
DRAFT

***Cypress Knolls
Tentative Tract Map and
General Plan Amendment***

***Environmental Impact
Report***

Prepared for:

*The City of Marina
Development Services Department*

Prepared by:

firma

*Landscape Architecture
Planning
Environmental Studies
Ecological Restoration*

*849 Monterey Street
San Luis Obispo CA
93401
805.781.9800*

DRAFT

Cypress Knolls

Environmental Impact Report

SCH # 2004081113

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Prepared for: City of Marina
Development Services Department
3056 Del Monte Avenue #205
Marina CA 93933
(831) 384-7324
Contact Person: Jennifer Coile AICP

Prepared by: ***firma***
849 Monterey Street
San Luis Obispo, CA 93401
(805) 781-9800
Contact Person: David Foote

Applicant: Front Porch
William Jennings CFO
303 N. Glenoaks Blvd Suite 1000
Burbank CA 91502

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*Vernon Yadon, Botanist / Dennis Duffy & Associates / Bryan Bradford,
Certified Arborist*

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I. Project Description

A. PURPOSE OF THE EIR

This environmental impact report (EIR) assesses the environmental impacts of the proposed Cypress Knolls Retirement Community, a project under consideration by the City of Marina. This EIR was prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code §21000 et seq.) and the State CEQA Guidelines (14 California Code of Regulations, §15000 et seq.) as amended in 1998.

The Project is the redevelopment and reuse of a portion of the former Patton Park family housing area on the former Fort Ord. Generally speaking (please refer to later in this section for a more detailed project description), the Project proposes to demolish up to 230 existing duplex residences and construct 596 new single family senior residential units (possibly up to 50 of which could be in the form of attached or duplex residences) and associated community facilities, 116 apartment units and, possibly, 60 new assisted living units.

The project includes a City General Plan map, text amendments and changes to the city zoning code, and other possible approvals and permits (as detailed on page I-7), to facilitate the physical project components described immediately above. This EIR provides a project-level analysis of these project components described immediately above.

It is anticipated that, simultaneously with considering entitlements for the project components described immediately above, the City also will consider program-level planning changes (General Plan amendment and possibly conforming zoning map amendment) to accommodate a potential future City park and City senior center (see Map 3). Because construction of a park or senior center is not actually proposed at present, no design specifics have been proposed and the City has not committed to construct the park or senior center, the EIR provides a program-level analysis of the potential impacts from a park and senior center. Before considering granting any project-level approvals in the future for the park or senior center, the City would conduct further environmental review under CEQA to refine and augment the analysis in this EIR. Certain of the substantive analytical areas of this EIR (e.g., traffic, noise and air quality, analysis of which depends on assumed traffic trips; water resources) are quantitative and depend upon specific size and attribute elements (e.g., building square footage, water fixtures, amount of natural irrigated turf, etc.). Accordingly, where necessary, this EIR assumes for analysis purposes, certain attributes for the future potential senior center (e.g., 6,000 square feet of building space, resulting in an assumed number of traffic trips generated) and park (e.g., 40 percent of the 18-acre site landscaped, 15 percent of which would be irrigated turf, etc.). In the EIR Section IV- Environmental Analysis, each study topic addresses the project-specific and program-level aspects of the project. Each EIR study topic identifies the assumptions made for the program level analysis in each respective section..

Because the Monterey Peninsula Unified School District has expressed some interest in using the 18-acre park site for a school in the distant future, this EIR analyzes (at a cumulative program level) the 18-acre site as a school (rather than a park) in the cumulative (year 2025) scenario.

The Fort Ord Reuse Authority (FORA) was created by the California legislature (California Government Code Section 67650 et seq.) to plan, finance, and implement the conversion of Fort Ord to civilian activities.

Since the realignment of Fort Ord, the U.S. Army Corps of Engineers (Corps) has prepared the following environmental studies relating to the disposal and reuse of the military base: Fort Ord Disposal and Reuse Final Environmental Impact Statement (June 1993) and the Fort Ord Disposal

and Reuse Supplemental Environmental Impact Statement (December 1995), herein referred to as the FEIS and FSEIS. FORA relied in part on the Corps' previous analyses in the FEIS and FSEIS for the development of the Fort Ord Reuse Plan Environmental Impact Report (Reuse Plan EIR), which is identified as a program-level EIR. The information from the FEIS and FSEIS was supplemented with additional information and analysis. FORA certified the Reuse Plan EIR and adopted the Fort Ord Reuse Plan on June 13, 1997.

As noted in the Reuse Plan EIR, additional CEQA analysis would be prepared at the specific project level to give decision makers more information about site-specific issues which are not addressed in the program level Reuse Plan EIR.

The Fort Ord Reuse Plan requires that each member jurisdiction adopt certain policies related to development within the member's jurisdiction. The City of Marina is a member agency of FORA. The City of Marina General Plan) was adopted by the Marina City Council on October 31, 2000, with amendments through December 2005, and incorporates those Reuse Plan policies applicable to the City of Marina. On March 6, 2001, FORA determined that the City of Marina General Plan was consistent with the Reuse Plan.

In accordance with California Public Resources Code Section 21083.8.1(b)(1), the Reuse Plan EIR examined the physical conditions that were present at the time the decision to close Fort Ord became final for the purpose of determining whether implementation of the Reuse Plan EIR may have a significant effect on the environment. The federal decision to close Fort Ord became final in 1991.

In order to be conservative, however, the determination in this EIR of whether the Proposed Project may have significant effects on the environment has been made in the context of the physical conditions as they exist at the project site and vicinity as of January 31, 2005, the date the Notice of Preparation was published (CEQA Guidelines Section 15125).

The purposes of this EIR are:

- o To serve as an informational document which examines the likely environmental impacts of this Project,
- o To identify those environmental impacts that could be potentially significant if the Project is approved,
- o To develop mitigation measures to reduce significant impacts to the extent feasible,
- o To identify potentially feasible alternatives to the Project that could avoid or reduce significant impacts while still meeting the Project's objectives,
- o To provide a means for citizens to participate in the decision-making process.

A significant environmental effect is defined in CEQA as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the proposed development. CEQA further states that if any aspects of the Project, either individually or cumulatively, may cause a significant effect on the environment, then an EIR must be prepared.

Prior to approving a project for which an EIR has been prepared that identifies significant environmental impacts that may result from a project, the lead agency is required to certify that the EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the

lead agency. The Final EIR will be reviewed by the City of Marina City Council for certification in accordance with CEQA Guidelines (e.g., CEQA Guidelines, Sections 15090, 15091, and 15092). Written findings of fact for each significant environmental impact identified in the EIR will be prepared by the lead agency to:

- Determine if the Proposed Project has been changed to avoid or substantially reduce the magnitude of the impacts;
- Find that changes to the Proposed Project are within another agency's jurisdiction, and such changes have been, or should be, adopted; and/or
- Find that specific economic, social, or other considerations make mitigation measures or Proposed Project alternatives infeasible.

Based on these findings, the lead agency may also prepare a Statement of Overriding Considerations (SOC) (CEQA Guidelines, Section 15093) as part of the project approval process. If the decision-making body elects to proceed with a project that would have significant impacts, then the SOC explaining the decision to balance the benefits of the project against unavoidable environmental impacts must be prepared.

In order to provide information upon which the lead agency will make the findings set forth above, this EIR categorizes each potential impact of the project into one of three categories:

- o **Significant and Unavoidable Impact (Class 1 Impact)**
A significant and unavoidable impact is a significant adverse effect on the physical environment that cannot be reduced to less than significant even if reasonable mitigation measures are incorporated into the Project.
- o **Significant Impact (Class 2 Impact)**
A significant impact will have a substantial adverse impact on the physical environment. Typically, this level of impact occurs when a community-based standard or a state or federal regulation or requirement has been exceeded. These standards, regulations or requirements act as "thresholds of significance", or significance criteria. In this Class, feasible and available mitigation measures will result in reduction of a significant impact to a less-than-significant-impact.
- o **Less than Significant Impact (Class 3 Impact)**
A less than significant impact is an effect that is determined not to have a substantial adverse impact on the physical environment and therefore no mitigation is required.

Impact evaluation criteria are presented for each issue examined in the EIR. The purpose of the criteria is to establish the thresholds required to make a determination if a significant impact will result. This enables those reviewing this document to understand how determinations about impacts were made. In establishing these criteria, the EIR relies to the greatest degree possible on local standards, existing laws, and government regulations.

In this report, information is organized to clearly address, analyze and disclose potentially significant impacts. Each study area includes a section in which the significance of the impacts and the probable effectiveness of proposed mitigation measures is discussed. Where a significant impact appears to be unavoidable or not mitigable to below a level of insignificance, a statement of overriding considerations would be required if the City decides to proceed with the Project. Section

15093(b) of the State CEQA Guidelines states that “where the decision of the public agency allows the occurrence of significant effects which are identified in the final EIR, but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record.”

The purpose of the publication of the draft EIR is to allow the public and applicable agencies to review and comment on the findings of the report.

Section 15204(a) and (c) of the Guidelines indicates that:

- (a) In reviewing draft EIRs, persons and public agencies should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. At the same time, reviewers should be aware that the adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project. CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commentors. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.
- (c) Reviewers should explain the basis for their comments, and, should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence.

The draft EIR will be circulated for agency and public review during a 45-day public review period. Comments received by the City on the Draft EIR within the review period will be reviewed, and responses to comments will be included in the Final EIR. Copies of the Draft EIR will be available at the City of Marina Development Services Department and the Marina Community Library, Seaside Library and Monterey Library. Copies of documents incorporated by reference into this Draft EIR will be available at the City of Marina Development Services Department. Comments to the draft EIR should be submitted to:

Jennifer Coile, AICP
Project Manager
Development Services Department
City of Marina
3056 Del Monte Avenue, Suite 205
Marina, CA 93933

The Final EIR will be prepared and forwarded to the Marina City Council for consideration under the provisions of CEQA. If the EIR is certified and adopted by the City, the City may then proceed to make decisions on the discretionary actions required for approval of the Project. The mitigation measures identified in the EIR could be included as conditions of Project approval and implemented and monitored under a Mitigation Monitoring Program.

It is not the purpose of an EIR to recommend either approval or denial of a project. CEQA requires the decision makers (in this case, the City of Marina) to make a decision with knowledge of the potential environmental impacts of the Project, and to balance the benefits of the proposed Project against its potential environmental impacts. Although the EIR does not dictate the ultimate decision on the Project, the decision makers must consider the information in the EIR and address each significant effect identified in the EIR. If significant adverse environmental effects are identified in the EIR, approval of the Project must be accompanied by written findings, as set forth above.

The Final EIR also will be reviewed and relied upon by other agencies to grant any discretionary approvals required for the Project from those agencies.

B. NOTICE OF PREPARATION

The City of Marina is the lead agency for the proposed Project. Section 15367 of the State CEQA guidelines defines the lead agency as "the public agency which has the principal responsibility for carrying out or approving a project". As the lead agency, the City is responsible for the preparation of the EIR.

The issues to be examined in the EIR were identified by the City of Marina through early analysis of the Project and its potential environmental consequences. Although an Initial Study was not prepared, the City determined, on the basis of its early studies and analysis, that aspects of the Project, both individually and cumulatively, may cause a significant effect on the environment. A public hearing and scoping meeting (as required by CEQA Guidelines Section 15082(c)(1)) before the Planning Commission was held on January 13, 2005. Thereafter, this Notice of Preparation (NOP) was distributed on or about January 31, 2005 as required by CEQA, to inform other public agencies, interest groups and the public in general of the City's intent to prepare an EIR. The NOP also provides an opportunity for those interested in the proposed Project to comment on the EIR's contents. Additionally, the NOP was sent to the State Clearinghouse, which is responsible for forwarding it to state agencies that might be affected by this Project. Responses to the January 31, 2005, NOP were received and were considered in the preparation of this EIR. Comments received at the January 13, 2005, scoping meeting also were considered.

Another NOP, for an earlier version of the project (generally involving fewer new residential units, and retention/rehabilitation of some of the existing units) was distributed on or about August 13, 2004. Responses to this NOP were received and also were considered in the preparation of this EIR (See Appendix A).

Based on the City's early Project analysis and EIR prepared for a similar project on this site, the following EIR topics were identified as necessary for study:

- Public Services (Recreation, Schools, Police, Fire, Solid Waste, Wastewater)
- Drainage
- Hazardous Materials
- Traffic and Circulation
- Noise
- Air Quality
- Water Resources Supply
- Water Quality
- Water Distribution and Fire Flows
- Energy
- Biological Resources

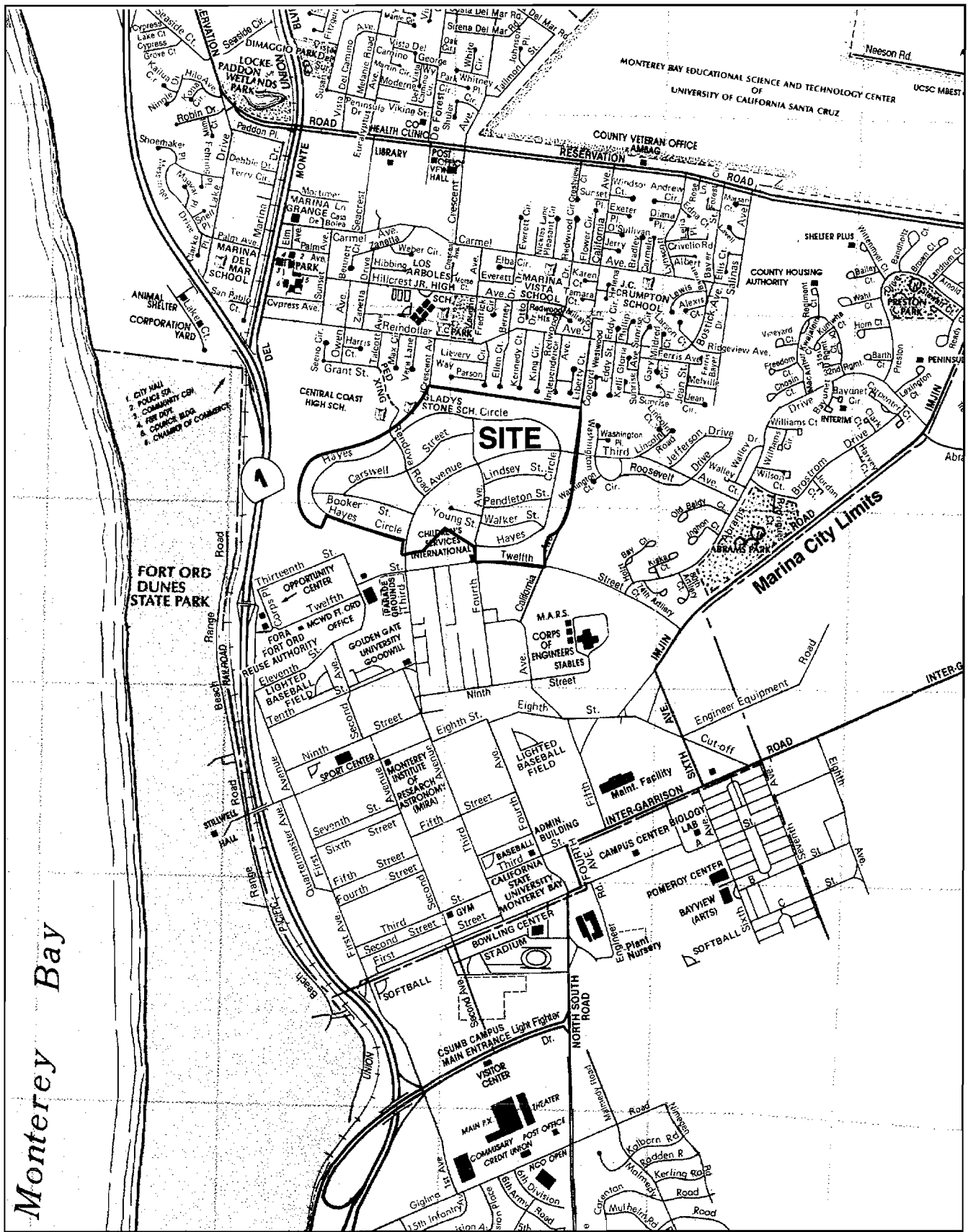
- Visual Resources
- Cultural Resources
- Population and Housing
- Geology and Soils
- Land Use

C. SITE LOCATION AND HISTORICAL BACKGROUND

The proposed Project site is located in the planned southwesterly quadrant of the City of Marina. The site is the northwesterly portion of the former Patton Park family housing area of the former Fort Ord. The site is east of Highway 1, west of the southern extension of California Avenue, and north of Imjin Parkway. The site is bordered on the north by the existing residential development accessed by Reindollar Avenue (see **Map 1– Project Location**).

The site comprises approximately 190 acres. The Project area is located on the northwest section of the former Fort Ord Army Base. Prior to its development as the Patton Park family housing area in the early 1960's, the area was used for various Army training operations. Development of the site included grading and construction of infrastructure, roads, parking, private driveways, and 460 residential units comprised of 230 duplex units with an adjacent elementary school. The Patton Park family housing area was occupied until the base was closed in 1993. Existing conditions and topography is shown on **Map 2- Existing Conditions**.

The northern portion of the Project site is adjacent to an existing single family residential area within the City of Marina. Most of this housing fronts on cul-de-sacs which are accessible from Reindollar Avenue.

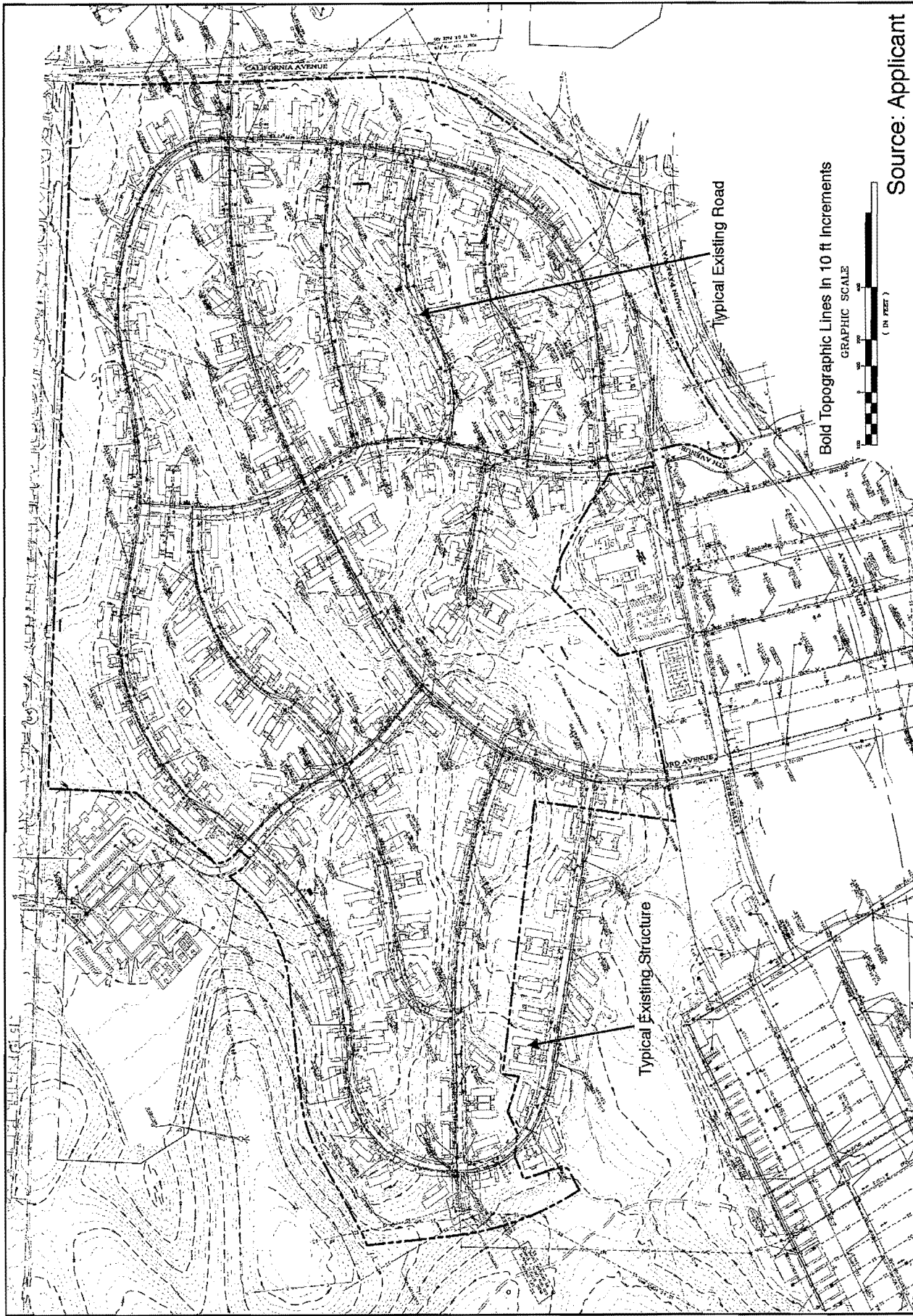


Monterey Bay

Project Location



Map
1



The specific existing setting for the Project site is discussed later in this EIR in each of the chapters by impact topic. For example, the existing biological setting and conditions at the project site are discussed in Section IV-A, immediately prior to the EIR's analysis of the potential biological impacts the project may have on such existing setting and conditions.

Background

In late 1989, the Department of Defense (DoD) proposed closing Fort Ord as part of an overall budget reduction program. Fort Ord, as well as other posts, was proposed for closure by a congressional study of military facilities. On April 11, 1991, Fort Ord was officially on the DoD's post closure list.

As part of the former Fort Ord, the Project site is available for development via a legislated conveyance process. The United States Department of the Army (U.S. Army) announced its intent to close and decommission Fort Ord in 1991 as part of 1990's Defense Base Realignment and Closure Act, which set up the process the DoD now uses to assess and reorganize its military infrastructure.

In 1994, FORA was created to address the economic and environmental challenges presented by the decommissioning of a military base and its conversion to civilian use. The FORA was authorized to prepare, adopt, finance and implement a base reuse plan for future development at the former Fort Ord. The FORA's responsibilities include financing deconstruction of obsolete buildings and infrastructure, providing environmental mitigation, constructing new infrastructure via a Capital Improvement Program (CIP), and to foster economic development on the Monterey Peninsula, replacing any employment lost by the closure of military operations through the growth of new businesses and industries.

Since 1990, numerous parcels within Fort Ord have been remediated and approved for transfer by the EPA through the Finding of Suitability to Transfer (FOST) process (See separate Technical Appendices Volume Appendix D). The FOST explains that on the basis of the above information contained in the FOST, the Department of Defense (DoD) concludes that the property should be assigned DoD Environmental Condition Category 4 (areas where release, disposal, and/or migration of hazardous substances has occurred, and all removal or remediation actions to protect human health and the environment have been taken) and is transferable.¹ The Project site is not on the state Department of Toxic Substances Control Hazardous and Substances Site List (Cortese list)(Refer to section IV-C Hazardous Materials).

D. PROJECT DESCRIPTION, AND GENERAL DESCRIPTION OF THE PROJECT'S TECHNICAL, ECONOMIC AND ENVIRONMENTAL CHARACTERISTICS

Since the inception of the Proposed Project, the proposed project description has evolved from a development that consisted primarily of rehabilitation and reuse of existing residences on the property into a project proposal that would demolish the existing units and replace them with an increased number of housing units. In December 2004, the City Council accepted the revised project description and directed City staff to process the necessary entitlements and continue negotiations for transfer of the project site to the developer based on a new pro-forma for a 772-unit project.

¹ Finding of Suitability for Transfer (FOST) Patton and Abrams Park Disposal Polygons Former Fort Ord, California, Department of Defense, March 2, 1998.

The Proposed Project would redevelop for civilian use a portion of the now decommissioned former Fort Ord military installation. The closure of the Fort Ord Military Installation in 1991 initiated major losses of population and employment in the Cities of Marina and Seaside and elsewhere throughout the Monterey Peninsula.

The remaining unused structures are rapidly deteriorating and the area has been declared blighted in the *Former Fort Ord*

Redevelopment Project (Number Three), City of Marina Redevelopment Agency (May 1999).

Through the development of the proposed project area, the City of Marina generally desires to (see specific Project Objectives later in this Section I):

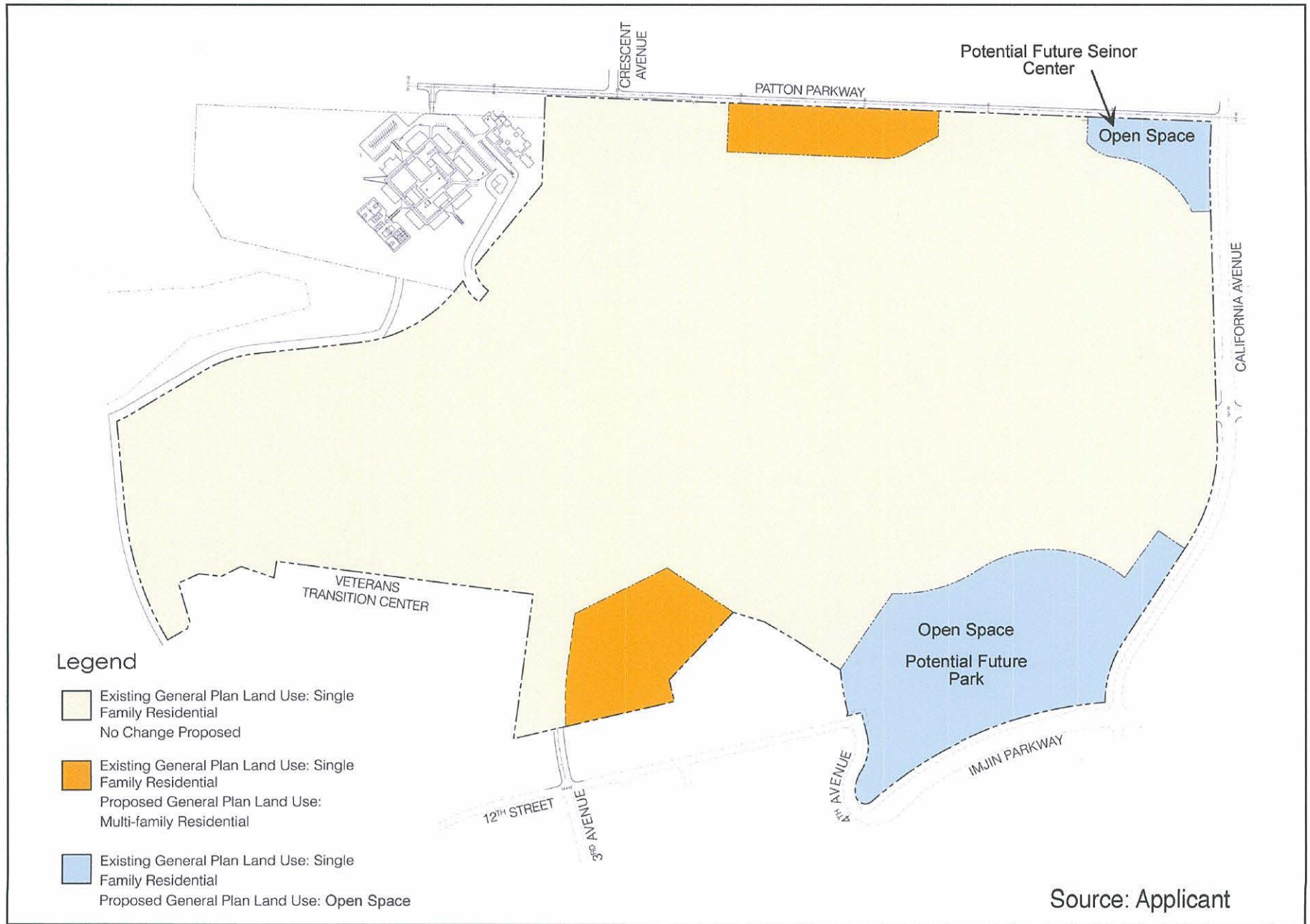
- Directly stimulate the local economy
- Create the maximum housing opportunities possible
- Rebuild and grow the local population

Implementation of these desires will improve the local tax base, which will help to facilitate local capital improvement programs, and serve as a catalyst for the future prosperity of the City, its residents, and its businesses.

Although the precise final boundaries of the Project will not be determined until the property is transferred from the FORA, the anticipated future boundaries of the Project site have been established for planning purposes and are shown on **Map 3-Proposed General Plan Amendment and Re-Zoning Map**.

The approximately 190-acre Project site currently contains 460 residential units in 230 duplex configurations. The Project proposes to demolish all of these structures that are located on the portion of the site where the 712 residential units and their associated community facilities, and the potential assisted living facility, will be constructed. The approximately 12 structures on the portion of the site that is the subject of the General Plan Amendment and Re-zone to Open Space to facilitate the potential for a future park and senior center also may be demolished at the same time as the other structures for efficiency sake. The proposed illustrative project Tentative Tract Map (see **Map 4-Tentative Tract Map**) presently includes the items listed immediately below. The final exact acreages and lot configuration will be determined by the tentative and final map approvals; any changes between this illustrative map and the final tentative map that is considered for final approval are anticipated to be minor and not to affect the accuracy of this EIR's analysis.

I-11



Residential units

- 596 residential senior adult single family units (it is possible that up to 50 of these units could be in the form of attached or duplex units)
- 116 affordable apartment units (a larger or smaller number of apartment units may get constructed, but in no event would the total number of single family adult units plus apartments exceed 712)
- An optional program of no more than 60 beds in an assisted living facility to be built at the developer's election

Approximate Land Use Acreage

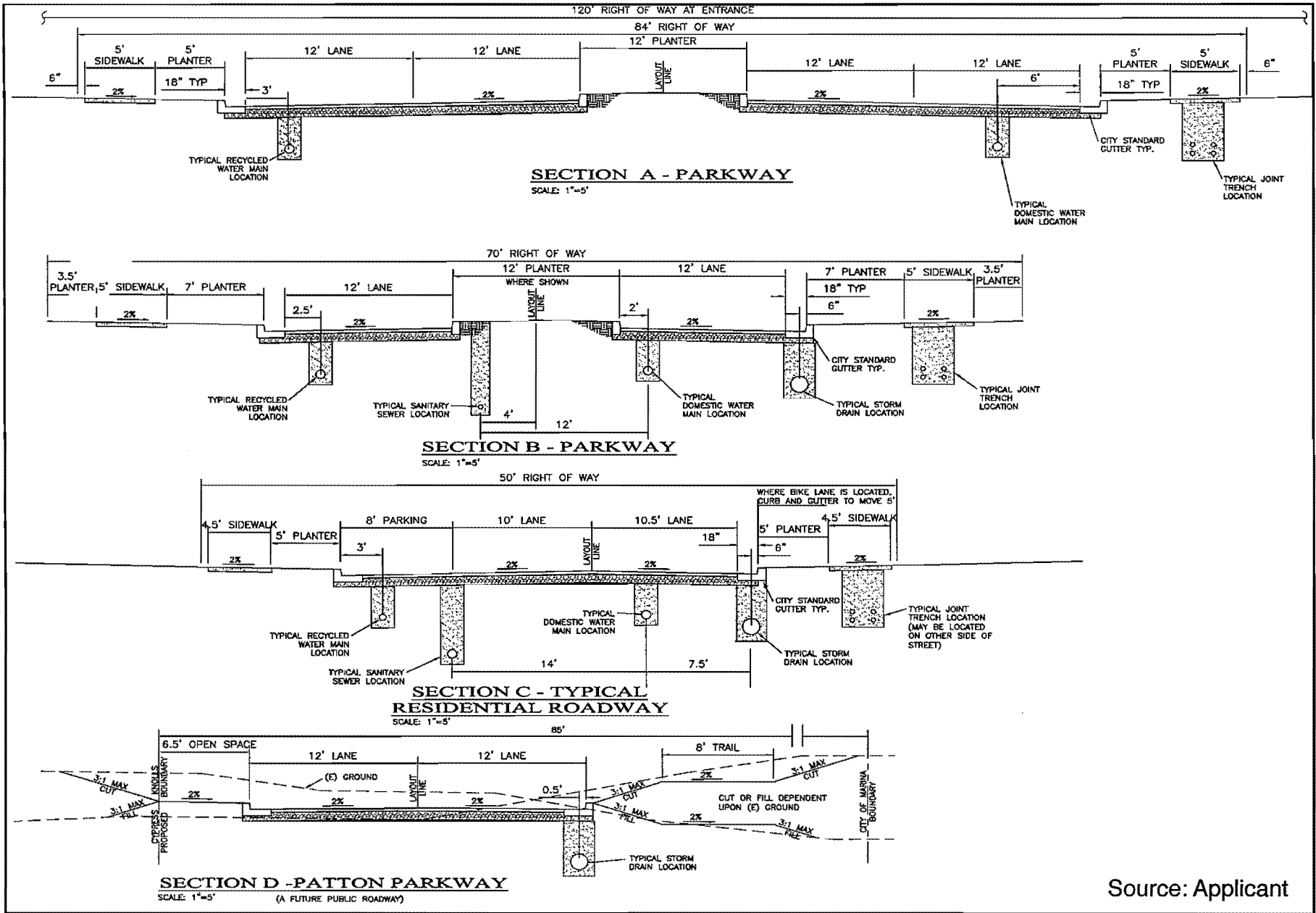
- 85 acres - Residential Lots
- 34 acres- Right of Way
- 30 acres – Common Area Open space (interior and buffer areas)
- 4 acres - Assisted Living Facility
- 6 acres - Apartments
- 8 acres – Community Center Facilities (e.g., pool, tennis courts, fitness center, sundry shops, classrooms, arts center, etc.) to serve project residents; approximately 20,000 square feet of building area
- 4 acres - Support services parcel(storage and maintenance area for landscaping, repair and other equipment that will be used to serve and maintain the project community); likely will contain an approximately 2,500 square foot storage/maintenance building and a recreational vehicle storage area

The site improvements for the Tentative Tract subdivision will include demolition of existing streets that do not conform to current City engineering standards and construction of new streets (see **Figure P-1 Proposed Street Cross-sections**). New interior streets within the residential area will be constructed and a new intersection of Crescent Ave with the new Patton Parkway (Patton Parkway and Crescent Avenue extensions to be constructed by the City, likely by the middle to end of 2007) along the northern project boundary will be constructed.

The project proposes to utilize a retention pond off-site adjacent to the project site's west boundary for the storage and treatment of stormwater runoff see **Map 5- Proposed Stormwater Basin**. The Project engineer has calculated the capacity of the existing basin as adequate for the proposed project under City engineering standards. The adequacy of the basin is addressed in section IV-I Drainage in this EIR.

The Project may be undertaken in phases, as yet unspecified. In the EIR, Assumptions about the rate of project buildout are conservative and yield a worst-case level of impact. It is possible that the final phasing of the project may be longer and, accordingly, lower the effects on the environment as in the case of construction stage noise and operational air quality emissions. Infrastructure to serve each phase will be constructed in a timely manner so as to ensure proper functioning of each phase, see **Map 6- Proposed Utility Plan**. Existing easements, and boundary information are shown on **Map 7- Boundary, Lots, Road Sections and Existing Easement Plan**

As stated earlier, It is anticipated that, simultaneously with considering entitlements for the senior residential units, the City also will consider program-level planning changes (a General Plan and zoning map amendment) to accommodate a potential future City park (approximately 18 acres) and City senior center (approximately 3 acres) (see Map 3). Because the Monterey Peninsula Unified School District has expressed some interest in using the 18-acre site for a school at some point in the future, this EIR analyzes (at a cumulative program level) the 18-acre site as a school in the cumulative (year 2025) scenario.



1-14

Source: Applicant

Proposed Street Cross-sections


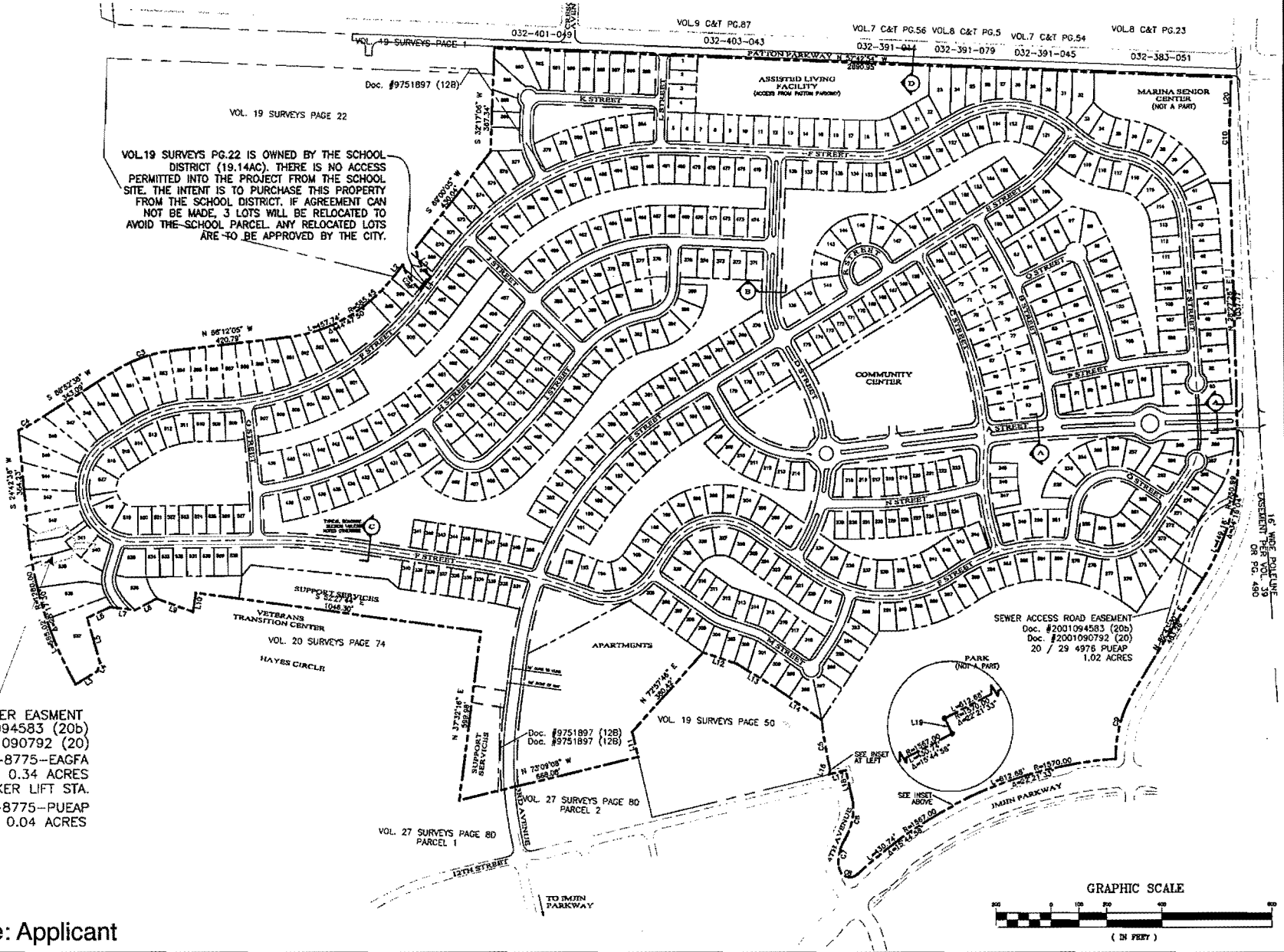

 NORTH

Figure P-1

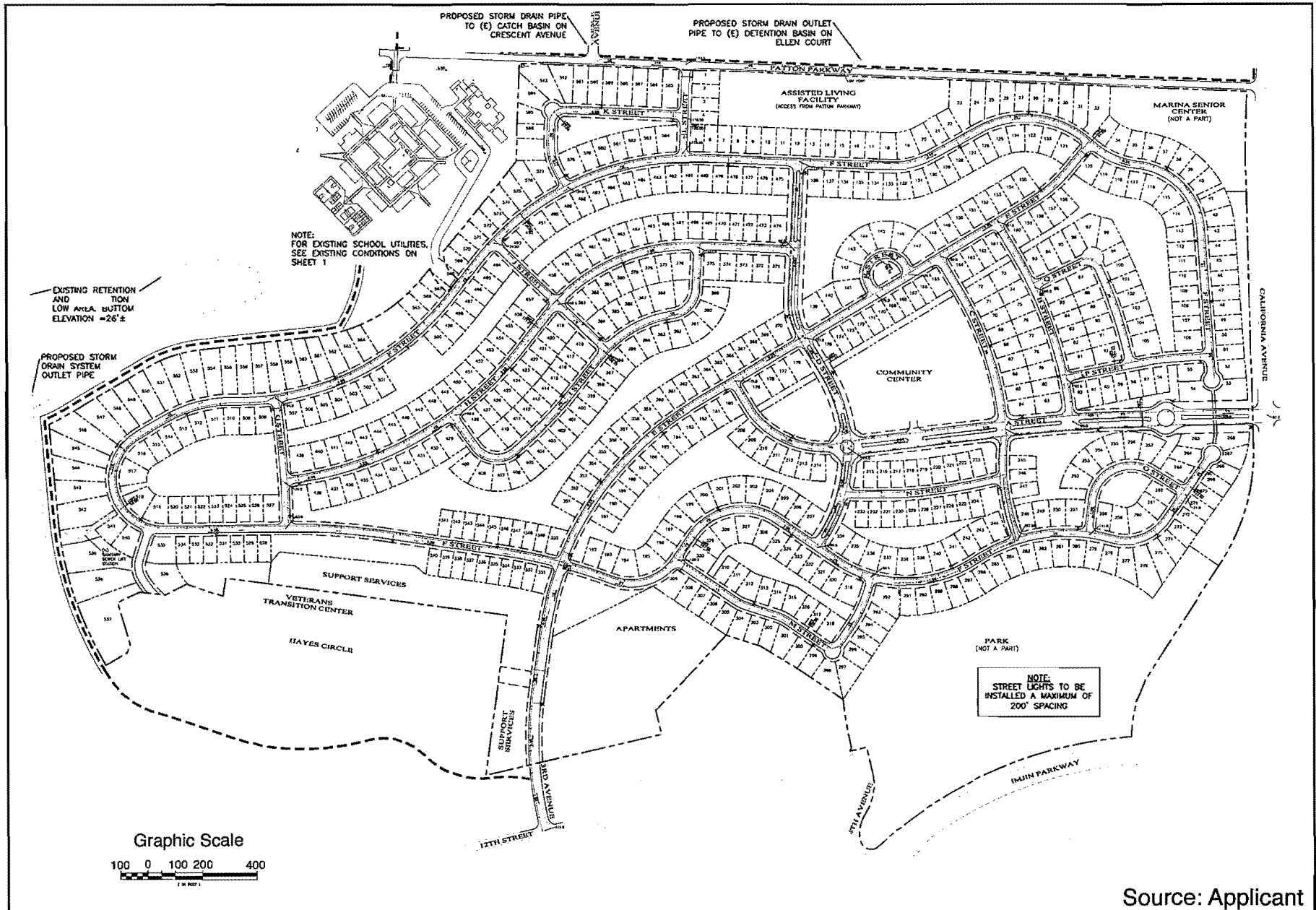
1-15



Boundary, Lots, Road Sections
and Existing Easement Plan



Map
5

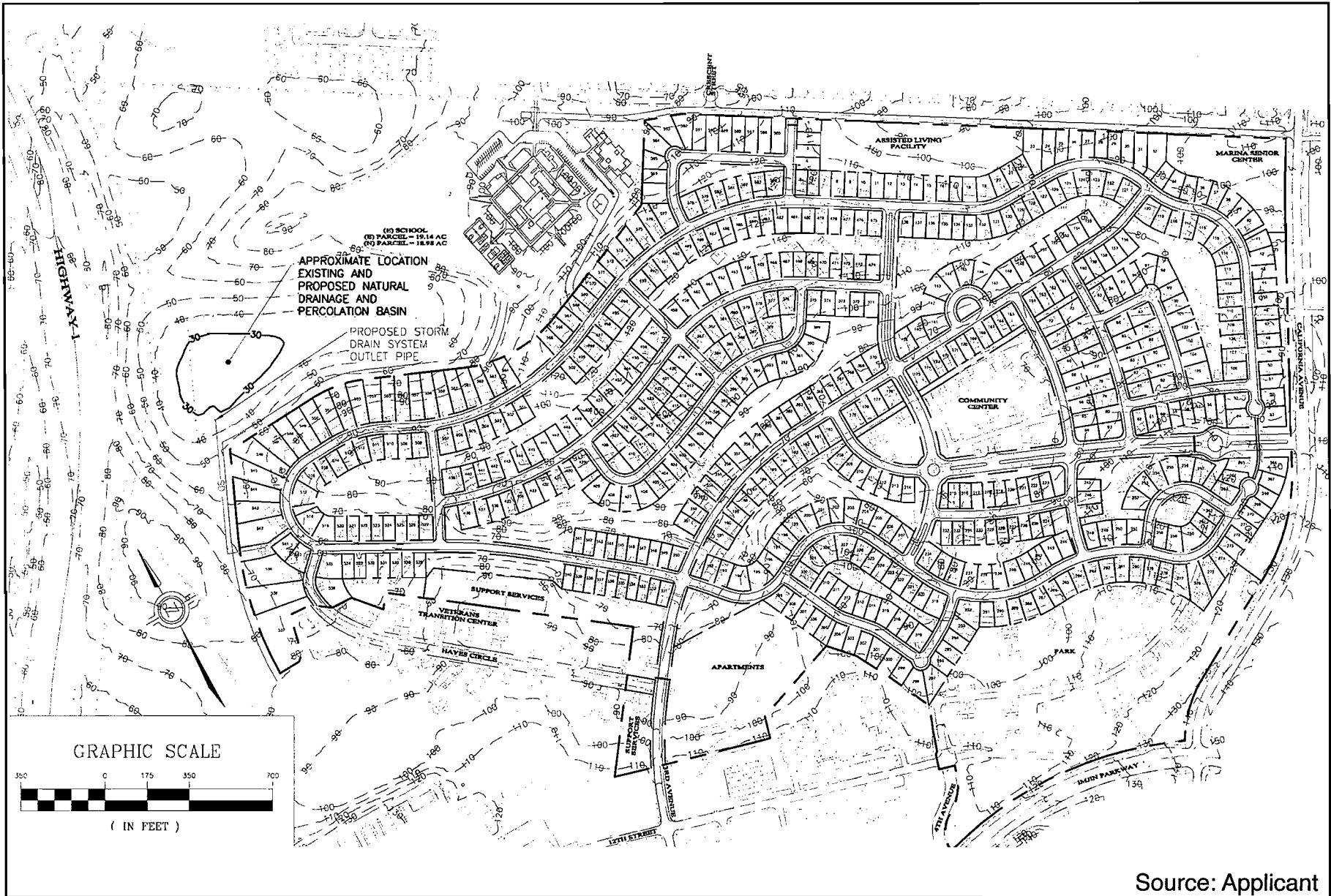


I-16

Utility Plan



Map
6



Proposed Stormwater Basin



E. LIST OF INTENDED USES OF THIS EIR

This EIR is anticipated to be used to inform various agencies regarding the project, when such agencies consider discretionary actions involved with the proposed senior housing project and the program-level actions regarding a potential future City park and senior center, which could include (but are not necessarily limited to) the following:

City of Marina and Marina Redevelopment Agency

- Approval of a Disposition and Development Agreement with the Redevelopment Agency to address certain aspects of the Project such as phasing, funding of off-site infrastructure improvements, and the provision of municipal services.

City of Marina

- Conditional Use Permit(s) to allow for use of the site as proposed with a mix of residential unit types and densities, continuing care facilities and associated support services.
- Approval of a City General Plan and Zoning Ordinance map and/or text amendments, potentially including:
 - General Plan Map amendments for senior housing project: Redesignate the approximately 4-acre Assisted Living Facility area and the approximately 6-acre Apartments area from Single Family Residential (5 units/acre) to Multi-Family Residential (15-35 units/acre)
 - General Plan text amendments for the senior housing project to facilitate the Proposed Project number/density of housing units, and the Project's design attributes. Zoning Map amendments for assisted living facility: Rezone the approximately 4-acre Assisted Living Facility area from R-1 to R-4.
 - Zoning Text amendments for senior housing project: Amend development standards in Chapter 17.54 to allow for necessary flexibility for this planned unit development project, including (but not limited to) facilitating a Community Center up to 40 feet tall, allowing the Community Center to have reduced parking so as to encourage project residents to walk, and permitting reduced perimeter landscape setbacks to permit a better design.
 - General Plan Map and zoning map amendments for program-level planning actions: Redesignate approximately 3 acre potential future Senior Center site from Single Family residential to Open Space. Redesignate approximately 18 acre potential future Park site from Single Family residential to Open Space. Rezoning the approximately 3-acre potential Senior Center site from R-4 to OS and the approximately 18-acre potential Park site from R-4 to OS.
 - Approval of a Development Agreement
 - Approval of Tentative or Vesting and Final Tract maps.
 - Design Review Approval and Tree Removal Permit for all site improvements.

Fort Ord Reuse Authority

- Consistency Determination by FORA as a responsible agency under CEQA, of all legislative land use decisions and development entitlements pursuant to Chapter 8 of the Fort Ord Reuse Authority Master Resolution, including a determination that the project is consistent with the Fort Ord Reuse Plan.

Other Federal, State, Regional and Local Agencies

- California Department of Fish and Game (Take Permit per Fort Ord HCP)
- Corps (Clean Water Act and Section 404 Permit)
- Regional Water Quality Control Board (for NDPEs permit for non-point source compliance relating to construction erosion and run-off, and infiltration of storm surface water into the site)
- California Highway Patrol (for implementation of transportation management associated with building removal)
- Marina Coast Water District (Conceptual Wet Utility Plans and Water Supply Assessment/ Verification of Supply, Water and Wastewater Project Master Plans and Design Plans for Utility Construction)
- Monterey Bay Unified Air Pollution Control District (Air Quality Permits relating to building deconstruction and in particular asbestos and lead based paint)

The purpose of this EIR is to analyze the Proposed Project and is intended to apply to any other approvals necessary or desirable to implement the proposed project.

F. PROJECT OBJECTIVES

The applicant's overall objective of the Cypress Knolls Project is to develop a successful safe and secure, pedestrian-friendly regional active senior living community, including housing, recreational amenities (such as pools, fitness center, sport courts, natural areas and trails, etc.) and support services, while providing the City of Marina and FORA with a successful base closure and reuse project.

The City and the City's Redevelopment Agency's objectives are as follows:

Implementation of Fort Ord Reuse Authority Act and Fort Ord Reuse Plan

In 1994, the California Legislature adopted the Fort Ord Reuse Authority Act, Government Code section 67650, et seq., in order to facilitate the transfer and reuse of Fort Ord. The City has actively participated in a cooperative effort to achieve the legislative purpose of the Fort Ord Reuse Authority Act, and desires to further implement that legislative purpose at the project level through this Cypress Knolls project by achieving the objectives listed below.

The City also desires to implement the Reuse Plan and its Community Design Vision for the Cypress Knolls portion of the former Fort Ord. The City now desires to carry out the Reuse Plan at the project-level by creating a livable community that integrates senior housing, other

housing, and senior support services and recreational opportunities in the overall community plan that meets the goals listed below.

Goal A.i. - Formulate and implement project-level land use planning and land disposition in a manner which will achieve the reuse of the real property comprising the Cypress Knolls (former Patton Park housing area) portion of the former Fort Ord as soon as possible.

Goal A.ii. - Overcome the disruption that was caused to the civilian economy by the closure of the former Fort Ord by re-populating the City and thereby return people and customers to downtown/central business to stabilize the economy in the long-term, improve the local tax base, and create revenue sources for local jurisdictions.

Goal A.iii. - Enhance the quality of life for people in the City of Marina and the Monterey Bay area by providing housing and senior support and recreational services within the Cypress Knolls/Patton Park portion of the former Fort Ord.

Goal A.iv. - The City wishes to accomplish the Design Objectives of the Reuse Plan in the Cypress Knolls/Patton Park area by approving development entitlements that accomplish all of the following:

- (1) Encourage an array of architectural styles, including the Monterey style, and modern and California styles.
- (2) Develop a community with a special character and identity.
- (3) Provide development that improves human welfare.
- (4) Establish a discernable edge to new developments.
- (5) Encourage distinctive and memorable entries.
- (6) Promote a sense of community and connectedness by minimizing street widths and providing comfortable pedestrian environments.

Goal A.v. Provide development entitlements, including design guidelines, that meet the general goals and programs contained in the all elements of the Reuse Plan.

Goal A.vi. To generate development that will maximize revenues to FORA's CIP program and thereby help to finance base-wide improvements encompassed therein.

Goal A.vii. Provide an opportunity to retain a military connection to the project site by providing an opportunity for retired military personnel to reside on the project site.

Achieving the Goals of the City of Marina Redevelopment Agency Redevelopment Plan

The City and the City of Marina Redevelopment Agency desire to achieve the purposes of the Redevelopment Plan for Project Area 3 through the land use approvals and disposition and development agreement for the Cypress Knolls/Patton Park area. More specifically, its goals in this regard are as follows:

Goal B.i. To expeditiously eliminate the blighted conditions which exist in the Cypress Knolls/Patton Park area, including in particular acceleration of the FORA Building Removal Program with the assistance of the project developer and removal of toxic contaminants.

Goal B.ii. To eliminate or ameliorate existing substandard conditions, including substandard vehicular and pedestrian circulation, street design, parking, inadequate

infrastructure, inadequate public improvements and facilities (including utility lines and storm drainage) which have contributed to the blight conditions within Project Area 3.

Goal B.iii. To facilitate the development of housing opportunities for active adults over 55 years of age.

Goal B.iv. To generate funding for the development of housing for very low, low and/or moderate income groups and residents of the City of Marina, including the possible use of set aside funds.

Goal B.v. To promote economic development opportunities in Project Area 3 which will in turn provide a basis of ongoing revenues to the City to support operation and capital projects, including the generation of property taxes, sales taxes from the purchases made by project residents, and other fees and other taxes.

Implement the City of Marina General Plan

Another project objective is to meet the goals of the City of Marina General Plan, including in particular the following:

Goal C.i. To avoid sprawl in the region by making efficient use of existing developed/disturbed land by developing infill development rather than greenfield development at sufficient density so as to relieve development pressures on undeveloped/undisturbed lands.

Goal C.ii. To facilitate and further an orderly pattern of development by entitling development on lands already designated for community development purposes.

Goal C.iii. To create residential neighborhoods which are physically and visually distinguishable from the other communities of the Monterey Bay region, with a sense of place and identity in which residents can take pride.

Goal C.iv. To develop the project site with a senior residential community, as called for by the General Plan.

Implementation of the Terms of the U.S. Army - FORA Memorandum of Understanding (MOU)- and the Economic Development Conveyance

Goal D.i. The City wishes to grant planning entitlements for the Cypress Knolls/Patton Park area and to enter into agreements which provide for the ultimate disposition of the subject property in a manner which fully complies with the City's obligations under both the FORA/Army MOU and the terms of the economic benefit conveyance.

Additional Project Goals

Goal E.i. Create the type of safe, walkable, secure and pedestrian-friendly community and environment that is uniquely important to active and retired seniors, particularly as they age.

Goal E.ii. Develop the project at sufficient residential density to make economically viable (a) all the necessary demolition, hazardous materials abatement, utility and infrastructure

improvements and other site redevelopment costs and (b) all the recreational and support amenities associated with a regional active senior community.

Goal E.iii. Respect the past residential use of the site by redeveloping it for single-family residential uses.

Goal E.iv. Make use of existing natural setting to provide nature walking and trail areas for project residents.

Goal E.v. Take advantage of the extensive recreational, shopping and learning opportunities in the immediate area that are particularly valuable and desired by active seniors, such as golf courses, senior education classes and arts attractions at CSUMB and Monterey Peninsula College and easy access to stores in Central Marina.

Goal E.vi. Provide a minimum of 30 acres of open space.

Goal E.vii. Provide an economically viable residential product type that is expected by and attractive to active seniors.

Goal E.viii. Respect the existing low building heights and horizontal massing of the existing development on the project site so as to better respect the existing rolling topography of the site.

Goal E. ix. Design a community that provides a secure environment for the senior residents.

Goal E. x. Utilize architectural and landscaping features such as trees, fences, creeks, berms and other natural and manmade features to provide security to residents and property while also enhancing the aesthetic quality of the project.

II. Executive Summary

A. SUMMARY OF IMPACTS AND MITIGATION MEASURES

The City of Marina (the City) determined that the Proposed Project could potentially result in significant environmental effects and required the preparation of this Environmental Impact Report (EIR). Pursuant to CEQA, this EIR focused primarily on those subjects identified as potentially significant by the City during preparation of the Notice of Preparation on the Project (Appendix A). The study areas below comprise the topics primarily analyzed in this EIR:

- Drainage
- Hazardous Materials
- Traffic and Circulation
- Noise
- Air Quality
- Water Resources
- Water Distribution and Fire Flows
- Biological Resources
- Visual Resources
- Cultural Resources
- Public Services (Recreation, Fire Protection, etc.)
- Population/Housing
- Geology/Soils
- Energy
- Water Quality
- Land Use

A summary of the environmental impacts and mitigation measures are presented in Table S. This table is organized in terms of the level of impact after mitigation. A more detailed description of each impact and mitigation measure is located in the respective EIR section for each topic. **This summary is provided for convenience only; the reader is advised to review the EIR main text itself for a more complete and accurate understanding of each impact and mitigation measure.** Class I impacts are unavoidable adverse significant impacts. If the City certifies the EIR and proceeds with the Project, Section 15093(b) of the State CEQA Guidelines requires the City to make findings of overriding consideration when Class I impacts are present indicating that specific economic, legal, social, technological or other benefits of the proposed Project outweigh the unavoidable adverse environmental effects.

Class II impacts are significant impacts which can be mitigated to a level of insignificance. Section 15091(a)(1) of the State CEQA Guidelines requires that findings be made indicating that changes or alterations have been required in the Project to avoid or substantially lessen Class II impacts. Class III impacts are adverse, but not significant impacts. Class IV impacts are beneficial impacts resulting from implementing the Project.

The Project could have significant, unavoidable impacts. The recommended mitigation measures reduce impacts to the greatest feasible extent, but a statement of overriding considerations will be required for these impacts if the City wishes to certify the EIR and proceed with the Project.

All other impacts are potentially significant but can be mitigated to less than significant levels by implementing the mitigation measures presented on **Table S** and discussed in the EIR.

The Project is proposed to go forward notwithstanding the impacts identified in this EIR because the Proposed Project is consistent with and implements the FOR A Reuse Plan and the Marina General Plan and implements the Proposed Project objectives detailed in EIR section I- Project Description.

B. List of Acronyms Used

A list of the agency and document acronyms used in this EIR is located immediately following Table S in this section.

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES**

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact D-4: <u>California Avenue/Patton Parkway -- Intersection # 13:</u> The left turn warrant will be met for the northbound left turn movement from California Avenue to Patton Parkway based upon the AM peak volumes. This is a significant project impact.</p>	<p>Mitigation D-4: To mitigate the project's impact at this intersection, the following improvement would be required:</p> <ul style="list-style-type: none"> • Add a left turn lane on the northbound California Avenue approach to Patton Parkway. <p>This project is not currently included in the City's CIP or the FORA CIP. It is recommended that this improvement be added to the City's CIP and TIF, the project's contribution to which would mitigate this impact. If it is not added to the City's CIP and TIF, it is recommended that it be imposed as a condition of the project. It is recommended that this improvement be constructed at the time that the Patton Parkway extension is constructed.</p>	<p>Significant</p>

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES**

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact D-7: <u>California Avenue/Imjin Parkway – Intersection # 21:</u> This intersection operates at LOS F under Background Conditions during the AM peak hour and the proposed project would increase the delay at this intersection 9.7 seconds, creating a significant project impact.</p>	<p>Mitigation D-7: Adding a right turn lane on the southbound California Avenue approach to Imjin Parkway would mitigate the project impact. This improvement is included in the City of Marina Capital Improvement Program as Traffic Intersection (TI) 25. The improvement is also included in the TIF, toward which the project will contribute. The Cypress Knolls project will pay its share of the cost of this improvement and mitigate its long-term impact through the payment of the TIF. However, this improvement is not scheduled to be constructed in the next five years, it is recommended that the City consider amending the CIP to plan for this improvement in the next five years. If the CIP is so amended, then the short-term and long-term impacts of the project would be less than significant. If the CIP is not so amended, then the short-term impacts of the project would be significant and unavoidable but the long-term impacts would be less than significant.</p>	<p>Significant</p>

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES**

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact D-8: <u>Southbound Highway 1 Ramps/Imjin Parkway – Intersection # 16:</u> Under Cumulative Without Project Conditions, the Southbound Highway 1 Ramps/Imjin Parkway intersection would operate at LOS F during the AM and PM peak hours. The project would add traffic that would increase the average vehicle delay by 7.0 seconds during the AM peak hour and 7.4 seconds during the PM peak hour. This is a significant project impact.</p>	<p>Mitigation D-8: To mitigate the project's impact to the intersection, the following improvement would be required:</p> <ul style="list-style-type: none"> • Reconstruct the interchange to eliminate the intersection between the southbound off-ramp and the southbound on-ramp. This would require the construction of a loop ramp to serve one of these two movements. 	<p>Significant</p>
	<p>The reconstruction of the interchange is required to serve regional traffic increases at the Highway 1/Imjin Parkway interchange. Imposing an improvement of this magnitude on a single project is infeasible due to the costs associated with reconstructing the interchange as compared to the project's contribution to the need for reconstructing the interchange. It is therefore beyond the scope of this project. This improvement is included in the City of Marina Capital Improvement Program as an element of Roadway (R) 48 (Construct New Interchange). The Highway 1/Imjin Parkway interchange reconstruction project is not included in the City's TIF or the FORA CIP.</p>	
	<p>The City's TIF includes the preparation of a Project Study Report for the Highway 1/Imjin Parkway interchange (PSR). The proposed project will pay its fair share of the costs of the PSR through its TIF payment. The PSR will evaluate alternative interchange designs to serve long-range traffic volumes at the interchange. Through the payment of the City's TIF, the project will contribute its fair share towards the development of a long-range improvement plan for the Highway 1/Imjin Parkway interchange.</p>	

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES**

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
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Mitigation D-8 (cont.):

Should the funding for the improvements identified in the PSR be added to the City's TIF prior to the issuance of the building permits for this project, this project will pay its fair share of the costs of the improvements. However, because the improvement project has not been identified at this time and is unfunded, the project's incremental cumulative impact to the Southbound Highway 1 Ramps/Imjin Parkway intersection would be significant and unavoidable.

Significant

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact D-9: <u>2nd Avenue/Imjin Parkway – Intersection # 18:</u> This intersection would operate at LOS C during the weekday AM peak hour and LOS F during the weekday PM peak hour under Cumulative Without Project Conditions. The proposed project will increase the delay at the intersection during the Cumulative Condition PM peak hour by 4.4 seconds, creating a significant project impact.</p>	<p>Mitigation D-9: The additional improvements that would be required to achieve acceptable operations at this intersection with an at-grade intersection would not be feasible. The planned PSR for the Highway 1/Imjin Parkway intersection (which is TIF funded - the project will pay its share, as set forth above) will evaluate alternative designs for this intersection including the feasibility of grade separating Imjin Parkway and 2nd Avenue at this location. The improvements at the 2nd Avenue/Imjin Parkway intersection are linked to the Highway 1/Imjin Parkway interchange design project because of the close proximity between the two locations and because improvements at one location will affect design requirements at the other location. The improvements that would be required to mitigate the project's incremental cumulative impact to the 2nd Avenue/Imjin Parkway will be identified in the PSR. Should the funding for improvements identified in the PSR be added to the City's TIF prior to the issuance of the building permits for this project, this project will pay its fair share of the costs of the improvements. However, a funded improvement project that would mitigate the project's incremental cumulative impact to this intersection does not currently exist and cannot be developed until the PSR for the Highway 1/Imjin Parkway intersection is completed. Therefore, the project's incremental cumulative impact at this location is significant and unavoidable.</p>	<p>Significant</p>

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES**

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact D-10: <u>Third Avenue/Imjin Parkway – Intersection # 19</u> would operate at LOS F during the AM and PM peak hours under Cumulative Without Project Conditions. The proposed project will increase the delay at the intersection by 22.3 seconds during the AM peak hour and 26.0 seconds during the PM peak hour, creating a significant impact.</p>	<p>Mitigation D-10: The following improvement would be required to mitigate the project's incremental cumulative impact on the Third Avenue / Imjin Parkway intersection:</p> <p style="padding-left: 40px;">Add a right turn lane on the southbound Third Avenue approach to Imjin Parkway and modify the traffic signal at this intersection to include a right turn overlap phase.</p> <p>Construction of this improvement by the project would mitigate the project's incremental cumulative impact to this intersection. Based upon design plans prepared for Imjin Parkway, additional right-of-way on the west side of Third Avenue would be required to implement this improvement. Additional right-of-way 12 feet in width extending on the west side of Third Avenue for a distance of 400 feet would be required. The property located west of Third Avenue and north of Imjin Parkway is the site of the Monterey Peninsula College Fort Ord 12th Street Campus.</p> <p>The additional right turn lane on the southbound intersection approach is not currently in the City's CIP. The installation of a traffic signal at this intersection is included in the City's CIP and TIF. It is recommended that the additional right turn lane be added to the CIP and TIF.</p>	<p>Significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
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Mitigation D-10 (cont.):

Should the right turn lane be incorporated into the City's CIP and TIF, payment of the TIF would mitigate the project's cumulative impact at this location. If the right turn lane is not added to the City's CIP and TIF, then the project's cumulative impact would be significant and unavoidable because, as this intersection already operates at unacceptable LOS, the costs associated with acquiring the necessary right of way for and constructing the right turn lane and the overall benefit provided would be disproportionate to the project's contribution to the need for constructing the turn lane.

Significant

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES**

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact D-11: <u>Northbound Highway 1 North of Del Monte Boulevard North (Segment #1)</u> would operate at LOS F during the PM peak hour under Cumulative Without Project Conditions. The proposed project would add trips to this highway segment, resulting in a significant impact.</p>	<p>Mitigation D-11: The following improvement would be required to mitigate the incremental project impact on this segment:</p> <ul style="list-style-type: none"> • Add a third lane on northbound Highway 1 between the Del Monte North interchange and the Nashua Road-Molera Road interchange. <p>This improvement is not currently included in long-range improvement plans for Highway 1. The Caltrans Route Concept Report for Highway 1 includes widening four lane segments of Highway 1 to six lanes. However, there is currently no funded improvement that would widen this segment of Highway 1. Additionally, this segment would operate at unacceptable levels without the Project and this improvement is required due to regional traffic with or without the Project. Moreover, the costs associated with constructing this improvement would be disproportionate to the project's contribution to the need for constructing the improvement. Therefore, the project's incremental cumulative impact to Highway 1 north of Del Monte Boulevard North would be a significant and unavoidable impact.</p>	<p>Significant and unavoidable</p>

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES**

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact D-12: <u>Northbound Highway 1 South of Imjin Parkway (Segment #5)</u> would operate at LOS F during the PM peak hour under Cumulative Without Project Conditions. The proposed project would add trips to this highway segment, resulting in a significant impact.</p>	<p>Mitigation D-12: The following improvement would be required to mitigate the incremental project impact on this segment:</p> <ul style="list-style-type: none"> • Add a fourth lane on northbound Highway 1 south of Imjin Parkway. <p>This improvement is not currently included in long-range improvement plans for Highway 1. Widening Highway 1 beyond the existing 6-lane section south of Imjin Parkway is not anticipated in the Caltrans Route Concept Report for Highway 1. Additionally, this segment would operate at unacceptable levels without the Project and this improvement is required due to regional traffic with or without the Project. Moreover, the costs associated with constructing this improvement would be disproportionate to the project's contribution to the need for constructing the improvement. The project's impact to Highway 1 south of Imjin Parkway would be a significant and unavoidable impact.</p>	<p>Significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact D-13: <u>Southbound Highway 1 On-Ramp at Imjin Parkway (Segment #8)</u> would operate at LOS F during the AM and PM peak hours under Cumulative Without Project Conditions. The proposed project would add trips to this highway ramp, resulting in a significant impact.</p>	<p>Mitigation D-13: The following improvement would be required to mitigate the incremental cumulative project impact on this segment:</p> <ul style="list-style-type: none"> Widen the southbound on-ramp to Highway 1 from Imjin Parkway to two-lanes. <p>This improvement is included in the City of Marina Capital Improvement Program as an element of Roadway (R) 48 (Construct New Interchange). The Highway 1/Imjin Parkway interchange reconstruction project is not included in the City's TIF or the FORA CIP.</p> <p>The reconstruction of the interchange is required to serve regional traffic increases at the Highway 1/Imjin Parkway interchange. Additionally, this segment would operate at unacceptable levels without the Project. Moreover, the costs associated with constructing this improvement would be disproportionate to the project's contribution to the need for constructing the improvement. Accordingly, imposing an improvement of this magnitude on a single project is infeasible due to the costs associated with constructing the improvement and interchange. It is therefore beyond the scope of this project.</p> <p>Before any work can be done at the State highway interchange Caltrans will require a study to identify the long term design for the interchange and the interim measures that would be consistent with that design. The City's TIF includes the preparation of the PSR for the Highway 1/Imjin Parkway interchange.</p>	<p>Significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
	<p>Mitigation D-13 (cont.): Through the payment of the City's TIF, the project will contribute its fair share towards the development of a long-range improvement plan for the Highway 1/Imjin Parkway interchange. Should the funding for the improvements identified in the PSR be added to the City's TIF prior to the issuance of the building permits for this project, this project will pay its fair share of the costs of the improvements. However, because the improvement project has not been identified at this time and is unfunded, the project's incremental cumulative impact to the southbound Highway 1 on-ramp at Imjin Parkway would be significant and unavoidable. The City's TIF includes the preparation of the PSR. The PSR will evaluate alternative interchange designs to serve long-range traffic volumes at the interchange.</p>	Significant
<p>Impact D-14: <u>Imjin Parkway Between Highway 1 and 2nd Avenue (Segment #22)</u> would operate at LOS C during the AM peak hour and LOS D during the PM peak hour under Cumulative Without Project Conditions. The proposed project would add trips to this street segment that would decrease the PM peak hour LOS to "E," resulting in a significant impact.</p>	<p>Mitigation D-14: The following improvement would be required to mitigate the incremental cumulative project impact on this segment:</p> <ul style="list-style-type: none"> • Widen Imjin Parkway between Highway 1 and 2nd Avenue to 8 lanes. <p>Such a project is not consistent with the City General Plan which calls for a six lane Imjin Parkway. Widening Imjin Parkway to 8 lanes is considered to be impractical and undesirable from a planning perspective and therefore infeasible. Therefore, the project's impact at this location is significant and unavoidable.</p>	Significant

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES**

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact D-15: <u>Imjin Parkway Between 2nd Avenue and Imjin Road (Segments #23-26)</u> would operate at LOS F during the PM peak hour under Cumulative Without Project Conditions. Segment 23 between 2nd Avenue and 3rd Avenue would operate at LOS F during the AM peak hour under Cumulative Without Project Conditions. The proposed project would add trips to these street segments, resulting in a significant impact.</p>	<p>Mitigation D-15: The following improvement would be required to mitigate the incremental project impact on this segment:</p> <p align="center">Widen Imjin Parkway between 2nd Avenue and Imjin Road to 6 lanes.</p> <p>This improvement is not included in the City's CIP or TIF program. Widening these segments of Imjin Parkway (between Second Avenue and California Avenue) to 6 lanes is included in the City's General Plan. The CIP and TIF do include intersection improvements to widen Imjin Parkway to 6 lanes at 2nd Avenue, California Avenue and Imjin Road. Widening at these intersections, but not the segments between the intersections, would leave gaps in the Imjin Parkway widening to 6 lanes at Third Avenue, Fourth Avenue and Abrams Drive (south). Accordingly, it would be appropriate in this case to incorporate the widening of Imjin Parkway to 6 lanes into the TIF program to avoid these gaps. Widening Imjin Parkway to 6 lanes at the intersections of Third Avenue, Fourth Avenue and Abrams Drive (south) to provide a continuous 6 lane section of roadway would mitigate the project's incremental cumulative impact. If the Imjin widening is added to the City's CIP and TIF to close these gaps, payment of fees by the project developer to the TIF would mitigate the project's impact.</p>	<p align="center">Significant</p>

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES**

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
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Mitigation D-15 (cont.):

It should be noted that widening to Imjin Parkway between California Avenue and Abrams Drive South is inconsistent with the General Plan. If the widening is not added to the City's CIP and TIF, then the project's cumulative impact would be significant and unavoidable because, as this segment already operates at unacceptable LOS, the costs associated with widening and the overall benefit provided from the widening would be disproportionate to the project's contribution to the need for constructing the widening.

Significant

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES**

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact E-1: Building demolition and construction activities for both project and program level components could occur within about 250 feet of any of the identified potential noise-sensitive receivers, and within 100 feet in many cases. Accordingly, construction noise constitutes a temporary significant impact.</p>	<p>Mitigation E-1: To mitigate significant construction phase noise impacts, comply with Marina Municipal Code Section 15.04.055, "Construction hours and noise" through implementation of the following:</p> <ul style="list-style-type: none"> • Place Stationary Equipment and Staged Construction Equipment and Activities to Minimize Impacts. Consistent with reasonable construction logistics, any construction equipment staging areas should be placed at sites where the staging area and the associated primary location for ingress/egress are as isolated as possible from the noise-sensitive land uses most vulnerable to exposure to noise from staging activities. • Incorporate Site-specific Constraints on Construction Timing. Municipal Code Section 15.04.055 places constraints on construction timing based on typical diurnal patterns of noise sensitivity for standard residential areas. To the extent feasible, the noisiest construction activities planned near noise-sensitive land uses with different diurnal sensitivity patterns should be scheduled to reduce disturbance at these uses. • Provide Advanced Notification. In advance of the noisiest construction activities planned near occupied noise-sensitive uses, provide advance notice of the approximate schedule of such activities to the occupants and/or owners/operators of these uses. 	<p>Significant</p>

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES**

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact E-4: The future cumulative traffic noise increases along California Avenue both north and south of Reindollar Avenue, and along Patton Parkway west of California Avenue represent significant cumulative impact upon receptors in those areas. Therefore both the project and program level project components are affected by this condition.</p>	<p>Mitigation E-4: The mitigation measure for the cumulative traffic noise impact along Patton Parkway is identical to that identified under Mitigation Measure E3. There are not any feasible procedures in place to fund and complete retrofit mitigation to address noise impacts related to future cumulative traffic noise increases along existing local roadways that are neither under Caltrans/FHWA jurisdiction nor meet their noise abatement criteria. The significant cumulative traffic noise increases along such existing roadways identified in this report are predicted along California Avenue north and south of Reindollar Avenue. Table E-5 shows that the estimated proportional project contributions to these increases are negligible – 0.1 to three percent. Therefore, it would be unreasonable to delegate a disproportionate mitigation responsibility to the project. Additionally, a fair share fee program to raise funds to perform retrofits does not currently exist.</p> <p>Accordingly, the future cumulative traffic noise increases identified along these segments of California Avenue are deemed significant and unavoidable.</p>	<p>Significant</p>

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES**

CLASS I. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
	<p>Mitigation E-1 (cont.):</p> <ul style="list-style-type: none"> • Maintain Equipment. Assure that the engines and exhaust systems of major combustion-engine-powered construction equipment be properly tuned and muffled according to manufacturers' specifications. 	Significant
<p>Impact F-7: Based on the information currently available, the potential for significant (albeit brief and sporadic) exposure of future project occupants to inhalable PM from these potential future burns cannot be ruled out. Accordingly, exposure of future project occupants to temporary/intermittent elevations in PM levels represents a potentially significant impact.</p>	<p>Mitigation F-7: For generation of or substantial contribution to a violation of a NAAQS or CAAQS for particulate matter neither the Applicant nor the City have authority to control the actions of the U.S. Army, BLM or UCSC regarding potential future prescribe burns within Fort Ord boundaries, nor over how or whether future occupants might choose to reduce their exposure to smoke from such events. Therefore, no feasible, effective and enforceable mitigation measure was identified, and this impact, though limited in occurrence, is considered significant and unavoidable.</p>	Significant

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact A-2: The removal of trees in the Project site that do not contain nesting birds or bats will be subject to conditions in the City of Marina's Municipal Code, Chapter 12.04 and are potentially significant (Impacts J-1 through J-3). Removal of trees with active bird nests would conflict with the Migratory Bird Treaty Act and Section 3503.5 of the California Fish and Game Code. Removal of active maternity roosts of special status bats would conflict with Section 4700 of the California Fish and Game Code. Impacts related to nesting roosts would be significant as identified in Impact A-6 and A-7. Mature trees that will be retained on site would continue to provide habitat for raptors and bats.</p>	<p>Mitigation A-2: To mitigate significant impacts resulting from the removal of existing landscape trees (California native and exotic) the applicant shall prepare a Tree Protection and Compensation Plan pursuant to Mitigation Measure J1 and identify, in a tree replanting plan, the locations, numbers and sizes of trees to be planted pursuant to the City of Marina Tree ordinance.</p>	<p>Less than significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact A-4: The Project may result in the removal or disturbance of 4.36 acres of sand gilia, which is a federal and state listed plant. Although impacts to sand gilia were addressed and mitigated through the HMP, potential take under CESA of state listed plant species are not authorized under CESA through the HMP and requires a Section 2081 incidental take permit (ITP) from CDFG. Currently, the Fort Ord Reuse Authority is in the process of obtaining a base-wide Section 2081 ITP to mitigate for impacts to sand gilia within all development parcels within the former Fort Ord. Although the Project's impacts to sand gilia are not greater than those anticipated in the HMP, the Project potentially could conflict with CESA (a State law protecting biological resources); accordingly, until FORA obtains the base-wide Section 2081 ITP, impacts to sand gilia are considered significant and require mitigation</p>	<p>Mitigation A-4: Construction activities that may directly impact approximately 680 sand gilia individuals (approximately 4.36 acres) within the Project site are not anticipated to occur prior to FORA obtaining the base-wide Section 2081 ITP, which is expected to occur mid- to late summer 2007. In order to avoid potential impacts to sand gilia until the base-wide Section 2081 ITP is issued, the following mitigation measures shall be implemented prior to the commencement of any ground-disturbing activities within the Project site:</p> <ul style="list-style-type: none"> • Protective fencing shall be placed in consultation with a qualified biologist so as to keep construction vehicles and personnel from impacting the sand gilia individuals; • Grading, excavating, and other activities that involve substantial soil disturbance shall be planned and carried out in consultation with a qualified hydrologist, engineer, or erosion control specialist, and shall utilize standard erosion control techniques to minimize erosion and sedimentation in the areas containing the sand gilia individuals. • No construction equipment shall be serviced or fueled outside of designated staging areas. • Irrigation systems shall be designed to minimize runoff or irrigation water into the areas of the sand gilia individuals. 	<p>Less than significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
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Mitigation A-4 (cont.):

If construction activities must commence that will result in impacts to the identified areas containing sand gilia prior to issuance of the base-wide Section 2081 ITP, the following alternative mitigation measures (at the applicant's option) shall be implemented:

Less than significant

- The Project site plan shall be redesigned to eliminate the loss of the approximately 680 sand gilia individuals and provide protection for the individuals in perpetuity.

OR

- The Project applicant shall obtain a project-specific Section 2081 ITP to mitigate for the take of 4.36 acres of sand gilia (approximately 680 individuals). The Project applicant would be required to comply with the Section 2081 ITP requirements, which may include conservation of existing populations and/or creation/enhancement of suitable sand gilia habitat.

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact A-6: Raptors and their nests are protected by both federal and state regulations (MBTA and CDFG Code Sections 30503 and 3503.5), which protect birds of prey and their eggs and nests. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by CDFG. Any loss of fertile raptor eggs or nesting raptors, or any activities resulting in raptor nest abandonment, will constitute a significant impact. Construction activities such as tree removal or site grading that disturb a nesting raptor on-site or immediately adjacent to the construction site will constitute a significant impact.</p>	<p>Mitigation A-6: To mitigate potentially significant impacts to nesting raptors resulting from removal of trees during nesting season (the nesting season is March 1 to September 15), pre-construction (i.e. no more than 30 days prior to construction) surveys for active nests shall be conducted by a qualified biologist within 250 feet of proposed construction activities; pre-construction surveys are not necessary outside the nesting season. If active nests are found, a suitable construction buffer shall be established by a qualified biologist until the young of the year have fledged. Alternatively, construction activities that may affect nesting raptors can be timed to avoid the nesting season.</p>	<p>Less than significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact A-7: Special status bats could have hibernation or maternity roosts in cavities of large trees and/or in abandoned buildings on the Project site. Should removal of occupied trees or abandoned buildings occur during the construction of the proposed Project, individual bats and their roosting habitat would be lost. The loss of special status bats and their roost sites would be considered a potentially significant impact.</p>	<p>Mitigation A-7: Prior to construction (e.g., building demolition and tree removal), a qualified biologist shall survey the Project site for the presence of special-status bat species. If special-status bat species are present, the following measures shall be implemented:</p> <ol style="list-style-type: none"> 1. Removal of buildings that contain the bats shall not occur if maternity bat roosts are present (typically maternity roosts are present between April 15 and August 1; however, this timeframe does not apply to all species). 2. No building removal shall occur within 30 feet of the maternity roost until all young bats have fledged – as determined by a qualified biologist. 3. If special-status bats are present but there is not an active maternity roost, the building(s) containing the bats shall not be demolished or removed until the bats have been excluded using exclusionary devices under the supervision of a qualified bat specialist. 	Less than significant
<p>Impact B-1: Implementation of the Project may disturb land with some degree of potential to contain cultural resources. This impact is potentially significant.</p>	<p>Mitigation B-1: As a condition of Project approval the Project grading plans shall include a note 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.</p>	Less than significant

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact C-2: Based on Department of Toxic Substances Control information, the potential exists for the potential hazardous materials or munitions to exist on the site that will require pre-construction training to ensure safety of workers. The potential presence of these materials does not affect the status of the findings in the FOST.</p>	<p>Mitigation C-2: Based Department of Toxic Substances Control information, prior to issuing of construction permits the project applicant shall confirm the status of pending resolution of the Army Track 1 Remedial Investigation and Feasibility Study dated June 21, 2004 related to potential MEC Track 1 site on the property and confirm with the Army any pre-construction training requirements applicable to this site.</p>	<p>Less than significant</p>
<p>Impact D-1: <u>Southbound Highway 1 Ramps/Imjin Parkway – Intersection # 16:</u> The project would add traffic to the southbound Highway 1 ramp approach to Imjin Parkway, which operates at LOS F under Existing Conditions. This is a significant project impact.</p>	<p>Mitigation D-1: To mitigate the project's impact to the intersection, the following improvement would be required:</p> <ul style="list-style-type: none"> • Signalize the intersection. <p>This improvement is included in the City of Marina Capital Improvement Program as Traffic Intersection (TI) 22. The improvement is also included in the TIF, toward which the project will contribute. The City is scheduled to construct this improvement in the 2007/2008 timeframe. The Cypress Knolls project will pay its share of the cost of this improvement and mitigate its impact through the payment of the TIF.</p>	<p>Less than significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact D-2: <u>Third Avenue/Imjin Parkway – Intersection # 19:</u> The project would add traffic to the southbound and northbound Third Avenue approaches to Imjin Parkway. These approaches operate at LOS F under existing conditions during the AM and PM peak hours. The delay on the approaches currently operating at LOS F increase with project trips added to the intersection creating a significant project impact.</p>	<p>Mitigation D-2: Widening the southbound and northbound approaches to provide more lanes on these approaches would not mitigate the incremental delay caused by the project at this intersection. Signalization of the intersection would mitigate the incremental delay, but the peak hour volume traffic signal warrants would not be met at the intersection based on Existing Plus Project Condition AM and PM peak hour volumes. The City’s Capital Improvement Program includes constructing a traffic signal at the intersection (TI 6). This improvement is included in the City’s TIF. The project’s payment of the City of Marina TIF will mitigate the project’s impact at this location.</p> <p>However, traffic signals are not installed unless the need for the signal is established by an engineering study that includes an evaluation of peak hour and 8-hour volumes at the intersection. To mitigate the project’s impact at this intersection prior to the installation of the signal, the following improvement would be required:</p> <ul style="list-style-type: none"> • Modify the median opening at the Imjin Parkway/Third Avenue intersection to prohibit left turns and through movements from the Third Avenue approaches to Imjin Parkway. 	<p>Less than significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
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Mitigation D-2 (cont.):

It is recommended that these interim improvements be installed as part of the project. The median closure can be accomplished using channelizers so that the closure can be easily reversed in the future when the signal is installed. Left turn movements from the Third Avenue approaches can be accomplished by either turning right onto Imjin Parkway from Third Avenue and performing a u-turn movement at an another intersection along Imjin Parkway or by accessing the signalized intersection of Imjin Parkway and 2nd Avenue via the local street network (i.e., 12th Street or 9th Street). Closure of the median opening on Imjin Parkway at Third Avenue should be reassessed as new development in the area occurs.

Less than significant

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact D-3: <u>Fourth Avenue/Imjin Parkway – Intersection # 20:</u> The project will add traffic to the intersection that would cause the existing LOS F operations on the 4th Avenue approaches to worsen, resulting in a significant impact.</p>	<p>Mitigation D-3: Widening the southbound and northbound approaches to provide more lanes on these approaches will not mitigate the incremental delay caused by the project at this intersection. Signalization of the intersection would mitigate the incremental delay. The City’s Capital Improvement Program includes constructing a traffic signal at the intersection (TI 9). This improvement is included in the City’s TIF. The project’s payment of the City of Marina TIF will mitigate the project’s impact at this location.</p> <p>The peak hour volume traffic signal warrants would not be met at the intersection based on Existing Plus Project Condition AM and PM peak hour volumes. To mitigate the project’s impact at this intersection prior to installation of the signal, the following improvement would be required:</p> <ul style="list-style-type: none"> • Modify the median opening at the Imjin Parkway/Fourth Avenue intersection to prohibit left turns and through movements from the Fourth Avenue approaches to Imjin Parkway. <p>It is recommended that these improvements be installed in conjunction with the project.</p> <p>The median closure can be accomplished using channelizers so that the closure can be easily reversed in the future. Left turn movements from the Fourth Avenue approaches can be accomplished by either turning right onto Imjin Parkway from Fourth Avenue and performing a u-turn movement at the another intersection along Imjin Parkway or by accessing the signalized intersection of Imjin Parkway and 2nd Avenue via the local street network (i.e., 12th Street or 9th Street).</p>	<p>Less than significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact D-5: <u>Third Avenue/Imjin Parkway – Intersection # 19:</u> This intersection was analyzed assuming all turning movements are allowed. The project will cause the average delay experienced by vehicles on the Third Avenue approaches to Imjin Parkway, which operate at LOS F under Background Conditions, to increase. This is a significant project impact.</p>	<p>Mitigation D-3 (cont.): Closure of the median opening on Imjin Parkway at Fourth Avenue should be reassessed by the City as new development in the area occurs.</p> <p>Mitigation D-5: The peak hour volume traffic signal warrant would be met during the PM peak hour. To mitigate the project's impact at this intersection, the following improvement would be required:</p> <ul style="list-style-type: none"> • Signalize the intersection. <p>The City's Capital Improvement Program includes constructing a traffic signal at the intersection (TI 6). This improvement is included in the City's TIF, and is anticipated to be constructed in the 2008/2009 timeframe. The project's payment of the City of Marina TIF will mitigate the project's impact at this location to less than significant.</p>	<p>Less than significant</p> <p>Less than significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact D-6: <u>Fourth Avenue/Imjin Parkway – Intersection # 20:</u> The project will add traffic to the intersection that would cause the existing LOS F operations on the 4th Avenue approaches to worsen, resulting in a significant impact.</p>	<p>Mitigation D-6: Signalization of the intersection would mitigate the incremental delay. The City's Capital Improvement Program includes constructing a traffic signal at the intersection (TI 9). This improvement is included in the City's TIF. The project's payment of the City of Marina TIF will mitigate the project's impact at this location.</p> <p>Background Plus Project peak hour volumes do not approach levels that would warrant the installation of a traffic signal. To mitigate the project's impact at this intersection prior to installation of the signal, the following improvement would be required:</p> <ul style="list-style-type: none"> • Modify the median opening at the Imjin Parkway/Fourth Avenue intersection to prohibit left turns and through movements from the Fourth Avenue approaches to Imjin Parkway. <p>It is recommended that these improvements be installed as a condition to the project. The median closure can be accomplished using channelizers so that the closure can be easily reversed in the future. Left turn movements from the Fourth Avenue approaches can be accomplished by either turning right onto Imjin Parkway from Fourth Avenue and performing a u-turn movement at the another intersection or by accessing the signalized intersection of Imjin Parkway and 2nd Avenue via the local street network (i.e., 12th Street or 9th Street). Closure of the median opening on Imjin Parkway at Fourth Avenue should be reassessed as new development in the area occurs.</p>	<p>Less than significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact E-2: Based on the predicted future exterior noise levels and their implications for potential exposure of building interiors for residential and program level anticipated land uses to traffic noise, this impact is deemed significant.</p>	<p>Mitigation E-2: To mitigate exposure of program level future land uses and project-level residential land uses to noise, implement the following for each project component noted: Incorporate an appropriate mix of design measures to provide acoustical control into the final project plans such as walls, fences, earth berms or landform and increased setback for the noise source in locations as follows: For program level future land uses, along those portions of the Imjin Parkway and California Avenue frontages of the 18-acre potential park parcel where such acoustical control measures could substantially interrupt the line of sight between those roadways and large portions of the parcel on the opposite side of the barrier. Based on guidance provided in paragraph 4.112 of the Noise Protection section of the City's General Plan (excerpted earlier in this section) and the relatively high degree of geometric flexibility currently available for mitigation on this parcel, berm or wall-topped berm construction is recommended for any such barriers. For project level residential land uses, along those proposed senior residential lots within about 150 feet of the centerline of California Avenue. Such barrier alignments are shown as two pink lines on the right side of Figure E-2, one below (southwest of) the proposed A Street (along proposed Lots 266 to 269), another above (northeast) of that proposed roadway (along proposed Lots 41 to 53).</p>	Less than significant

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
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Mitigation E-2 (cont.):

These barriers would mitigate the impact represented by receiver location N4 to less than significant. Wall-topped berms and/or substantial roadway-side landscaping and/or increased rear setbacks, as practical, should be applied here consistent with paragraph 4.112 of the Noise Protection section of the City's General Plan.

Less than significant

Along the portion of the project site's northwestern boundary representing future senior residential lots that would be most exposed to traffic noise from SR 1, although retained trees along SR would reduce this impact. This proposed barrier alignment is shown as a single pink line on the left side of Figure E-2. This barrier would bound proposed Lots 542 to 564. It would mitigate the impact represented by receiver location N2b. Accordingly, the recommended mitigation measures for this impact reduce it to a less-than-significant level.

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES**

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact E-3: Based on the noise levels recorded at measurement site F3a, it is reasonable to expect that existing L_{dn} at residential locations north of the proposed Patton Parkway alignment (<i>i.e.</i>, existing conditions without a Patton Parkway, or any other roadway, adjacent to these residential locations) are generally below 50 dBA, probably somewhere on the order of 45-48 Dba. The modeled L_{dn} of 56 dBA under Baseline+Project conditions (<i>i.e.</i>, with Patton Parkway, plus traffic from the project and other approved but not yet constructed projects) would therefore represent an increase of well over five decibels, a significant noise increase.</p>	<p>Mitigation E-3: Project-Generated Traffic Noise Impacts at Off-Site Receptors: To mitigate project and future traffic noise levels, incorporate an appropriate mix of design measures to provide acoustical control into the final project plans such as walls, fences, earth berms or landform and increased setback for the noise source along the north side of Patton Parkway..</p>	<p>Less than significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact F-1: Projected construction phase PM₁₀ emissions would exceed the APCD's applicable significance threshold during site construction activities, resulting in a potentially significant impact.</p>	<p>Mitigation F-1: To mitigate fugitive dust emissions related to project construction, the following shall be implemented:</p> <p>Prepare an Erosion Control Plan to be reviewed and approved by the City, which should include the following as applicable:</p> <ul style="list-style-type: none"> • Water all active construction areas as needed. Frequency should be based on the type of operation, soil, and wind exposure. • Prohibit all grading activities during periods of high wind (over 30 mph). • Haul trucks shall maintain at least 2'0" of freeboard. • Cover all trucks hauling dirt, sand, or loose materials. • Plant vegetative ground cover in disturbed areas as soon as possible. • Cover inactive storage piles. • Install wheel washers at the entrance to construction sites for all exiting trucks. • Sweep streets if visible soil material is carried out from the construction site. • Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the APCD shall be visible to ensure compliance with Rule 402 (Nuisances). 	<p>Less than significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact F-2: For PM₁₀, based on conservatively high assumptions regarding the proportion of wood-burning appliances, estimated wintertime emissions from area-wide sources are 94 pounds per day, resulting in total operational PM₁₀ emissions of 148 pounds per day. As shown in Table F-8, these emissions exceed the applicable significance criterion, resulting in a potentially significant impact.</p>	<p>Mitigation F-2: To mitigate PM₁₀ emissions related to residential fuel combustion, limit wood-burning appliances to wood fireplaces, and permit installation of such appliances into no more than 35 residential units.</p>	Less than significant
<p>Impact F-3: Health impacts related to airborne lead exposure generated during project demolition activities represent a potentially significant impact.</p>	<p>Mitigation F-3: To mitigate the emission of airborne concentrations of lead compounds associated with project-related building demolition, implement the following APCD staff-recommended work practices contained in proposed Rule 439:</p> <ul style="list-style-type: none"> • As necessary to prevent visible emissions, sufficiently wet the structure prior to removal. Continue wetting as necessary during active removal and the debris reduction process. • Demolish structure inward toward building pad. Laydown roof and walls so that they fall inward and not away from the building. • All removal activities must cease when wind speeds exceed 15 miles per hour. 	Less than significant

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact F-4: Modeled predictions of construction related acrolein show a potentially significant impact based on APCD thresholds.</p>	<p>Mitigation F-4: To mitigate toxic Air Contaminant Emissions Related to Other Aspects of Project Construction, before construction contracts are finalized, perform a follow-up assessment of acute health risk associated with acrolein based on more sophisticated dispersion modeling and, to the extent available at that time:</p> <ul style="list-style-type: none"> • Updated PM emission factors (ARB is expected to release a substantial update to its OFF-ROAD model shortly); and • More specific construction activity parameters. <p>If such follow-up more detailed and exacting assessment (based on more exact construction parameter and updated PM emissions) shows impacts less than applicable standards, then no mitigation is necessary. If such assessment shows impacts greater than the applicable standard, or if the project proponent elects not to perform the assessment but rather proceed directly with the following mitigation, then the following would apply:</p> <ul style="list-style-type: none"> • Require a combination of off-road construction vehicle fleet characteristics, after-market retrofits, fuel types, additives and perhaps development phasing/duration that would reduce the acute acrolein hazard index below the significance threshold of one. The following measures would be expected to contribute to this reduction: • Use equipment with diesel engines newer than those shown in the first two date rows of Table F-10. 	<p>Less than significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
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Mitigation F-4 (cont.):

- | | | |
|--|---|-----------------------|
| | <ul style="list-style-type: none"> • Use equipment with engines having experienced fewer preceding cumulative hours of use than those shown in the same data rows of Table F-10 (and therefore having experienced less deterioration of performance). • Install diesel oxidation catalysts on construction equipment that is compatible with but lacks such control devices, to reduce ROG (including acrolein) emission rates from diesel exhaust. • Substitute a biodiesel blend for conventional petroleum-based diesel fuels for use in compatible construction equipment to • reduce PM emissions. (Such fuel might also generate a small reduction in acrolein emissions.) Currently, at least one major construction manufacturer has released approval for use of a five percent biodiesel blend (B05) for all of their equipment and has indicated the possibility of using blends up to B20 with many of their products. Note, however, that currently-published authoritative data shows relatively modest acrolein emission reduction benefits from such blends. • Use an ARB-approved diesel fuel additive to reduce emissions of ROG (potentially including reductions in acrolein emissions). An additive which has already been used in California and is currently being evaluated by the ARB is Viscon, a product specifically mentioned by APCD staff as a viable emission reduction technique. | Less than significant |
|--|---|-----------------------|

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact H-1: The existing water distribution system does not provide minimum fire flows necessary for public safety purposes for attached structures having over 3,600 square feet of floor area, nor for the larger structures such as apartments and the assisted living facility. This is a potentially significant impact.</p>	<p>Mitigation H-1(a): Project residences shall be provided with a combination of fire sprinkler systems and/or fire flow and/or other mechanisms approved by the Fire Chief to meet the standards of the Uniform Fire Code and the Fire Division of the Marina Public Safety Department.</p>	Less than significant
	<p>Mitigation H-1(b) To increase the performance of the water distribution system for fire flow purpose, provide a new connection between the system and the 16-inch well transmission line at Third Avenue and the California Road extension in a manner which will meet the minimum Project fire flow requirements determined by the Fire Safety Division of the Marina Public Safety Department.</p>	Less than significant
<p>Impact I-1: The Proposed Project could have areas of localized flooding if the Project does not provide stormwater conveyances sized to accommodate the 100 year storm event runoff. This condition is a potentially significant impact due to flooding</p>	<p>Mitigation I-1: To mitigate potential 100-year storm flooding impacts final Tract grading and drainage plans shall create storm drains to convey a 100-year storm volume to the retention basin, acceptable to the City Public Works Department.</p>	Less than significant

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact J-1 The Project would remove existing mature trees and related landscape within the central area of the site resulting in a significant visual change as viewed from within the project and along the various public streets and access points into the site. This is a significant but mitigable impact.</p>	<p>Mitigation J-1: To mitigate significant impacts related to removal of existing trees within the project site, the applicant shall prepare a Tree Protection and Compensation Plan based on Marina Code requirements and based on detailed site surveys to identify trees to be protected, removed and replaced, and include fast growing local species, such as Monterey Cypress, and native Coast Live Oak. The Plan shall be reviewed and approved by the City Tree Committee.</p>	<p>Less than significant</p>
<p>Impact J-3 Selected trees located in the northern portion of the proposed apartment site and along California Avenue are significant to visual character and scenic resources of the Marina Planning Area by providing landscape screening of the project site. At present, these trees are planned to be retained. It is possible, however, that these trees will need to be removed at the time development immediately adjacent to these trees (e.g., when the apartments are constructed) occurs, depending upon the health of the trees at that time and the specifics of the development. This is a potentially significant but mitigable impact.</p>	<p>Mitigation J-3: If these trees are removed, a Tree Protection and Compensation Plan must be prepared based on Marina Code requirements as determined by the City Council per the City's Tree Protection Ordinance addressing the replacement and/or retention of these trees. The plan shall require replacement at ratio as required by the Marina Code and are recommend to consist of native Monterey Cypress and Coast Live Oaks and other appropriate trees.</p>	<p>Less than significant</p>

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CLASS II. SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact K-1: The discharge of sediment or pollutants during construction into the proposed percolation ponds could affect water quality by introducing pollutants that could have an adverse effect on groundwater, a potentially significant impact.</p>	<p>Mitigation K-1: Compliance with the State General Construction Activity Permit, as recently modified by SWRCB resolution, and City standards applied uniformly to all projects over one acre would ensure that construction-related sediment or other contaminants that could adversely affect receiving water would be reduced to a less-than-significant impact.</p>	<p>Less than significant</p>
<p>Impact K-2: Urban stormwater runoff typically contains oil, grease, and heavy metals from vehicles and pesticides and herbicides from landscape areas. These runoff constituents carried in runoff could adversely affect receiving water quality (groundwater), a potentially significant impact.</p>	<p>Mitigation K-2: Proposed Project shall be required to meet the Best Management Practices (BMP) standards for operational phase stormwater runoff (construction phase runoff impacts are addressed in Impact and Mitigation K-1) and to maintain the on-site BMPs. The Proposed Project shall implement BMPs to manage water quality by providing on-site runoff treatment in line with the on-site infiltration system. With this mitigation, the Proposed Project's stormwater pollutant load would be minimal, and would result in a less-than-significant impact.</p>	<p>Less than significant</p>

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES (Cont.)**

CLASS III. OTHER ENVIRONMENTAL IMPACTS WHICH ARE ADVERSE BUT NOT SIGNIFICANT

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact A-1: Implementation of the Proposed Project could result in the direct loss of maritime chaparral habitat, and developed/disturbed habitat. Impacts to developed/disturbed habitat are considered less-than-significant due to the dominance of non-native plant species and the associated low wildlife habitat value. Since maritime chaparral habitat is a HMP habitat, impacts to this habitat type of the former Fort Ord are anticipated and mitigated by the HMP. Therefore, impacts to maritime chaparral are considered less-than-significant and no mitigation is required.</p>	None required	Less than significant
<p>Impact A-3: The Project may result in the removal or disturbance of several special status plant species including Monterey spineflower, sandmat manzanita, Toro manzanita, Eastwood's golden fleece, and Monterey ceanothus. Impacts to these species were anticipated and accommodated by the HMP. Implementation of the HMP is considered mitigation for the impacts to HMP species. Therefore, impacts to these species are considered less-than-significant. The Project may also result in impacts to Kellogg's horkelia within the Project site. This species is a CNPS List 1B species. Although Kellogg's horkelia is not specifically addressed in the HMP, it occupies maritime chaparral habitat, a HMP habitat, and, therefore, would indirectly receive protection through the HMP; accordingly, impacts to Kellogg's horkelia would be less than significant.</p>	None required	Less than significant

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES (Cont.)**

CLASS III. OTHER ENVIRONMENTAL IMPACTS WHICH ARE ADVERSE BUT NOT SIGNIFICANT

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact A-5: The Project may result in impacts to black legless lizards and California coast horned lizard, which would occur during the construction of the proposed Project. Mitigation for impacts to black legless lizards and their habitat is provided in the 1997 HMP through the set-aside and management of habitat reserve areas within the boundaries of the former Fort Ord. Since parties receiving lands on the former Fort Ord are required to comply with the mandates of the HMP as a condition of the land transfer, removal of potential habitat for black legless lizards through grading or other ground disturbance in the Project site would be considered a less-than-significant impact and no additional mitigation is required. Although the California coast horned lizard is not specifically addressed in the HMP, it occupies the same habitat as the black legless lizard and would indirectly receive protection through the HMP. Therefore, impacts to the black legless lizard and coast horned lizard and their habitat would not result in adverse effects to either species on former Fort Ord beyond what has already been accounted for in the HMP.</p>	None required	Less than significant

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES (Cont.)**

CLASS III. OTHER ENVIRONMENTAL IMPACTS WHICH ARE ADVERSE BUT NOT SIGNIFICANT

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact C-1: Based on the FOST and subsequent investigations within the former Fort Ord, it is not probable that a significant hazard exists on the site other than disposal of demolition generated materials from existing structures mitigated by Mitigation F-3.</p>	Mitigated by Mitigation F-3	Less than significant
<p>Impact F-5 Based on data reported by the U.S. Army's contractor for their initial prescribed burn, potential future prescribed burns within Fort Ord boundaries are not expected to expose future project occupants to significant increases in TAC exposure. Therefore, the exposure of future project residences to TACs is expected to constitute a less-than-significant impact.</p>	None required	Less than significant
<p>Impact F-6: Based on worst case modeling analysis derived from the EIR traffic report, the project's ambient CO concentration impacts are deemed less-than-significant.</p>	None required	Less than significant

Table S: SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES (Cont.)

CLASS III. OTHER ENVIRONMENTAL IMPACTS WHICH ARE ADVERSE BUT NOT SIGNIFICANT

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact G-2: 45.51 AF/Y of FORA groundwater is projected to be available for use within Marina's portion of the Ord Community following total build-out of the Marina Heights, MCP and proposed Cypress Knolls redevelopment projects, assuming all three redevelopment projects completely build out and that no new water supplies become available for use in Ord-Marina. The total combined additional demand projected for the potential future City park and City senior center is approximately 30.24 AF/Y. Although that demand comes within the 45.51 AF/Y of available FORA groundwater, any project-level action to cause construction of the park or senior center will require further project-level CEQA review for these uses. Thus, development of the Proposed Project, combined with a program-level approval of the potential future City park and City senior center, would not create new water demand that exceeds available sources of supply. Accordingly, the Proposed Project, combined with the City's program-level approval of the potential future City park and City senior center, will have a less-than-significant program-level impact on water resources.</p>	<p>None required</p>	<p>Less than significant</p>

**Table S: SUMMARY OF ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES (Cont.)**

CLASS III. OTHER ENVIRONMENTAL IMPACTS WHICH ARE ADVERSE BUT NOT SIGNIFICANT

Impact	Mitigation Measure	Level of Impact After Mitigation
<p>Impact G-3: The City and MCWD have concluded that the 2,400 AF/Y of Augmentation Project water is a reasonably foreseeable probable future water supply that will be available to serve probable future projects. Based on the cumulative water demand projected to arise from existing development, the Proposed Project and probable future projects that are allowed under the current, adopted Reuse Plan, and the conclusion of MCWD's 2005 UWMP that the Regional Urban Water Augmentation Project is designed to support build-out under the development restrictions imposed by the current Reuse Plan for former Fort Ord, the City concludes that approval of the Proposed Project in combination with other probable future development will have a less-than-significant cumulative impact on water resources.</p>	None required	Less than significant
<p>Impact J-2 Based on the proposed tree removal and retention plan, the existing Cypress trees along the western perimeter of the proposed project site will be retained for their aesthetic and screening quality, however, as recommended by the arborist, they will be thinned to improve their health and viability. Accordingly, this impact would be less than significant.</p>	None required	Less than significant

List of Acronyms Used

AB 939 = California Integrated Waste Management Act of 1989

AFY = Acre Feet per Year

AMBAG = Association of Monterey Bay Governments

ANSI = American National Standards Institute

APCD = Air Pollution Control District

AQMP = Air Quality Management Plan

ATCM

BAT = Best Available Technologies

BLM= Bureau of Land Management

BMPs = Best Management Practices

BRP = Fort Ord Base Reuse Plan

CAAQS = California Ambient Air Quality Standards

Caltrans = California Department of Transportation

CARB = California Air Resources Board

CCR = California Code of Regulations

CCRWQCB = Central Coast Regional Water Quality Control Board

CDFG = California Department of Fish and Game

CESA = California Endangered Species Act

CEQA = California Environmental Quality Act

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

CERFA = Comprehensive Environmental Response Facilitation Act

CFR = Code of Federal Regulations

CHP = California Highway Patrol

CHRIS = California Historical Resources Information System

CIP= Capital Improvement Projects

CMP = County of Monterey's Congestion Management Program

CNEL = community noise exposure level

CNPS = California Native Plant Society

CO = carbon monoxide

Corps = U.S. Army Corps of Engineers

CSC = California Species of Special Concern

CSUMB = California State University, Monterey Bay

CTS = California tiger salamander

CUPA = Certified Unified Program Agency

CWA – Clean Water Act

dB = decibel

dBA = A-weighted decibel scale

DOD = Department of Defense

DOT = Department of Transportation

DTSC = Department of Toxic Substance Control

ECP = Environmental Condition of Property

EIR = Environmental Impact Report

EPA = U.S. Environmental Protection Agency

FEMA = Federal Emergency Management Agency

FESA = Federal Endangered Species Act

FHWA = Federal Highway Administration

FHWA RD-77-108 = Federal Highway Administration Noise Prediction Model

FIRMS = Flood Insurance Rate Maps

FOBRP = Fort Ord Base Reuse Plan

FORA = Fort Ord Reuse Authority

FOST = Finding of Suitability to Transfer

GAMAQI = Guide to Assessing and Mitigating Air Quality Impacts

GIS = Geographical Information System

gpcpd = gallons per capita per day

gpm = gallons per minute

HCP = Habitat Conservation Plan

HCM = 2000 Highway Capacity Manual

HMP = Habitat Management Plan

IA = Implementing Agreement

IDF = Intensity-Duration-Frequency

ITE = Institute of Transportation Engineers

ITP

LAFCO = Local Agency Formation Commission

L_{eq} = equivalent energy noise level

L_{dn} = day night average level

L_{min} = minimum instantaneous noise level experienced during a given period of time

L_{max} = maximum instantaneous noise level experienced during a given period of time

LOS = Level of Service

MBTA = Migratory Bird Treaty Act

MBUAPCD = Monterey Bay Unified Air Pollution Control District

MCEST = Monterey Bay Education, Science and Technology Center

MCL = maximum contaminant limit

MCP = Marina Community Partners

MCWRA = Monterey County Water Resources Agency

MCWD = Marina Coast Water District

MPWMD = Monterey Peninsula Water Management District

MRSWMP = Monterey Regional Storm Water Management Program

MRWPCA = Monterey Regional Water Pollution Control Agency

MST = Monterey-Salinas Transit

NAAQS

NCCAB = North Central Coast Air Basin

NESHAP = National Emission Standards for Hazardous Air Pollutants

NFIP = National Flood Insurance Program

NHPA = National Historic Preservation Act

NO₂ = nitrogen dioxide

NOAA

NOI = Notice of Intent

NPDES = National Pollutant Discharge Elimination System

NPL = National Priority List

NWIC = Northwest Information Center

OE = ordnance and explosives

OES = Office of Emergency Services

OPR = Office of Planning and Research

OSHA = Occupational Safety and Health Administration

OU = operable unit

PM₁₀ = Particulate matter less than ten microns in diameter

PRV = Pressure Relief Valve

Psi = Pounds per square inch

PSR = Project Study Report

RCRA = Resource Conservation and Recovery Act

RI = Remedial Investigation

ROG = reactive organic gases

RTOR = right turns on red

RWQCB = Regional Water Quality Board

SANDAG = San Diego Association of Governments

SF = square feet

SHPO = State Historic Preservation Office

SIP = State Implementation Plan

SJVUAPCD = San Joaquin Valley Unified Air Pollution Control District

SO₂ = sulfur dioxide

SOPA = Society of Professional Archaeologists

SR 1 = State Route 1

SWPPP = Storm Water Pollution Prevention Plan

SWRCB = State Water Resources Control Board

TAC = toxic air contaminants

TAPS = Transportation and Parking Services

TI =Traffic Impact Analysis

TIF = Transportation Improvement Fund

URBEMIS = CARB's Urban Emissions Model

USFWS = U.S. Fish and Wildlife Service

UWMP = Urban Water Management Plan

UXO = unexploded ordnance

VdB = vibration decibels

VOC = volatile organic compound

WSA = Water Supply Assessment

WDR = Waste Discharge Requirements

C. IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126(f) of the State CEQA Guidelines states that for the preparation of EIRs, a discussion of any significant irreversible environmental changes which would be involved in the proposed action be provided. These irreversible environmental changes include: uses of non-renewable resources during the construction and operation phases of the Project, the commitment of future generations to the proposed uses, and any irreversible damage that would occur from development of the Project site.

In the short term, most changes that would occur on the site would be directly related to construction activities.

In the long term, the following effects would occur throughout the life of the Project:

- Increased traffic with associated air pollutant emissions and noise
- Permanent loss of area available to native plant communities
- Increased demand for fire and police protection
- Increased demand for water resources and wastewater treatment.

D. GROWTH INDUCING IMPACTS

The State CEQA Guidelines (Section 15126(g)) requires an EIR to discuss how a proposed project could directly or indirectly lead to economic, population, or housing growth. A project may be growth-inducing if it removes obstacles to growth, extends community service facilities or infrastructure, or encourages other activities or precedents which cause significant growth. The potential growth-inducing impacts of the proposed Project are discussed below in terms of these factors.

Economic, Population or Housing Growth

The Project would result in a net increase of 242 residential dwellings (i.e., the project would construct 242 more units than it would demolish) and 60 assisted-living quarters in the City of Marina over the historic number of dwelling units at Patton Park (existing units in the portion of Patton Park where the project would get constructed, however, are vacant). Since the Project is specifically designed primarily for elderly residents, the actual occupancy would be likely to be less than the 2.73 persons/dwelling identified for the rest of the City. If the occupancy is 2.0 persons/dwelling or less, the increase in population would be about 1424 (slightly more if the apartment units are not reserved for seniors only) persons plus 60 in assisted living. This change is part of the project objectives and is not considered a significant effect since the repopulation of the area is planned for in regional projections and will be phased over several years.

Removal of an Impediment to Growth

The public street improvements which will be constructed with the Project, or with the Project fees paid to the City, will only increase capacity to accommodate Project traffic or growth that is planned to occur under the orderly implementation of the City General Plan and the Fort Ord Reuse Plan. The improvements would not increase capacity to a degree that an impediment to growth (apart from the Proposed Project itself) is removed.

Potential for Land Use Intensification and Precedent-Setting Effects

In the case of the Fort Ord reuse, the Proposed Project is considered both "in-fill" and "reuse" because of the existing urban footprint and extensive infrastructure left behind by the military. Adjacent properties are and will be developed with institutional, residential and commercial uses, and would not be subject to increased development pressures as they are already planned. Vacant properties to the south are currently proposed for commercial uses. Therefore, the development of the Proposed Project site would not increase pressure on the City to intensify the land use designations and zoning on adjacent or nearby properties. However, the Proposed Project is expected to encourage population growth as the residential development would create employment and housing opportunities.

Precedent setting effects are defined as the ability of a project to set an example of what can be achieved on parcels with similar land use designations and parcels of land situated in similar location within the City and with similar constraints. Parcels of land potentially susceptible to precedent-setting effects of the proposed Project include other parts of the former Fort Ord such as Abrams and Preston Park housing areas which are planned for orderly redevelopment under the Reuse Plan. There are no other large parcels similar to the proposed Project elsewhere in the Marina area.

E. SUMMARY OF CUMULATIVE IMPACTS AND APPROACH TO CUMULATIVE IMPACTS ANALYSIS

Cumulative impacts are two or more individual effects that, when considered together are considerable or compound to increase other environmental impacts. The individual effects may be changes resulting from a single project or several projects. Not all aspects of the Project would lead to cumulative effects. For example, most geologic and hazard impacts are site specific and not cumulative.

Section 15130(a)(3) of the CEQA Guidelines states also that an EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. This principle applies to the Proposed Project's contribution to cumulative traffic impacts, for example.

Section 15130(b) indicates that the level of detail of the cumulative analysis need not be as great as for the project impact analyses, that it should reflect the severity of the impacts and their likelihood of occurrence, and that it should be focused, practical, and reasonable.

Each study topic in Section IV of the EIR includes discussion of cumulative impacts. Projections of future conditions were based on City General Plan Land Use and Circulation Elements, the short term cumulative project list and the *Fort Ord Reuse Plan EIR*. The list of known projects is included in the traffic section in the EIR, and because they are based on the traffic report, the air quality and noise sections are also based on this information. This list of projects and summary of projections found in the General Plan and Reuse Plan satisfies the state CEQA Guidelines Section 15130 requirements for identifying a reasonable cumulative scenario

The following **Table S.2** tabulates the types of cumulative impacts for each study topic in the EIR. The designation 'N/A' means not applicable because no cumulative impacts were identified.

Table S-2. Summary of Cumulative Impacts

Topic	Significant Impact?	Impact after Mitigation
Drainage	no	N/A
Traffic	yes	significant
Public Services	no	N/A
Archaeology	no	Less than significant
Visual Resources	no	N/A
Air Quality	yes	significant
Noise	yes	significant
Geology/Soils	no	N/A
Recreation	no	N/A
Water Supply	no	N/A
Water Distribution	no	N/A
Hazards	no	N/A

The Cypress Knolls EIR relies upon a 2005 baseline and cumulative analysis updated from the projections from the current General Plan adopted in 2000, as amended through 2005, and the short-term cumulative (approved) project list contained in Exhibit 13 of Traffic Appendix E of this EIR. The long term cumulative scenario is consistent with other recent EIRs in the City of Marina, i.e. University Villages EIR and Marina Heights Specific Plan EIR. **Map 10-Significant Planned Projects in the City of Marina** shows the major projects within the city and former Fort Ord that are a substantial part of the cumulative scenario. This EIR also relies upon and references the cumulative analysis contained in the Reuse Plan EIR and General Plan EIR where applicable, appropriate and accurate, particularly regional traffic. The cumulative analysis assumptions are identified for each EIR topic within their respective sections. For example, the traffic, air quality and noise impact analysis rely on a uniform set of cumulative projections described in Section IV-D–Traffic in this EIR.

F. SUMMARY OF ALTERNATIVES TO THE PROPOSED PROJECT

The alternatives examined in Section V of the EIR include the No Project and two Reduced Scale Alternatives. An alternative of reuse of existing structures instead of reconstruction was determined to be infeasible due to the deteriorated condition of the structures and some infrastructure. The alternatives of different land use type or non-senior residential land use were rejected because previous Reuse Plan and General Plan EIRs adequately addressed these alternatives. Examination of alternative sites within the Reuse Plan area were rejected for the same reason.

The Reduced-scale Alternative Project- General consisting of 540 units including 400 residences in duplex configuration, 80 apartment units (affordable) and 60 assisted-living units, was identified as the environmentally superior alternative. The primary benefits of this alternative are reduced water demand, wastewater treatment demand, less loss of maritime chaparral habitat, less visual change and less cumulative noise increases.

This reduced scale alternative does not completely avoid any significant impact or reduce unavoidable, significant impacts to a less than significant level.

The Reduced Scale Alternative- General does not reduce any impact identified as significant and unavoidable in the EIR to a less than significant level with mitigation and does not achieve many of the project objectives. In addition, it could result in the needed dwelling units being developed elsewhere in a manner inconsistent with the “no sprawl” goal of the City’s General Plan. For this reason, it does not appear the environmental benefits of the alternative outweigh the substantially decreased attainment of project objectives.

The Reduced-scale Alternative Project-Traffic consists of 386 total residential units with 298 senior duplex units using existing pads, 58 apartment units, 30 assisted living units. In addition to achieving reductions in the impact areas noted above for Reduced Scale Alternative-General, this alternative was developed to see if a substantial density reduction would have a significant effect on traffic conditions and required mitigations. The analysis showed no substantial change in traffic conditions and mitigation required.

The Reduced Scale Alternative - Traffic does not reduce any impact identified as significant and unavoidable in the EIR to a less than significant level with mitigation, or provide a meaningful reduction in regional or local traffic volumes and required roadway improvements to meet future traffic volumes. It does not achieve many of the project objectives. In addition, it could result in the needed dwelling units being developed elsewhere in a manner inconsistent with the “no sprawl” goal of the City’s General Plan. For this reason, it does not appear the environmental benefits of the alternative outweigh the substantially decreased attainment of project objectives.

III. General Environmental Regulatory Setting

A. PHYSICAL AND REGULATORY SETTING

The former Fort Ord comprises approximately 55% of the 6,100 acres within the corporate limits of the City of Marina. The former Patton Park family housing area is located in the northwesterly portion of the former Fort Ord adjacent to the northern boundary of the former military reservation. Patton Park is one of three former military family housing areas within the City of Marina. The other two family housing areas are the Preston Park and Abrams Park areas.

The dominant land form of the Project area has been described as a large bowl with a flat base at the approximate center of the site. The topography of the area was created to a large degree by the grading undertaken to prepare the site for military housing in the early 1960's. The existing residential units are located on the slopes of this bowl. The flat base of the bowl is proposed for the community center, apartment units and the potential assisted living units. The site varies in elevation from a low point of approximately +56 feet msl (height above mean sea level) at the intersection of Booker and Carswell Streets in the southwest portion of the site to a high point of approximately +127 feet msl in the northwest portion of the site south of Hayes Circle near its intersection with a southerly prolongation of Crescent Avenue.

The most prominent vegetation on the site are its mature trees, the most numerous of which are pines, oaks, cypress and ornamentals. Native plants are also found on the site as remnants of the original natural habitat. The project site also has some sensitive biological conditions (e.g., the presence of Sand Gilia). Detailed discussion of the project site existing biological setting is set forth in detail in Section IV-A, Biological Resources in this EIR.

The existing slopes are stable. The flat area of the site is not considered to be within the 100 year flood plain by the Federal Emergency Management Agency (FEMA). (Refer to Section IV-I Drainage in this EIR.)

Detailed discussion of the existing environmental setting is set forth in each of the substantive topic areas discussed in Section IV of this EIR.

B. SURROUNDING LAND USES

To the north, the former Patton School has been conveyed to the Monterey Peninsula Unified School District (Refer to **Map 8-Existing Site Context**). The school site is currently being used as a combination of interim high school, evening adult school, and special education school for younger children. There is also an adjacent day care center in this location.

The Veterans Transition Center (VTC), a nonprofit organization, has acquired forty (40) residential units located to the southwest of the Cypress Knolls Project site. This area also includes an administration building known as Martinez Hall and two (2) barracks converted to offices. The VTC housing will be confined entirely to the southernmost portion of Hayes Circle. The VTC residential area will be separated from the Cypress Knolls Project by the creation of a new cul-de-sac on Hayes Circle.

To the south of the Cypress Knolls Project, Children Services International (CSI) has developed a children's day care center. This day care center has been operated in this location for several years.



Source: Applicant



The northeastern boundary of the Project site is the boundary between the former Fort Ord and the remainder of the City of Marina. Single family residences adjoin this portion of the Project boundary. These residences front on cul-de-sacs which are accessible from Reindollar Avenue and do not have direct access to the Cypress Knolls Project area.

C. PREVIOUS ENVIRONMENTAL DOCUMENTS AND BASELINE ANALYSES

The proposed Project is part of a larger plan to reuse the former Fort Ord known as the Fort Ord Reuse Plan. An environmental impact report was prepared by the Fort Ord Reuse Authority (see Section D below) in 1996, entitled the Ford Ord Reuse Plan Environment Impact Report, which provided CEQA documentation for all aspects of the Reuse Plan, including Patton Park. The Reuse Plan EIR is a program-level EIR as defined by CEQA (Public Resources Code, Section 21166). As such, the Reuse Plan EIR was intended to cover all subsequent actions implementing the plan provided no substantial changes in the Reuse Plan project setting and circumstances occur. The Reuse Plan EIR notes, however, that "Additional CEQA analysis may also be required at the specific project level to give decision makers more information about site-specific issues which are not addressed in this program-level EIR."¹ Therefore, this EIR provides that additional CEQA analysis at the project level for the senior housing and apartment project, and additional further program-level analysis for the proposed City planning level changes to facilitate potential future development of a City park and senior center. To the extent applicable, each EIR section describes the degree to which previous documents are used in this EIR analysis, if applicable.

Baseline Assumptions

In this EIR, analysis, impact projections and mitigations from the Reuse Plan EIR and Marina General Plan EIR are relied upon, where appropriate and applicable and if still accurate and current, summarized and updated to a 2005 baseline consistent with the Cypress Knolls EIR Notice of Preparation date of January 2005.

The City of Marina comprehensively updated its General Plan in 2000.² The City hired consultants to prepare detailed studies of existing conditions in the City which have been compiled into a Draft Technical Workbook.³ The Technical Workbook and General Plan EIR include information on relevant CEQA topics relevant to the Cypress Knolls EIR. The General Plan EIR provides additional baseline information that is utilized and referenced in the Cypress Knolls EIR where appropriate and applicable.

Incorporation of Other Documents by Reference

Detailed analyses contained in the Reuse Plan EIR and the General Plan EIR are summarized in this EIR, where relevant and applicable, in each applicable impact analysis section. Copies of two EIRs are incorporated into this EIR by reference as detailed below.

The following documents are incorporated into this EIR by reference, and are available for public review at the City of Marina Development Services Department located at 3056 Del Monte Avenue Suite 205 in Marina:

¹ Fort Ord Reuse Plan EIR, EDAW and EMC Planning Group, pp. 1-4.

² Since 2000, the City has made periodic updates and changes to the General Plan.

³ City of Marina General Plan Update Program Draft Technical Workbook, March 1998.

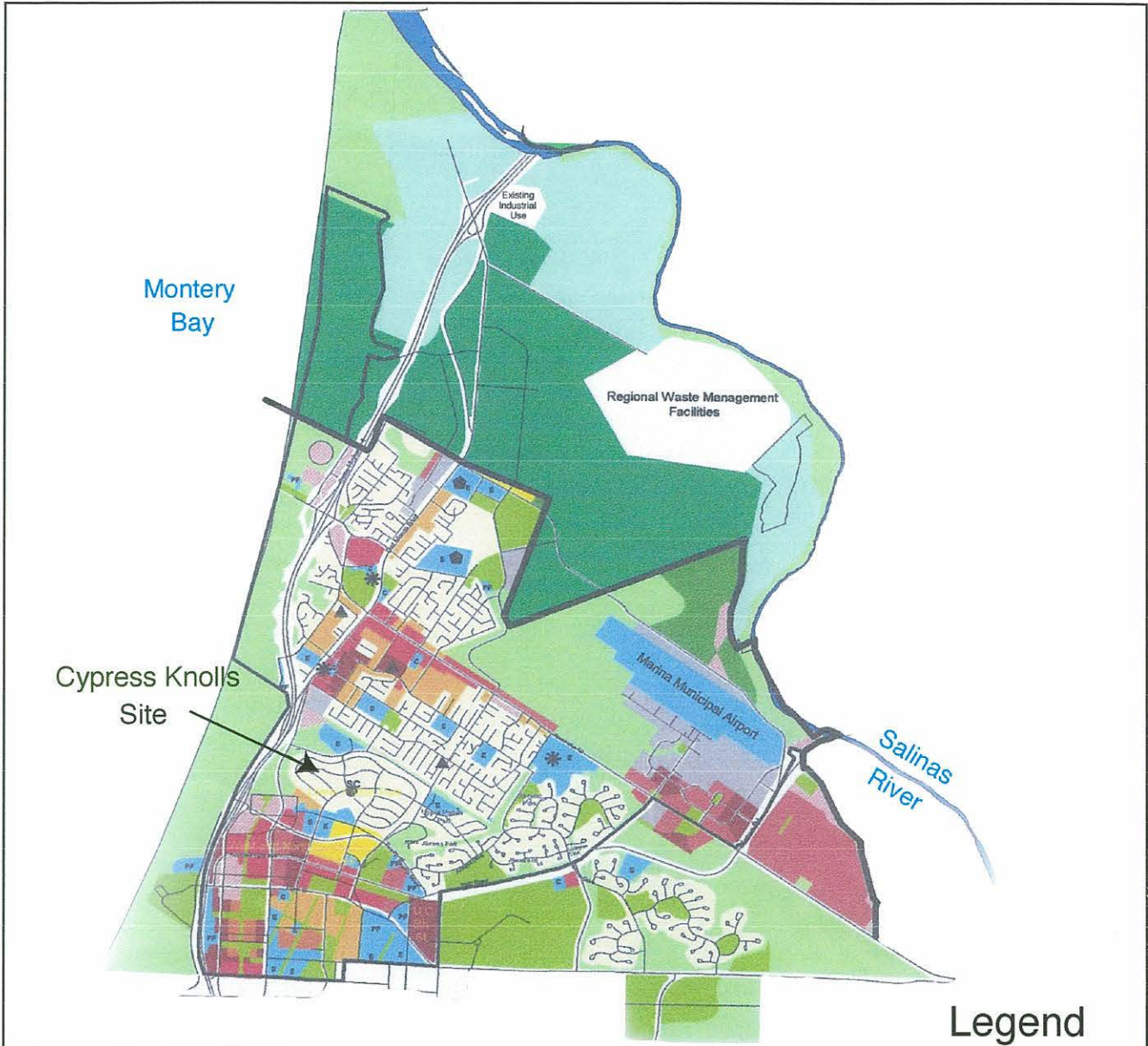
- Fort Ord Reuse Plan Final Environmental Impact Report (Reuse Plan EIR) SCH #96013022
- Marina Draft General Plan Environmental Impact Report (General Plan EIR) SCH #1999031064
- Urban Water Management Plan Environmental Impact Report, Marina Coast Water District SCH #2003081142
- Marina General Plan, 2005 and City of Marina General Plan Update Program Draft Technical Workbook, March 1998.
- Ford Ord Reuse Plan, 1997
- Staff report to the Marina Redevelopment Agency Board / Marina City Council on December 7, 2004

D. GENERAL REGULATORY SETTING

Fort Ord Reuse Plan: A 13-member board of elected representatives established by the California Legislature, the Fort Ord Reuse Authority (FORA) must prepare, adopt, finance and implement a plan for the land formerly occupied by Fort Ord, including the development of land use, transportation, and conservation strategies, and a five year capital improvement program. FORA Board Members represent the County of Monterey (three members) and the Cities of Marina (two members), Seaside (two members), Del Rey Oaks, Sand City, Carmel, Pacific Grove, Monterey and Salinas (one member each). "After the Board has adopted a Reuse Plan, an agency that is a member of FORA may adopt and rely on the Reuse Plan as its local general plan for the land in its jurisdiction that is also within the territory of the former Fort Ord. The Act indicates that all Fort Ord property that has been transferred from the federal government must be used in a manner consistent with the...Reuse Plan." (See FORA Reuse Plan, pg. 2-2.) The Fort Ord Reuse Plan developed by FORA was adopted in June of 1997. **Map 9** shows the General Plan Land Uses in the City of Marina, which conform to the land uses permitted in the FORA Reuse Plan. The Reuse Plan designates the Cypress Knolls site "SFD Medium Density Residential" which is intended primarily to permit single family and multiple family residential densities of 5-10 units per acre (gross). The proposed Cypress Knolls Project is in conformance with this Land Use designation. Refer to Section IV- O Land Use for a discussion of consistency with the Reuse Plan.

City of Marina General Plan. The Marina General Plan is composed of four primary elements: Community Land Use, Community Infrastructure, Community Design and Development, and Program and Implementation. The City's Housing Element is a separate document adopted in December 2004. It was since certified by the California Department of Housing and Urban Development as being in compliance with State law. The General Plan's Transportation Element is contained within the Community Infrastructure Element. See pp. 56, et seq. The General Plan's Public Health and Safety Element is a subchapter within the Community Design & Development Element. See pp. 117, et seq. The overall goal of the General Plan is to create a community which provides a high quality of life for all its residents; offers a broad range of housing, transportation and recreation choices; and which conserves irreplaceable natural resources. The Project site has a "Single Family Residential (5du/ac)" designation (Refer to **Map 9-City of Marina General Plan Land Use**). Refer to section IV-O Land Use and section IV-L subsection Population and Housing for an analysis of consistency with General Plan policies applicable to those topic areas.

Marina Zoning Ordinance: The Project site has a zoning designation of "R-4 (Multiple Family Residential District)." Refer to page I-9 for the proposed changes to the General Plan & Zoning Ordinance.



Legend

Urban Growth Boundary

Parks and Open Space

- Habitat Reserve & Other Open Space
- Parks and Recreation
- Agriculture Reserve
- Golf Course
- ▲ Mini-Park (general location)
- UGB Parks and Open Space (Draft Designation per Urban Growth Boundary Initiative)

Residential

- Single Family Residential (avg. density 5 dwelling units/acre)
- Village Homes (avg. density 8 dwelling unit/acre)
- Multi-family Residential (8-15 dwelling units/acre)
- High Density Residential (30-35 dwelling units/acre)

Commercial

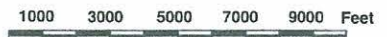
- Multiple Use
- Office/Research
- Retail/Service
- Visitor-Serving

Industrial

- Light Industrial/Service Commercial

Public Facilities

- E Education
- M Alternative Middle School Site
- C Civic
- ★ Alternative Civic Center site
- PE Other Public Facilities
- SC Senior Center



Source: Community LUE

City of Marina General Plan Land Use



Map
9

Congestion Management Plan

The Congestion Management Plan (CMP) is administered by the Transportation Agency of Monterey County and is intended to assist in the coordination of land use, transportation and air quality planning and implementation. It establishes a basic road network consisting of all state highways and principal arterial streets in Monterey County, and establishes the acceptable Level of Service (LOS) at which these roads are to perform. In addition, it designates a transit network (including frequency and coordination standards), promotes alternative transportation methods, requires the standardization of land use impact analysis, and defines a seven-year Capital Improvement Program. Roadways within the Marina Planning Area which are included in the CMP network are Highway 1, Del Monte Boulevard, Reservation Road, and Bianco Road. Refer to section IV-D for discussion related to this regional plan.

Fort Ord Habitat Management Plan

The Installation-wide Multi-species Habitat Management Plan for Former Fort Ord (HMP) was prepared by Jones and Stokes for the US Army as part of the base closure and disposal process. It describes those measures necessary to provide for the continued protection of all federally protected plant and animal species at the former Fort Ord, and provides the basis for the US Fish and Wildlife Service's conclusion that the closure of Fort Ord will not pose a threat to the continued existence of any species. The HMP was approved by both the Army and US Fish and Wildlife Service in April of 1997. All recipients of former Fort Ord lands will be required to abide by its management requirements and procedures. Refer to EIR section IV-A Biological Resources for discussion related to the HMP.

Air Quality Management Plan for the Monterey Bay Region

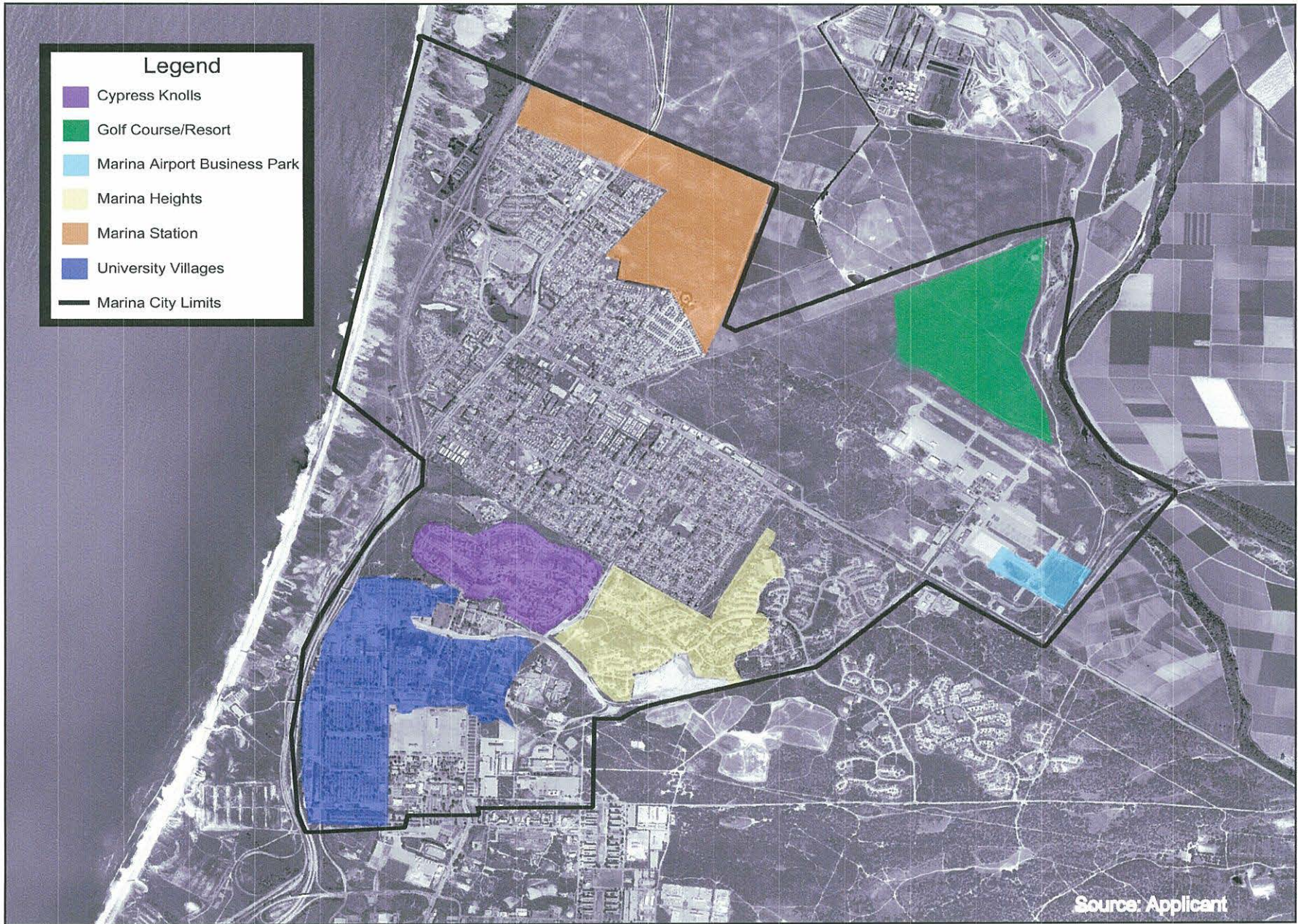
EIR Section IV-F Air Quality discusses consistency with this plan as well as project consistency with the AMBAG population projections in that plan.

A more detailed discussion of the Proposed Project's consistency with the above plans, and any other applicable plans, is contained in each of the substantive chapters of Section IV of this EIR (for example, the General Plan's policies regarding visual quality and visual impacts, and the Project's consistency with those policies, is discussed in Section IV-J, Visual Resources).

E. Areas of Known Controversy

The proposed Cypress Knolls retirement community will renovate and reuse a previously occupied family housing project area. It is not anticipated that the reuse of this area as a retirement community will be controversial within the City of Marina.

Members of the public testified at the EIR scoping meetings conducted by the City in spring 2004 and January 2005. One substantial issue raised was the loss of existing trees on the project site resulting from development. Water supply also may be an area of interest.



Significant Planned Projects in the City of Marina



IV. Environmental Analysis

A. BIOLOGICAL RESOURCES

1. Environmental Issue

The majority of the construction is proposed redevelopment of an area that currently contains former military residences. These homes and streets have been landscaped with Monterey cypress trees, Monterey pine, and an assortment of ornamental trees. Native trees and shrubs, such as coast live oak, are found where land was not developed.

The proposed construction of the Proposed Project would result in impacts to maritime chaparral habitat and potentially to special status species located near the Project site, including but not limited to Monterey spineflower, sandmat manzanita, Monterey ceanothus, Eastwood's golden fleece, Kellogg's horkelia, coast wallflower, coast horned lizard, and California black legless lizard, all as set forth in more detail below.

Project Specific and Program Level Analysis Assumptions

The Project site surveyed for the biological resources section includes the Tentative Tract Map area as well as the future Patton Parkway right of way and the two proposed Open Space parcels (potential future senior center and park). Though a development footprint is not yet known for these Open Space parcels' future uses, the potential impacts can be estimated (given that the potential future change in use would result in modification of the existing biological setting) and the mitigation measures identified in this section apply to both the Project and program level components.

2. Regulatory Setting

Federal Endangered Species Act. (FESA)-1973. Provisions of the federal Endangered Species Act (FESA) of 1973 (16 USC 1532 et seq., as amended) protects federally-listed endangered or threatened wildlife or fish species and their habitats from unlawful take. FESA provides more limited protections for federally-listed plant species, as set forth below. Listed species include those for which proposed and final rules have been published in the Federal Register U.S. Fish and Wildlife Service (USFWS) or *National Oceanographic and Atmospheric Administration (NOAA) Fisheries* (formerly known as the National Marine Fisheries Service). The FESA is administered by the USFWS and NOAA Fisheries. In general, NOAA Fisheries is responsible for the protection of FESA-listed marine species and anadromous fish, whereas other listed species are under USFWS jurisdiction.

Federal Candidate species are "taxa for which USFWS has on file sufficient information on biological vulnerability and threats to support issuance of a proposed rule to list, but issuance of the proposed rule is precluded." Federal candidate species are not afforded formal protection, although USFWS encourages other federal agencies to give consideration to candidate species in environmental planning. In 1996, the USFWS discontinued the Category 3 and 4 classifications for federal candidate species (USFWS,

1996). Species either are identified as candidate species with a listing priority classification or are no longer given any federal status.

Section 9 of FESA prohibits the take of any fish or wildlife species listed under FESA as endangered. Take, as defined by FESA, is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Harm is defined as "any act that kills or injures the species, including significant habitat modification." If there is the potential for take of a federally listed fish or wildlife species, take of listed species can be authorized through either the Section 7 consultation process for federal actions or a Section 10 incidental take permit process for actions by non-federal entities.

Plants are not protected against "take." Instead, plants are protected from harm in two circumstances. Section 9 prohibits (1) the removal and reduction to possession (i.e., collection) of endangered plants from lands under federal jurisdiction, and (2) the removal, cutting, digging, damage, or destruction of endangered plants on any other area in knowing violation of a state law or regulation. Section 9 also makes illegal the international and interstate transport, import, export, and sale or offer for sale of endangered plants and animals.

The Proposed Project site does not contain any federally listed fish or wildlife species, and, therefore, no take in violation of Section 9 of the FESA would occur as a result of the Proposed Project. However, the proposed Project site does contain two federally listed plant species: the Monterey spineflower and sand gilia. The Proposed Project would not violate FESA's protections for these listed plant species because (1) the Project site is not under federal jurisdiction (and, therefore, part of FESA's protections for plants is not applicable) and (2) the Proposed Project would not damage these plants in knowing violation of a state law or regulation (as set forth below).

Federal Migratory Bird Treaty Act – 1936. The MBTA regulates or prohibits taking, killing, possession of, or harm to designated migratory bird species. The MBTA is an international treaty and is enforced in the United States by the USFWS. The MBTA includes protection for migratory birds of prey (raptors).

California Endangered Species Act (CESA). The CDFG administers the California Endangered Species Act of 1984 (CESA - Fish and Game Code Section 2050), which regulates the listing and take of State-endangered and State-threatened species. The CESA established that it is State policy to conserve, protect, restore, and enhance endangered species.

Species listed under the CESA cannot be taken without adequate mitigation and compensation. "Take" in the context of the CESA means to hunt, pursue, kill, or capture a listed species, as well as any other actions that may result in adverse impacts when attempting to take individuals of a listed species. However, based on findings of the California Attorney General's Office, take under the CESA does not prohibit indirect harm by way of habitat modification. Typically, the CDFG implements endangered species protection and take determinations by entering into management agreements (Section

2081 Management Agreement) with Project applicants and/or by issuing a Section 2081 Incidental Take Permit.

CDFG maintains lists for Candidate-Endangered Species and Candidate-Threatened Species. California candidate species are given equal protection of the law as listed species have. CDFG also lists Species of Special Concern based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Species of special concern do not receive protection under the CESA or any section of the California Fish and Game Code, and may not meet CEQA Guidelines Section 15380 criteria as rare, threatened, endangered, or of other public concern. The determination of significance for California species of special concern must be made on a case-by-case basis. Designation of Species of Special Concern is intended by CDFG to be used as a management tool for consideration in future land use decisions by, for example, local agencies such as the City of Marina.

Installation-Wide Multi-species Habitat Management Plan for Former Fort Ord (U.S. Army Corps of Engineers, April 1997). As set forth below in more detail, the Project description for the U.S. Army's closure of former Fort Ord, which Project description was analyzed as part of the Army's Disposal and Reuse FEIS and FSEIS (and such analysis was carried forward through FORA's Reuse Plan Program EIR) was the development and implementation of a habitat management plan (HMP) to minimize incidental take of listed species and their habitat and to mitigate for impacts to vegetation and wildlife resources resulting from the U.S. Army's actions (and, consequently, FORA's actions in reuse planning for Fort Ord, including designating the Cypress Knolls Project site for development). The HMP provides parcel-specific prescriptions for both pre-transfer activities and post-transfer reuse that are intended to mitigate for impacts to vegetation and wildlife resources.

The U.S. Army's decision to close and dispose of the Fort Ord military base was considered a major federal action that could affect listed species under FESA. Therefore, the Army was required to undergo Section 7 consultation with the USFWS. The consultation culminated in the issuance of a Biological Opinion on the disposal and reuse of former Fort Ord and required that a Habitat Management Plan be developed and implemented to reduce the incidental take of listed species and loss of habitat that supports these species (October 19, 1993). This plan was prepared to assess impacts on vegetation and wildlife resources and provide mitigation for their loss associated with the disposal and reuse of former Fort Ord.

The HMP addresses impacts to biological resources associated with reuse of the former Fort Ord and establishes guidelines for the conservation and management of species and habitats on former Fort Ord lands. The HMP identifies lands that are available for development, lands that have some restrictions with development, and habitat reserve areas. The intent of the plan is to establish large, contiguous habitat conservation areas and corridors to compensate for future development in other areas of the former base. Specifically, the HMP includes a reuse development scenario for the entire base that will result in the removal of up to 6,300 acres of existing vegetation and wildlife habitat.

Losses to 18 special status plant and wildlife species designated as "HMP species" and two sensitive habitats designated as "HMP habitats" are addressed in the HMP. The establishment of approximately 16,000 acres of habitat reserves with about 400 additional acres of connecting habitat corridors is the primary measure to minimize the impacts of reuse on HMP species and habitats. In addition, the HMP further conditions development on approximately 1,800 additional acres by requiring reserve areas or restrictions on those lands. The HMP sets the standards to assure the long-term viability of former Fort Ord's biological resources in the context of base reuse so that no further mitigation for impacts to species and habitats considered in the HMP should be necessary.

The HMP, deed restrictions, and Memoranda of Agreement between the Army and various land recipients provide the legal mechanism to assure HMP implementation. It is a legally binding document, and all recipients of former Fort Ord lands are required to abide by its management requirements and procedures, including the Project proponent. Since the HMP does not designate any reserve areas or habitat corridors within the Project site, impacts to HMP species and habitats as a result of the Proposed Project are anticipated and mitigated by provisions in the HMP.

The HMP does not provide specific authorization for incidental take of federal or state listed species to other parties. In compliance with the CESA, the FORA is currently in the process of obtaining a Section 2081 Incidental Take Permit from CDFG, which will provide base-wide coverage for take of listed plant species to all non-federal entities receiving land on the former Fort Ord¹. Until this base-wide permit is issued by CDFG, actual take of any state listed species must be addressed on a project-by-project basis (as set forth later in this section, avoidance of take until the base-wide 2081 permit is issued is acceptable mitigation and would comply with CESA).

California Fish and Game Code - Sections 3503, 3503.5, 3513. Fish and Game Code Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird.

Fish and Game Code B Sections 3511, 4700, 5050, and 5515. Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code designate certain species as "fully protected."

California Environmental Quality Act (CEQA). Although threatened and endangered species are protected by specific federal and State statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or State list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after definitions in the FESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. Section 15380(b) requires public agencies to undertake reviews to determine if

¹ Additionally, in compliance with the FESA, FORA is currently in the process of obtaining a Section 10 Incidental Take Permit from the USFWS and preparing a Habitat Conservation Plan (HCP) and Implementing Agreement (IA), which will provide base-wide coverage for take of listed wildlife species to all non-federal entities receiving land on the former Fort Ord. Because the project would not take any federally-listed wildlife species, the proposed project's ability to go forward is not dependent upon completion of the HCP and IA.

projects would result in significant effects on species that are not listed by either the USFWS or CDFG (i.e., candidate species).

City of Marina Municipal Code Chapter 12.04. The City recognizes that the maintenance and new growth of healthy trees helps drainage and can reduce soil erosion, adds real property and aesthetic values, and provides habitat for wildlife. "To enhance the beauty of our city, while at the same time recognizing individual rights to develop private property, the city council adopts this chapter, establishing basic standards and measures to preserve and maintain existing trees and to encourage new tree planting. It is the intent of the city by the adoption of these regulations to limit and restrict the removal of healthy and desirable trees in the city. However, regarding single-family residential properties which cannot be further subdivided, the intent is to limit and restrict only the removal of landmark trees." (Ord. 96-3 § 2 (part), 1996).

Impact Significance Criteria

The City of Marina has established the following impact significance criteria for Fort Ord Reuse Projects. A project would have a significant impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. For this EIR, substantial adverse effect is defined as losses greater than those anticipated in the *Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord* (April 1997), which losses were analyzed in the FORA Reuse Plan EIR ;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. For the purposes of this EIR, substantial adverse effect is defined as losses greater than those anticipated in the *Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord* (April 1997), which losses were analyzed in the FORA Reuse Plan EIR;
- Have a substantial adverse effect on federally protected wetlands defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or by other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with the provisions of an approved local, regional or State policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

3. Environmental Setting

This section summarizes the description of biological resources, and impacts from previously-planned and approved base reuse, at the site of the proposed Cypress Knolls Project at the former Fort Ord, which can be found in detail in the following documents: Installation-Wide Multispecies Habitat Management Plan (HMP) for Fort Ord, California (April 1997) and Fort Ord Reuse Plan Draft EIR (May 1996) and Final EIR (June 1997).

The Project site was also surveyed by a Levine Fricke (LFR) biologist in January 1999, and subsequently by biologist Vernal Yadon in March, April and June 2000, May 2001, June 2002, July 2003, and April 2004 and April 2006, and by Denise Duffy & Associates, Inc. May 2006 (See Appendix G- Biological *Surveys*). The biological surveys consisted of canvassing the Project site on foot and recording the animal and plant species in identifiable condition. In addition, all animal signs such as tracks, scat, and burrows were investigated. The plant communities and animal habitats were described and potential effects of the disturbance on the natural vegetation noted. Refer to Map 11 Habitats and Special-Status Species within the Project site.

The Project site is located along the coast of Central California, at the former Fort Ord military base. Monterey Bay is located west of the site and, because of the proximity to the ocean, the climate is characterized as maritime. A maritime climate is cool and mild and does not display much daily or seasonal temperature fluctuations. The former Fort Ord has a very unique and diverse natural area because both northern and southern plant and animal species intermingle at the limits of their ranges in the Monterey area.

Maritime chaparral is the dominant vegetation type at Fort Ord and is noted to contain the greatest diversity of wildlife. Maritime chaparral typically occurs in windswept coastal areas of central and northern California. In Monterey, the maritime chaparral community is best developed on the sandy soils of old stabilized sand dunes. This community forms a mosaic with closed-cone coniferous forests, coastal live oak woodlands, and coastal scrub at the Project site.

The Cypress Knolls Project is located in the northwest region in Parcel E4.1, identified as an "Economic Development Conveyance Parcel with no HMP Requirements" by the Installation-Wide Multispecies Habitat Management Plan (HMP) for Fort Ord, California (April 1997). It is located east of Parcel E2a and west and north of parcel E8a.1, both parcels with development in reserve areas or development with restrictions².

Existing plant communities occurring within the Project site:

Developed/Disturbed- The developed/disturbed portions of the Project site cover about 90% of the approximately 190 acre site. Vegetation within these developed areas consists of ornamental trees and shrubs such as Monterey Cypress and Monterey Pine, with a

² U.S. Army Corps of Engineers, Sacramento District. 1997. Installation-Wide Multi-Species Habitat Management Plan for Former Fort Ord, California. April. Sacramento, CA. Page 4-53.

variety of introduced plants of Australian origin, such as Acacia. The understory is often non-native annual grasses and other exotic weeds. These non-native, weedy understory species include ruderal species such as ripgut brome (*Bromus diandrus*), wild oat (*Avena fatua*), filaree (*Erodium sp.*), iceplant (*Carpobrotus edulis*), plantain (*Plantago sp.*), and wild mustard (*Brassica sp.*). Most landscape trees are adjacent to buildings or roads. Over time since the closure of the base, some native species have become intermingled with previously landscaped or developed/disturbed areas of the site. There are many unpaved areas with bare, sandy soils that support a combination of primarily ruderal vegetation with some native coastal scrub species, such as coyote bush (*Baccharis pilularis*), telegraph weed (*Heterotheca grandiflora*), and deer weed (*Lotus scoparius*). The less-disturbed portions of these areas of the site support a variety of native species including beach evening primrose (*Camissonia cheiranthifolia*), suncups (*Camissonia ovata*), and Monterey spineflower (*Chorizanthe pungens var. pungens*). In addition, some shrubs, such as manzanita and ceanothus, are located in the developed area and have been incorporated into the historic landscaping of the site.

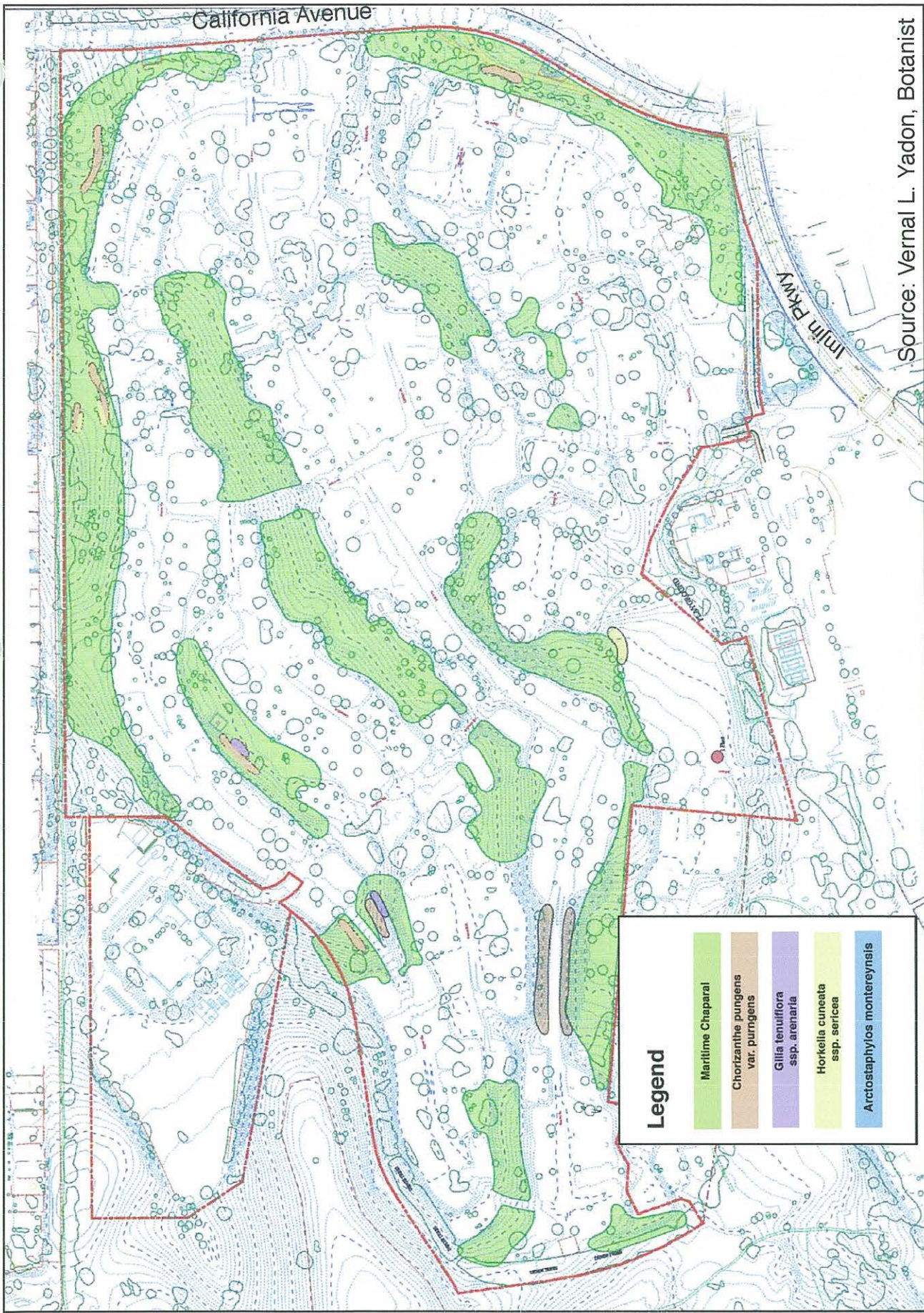
Wildlife diversity in these previously developed/disturbed areas is typically low due to the limited extent of native habitat. However, the trees could provide nesting sites for raptors and other birds, and abandoned buildings could potentially provide roosting sites for bats.

Maritime Chaparral- The maritime chaparral community within the former Fort Ord and the Project site is identified by the Habitat Management Plan (HMP) as “sand hill maritime chaparral”³, and is addressed in the HMP as a sensitive habitat. A mixture of manzanita, chamise, and ceanothus dominates the community. The dominant plants range in height from a few prostrate shrubs to tall to large bushes 6 to 9 feet tall. Scattered coast live oaks are also present but often grow on slopes exposed to strong coastal winds and are often wind pruned.

The community is primarily dominated by shaggy bark manzanita. Other species found in the shrub layer include dwarf ceanothus, chamise, Eastwood’s ericameria, black sage, monkey-flower, California sagebrush, silver lupine, coffeeberry, and deerweed. The herbal layer includes species such as yarrow, horkelia, rattlesnake grass, and red brome.

A series of botanical surveys was conducted in 1996, annually from 2001 to 2004, and again in 2006 (refer to **Appendix G**). Special-status shrubs identified within the maritime chaparral habitat include Monterey ceanothus, sandmat manzanita, and Eastwood’s golden fleece (reference Map and Appendix G). In addition, one Toro manzanita was identified within the Project site (refer to **map 11 and Appendix G**). Special-status herbaceous species identified within the maritime chaparral habitat include sand gilia, Monterey spineflower, Kellogg’s horkelia, small-leaved lomatium, and Michael’s piperia. Other exotic or weedy species found in the natural areas within the Project site include pampas grass, scotch brome, and eucalyptus. Eucalyptus were planted in corridors west of the school, as were rows of cypress.

³ U.S. Army Corps of Engineers, Sacramento District. 1997. Installation-wide multi-species habitat management plan for former Fort Ord, California. April. Sacramento, CA. Page S-8.



Source: Vernal L. Yadon, Botanist

Habitats & Special Status Species



Trees-The Project site hosts approximately 1780 trees mainly consisting of cypress, oak, and pine (refer to **Map 12-Existing Tree Survey**). Trees in the Project site, whether native or ornamental, represent habitat for local (common and special-status) wildlife species, and provide perching sites, shade and feeding opportunities (i.e., seeds, insects) as well as potential nesting opportunities.

Fauna-The HMP⁴ and the Fort Ord Reuse Plan Draft EIR⁵ described the maritime chaparral biological community as having the greatest diversity of HMP shrub species at former Fort Ord. One reason for this diversity is the periodic disturbance of the community caused by the unstable substrate and fire that maintains and rejuvenates the community. Healthy maritime chaparral occurs as a patchwork of stands that have burned at different times and that support vegetation of various ages and structures. The habitat mosaic allows for high species and habitat diversity.

Birds common to the maritime chaparral habitat include orange-crowned warbler, rufous-sided towhee, and California quail. Other birds observed in this habitat during the January survey include the scrub jay and American crow. These birds included a juvenile sharp-shinned hawk, red-tailed hawk, red-shouldered hawk, and American kestrel. These birds of prey may be common as a result of the presence of California mouse and brush rabbits that are known to forage in this habitat. Other mammals common to this habitat include gray fox, bobcat, spotted skunk, and deer.

Reptiles known to inhabit in this area include rattlesnake, legless lizard, northern alligator lizard, western skink, coast horned lizard, and western fence lizard.

Special Status Species

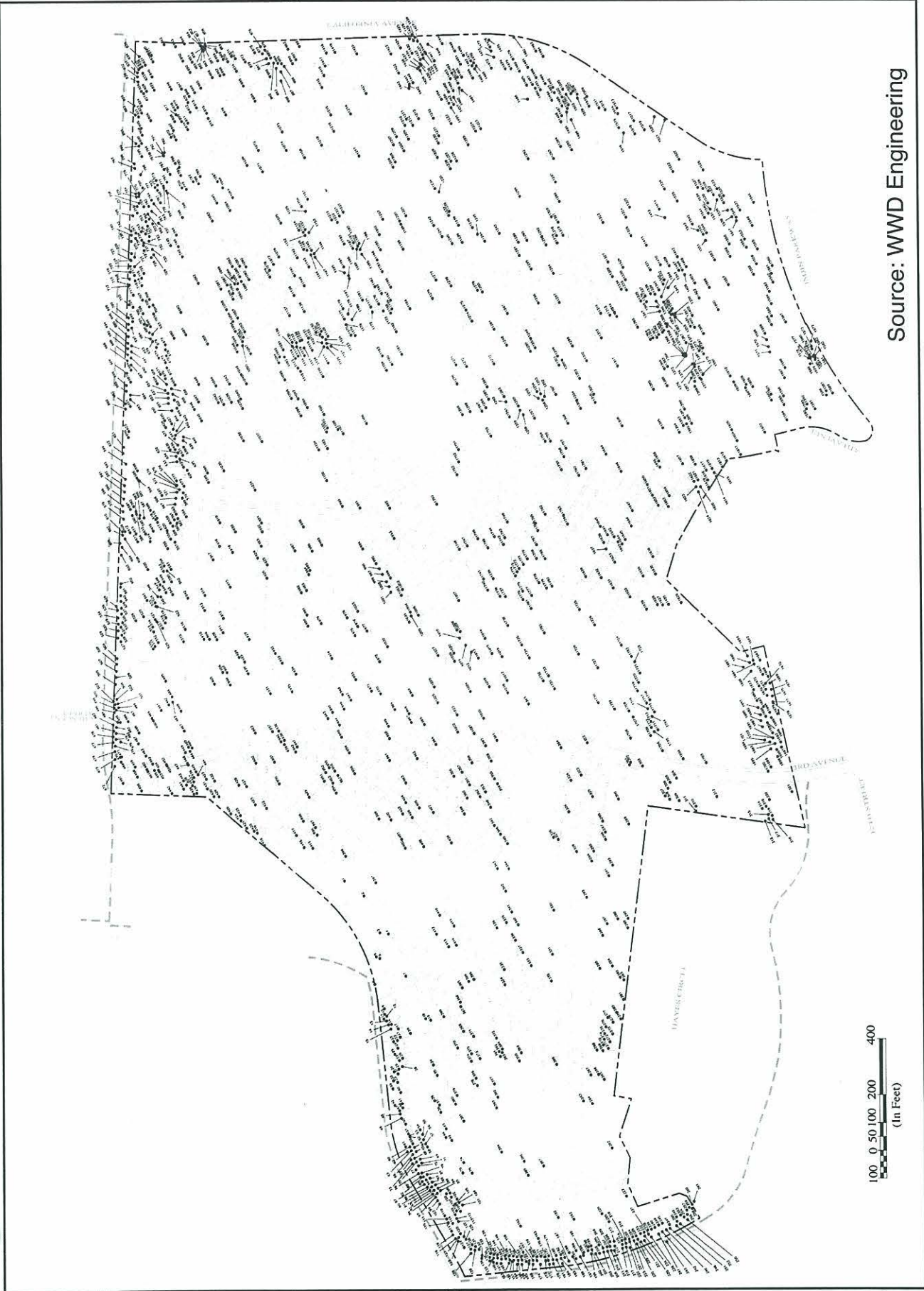
Special-status species are those plants and animals:

- Listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS);
- Listed or proposed for listing as rare, threatened, or endangered by the California Department of Fish and Game (CDFG);
- Occurring on lists 1B or 2 of the California Native Plant Society's Inventory of Rare and Endangered Plants of California, Sixth Edition (2001)⁶;
- Designated as "Species of Special Concern" (CSC) by the CDFG; or Addressed in the Fort Ord Habitat Management Plan (HMP).

⁴ U.S. Army Corps of Engineers, Sacramento District. 1997. Installation-wide multi-species habitat management plan for former Fort Ord, California. April. Sacramento, CA. Page S-8

⁵ EMC PLANNING GROUP, INC. AND EDAW, INC., JUNE 1997. page 4-116.

⁶ In general, the CDFG considers plant species on List 1 or 2 of the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California (Tibor 2001) as qualifying for legal protection under this CEQA provision. Species on CNPS List 3 or 4 generally do not qualify for protection under this provision.



Source: WWD Engineering



Existing Tree Survey

Special Status Plant Species

Based on the literature research, site surveys, botanical surveys, and the CNDDDB reports, the following special status plant species are known to occur within the Project site: sand gilia, Monterey spineflower, sandmat manzanita, Toro manzanita, Kellogg's horkelia, Eastwood's golden fleece and Monterey ceanothus. Focused botanical surveys for other potential special status plant species were conducted; however, no other special status plant species were observed and none are expected to occur within the Project. Therefore, they are not discussed further in this document.

Sand Gilia (*Gilia tenuiflora* ssp. *arenaria*). Sand gilia is federally listed endangered and state-listed threatened. It is on the CNPS List 1B, and is addressed in the HMP. The sand gilia is an annual herb found in sandy openings in coastal dunes and scrub and maritime chaparral. As shown on Maps 13 and 14, approximately 4.36 acres of sand gilia were identified within the Project site.

Monterey Spineflower (*Chorizanthe pungens* var. *pungens*). The Monterey spineflower is federally listed threatened, a CNPS List 1B species, and is addressed in the HMP. The Monterey spineflower is an annual herb that flowers in summer and is found in recently disturbed sandy sites in coastal dune, coastal scrub, grassland, and maritime chaparral. Low density populations were identified within the Project site (Map 11).

Sandmat Manzanita (*Arctostaphylos pumila*). The sandmat manzanita is a CNPS List 1B species and is addressed in the HMP. The sandmat manzanita is a perennial, low-lying, woody shrub, often found in mats or mounds. It occurs in varying densities within the maritime chaparral portion of the Project site.

Toro Manzanita (*Arctostaphylos montereyensis*). The Toro manzanita is a CNPS List 1B species and is addressed in the HMP. The Toro manzanita is an evergreen shrub, about 3-7 ft tall. This species is found in sandy soils and chaparral. In the June 2000 Biological Report (Appendix G), one plant was found amongst the maritime chaparral within the Project site. A subsequent survey in August 2004 concluded that this plant is still present in the same location.

Kellogg's Horkelia (*Horkelia cuneata* ssp. *sericea*). Kellogg's horkelia is a CNPS List 1B species. The species is an annual plant, gray-green in color with copious long hairs along the stems. Three populations were documented within the Project site (Appendix G).

Eastwood's golden fleece (*Ericameria fasciculata*). The Eastwood's golden fleece is a CNPS List 1B species and is addressed in the HMP. This shrub is found in the coastal dune and scrub, maritime chaparral, and closed-cone coniferous forest communities. It flowers in late spring-early summer. This species is common within the maritime chaparral habitat on the Project site.

1VA12



Occupied Sand Gilia Habitat within Project Site



IV-A13



Sand Gilia Population Within Project Site



Monterey ceanothus (*Ceanothus cuneatus* var. *rigidus*). The Monterey ceanothus is a CNPS list 4 species – “Plants of limited distribution – a watch list” - but is addressed in the HMP. The Monterey ceanothus is a shrub found in the sandy hills and flats of maritime chaparral, closed-cone forests, and coastal scrub. The Monterey ceanothus is present in low to medium density within the Project site.

Special Status Wildlife Species

Based on the literature research, site surveys, botanical surveys, and the CNDDDB reports, the following special status wildlife species are known or have potential to occur within the Project site: black legless lizard, coast horned lizard, nesting raptor species, and special status bat species. Other special status wildlife species known to occur within the former Fort Ord are considered unlikely to occur within or adjacent to the site due to the lack of appropriate habitat. Therefore, those species are not discussed further in this document. Only those special-status species known or with the potential to occur are discussed below.

Black legless lizard (*Anniella pulchra nigra*). The black legless lizard is a CDFG California species of species concern and is addressed in the HMP. The black legless lizard typically is found in moist, warm habitats with loose soil for burrowing and prostrate plant cover. They may be found on beaches, in chaparral, pine oak woodland, or riparian areas. The HMP identified the undeveloped areas within the Project site as potential habitat for the lizard and one was observed just north of Thirteenth Street⁷.

California coast horned lizard (*Phrynosoma coronatum frontale*). The California coast horned lizard is a California species of special concern. California coast horned lizards inhabit open country, especially sandy areas, washes, flood plains, and wind-blown deposits in a wide variety of habitats, including shrub lands, woodlands, riparian habitats and annual grassland. Warm, sunny, open areas with friable soils are a main habitat requirement, along with colonies of native harvester ants. This horned lizard is vulnerable to predation from domestic cats, dogs and humans, and their primary prey (granivorous ants) out-competed by the non-native Argentine ant species associated with development. The California coast horned lizard at one time occurred in many habitat types on the former Fort Ord, but while this species is likely to have occurred in the Project site historically, California horned lizards typically disappear quickly from urbanized areas and adjacent habitats⁸.

Potential habitat for California coast horned lizard is present within the Project site. However, these habitat areas are small, fragmented, and isolated from other areas of suitable habitat by urban development. This species has not been observed during reconnaissance level surveys of the Project site. Negative results of focused surveys for this species are generally considered to be inconclusive by the resource agencies, and they will typically require that presence is assumed if a project is within the species' known range and contains appropriate habitat, even if the species is not observed.

⁷ U.S. Army Corps of Engineers, December 1996, figure B-16 April 1997.

⁸ Jennings and Hayes, 1994.

Therefore, California coast horned lizard is assumed to be present in suitable habitat within the Project site.

Nesting Raptors. Raptors and their nests are protected under CDFG Code and the MBTA, and some are further designated as California species of special concern. Species that have the potential to nest at both sites include, but are not limited to: the sharp-shinned hawk, red-shouldered hawk, red-tailed hawk, and American kestrel. While the life histories of these species vary, overlapping nesting and foraging similarities (approximately March to August) allows for their concurrent discussion. Most raptors are breeding residents throughout most of the wooded portions of the state. Stands of live oak, riparian deciduous, or other forest habitats, as well as open grasslands, are used most frequently for nesting. Breeding occurs between March and August, with peak activity May through July. Prey for these species includes small birds, small mammals, and some reptiles and amphibians. Many raptor species hunt in open woodland and habitat edges.

The sharp-shinned hawk, red-shouldered hawk, red-tailed hawk, and American kestrel were observed foraging within the Project site. There is the potential for these, and other raptor species, to nest within the coast live oaks within the Project site.

Special-status bats. Four special-status bat species are known to roost in buildings or trees in Monterey County. These species include: Townsend's western big-eared bat (*Plecotus townsendii townsendii*), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis*), and long-legged myotis (*Myotis volans*). All of these bats are California species of special concern. The abandoned buildings in the Project site could provide suitable roosting habitat for the Townsend's western big-eared bat, pallid bat, and long-legged myotis. Western mastiff bats rarely occur near urbanized areas and requires roost sites with a significant vertical drop to assist this large bat on takeoff⁹.

4. Project Impacts

Impacts to Habitats

Impact A-1: Implementation of the Proposed Project could result in the direct loss of maritime chaparral habitat, and developed/disturbed habitat. Impacts to developed/disturbed habitat are considered less-than-significant due to the dominance of non-native plant species and the associated low wildlife habitat value. Since maritime chaparral habitat is a HMP habitat, impacts to this habitat type of the former Fort Ord are anticipated and mitigated by the HMP. Therefore, impacts to maritime chaparral are considered less-than-significant and no mitigation is required.

⁹ <http://www.batcon.org/>

Impacts to Trees

Trees in the Project site, whether native (e.g., coast live oaks) or ornamental (e.g., acacia), represent habitat for local (common and special-status) wildlife species, and provide perching sites, shade and feeding opportunities (i.e., seeds, insects) as well as potential nesting opportunities. Approximately 1780 trees and eucalyptus exist on the Proposed Project site (see the Tentative Tract Map (see page I-11) and Existing Tree Survey Map (see page IV-A10)), Approximately 1139 (53 of which are dead) of which, and likely a majority of an additional 166 Eucalyptus, are subject to removal. It is possible that unexpected site construction or design circumstances could require removal of a few additional trees.

Impact A-2 The removal of trees in the Project site that do not contain nesting birds or bats will be subject to conditions in the City of Marina's Municipal Code, Chapter 12.04 and are potentially significant (Impacts J-1 through J-3). Removal of trees with active bird nests would conflict with the Migratory Bird Treaty Act and Section 3503.5 of the California Fish and Game Code. Removal of active maternity roosts of special status bats would conflict with Section 4700 of the California Fish and Game Code. Impacts related to nesting roosts would be significant as identified in Impact A-6 and A-7. Mature trees that will be retained on site would continue to provide habitat for raptors and bats.

Impacts to Special Status Plant Species

Impact A-3. The Project may result in the removal or disturbance of several special status plant species including Monterey spineflower, sandmat manzanita, Toro manzanita, Eastwood's golden fleece, and Monterey ceanothus. Impacts to these species were anticipated and accommodated by the HMP. Implementation of the HMP is considered mitigation for the impacts to HMP species. Therefore, impacts to these species are considered less-than-significant. The Project may also result in impacts to Kellogg's horkelia within the Project site. This species is a CNPS List 1B species. Although Kellogg's horkelia is not specifically addressed in the HMP, it occupies maritime chaparral habitat, a HMP habitat, and, therefore, would indirectly receive protection through the HMP; accordingly, impacts to Kellogg's horkelia would be less than significant.

Impact A-4. The Project may result in the removal or disturbance of 4.36 acres of sand gilia, which is a federal and state listed plant. Although impacts to sand gilia were addressed and mitigated through the HMP, potential take under CESA of state listed plant species are not authorized under CESA through the HMP and requires a Section 2081 incidental take permit (ITP) from CDFG¹. Currently, the Fort Ord Reuse Authority is in the process of obtaining a base-wide Section 2081 ITP to mitigate for impacts to sand gilia within all development parcels within the former Fort Ord. Although the Project's impacts to sand gilia are not greater than those anticipated in the HMP, the Project potentially could conflict with CESA (a State law protecting biological resources); accordingly, until FORA obtains the base-wide Section 2081 ITP, impacts to sand gilia are considered

¹ The FESA does not prohibit take of federally listed plant species unless in violation of state law.

significant and require mitigation (as set forth later in this section, avoidance of impacts to the sand gilia until the base-wide Section 2081 permit is issued would mitigate the Project's potential impacts to sand gilia).

Impacts to Special Status Wildlife Species

Impact A-5. The Project may result in impacts to black legless lizards and California coast horned lizard, which would occur during the construction of the proposed Project. Mitigation for impacts to black legless lizards and their habitat is provided in the 1997 HMP through the set-aside and management of habitat reserve areas within the boundaries of the former Fort Ord. Since parties receiving lands on the former Fort Ord are required to comply with the mandates of the HMP as a condition of the land transfer, removal of potential habitat for black legless lizards through grading or other ground disturbance in the Project site would be considered a less-than-significant impact and no additional mitigation is required. Although the California coast horned lizard is not specifically addressed in the HMP, it occupies the same habitat as the black legless lizard and would indirectly receive protection through the HMP. Therefore, impacts to the black legless lizard and coast horned lizard and their habitat would not result in adverse effects to either species on former Fort Ord beyond what has already been accounted for in the HMP.

Impact A-6. Raptors and their nests are protected by both federal and state regulations (MBTA and CDFG Code Sections 30503 and 3503.5), which protect birds of prey and their eggs and nests. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by CDFG. Any loss of fertile raptor eggs or nesting raptors, or any activities resulting in raptor nest abandonment, will constitute a significant impact. Construction activities such as tree removal or site grading that disturb a nesting raptor on-site or immediately adjacent to the construction site will constitute a significant impact.

Impact A-7. Special status bats could have hibernation or maternity roosts in cavities of large trees and/or in abandoned buildings on the Project site. Should removal of occupied trees or abandoned buildings occur during the construction of the proposed Project, individual bats and their roosting habitat would be lost. The loss of special status bats and their roost sites would be considered a potentially significant impact.

Cumulative Impacts

The Fort Ord Reuse Plan Draft EIR did not identify any cumulative impacts of the Project as a result of measures to mitigate impacts to the sensitive species and maritime chaparral at Fort Ord.¹¹ The Installation-Wide HMP anticipated this cumulative effect (e.g. incremental habitat fragmentation) of development on former Fort Ord and provides for regional planning for sensitive biological resources and natural communities. Since the Proposed Project is consistent with, and accounted for in the Installation-wide HMP and

¹¹ Ford Ord Reuse Plan EIR, 1997, pages 4-115 through 4-144.

associated mitigation by occurring in an area designated for "development without restriction," its contribution to regional habitat fragmentation and loss of biodiversity would result in a less-than-significant cumulative impact and no further mitigation beyond that identified in the HMP is warranted.

4. Mitigation Measures

The following mitigation measures are recommended;

Mitigation A-2: To mitigate significant impacts resulting from the removal of existing landscape trees (California native and exotic) the applicant shall prepare a Tree Protection and Compensation Plan pursuant to Mitigation Measure J1 and identify, in a tree replanting plan, the locations, numbers and sizes of trees to be planted pursuant to the City of Marina Tree ordinance.

Level of Significance After Implementation of the Mitigation Measures: Successful replanting of suitable areas pursuant to an approved Tree Protection and Compensation Plan would mitigate impacts to trees to a less-than-significant level.

Mitigation A-4: Construction activities that may directly impact approximately 680 sand gilia individuals (approximately 4.36 acres) within the Project site are not anticipated to occur prior to FORA obtaining the base-wide Section 2081 ITP, which is expected to occur mid- to late summer 2007. In order to avoid potential impacts to sand gilia until the base-wide Section 2081 ITP is issued, the following mitigation measures shall be implemented prior to the commencement of any ground-disturbing activities within the Project site:

- Protective fencing shall be placed in consultation with a qualified biologist so as to keep construction vehicles and personnel from impacting the sand gilia individuals;
- Grading, excavating, and other activities that involve substantial soil disturbance shall be planned and carried out in consultation with a qualified hydrologist, engineer, or erosion control specialist, and shall utilize standard erosion control techniques to minimize erosion and sedimentation in the areas containing the sand gilia individuals.
- No construction equipment shall be serviced or fueled outside of designated staging areas.
- Irrigation systems shall be designed to minimize runoff or irrigation water into the areas of the sand gilia individuals.

If construction activities must commence that will result in impacts to the identified areas containing sand gilia prior to issuance of the base-wide Section 2081 ITP, the following alternative mitigation measures (at the applicant's option) shall be implemented:

- The Project site plan shall be redesigned to eliminate the loss of the approximately 680 sand gilia individuals and provide protection for the individuals in perpetuity.

OR

- The Project applicant shall obtain a project-specific Section 2081 ITP to mitigate for the take of 4.36 acres of sand gilia (approximately 680 individuals). The Project applicant would be required to comply with the Section 2081 ITP requirements, which may include conservation of existing populations and/or creation/enhancement of suitable sand gilia habitat.

Level of Significance After Implementation of the Mitigation Measures: Less-than-significant.

Mitigation A-6: To mitigate potentially significant impacts to nesting raptors resulting from removal of trees during nesting season (the nesting season is March 1 to September 15), pre-construction (i.e. no more than 30 days prior to construction) surveys for active nests shall be conducted by a qualified biologist within 250 feet of proposed construction activities; pre-construction surveys are not necessary outside the nesting season. If active nests are found, a suitable construction buffer shall be established by a qualified biologist until the young of the year have fledged. Alternatively, construction activities that may affect nesting raptors can be timed to avoid the nesting season.

Level of Significance After Implementation of the Mitigation Measures: Less than significant.

Mitigation A-7: Prior to construction (e.g., building demolition and tree removal), a qualified biologist shall survey the Project site for the presence of special-status bat species. If special-status bat species are present, the following measures shall be implemented:

1. Removal of buildings that contain the bats shall not occur if maternity bat roosts are present (typically maternity roosts are present between April 15 and August 1; however, this timeframe does not apply to all species).
2. No building removal shall occur within 30 feet of the maternity roost until all young bats have fledged – as determined by a qualified biologist.
3. If special-status bats are present but there is not an active maternity roost, the building(s) containing the bats shall not be demolished or removed until the bats have been excluded using exclusionary devices under the supervision of a qualified bat specialist.

Level of Significance After Implementation of the Mitigation Measures: Less than significant.

B. CULTURAL RESOURCES

1. Environmental Issue

The Marina area's cultural resources include potential archaeological resources dating from 1770 to 1897 or later. Where such resources exist, they represent unique and important records of the lives of the native people that first inhabited the area and of the colonization and settlement periods that followed.

The California Environmental Quality Act of 1970 declares that the policy of the State of California is to: "...take all steps necessary to provide the people of this state with...enjoyment of...historic environmental qualities...". The CEQA definition of "environmental qualities" includes objects of historic, archaeological and aesthetic significance (Public Resources Code Section 21001, Jones, 1975).

Project Specific and Program Level Analysis

As discussed in this Section IV-B, the potential for cultural impacts relates to ground disturbance during grading and construction. Such disturbance could occur in the senior housing portion of the project site when the senior housing is constructed, or at the future potential park and senior center sites if the City decides in the future to take follow-on discretionary actions (which would be subject to additional CEQA review) toward constructing such a park or senior center. Accordingly, the analysis in this Section IV-B applies to both the project-level and program-level aspects of the proposed project.

2. Environmental Setting

According to the General Plan Update Program Technical Workbook:

An archaeological sensitivity analysis was prepared as part of the environmental review for the *Fort Ord Reuse Plan*. This analysis classified the former military base into four sensitivity zones based upon geophysical landform. The unstabilized active dunes were considered to have little archaeological potential, while areas underlain by stabilized dune formations were determined to have a moderate potential for possessing archaeological resources. Areas with a high potential for possessing archaeological resources include the "dissected uplands", the benches and terraces adjacent to the Salinas River, and the peripheries of wetlands such as vernal ponds.¹

The Project site is not located in a high sensitivity area. Known historic-period sites and buildings in the vicinity of the Project are limited to the Old Windmill site at the Marina Municipal Airport and Stilwell Hall at Fort Ord Dunes State Park (within the City of Marina's proposed Sphere of Influence). Both sites have been included in the list of former Fort Ord sites eligible for inclusion in the National Register of Historic Places. The Project site does not contain any significant historic structures. The existing residential units were built in the 1960s.

According to the *Fort Ord Reuse Plan EIR* (EDAW/EMC 1996), the U.S. Army and the California State Historic Preservation Officer (SHPO) concluded that "Stilwell Hall and 35 structures in the East Garrison area were the only former Fort Ord properties eligible for listing

¹ Fort Ord Reuse Plan EIR, Figure 4.12-1. General Plan Technical Workbook,

on the National Register of Historic Places.¹² None of these buildings are located within the project site.

3. Environmental Impacts

Impact Significance Criteria

The Project would have a significant impact if it would:

- Alter or destroy an archaeological site as defined by Section 15064.5 of the CEQA Guidelines and the Public Resources Code Section 21083.2 (CEQA Statute).
- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Project Impacts

According to the Ford Ord Reuse Plan EIR:

Implementation of the proposed Project may disturb lands with potential to contain archaeological resources. Archaeological surveys conducted for the Army's FEIS found cultural resources at former Ford Ord which indicated human occupation dating back 10,000 years (Lapp et al, 1993; Babson, 1993; Bowman et al, 1994; Waite, 1994). There may be a need for further research to identify additional archaeological remains at former Fort Ord. The *Draft Fort Ord Reuse Plan* identifies the following policies and programs for the Cities of Marina and Seaside and Monterey County related to protecting resources and identifying additional archaeological sites that may be affected by the reuse of former Ford Ord.

Policy A-1, Program A-1.1 in the Reuse Plan requires an archaeological records check and Phase 1 surface survey for lands in high sensitivity areas. The Project site is not in a high sensitivity area.

Impact B1: Implementation of the Project may disturb land with some degree of potential to contain cultural resources. This impact is potentially significant.

As noted above there are no historic structures on the site. Likewise, the General Plan EIR states there are no known areas with potential paleontological value in Marina.³

Cumulative Impacts

The Project potentially could contribute to a significant cumulative impact on cultural resources.

² EMC Planning Group, Inc., Fort Ord Reuse Plan Environmental Impact Report, SCH No. 96013022, Certified June 13, 1997. Prepared for the Fort Ord Reuse Authority (republished November 2001), 4-194.

³ Marina General Plan EIR page 12-3.

4. Mitigation Measures

Pursuant to FORA Policy A-1, Program A-1.3 and General Plan EIR mitigation measures 12.1 and 12.2, the following mitigation measure is recommended:

Mitigation B1: As a condition of Project approval the Project grading plans shall include a note 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.

Level of Significance After Implementation of the Measure: Compliance with the measure would reduce potential impacts (both project specific, program and cumulative) to less than significant levels.

C. HAZARDOUS MATERIALS

1. Environmental Issue

The proposed Project site is part of a former military base which, due to its age, is known to contain lead based paint and asbestos in building materials. The entire former Fort Ord military base was designated a Superfund National Priority List (NPL) Hazardous Waste Site in 1990 primarily due to groundwater contamination. Various U.S. Department of the Army sources also showed five potential ordnance and explosives (OE) locations within the Project site. In addition, other types of hazardous materials may have been used by the military over the years in and around the former Patton Park housing area.

The Department of Toxic Substances Control (DTCS) responded to the EIR Notice of Preparation (refer to EIR Appendix A) and provided information on the current status of residual chemical contaminants or Munitions and Explosives or Concern (MEC).

Project Specific and Program Level Analysis

The information in this Section IV-C regarding the potential for hazardous materials impacts applies to both the project-level and program-level aspects of the proposed project.

2. Environmental Setting

In 1998 the U.S. Department of the Army issued a Finding of Suitability to Transfer (FOST) declaring the area of former Patton and Abrams Park housing environmentally suitable for transfer to FORA for housing and infrastructure use. The FOST was based on a Community Environmental Response Facilitation Act (CERFA) Report that included review of existing environmental documents, site inspections and Environmental Protection Agency concurrence, and ordnance and explosives investigations. (See Appendix D–Finding of Suitability to Transfer.) The FOST noted the presence of lead paint and friable asbestos in the structures.

The FOST shows the Army's mapping of the five potential OE locations in the Project site and its vicinity as of November 1996. A Draft Literature Review Report for the Former Fort Ord prepared by Harding Lawson Associates in September 1999 reports that no evidence has been found that any live ordnance was used within these locations. The Army reports that a variety of methods were used to investigate the potential for OE within the locations, including site walks and sampling, and no ordnance and explosives were found.¹

The environmental condition of the project site was determined based on the Final Community Environmental Response Facilitation Act (CERFA) Report (April 1994), the Environmental Baseline Survey for the Main Garrison Parcels (September 1997), and on a visual site inspection performed in August 2004.²

¹ Draft Literature Review Report for the Former Fort Ord prepared by Harding Lawson Associates, September 1999, pages 25, 31 and Table I, and personal communications with Gail Youngblood, Directorate of Environmental and Natural Resources, Presidio of Monterey.

² United States Army, *Finding of Suitability to Transfer (FOST), Patton park and Abrams Park Polygon*, Former Fort Ord, California, March 1998, refer to EIR Appendix E- FOST

On the basis of environmental condition, the project site was placed in CERFA/DOD Environmental Condition of Property (ECP) category 4. ECP Category 4 includes parcels where release, disposal, and/or migration of hazardous substances has occurred, and all removal or remedial actions to protect human health and the environment have been taken.³

In July 1999 a Phase 1 Environmental Site assessment was prepared by D and M Consulting Engineers of Monterey. This study confirmed the FOST findings on ordnance and explosives and lead/asbestos building materials, and noted that an underground storage tank for fuel was removed in 1989. Because the FOST was based on detailed investigations, and the FOST placed no restrictions on usage of the Project site related to the removed UST and ordnance/explosives, impacts from the UST and (OE) at the Project site would be less than significant. The site overlays part of the Fort Ord Landfill groundwater contamination plume. This plume is under remediation and would not affect site residents, in any case. The FOST confirms that the site is suitable for transfer to the City for reuse, i.e. urban development.

Government Code section 65962.5 requires the California Environmental Protection Agency (Cal/EPA) to develop, at least annually, an updated Hazardous Waste and Substances (Cortese) List. The Cortese List is a planning document used by the State, local agencies and developers to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. DTSC is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List. On June 5, 2003, the City received notification from the state Department of Toxic Substances Control (DTSC) that the project site was determined to not have a significant release of lead-based paint from structures or soils and that the property was safe for residential use. The project is not on the DTSC Hazardous Waste and Substances List (Cortese List)⁴

Location of Schools Relative to Source of Hazardous Emissions. In addition to an evaluation of potential site contamination issues, Public Resources Code Sections 21151.4, 21151.8, and 21151.2 require that no EIR be approved for a project involving the construction or alteration of a facility that might reasonably be anticipated to result in hazardous air emissions within one-quarter mile of a school unless the lead agency has consulted with the school district having jurisdiction regarding the potential impact of the project on the school (notice of availability of this Draft EIR was given to the local school district), or the school has been given written notification of the project not less than 30 days prior to approval of the EIR. This code section also requires that the CEQA document for a proposed school identify the presence of potential hazardous emission sources within one quarter mile of the proposed school.

3. Environmental Impacts

Impact Significance Criteria

The Project would have a significant impact if it exposed people to a health or safety hazard (CEQA Guidelines Appendix G).

³ United States Army, *Finding of Suitability to Transfer (FOST), Patton park and Abrams Park Polygon, Former Fort Ord, California, March 1998*, refer to EIR Appendix E.

⁴ http://www.envirostor.dtsc.ca.gov/public/profile_report

For the purposes of this EIR, impacts related to hazards and public safety would be considered significant if the Proposed Project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment; or
- Expose the public to unexploded ordnance in the long-term, creating risk of upset related to human or environmental health or safety.

Project Impacts

Groundwater contamination does occur under the project site but, as established in 1991, the project is precluded from drilling water wells on the project site and the contamination is under remediation. Therefore, this issue is not an impact to or created by the Proposed Project.

The Proposed Project will comply with all existing federal, State, and local laws and regulations related to hazardous materials, which are administered and enforced by local authorities. The Monterey County Environmental Health Department and Marina Fire Department standards (the local agency that implements applicable hazardous materials-related sections of the Uniform Fire Code and Uniform Building Code) apply to all projects uniformly, would serve to ensure impacts associated with the routine use, storage, and transportation of hazardous materials associated with construction and occupancy of the Proposed Project remain at a less-than-significant level, and mitigation is not warranted.

The project site is not within a confirmed OE area. Unexploded ordnance is expected to occur only in the impact areas of the inland ranges.⁵ Pursuant to the FOST, the information regarding the former storage or disposal of hazardous substances on the subject property indicates that it was conducted in a manner that would not pose a threat to human health and the environment. This notice was given pursuant to CERCLA and no additional action is necessary under CERCLA to protect human health and the environment.⁶ However, based on all available information the potential for exposure of future residents or workers to unexploded ordnance and associated hazards are not anticipated in this part of Fort Ord and are considered less than significant.

Potential significant impacts on people resulting from demolition activities for structures having asbestos and lead based paint are identified in Section IV-F Air Quality as airborne toxics (Impact F-3).

Impact C-1 Based on the FOST and subsequent investigations within the former Fort Ord, it is not probable that a significant hazard exists on the site other than disposal of demolition generated materials from existing structures mitigated by Mitigation F-3.

⁵ Fort Ord Reuse Authority, *Fort Ord Reuse Plan DEIR*, May 1996, Page 4-64.

⁶ Finding of Suitability to Transfer (FOST) Track 0 Parcels, Former Fort Ord, California, May 2003.

The project site is not within a confirmed OE area. Unexploded ordnance is expected to occur only in the impact areas of the inland ranges.⁷ Pursuant to the FOST, the information regarding the former storage or disposal of hazardous substances on the subject property indicates that it was conducted in a manner that would not pose a threat to human health and the environment. This notice was given pursuant to CERCLA and no additional action is necessary under CERCLA to protect human health and the environment.⁸ In the unlikely event that any OE is discovered within the project site, the source should be identified following Section A of the Ordnance and Explosives Incident Reporting Form, followed by notifying Presidio of Monterey Police Department for proper disposal.

In addition, the DTCS has indicated that they believe the project may have a recorded MEC site.⁹ They indicate that that site is Munitions Response Site (MRS) 1 which is included as a Track 1, Category 3 candidate for the upcoming Proposed Plan of Record and Decision. The MEC site is the former flame thrower range and is proposed for no further action related to the MEC. DTSC anticipates the Army will recommend that ordnance recognition and safety training be conducted prior to construction activities.

Impact C-2- Based on Department of Toxic Substances Control information, the potential exists for the potential hazardous materials or munitions to exist on the site that will require pre-construction training to ensure safety of workers. The potential presence of these materials does not affect the status of the findings in the FOST.

Cumulative Impacts

Hazardous materials incidents would typically be site-specific and would involve accidental spills or inadvertent releases. Associated health and safety risks would generally be limited to those individuals using the materials or to persons in the immediate vicinity of the materials. Thus, the Proposed Project's contribution to increased use of hazardous materials, and associated exposure risks, would not be cumulatively considerable. Implementation of applicable hazardous materials management laws and regulations adopted at the federal, State, and local level by the authorities described above would ensure cumulative impacts related hazardous material would not be cumulatively considerable. Cumulative impacts therefore would be less than significant.

4. Mitigation Measures

Potential impacts on health due to airborne toxics during demolition activities are mitigated by Measure F-3 in Section IV –F Air Quality (see also Table S in Section II).

Mitigation Measure C-2 Based Department of Toxic Substances Control information, prior to issuing of construction permits the project applicant shall confirm the status of pending resolution of the Army Track 1 Remedial Investigation and Feasibility Study dated June 21, 2004 related to potential MEC Track 1 site on the property and confirm with the Army any pre-construction training requirements applicable to this site.

Level of Impact Significance after Implementation of the Measure; Less than significant.

⁷ Fort Ord Reuse Authority, *Fort Ord Reuse Plan DEIR*, May 1996, Page 4-64.

⁸ Finding of Suitability to Transfer (FOST) Track 0 Parcels, Former Fort Ord, California, May 2003.

⁹ DTCS letter in response Cypress Knolls EIR NOP, September 15, 2004.

D. TRAFFIC

1. Environmental Issue and Study Methodology

1.1 Overview and Scope of Traffic Analysis

The scope of work for this traffic study was developed to identify the potential project and cumulative traffic impacts associated with the development of the Cypress Knolls project. The traffic study includes a traffic impact analysis of intersection traffic operations at 25 intersections, five Highway 1 (also referred to as SR1) freeway segments, four freeway ramps and 14 street segments during typical weekday AM and PM peak hours.

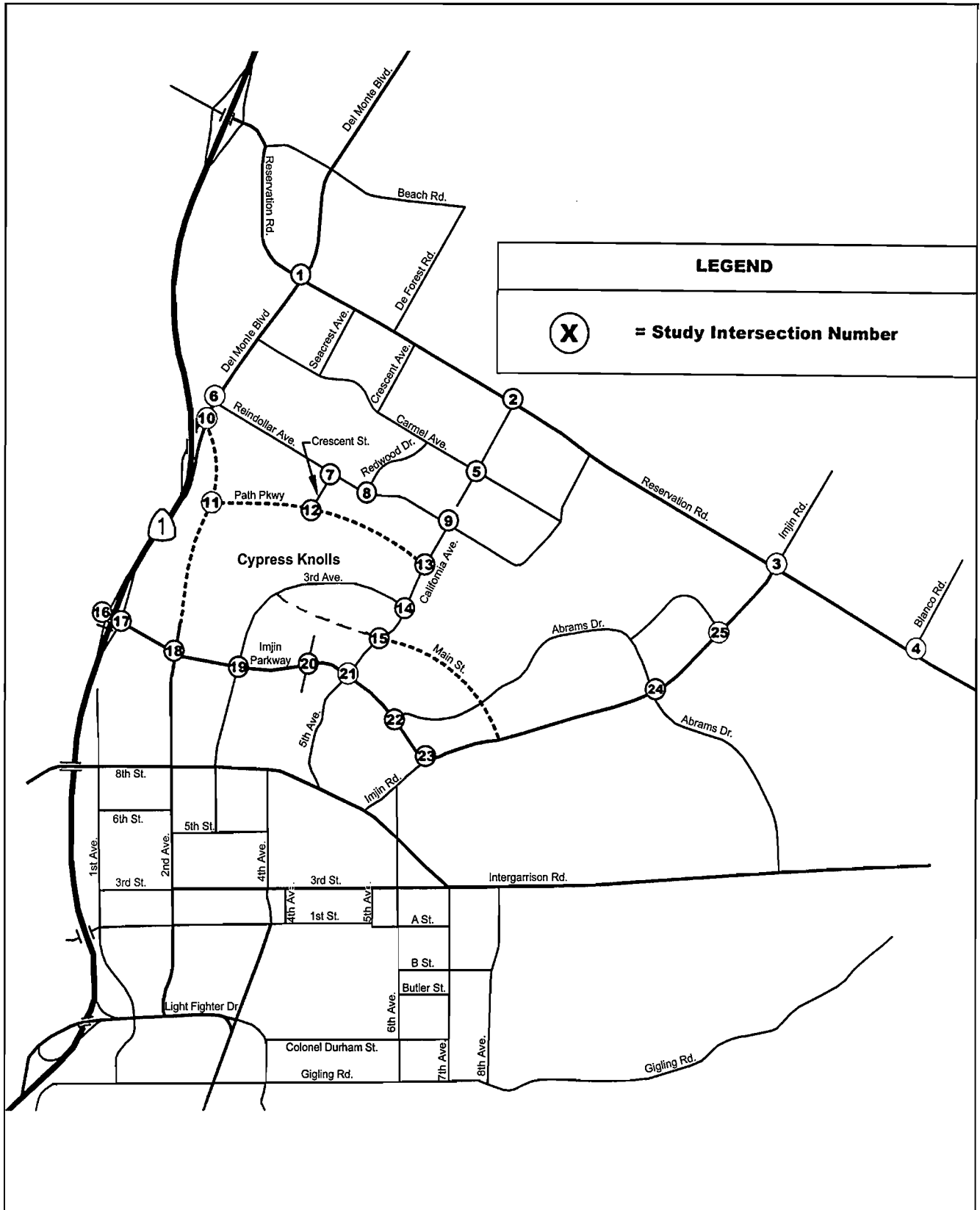
Intersections and segments were selected for analysis collaboratively with City staff based on the potential for the project to impact the facility. An initial trip distribution analysis for the project determined that project trips would be oriented to Highway 1, the Reservation Road/Blanco Road/Davis Road corridors, as well as the local Marina Street network. A principal study area was identified bounded by Highway 1 on the west, Reservation Road on the north and east and Imjin Parkway on the south. Within the study area, the intersections and segments that would potentially be impacted by the project were identified and included in the analysis. The study intersections and segments are shown on **Figures D-1 and D-2**.

All of the traffic exhibits containing detailed technical analysis cited as in the traffic report appendices are contained in the separate EIR Technical Appendices Volume, Appendix E-Traffic Report prepared by Higgins and Associates. Figures D-1 and D-2 illustrate the intersection and street segments in that study.

Beyond the limits of the study area, the project trips disperse onto numerous local streets and regional facilities. The local streets and intersections included in the analysis were identified as potentially experiencing the greatest impact from the project based on preliminary analysis of project trip generation and trip distribution.

The anticipated regional traffic impact from all FORA development projects were evaluated as part of the Fort Ord Base Reuse EIR, certified in 1997. The traffic impact identified at that point in time based upon the FORA Reuse Plan were used as the basis for the FORA traffic impact fee and the Capital Improvement Program (CIP).

The FORA CIP was updated as part of the FORA Fee Reallocation Study and adopted in April 2005. The FORA Fee Reallocation Study re-evaluated on-site, off-site and regional improvements with current land use and road network data and projections. The Reallocation Study used the AMBAG Travel Demand Model that was updated in 2004 and includes recent travel survey data that reflects existing travel demand and existing traffic conditions throughout the region. The model includes the three AMBAG counties and Santa Clara County. The Study uses the most current Master Plan for CSUMB, which was adopted in 2005, and the specific plans for Marina Heights, Seaside Highlands, East Garrison and the prior plan prepared for Cypress Knolls. The Reallocation Study states: "Overall, the growth projections are consistent with AMBAG's current land use forecast, and are also consistent with the Fort Ord Base Reuse Plan for the former Fort Ord area. However, within the total development envelope under the Base Reuse Plan, the study reflects the current pattern of development and the actual road networks included in the specific plans and other City and County Plans."



Traffic Study Intersections



Figure D-1a

Intersection	Jurisdiction	Level of Service Standard	Traffic Control		
			Existing	Background	Cumulative
1. Del Monte Boulevard/Reservation Road	Marina	D	Signal	Signal	Signal
2. California Avenue/Reservation Road	Marina	D	Two-Way Stop	Signal	Signal
3. Imjin Parkway/Reservation Road	Marina	D	Signal	Signal	Signal
4. Blanco Road/Reservation Road	Monterey County	D	Signal	Signal	Signal
5. California Avenue/Carmel Avenue	Marina	D	All-Way Stop	All-Way Stop	All-Way Stop
6. Del Monte Boulevard/Reindollar Avenue	Marina	D	Signal	Signal	Signal
7. Crescent Avenue/Reindollar Avenue	Marina	D	One-Way Stop	One-Way Stop	One-Way Stop
8. Redwood Drive/Reindollar Avenue	Marina	D	One-Way Stop	One-Way Stop	One-Way Stop
9. California Avenue/Reindollar Avenue	Marina	D	All-Way Stop	All-Way Stop	Signal
10. Del Monte Boulevard/2nd Avenue Extension (future)	Marina	D	-	-	Signal
11. 2nd Avenue Extension/Patton Parkway (future)	Marina	D	-	One-Way Stop	One-Way Stop
12. Crescent Avenue/Patton Parkway (future)	Marina	D	-	One-Way Stop	One-Way Stop
13. California Avenue/Patton Parkway (future)	Marina	D	-	One-Way Stop	One-Way Stop
14. California Avenue/3rd Avenue	Marina	D	All-Way Stop	All-Way Stop	All-Way Stop
15. California Avenue/Main Street (future)	Marina	D	-	Signal	Signal
16. Southbound Highway 1 ramps/Imjin Parkway (12th Street)	Caltrans	D	One-Way Stop	Signal	Loop Ramps
17. Northbound Highway 1 ramps/Imjin Parkway (12th Street)	Caltrans	D	One-Way Stop	One-Way Stop	One-Way Stop
18. 2nd Avenue/Imjin Parkway	Marina	D	Signal	Signal	Signal
19. 3rd Avenue/Imjin Parkway	Marina	D	Two-Way Stop	Two-Way Stop	Signal
20. 4th Avenue/Imjin Parkway	Marina	D	Two-Way Stop	Two-Way Stop	Signal
21. California Avenue/Imjin Parkway	Marina	D	Signal	Signal	Signal
22. Abrams Drive (South)/Imjin Parkway	Marina	D	One-Way Stop	Signal	Signal
23. Imjin Road/Imjin Parkway	Marina	D	Signal	Signal	Signal
24. Imjin Road/Abrams Drive (north)	Marina	D	Signal	Signal	Signal
25. Imjin Parkway/Preston Drive	Marina	D	Signal	Signal	Signal

Notes:

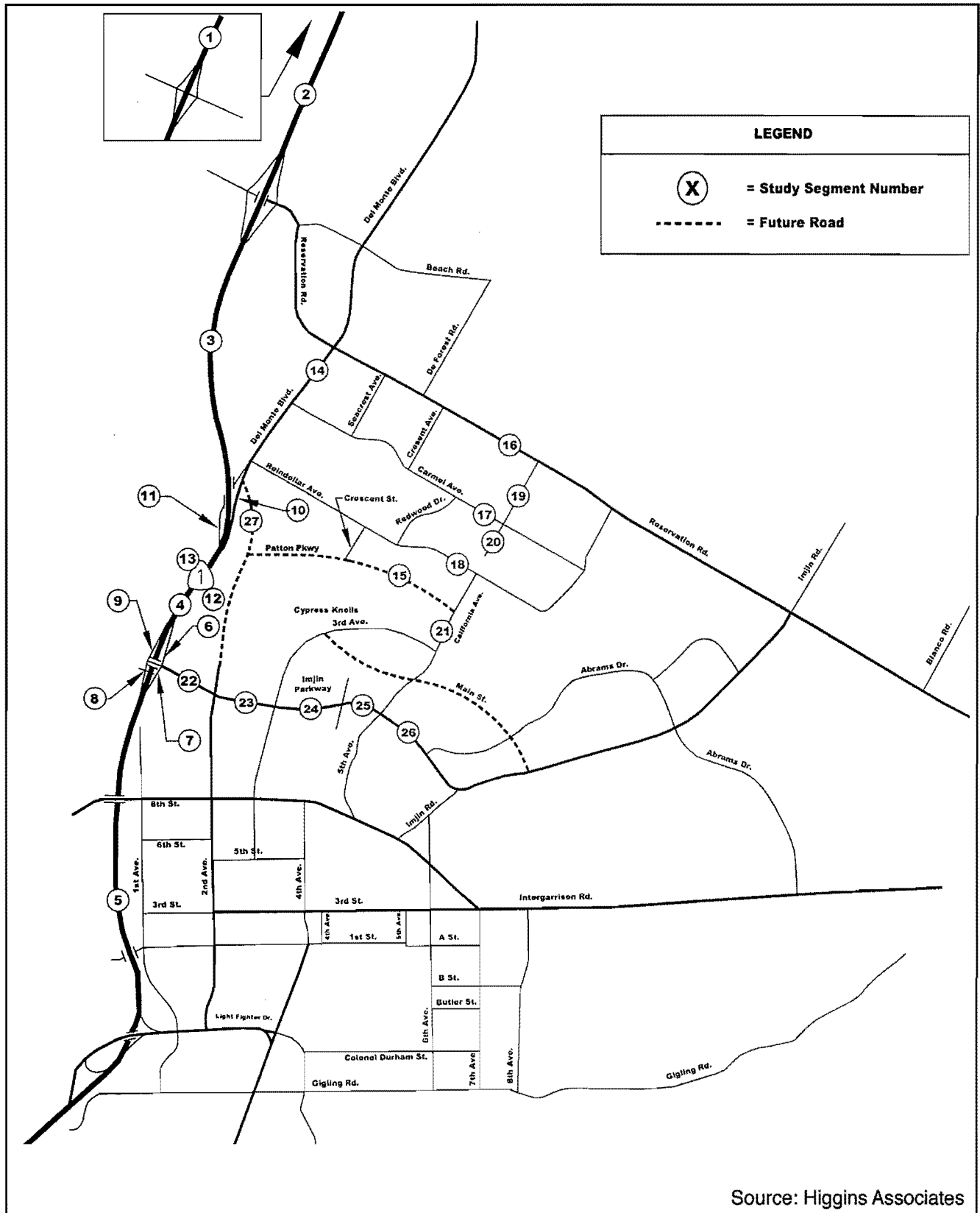
- 1. All-way stop: Stop signs on all intersection approaches.
- Two-way stop: Stop signs on two intersection approaches.
- One-way stop: Stop sign on one intersection approach.

Source: Higgins Associates

Traffic Study Intersections Key



Figure
D-1b



Traffic Study Segments  NORTH **Figure D-2a**

Freeway Segments

1. Highway 1, between Nashua/Molera Road and Del Monte Blvd. (North)
2. Highway 1, between Del Monte Blvd. (North) and Reservation Road
3. Highway 1, between Reservation Road and Del Monte Blvd. (South)
4. Highway 1, between Del Monte Blvd. (South) and Imjin Parkway
5. Highway 1, between Imjin Parkway and Lightfighter

Freeway Ramps

6. Highway 1 Northbound On-Ramp at Imjin Parkway
7. Highway 1 Northbound Off-Ramp at Imjin Parkway
8. Highway 1 Southbound On-Ramp at Imjin Parkway
9. Highway 1 Southbound Off-Ramp at Imjin Parkway
10. Highway 1 Northbound Off-Ramp at Del Monte Blvd. (South) Interchange
11. Highway 1 Southbound On-Ramp at Del Monte Blvd. (South) Interchange

Weaving Segments

12. Highway 1 Northbound between Imjin Parkway and Del Monte Blvd. (South)
13. Highway 1 Southbound between Del Monte Blvd. (South) and Imjin Pkwy.

Street Segments

14. Del Monte Boulevard south of Reservation Road
15. Patton Parkway west of California Avenue
16. Reservation Road west of California Avenue
17. Carmel Avenue west of California Avenue
18. Reindollar Avenue west of California Avenue
19. California Avenue between Reservation Road and Carmel Avenue
20. California Avenue between Carmel and Reindollar Avenue
21. California Avenue between Patton Parkway and 3rd Avenue
22. Imjin Parkway between Highway 1 and 2nd Avenue
23. Imjin Parkway between 2nd Avenue and 3rd Avenue
24. Imjin Parkway between 3rd Avenue and 4th Avenue
25. Imjin Parkway between 4th Avenue and California Avenue
26. Imjin Parkway between California Avenue and Imjin Road
27. 2nd Avenue Extension south of Del Monte Boulevard

Source: Higgins Associates

The updated FORA CIP as adopted on April 8, 2005, identified new improvements that will better mitigate the projected impacts based on current land use and circulation plans. The regional impacts that have been identified in the FORA Fee Reallocation Study were mitigated by the improvements included in the Fee Reallocation Program. The Proposed Project is consistent with the Reuse Plan's land use assumptions and plans for the project site, therefore, the proposed project's payment of the FORA development impact fee satisfies its fair share contribution towards regional infrastructure improvements.

All study intersections are located within the jurisdiction of the City of Marina except the Highway 1/Imjin Parkway interchange ramp intersections, which are under the control of Caltrans, and the Reservation Road/Blanco Road intersection, which is under the control of Monterey County.

All study street segments are within the jurisdiction of the City of Marina except the Highway 1 freeway and ramp segments, which are under the control of Caltrans.

The traffic scenarios evaluated as part of this traffic study are:

1. Existing Traffic Conditions;
2. Existing Plus Project Traffic Conditions;
3. Background (Existing Plus Approved Projects) Traffic Conditions;
4. Background Plus Project Traffic Conditions;
5. Cumulative Without Project Traffic Conditions;
6. Cumulative With Project Traffic Conditions.

Traffic forecasts for this study were developed using a TRAFFIX model for the Marina/FORA area. The model includes approved and planned projects in the Marina/Seaside/FORA area. Peak hour trips generated by each of the projects are estimated using trip generation rates published by the Institute of Transportation Engineers (ITE), 7th Edition, or San Diego Association of Governments (SANDAG). The SANDAG rates were used where ITE does not provide a rate. For example, SANDAG trip rates were used for the City Park land use and SANDAG AM peak hour trip rates were used for the Specialty Retail land use.

The trips are assigned to the local road network using trip distribution patterns developed by the AMBAG traffic forecasting model. The trip assignments developed for individual development projects are combined with existing traffic volumes to obtain traffic forecasts for the various study scenarios. The process provides an intersection level analysis, which is required for the environmental evaluation of project impacts. The AMBAG model itself does not provide intersection level turning movement traffic forecasts.

The approved and pending projects modeled in the study include commercial retail uses. Not all of the trips generated by these uses will be new trips added to the road network. Some of the trips generated by the commercial retail uses will be captured from the existing or background traffic traveling past the site. The trip generation for some of the commercial retail uses modeled in this study was adjusted to account for the capture of pass-by capture. The Cypress Knolls project does not include any commercial retail uses that would capture trips from the adjacent street network, but other projects including the Marina University Villages and Marina Station projects include commercial retail uses. Traffic impact study guidelines published by Caltrans recommend a pass-by reduction factor of 15%. For this study, pass-by factors greater than 15% were used for some of the land uses. For example, a 25% pass-by

rate was used for fast food restaurants and a 30% pass-by rate was used for convenience stores. A pass-by rate of 20% was used for the PM peak hour trips generated by the Marina University Villages commercial retail uses located adjacent to Imjin Parkway. While these rates exceed the pass-by rate recommended by Caltrans, the rates used for this study are lower than rates published by ITE. For example, the PM peak hour ITE pass-by rate for shopping centers is 34%, the pass-by rate for fast food restaurants is 50% and the pass-by capture rate for convenience markets is 61%. The pass-by rates used for this study are less than rates documented by ITE and provide a reasonable worst-case evaluation of the trip generation associated with new development in the area.

NOP Responses

Caltrans requested that the Highway 1/Lightfighter interchange and the Highway 1/Reservation Road interchanges be studied in addition to the Highway 1/Imjin Parkway (12th Street) interchange (refer to EIR Appendix A- NOP included at the end of this EIR volume). Only the Highway 1/Imjin Parkway (12th Street) interchange was evaluated for this study because it is located immediately adjacent to the project site and will provide primary access between Highway 1 and the project site. Most if not all of the project generated traffic using Highway 1 is expected to access Highway 1 via the Highway 1/Imjin Parkway (12th Street) interchange. The project contribution of vehicle trips to the Lightfighter and Reservation Road interchanges is expected to be de minimus because few project residents and visitors will use these interchanges because they will use the interchange closest to the project site for access to Highway 1.

Project Development Assumptions

This report analysis assumes under the Existing Plus Project and Background Plus Project conditions that the 18-acre potential park site is developed as a park, but assumes under Cumulative Conditions that the site is developed with a K-8 school, for reasons stated earlier in this EIR. Also, the development of the Assisted Living Facility is at the developer's option. This report analyzes the project's traffic impacts with the Assisted Living Facility included as a component of the project. Impacts assuming the project does not include the Assisted Living Facility are separately described qualitatively.

The traffic study analyzes the project as a proposed gated project. This will prohibit non-project generated traffic to travel through the project site. Impacts associated with not gating the project are described qualitatively.

Program and Project Analysis

To be conservative, this traffic analysis analyzes the combined impacts from traffic that would be generated by the proposed senior housing development plus traffic that would be generated by potential future park and senior center uses, should the City decide to take further actions toward those uses in the future (this approach is conservative and presents a worst-case scenario because the City may never take such further actions). Additionally, attempting to prepare separate analyses would have yielded exceedingly complex results that would have been difficult to implement. Accordingly, the impact and mitigation discussed in this Chapter IV-D covers both the project and program aspects of the Proposed Project.

1.2 Road Network Assumptions

Figure D-1 shows the road network configuration assumed for each analysis scenario. A Patton Parkway extension and the extension of Crescent Avenue to the south to Patton Parkway are assumed in the Background Plus Project and Cumulative Plus Project Conditions. The completion or connection of Patton Parkway to the 2nd Avenue extension is assumed in the Cumulative Without Project Condition.

For the analysis of Background Conditions (Existing Plus Approved Projects), improvements that are planned to be installed in conjunction with the development of the approved Marina Heights project and first phase of approved Marina University Villages project were assumed to be constructed. In addition, California Avenue between Reindollar Avenue and Carmel Avenue is assumed to be completed. This segment is currently under construction. The Marina Heights improvements include the construction of Main Street and the elimination of the east leg of the California Avenue/3rd Avenue intersection.

The Cumulative Condition (Year 2025 condition) road network with and without the project includes improvements included in the Marina Transportation Facilities Impact Fee (TIF) and the Fort Ord Reuse Plan Capital Improvement program. These improvements include the 2nd Avenue Extension between Del Monte Boulevard and Imjin Parkway. In this scenario, Patton Parkway is extended to the 2nd Avenue Extension. In addition to these links, intersection improvements identified in the Marina TIF program were assumed to be constructed.

1.3 Traffic Operation Evaluation Methodologies

Intersection traffic operations were evaluated based on the Level of Service (LOS) concept. LOS is a qualitative description of an intersection and roadway's operation, ranging from LOS A to LOS F. Level of service "A" represents free flow un-congested traffic conditions. Level of service "F" represents highly congested traffic conditions with what is commonly considered unacceptable delay to vehicles on the road segments and at intersections. The intermediate levels of service represent incremental levels of congestion and delay between these two extremes.

Intersection operations were evaluated using technical procedures documented in the *2000 Highway Capacity Manual* (HCM). For signalized intersections, average control delay per vehicle is utilized to define intersection level of service. Delay is dependent on a number of factors including the signal cycle length, the roadway capacity (number of travel lanes) provided on each intersection approach and the traffic demand. Traffic Appendix A1 in Appendix E of this EIR (The EIR Technical Appendices Volume is a separate document contained Appendix E-Traffic Report) shows the relationship between vehicle delay and the signalized intersection level of service categories. The TRAFFIX 7.7 software program was utilized to model the traffic impact of the different development scenarios and to calculate signalized and un-signalized intersection levels of service.

For all-way (or four-way) stop intersections, average control delay per vehicle is utilized to define intersection level of service. Delay is dependent on a number of factors including the roadway capacity (number of travel lanes) provided on each intersection approach and the traffic demand. *Traffic Appendix A2* (in separate technical appendix volume) shows the

relationship between vehicle delay and the all-way stop intersection level of service categories.

At one- and two-way stop controlled intersections, the operating efficiency of vehicle movements that must yield to through movements are analyzed. The level of service for vehicle movement on the controlled approaches is based on the distribution of gaps in the major street traffic stream and driver judgment in selecting gaps. *Traffic Appendix A3* shows the relationship between the vehicle delay and level of service for two-way stop controlled intersections. The 2000 HCM calculates the level of service of the minor street approaches. Using this data, an overall intersection level of service was calculated. Both are reported in this study because traffic on the minor street approaches has the lowest priority of right-of-way at the intersection and are the most critical in terms of delay. Generally, LOS E/F operations on the side street approach are the thresholds that warrant improvements.

The operational analysis of the study freeway segments was based upon the *Highway Capacity Manual (HCM) 2000* methodologies, which uses vehicle density as the criteria for rating levels of service. Vehicle density is defined as passenger cars per mile per lane, and is the ratio of the traffic volume on a freeway segment over a one-hour period, divided by the product of the number of lanes on the segment and the travel speed. Levels of Service Descriptions for freeway segments are included as *Traffic Appendix A4*.

The freeway ramps were analyzed using the threshold volumes contained within *Traffic Appendix A5*, which are based on *HCM 2000* methodologies.

1.4 Modeling of Right Turn on Red (RTOR)

All of the signalized study intersections allow right turns on red (RTOR), and these right turns can have an effect on the intersection LOS calculations. However, for this study no allowance was made for RTOR, as insufficient information was available regarding the percentage of vehicles turning right on red. Furthermore, right turn overlap signal phasing has been installed at some of the intersections that facilitate right turns. The results of the intersection analyses can thus be seen as reflecting a worst-case scenario.

1.5 Technical Appendix

All of the traffic exhibits containing detailed technical analysis cited as in the traffic report appendices are contained in the separate EIR Technical Appendices Volume, Appendix E-Traffic Report prepared by Higgins and Associates that is available for public review at the City of Marina Development Services Department.

2. Environmental Setting

2.1 Project Access

The Cypress Knolls project site is located east of Highway 1, north of Imjin Parkway and west of California Avenue. Historically the main regional access to the site has been from Highway 1 via the Imjin Parkway (12th Street) interchange. The completion and opening of the Highway 1 / 12th Street / Imjin Parkway interchange during 2003 provides the primary regional access to the project site. Other regionally important highways are Highway 101, the main north-south highway through Santa Clara and Monterey Counties, and the two east-west highways, linking

Highway 101 to Highway 1; Highway 156 to the north of Marina; Highway 68 to the south of the project site; and Imjin Parkway, which extends from the project site to the east providing connectivity to Reservation Road, Blanco Road and Davis Road.

The senior adult housing portion of the project is proposed to be a gated community with potentially gated entry points located on 3rd Avenue west of California Avenue and on 3rd Avenue near the southerly boundary of the project site. The apartment use would be accessed from 3rd Avenue, but may not be located within the proposed gated portion of the project site. The future potential park site is located northwest of the Imjin Parkway/California Avenue intersection and would be accessed via 4th Avenue. On the northerly portion of the site, a new east-west road, Patton Parkway, is being constructed by the City between California Avenue and the existing high school located near Crescent Avenue. Crescent Avenue is being constructed by the City to extend south from Reindollar Avenue to connect with Patton Parkway. Patton Parkway and Crescent Avenue will provide access to the existing high school, the assisted living facility (if constructed) and the potential senior center site.

2.2 Existing Traffic Network

The primary Regional access to the Cypress Knolls project site is provided by Highway 1. Other significant regional highways are Highway 101, Highway 156 and Highway 68. Important streets relevant to the Cypress Knolls project are Reservation Road, Del Monte Boulevard, Imjin Parkway, Imjin Road, Second Avenue, California Avenue, Fourth Avenue, Third Street, Reindollar Avenue and Crescent Avenue. A brief description of the key roadways serving the Cypress Knolls site is provided below.

Highway 1 is a state highway within Monterey County, providing access to Watsonville and Santa Cruz to the north via Castroville, and Marina, and San Luis Obispo to the south, via Seaside, Monterey, and Carmel. Through its connection to Highway 156 in Castroville, it also provides access to Highway 101 and the greater San Francisco Bay Area. In the vicinity of the project, it is a four-lane freeway north of the southern Del Monte Boulevard interchange and south of Fremont Boulevard, and a six-lane freeway between the southern Del Monte Boulevard and Fremont Boulevard interchanges.

Reservation Road is a major arterial extending from Marina State Park west of Dunes Drive, through the City of Marina, connecting to Highway 68 south of Salinas. Between Marina State Park and Del Monte Boulevard, Reservation Road is two lanes wide with left turn channelization at key intersections. Between Del Monte Boulevard and Blanco Road, Reservation Road is a four-lane divided roadway. East of Blanco Road, it narrows to a two-lane rural highway. Reservation Road is under the jurisdiction of the City of Marina west of Blanco Road and the County of Monterey east of Blanco Road.

Blanco Road is a major arterial extending from Reservation Road to the City of Salinas. Between Reservation Road and the Salinas River Bridge, Blanco Road is four-lanes wide with left turn channelization at key intersections. The remainder of its length to Salinas, it is a two-lane rural highway.

Del Monte Boulevard is a major arterial within western City of Marina, extending from a partial interchange (SB on- and NB off ramps only) with Highway 1 north of Imjin Parkway

(Twelfth Street) to Highway 1 north of Marina. In the project vicinity, Del Monte Boulevard is a four-lane divided roadway.

Imjin Parkway is an arterial roadway within the City of Marina city limits. Imjin Parkway is a four-lane divided roadway with left turn channelization east of the Highway 1 interchange to the intersection with Imjin Road.

Imjin Road is a two-lane arterial between Reservation Road and Eighth Street. Imjin Road provides access to the Marina Municipal Airport and the UC-MBEST development located north of Reservation Road, the Marina University Villages project and CSUMB located in southern Marina, and residential developments in between.

Second Avenue is a four-lane divided arterial between Light Fighter Drive and Imjin Parkway.

California Avenue is a two-lane roadway connecting the former Fort Ord area with central City of Marina. At present there is a disconnected portion of California Avenue between Carmel Avenue and Reindollar Avenue. This missing connection will be constructed in future to enable California Avenue to link Reservation Road to Imjin Parkway.

Fourth Avenue is a northerly extension of General Jim Moore Boulevard, serving as the primary north-south roadway through the CSUMB campus and has been functioning as an important two-lane arterial in the former Fort Ord road network.

Reindollar Avenue is a two-lane roadway within the southern portion of central City of Marina, providing access to adjacent businesses and residential neighborhoods.

Abrams Drive is a two-lane roadway within former Fort Ord military housing areas. Much of the housing has remained unoccupied since the closure of the army base. However, some of the homes are currently on CSUMB property and are being used for student, staff, and faculty housing.

2.3 Existing Transit Systems

The largest single public transit provider in Monterey County is the Monterey-Salinas Transit (MST). The Monterey-Salinas Transit operates from five key transit centers, the Monterey Transit Plaza, Salinas Transit Center, Watsonville Transit Center, Edgewater Transit Exchange, and Marina Transit Exchange. Each of these centers operates on a time-transfer "pulse" schedule providing easy connections and quick transfers to multiple routings.

MST currently operates two public bus routes that service the Cypress Knolls area. Route 17 travels on Imjin Parkway between Imjin Road and 3rd Avenue and a segment of Reindollar Road between Vaughn and Bostick. Route 16 travels on Imjin Parkway between Highway 1 and 2nd Avenue. Neither bus route provides direct connections to Cypress Knolls. MST Route 20 provides a direct link to Salinas and Monterey and Route 27 provides service to Watsonville and Monterey from the Marina Transit Center.

2.4 Existing Bikeway and Pedestrian Facilities

There are three basic types of bicycle facilities in the Monterey Peninsula. Each type is described below:

- Bike path (Class I) - A completely separate right-of-way designed for the exclusive use of cyclists and pedestrians, with minimal crossings for motorists.
- Bike lane (Class II) - A lane on a regular roadway, separated from the motorized vehicle right-of-way by paint striping, designated for the exclusive or semi-exclusive use of bicycles. Bike lanes allow one-way bike travel. Through travel by motor vehicles or pedestrians is prohibited, but crossing by pedestrians and motorists is permitted.
- Bike route (Class III) - Provides shared use of the roadway, designated by signs or permanent markings and shared with motorists.

Bike facilities

The majority of the roadways in close proximity to the Cypress Knolls project site do not have dedicated bicycle lanes. Existing bikeways in the project vicinity are shown on Traffic Technical Appendix Exhibit 4B. A Class 1 bikeway is located along Imjin Parkway from Imjin Road to Highway 1 and Class 2 bikeways are located along California Avenue from Imjin Parkway to its current terminus and along Second Avenue south of Imjin Parkway. The Monterey Bay Coastal bikeway is in close proximity along Del Monte Avenue/Highway 1.

Pedestrian facilities

The existing roads and associated pedestrian walkways in the former Fort Ord were designed to serve the needs of a military base. There are thus limited adequate existing pedestrian routes in the proximity of the proposed Cypress Knolls site. A sidewalk is provided on California Avenue between Imjin Parkway and Reindollar Avenue on the east side of the road.

2.5 Existing Traffic Data

To establish existing traffic flow conditions, new traffic counts were conducted at the study intersections during the weekday AM (i.e. 7:00 – 9:00 am) and PM (i.e. 4:00 – 6:00 pm) peak hours. The date the intersection volumes were collected at each intersection are shown in *Traffic Appendix B (Technical Appendices Volume Appendix E.)* From the peak period traffic counts, the AM and PM peak hour turning movement volumes were identified.

Most of the intersections were counted in 2004. Counts were conducted at the following five intersections in 2005:

1. Imjin Parkway/Preston Drive (January 2005)
2. Imjin Parkway/2nd Avenue (February 2005)
3. California Avenue/Carmel Avenue (April 2005, PM peak hour)
4. Reindollar Avenue/Redwood Avenue (April 2005)
5. Del Monte Boulevard/Reindollar Avenue (March 2005)

Because all of the counts were not collected on the same day and in different years, the counts did not necessarily balance between intersections. The intersection traffic volumes were balanced between adjacent intersections along the arterial corridors to account for variations in the counts. Along each corridor, the intersection with the highest approach volume was selected as the controlling volume and volumes at the other intersections along the corridor were balanced between intersections to the controlling volume, regardless of the

year that the count was collected. This provides a reasonable worst-case analysis as the highest volume of traffic observed over the last two years was used for the study. The existing peak hour traffic volumes are presented on Traffic Technical Appendix Exhibits 5A and 5B.

AM and PM peak period counts of Highway 1 traffic were performed in January of 2005 to establish existing traffic volumes on Highway 1. Peak period traffic counts collected at the ramp intersections at the Highway 1/Reservation Road and Highway 1/Del Monte Boulevard (North) interchanges in January and February of 2005 were used with the peak hour volumes at the Highway 1/Imjin Parkway interchange to establish Highway 1 segment volumes from south of the Imjin Parkway interchange to north of the Del Monte Boulevard (North) interchange.

The following discussion provides an evaluation of operating conditions for the study intersections, freeway segments and ramps under existing traffic conditions.

2.6 Existing Conditions Intersection Operations

Existing conditions AM and PM intersection levels of service are summarized on Traffic Technical Appendix Exhibits 6A & 6B. The LOS calculation sheets for existing traffic conditions can be found in *Traffic Appendix C*. The traffic signal warrant and channelization warrant worksheets are included as *Traffic Appendix D*.

All but one of the study intersections operate at or better than the operational LOS standards utilized for this study. Currently, the Southbound Highway 1 Ramps/Imjin Parkway intersection (Intersection #16) is operating at unacceptable levels during the AM and PM peak hours.

In addition, the following unsignalized intersections are experiencing LOS F operations on the stop-controlled minor street approaches during one or both of the peak commute periods:

Intersection #2:	California Avenue/Reservation Road;
Intersection #19:	Third Avenue/Imjin Parkway; and
Intersection #20:	Fourth Avenue/Imjin Parkway.

2.7 Existing Traffic Conditions – Roadway Segment Operations

Existing morning and evening peak hour volumes on the study highway and street segments are tabulated on Traffic Technical Appendix Exhibit 8A. These are based upon the turning volumes illustrated on Traffic Technical Appendix Exhibits 5A and 5B and the freeway counts performed on Highway 1 at the Imjin Parkway overcrossing.

Threshold volumes provided in *Traffic Appendix A5* were used in the evaluation and serve primarily as a general guide as to whether roadway segments operate properly. However, other factors may affect traffic flow conditions on roadway segments including intersection channelization design, type of traffic control devices, bicycle and pedestrian volume, driveway activities, average travel speed, and on-street parking activities. The weaving section level of service calculation worksheets are contained in *Traffic Appendix K*.

All of the study road segments and freeway ramps currently operate at acceptable levels of service.

3. Environmental Impacts

3.1 Level of Service Standards and Impact Significance Criteria

The study area covers the jurisdiction of two local agencies: they are the City of Marina and Monterey County. Certain intersections and roadways in the study area fall under the jurisdiction of Caltrans, a state agency. The local agencies and the state agency have different level of service standards.

The City of Marina has established LOS D as the general threshold for acceptable overall traffic operations for both signalized and unsignalized intersections. All study intersections and street segments are under City of Marina jurisdiction, except the Blanco Road/Reservation Road intersection and Highway 1 and its interchanges.

The County of Monterey has established LOS C as its level of service standard. The intersection of Reservation Road and Blanco Road is in the County of Monterey.

The Caltrans level of service standard is the transition between LOS C and LOS D. Caltrans recognizes that achieving LOS C may not always be feasible in all situations, and LOS D is acceptable on a case-by-case basis. Caltrans has jurisdiction over Highway 1 and the Highway 1 interchanges including the intersections at the Highway 1/Imjin Parkway interchange.

The Caltrans LOS C standard would normally apply to the State controlled facilities and the LOS C threshold would apply to the Reservation Road/Blanco Road intersection. However, the Transportation Agency for Monterey County (TAMC) has indicated that LOS D should be used to determine where the regional roadway network would be operating at unacceptable LOS. The regional road network includes all of the State highways and the Marina to Salinas corridor, which includes Reservation Road and Blanco Road. Objective 2 of Goal 1.1 Road and Highway Transportation of the 2005 Regional Transportation Plan states the following:

“Design facilities included in TAMC’s expenditure plan program of regional transportation projects to operate at LOS C, achieve at least LOS D on the regional roadway network by 2020, and maintain at least LOS D on regional roadways thereafter.”

It should also be noted that the LOS D standard is consistent with Caltrans’ long-range goals, as described in the Transportation Concept Report (TCR) for Highway 1. The TCR states the following:

“The ability to provide capacity to accommodate rising volumes has become increasingly difficult in California. Historically, District 5 targeted a peak hour concept of LOS C or better for state highways. However, in each county, current operations, existing development patterns, environmental values, local plans, and/or projected growth are such that achieving even LOS D will require major improvements and concerted efforts to manage demand. In some segments, the California Coastal Act prohibits additional capacity.”

Therefore, LOS D was used in this study as the minimally acceptable level of service for State and County facilities. It should be noted, however, that the conclusions of this report regarding

the proposed project's traffic impacts would not change even if LOS C were used as the minimally acceptable level of service for State and County facilities based upon the significance criteria used for this study, as described below.

According to Appendix G of the State CEQA Guidelines, a project would have a significant effect on the environment if it would cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. In accordance with CEQA and agencies and professional standards, specific impact criteria have been applied to the study intersections and road segments to determine if the project specific increase in traffic is substantial in relation to the existing traffic load and capacity of the street system. The significance criteria incorporates the LOS D standard described above, but also establishes criteria for evaluating significance when pre-project operations exceed the LOS D standard. The analysis contained in this traffic study is based upon the significance criteria listed below.

A significant impact at a **signalized study intersection** is defined to occur under the following conditions:

- The addition of project traffic causes pre-project operations to deteriorate from acceptable level (LOS D or better) to an unacceptable level (LOS E, or LOS F), or
- The addition of project traffic increases the pre-project average delay by more than 1.0 second at intersections operating at LOS E or LOS F.

A significant impact at an **unsignalized study intersection** is defined to occur under the following scenarios:

- The addition of project traffic causes operations to deteriorate from an acceptable level (LOS E or better on side street for two-way stop control, LOS D or better for all-way stop control) to an unacceptable level (LOS F on side street for two-way stop control, LOS E for all-way stop control), or
- Two-way or one-way stop controlled intersection: the project adds traffic to any intersection movement that results in an increase to the delay for any approach operating at LOS F pre-project;
- All-way stop control: the project adds traffic to an all-way stop controlled intersection operating at LOS E or worse pre-project that results in an increase to the overall intersection delay, or
- The Caltrans peak-hour volume signal warrant is met, or
- The left-turn channelization warrant is met.

A significant impact on a **study roadway/highway segment** is defined to occur under the following scenarios:

- The addition of project traffic causes a roadway segment operating at an acceptable level (LOS D or better) pre-project to degrade to an unacceptable level (LOS E, or LOS F), or
- The addition of project traffic causes a roadway segment operating at LOS E to degrade to LOS F, or
- The addition of one project trip to a segment operating at LOS F pre-project.

3.2 Existing Plus Project Conditions

Project Traffic Scenario Description

The Cypress Knolls project will primarily consist of a retirement community consisting of 596 units located in a proposed gated community that includes a Community Center Clubhouse. Other aspects of the proposed project would be located outside of the proposed gated community.

Project Trip Generation

Figure D-3 contains the trip generation estimate for the project, which is based upon trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation*, 7th Edition, 2003 and San Diego Association of Governments (SANDAG) *Vehicular Traffic Generation Rates*, 2003.

The ITE trip generation rates for the Senior Adult Housing - Detached land use category was used to estimate the trip generation for the senior/retirement housing component of the project. The Senior Adult Housing trip rates are based on survey of existing senior/retirement communities that have demographic characteristics similar to the proposed project.

Because ITE does not publish trip rates for a park, the SANDAG City Park trip rates were used to estimate the volume of traffic that will be generated by the future potential park. As stated in Chapter I of this EIR, the City is contemplating taking initial program-level steps (i.e., General Plan and zoning map amendments) to facilitate possible future development of a City park and City senior center adjacent to the proposed senior residential development. To be conservative, this traffic analysis bases its impact and mitigation analysis on traffic from the senior housing development and the City park and City senior center.

The project would generate 4,630 daily trips, with 266 trips generated during the AM peak hour and 363 trips generated during the PM peak hour. The potential park site itself potentially may be developed as a K-8 school in the future. For this study, the analysis of Existing Plus Project Conditions and Background Plus Project evaluates the 18-acre potential park site developed as a park. For the analysis of Cumulative Conditions, a K-8 school is assumed to be developed on this site because, even though the City would not be amending the General Plan and/or zoning to designate this site for a school (but rather would be making such amendments to facilitate the potential for a park), the School District has expressed preliminary interest in possibly developing this site with the school at some point in the future.

Project Trip Distribution and Assignment

A trip distribution for the project was developed based on origin/destination matrices provided by AMBAG for Marina. Traffic Technical Appendix Exhibit 10 shows the project trip distribution. As previously discussed, the forecasting process using the TRAFFIX model provides an intersection level analysis that is not provided by the AMBAG model.

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LAND USE	ITE LAND USE CODE	PROJECT SIZE	PEAK HOUR TRIP RATES								
			DAILY TRIP RATES	PEAK HOUR RATES	AM PEAK HOUR			PEAK HOUR RATE	PM PEAK HOUR		
					% OF DAILY TRIPS	% IN	% OUT		% OF DAILY TRIPS	% IN	% OUT
Senior Adult Housing - Detached	251	546 Units	3.71	0.20	5%	0.38	0.62	0.26	7%	0.61	0.39
Senior Adult Housing - Townhome	251	50 Units	3.71	0.20	5%	0.38	0.62	0.26	7%	0.61	0.39
Assisted Living	254	60 Beds	2.74	0.17	6%	0.73	0.27	0.38	14%	0.36	0.64
Club Facility	495	20,000 SF	22.88	1.62	7%	0.61	0.39	1.64	7%	0.29	0.71
Apartments	220	116 Units	6.72	0.51	8%	0.20	0.80	0.62	9%	0.65	0.35
City Park	SDTG	17.60 Acres	50.00	2.00	4%	0.50	0.50	4.00	8%	0.50	0.50
K-8 School	552	850 Students	1.62	0.53	33%	0.55	0.45	0.15	9%	0.52	0.48
Senior Center	495	6,000 SF	22.88	1.62	7%	0.61	0.39	1.64	7%	0.29	0.71

LAND USE	ITE LAND USE CODE	PROJECT SIZE	PROJECT TRIP GENERATION - PROJECT CONDITIONS								
			DAILY TRIPS	PEAK HOUR TRIPS	AM PEAK HOUR			TOTAL PEAK HOUR	PM PEAK HOUR		
					% OF DAILY TRIPS	TRIPS IN	TRIPS OUT		% OF DAILY TRIPS	TRIPS IN	TRIPS OUT
Senior Adult Housing - Detached	251	546 Units	2,026	109	5%	41	68	142	7%	87	55
Senior Adult Housing - Townhome	251	50 Units	186	10	5%	4	6	13	7%	8	5
Assisted Living	254	60 Beds	164	10	6%	7	3	23	14%	8	15
Club Facility	495	20,000 SF	458	32	7%	20	13	33	7%	10	23
Apartments	220	116 Units	780	59	8%	12	47	72	9%	47	25
City Park	SDTG	18 Acres	880	35	4%	18	18	70	8%	35	35
Senior Center	495	6,000 SF	137	10	7%	6	4	10	7%	3	7
TOTAL PROJECT TRIPS -- PROJECT CONDITION			4,630	266	6%	108	158	363	8%	197	166

LAND USE	ITE LAND USE CODE	PROJECT SIZE	PROJECT TRIP GENERATION - CUMULATIVE								
			DAILY TRIPS	PEAK HOUR TRIPS	AM PEAK HOUR			TOTAL PEAK HOUR	PM PEAK HOUR		
					% OF DAILY TRIPS	TRIPS IN	TRIPS OUT		% OF DAILY TRIPS	TRIPS IN	TRIPS OUT
Senior Adult Housing - Detached	251	546 Units	2,026	109	5%	41	68	142	7%	87	55
Senior Adult Housing - Townhome	251	50 Units	186	10	5%	4	6	13	7%	8	5
Assisted Living	254	60 Beds	164	10	6%	7	3	23	14%	8	15
Club Facility	495	20,000 SF	458	32	7%	20	13	33	7%	10	23
Apartments	220	116 Units	780	59	8%	12	47	72	9%	47	25
City Park	SDTG	17.60 Acres	880	36	4%	18	18	70	8%	35	35
K-8 School (Cumulative Project)	552	850 Students	1,377	451	33%	248	203	128	9%	66	61
Senior Center	495	6,000 SF	137	10	7%	6	4	10	7%	3	7
TOTAL PROJECT TRIPS -- CUMULATIVE CONDITION			6,007	717	12%	356	361	490	8%	263	227

Notes:

1. Trip generation rates published by Institute of Transportation Engineers, "Trip Generation," 7th Edition, 2003, except City Park.
2. City Park trip rates from "San Diego Traffic Generators," San Diego Association of Governments, 1998.
3. Club Facility: 90% of the trips generated by this use will be modeled as internal trips and 10% as external trips.
4. Analysis of Existing Plus Project and Background Plus Project includes the trips generated by the park. Analysis of Cumulative Conditions includes the K-8 school.

Source: Higgins Associates

Project Trip Generation

Figure
D-3

Traffic Technical Appendix Exhibits 11A and 11B show the project trips assigned to the 25 study intersections. The project trips in Traffic Technical Appendix Exhibits 11A and 11B were added to the existing traffic volumes to create Existing Plus Project traffic volumes. These traffic volumes are shown on Traffic Technical Appendix Exhibits 12A and 12B.

The development of the Cypress Knolls project will impact the access to the existing school and Head Start facility that are currently accessed via 3rd Avenue. Access to these facilities will be provided by the construction of Patton Parkway and the Crescent Avenue extension to Patton Parkway.

Existing Plus Project Traffic Conditions – Intersection Impacts

The traffic that would be generated by the project was combined with the existing traffic to provide existing plus project traffic volumes. Existing plus project morning and evening peak hour turning volumes are illustrated on Traffic Technical Appendix Exhibits 12A and 12B. Traffic Technical Appendix Exhibits 6A and 6B tabulate corresponding morning and evening peak hour levels of service. Level of service calculation worksheets are presented in *Traffic Appendix E*.

Based upon the significance criteria described in Section 1.5, the project would significantly impact the following intersections:

Intersection #16: Southbound Highway 1 Ramps/Imjin Parkway;
Intersection #19: Third Avenue/Imjin Parkway; and
Intersection #20: Fourth Avenue/Imjin Parkway.

Mitigation measures to reduce the project's impact at the three intersections are described in section 4 below. The mitigated intersection level of service calculations are contained in *Traffic Appendix L*.

Impact D-1: Southbound Highway 1 Ramps/Imjin Parkway – Intersection # 16:

The project would add traffic to the southbound Highway 1 ramp approach to Imjin Parkway, which operates at LOS F under Existing Conditions. This is a significant project impact.

Mitigation D-1: To mitigate the project's impact to the intersection, the following improvement would be required:

- Signalize the intersection.

This improvement is included in the City of Marina Capital Improvement Program as Traffic Intersection (TI) 22. The improvement is also included in the TIF, toward which the project will contribute. The City is scheduled to construct this improvement in the 2007/2008 timeframe. The Cypress Knolls project will pay its share of the cost of this improvement and mitigate its impact through the payment of the TIF.

Level of Significance after Mitigation: Less than significant.

Impact D-2: Third Avenue/Imjin Parkway – Intersection # 19: The project would add traffic to the southbound and northbound Third Avenue approaches to Imjin Parkway. These approaches operate at LOS F under existing conditions during the AM and PM peak hours. The delay on the approaches currently operating at LOS F increase with project trips added to the intersection creating a significant project impact.

Mitigation D-2: Widening the southbound and northbound approaches to provide more lanes on these approaches would not mitigate the incremental delay caused by the project at this intersection. Signalization of the intersection would mitigate the incremental delay, but the peak hour volume traffic signal warrants would not be met at the intersection based on Existing Plus Project Condition AM and PM peak hour volumes. The City's Capital Improvement Program includes constructing a traffic signal at the intersection (TI 6). This improvement is included in the City's TIF. The project's payment of the City of Marina TIF will mitigate the project's impact at this location.

However, traffic signals are not installed unless the need for the signal is established by an engineering study that includes an evaluation of peak hour and 8-hour volumes at the intersection. To mitigate the project's impact at this intersection prior to the installation of the signal, the following improvement would be required:

- Modify the median opening at the Imjin Parkway/Third Avenue intersection to prohibit left turns and through movements from the Third Avenue approaches to Imjin Parkway.

It is recommended that these interim improvements be installed as part of the project. The median closure can be accomplished using channelizers so that the closure can be easily reversed in the future when the signal is installed. Left turn movements from the Third Avenue approaches can be accomplished by either turning right onto Imjin Parkway from Third Avenue and performing a u-turn movement at an another intersection along Imjin Parkway or by accessing the signalized intersection of Imjin Parkway and 2nd Avenue via the local street network (i.e., 12th Street or 9th Street). Closure of the median opening on Imjin Parkway at Third Avenue should be reassessed as new development in the area occurs.

Level of Significance after Mitigation: Less than significant.

Impact D-3: Fourth Avenue/Imjin Parkway – Intersection # 20: The project will add traffic to the intersection that would cause the existing LOS F operations on the 4th Avenue approaches to worsen, resulting in a significant impact.

Mitigation D-3: Widening the southbound and northbound approaches to provide more lanes on these approaches will not mitigate the incremental delay caused by the project at this intersection. Signalization of the intersection would mitigate the incremental delay. The City's Capital Improvement Program includes constructing a traffic signal at the intersection (TI 9). This improvement is included in the City's TIF. The project's payment of the City of Marina TIF will mitigate the project's impact at this location.

The peak hour volume traffic signal warrants would not be met at the intersection based on Existing Plus Project Condition AM and PM peak hour volumes. To mitigate the project's impact at this intersection prior to installation of the signal, the following improvement would be required:

- Modify the median opening at the Imjin Parkway/Fourth Avenue intersection to prohibit left turns and through movements from the Fourth Avenue approaches to Imjin Parkway.

It is recommended that these improvements be installed in conjunction with the project.

The median closure can be accomplished using channelizers so that the closure can be easily reversed in the future. Left turn movements from the Fourth Avenue approaches can be accomplished by either turning right onto Imjin Parkway from Fourth Avenue and performing a u-turn movement at the another intersection along Imjin Parkway or by accessing the signalized intersection of Imjin Parkway and 2nd Avenue via the local street network (i.e., 12th Street or 9th Street). Closure of the median opening on Imjin Parkway at Fourth Avenue should be reassessed by the City as new development in the area occurs.

Level of Significance after Mitigation: Less than significant.

Existing Plus Project Traffic Conditions – Road Segments

Existing Plus Project Condition morning and evening peak hour volumes on the study street segments are tabulated on Traffic Technical Appendix Exhibit 8A. These are based upon turning volumes illustrated on Traffic Technical Appendix Exhibits 12A & 12B. Traffic Technical Appendix Exhibit 8A also tabulates corresponding street segment levels of service. The roadway segment level of service is based on the threshold volumes as shown in *Traffic Appendix A5* and the HCM 2000 methodologies. The weaving section level of service calculation worksheets are contained in *Traffic Appendix K*.

Under Existing Plus Project Conditions, all the study highway and street segments would operate at acceptable levels of service. The project will not significantly impact any of the street and highway segments analyzed for this study.

Existing Plus Project Traffic Conditions – Potential Impacts With Alternative Project Description

The Assisted Living Facility is proposed as an optional component of the project and, if constructed, it would be located on Patton Parkway, outside of the potentially gated portion of the project site. The Assisted Living Facility would generate 10 AM peak hour trips and 23 PM peak hour trips, which is a relatively small volume of trips. If the Assisted Living Facility were removed from the project, there would be no change to the findings and conclusions of the analysis of Existing Plus Project Conditions.

The project may be a gated facility. The land uses that would be located within the gated portion of the site include the senior housing, and community center facility. The assisted

living, apartments, City senior center and park/school uses would be located outside of the project gates.

Whether the facility is gated or not would not impact the circulation patterns of the trips generated within the potentially gated portion of the site; trips generated within the potentially gated portion of the site would have be able to access the site via California Avenue and Imjin Parkway. If gates were installed, the gates will prohibit the use of Third Avenue as a link between 12th Street and California Avenue. This would limit the access/circulation opportunities for the development located generally on the north side of Imjin Parkway on either side of Third Avenue. This includes the Cypress Knolls apartment land use and the Monterey Peninsula College Satellite Campus, which is located along Third Avenue north of Imjin Parkway.

If the project was not gated, traffic volumes on Third Avenue between Imjin Parkway and California Avenue would be higher than modeled in this study. Existing traffic would, under this scenario, use the route to travel between the Imjin Road and California Avenue corridors. Trips generated by the Cypress Knolls apartment project would also use Third Avenue to access California Avenue. Should the project not be gated, traffic calming measures would be appropriate on Third Avenue through the project site to reduce the desirability of Third Avenue through the project site for circulation between Imjin Parkway and California Avenue. Potentially, traffic volume increases on the Third Avenue approaches to California Avenue and Imjin Parkway as a result of no gates could require additional lanes on these intersection approaches due to increased use of Third Avenue. Opening Third Avenue could reduce traffic volumes on Imjin Parkway between Third Avenue and California Avenue and on California Avenue between Third Avenue and Imjin Parkway, resulting in better traffic operations on these segments.

3.3 Background Traffic Conditions

This chapter presents a description of the traffic network, traffic volumes, and intersection levels of service within the study area under background (existing plus approved projects) traffic conditions.

Approved Projects Description

A number of other projects have been approved within the study area that have not yet been constructed. These projects include projects approved by the City of Marina, and projects approved by other agencies. Traffic Technical Appendix Exhibit 13 provides a list of these projects as well as the trip generation associated with these projects. The list of approved projects was compiled from traffic studies prepared for other projects in the Monterey Peninsula area. In addition, the planning departments at the various Monterey Peninsula jurisdictions were contacted to provide an updated list of approved projects. The locations of the approved projects are shown on the map provided in *Traffic Appendix F*. These projects will impact the study street network prior to impacts being experienced by the proposed project because these projects are planned to be completed before the project is completed.

Included in the background projects is an account for the anticipated growth of CSUMB and the number of trips that would be generated. An estimation of the CSUMB trip generation under background conditions was based on the phased student and staff

growth provided by the University. Also included in the Background Condition is the Marina Heights project and Phase 1 of the Marina University Villages project, including the traffic improvements provided by or required of those projects (in the case of University Villages, the improvements to be provided or required concurrent with Phase I development were included). The assumptions utilized for the Background Condition development are consistent with the assumptions used for the traffic analysis for the University Villages project.

The approved projects, as well as CSUMB at the background level would generate a total of 122,805 daily trips, with 6,884 trips during the AM peak hour and 11,287 trips during the PM peak hour. These trips were assigned to the area road network and subsequently added to the existing traffic volumes to create the background traffic volumes depicted on Traffic Technical Appendix Exhibits 14A and 14B.

Background Traffic Conditions – Intersection Operations

The traffic that would be generated by the approved projects and CSUMB growth was combined with the existing traffic to provide Background Conditions traffic volumes. Background morning and evening peak hour turning volumes are illustrated on Traffic Technical Appendix Exhibits 14A & 14B. Traffic Technical Appendix Exhibits 6A & 6B tabulate corresponding morning and evening peak hour levels of service. The Background Condition level of service worksheets are presented in *Traffic Appendix G*. The intersection levels of service shown on Traffic Technical Appendix Exhibits 6A and 6B are based upon existing intersection geometrics.

The following intersections would operate at unacceptable levels under Background Conditions:

Intersection #3: Imjin Road/Reservation Road;
Intersection #4: Imjin Road/Blanco Road;
Intersection #19: Third Avenue/Imjin Parkway;
Intersection #20: Fourth Avenue/Imjin Parkway;
Intersection #21: California Avenue/Imjin Parkway;
Intersection #25: Imjin Road/Preston Drive.

Background Traffic Conditions – Road Segments

Background morning and evening peak hour volumes on the study street segments are tabulated on Traffic Technical Appendix Exhibit 8A. These are based upon turning volumes illustrated on Traffic Technical Appendix Exhibits 14A & 14B. Traffic Technical Appendix Exhibit 8A also tabulates corresponding street segment levels of service. The roadway segment level of service is based on the threshold volumes as shown in *Traffic Appendix A5* and the HCM 2000 methodologies. The weaving section level of service calculation worksheets are contained in *Traffic Appendix K*.

All the study highway and street segments would operate at acceptable levels of service under Background Conditions except the northbound Highway 1 segment south of Imjin Parkway, which would operate at LOS E during the PM peak hour.

3.4 Background Plus Project Traffic Conditions

This section of the report describes the analyses of the study road network under Background Plus Project traffic conditions. The section includes the analysis of project trip generation, distribution and assignment.

Background Plus Project Traffic Volumes

The project trip assignments shown in Traffic Technical Appendix Exhibits 11A and 11B were adjusted to account for the completion of California Avenue between Carmel Avenue and Reindollar Avenue, which is included Background Condition road network. The adjusted project trip assignments were added to the background traffic volumes to create Background plus Project traffic volumes. These traffic volumes are shown on Traffic Technical Appendix Exhibits 15A and 15B.

Background Plus Project Traffic Conditions- Intersection Impacts

Traffic Technical Appendix Exhibits 6A and 6B tabulate corresponding morning and evening peak hour levels of service. Level of service calculation worksheets are presented in *Traffic Appendix H*.

Based upon the significance criteria described in Section 3.1 above, the project would create significant impacts at the following intersections:

Intersection #19: Third Avenue/Imjin Parkway;
Intersection #20: Fourth Avenue/Imjin Parkway; and
Intersection #21: California Avenue/Imjin Parkway.

In addition, a left turn is warranted on the northbound California Avenue approach to Patton Parkway.

Mitigation measures for the Background Plus Project Condition are described below. The mitigated intersection level of service calculations are contained in *Traffic Appendix M*.

Impact D4: California Avenue/Patton Parkway – Intersection # 13: The left turn warrant will be met for the northbound left turn movement from California Avenue to Patton Parkway based upon the AM peak volumes. This is a significant project impact.

Mitigation D-4: To mitigate the project's impact at this intersection, the following improvement would be required:

- Add a left turn lane on the northbound California Avenue approach to Patton Parkway.

This project is not currently included in the City's CIP or the FORA CIP. It is recommended that this improvement be added to the City's CIP and TIF, the project's contribution to which would mitigate this impact. If it is not added to the City's CIP and

TIF, it is recommended that it be imposed as a condition of the project. It is recommended that this improvement be constructed at the time that the Patton Parkway extension is constructed.

Level of Significance after Mitigation: Less than significant if the improvement is added to the City's CIP and TIF and the project pays the City's TIF, or if it is constructed as a condition of the project. If the improvement is not or cannot be constructed the impact would be significant and unavoidable.

Impact D5: Third Avenue/Imjin Parkway – Intersection # 19: This intersection was analyzed assuming all turning movements are allowed. The project will cause the average delay experienced by vehicles on the Third Avenue approaches to Imjin Parkway, which operate at LOS F under Background Conditions, to increase. This is a significant project impact.

Mitigation D-5: The peak hour volume traffic signal warrant would be met during the PM peak hour. To mitigate the project's impact at this intersection, the following improvement would be required:

- Signalize the intersection.

The City's Capital Improvement Program includes constructing a traffic signal at the intersection (TI 6). This improvement is included in the City's TIF, and is anticipated to be constructed in the 2008/2009 timeframe. The project's payment of the City of Marina TIF will mitigate the project's impact at this location to less than significant.

Level of Significance after Mitigation: Less than significant.

Impact D-6: Fourth Avenue/Imjin Parkway – Intersection # 20: The project will add traffic to the intersection that would cause the existing LOS F operations on the 4th Avenue approaches to worsen, resulting in a significant impact.

Mitigation D-6: Signalization of the intersection would mitigate the incremental delay. The City's Capital Improvement Program includes constructing a traffic signal at the intersection (TI 9). This improvement is included in the City's TIF. The project's payment of the City of Marina TIF will mitigate the project's impact at this location.

Background Plus Project peak hour volumes do not approach levels that would warrant the installation of a traffic signal. To mitigate the project's impact at this intersection prior to installation of the signal, the following improvement would be required:

- Modify the median opening at the Imjin Parkway/Fourth Avenue intersection to prohibit left turns and through movements from the Fourth Avenue approaches to Imjin Parkway.

It is recommended that these improvements be installed as a condition to the project. The median closure can be accomplished using channelizers so that the closure can be easily reversed in the future. Left turn movements from the Fourth Avenue approaches

can be accomplished by either turning right onto Imjin Parkway from Fourth Avenue and performing a u-turn movement at the another intersection or by accessing the signalized intersection of Imjin Parkway and 2nd Avenue via the local street network (i.e., 12th Street or 9th Street). Closure of the median opening on Imjin Parkway at Fourth Avenue should be reassessed as new development in the area occurs.

Level of Significance after Mitigation: Less than significant.

Impact D-7: California Avenue/Imjin Parkway – Intersection # 21: This intersection operates at LOS F under Background Conditions during the AM peak hour and the proposed project would increase the delay at this intersection 9.7 seconds, creating a significant project impact.

Mitigation D-7: Adding a right turn lane on the southbound California Avenue approach to Imjin Parkway would mitigate the project impact. This improvement is included in the City of Marina Capital Improvement Program as Traffic Intersection (TI) 25. The improvement is also included in the TIF, toward which the project will contribute. The Cypress Knolls project will pay its share of the cost of this improvement and mitigate its long-term impact through the payment of the TIF. However, this improvement is not scheduled to be constructed in the next five years, it is recommended that the City consider amending the CIP to plan for this improvement in the next five years. If the CIP is so amended, then the short-term and long-term impacts of the project would be less than significant. If the CIP is not so amended, then the short-term impacts of the project would be significant and unavoidable but the long-term impacts would be less than significant.

Level of Significance after Mitigation: Less than significant if the CIP is amended to advance the construction of the recommended mitigation measure. If the construction is not advanced, there will be a temporary significant and unavoidable impact prior to the installation of the improvement.

Background Plus Project Traffic Conditions- Road Segments

Background Plus Project Condition morning and evening peak hour volumes on the study street segments are tabulated on Traffic Technical Appendix Exhibit 8A. These are based upon turning volumes illustrated on Traffic Technical Appendix Exhibits 15A & 15B. Traffic Technical Appendix Exhibit 8A also tabulates corresponding street segment levels of service. The roadway segment level of service is based on the threshold volumes as shown in *Traffic Appendix A5* and the HCM 2000 methodologies. The weaving section level of service calculation worksheets are contained in *Traffic Appendix K*.

Based upon the significance criteria described in Section 3.1, the project would not significantly impact the study road and highway segments.

Background Plus Project – Potential Impacts With Alternative Project Description

If the Assisted Living Facility were removed from the project, there would be no change to the findings and conclusions of the analysis of Background Plus Project Conditions.

The discussion in the Existing Plus Project section concerning the gating of the project also applies to the Background Plus Project Condition. With approved projects developed, the volume of traffic that could use Third Avenue as a link between California Avenue and Imjin Parkway would be higher than with the Existing Plus Project Condition.

3.5 Cumulative Without Project Conditions

This section describes the analysis results of the study intersection and roadway segment operations under cumulative traffic conditions without the project developed. Traffic projections for the Cumulative Without Project Condition were developed by modeling the traffic generated by several additional proposed and anticipated developments in the Marina/Seaside area. The TRAFFIX software program was used to model the traffic generated by these projects and assign the traffic to the road network. The traffic from cumulative projects was added to Background traffic volumes to obtain Cumulative Without Project traffic volumes. The cumulative traffic condition is defined as traffic conditions roughly twenty years beyond existing conditions. However, it is uncertain when or if the projects modeled for the Cumulative Condition will be fully developed and occupied. The horizon year for the Cumulative Condition is at least Year 2025.

Cumulative Development Projects Trip Generation

Various approved and proposed projects throughout the Cities of Marina and Seaside, as well as in the surrounding FORA areas are anticipated to be developed, or at least partially developed within the next fifteen to twenty years. The list of cumulative projects includes projects that have been approved for development, such as the East Garrison project and Phases II and higher of the University Villages project and Imjin office Park (new FORA offices), and projects that are currently under environmental review, such as Marina Station. Projects have also been included that have previously been proposed in other planning documents, but that have not completed environmental review. These projects include UCMBEST in Marina, Del Rey Oaks Resort, and Monterey Peninsula College.

For this scenario, it was assumed that the cumulative projects would be fully built out. Furthermore, the expected number of students at CSUMB Master Plan level was used to determine the anticipated number of trips that would be generated by CSUMB. It should be noted that these assumptions for buildout are based on a conservative approach for the buildout of these cumulative projects and will likely change over time due to market conditions, development decisions and other conditions.

Traffic Technical Appendix Exhibit 16 shows the list of cumulative projects and the trip generation for the cumulative projects. The cumulative projects would generate a total of 232,954 daily trips, with 15,093 trips generated during the AM peak hour, and 22,601 trips during the PM peak hour. The locations of the cumulative projects are shown on the map provided in *Traffic Appendix K*.

Cumulative Without Project – Trip Distribution and Assignment

For the purpose of this traffic scenario, the distribution of the estimated project trips was based upon origin/destination matrices provided by AMBAG for the FORA traffic zone

and the Marina traffic zone. Furthermore, the locations and proximity of CSUMB campus activities, other future FORA projects and other existing and future land uses in the area were considered in the project trip distribution. The traffic assignment accounts for anticipated linked trips that will occur between the residential and commercial uses within the Marina University Villages area as well as the CSUMB campus, and existing and planned surrounding residential developments as part of the FORA Reuse Plan. The linked trips have been taken into consideration in the cumulative project trip distribution to avoid double counting of trips on the study intersections and road network.

Traffic Technical Appendix Exhibits 17A and 17B show Cumulative Condition AM and PM peak hour traffic volumes. These volumes were achieved by combining the traffic assignment for the cumulative projects with the Background Plus Project Condition traffic volumes.

Cumulative Without Project – Road Network

Under this traffic scenario, all improvements included in the City of Marina TIF and FORA CIP, the 2004 CSUMB Master Plan Transportation and Circulation study, as well as improvements not included in these plans by the University Villages and Marina Heights projects. The Cumulative Condition road network includes the 2nd Avenue Extension between Del Monte Boulevard and Imjin Parkway, which is included in the City's TIF program. Patton Parkway between California Avenue and Crescent Avenue is included in the Cumulative Without Project road network because it is included in the City's TIF. The Crescent Avenue Extension between Reindollar Avenue and Patton Parkway and Patton Parkway between Crescent Avenue and 2nd Avenue are included in the Cumulative Without Project road network because these projects are included in the FORA Capital Improvement Program.

As part of the CSUMB network changes 4th Avenue will be realigned to intersect 8th Street at the existing intersection with California Avenue. Also, 5th Avenue will be realigned to the intersection of Imjin Road and 8th Street to create the primary access to the CSUMB campus from the north. Refer to Traffic Technical Appendix Exhibit 3C for the future study road network used in the traffic analysis for the cumulative traffic scenario.

Cumulative Without Project – Intersection Operations

The traffic that would be generated by the cumulative projects was combined with the Background Condition traffic volumes to provide Cumulative Without Project traffic volumes. Cumulative morning and evening peak hour turning volumes are illustrated on Traffic Technical Appendix Exhibit 17A and 17B. Traffic Technical Appendix Exhibits 6A & 6B tabulate corresponding morning and evening peak hour levels of service, the details of which are presented in *Traffic Appendix J*.

The following intersections do not operate within acceptable levels under the Cumulative Without Project Condition:

Intersection #1:	Del Monte Boulevard/Reservation Road
Intersection #3:	Imjin Road/Reservation Road
Intersection #4:	Blanco Road/Reservation Road
Intersection #16:	SB Highway 1 Ramps/Imjin Parkway;

Intersection #18:	Second Avenue/Imjin Parkway
Intersection #19:	Third Avenue/Imjin Parkway
Intersection #20:	Fourth Avenue/Imjin Parkway
Intersection #21:	California Avenue/Imjin Parkway
Intersection #23:	Imjin Road/Imjin Parkway;
Intersection #24:	Imjin Road/Abrams Drive (North);
Intersection #25:	Imjin Road/Preston Drive.

Cumulative Without Project – Road Segments

Cumulative Without Project Condition morning and evening peak hour volumes on the study street segments are tabulated on Traffic Technical Appendix Exhibit 8A. These are based upon turning volumes illustrated on Traffic Technical Appendix Exhibits 17A & 17B. Traffic Technical Appendix Exhibit 8A also tabulates corresponding street segment levels of service. The roadway segment level of service is based on the threshold volumes as shown in *Traffic Appendix A5* and the HCM 2000 methodologies. The weaving section level of service calculation worksheets are contained in *Traffic Appendix K*.

The following highway and street segment deficiencies would occur under Cumulative Without Project Conditions:

Segment #1: Highway 1 northbound between Del Monte North and Nashua interchanges would operate at LOS F during the PM peak hour.

Segment #2: Highway 1 northbound between Reservation Road and interchanges would operate at LOS E during the PM peak hour.

Segment #3: Highway 1 northbound between Del Monte South and Reservation Road interchanges would operate at LOS E during the PM peak hour.

Segment #4: Highway 1 northbound between Imjin Parkway and Del Monte South interchanges would operate at LOS E during the PM peak hour.

Segment #5: Highway 1 southbound between Lightfighter and Del Monte South interchanges would operate at LOS E during the AM peak hour.

Segment #5: Highway 1 northbound between Lightfighter and Del Monte South interchanges would operate at LOS F during the PM peak hour.

Segment #5: Highway 1 southbound between Lightfighter and Del Monte South interchanges would operate at LOS E during the PM peak hour.

Segment #8: Highway 1 southbound on-ramp at Imjin Parkway would operate at LOS F during the PM peak hour.

Segment #13: Southbound Highway 1 weaving section between Del Monte Boulevard and Imjin Parkway would operate at LOS E during the AM peak hour and LOS E during the PM peak hour.

Segment #16: Reservation Road west of California Avenue would operate at LOS E during the PM peak hour.

Segments #23 through #26: Imjin Parkway from 2nd Avenue to Imjin Road would operate at LOS F during the PM peak hour. Segment #23 (Imjin Parkway between 2nd Avenue and 3rd Avenue) would operate at LOS F during the AM peak hour.

3.6 Cumulative With Project Conditions

This section describes the analysis results of the study intersection and roadway segment operations under cumulative traffic conditions with the project developed. The traffic assignment for the project was combined with the Cumulative Without Project volumes to obtain Cumulative With Project Condition traffic volumes.

The project trip assignments utilized for the Background Plus Project analysis were adjusted to account for the completion of the 2nd Avenue Extension between Imjin Parkway and Del Monte Boulevard and the extension of Patton Parkway from Crescent Avenue to the 2nd Avenue extension. These links are included in the Cumulative Condition road network, but are not elements of the Existing Condition or Background Condition road networks.

In order to facilitate an analysis of cumulative with and without the proposed project, all of the cumulative projects shown on Traffic Technical Appendix Exhibit 16 were assumed for purposes of this report to be fully built out. This assumption may be overly conservative, however, given that applications for the proposed project are actually currently under review, whereas applications for some of the cumulative projects have not been filed yet. This approach to the analysis presents the worst-case view of the proposed project's cumulative traffic impacts.

Cumulative With Project Conditions – Intersection Impacts

Cumulative with project morning and evening peak hour turning volumes are illustrated on Traffic Technical Appendix Exhibit 18A and 18B. Traffic Technical Appendix Exhibits 6A & 6B tabulate corresponding morning and evening peak hour levels of service, the details of which are presented in *Traffic Appendix K*.

Based on the significance criteria presented in Section 1.5, the project would create a significant impact in conjunction with other cumulative development at the following intersections:

Intersection #16: Southbound Highway 1 Ramps/Imjin Parkway

Intersection #18: 2nd Avenue/Imjin Parkway

Intersection #19: Third Avenue/Imjin Parkway.

Traffic Technical Appendix Exhibits 7A and 7B list the improvements required to mitigate incremental project impacts at the cumulative level. The required improvements are described below. The mitigated intersection level of service calculations are contained in *Traffic Appendix N*.

Impact D-8: Southbound Highway 1 Ramps/Imjin Parkway – Intersection # 16: Under Cumulative Without Project Conditions, the Southbound Highway 1 Ramps/Imjin Parkway intersection would operate at LOS F during the AM and PM peak hours. The project would add traffic that would increase the average vehicle delay by 7.0 seconds during the AM peak hour and 7.4 seconds during the PM peak hour. This is a significant project impact.

Mitigation D-8: To mitigate the project's impact to the intersection, the following improvement would be required:

- Reconstruct the interchange to eliminate the intersection between the southbound off-ramp and the southbound on-ramp. This would require the construction of a loop ramp to serve one of these two movements.

The reconstruction of the interchange is required to serve regional traffic increases at the Highway 1/Imjin Parkway interchange. Imposing an improvement of this magnitude on a single project is infeasible due to the costs associated with reconstructing the interchange as compared to the project's contribution to the need for reconstructing the interchange. It is therefore beyond the scope of this project. This improvement is included in the City of Marina Capital Improvement Program as an element of Roadway (R) 48 (Construct New Interchange). The Highway 1/Imjin Parkway interchange reconstruction project is not included in the City's TIF or the FORA CIP.

The City's TIF includes the preparation of a Project Study Report for the Highway 1/Imjin Parkway interchange (PSR). The proposed project will pay its fair share of the costs of the PSR through its TIF payment. The PSR will evaluate alternative interchange designs to serve long-range traffic volumes at the interchange. Through the payment of the City's TIF, the project will contribute its fair share towards the development of a long-range improvement plan for the Highway 1/Imjin Parkway interchange. Should the funding for the improvements identified in the PSR be added to the City's TIF prior to the issuance of the building permits for this project, this project will pay its fair share of the costs of the improvements. However, because the improvement project has not been identified at this time and is unfunded, the project's incremental cumulative impact to the Southbound Highway 1 Ramps/Imjin Parkway intersection would be significant and unavoidable.

Level of Significance after Mitigation: Significant and unavoidable.

Impact D-9: 2nd Avenue/Imjin Parkway – Intersection # 18: This intersection would operate at LOS C during the weekday AM peak hour and LOS F during the weekday PM peak hour under Cumulative Without Project Conditions. The proposed project will increase the delay at the intersection during the Cumulative Condition PM peak hour by 4.4 seconds, creating a significant project impact.

Mitigation D-9: The additional improvements that would be required to achieve acceptable operations at this intersection with an at-grade intersection would not

be feasible.¹ The planned PSR for the Highway 1/Imjin Parkway intersection (which is TIF funded - the project will pay its share, as set forth above) will evaluate alternative designs for this intersection including the feasibility of grade separating Imjin Parkway and 2nd Avenue at this location. The improvements at the 2nd Avenue/Imjin Parkway intersection are linked to the Highway 1/Imjin Parkway interchange design project because of the close proximity between the two locations and because improvements at one location will affect design requirements at the other location. The improvements that would be required to mitigate the project's incremental cumulative impact to the 2nd Avenue/Imjin Parkway will be identified in the PSR. Should the funding for improvements identified in the PSR be added to the City's TIF prior to the issuance of the building permits for this project, this project will pay its fair share of the costs of the improvements. However, a funded improvement project that would mitigate the project's incremental cumulative impact to this intersection does not currently exist and cannot be developed until the PSR for the Highway 1/Imjin Parkway intersection is completed. Therefore, the project's incremental cumulative impact at this location is significant and unavoidable.

Level of Significance after Mitigation: Significant and unavoidable.

Impact D-10: Third Avenue/Imjin Parkway – Intersection # 19 would operate at LOS F during the AM and PM peak hours under Cumulative Without Project Conditions. The proposed project will increase the delay at the intersection by 22.3 seconds during the AM peak hour and 26.0 seconds during the PM peak hour, creating a significant impact.

Mitigation D-10: The following improvement would be required to mitigate the project's incremental cumulative impact on the Third Avenue / Imjin Parkway intersection:

- Add a right turn lane on the southbound Third Avenue approach to Imjin Parkway and modify the traffic signal at this intersection to include a right turn overlap phase.

Construction of this improvement by the project would mitigate the project's incremental cumulative impact to this intersection. Based upon design plans prepared for Imjin Parkway, additional right-of-way on the west side of Third Avenue would be required to implement this improvement. Additional right-of-way 12 feet in width extending on the west side of Third Avenue for a distance of 400 feet would be required. The property located west of Third Avenue and north of Imjin Parkway is the site of the Monterey Peninsula College Fort Ord 12th Street Campus.

The additional right turn lane on the southbound intersection approach is not currently in the City's CIP. The installation of a traffic signal at this intersection is included in the City's CIP and TIF. It is recommended that the additional right turn lane be added to the CIP and TIF. Should the right turn lane be incorporated into the City's CIP and TIF, payment of the TIF would mitigate the project's cumulative impact at this location. If the right turn lane is not added to the City's CIP and TIF, then the project's cumulative impact

¹ *Marina University Villages Mixed Use Development, City of Marina, Traffic Impact Study Report, Final Report*, Higgins Associates, December 17, 2004.

would be significant and unavoidable because, as this intersection already operates at unacceptable LOS, the costs associated with acquiring the necessary right of way for and constructing the right turn lane and the overall benefit provided would be disproportionate to the project's contribution to the need for constructing the turn lane.

Level of Significance after Mitigation: If the improvement is added to the City's CIP and TIF, payment by the project of the TIF would reduce the impact to less than significant. If the improvement is not added to the City's CIP and TIF, the impact would remain significant and unavoidable.

Cumulative With Project Conditions – Road Segments

Cumulative Condition morning and evening peak hour volumes on the study street segments are tabulated on Traffic Technical Appendix Exhibit 8A. These are based upon turning volumes illustrated on Traffic Technical Appendix Exhibits 18A & 18B. Traffic Technical Appendix Exhibit 8A also tabulates corresponding street segment levels of service. The roadway segment level of service is based on the threshold volumes as shown in *Traffic Appendix A5* and the HCM 2000 methodologies. The weaving section level of service calculation worksheets are contained in *Traffic Appendix K*.

The project would significantly impact the following highway and road segments:

Segment #1: Northbound Highway 1 north of Del Monte North interchange;
Segment #5: Northbound Highway 1 south of Imjin Parkway;
Segment #8: Southbound Highway 1 off-ramp at Imjin Parkway;
Segment #22: Imjin Parkway between Highway 1 and 2nd Avenue;
Segment #23: Imjin Parkway between 2nd Avenue and Third Avenue;
Segment #24: Imjin Parkway between Third Avenue and Fourth Avenue;
Segment #25: Imjin Parkway between Fourth Avenue and California Avenue; and
Segment #26: Imjin Parkway between California Avenue and Imjin Road.

The following project impacts would occur at these locations:

Impact D-11: Northbound Highway 1 North of Del Monte Boulevard North (Segment #1) would operate at LOS F during the PM peak hour under Cumulative Without Project Conditions. The proposed project would add trips to this highway segment, resulting in a significant impact.

Mitigation D-11: The following improvement would be required to mitigate the incremental project impact on this segment:

- Add a third lane on northbound Highway 1 between the Del Monte North interchange and the Nashua Road-Molera Road interchange.

This improvement is not currently included in long-range improvement plans for Highway 1. The Caltrans Route Concept Report for Highway 1 includes widening four lane segments of Highway 1 to six lanes. However, there is currently no funded improvement that would widen this segment of Highway 1. Additionally, this segment would operate at

unacceptable levels without the Project and this improvement is required due to regional traffic with or without the Project. Moreover, the costs associated with constructing this improvement would be disproportionate to the project's contribution to the need for constructing the improvement. Therefore, the project's incremental cumulative impact to Highway 1 north of Del Monte Boulevard North would be a significant and unavoidable impact.

Level of Significance (no feasible mitigation available): Significant and unavoidable.

Impact D-12: Northbound Highway 1 South of Imjin Parkway (Segment #5) would operate at LOS F during the PM peak hour under Cumulative Without Project Conditions. The proposed project would add trips to this highway segment, resulting in a significant impact.

Mitigation D-12: The following improvement would be required to mitigate the incremental project impact on this segment:

- Add a fourth lane on northbound Highway 1 south of Imjin Parkway.

This improvement is not currently included in long-range improvement plans for Highway 1. Widening Highway 1 beyond the existing 6-lane section south of Imjin Parkway is not anticipated in the Caltrans Route Concept Report for Highway 1. Additionally, this segment would operate at unacceptable levels without the Project and this improvement is required due to regional traffic with or without the Project. Moreover, the costs associated with constructing this improvement would be disproportionate to the project's contribution to the need for constructing the improvement. The project's impact to Highway 1 south of Imjin Parkway would be a significant and unavoidable impact.

Level of Significance (no feasible mitigation available): Significant and unavoidable.

Impact D-13: Southbound Highway 1 On-Ramp at Imjin Parkway (Segment #8) would operate at LOS F during the AM and PM peak hours under Cumulative Without Project Conditions. The proposed project would add trips to this highway ramp, resulting in a significant impact.

Mitigation D-13: The following improvement would be required to mitigate the incremental cumulative project impact on this segment:

- Widen the southbound on-ramp to Highway 1 from Imjin Parkway to two-lanes.

This improvement is included in the City of Marina Capital Improvement Program as an element of Roadway (R) 48 (Construct New Interchange). The Highway 1/Imjin Parkway interchange reconstruction project is not included in the City's TIF or the FORA CIP.

The reconstruction of the interchange is required to serve regional traffic increases at the Highway 1/Imjin Parkway interchange. Additionally, this segment would operate at unacceptable levels without the Project. Moreover, the costs associated with constructing this improvement would be disproportionate to the project's contribution to the need for constructing the improvement. Accordingly, imposing an improvement of this

magnitude on a single project is infeasible due to the costs associated with constructing the improvement and interchange. It is therefore beyond the scope of this project.

Before any work can be done at the State highway interchange Caltrans will require a study to identify the long term design for the interchange and the interim measures that would be consistent with that design. The City's TIF includes the preparation of the PSR for the Highway 1/Imjin Parkway interchange. The City's TIF includes the preparation of the PSR. The PSR will evaluate alternative interchange designs to serve long-range traffic volumes at the interchange. Through the payment of the City's TIF, the project will contribute its fair share towards the development of a long-range improvement plan for the Highway 1/Imjin Parkway interchange. Should the funding for the improvements identified in the PSR be added to the City's TIF prior to the issuance of the building permits for this project, this project will pay its fair share of the costs of the improvements. However, because the improvement project has not been identified at this time and is unfunded, the project's incremental cumulative impact to the southbound Highway 1 on-ramp at Imjin Parkway would be significant and unavoidable.

Level of Significance after Mitigation: Significant and unavoidable.

Impact D-14: Imjin Parkway Between Highway 1 and 2nd Avenue (Segment #22) would operate at LOS C during the AM peak hour and LOS D during the PM peak hour under Cumulative Without Project Conditions. The proposed project would add trips to this street segment that would decrease the PM peak hour LOS to "E," resulting in a significant impact.

Mitigation D-14: The following improvement would be required to mitigate the incremental cumulative project impact on this segment:

- Widen Imjin Parkway between Highway 1 and 2nd Avenue to 8 lanes.

Such a project is not consistent with the City General Plan which calls for a six lane Imjin Parkway. Widening Imjin Parkway to 8 lanes is considered to be impractical and undesirable from a planning perspective and therefore infeasible. Therefore, the project's impact at this location is significant and unavoidable.

Level of Significance (no feasible mitigation available): Significant and unavoidable.

Impact D-15: Imjin Parkway Between 2nd Avenue and Imjin Road (Segments #23-26) would operate at LOS F during the PM peak hour under Cumulative Without Project Conditions. Segment 23 between 2nd Avenue and 3rd Avenue would operate at LOS F during the AM peak hour under Cumulative Without Project Conditions. The proposed project would add trips to these street segments, resulting in a significant impact.

Mitigation D-15: The following improvement would be required to mitigate the incremental project impact on this segment:

- Widen Imjin Parkway between 2nd Avenue and Imjin Road to 6 lanes.

This improvement is not included in the City's CIP or TIF program. Widening these segments of Imjin Parkway(between Second Avenue and California Avenue) to 6 lanes is included in the City's General Plan. The CIP and TIF do include intersection improvements to widen Imjin Parkway to 6 lanes at 2nd Avenue, California Avenue and Imjin Road. Widening at these intersections, but not the segments between the intersections, would leave gaps in the Imjin Parkway widening to 6 lanes at Third Avenue, Fourth Avenue and Abrams Drive (south). Accordingly, it would be appropriate in this case to incorporate the widening of Imjin Parkway to 6 lanes into the TIF program to avoid these gaps. Widening Imjiin Parkway to 6 lanes at the intersections of Third Avenue, Fourth Avenue and Abrams Drive (south) to provide a continuous 6 lane section of roadway would mitigate the project's incremental cumulative impact. If the Imjin widening is added to the City's CIP and TIF to close these gaps, payment of fees by the project developer to the TIF would mitigate the project's impact. It should be noted that widening to Imjin Parkway between California Avenue and Abrams Drive South is inconsistent with the General Plan. If the widening is not added to the City's CIP and TIF, then the project's cumulative impact would be significant and unavoidable because, as this segment already operates at unacceptable LOS, the costs associated with widening and the overall benefit provided from the widening would be disproportionate to the project's contribution to the need for constructing the widening.

Level of Significance after Implementation of Mitigation: If the improvements are added to the City's CIP and TIF, payment by the project of the TIF would mitigate the impact to less than significant. If the improvements are not added to the City's CIP and TIF, the impact would remain significant and unavoidable.

Cumulative With Project – Potential Impacts With the Alternative Project Description

If the Assisted Living Facility were removed from the project, there would be no change to the findings and conclusions of the analysis of Cumulative With Project Conditions.

The discussion in the Existing Plus Project section concerning the gating of the project is also appropriate for the Cumulative With Project Condition. Third Avenue between California Avenue and 12th Street would be used for local circulation. This would reduce volumes on Imjin Parkway and California Avenue as previously described. Traffic calming measures may be appropriate, under this situation, on Third Avenue. Additional approach lanes could be required on the southbound Third Avenue approach to Imjin Parkway and on the eastbound Third Avenue approach to California Avenue as a result of higher volumes on these approaches.

E. NOISE

1. Environmental Issue

The proposed project would be exposed to noise from existing sources (e.g., traffic) in the vicinity, and would contribute to noise exposure at nearby existing and approved future noise-sensitive land uses during project construction, and as a result of project-generated traffic and the associated construction of Patton Parkway along the project's northern boundary.

Project Specific and Program Level Analysis Assumptions

This analysis is based upon the project as described in Section I of this EIR and evaluated in the project's Traffic Impact Analysis (TIA) in section IV-D of the EIR and in the Technical Appendices Volume.¹ As explained in Section I of this EIR, to be conservative and to enable some level of meaningful analysis, certain land use characteristics were assumed for analysis purposes only for the program-level project components, *i.e.*, the potential senior center and park. The trip generation assumptions for these land uses detailed in Section IV-D provide specific traffic volumes that are used in the modeling of potential noise impacts. The impact and mitigation sections identify where an impact and/or mitigation is applicable to one, the other, or both the project specific and program level components of the Proposed Project.

2. Environmental Setting

Noise Measurement Statistics

Sound is technically described in terms of loudness (amplitude) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Several rating scales have been developed to analyze the adverse effect of community noise on people. Development of these scales has considered that the potential effect of noise upon people is often dependent upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs.

L_{eq} , the equivalent energy noise level, is the average acoustic energy content of noise during the time it lasts. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure, no matter what time of the day or night they occur.

L_{dn} (or DNL), the day-night average noise level, is a 24-hour average L_{eq} with what is effectively a 10 dB "penalty" added to noise during the hours of 10:00 P.M. to 7:00 A.M. to account for the greater nocturnal noise sensitivity of people.

CNEL, the community noise equivalent level, is the same as L_{dn} except that an additional penalty, effectively about 5 dB in magnitude, is added to noise occurring during evening hours (7:00 p.m. to 10:00 p.m.).

Other noise measures give information on the range of instantaneous noise levels experienced over time. Two examples of such measures are L_{max} , the maximum instantaneous noise level experienced during a given period of time, and L_{min} , the corresponding minimum level. Other examples include variations of the L_n statistic. The L_n value represents the noise level that was exceeded “n” percent of the time during a given evaluation period. For instance, the L_{02} is the noise level exceeded during two percent of the evaluation period -- about one minute if the evaluation period is one hour long. The L_{25} is the level exceeded during 25 percent of the evaluation period (e.g., 15 minutes during an evaluation period of one hour).

Applicable Regulations, Policies and Guidelines

State

The *California Noise Insulation Standards*ⁱⁱ establish the following noise standards for “...new...long-term care facilities, apartment houses, and dwellings other than detached single-family dwellings...”:

“Interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric shall be either the Day-night Average Sound Level (L_{dn}) or the Community Noise Equivalent Level (CNEL), consistent with the noise element of the local general plan”.

Local

General Plan

The Noise Protection section of the City’s General Plan (the Public Health & Safety portion) establishes maximum acceptable ambient noise levels for each of several use categoriesⁱⁱⁱ. Acceptable levels for land use categories most relevant to this analysis are summarized in Table E-1. The Noise Protection section states that:

“4.110...Where existing or projected exterior noise levels exceed the acceptable limit, construction shall be conditionally permitted only when appropriate mitigation measures are employed, including measures to attenuate exterior noise levels where development of schools, parks and playgrounds is proposed^{iv}.”

For projects which must mitigate noise impacts, the Noise Protection section indicates the following:

“4.112 Site-planning measures such as sound walls along roadways shall be used only as a last resort, so as to avoid the adverse visual impacts of such structures. Where they are necessary, sound walls shall include landscaped earthen berms at their bases to minimize visible wall height. Sound wall designs shall also incorporate provisions for screening landscaping and

for coverage of walls by plant materials. Sound walls shall be built of attractive, durable materials^v.”

TABLE E-1 – ALLOWABLE NOISE STANDARDS

Land Use Category	Threshold: L _{dn} (dBA)		
	Exterior		Interior
	Acceptable	Conditionally Acceptable	
Residential	60	70	45
Schools, Nursing Homes	60	70	45
Parks and Playfields	65	70	NA

SOURCE: City of Marina, General Plan, Draft Urban Growth Boundary Edition, Adopted October 31, 2000, Amended through November 6, 2001; Health & Safety Element, Noise Protection section, Table 4.1, p.4-37.

Municipal Code

The following sections of the municipal code are most relevant to the current analysis:

“9.24.040 Public nuisance declared...

E. Excessive, unnecessary or unusually loud noise due to construction, demolition, excavation, erection, alteration or repair activity that disturbs the peace, comfort and tranquility of the occupants of residential property unless it is due to an emergency or properly authorized by the Marina department of public safety or public works department. (Ord. 94-12 § 1 (part), 1994)...

“15.04.055 Construction hours and noise...

“...it is unlawful for any person within the city to conduct any outside construction, repair work or related activities requiring a building, grading, demolition, use or other permit from the city when construction noise is produced adjacent to residential uses, including transient lodging, except between the hours of seven a.m. and seven p.m. (standard time), and on Sundays and holidays between the hours of ten a.m. and seven p.m. (standard time). During daylight savings time, the hours of construction may be extended one hour to eight p.m. For the purposes of this section, holidays shall include New Year’s Day, July 4th, Thanksgiving and Christmas. However, during the hours of construction, no construction, tools or equipment shall produce a decibel level of more than sixty

decibels for twenty-five percent of an hour at any receiving property line. (Ord. 87-2 § 2, 1987)."

Note that the noise metric corresponding with "...twenty-five percent of an hour..." is referred to as L_{25} , an example of an L_n value as defined above. This standard is incorporated into an enforceable code with associated penalties for violations.

Baseline Noise Environment

Area of Potential Impact

For the purposes of the Noise analysis, the area of potential impact includes the proposed project site itself, as well as potentially noise-sensitive areas immediately adjacent to the site and along nearby surface streets that would serve as primary project vehicular access routes.

Noise Sources

Transportation-Related

Motor Vehicle Traffic

The primary existing traffic noise sources in the immediate vicinity of the project are State Route (SR) 1 (west of the site), Imjin Parkway (south of the site) and California Avenue (east of the site). Sources of traffic noise within the nearest portions of the City north of the former Fort Ord boundaries include the northern portion of California Avenue as well as Reindollar and Carmel Avenues.

Aircraft

The aircraft facility nearest to the project site is Marina Municipal Airport. This airport is north of Reservation Road and is surrounded by University of California Technology Center property. Formerly operated as the original Fort Ord - Fritzsche Army Airfield, it currently serves as a civilian general aviation facility supporting approximately 60,000 aircraft operations annually. The Monterey Peninsula Airport, located south of Seaside, represents a more substantial source of aircraft noise, but is located much further from the project surroundings than the Marina Municipal Airport is. From time to time individual small aircraft served by these facilities fly near enough to the areas surrounding the project site to briefly influence noise levels in these areas. However, aircraft activity has no appreciable influence on long-term average (e.g. $L_{dn}/CNEL$) noise levels in the immediate site vicinity.

Miscellaneous

Miscellaneous, intermittent sources of noise in the project surroundings include outdoor student activities at the schools immediately northwest of the project site and at the Children Services International (CSI) facility south of the project site, as well as

recreational activities at the Teen Center and Los Arboles Sports Complex north of Reindollar Avenue near Crescent Street. Miscellaneous neighborhood sources such as refuse/recycling collection activities can also influence the noise environment in the project vicinity.

Noise-Sensitive Land Uses

Existing noise-sensitive land uses most likely to be exposed to project-related noise impacts include the school facilities immediately northwest of the project site, the CSI facility south of the project site, single family homes near the northern boundary of the project site, and other such homes and school facilities (e.g., the Los Arboles Middle School/Sports Complex) along potential project vehicular access routes such as California and Reindollar Avenues. All of these receptors are located within current City of Marina boundaries.

Future noise-sensitive areas that are not yet occupied but that are approved and (in some cases) under construction include residential areas within the Marina Heights development southeast of the project site and the University Villages Specific Plan area southwest of the site. Construction of the first residences within the adjacent Marina Heights development is currently expected to occur in late 2006, while construction of Phase I of the University Villages mixed use development to the south had proceeded to the grading phase as of early 2006.

Noise Exposure Circumstances

Source-Receiver Distances

The point on the project site nearest to SR 1 is about 750 feet from the centerline of the highway. The project site approaches within about 80-160 feet of the nearest exterior and interior activity areas on the school property along Crescent Street, and adjoins the CSI site. Residential structures along Reindollar Avenue, Crescent Street and currently improved portions of California Avenue are typically set back about 45 to 65 feet from the centerlines of those roadways.

Topography/Barriers

The area between SR 1 and the nearest portion of the project site (the northwest corner) is characterized by somewhat complex variations in ground elevations. The elevation of SR 1 in this general area tends to increase from south to north. In general, site boundary elevations tend to increase along a path from the Veteran's Transition Center near the west side of the project around towards the site boundary's closest approach to the Central Coast High School facility to the north. Therefore, in general, the degree to which areas near this portion of the project boundary experience direct exposure to noise from SR 1 traffic also tends to increase along that same path.

A steep slope separates the north portion of the project site from the

school property about 40 to 50 feet below. This slope obscures the line of sight between portions of the site set back about 50 to 100 feet or more from the northern portion of the site boundary and the nearest school activity areas. The portion of the project site northeast of the intersection of 12th Street and Fourth Avenue is depressed several feet below Fourth Avenue and the nearest buildings of CSI to the northwest, interrupting the line of sight between those buildings and this portion of the site. Many of the homes along Reindollar Avenue northeast of the project site are elevated slightly above or depressed slightly below that roadway. Homes along Crescent Street southwest of Reindollar Avenue and California Avenue southwest of Carmel Avenue tend to be at or nearly at the same elevation as the adjacent roadways. Along the proposed alignment for the California Avenue extension south of Reindollar Avenue, homes on the east side tend to be elevated several feet above the level of the proposed roadway alignment, while those along the west side tend to be nearer to proposed roadway level.

Noise Levels

Previously Published Data

Projected Year 2015 noise contours presented in the Marina Municipal Airport Final Environmental Assessment/Environmental Impact Report indicate that aircraft-generated noise levels exceeding 55 dBA CNEL are expected to be confined to areas northeast of Reservation Road and southeast of Del Monte Boulevard. The Fort Ord Reuse Plan Draft EIR presents Year 2010 forecast noise contours for the Monterey Peninsula Airport which indicate that aircraft noise levels exceeding 65 dBA CNEL are projected to be limited to an area on the south side of Seaside, well south of the project site.

Noise Surveys

Noise measurement surveys were done in the project vicinity in 1999 and 2004. The results of these measurements would be expected to predict a sound environment that would be approximately the same as January 2005 (the NOP date) due to very few changes in noise sources. The noise measurement locations are depicted in Figure E-1. The corresponding measurement statistics and associated observations are summarized in Table E-2. Measurement locations were labeled with either an "N" (for on-site locations) or an "F" (for off-site locations). A corresponding color-coding is applied as illustrated in the legend on Figure E-1. Site codes for measurement locations from the 1999 survey are appended with the letter "a"; those for measurement locations from the 2004 survey are appended with the letter "b". Where a 1999 measurement location was replicated exactly in 2004, no letter was appended to the corresponding site code.

Measurement locations for the 2004 survey were selected in an effort to provide the most efficient supplement to the 1999 survey. The 1999

measurement at location N3 was adjacent to a segment of 12th Street that was effectively replaced by Imjin Parkway as of 2004. The 2004 survey included a repeat measurement at that same location to reflect the substantially changed noise exposure circumstances there. Another measurement during the 2004 survey was performed on-site at a location near 1999 measurement site N2, but at an elevation that was higher and therefore more exposed to SR 1 traffic. In this report, the 1999 measurement location is referred to as Site N2a, while the corresponding 2004 location is referred to as N2b. Similarly, 2004 measurement location F1b – while somewhat distant from F1a – is also adjacent to California Avenue. However, F1b was positioned along a section of that roadway that had not yet been improved as of 1999.

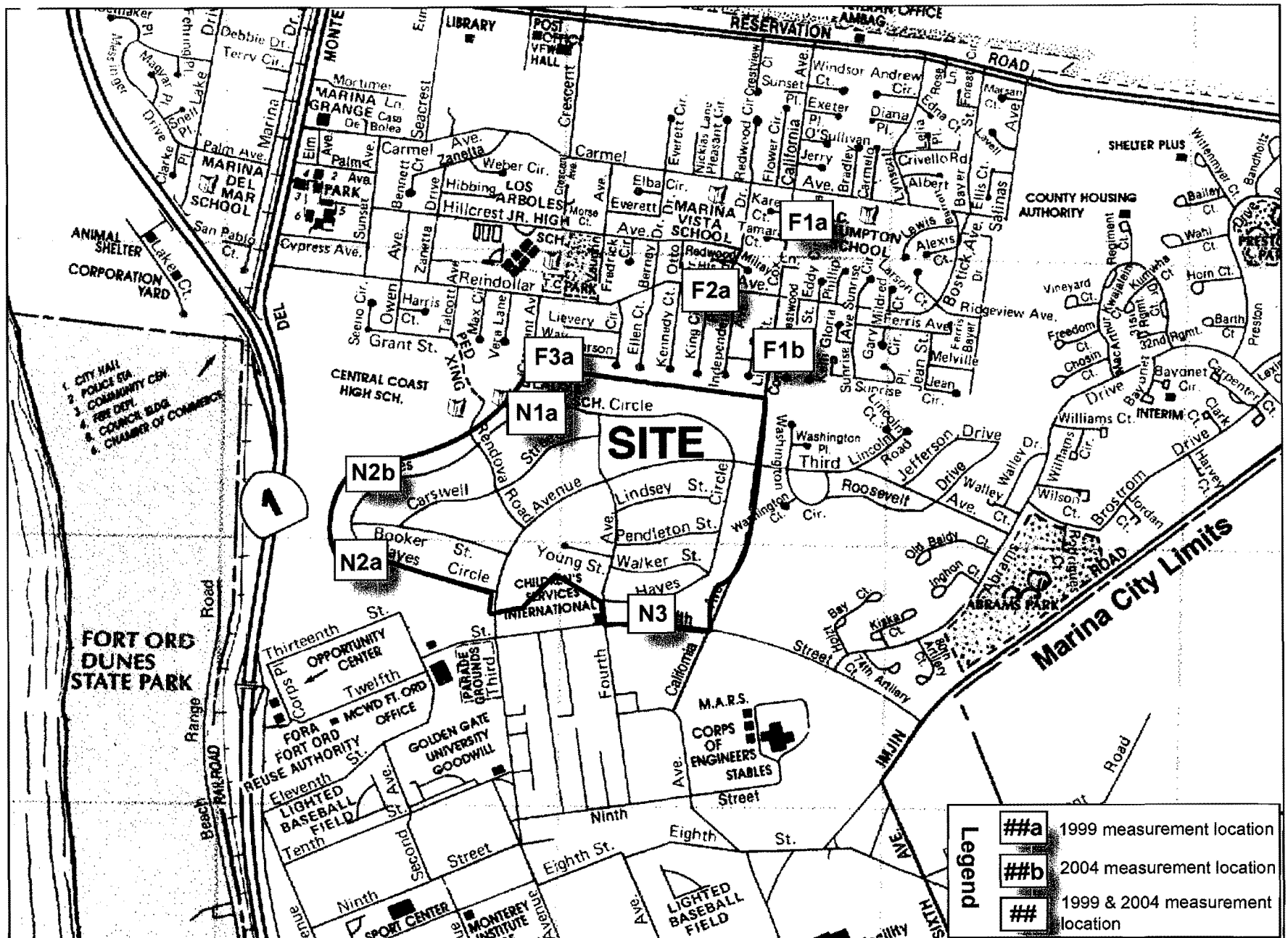
Table E-2 shows that measured L_{eq} at the various on- and off-site locations varied from the low 40s to high 50s dBA.

On-site

Site N1a is relatively distant from SR 1 and major surface streets, and experienced relatively quiet noise levels during the measurement performed there. That measured level is probably generically representative of noise levels at the nearby Central Coast High School site as well. However the school site is probably both less exposed to SR 1 traffic noise (due to its lower elevation) and more influenced by the school-related noise sources such as outdoor student activities.

The L_{eq} measured at N2b in 2004 exceeded that measured at N2a in 1999 by six decibels. While there are a variety of circumstances that can explain this difference, the circumstances likely to be most important in explaining the difference are differences in “fixed” propagation circumstances (e.g., local topography) between the sites, differences in variable propagation circumstances (e.g., atmospheric conditions) between the two measurements, and variations in source strength (i.e., traffic flow) between the measurement periods. A comparison of observed traffic flow between the two measurements suggests that noise emissions from traffic along the relevant segment of SR 1 was probably about four decibels *higher* during the 1999 measurement at N2a versus the 2004 measurement at N2b, even though the level measured at N2a was about six decibels lower. This suggests that the differences in propagation circumstances between the sites at which --and time periods during which -- the measurements were taken would have accounted for somewhere on the order of a 10 dBA difference in noise exposure if traffic flow had been identical for the two measurements. While differing atmospheric conditions between the two measurements could have accounted for some of this difference, it is clear that Site N2b is topographically more exposed to noise from SR 1 traffic than Site N2a is.

1VE8



Noise Measurement Locations



Figure E-1

TABLE E-2 -- NOISE MEASUREMENT STATISTICS AND OBSERVATIONS

Measurement Site		Land Use		Measurement Time ^a		Observed, Sustained Noise Source(s)		Measured Noise Levels (dBA)				Note
#	Location	Existing	Proposed	Date	Start	Description	Distance (ft)	L _{eq}	L _{min}	L ₅₀	L _{max}	
On-Site												
N1a	Existing unit #8511	Abandoned Residential	Senior residential (~Lots 574-575)	1/13/99	9:13	SR 1 traffic (background)	2300	46	41	45	60	Signal tone generated maximum observed level
						Signal tones/PA announcement ²	2500'					
						Children playing on school site	150					
N2a	Existing unit #8733	Abandoned Residential	Senior residential (~Lot 537)	1/12/99	16:09	SR 1 traffic (background)	1200	52	47	51	61	N2b is more elevated and more exposed to SR 1 traffic than N2a is
						SR 1 traffic (background)	150					
N2b	Existing unit #8522	Abandoned Residential	Senior residential (~Lot 547)	8/30/04	14:50	SR 1 traffic (background)	1200	58	52	58	62	
N3	Existing units #8720 & 8621	Abandoned Residential	18-acre public facilities (potentially a park)	1/12/99	16:56	Intermittent traffic on 12 th Street	75	52	43	47	68	Rerouting of traffic from 12 th to more distant Imjin
						Aircraft over-flight	~3000					
				8/30/04	13:20	Imjin Parkway traffic	290	47	39	45	62	
Off-Site												
F1a	3077 Helena Way	Single-family detached	NA	1/12/99	15:15	Intermittent traffic on California	60	54	41	47	72	Traffic flow on California still low in 2004, but meaningfully higher for F1b vs. F1a.
						Traffic on Carmel Ave.	400					
						Intermittent traffic on Helena	25					
F1b	3007 Concord Ct.	SFD	NA	8/30/04	15:50	Intermittent traffic on California	50	56	41	49	70	
F2a	3031 Reindollar	SFD	NA	1/12/99	14:31	Intermittent traffic on Reindollar Ave.	55	59	43	54	75	L _{max} from pickup truck
F3a	3001 Crescent Street	SFD	NA	1/12/99	13:08	SR 1 traffic (background)	2650	42	36	38	56	L _{max} from aircraft overflight
						Reindollar traffic (background)	700					
						Vehicle activity on Crescent ^b	120-300					
						Aircraft over-flight	~3000					

^a The duration of each measurement was 15 minutes.

^b For example, doors slamming shut, engines starting.

SOURCE: MSW Consulting, 1999, 2004

Off-site

Table E-2 shows that noise levels observed at F1a and F1b were relatively similar; L_{eq} recorded during both measurements were in the mid-50s dBA. F1b was located within a cluster of residences separated from California Avenue by a sound wall. However, the measurement was performed at a height where the wall provided minimal protection; this was done to represent worst-case noise exposure at the upper floor of the nearby two-story residence. Traffic flow along California Avenue south of Reindollar Avenue during measurement F1b was higher than it was along California south of Carmel Avenue during measurement F1a, but was still fairly low relative to what it might be after build-out of approved and proposed projects within the former Fort Ord. Other noise sources observed at F1a contributed to overall measured noise levels approaching those recorded at F1b.

Site F2a is close to Reindollar Avenue, a relatively well-traveled surface street within the City of Marina. Accordingly, the L_{eq} and L_{max} measured at this location were higher than those measured during the remainder of the noise surveys.

Site F3a was even more isolated from major noise sources than nearby on-site location N1a was. It was both low enough in elevation to be very effectively isolated from SR 1 traffic noise, and distant enough from the nearest school/park facilities to experience minimal influence from noise generated by activities at those facilities. The lowest noise levels among both surveys were recorded here.

3. Environmental Impacts

A. Method of Analysis

Construction-Related Impacts

Potential noise impacts associated with project construction activities are relatively difficult to quantify accurately since they tend to be sporadic. Therefore, these impacts are evaluated in a primarily qualitative manner. However, while the ultimate impact assessments are qualitative, they are based upon typical ranges in reference instantaneous noise levels for construction equipment, and – in most cases – upon measured minimum distances between future construction locations and nearby sensitive receivers and upon intervening topography.

Operational Impacts

Motor Vehicle Traffic

Scenarios

The following project traffic analysis scenarios were analyzed in the

Noise section:

- Existing (off-site impact baseline, existing receivers)
- Existing+Project (off-site project impacts, existing receivers)
- Background (off-site impact baseline, approved future noise-sensitive land uses)
- Background+Project (off-site project impacts, approved future noise-sensitive land uses)
- Cumulative+Project (on-site impacts, off-site cumulative impacts)

Modeling Tools

For traffic noise impacts experienced at future project receivers, this EIR uses the Traffic Noise Model (TNM^{vi}) promulgated by the Federal Highway Administration (FHWA). To assess project and cumulative traffic noise increases at off-site locations, this analysis used the TNM Lookup Program^{vii}.

Receivers

Most modeled receiver locations were based upon noise measurement locations included in the January 1999 and 2004 noise surveys. Others were added as appropriate.

Average Daily Traffic (ADT) Volumes

While the traffic impact analysis focuses on peak traffic periods, the noise analysis, because it is based on 24-hour average noise levels, applied average daily traffic (ADT) volumes instead. For surface streets, ADT estimates were derived by applying daily/peak hour ratios from the most appropriate available hourly traffic counts^{viii} to the peak hour volumes presented in the project traffic analysis. For SR 1, Caltrans daily traffic count data were referenced to obtain existing ADTs, while worst-case growth factors applied in the County of Monterey General Plan EIR were adapted to estimate future ADTs^{ix}.

Travel Speeds

Travel speeds for existing roadways were estimated based upon posted speed limits (where observed) and field observations. Travel speeds for future new or substantially improved roadways were estimated based on typical posted speed limits/travel speeds for comparable existing roadways.

Modal and Temporal Distribution of Traffic

For a given total ADT, average travel speed and source/receiver geometry, traffic noise levels can vary depending upon the proportions of that ADT which are composed of medium- and heavy-

duty trucks. For SR 1, these proportions were derived from Caltrans truck count data^x. For other roadways, these percentages were derived from standard assumptions and multiple short-term counts performed for roadways adjacent to noise measurement locations.

As discussed under the Noise Measurement Statistics heading, above, L_{dn} is sensitive to the proportion of noise-generating activity that occurs during nighttime hours. Estimates of nighttime traffic percentages for each modeled roadway were derived from the most appropriate hourly machine counts available.

B. Standards of Impact Significance

For the purposes of this analysis, a significant impact will be declared where the project would:

- Expose adjacent noise-sensitive property to project-construction-generated hourly L_{25} exceeding 60 decibels for more than eight discrete hours within the entire construction period during which noise-sensitive activities within those properties are occurring;
- Expose exterior living areas of proposed project residences – or future potential on-site park (school in the cumulative condition) -- to future L_{dn} exceeding the applicable City General Plan criteria;
- Potentially expose interior living areas of proposed project residences – or future potential school classrooms in the cumulative condition -- to future L_{dn} exceeding 45 dBA; or
- Substantially increase long-term average traffic noise levels at existing off-site noise-sensitive land uses relative to existing conditions. For the purposes of this analysis, a “substantial” increase is defined as a 3 dBA increase over corresponding pre-project conditions where resulting levels are likely to cause or contribute to exterior noise levels exceeding the applicable General Plan ambient criteria at noise-sensitive land uses, or a 5 dBA increase in other cases. These significance criteria are applied to cumulative impacts as well.

C. Project Impacts

Construction Impacts

Construction activities for the Tentative Tract Map project improvements and residences, as well as the potential future park and senior center uses on the proposed Open Space parcels would include both demolition and new building construction, including grading.

The time constraints in Section 15.04.055 of the Municipal Code (excerpted above) would apply to impacts on residential properties occupied at the time of any project construction activities that occur adjacent to them. Compliance with the provisions of this Section, as required by law, would adequately control the exposure of these uses to construction noise.

The Code’s limitations on construction scheduling are similar to those incorporated into many local regulations and construction contract specifications; implementing them during construction activities near occupied residences, as required by the Municipal

should be routine. Figure E-2 shows typical ranges in noise levels from individual pieces of construction equipment of various types, considered at a reference distance of 50 feet from such equipment. Several factors could influence the relationship between these reference instantaneous noise level ranges for individual equipment and the resulting exposure of adjacent noise-sensitive properties relative to the one-hour L_{25} metric. These include the types and numbers of equipment operating at various times during a given hour, their (potentially time-varying) positions relative to the subject noise-sensitive land use during that hour, the duration and relative timing of their operation during that hour, and the manner in which propagation features such as intervening terrain influence the resulting noise levels at the receiving land use of concern.

Among receiver areas that would tend to be more sensitive during weekday, daytime hours, substantial temporary noise disturbance would be most likely for demolition and building construction near the following locations:

- Central Coast High School (e.g., demolition/construction at Lots 558 to 577 and 592 to 596 as shown on the project's currently proposed Tentative Map)
- The CSI facility (e.g., construction at the proposed apartments and demolition/ construction Lots 296 to 306 as shown on the project's currently proposed Tentative Map)

Among receiver areas that would tend to be most sensitive during evening, nighttime and weekend/holiday periods (during which Code Section 15.04.055 would substantially constrain allowable hours for construction), such disturbance would be most likely to occur in the following locations:

- The Veterans Transition Center (e.g., demolition/construction at the Support Services areas indicated on the project's illustrative proposed Tentative Map)
- Any Marina Heights residential areas adjacent to California Avenue opposite the project site and occupied at the time of adjacent project construction (e.g., demolition/construction at Lots 41 to 53 and 266 to 269)

Among receiver areas that would tend to be potentially sensitive throughout the week and throughout any given day, such disturbance would be most likely to occur in the following locations:

- Any noise-sensitive portions of the proposed project development (generally senior housing) that are completed and occupied before demolition/construction occurs within an adjacent area (e.g., demolition/construction on any portions of later project phases that occurs near a shared boundary with a preceding phase).

Impact E1: Building demolition and construction activities for both project and program level components could occur within about 250 feet of any of the identified potential noise-sensitive receivers, and within 100 feet in many cases. Accordingly, construction noise constitutes a temporary significant impact.

Exposure of Project Land Uses to Noise

Exterior Noise Levels in Residential Part of Project

For proposed noise-sensitive project land uses, the primary future noise sources of concern would be motor vehicles traveling along Highway 1 (SR 1) and along major nearby surface streets. Table E-3 summarizes estimated future traffic noise levels at representative receiver locations within areas of the project that would be most exposed to such sources, and compares them to applicable significance criteria. For receiver locations N2a, N2b and N4, the corresponding predicted noise levels are shown in blue in Figure E-3.

Without mitigation, Table E-3 shows that exterior noise levels at N2b and N4 are predicted to exceed the applicable significance threshold by two to three decibels under Cumulative + Project conditions. This impact is conservatively treated as a project-specific impact, rather than a cumulative impact, because the impact relates to placing residents on the project site and exposing them to traffic noise. The noise impact occurs when cumulative traffic on surrounding roads from future projects, plus the project's traffic, is using these roads. To disclose "worst case" condition, this impact is categorized as a project-specific impact (or more near term, rather than a 2025 cumulative condition impact).

Exterior Noise Levels in Program Level Part of Project

Corresponding noise levels for receiver location N3 – representing the entire 18-acre parcel proposed for general plan amendment to open space to facilitate possible future development of a park – are represented by blue noise level contours (isopleths) within that parcel, near the southwest corner of the project site. Figure E-3 indicates that noise levels under Cumulative + Project conditions could exceed 65 dBA L_{dn} (the significance threshold for parks) within about 50 to 150 feet of the future potential park parcel's boundary along Imjin Parkway and within about 25 to 50 feet of that parcel's shared boundary with California Avenue.¹ Based on the modeled values shown on Figure E-3 at the location N4, a similar noise level may be anticipated along the senior center program level parcel to the north. This noise level would also exceed the noise threshold and be potentially significant.

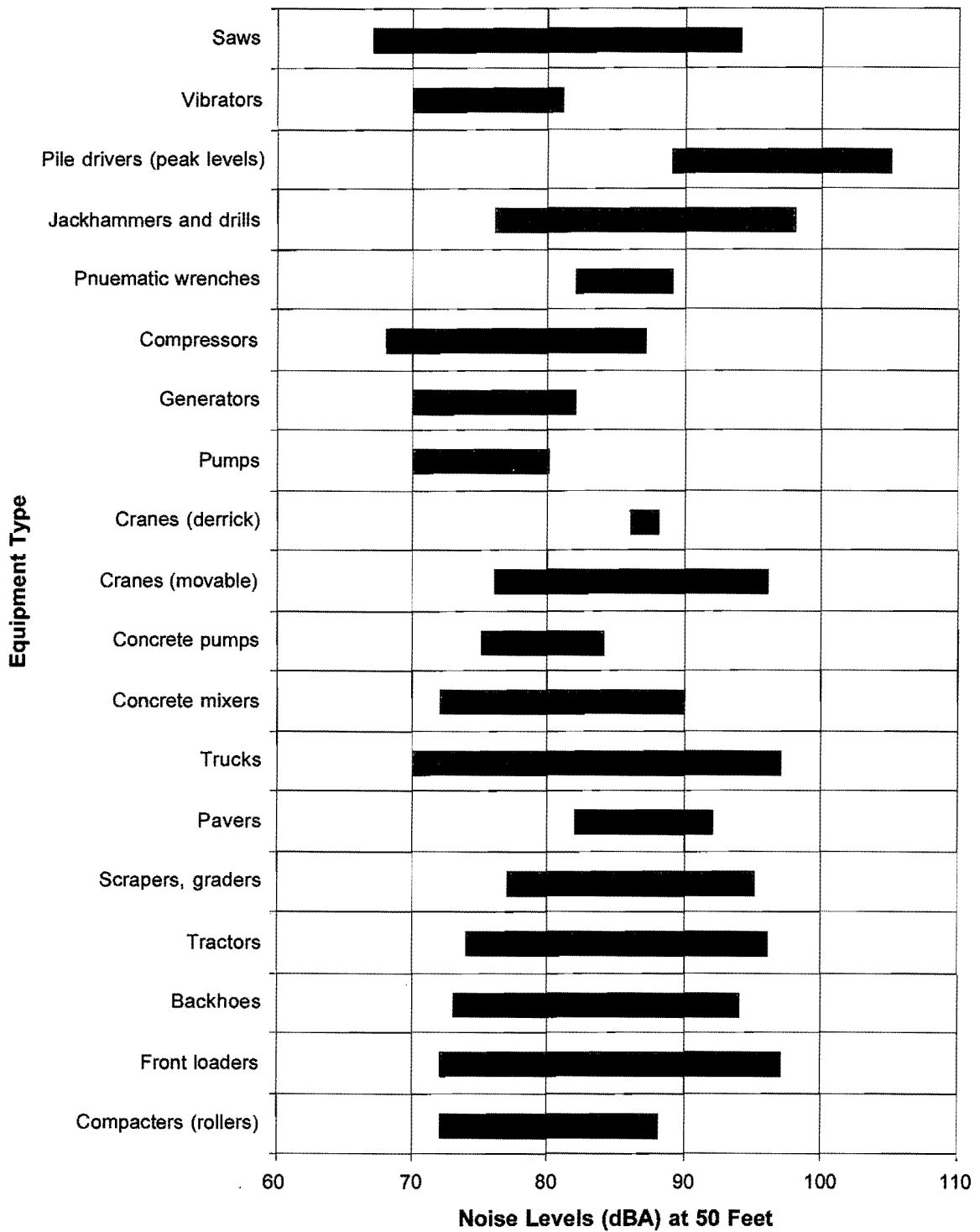
¹ In the Cumulative + Project condition, future noise levels exceeding the more stringent 60 dBA L_{dn} threshold for schools could be exceeded within the 18-acre parcel anywhere between about 125 and 400 feet from its boundaries along the adjacent public roadways. This information is provided, because as explained elsewhere in this EIR, the Monterey Peninsula Unified School District has expressed some preliminary interest in locating a K-8 school on the park site at some point in future.

TABLE E-3 – PREDICTED FUTURE^a EXPOSURE OF KEY PROJECT RECEIVER LOCATIONS TO TRAFFIC NOISE

Receiver(s) Represented			Assumptions for Key Traffic Noise Source							L _{dn} (dBA)		Signifi- cant?
			Name	Distance to Roadway Center-line (ft)	ADT ^b	Vehicle Type Splits ^{c,d}			Modeled Speed (mph)			
#	General	Specific				Autos	Medium Trucks	Heavy Trucks				
N2a'	Senior residential	Lot 537	SR 1	860	16200	95.7%	2.3%	2.0%	65	55	60	N
N2b	Senior residential	Lot 547	SR 1	920	116200	95.7%	2.3%	2.0%	65	62	60	Y
N3	Potential future park	Entire 18-acre parcel	Imjin Parkway	Variable	67400	95%	4%	1%	45	Variable, some portions >65 ^e	60-65 ^f	Y
			California Ave.	Variable	14600	95%	4%	1%	35			
N4	Senior residential	Lots 53 & 268	California Ave.	90	14600	95%	4%	1%	35	63	60	Y

^a Cumulative+Project conditions.
^b Estimated based upon PM Peak Hour projections obtained from Exhibit 8A of: Higgins Associates, *Cypress Knolls, Marina, California: Traffic Impact Analysis: Final Report (June 26, 2006)* For SR 1, Cumulative+Project projections were compared with corresponding estimated Existing volumes to develop a growth percentage that was applied to the existing ADT for the applicable segment of SR 1 reported in: California Department of Transportation (Caltrans), Traffic and Vehicle Data Systems, 2005: *All Traffic Volumes on CSHS*, 2006. For surface streets, Cumulative+Project traffic projections were converted to ADT estimates using ADT / PM Peak ratios derived from: Keith B. Higgins & Associates, 2004 Counts: Imjin West of California, California North of Carmel, Reindollar West of California; May 31-June 21, 2004.
^c SR 1: Caltrans, Traffic and Vehicle Data Systems, *2004 Annual Average Daily Truck Traffic on the California State Highway System*, August 2005.
^d Surface streets: Standard assumption, adjusted based on traffic counts performed during noise measurements.
^e See Figure E-3.
^f 60 dBA for school, 65 dBA for park.
 SOURCES: MSW, 2006; [As indicated above]; Federal Highway Administration (FHWA), *Traffic Noise Model* (described in FHWA-PD-96-010/DOT-VNTSC-FHWA-98-2) v2.5, 1996-2004

FIGURE E-2 – TYPICAL NOISE LEVEL RANGES FOR VARIOUS TYPES OF CONSTRUCTION EQUIPMENT



Source: Handbook of Noise Control, Second Edition, 1979, Edited by Cyril M. Harris

IV/E17



Modeled Future On-Site Noise Exposure and Recommended On-Site Mitigation



Figure E-3

Interior Noise Levels for the Residential Part of the Project

It is reasonable to anticipate that the facades of proposed residential housing in the vicinities of N2b and N4 will provide at least 18 decibels of exterior-to-interior noise reduction with windows and doors closed. Therefore, given the predicted exterior noise levels of 62-63 dBA at these locations, it is reasonable to expect that the corresponding exposure of residential interiors to traffic noise will be maintained at 45 dBA L_{dn} or below. As discussed earlier in this report, Table 4.1 in the Noise Protection section of the City's General Plan indicates a preference for attainment of the interior standards with windows open and explicitly requires mechanical ventilation where windows must be closed to achieve that standard. While such mechanical ventilation can be expected to be provided for new residential construction based on current CCR Title 24 requirements, this analysis will support the approach taken in Table E-1 and not assume such ventilation in the impact assessment. Accordingly, potential worst-case future exposure of project residential interiors to traffic noise will be considered potentially significant.

Interior Noise Levels for the Program Level Part of the Project

A potential future park is not expected to contain any uses or structures housing interior sensitive noise receptor uses.² Regarding a potential future senior center parcel, the modeled noise levels are not predicted to exceed 65 dBA therefore the interior noise level may to exceed the interior noise level standard depending on ultimate building setback on the site relative to California Ave.

Based on these analyses the following impact applies to both the project and program level components of the project:

Impact E-2: Based on the predicted future exterior noise levels and their implications for potential exposure of building interiors for residential and program level anticipated land uses to traffic noise, this impact is deemed significant.

Project-Generated Traffic Noise Impacts at Off-Site Receptors

Project-generated traffic, in combination with other future cumulative traffic noise increases and roadway alterations, would influence traffic noise levels at off-site receptors. As demonstrated in the *TIA*, the projected trip generation rates (per residential unit per day) for the project's various senior housing components are substantially lower than those for non-restricted single-family housing. Nevertheless, the resulting trip generation could have a meaningful relative influence on noise levels at off-site residences that either currently exist, or that have already been approved for construction and would be occupied under the Background conditions scenario addressed in the *TIA*. To provide generally-representative and conservative results, noise levels along each evaluated segment were considered at an appropriate reference distance. In most cases, this distance was 50 feet. (By comparison, note in Table E-2 that the distances from measurement locations F1a, F1b and F2a to the corresponding roadway segments ranges from 50 to 60 feet.) For each segment, noise levels were

² Since at least small portions of the 18-acre site could be exposed to exterior noise levels exceeding 65 or even 70 dBA L_{dn} , it is possible that a school building (should the City ever decide to redesignate the 18-acre site to permit school uses) on the site could experience traffic noise levels within the building's interior that could exceed 45 dBA L_{dn} .

considered relative to the appropriate baseline scenario. Where the representative receivers are already occupied, the Existing scenario was selected as the baseline. Where the representative receivers are part of a project that has been approved and is included under the *TIA*'s Background scenario, but has not yet been constructed and occupied, the Background scenario was applied as the baseline.

As Table E-4 shows, the estimated increases in noise levels associated with the addition of project-generated trips are very low – 0.1 to 0.5 decibels – in all but one case. That case corresponds to *TIA* roadway segment number 15, Patton Parkway west of California Avenue. That roadway has yet to be constructed but it is assumed to be constructed in the same general timeframe as the initial residential phases of the Proposed Project.

Impact E-3: Based on the noise levels recorded at measurement site F3a, it is reasonable to expect that existing L_{dn} at residential locations north of the proposed Patton Parkway alignment (*i.e.*, existing conditions without a Patton Parkway, or any other roadway, adjacent to these residential locations) are generally below 50 dBA, probably somewhere on the order of 45-48 Dba. The modeled L_{dn} of 56 dBA under Baseline+Project conditions (*i.e.*, with Patton Parkway, plus traffic from the project and other approved but not yet constructed projects) would therefore represent an increase of well over five decibels, a significant noise increase.

Cumulative Traffic Noise Impacts

Table E-5 is analogous to Table E-4,³ but considers future cumulative traffic noise impacts as a whole, not just the portion of those impacts directly attributable to the project.

The first four data rows in this table (like Table E-4) consider roadway segments outside of the boundaries of the former Fort Ord. At three of those locations, the cumulative future traffic noise increase is predicted to be significant. However, for only one of these three segments is the project contribution expected to be substantial – Patton Parkway west of California Avenue (*i.e.*, the Patton Parkway extension mentioned above).

The last three data rows in Table E-5 consider roadway segments within the former Fort Ord. For these locations, estimated proportional project contributions to total future cumulative traffic noise increases range from three to 14 percent. Two of these rows consider segments adjacent to future sensitive receivers associated with development (Marina Heights and University Villages) that has been approved but not yet completed. For these segments, the *TIA*'s Background scenario served as the baseline, since that would be the earliest *TIA* scenario during which occupancy of these sensitive land uses can be expected.

³ Table E-4 isolates this project-specific influence along selected nearby roadway segments, including those where the *TIA* indicates the largest project-generated traffic contributions would occur. The fourth column of this table describes the representative receiver types along each roadway segment, while the fifth column indicates the representative noise.

TABLE E-4 – PROJECT-GENERATED TRAFFIC NOISE IMPACTS AT OFF-SITE RECEIVERS

Roadway Segment			Representative Receivers	Representative Existing Measurement	Baseline Scenario	Distance from Centerline ^a	L _{dn} (dBA)				Exceeded?	Significant Increase?
TIA #	Name	Segment					Baseline	Baseline+ Project	Difference	Applicable Criterion		
20	California Ave.	Carmel-Reindollar	Existing SFD	F1a	Existing	50	50.7	50.8	0.1	60	N	N
NA	California Ave.	S: Reindollar	Existing SFD	F1b	Existing	50	60.5	60.8	0.3	60	Y	N
18	Reindollar	W: California	Existing SFD	F2a	Existing	50	60.3	60.4	0.1	60	Y	N
15	Patton Parkway	W: California	Existing SFD	F3a	Existing	50	~45-48	56.1	>5	60	N	Y
21	California Ave.	Patton-3 rd	Approved future residential (Marina Heights)	NA	Background	50	63.1	63.6	0.5	60	Y	N
24	Imjin Parkway	3 rd -4 th	Children Services International	NA	Existing	500	48.8	49.0	0.2	60	N	N
23	Imjin Parkway	2 nd -3 rd	Approved future residential (University Villages)	NA	Background	100	65.3	65.5	0.2	60	Y	N

^a Observations at representative measurement location F3a suggest that existing daytime ambient levels are very low and are not dominated by public roadway traffic. MSW applied experience with short- and long-term measurements within noise environments of this general type to generate a range of L_{dn} values within which the existing annual-average L_{dn} at this modeled receiver would likely fall.

SOURCES: MSW, 2006; Higgins Associates, *Cypress Knolls, Marina, California: Traffic Impact Analysis Final Report (June 26, 2006)*; Federal Highway Administration (FHWA), Traffic Noise Model Lookup Program (data from TNM Ver. 2.5), v.2.0, December 17, 2004.

TABLE E-5 – CUMULATIVE TRAFFIC NOISE IMPACTS AT OFF-SITE RECEIVERS

Roadway Segment			Representative Receivers	Baseline Scenario	Distance from Roadway Centerline	L _{dn} (dBA)					Exceeded?	Significant Increase?
TIA #	Name	Segment				Baseline	Cumulative+ Project	Difference	Proportional Project Contribution	Applicable Criterion		
20	California Ave.	Carmel-Reindollar	Existing SFD	Existing	50	50.7	64.4	13.7	0.1%	60	Y	Y
NA	California Ave.	S: Reindollar	Existing SFD	Existing	50	60.5	65.8	5.3	3%	60	Y	Y
18	Reindollar	W: California	Existing SFD	Existing	50	60.3	60.6	0.3	23%	60	Y	N
15	Patton Parkway	W: California	Existing SFD	Existing	50	~45-48 ^a	53.4 ^b	>5	Substantial ^c	60	N	Y
21	California Ave.	Patton-3 rd	Approved future residential (Marina Heights)	Background	50	63.1	65.8	2.7	14%	60	Y	N
24	Imjin Parkway	3 rd -4 th	Children Services International	Existing	500	48.8	53.1	4.3	3%	60	N	N
23	Imjin Parkway	2 nd -3 rd	Approved future residential (University Villages)	Background	100	65.3	68.1	2.8	4%	60	Y	N

^a Observations at representative measurement location F3a suggest that existing daytime ambient levels are very low and are not dominated by public roadway traffic. MSW applied experience with short- and long-term measurements within noise environments of this general type to generate a range of L_{dn} values within which the existing annual-average L_{dn} at this modeled receiver would likely fall.

^b This level is lower than the corresponding predicted Existing+Project level in Table E-4 because modifications in the overall roadway network between Existing+Project and Cumulative conditions are expected to reduce traffic flow along this segment of Patton Parkway.

^c To the extent that the project is responsible for substantially accelerating the construction of the segment of Patton Parkway west of California Avenue, it can be deemed to have contributed 100% to the noise impact from that roadway relative to either Existing or Background baseline conditions. However, under Cumulative baseline conditions, the extension of Patton Parkway all the way to the northward extension of 2nd Avenue is assumed to be complete whether or not the Cypress Knolls project is constructed. Under those conditions, the assumed contribution of project-generated traffic to overall traffic along Patton Parkway is expected to be relatively small.

SOURCES: MSW, 2006; Higgins Associates, *Cypress Knolls, Marina, California: Traffic Impact Analysis Final Report (June 26, 2006)*; Federal Highway Administration (FHWA), Traffic Noise Model Lookup Program (data from TNM Ver. 2.5), v.2.0, December 17, 2004.

Relative to that baseline, increases of 2.7 to 2.8 decibels are anticipated by the time Cumulative+Project conditions prevail. These increases are below the three decibel significant increase threshold applicable to these cases. For the remaining analyzed roadway segment within the former Fort Ord – Imjin Parkway between 3rd and 4th Avenues – the representative receiver considered is the existing Children Services International facility. Relative to the Existing baseline considered at this facility, Cumulative+Project noise levels are estimated to be 4.3 decibels higher. That is lower than the five-decibel significant increase threshold applied where the resulting level does not exceed the applicable City General Plan criterion.

Impact E-4: The future cumulative traffic noise increases along California Avenue both north and south of Reindollar Avenue, and along Patton Parkway west of California Avenue represent significant cumulative impact upon receptors in those areas. Therefore both the project and program level project components are affected by this condition.

4. Mitigation Measures

Mitigation Measure E1 – To mitigate significant construction phase noise impacts, comply with Marina Municipal Code Section 15.04.055, “Construction hours and noise” through implementation of the following:

- Place Stationary Equipment and Staged Construction Equipment and Activities to Minimize Impacts. Consistent with reasonable construction logistics, any construction equipment staging areas should be placed at sites where the staging area and the associated primary location for ingress/egress are as isolated as possible from the noise-sensitive land uses most vulnerable to exposure to noise from staging activities.
- Incorporate Site-specific Constraints on Construction Timing. Municipal Code Section 15.04.055 places constraints on construction timing based on typical diurnal patterns of noise sensitivity for standard residential areas. To the extent feasible, the noisiest construction activities planned near noise-sensitive land uses with different diurnal sensitivity patterns should be scheduled to reduce disturbance at these uses.
- Provide Advanced Notification. In advance of the noisiest construction activities planned near occupied noise-sensitive uses, provide advance notice of the approximate schedule of such activities to the occupants and/or owners/operators of these uses.
- Maintain Equipment. Assure that the engines and exhaust systems of major combustion-engine-powered construction equipment be properly tuned and muffled according to manufacturers’ specifications.

Level of Impact after Mitigation:

This measure would substantially reduce the risk and potential degree to which the identified significance criterion would be exceeded. However, even with these

measures, isolated cases of noise exposure exceeding the dBA noise limit of Marina Code Section 15.04.055 might still occur. Accordingly, the impact remains significant and unavoidable, albeit temporary.

Mitigation Measure E2 – To mitigate exposure of program level future land uses and project-level residential land uses to noise, implement the following for each project component noted:

Incorporate an appropriate mix of design measures to provide acoustical control into the final project plans such as walls, fences, earth berms or landform and increased setback for the noise source in locations as follows:

- For program level future land uses, along those portions of the Imjin Parkway and California Avenue frontages of the 18-acre potential park parcel where such acoustical control measures could substantially interrupt the line of sight between those roadways and large portions of the parcel on the opposite side of the barrier. Based on guidance provided in paragraph 4.112 of the Noise Protection section of the City's General Plan (excerpted earlier in this section) and the relatively high degree of geometric flexibility currently available for mitigation on this parcel, berm or wall-topped berm construction is recommended for any such barriers.
- For project level residential land uses, along those proposed senior residential lots within about 150 feet of the centerline of California Avenue. Such barrier alignments are shown as two pink lines on the right side of Figure E-2, one below (southwest of) the proposed A Street (along proposed Lots 266 to 269), another above (northeast) of that proposed roadway (along proposed Lots 41 to 53). These barriers would mitigate the impact represented by receiver location N4 to less than significant. Wall-topped berms and/or substantial roadway-side landscaping and/or increased rear setbacks, as practical, should be applied here consistent with paragraph 4.112 of the Noise Protection section of the City's General Plan.
 - Along the portion of the project site's northwestern boundary representing future senior residential lots that would be most exposed to traffic noise from SR 1, although retained trees along SR would reduce this impact. This proposed barrier alignment is shown as a single pink line on the left side of Figure E-2. This barrier would bound proposed Lots 542 to 564. It would mitigate the impact represented by receiver location N2b. Accordingly, the recommended mitigation measures for this impact reduce it to a less-than-significant level.

Level of Impact after Mitigation:

Figure E-2 shows that proposed acoustical controls (at a height of six feet) in areas represented by receivers N4 and N2b are predicted to reduce noise levels at those receivers to well below the 60 dBA L_{dn} mitigation targets.

In addition, any site planning for specific activity areas within the 18-acre potential park parcel should be guided in part by residual future noise exposure after construction of the barriers proposed for this parcel. For instance, areas near Imjin

Parkway west of the intersection with California Avenue – expected to experience relatively high noise exposure -- might be suitable for parking lots, et cetera. Any designated park trails should probably orient park users to the “back” (northwest) portion of the parcel where noise exposure will be lower.

The red noise contour lines shown in Figure E-2 within the future potential park parcel – when compared with the blue (no-mitigation) contour lines – show that the barriers proposed within this parcel (at a height of eight feet above local ground level) would provide substantial benefit only near the west end of the parcel. This is due to the observed constraints on feasible and effective barrier placement within this parcel as described previously, resulting in only partial barrier coverage as shown in Figure E-2. Nevertheless, the predicted resulting noise exposure would be above the conditionally-acceptable level of 70 dBA L_{dn} only for perhaps one to two percent of the total parcel area near Imjin Parkway. The portion of the parcel that would be exposed to levels above the maximum (normally) acceptable L_{dn} of 65 for parks represents perhaps about 10 percent of the total parcel area. About 30 percent of the parcel area would be exposed to levels exceeding the maximum (normally) acceptable level for schools of 60 dBA L_{dn} . The mitigation measures previously described satisfy the “condition” associated with the more permissive conditionally-acceptable noise standard, the level predicted to be exceeded within only about one to two percent of the parcel.⁴

Mitigation Measure E3 - Project-Generated Traffic Noise Impacts at Off-Site Receptors: To mitigate project and future traffic noise levels, incorporate an appropriate mix of design measures to provide acoustical control into the final project plans such as walls, fences, earth berms or landform and increased setback for the noise source along the north side of Patton Parkway.

Level of Impact after Mitigation:

Based on a acoustical control barrier height of at least six feet and a roadway elevation at least slightly higher than the nearest existing residential properties, this measure is expected to reduce the project-related traffic noise increase at the effected noise sensitive receivers to below five decibels, resulting in a less-than-significant impact.

Mitigation Measure E4 - Cumulative Traffic Noise Impacts

The mitigation measure for the cumulative traffic noise impact along Patton Parkway is identical to that identified under Mitigation Measure E3.

There are not any feasible procedures in place to fund and complete retrofit mitigation to address noise impacts related to future cumulative traffic noise increases along existing local roadways that are neither under Caltrans/FHWA

⁴ Any school constructed on the site in the future could use building design to shield outdoor activity areas (e.g., courtyards) from direct exposure to traffic noise. Any school design should also avoid placement of potentially noisy outdoor activity areas (e.g., playfields or athletic courts) immediately adjacent to the proposed senior residential areas along the parcel's northern boundary. If any school buildings enclosing noise-sensitive rooms (e.g., classrooms, offices, auditoria) are proposed for locations expected to be exposed to future exterior traffic noise levels exceeding 65 dBA L_{dn} , a building sound insulation study should be performed to assure that exterior-source traffic noise would not exceed the 45 dBA L_{dn} threshold within such spaces. Based on predicted exterior noise levels, it is reasonable to expect that any such building façade insulation (and associated mechanical ventilation) requirements can be achieved through appropriate building design.

jurisdiction nor meet their noise abatement criteria. The significant cumulative traffic noise increases along such existing roadways identified in this report are predicted along California Avenue north and south of Reindollar Avenue. Table E-5 shows that the estimated proportional project contributions to these increases are negligible – 0.1 to three percent. Therefore, it would be unreasonable to delegate a disproportionate mitigation responsibility to the project. Additionally, a fair share fee program to raise funds to perform retrofits does not currently exist.

Accordingly, the future cumulative traffic noise increases identified along these segments of California Avenue are deemed significant and unavoidable.

ⁱ Higgins Associates, *Cypress Knolls, Marina, California: Traffic Impact Analysis Report (June 26, 2006)*.

ⁱⁱ State of California, 24 CCR Part 2, State Building Code, Appendix Chapter 35, December 1988.

ⁱⁱⁱ City of Marina, *General Plan*, as subsequently amended; Health & Safety Element, Noise Protection section, Table 4.1, p.4-37.

^{iv} *Ibid.*, p.4.35.

^v *Ibid.*, p.4-36.

^{vi} Federal Highway Administration (FHWA), *Traffic Noise Model* (described in FHWA-PD-96-010/DOT-VNTSC-FHWA-98-2) v2.5, 1996-2004. (<http://www.trafficnoisemodel.org>)

^{vii} FHWA, Traffic Noise Model Lookup Program (data from TNM Ver. 2.5), v.2.0, December 17, 2004. (<http://www.trafficnoisemodel.org/tnmlookup.html>)

^{viii} Keith B. Higgins & Associates, 2004 Counts: Imjin West of California, California North of Carmel, Reindollar West of California; May 31-June 21, 2004.

^{ix} County of Monterey, *General Plan Update Environmental Impact Report, Public Review Draft*; March 27, 2002; Transportation Management Section, Table 5.14-11, p.5.14-41.

(http://www.co.monterey.ca.us/gpu/DEIR/Volume%201%20USE/5.14_TransportationManagement2.pdf)

^x Caltrans, Traffic and Vehicle Data Systems, *2004 Annual Average Daily Truck Traffic on the California State Highway System*, August 2005.

F. AIR QUALITY

1. Environmental Issue

Maximum air pollutant concentrations in Monterey County and the remainder of the North Central Coast Air Basin continue to exceed State standards that are based upon the health effects of these pollutants. Plans to attain these standards already accommodate the future growth projections available at the time these plans were prepared. However, an individual project that would substantially contribute to area-wide population growth exceeding these projections -- or to an area-wide growth in total miles traveled by motor vehicles that exceeds the rate of population growth -- could be considered inconsistent with the relevant air quality plan. Any development project capable of generating air pollutant emissions exceeding regionally-established criteria is considered significant for purposes of CEQA analysis, whether or not such emissions have been accounted for in this plan. Furthermore, any project that would directly cause or substantially contribute to a localized violation of an air quality standard would generate substantial air pollution impacts. The same would be true if the project generated a substantial increase in health risk associated with toxic air contaminants, or would introduce future occupants to a site exposed to substantial health risk associated with such contaminants.

The Monterey Bay Unified Air Pollution Control District (MBUAPCD) responded to the Notice of Preparation for this EIR (refer to EIR Appendix A) and requested that, in addition to the standard CEQA air quality analyses, the EIR include discussion of consistency with the AMBAG land use assumptions in the 2004 Air Quality Management Plan for the Monterey Bay Region (AQMP) and the Department of Defense and Bureau of Land Management prescribed burn programs within the Former Fort Ord (the impact and mitigation discussion below includes such a discussion).

2. Environmental Setting

Ambient air quality is commonly determined by climatological conditions, the area's topography, and the quantity and type of pollutants released.

a. Climate and Topography

The proposed project is located in the North Central Coast Air Basin (NCCAB), which includes Monterey, Santa Cruz and San Benito counties. The NCCAB lies along the central coast of California, covering an area of 5,159 square miles. The northwest sector of the NCCAB is dominated by the Santa Cruz Mountains. The Diablo Range marks the northeastern boundary, and together with the southern extent of the Santa Cruz Mountains, forms the Santa Clara Valley, which extends into the northeastern tip of the NCCAB. Further south, the Santa Clara Valley evolves into the San Benito Valley, which runs northwest-southeast and has the Gabilan Range as its western boundary. To the west of the Gabilan Range is the Salinas Valley, which extends from Salinas at the northwest end to south of King City.

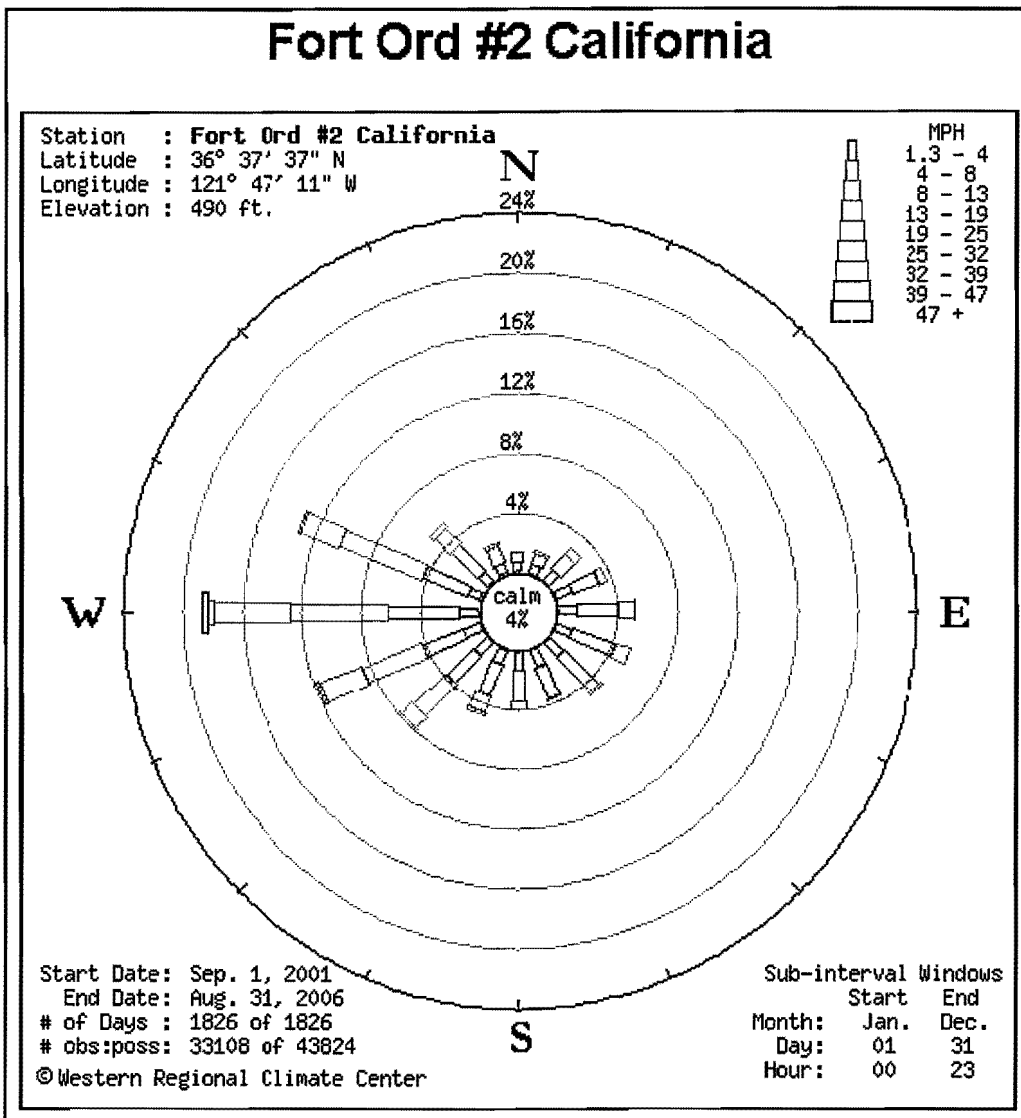
The western side of the Salinas Valley is formed by the Sierra de Salinas, which also forms the eastern side of the smaller Carmel Valley; the coastal Santa Lucia Range defines the western side of the valley.

The semi-permanent high pressure cell in the eastern Pacific is the basic controlling factor in the climate of the NCCAB. In the summer, the high pressure cell is dominant and causes persistent west and northwest winds over the entire California coast. Air descends in the Pacific High, forming a stable temperature inversion of hot air over a cool coastal layer of air.

The onshore air currents pass over cool ocean waters to bring fog and relatively cool air into the coastal valleys. (represented in Figure F-1 by the preponderance of winds from the west)

The warmer air aloft acts as a lid to inhibit vertical air movement.

FIGURE F-1 – FORT ORD WIND ROSE



The generally northwest-southeast orientation of mountainous ridges tends to restrict and channel the summer onshore air currents. Surface heating in the interior portion of the Salinas and San Benito Valleys creates a weak low pressure that intensifies the onshore air flow during the afternoon and evening. In the fall, the surface winds become weak, and the marine layer grows shallow, dissipating altogether on some days. The air flow is occasionally reversed in a weak offshore movement, and the relatively stationary air mass is held in place by the Pacific High pressure cell, which allows pollutants to build up over a period of a few days. It is most often during this season that the north or east winds develop to transport pollutants from either the San Francisco Bay Area or the Central Valley into the NCCAB.

During the winter, the Pacific High migrates southward and has less influence on the NCCAB. Air frequently flows in a southeasterly direction out of the Salinas and San Benito Valleys, especially during night and morning hours. Northwest winds are nevertheless still dominant in winter, but easterly flow is more frequent. The general absence of deep, persistent inversions and the occasional storm systems usually result in good air quality for the basin as a whole in winter and early spring.

b. Air Pollutants of Primary Concern

1) Criteria Air Pollutants

(a) Ozone

Ozone is a colorless gas with a pungent odor. As shown in Table F-1, ozone causes eye irritation and respiratory function impairment. Most ozone in the atmosphere is formed as a result of the interaction of ultraviolet light, reactive organic gases (ROG), and oxides of nitrogen (NO_x). ROG (equivalent for the purposes of this analysis to volatile organic compounds, or VOC) is composed of nonmethane hydrocarbons, and NO_x is made of different chemical combinations of nitrogen and oxygen, mainly NO and NO₂. A highly reactive molecule, ozone readily combines with many different components of the atmosphere. Consequently, high levels of ozone tend to exist only while high ROG and NO_x levels are present to sustain the ozone formation process. Once the precursors have been depleted, ozone levels rapidly decline. Because these reactions occur on a regional scale, ozone is considered a regional pollutant.

(b) CO

Carbon monoxide (CO) is an odorless, colorless, gas. CO causes a number of health problems including fatigue, headache, confusion, and dizziness (see Table F-1). The incomplete combustion of petroleum fuels in on-road vehicles is a major cause of CO. CO is also produced during the winter from wood stoves and fireplaces. CO tends to dissipate rapidly into the atmosphere; consequently, violations of the State CO standard are generally limited to major intersections during peak hour traffic conditions.

(c) Suspended Particulate Matter

Suspended particulate matter (airborne dust) consists of particles small enough to remain suspended in the air for long periods. Fine particulate matter includes particles small enough to be inhaled, pass through the respiratory system, and lodge in the lungs, with resultant health effects. Particulates can include materials such as sulfates and nitrates which are particularly damaging to the lungs. Health effects studies resulted in revision of the Total Suspended Particulate (TSP) standard in

TABLE F-1 – HEALTH EFFECTS OF KEY CRITERIA AIR POLLUTANTS AND HAZARDOUS AIR POLLUTANTS^a

Pollutant		Health Effects	Examples Of Sources
Category	Description		
Criteria Air Pollutants ^b	Particulate Matter (inhalable: less than 10 microns in diameter, e.g., PM ₁₀ , PM _{2.5})	Increased Respiratory Disease Lung Damage Premature Death	Cars and Trucks Especially Diesels Fireplaces, Woodstoves Windblown Dust from Roadways, Agriculture and Construction
	Ozone (O ₃)	Breathing Difficulties Lung Damage	Formed by chemical reactions of air pollutants in the presence of sunlight. Common sources: motor vehicles, industries, and consumer products
	Carbon Monoxide (CO)	Chest Pain in Heart Patients Headaches, Nausea Reduced Mental Alertness Death at Very High Levels	Any source that burns fuel such as cars, trucks, construction and farming equipment and residential heaters and stoves
	Nitrogen Dioxide (NO ₂)	Lung Damage	See Carbon Monoxide Sources
Hazardous Air Pollutants	Asbestos ^c	<i>Chronic Effects (Non-cancer):</i> A lung disease called asbestosis, which is a diffuse fibrous scarring of the lungs. <i>Cancer Risk:</i> Exposure to asbestos via inhalation can cause lung cancer and mesothelioma (a rare cancer of the membranes lining the abdominal cavity and surrounding internal organs).	Erosion of natural deposits in asbestos-bearing rocks, from a variety of asbestos-related industries, or from clutches and brakes on cars and trucks. Released from a variety of building materials such as insulation and ceiling and floor tiles.
	Lead ^d	<i>Acute Effects:</i> Gastrointestinal symptoms, death at high levels. <i>Chronic Effects (Non-cancer):</i> Anemia, neurological problems (especially in children), adverse on blood pressure and kidney function, and interference with vitamin D metabolism. <i>Probable carcinogen.</i>	Combustion of solid waste, coal, and oils, emissions from iron and steel production and lead smelters, and tobacco smoke. Flaking, chipping and/or powdering of lead-based paint in older buildings. Drinking water contaminated by lead-containing pipes, solder, and fixtures.
	DPM ^{e,f} /Acrolein ^g	<i>Acute Effects:</i> Effects on the lung, such as upper respiratory tract irritation and congestion. Acute inhalation exposure to high levels may result in death. <i>Chronic Effects (Non-cancer):</i> General respiratory congestion and eye, nose, and throat irritation. greater incidence of cough, phlegm, and bronchitis. Also skin irritation. <i>Carcinogen (per ARB).</i>	Can be formed from the breakdown of certain pollutants found in outdoor air, from burning tobacco, or from burning gasoline. Exposure can occur near automobiles or oil or coal power plants.
<p>^a The corresponding term for "Hazardous Air Pollutants" applied by the ARB is "Toxic Air Contaminants".</p> <p>^b U.S. EPA, Hazard Summary: Asbestos, April 1992 (revised January 2000). (http://www.epa.gov/ttn/atw/hlthef/asbestos.html)</p> <p>^c U.S. EPA, Hazard Summary: Lead Compounds, April 1992 (revised January 2000). (http://www.epa.gov/ttn/atw/hlthef/lead.html)</p> <p>^d U.S. EPA, Hazard Summary: Lead Compounds, April 1992 (revised January 2000). (http://www.epa.gov/ttn/atw/hlthef/lead.html)</p> <p>^e ARB, <i>Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles</i>, October 2000. (http://www.arb.ca.gov/diesel/documents/rrpFinal.pdf)</p> <p>^f ARB, Office of Environmental Health Hazard Assessment (OEHHA), "Initial Statement of Reasons for Rulemaking: Staff Report - Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant", June 1998. (http://www.arb.ca.gov/toxics/dieseltac/staffrpt.pdf)</p> <p>^g U.S. EPA, Hazard Summary: Acrolein, April 1992 (revised January 2000). (http://www.epa.gov/ttn/atw/hlthef/lead.html)</p>			

1987 to focus on particulates that are small enough to be considered "inhalable", i.e., 10 microns or less in size (PM₁₀). In July of 1997 a further revision of the federal standard added criteria for PM_{2.5}, reflecting recent studies that suggested that particulates less than 2.5 microns in diameter are of particular concern. (The status of implementation of this standard is discussed under the Regulatory Context heading, below.)

Hazardous Air Pollutants / Toxic Air Contaminants

Hazardous air pollutants (HAPs), typically referred to at the State level as toxic air contaminants (TACs), are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. The federal government is working with state, local, and tribal governments to reduce air toxics releases of 188 pollutants to the environment. Examples of toxic air pollutants include benzene, which is found in gasoline; perchlorethylene, which is emitted from some dry cleaning facilities; and methylene chloride, which is used as a solvent and paint stripper by a number of industries. Examples of other listed air toxics include dioxin, asbestos, toluene, and metals such as cadmium, mercury, chromium, and lead compounds.¹

For this analysis, the HAPs/TACs of primary concern are asbestos, lead and compounds in the exhaust of diesel-fueled engines (both particulate matter and acrolein). The potential health effects of HAPs most relevant to this analysis are summarized in Table F-1.

During the last few years, particular attention has been devoted at the State level to particulate matter from diesel engine exhaust. It is of particular concern because, in addition to its being recognized over the past couple of decades as a potential source of both cancer and non-cancer health effects, it is nearly ubiquitous at some concentration level throughout developed areas. Diesel particulate emissions are discussed in the context of state regulatory activities later in this report.

Diesel particulate matter (DPM) is generated by on-road vehicles such as trucks and buses, which in 2000 accounted for approximately 27% of DPM emissions in California.

Emissions are also generated by off-road mobile sources, which include agricultural equipment, construction equipment, industrial equipment, railroads and marine vehicles, among others.

c. Regulatory Context

1) Federal

The Federal Clean Air Act (CAA) of 1970, as amended, establishes air quality standards for several pollutants. These pollutants are termed "criteria" pollutants because the United States Environmental Protection Agency (U.S. EPA) has established specific concentration threshold criteria for them based upon specific medical evidence of health effects. These national ambient air quality standards (NAAQS) are divided into primary standards and secondary standards. Primary standards are designed to protect the public health, and secondary standards are intended to protect the public welfare from effects such as visibility reduction, soiling, nuisance, and other forms of damage. Current NAAQS' are presented in Table F-2. Regions of the country are classified with respect to their attainment -- or the extent of their "nonattainment" -- of these standards.

Table F-2 – Ambient Air Quality Standards

Ambient Air Quality Standards							
Pollutant	Averaging Time	California Standards ¹		Federal Standards ²			
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷	
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry	
	8 Hour	0.070 ppm (137 µg/m ³)*		0.08 ppm (157 µg/m ³), ⁸			
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	20 µg/m ³		50 µg/m ³			
Fine Particulate Matter (PM _{2.5})	24 Hour	No Separate State Standard		65 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	15 µg/m ³			
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	None	Non-Dispersive Infrared Photometry (NDIR)	
	1 Hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)			
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—			
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	—	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemiluminescence	
	1 Hour	0.25 ppm (470 µg/m ³)		—			
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	—	Ultraviolet Fluorescence	0.030 ppm (80 µg/m ³)	—	Spectrophotometry (Pararosaniline Method)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (365 µg/m ³)			
	3 Hour	—		—			0.5 ppm (1300 µg/m ³)
	1 Hour	0.25 ppm (655 µg/m ³)		—			—
Lead ⁹	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	—	
	Calendar Quarter	—		1.5 µg/m ³			Same as Primary Standard
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards			
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography				
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence				
Vinyl Chloride ⁹	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography				
*This concentration was approved by the Air Resources Board on April 28, 2005 and is expected to become effective in early 2006.							
See footnotes on next page ...							

California Air Resources Board (11/29/05)

(a) Criteria Air Pollutants

(i) Ozone

The previous one-hour-average NAAQS for ozone was revoked on June 15, 2005. As of March 2006, the NCCAB was designated as Unclassified/Attainment with respect to the eight-hour-average NAAQS that replaced it². This information is policy background, and therefore does not affect the impact analysis or significance thresholds used, as described below.

(ii) CO

The County (and the remainder of the NCCAB) is designated as Unclassified/Attainment with respect to the CO NAAQS³.

(iii) Suspended Particulate Matter

NAAQS's for particulate matter are expressed in terms of both PM₁₀ and PM_{2.5}, and with respect to both 24-hour and annual-average concentrations. For the latter pollutant, the U.S. EPA issued initial formal attainment status designations on December 17, 2004. The NCCAB is currently designated as Unclassified/Attainment with respect to both the PM₁₀ and PM_{2.5} NAAQS⁴.

(b) Hazardous Air Pollutants

One means by which the U.S. EPA addresses HAP exposure is through the National Emission Standards for Hazardous Air Pollutants (NESHAPS), also known as maximum achievable control technology (MACT) standards⁵. These NESHAPS are promulgated under Title 40 of the Code of Federal Regulations (CFR), Parts 61 & 63.

(i) Asbestos

The NESHAP for asbestos is contained under Subpart M of 40 CFR Part 61⁶. Section 145 of this Subpart addresses the "Standard for demolition and renovation". That section includes numerous provisions, including:

- Requirements for notifying the U.S. EPA or other agency with delegated authority
- Procedures for asbestos emission control:
 - "...Remove all RACM from a facility being demolished or renovated before any activity begins that would break up, dislodge, or similarly disturb the material or preclude access to the material for subsequent removal..." except under certain specifically-defined circumstances.
 - Adequately wet the RACM under numerous specifically-defined circumstances.
 - Strip RACM-containing facility components using adequate wetting and/or a local exhaust ventilation and collection system, or seal those components in leak-tight wrapping.
 - At least one properly-trained on-site demolition project representative with adequate authority must be present during asbestos abatement activities.

(ii) Lead

The only lead-related NESHAPs currently adopted address lead smelting⁷.

(iii) Acrolein

There are currently no NESHAPs explicitly addressing acrolein⁸.

2) State

The California Air Resources Board (ARB) coordinates and oversees both State and federal air pollution control programs in California. As part of this responsibility, the ARB monitors existing air quality, establishes CAAQS, and limits allowable emissions from vehicular sources. The ARB has divided the State into many air basins. Regulatory authority within them has been given to regional Air Districts – Air Pollution Control Districts (APCDs) and Air Quality Management Districts (AQMDs) -- which control stationary source emissions and develop regional air quality plans.

(a) Criteria Air Pollutants

The State of California has established its own set of ambient air quality standards (CAAQS) that are generally more stringent than the corresponding NAAQS. The California Clean Air Act (CCAA), which became effective on January 1, 1989, provides a planning framework for attaining the CAAQS. Non-attainment areas in the State were required to prepare plans for attaining these standards. The CCAA provided for the classification of regions within the State into three classes depending upon the findings of the attainment plans: moderate, if CAAQS attainment could not be demonstrated before December 31, 1994; serious, if CAAQS attainment could not be demonstrated before December 31, 1997; and severe, if CAAQS attainment could not be demonstrated at all. For each class, the CCAA specifies attainment strategies that must be adopted. For all classes, attainment plans are required to demonstrate a five percent per year reduction in the emissions of non attainment pollutants or their precursors, unless all feasible measures are being employed.

(i) Ozone

On May 17, 2006, the ARB's new eight-hour ozone CAAQS became effective⁹, supplementing the existing one-hour ozone CAAQS. The ARB's initial designation for the NCCAB with respect to the eight-hour standard is expected to be released in November 2006. The NCCAB is designated as Nonattainment-Transitional with respect to the one-hour ozone NAAQS¹⁰.

(ii) CO

The County (and the remainder of the NCCAB) is designated as attainment with respect to the CO CAAQS¹.

(iii) Suspended Particulate Matter

The NCCAB is designated as non-attainment with respect to the PM₁₀ CAAQS¹ and attainment with respect to the PM_{2.5} CAAQS¹.

(b) Toxic Air Contaminants

The State regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588)¹¹.

The Tanner Air Toxics Act institutes a formal procedure for designating substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. The ARB then adopts an Airborne Toxics Control Measure for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below the threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technology to minimize emissions. Air districts adopt and enforce the control measure locally.¹²

Within the state of California, the Office of Environmental Health Hazard Assessment (OEHHA) works with the ARB to address health risk issues associated with TACs. The OEHHA establishes Reference Exposure Levels (RELs) as indicators of potential adverse health effects. An REL is a concentration level of a toxic air contaminant (TAC) at or below which no adverse health effects are anticipated¹³.

The OEHHA has published health *Risk Assessment Guidelines* for the Air Toxics Hotspots program¹⁴. Within California, those guidelines are commonly referenced in the adoption of general health risk policies, assessment guidelines and thresholds at the regional level. The OEHHA *Risk Assessment Guidelines* include the following statement regarding cancer risk from short-term emission sources:

“...There are often questions regarding the validity of applying the cancer potency factors to less than lifetime exposures....as the exposure duration decreases the uncertainties introduced by applying cancer potency factors derived from very long term studies increases. Short-term high exposures are not necessarily equivalent to longer-term lower exposures even when the total dose is the same. OEHHA therefore does not support the use of current cancer potency factor to evaluate cancer risk for exposures of less than 9 years. If such risk must be evaluated, we recommend assuming that average daily dose for short-term exposure is assumed to last for a minimum of 9 years. OEHHA is evaluating cancer risk assessment methodologies over the next several years to address a number of issues including methods to evaluate short-term exposures to carcinogens...”

OEHHA representatives have indicated that a comprehensive update to these guidelines is currently in the late stages of internal development, and is expected to include more specific guidance on addressing cancer risk in the context of relatively short-term exposures¹⁵. Given the breadth and complexity of this work, it is difficult to predict when it might be released and subsequently considered for official adoption. However, OEHHA staff hopes to release the draft update later in 2006 and to have the public review phase completed sometime in 2007.

In 2005, the ARB published their *Air Quality and Land Use Handbook: A Community Health Perspective* (referred to hereafter as “*Air Quality and Land Use Handbook*”).

This document includes various siting recommendations for proposed sensitive land uses relative to localized air pollution sources. While it does not explicitly limit itself to particular pollutants or pollutant categories, some of its most important recommendations are driven by exposure to TACs in general and DPM in particular.¹⁶ Additional discussion of DPM is presented below.

(i) Asbestos

State Health and Safety Code Section 19827.5 – added to the California Code of Regulations (CCR) to comply with State Assembly Bill 2791¹⁷ – establishes applicable asbestos notification pursuant to 40 CFR Part 61 as a prerequisite for issuance of a demolition permit. More recently, the ARB has established

asbestos Air Toxic Control Measures (ATCMs) related to construction, grading, quarrying, and surface mining operations¹⁸ and to surfacing applications¹⁹. Both of these ACTMs focus on naturally-occurring asbestos in soil and rock.

(ii) Lead

In April 1997, the Air Resources Board (ARB or Board) identified inorganic lead as a TAC. In 2001 the ARB prepared *Risk Management Guidelines for New, Modified, and Existing Sources of Lead*²⁰. These guidelines include suggested exposure level thresholds for application to various decisions associated with management of lead-related health risk.

(iii) Diesel Particulate Matter

In August 1998 the ARB listed "Particulate Matter Emissions from Diesel-Fueled Vehicles" as a TAC. Subsequently, the ARB has devoted substantial attention to reducing exposure risk for this pollutant.

In 2000, the ARB developed a *Risk Reduction Plan (RRP)*²¹ to address this source of TACs. The ARB is in the process of implementing this Plan. The *RRP* identified the cancer risk levels from DPM emissions associated with various source categories, including freeways, stationary engines, distribution (trucking) centers, truck stops and locations with concentrations of school bus idling.

The *RRP* contains the following three components:

1. New regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce diesel PM emissions by about 90 percent overall from current levels;
2. New retrofit requirements for existing on-road, off-road, and stationary diesel-fueled engines and vehicles where determined to be technically feasible and cost-effective; and
3. New Phase 2 diesel fuel regulations to reduce the sulfur content levels of diesel fuel to no more than 15 ppm to provide the quality of diesel fuel needed by the advanced diesel PM emission controls.

Since adoption of the *RRP*, the ARB has conducted regulatory activities to implement all three plan components. Examples include the "Diesel Particulate Matter Control Measure for On-road Heavy-duty Diesel-fueled Residential and Commercial Solid Waste Collection Vehicles"²² and ATCMs for stationary compression ignition engines²³; portable engines rated at 50 horsepower and greater²⁴; in-use diesel-fueled transport refrigeration units (TRU) and TRU generator sets, and facilities where TRUs operate²⁵; and diesel-fueled commercial motor vehicle idling²⁶.

The *Air Quality and Land Use Handbook* recommends avoiding the siting of "...new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 vehicles/day..."²⁷. This recommendation is driven largely by the contribution of DPM to the overall air pollution impact from such transportation sources.

(c) Fuels

One of the strategies that ARB considers in reducing emissions of both criteria air pollutants and toxic air contaminants is alterations in fuel formulations. One alternative to ARB-certified petroleum-based diesel fuels is fuel that includes

biodiesel, fuel derived from vegetable oil or animal fats. Use of various biodiesel blends has generally been demonstrated to reduce the rates of ROG and PM emissions relative to purely petroleum-based diesel. In addition, many studies have demonstrated substantial reductions in the rates of emissions of potentially cancer-causing gaseous pollutants when the biodiesel content is increased.

However, the ARB and OEHHA feel that there is currently insufficient information to determine whether or if the PM produced by the exhaust from a biodiesel fuel blend has less of a cancer-causing potential than that of traditional diesel fuel. Until such information is developed, ARB staff recommends assuming that there is no such difference, so that any reduction in cancer risk from PM emissions attributable to substitution of a biodiesel blend for traditional diesel would derive from the reduced overall rate of PM emissions from that blend.

The ARB (possibly in partnership with the OEHHA) plans to prepare a comprehensive study of the potential implications of wider introduction of biodiesel blends for air quality, and of related issues (e.g., related to biodiesel supply). As part of that study, the ARB expects to develop better information regarding the potential benefit of such blends in reducing cancer risk. They currently estimate that this study will be completed and released between late 2007 and early 2008.

3) Regional

The Monterey Bay Unified Air Pollution Control District (abbreviated as MBUAPCD, but referred to hereafter simply as the APCD) has jurisdiction over the entire NCCAB, comprising Monterey, San Benito and Santa Cruz counties. The MBUAPCD has responsibility for attainment planning related to criteria air pollutants and for rule development and enforcement for those activities over which it has jurisdiction. It is also the key reviewing agency for air quality analyses in the context of California Environmental Quality Act (CEQA) assessments, and has promulgated both a *CEQA Air Quality Guidelines*²⁸ document and recommended analytical tools^{29,30,31} for evaluation of specific air quality impact categories in the context of CEQA.

(a) Criteria Air Pollutants

(i) Ozone

To address CCAA planning requirements relating to ozone, the APCD prepared the 1991 Air Quality Management Plan (AQMP). The most recent version of that plan, published in 2004³², represents the fourth update to the plan. The 2004 AQMP proposes adoption of...

“...control measures for the following sources:

- Solvent Cleaning Operations
- Spray Booths - Misc. Coatings and Cleaning Solvents
- Degreasing Operations
- Adhesives and Sealants
- Natural Gas-Fired Fan-Type Central Furnaces and Residential Water Heaters.³³ⁿ

The 2004 AQMP acknowledges that, even with implementation of its recommendations, “...some areas of the Basin may still not achieve the standard.” It attributes ongoing violations of the one-hour ozone CAAQS, in

part, to "...variable meteorological conditions occurring from year to year, transport of air pollution from the San Francisco Bay Area, and locally generated emissions."³⁴

APCD rules relevant to the emissions of ozone precursors (specifically, ROG) from sources related to the proposed project include Rule 425 (Use Of Cutback Asphalt)³⁵ and Rule 426 (Architectural Coatings)³⁶.

(ii) CO

There have been no recorded violations of the federal or CO CAAQS at APCD monitoring stations³⁷. In connection with proposed land development projects, the APCD addresses potential CO exposure issues primarily through guidance on how and under what conditions local ambient CO "hot-spot" analysis should be performed in the context of air quality assessments pursuant to CEQA.

(iii) Suspended Particulate Matter

APCD planning related to attainment of the PM₁₀ CAAQSs was addressed in the *1998 Report on Attainment of the California Particulate Matter Standards in the Monterey Bay Region*³⁸ (which updated corresponding 1995 and 1996 reports³⁹), and, more recently, in the *2005 Report on the Attainment of the California Particulate Matter Standards in the Monterey Bay Region (Senate Bill 656 Implementation Plan)*⁴⁰. The latter plan describes the greater vulnerability of coastal locations within the NCCAB to PM₁₀ standard violations, due largely to the contribution from sea salt. It focuses primarily on controlling particulate sources related fugitive dust and smoke related to combustion, but also addresses NO_x- and ROG-related particulate formation⁴¹. Consistent with the requirements of SB 656, and with the difficulty in estimating future ambient concentrations of particulate matter substantially influenced by fugitive dust sources (even disregarding unusual burn events), this plan concentrates on identification of and implementation scheduling for available PM emission control measures. Predicted adoption dates for the recommended measures varied from June 2006 to June 2007.

APCD Rule 402 (Nuisances)⁴² does not specifically address suspended particulate matter, but is perhaps most likely to be applied in the context of human-initiated activities that release particulate matter (e.g., fugitive dust) into the air. The final paragraph of that rule reads as follows:

"No person shall discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health, or safety of any such persons or the public; or which cause, or have a natural tendency to cause, injury or damage to business or property. {HSC Section 41700}"

(b) Toxic Air Contaminants

The MBUAPCD *CEQA Air Quality Guidelines*⁴³ provide the following guidance regarding evaluating the potential significance of project-related TAC impacts:

"Construction...Equipment or processes not subject to Rule 1000 that emit noncarcinogenic TACs could result in significant impacts if emissions would exceed the threshold that is based on the best available data [i.e., acute (1-hour) REL,

chronic (annual) REL, PEL/420]... In addition, temporary emissions of a carcinogenic TAC that can result in a cancer risk greater than one incident per 100,000 population are considered significant.

"Likewise, a project which would be located adjacent to a source of TACs unregulated by Rule 1000 may also result in significant impacts to air quality and human health and require modeling. Common sources of TACs include diesel fueled internal combustion engines..."

APCD Rule 1000 (Permit Guidelines and Requirements for Sources Emitting Toxic Air Contaminants)⁴⁴ addresses exposure issues for TACs in general. It applies to stationary sources for which the State has not adopted an Air Toxics Control Measure (ATCM). It considers new and modified TAC source review and risk assessment requirements.

(i) Asbestos

The APCD regulates asbestos (and selected other TACs) through Rule 424⁴⁵, which incorporates the U.S. EPA's NESHAPs (discussed earlier in this report) by reference. Rule 424 adds APCD-specific language to some of the incorporated federal regulations, including the following text associated with asbestos:

- "Building surveys shall clearly identify all suspect building materials, sample locations and the laboratory analysis for each sample taken in a written report. The written building survey report shall be submitted along with the notification for each demolition project and for asbestos removal projects that will disturb building materials other than those being abated.
- "For asbestos renovation projects, all containment areas shall have viewports installed where feasible to allow clear viewing of asbestos removal operations from outside the containment area."

In Rule 306⁴⁶, the APCD addresses fee requirements associated with asbestos NESHAP implementation pursuant to Rule 424. The APCD has also published a brief document to assist in compliance with the asbestos NESHAP under Rule 424⁴⁷.

(ii) Lead

The APCD does not currently have any adopted regulations addressing lead abatement. However, APCD staff has prepared proposed Rule 439 (Building Removals), which addresses control of general particulate emissions during building demolition but was largely motivated by a desire to assure adequate control of airborne lead emissions⁴⁸. This proposed rule is intended to implement lead exposure standards contained in the ARB's *Risk Management Guidelines for New, Modified, and Existing Sources of Lead* (discussed under the "2. State" heading earlier in this report). It was motivated largely by recent proposals (preceding the proposal that is the subject of this analysis) to redevelop portions of the Fort Ord property. The Staff Report for this proposed rule includes the following discussion:

"...the District requested that building removals conducted at the former Fort Ord be monitored to determine lead levels. This initial round of monitoring documented that building removals could exceed the

recommended lead level of 0.30 $\mu\text{g}/\text{m}^3$. Therefore, the District decided to go forward with a rule-making action to limit lead emissions from building removals at the former Fort Ord....additional monitoring data has now been acquired. The data reflects monitoring of building removals in Marina Heights conducted in July and August of 2005 and monitoring of the initial phase of building removals for University Villages conducted in January 2006. This latest data shows that when a building is removed using proper techniques the monitored lead level is below the recommended lead level.”

APCD staff has prepared the proposed rule to enforce the use of such proper removal techniques , as illustrated in the following excerpt⁴⁹:

“The following work practice standards shall be followed during building removals:

- 3.2.1 As necessary to prevent visible emissions, sufficiently wet the structure prior to removal. Continue wetting as necessary during active removal and the debris reduction process.
- 3.2.2 Demolish structure inward toward building pad. Laydown roof and walls so that they fall inward and not away from the building.
- 3.2.3 All removal activities must cease when wind speeds exceed 15 miles per hour.”

Note that these requirements are adequately compatible with those from the asbestos NESHAP excerpted earlier in this report..

(iii) Diesel Particulate Matter / Acrolein

The APCD assumes that diesel particulate matter is the key element of diesel exhaust with respect to cancer risk. Pending development and release of enhanced guidance from the OEHHA on cancer risk for relatively short-duration exposures (discussed earlier in this report), APCD staff has adopted the conservative approach to such exposures included in the OEHHA’s current *Risk Exposure Guidelines*.

According to the APCD: “Acrolein appears to drive the acute hazard index more significantly than any other acutely toxic substance in diesel exhaust, such that the other substances are not significant...”⁵⁰ Therefore, the APCD relies on acrolein as the basis for hazard index calculations related to exposure to diesel exhaust. Table F-3 compares various thresholds established for and health effects associated with acrolein exposure. Note that the acute (one-hour) REL promulgated by the OEHHA and applied by the MBUAPCD as a significance criterion⁵¹ appears to be a conservatively low value relative to the underlying study data and relative to standards and criteria associated with occupational exposure and with higher degrees of health impact.

d. Existing Air Quality

1) Air Pollutant Sources

(a) Terminology

When considering potential air pollution impacts from a proposed land development project, project-related air pollutant sources are often categorized as either “direct”

or “indirect”. Direct sources are those directly associated with the proposed project site: e.g., fireplaces located within proposed residential housing. Indirect-source emissions include those resulting from mobile source activity such as motor vehicle trips that will be generated by or attracted to the proposed project.

(b) Sustained Sources

Regional air pollutant sources comprise a wide variety of stationary, area-wide, mobile and non-anthropogenic (natural) sources. These will be discussed later in the

TABLE F-3 – VARIOUS ACROLEIN CONCENTRATION VALUES AND ASSOCIATED STANDARDS OR OBSERVED HEALTH EFFECTS

Information Source	Referencing Agency(ies)	Reference Concentration		Context		Health Effects	
		ug/m ³	ppb ^a	General	Specific	Description	Based On
OEHHA	OEHHA, MBUAPCD	0.19	0.08	REL	Acute (1-hour)	Eye irritation	Conservative adjustment of study data extrapolation to reflect uncertainty
OEHHA		11.5	5	Extrapolation of study results	1 hour	Eye irritation	Extrapolation of study results
Darley et al., 1960	OEHHA	138	60	Laboratory exposure	5 minutes	Eye irritation	Study observation
ACGIH ^b	U.S. OSHA	250	100	Permissible Exposure Limit (PEL) ^c	8-hour TWA ^d	[Not specified in applicable regulations] ^e	
IARC: Fassett, 1962	OEHHA	2,300	1,000	Acute toxicity	5 minutes	Lacrimation and irritation of the eyes, nose, and throat	Study observation

^a Typically based on indicated ug/m³ concentration and an air temperature of 25° C, or (in the case of the OSHA regulations) reported as the primary concentration measure, with the corresponding ug/m³ value being estimated.

^b American Conference of Governmental Industrial Hygienists.

^c 29 CFR 1926.55 App A. (This would be applicable to construction workers, for example.)

^d Total weight average.

^e Reference ACGIH document is *Threshold Limit Values of Airborne Contaminants for 1970*.

SOURCES: MSW, 2006; As indicated above.

report under the “Air Pollutant Emissions” heading. Sources of air pollution in the project vicinity include motor vehicle traffic, especially along Highway 1. No nearby major stationary sources of air pollution were identified during the site visit or through a review of the ARB’s Community Health Air Pollution Information System (CHAPIS)⁵² or Facility Search Engine⁵³.

(c) Temporary/Intermittent Sources

Construction activities at the nearby University Villages and Marina Heights development sites have and – for a relatively short period into the future – will represent temporary sources of air pollution impacts in the area.

A program of prescribed burning has been initiated within Fort Ord Boundaries⁵⁴, and there are plans to continue performing such burns into the future⁵⁵. At this point, such burns have only been performed under the auspices of the U.S. Army for purposes of clearing vegetation in advance of removing potential un-detonated ordnance and explosives. The first such burn (and only such burn initiated to date) was performed in October 2003 at Ranges 43-48, west of the center of Fort Ord and about three miles south of the proposed project site. Several air pollutant monitoring stations were arrayed around the targeted burn area, including one (“PS 1”) just south of the Cypress Knolls site. During the initial burn (“active ignition”) day and the subsequent (“smolder”) day, PM₁₀ concentrations measured at all or nearly all of the monitoring stations exceeded the applicable CAAQS. Concentrations of selected TACs were also monitored, but no substantial increases to background concentrations of those compounds were measured during the burn.⁵⁶

2) Sensitive Receivers

Existing sensitive receivers in the project vicinity include the school just northwest of the site. (Construction of the first residences within the adjacent Marina Heights development is currently expected to occur in the foreseeable near future, while construction of Phase I of the University Villages mixed use development to the south had proceeded to the grading phase as of early 2006⁵⁷.)

3) Emissions

(a) Criteria Air Pollutants

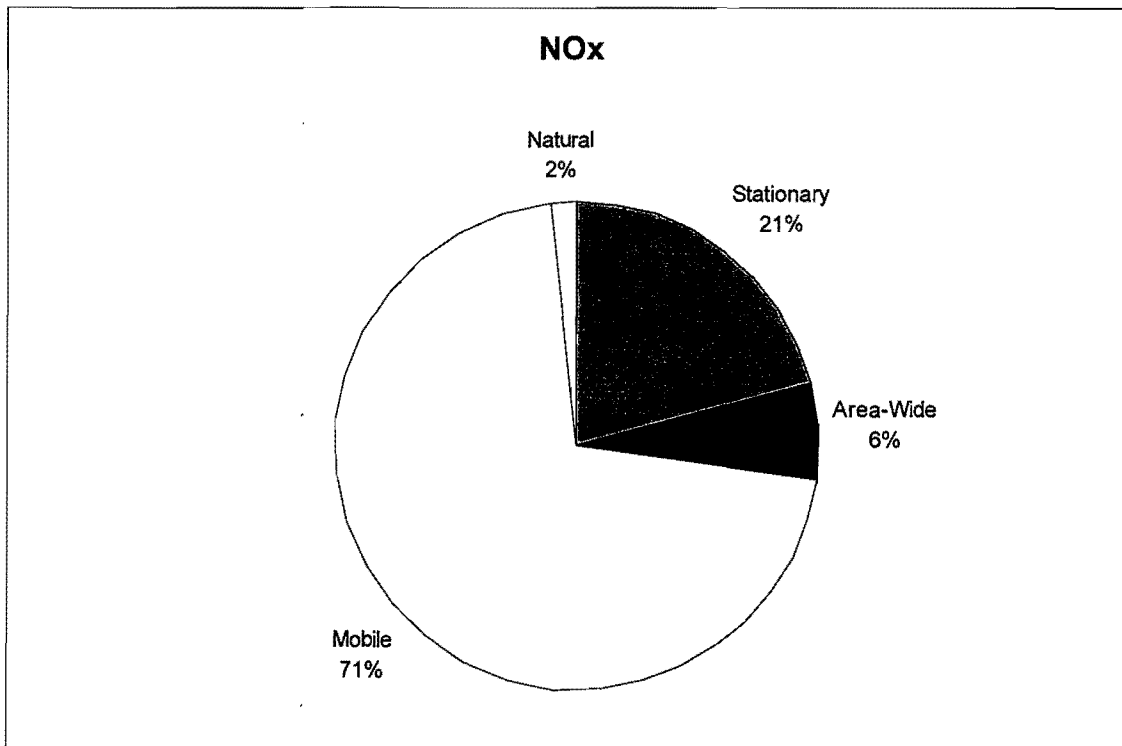
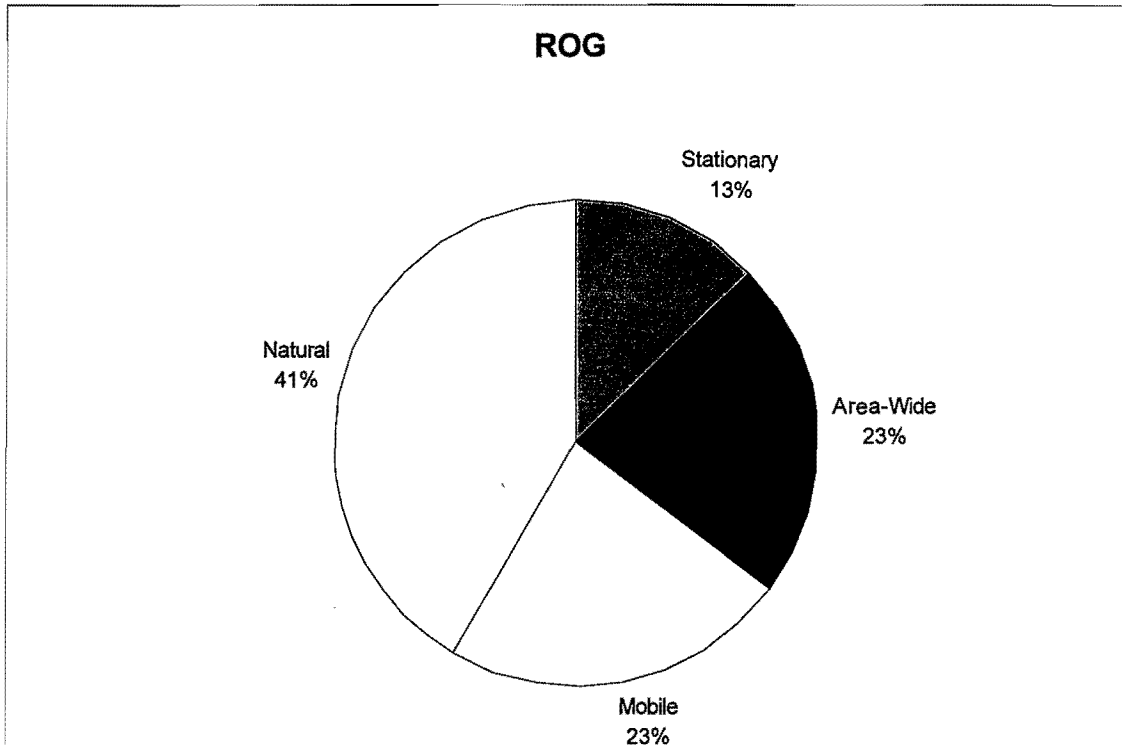
Table F-4 summarizes the most recent emissions inventories for Monterey County and the NCCAB as a whole. As shown in Table F-4, on-road motor vehicles represent only one of many categories of emissions sources within the County and NCCAB. However, such vehicles (part of the mobile category shown in Figures F-2 and F-3) account for nearly half of total anthropogenic (human-activity-generated) CO and NO_x emissions. Both area-wide and mobile sources contribute substantially to anthropogenic emissions of ROG. For PM₁₀, emissions from miscellaneous processes (part of the area-wide category shown in Figures F-1 and F-2) are dominant. Some of these emissions are attributed to dust entrained from paved and unpaved roads and are thus indirectly related to on-road vehicle travel. Construction-related activities also make a meaningful contribution to regional air pollutant emissions. Such activities account for an estimated six percent of County- and Basin-wide PM₁₀ emissions under the Area-Wide Sources: Miscellaneous Processes category, a large proportion of the approximately six percent of Area-Wide Sources: Solvent Evaporation emissions of ROG attributed to the application of architectural coatings and asphalt paving, and a small proportion of the estimated emissions in the Mobile Sources: Other Mobile category.

TABLE F-4 – 2005 ESTIMATED ANNUAL AVERAGE EMISSIONS OF SELECTED CRITERIA AIR POLLUTANTS FOR MONTEREY COUNTY (NCCAB PORTION) AND THE ENTIRE NCCAB

Source Category	Emissions (tons/day) by Pollutant									
	ROG		NO _x		CO		PM ₁₀		PM _{2.5}	
	Co. ^a	AB ^b	Co.	AB	Co.	AB	Co.	AB	Co.	AB
Fuel Combustion	0.4	0.9	12.5	15.5	12.0	13.2	0.9	1.1	0.9	1.1
Waste Disposal	0.8	1.4	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.0
Cleaning and Surface Coatings	4.2	9.6	–	–	–	–	–	–	–	–
Petroleum Production and Marketing	2.0	3.1	0.0	0.0	0.0	0.0	–	–	–	–
Industrial Processes	0.4	0.6	0.0	2.5	0.0	8.6	0.9	3.0	0.4	1.1
Total Stationary Sources	7.8	15.6	12.6	18.1	12.2	22.0	1.8	4.1	1.2	2.3
Solvent Evaporation	10.8	16.7	–	–	–	–	–	–	–	–
Miscellaneous Processes	6.5	10.9	3.4	5.5	100.6	157.7	41.3	67.8	16.5	27.0
Total Area-Wide Sources	17.3	27.6	3.4	5.5	100.6	157.7	41.3	67.8	16.5	25.6
On-Road Vehicles	11.3	20.3	26.0	40.9	126.3	208.9	0.8	1.3	0.6	0.9
Other Mobile	5.7	7.9	14.6	20.4	37.9	57.7	1.1	1.5	0.9	1.3
Total Mobile Sources	17.0	28.3	40.7	61.3	164.1	266.6	1.9	2.7	1.5	2.2
Subtotal w/o Natural Sources	42.0	71.5	56.6	84.9	276.9	446.3	45.0	74.7	19.3	31.4
<i>Natural Sources</i>	<i>51.1</i>	<i>73.4</i>	<i>1.4</i>	<i>1.5</i>	<i>40.7</i>	<i>43.5</i>	<i>4.2</i>	<i>4.5</i>	<i>3.6</i>	<i>3.8</i>

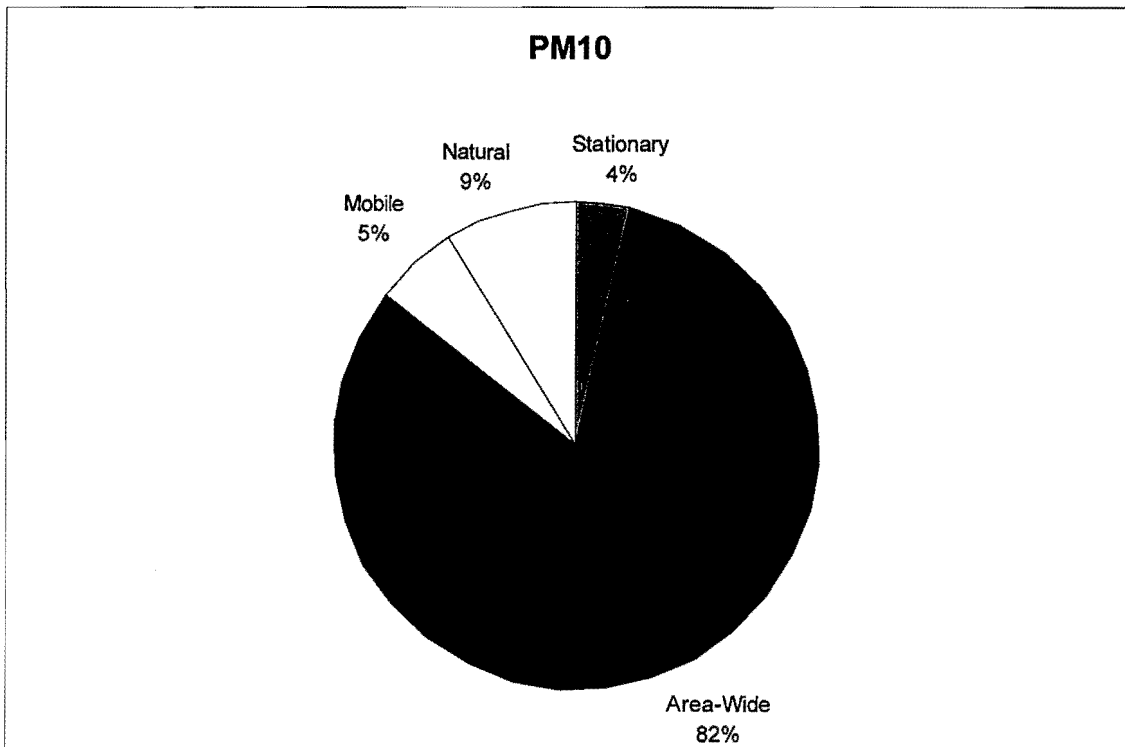
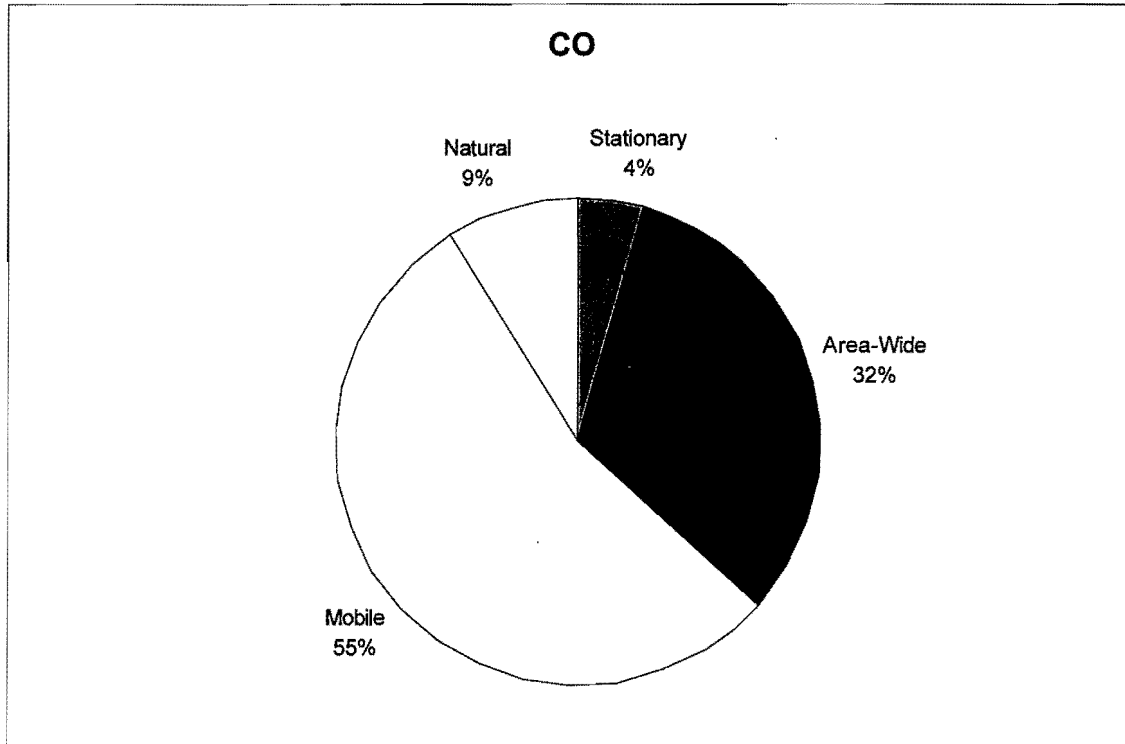
^a County; ^b Air Basin
 SOURCE: ARB, "Almanac Emission Projection Data", published in 2006.
 (<http://www.arb.ca.gov/ei/maps/basins/abnccmap.htm>)

FIGURE F-2: NCCAB EMISSIONS BY SOURCE CATEGORY -- ROG AND NOX



SOURCE: ARB, "ALMANAC EMISSION PROJECTION DATA", PUBLISHED IN 2006

FIGURE F-3: NCCAB EMISSIONS BY SOURCE CATEGORY -- CO AND PM10



SOURCE: ARB, "Almanac Emission Projection Data", published in 2006

(b) Toxic Air Contaminants

Table F-5 summarizes estimated County-wide emissions of TACs discussed in this analysis. While Table F-4 reported emissions estimates in units of tons per *day*, this table reports such estimates in units of tons per *year*. Note that "Other Mobile" sources are estimated to account for more than half of County-wide emissions of DPM, while County-wide acrolein and lead emissions are attributed primarily to area-wide sources (which, for the latter, could include demolition-related activities).

TABLE F-5 – 2004 ESTIMATED DAILY AVERAGE EMISSIONS OF SELECTED TOXIC AIR CONTAMINANTS FOR MONTEREY COUNTY

Pollutant	Emissions (tons/year) by Source Category					
	Stationary	Area-wide	On-road Mobile	Other Mobile	Natural	Total
Acrolein	0.15	64.16	6.41	8.12	16.42	95.26
Diesel engine exhaust, particulate matter (DPM)	21.28	–	104.76	187.64	–	313.68
Lead	0.00	2.96	0.01	0.12	–	3.10

SOURCE: ARB, California Toxics Inventory (CTI), 2004. (<http://www.arb.ca.gov/toxics/cti/cti.htm>)

4) Air Pollutant Concentrations and Standard Violations

(a) Criteria Air Pollutants

Ambient air pollutant concentrations are affected by the rates and distributions of corresponding air pollutant emissions, as well as by the climactic and topographic influences discussed above. The primary determinant of concentrations of non-reactive pollutants (such as CO and PM₁₀) is proximity to major sources. As previously discussed, ambient CO levels usually closely follow the spatial and temporal distributions of vehicular traffic.

The ARB (occasionally with the assistance of private sector partners) and relevant APCDs operate a number of ambient air quality monitoring stations throughout the County and the remainder of the NCCAB. For each of the previous three years, Table F-6 summarizes the number of violations for selected key CAAQS recorded at each of the applicable monitoring stations. (As previously discussed, the NCCAB is designated as Unclassified/Attainment with respect to the less stringent NAAQS for the key criteria air pollutants, and violations of those standards have not recently been an issue within the NCCAB.) Among the few violations of the one-hour ozone CAAQS recorded within the NCCAB over the preceding three years, Table F-6 shows that most were recorded at the Pinnacles National Monument station, an inland monitoring station where topography and meteorology tend to favor the concentration of this regionally-significant, photochemically-generated pollutant. According to the MBUAPCD, the "...ARB has determined that ozone conditions at Pinnacles are highly influenced by smog transported from a number of regional sources including the San Francisco Bay Area, the North Central Coast and the San Joaquin air basins."⁵⁸ By contrast, the largest number of violations of the PM₁₀ CAAQS within the NCCAB have been recorded at the Davenport and Moss Landing

stations along the coast, where sea salt (and, at Davenport, cement dust from a nearby plant) appears to have an important influence on overall PM₁₀ concentrations⁵⁹.

TABLE F-6 – AIR MONITORING NETWORK / MONITORED EXCEEDANCES: NCCAB, 2003-2005

Station	Parameters Measured	Monitored Exceedances of the State 1-Hour Ozone Standard and the State 24-Hour PM ₁₀ Standard							
		2005		2004		2003		3-Yr Total	
		O ₃	PM ₁₀	O ₃	PM ₁₀	O ₃	PM ₁₀	O ₃	PM ₁₀
SL	O ₃ , NO ₂ , NO _x , CO, PM ₁₀ , PM _{2.5} , WS, WD, T	0	0	0	0	0	4	0	4
HL	O ₃ , PM ₁₀ , WS, WD, T	0	0	0	0	0	0	0	0
CV	O ₃ , PM ₁₀ , T	0	0	0	0	0	0	0	0
SC	O ₃ , PM ₁₀ , PM _{2.5} , WS, WD, T	0	0	0	1	0	0	0	1
WT	O ₃ , PM ₁₀ , WS, WD, T	0	0	0	0	0	0	0	0
SV	O ₃ , WS, WD, T	0	NM	0	NM	1	NM	1	NM
DV	O ₃ , NO ₂ , NO _x , SO ₂ , CO, PM ₁₀ , WS, WD, T	0	2	0	7	0	5	0	14
KC	O ₃ , PM ₁₀ , WS, WD, T	0	0	0	0	0	0	0	0
PN	O ₃ , WS, WD, T	2	NM	0	NM	2	NM	4	NM
ML*	PM ₁₀ , WS, WD, T	NM	1	NM	2	NM	7	NM	10
TOT	O ₃ , PM ₁₀	2	3	0	10	3	16	5	29

*Moss Landing Station Closed 7/31/2005

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Station Abbreviations:

Parameter Abbreviations:

SL - Salinas, 855 E. Laurel Dr.
 HL - Hollister, 1979 Fairview Rd
 CV - Carmel Valley, 34 Ford Rd
 SC - Santa Cruz, 2544 Soquel Ave.
 WT - Watsonville, 444 Airport Blvd.
 KC - King City, 1001 Industrial Way
 SV - Scotts Valley, 4859 Scotts Valley Dr.
 PN - Pinnacles National Monument, 5000 Hwy 146
 DV - Davenport, Marine View and Center Ave.
 ML - Moss Landing, 7539 Sandholt Road
 TOT - Total station exceedances

O₃ - Ozone
 PM₁₀ - Particulate Matter smaller than 10 microns
 PM_{2.5} - Particulate Matter smaller than 2.5 microns
 NO₂ - Nitrogen Dioxide
 NO_x - Oxides of Nitrogen
 SO₂ - Sulfur Dioxide
 CO - Carbon Monoxide
 NM - Pollutant Not Monitored
 WS - Wind Speed
 WD - Wind Direction
 T - Temperature

Version Dated March 15, 2006

SOURCE: MBUAPCD, "Ambient Air Quality – Exceedances of Standards", March 15, 2006. (<http://www.mbuapcd.org/index.cfm?Doc=385>).

(b) Toxic Air Contaminants

Since closure of Fort Ord, it is reasonable to expect (given the coastal setting, moderate development densities, absence of major nearby stationary TAC sources, et cetera) that long-term area-average TAC levels in the project vicinity have generally been relatively low. Temporary, localized elevations of specific pollutants such as airborne lead compounds might have occurred during some previous base housing demolition activities such as those referred to in APCD communications related to proposed APCD Rule 439, as described above.

3. Environmental Impacts

a. Method of Analysis

This air quality analysis was performed in a manner consistent with the APCD's *CEQA Air Quality Guidelines*⁶⁰.

1) Project Level and Program Level Analysis Assumptions

This analysis is based upon the project as described in Section I of this EIR and evaluated in section IV-D of this EIR and in the project's Traffic Impact Analysis (*TIA*) contained in the Technical Appendices Volume.⁶¹ The foreseeable land uses for the program level project components are a senior center and a park. The trip generation assumptions for these land uses detailed in Section IV-D provide specific traffic volumes that are used in the modeling of potential air quality impacts. Hence the mitigation measures presented below for these identified impacts apply to both the project specific and program level Proposed Project components.

2) Criteria Air Pollutants

(a) Emissions

Criteria air pollutant emissions associated with proposed project were estimated using the ARB's URBEMIS 2002 (v. 8.7)⁶² model (with the applicable MBUAPCD patch)⁶³. For emissions estimates for ozone precursors (ROG and NO_x) and construction-related PM₁₀ emissions, results for summertime conditions were reported; for operational emissions of PM₁₀ (including heating-related fuel combustion), wintertime results were reported.

(i) Model Years

Average air pollutant emission rates for the on-road motor vehicle fleet are expected to decrease over time as newer vehicles-- subject to more stringent air pollution control requirements-- are substituted for older, more polluting vehicles. Therefore, all else being equal, an earlier future analysis year will result in more conservative (higher) emissions estimates than a more distant future analysis year. For the purposes of a conservative analysis, build-out of the project has been assumed to occur by 2008. A longer project buildout would lower the magnitude of air quality effects during construction operations but would not change the significance level identified below.

(ii) Land Use and Trip Generation Assumptions

Land use categories, development sizes and trip generation rates were derived from the *TIA*. Corresponding acreages were derived from the EIR Project Description.

(iii) Construction-related Criteria Air Pollutant Emissions

URBEMIS divides construction into three phases: Phase 1 (demolition), Phase 2 (site grading) and Phase 3 (building construction, asphalt paving and the application of architectural coatings). For construction Phases 2 and 3, this air quality analysis relies on URBEMIS-generated assumptions based on the project's scale and land use characteristics, with the exception of limiting the assumed maximum total daily acreage of land disturbed to 10 acres consistent with model guidance⁶⁴. For demolition, equipment assumptions were generated based on input from a demolition contractor familiar with projects requiring asbestos and lead abatement⁶⁵.

As indicated in the EIR Project Description, the proposed project site was already developed, with grading and construction of infrastructure, roads, parking, private driveways. Accordingly, internally-balanced site grading to facilitate the proposed redevelopment has been assumed with such grading being relatively limited in comparison to development of raw land, and which accounts for infrastructure reconstruction, excavation for new foundations, new road alignments and potential building pad elevations in variation from existing pads. URBEMIS' default emission rate for site grading was applied based on the default maximum daily grading acreage assumption of 10 acres.

Overall, the worst-case daily condition for construction activities was estimated assuming the aforementioned 10 acres of active grading area on one portion of the site occurred simultaneously with building of the proposed Community Center facility, optional assisted living facility and one half of the residential units proposed for the entire project on other portions of the site. It is anticipated that simultaneous construction activity associated with any particular project phase would be no greater than that.

(iv) Area-source Emissions

Area-wide emission sources would include fuel combustion associated with natural gas, hearth appliances and landscape equipment, as well as the use of ROG-emitting consumer products and ongoing (re-)application of architectural coatings. URBEMIS bases most of the area-source emission calculations upon the entered land use information and various emission factors and scaling assumptions. This EIR's air quality analysis relied on default values for those factors and assumptions in most cases. Emissions related to landscape maintenance were calculated for the appropriate model year. The percentage of residential development assumed to be served by natural gas was increased to 100 percent (consistent with published URBEMIS guidance). Consistent with URBEMIS defaults, a substantial proportion of detached/townhome residential units were assumed (in the base case) to be equipped with wood-burning appliances. For purposes of estimating ROG emissions from applicable consumer products, the estimated number of people per residential unit was reduced to 2, reflecting the fact that proposed residential development would be dominated by senior housing (with only the apartment units possibly not being restricted to only seniors).

(v) Indirect (“Operational”) Criteria Air Pollutant Emissions

Vehicle fleet mixes consistent with APCD recommendations⁶⁶ were substituted for corresponding URBEMIS defaults. Also consistent with APCD guidance⁶⁷, URBEMIS-default trip characteristics were retained. The TIA indicates that the “...Cypress Knolls project does not include any commercial retail uses that would capture trips from the adjacent street network, but other projects including the Marina University Villages and Marina Station projects include commercial retail uses... A pass-by rate of 20% was used for the PM peak hour trips generated by the Marina University Villages commercial retail uses located adjacent to Imjin Parkway...” While these assumptions are consistent with a 20% pass-by rate for some portion of total “Home-based shop” trips, the corresponding overall pass-by rate for all project trips would be relatively low. Consistent with a conservative analysis, EIR ANALYSIS did not enable URBEMIS’ computations for “Pass-by Trips” or “Double-Counting Correction” (related to project-internal trips).

(b) Ambient Air Pollutant Concentration Impacts

Potential ambient pollutant concentration impacts were considered for both CO and PM (PM₁₀ and PM_{2.5}).

(i) Carbon Monoxide

With regard to CO, relevant data from the TIA were compared to applicable screening thresholds presented in the APCD’s *CEQA Air Quality Guidelines* publication. Once one or more combinations of intersection and future scenario were identified where those screening thresholds were exceeded, the single combination of intersection and future scenario was selected that was expected to generate the highest localized increase in ambient CO concentration at a given nearby receiver location. CO concentrations were then estimated at a worst-case curbside receiver adjacent to that intersection and under that scenario. Consistent with guidance in the current APCD *CEQA Air Quality Guidelines*, the screening method described in Appendix A of Caltrans’ *CO Protocol*⁶⁸ document was used to generate these estimates. While emission factor models have been updated since that screening method was developed, the method was considered sufficiently conservative that – if a violation was not predicted using that method – a violation would not be predicted using more sophisticated methods involving CALINE4 runs and the most recent emission factor model.

(ii) Particulate Matter

This analysis considered the potential for future project occupants to be exposed to substantially elevated PM levels during either later-phase project construction activities after occupancy of early-phase residential construction on the site, or during future prescribed burns within Fort Ord.

(c) Consistency with Relevant Air Quality Plans

Per direction from the APCD^{69, 70}, the consistency of the proposed project with the relevant air quality plan (the APCD’s 2004 AQMP) was evaluated based on a determination from the Association of Monterey Bay Area Governments (AMBAG). The determination of project consistency (i.e., AMBAG determined that the Proposed Project is consistent with the AQMP) was made by AMBAG and is contained in the letter from AMBAG dated August 8, 2006 located in the end of Appendix A of this

EIR. AMBAG and the APCD have agreed that the appropriate method to assess consistency of proposed development projects with the AQMP is to compare the total county-wide number of existing and approved housing units at the time of determination – with the proposed project housing units added to that total – to the corresponding regional forecasts that were incorporated into the AQMP⁷¹.

3) Toxic Air Contaminants

(a) Project-generated TAC Emissions

TAC emissions impacts from project-related sources/activities were evaluated based on their potential to generate significant impacts within the context of existing adopted regulations that address such sources/activities.

(b) Exposure of Future Project Occupants to TAC Impacts from Off-site Sources

(i) Motor Vehicle Traffic

TAC impacts on future project occupants from motor vehicle traffic were evaluated in the context of applicable siting recommendations provided in the ARB's *Air Quality and Land Use Handbook*.

(ii) Prescribed Burning at Fort Ord

TAC impacts on future project occupants from prescribed burning elsewhere within Fort Ord were evaluated based on available documentation regarding pollutant levels during the 2003 burn described earlier in this report and on available information regarding the locations and scales of potential future burns.

b. Standards of Significance

1) Criteria Air Pollutants

Based on criteria applied in or adapted from information provided in the APCD *CEQA Air Quality Guidelines*, the project's criteria air pollution impacts would be significant if the project would...

1. ...during construction, result in direct emissions of more than 82 lb/day of PM₁₀...
2. ...during operations, ...
 - a. ...generate direct plus indirect emissions of either ROG or NO_x that exceed 137 lb/day...
 - b. ...generate on-site emissions of PM₁₀ exceeding 82 lb/day...
 - c. ...generate direct emissions of CO exceeding 550 lb/day...
 - d. ...cause or substantially contribute to a violation of PM₁₀ AAQS near any off-site unpaved roads along which project-generated vehicle trips would travel...
 - e. ...cause or substantially contribute to a violation of a CO AAQS, or...
 - f. ...be inconsistent with the adopted AQMP.

Regarding item "2e", the APCD *CEQA Air Quality Guidelines* indicate that the following traffic effects should be assumed to generate a significant CO impact unless CO dispersion modeling demonstrates otherwise:

- Intersections or road segments that operate at LOS D or better that would

operate at LOS E or F with the project's traffic, or

- Intersections or road segments that operate at LOS E or F where the volume-to-capacity (V/C) ratio would increase 0.05 or more with the project's traffic, or
- Intersections that operate at LOS E or F where delay would increase by 10 seconds or more with the project's traffic, or
- Unsignalized intersections which operate at LOS E or F where the reserve capacity would decrease by 50 or more with the project's traffic (based on the turning movement with the worst reserve capacity), or
- Project would generate substantial heavy duty truck traffic or generate substantial traffic along urban street canyons or near a major stationary source of CO.

2) Toxic Air Contaminants

(a) Project-generated TAC Emissions

(i) Sources Subject to Adopted APCD Regulations Intended to Assure Acceptable Exposure Levels

For project-related TAC sources subject to adopted APCD regulations intended to assure acceptable exposure levels, this analysis assumes compliance with those regulations and therefore less-than-significant TAC-related impacts. For sources of TAC emissions in general, the primary applicable APCD rule is Rule 1000. In the APCD *CEQA Air Quality Guidelines*, the APCD indicates that "Construction equipment or processes would not result in significant air quality impacts if they would comply with Rule 1000."⁷² The same conclusion is drawn for corresponding operational equipment and processes. For the purposes of this analysis, the same approach is applied to demolition-related asbestos emission impacts addressed under Rule 424.

(ii) Sources Specifically Addressed in APCD Guidelines/Recommendations Intended to Assure Acceptable Exposure Levels

For project-related TAC sources not subject to adopted APCD regulations but addressed in APCD guidelines/recommendations to assure acceptable exposure levels, noncompliance with those guidelines/recommendations will be considered a potentially significant impact. For the purposes of this analysis, lead exposure related to building demolition will be addressed in this fashion. In this case, APCD staff has proposed a new "work practice rule" specifically to address proper lead abatement procedures during demolition activities – abatement procedures that have been demonstrated to avoid unacceptable lead levels in the air -- but that rule has yet to be considered by the APCD Board for adoption, so it is not enforceable at this time.

(iii) Sources Subject Neither to Adopted APCD Regulations Nor APCD Guidelines/Recommendations Intended to Assure Acceptable Exposure Levels

For project-related TAC sources subject neither to adopted APCD regulations nor APCD guidelines/recommendations intended to assure acceptable exposure levels, exposure of sensitive receivers to levels exceeding applicable acute (1-hour) or chronic (annual) reference exposure levels (RELs) or cancer risk greater than one incident per 100,000 population (based on an exposure duration which is the lesser of the source duration or 70 years) will be considered significant.

Table F-6 summarizes the RELs potentially relevant to this analysis

TABLE F-6 – REFERENCE EXPOSURE LEVELS POTENTIALLY RELEVANT TO THIS ANALYSIS

Pollutant	Non-cancer Risk: Reference Exposure Levels	
	Acute	Chronic
Asbestos	NA	NA
Lead	0.30	NA
DPM	NA	5
Acrolein	0.19	0.06

SOURCES: Sewell, Mike, Air Quality Engineer, MBUAPCD; Consideration of New District Rule 439 (Building Removals) [Including Staff Report: Proposed New Rules -- Rule 439 (Building Removals): Public Notice], June 16, 2006; MBUAPCD, *CEQA Air Quality Guidelines*, Appendix A: "Diesel Health Risk Assessment Guidance for Analyzing the Health Risks near: Truck Stops, Warehouse/Distribution Centers, Transit Centers & Train Idling for CEQA Air Quality Analysis Requirements" (October 2003); Office of Environmental Health Hazard Assessment (OEHHA), Acute RELs as of May 2000 (http://www.oehha.ca.gov/air/acute_rels/allAcRELS.html), Chronic RELs as of February 2005 (http://www.oehha.ca.gov/air/chronic_rels/AllChrels.html).

TABLE F-7 – ESTIMATED PM¹⁰ EMISSIONS RELATED TO PROJECT CONSTRUCTION

Construction Phase		Without Mitigation		With Mitigation	
#	Description	Emissions (lb/day)	Significant?	Emissions (lb/day)	Significant?
1	Demolition	55 ^a		<55 ^b	
2	Site Grading	129		15	
3	Building Construction	44		33	
Worst-case Simultaneous Combined Emissions^c		143	Yes	80	No

^a Most likely, compliance with the asbestos NESHAP per 40 CFR Part 61 Subpart M, as required under APCD Rule 424, would reduce PM₁₀ emissions to below these levels, although there is not sufficient information available to provide an adequate quantitative estimate that reduction. Additional PM₁₀ emission reduction might occur as a result of compliance with currently proposed APCD Rule 439; however, pending consideration of approval of that rule, this analysis does not assume compliance with it under the pre-mitigation scenario.

^b Pending consideration of approval of proposed APCD Rule 439, this analysis applies the practices proposed in that rule as mitigation measures. With the application of those measures, it is likely that PM₁₀ emissions would be reduced relative to the without-mitigation scenario.

^c URBEMIS computes this value by adding the highest single exhaust emissions estimate among the three phases to the highest single fugitive-dust-related emissions estimate from each of the phases. Thus, this total is higher than that for any individual phase, but less than the sum of maximum daily emissions from each individual phase. It would be unreasonable to anticipate maximum daily emissions from all three phases to occur simultaneously.

SOURCES: MSW, 2006; ARB (Rimpo and Associates), URBEMIS 2002 (Air Emissions from Land Development) v. 8.7, April 2005. (<http://www.urbemis.com/software/UrBemis2002v87.html>)

(b) Exposure of Future Project Occupants to TACs From Nearby Off-site Sources

Where future project occupants would be exposed to TACs from nearby off-site sources, that exposure would be considered significant if it occurred at distances less than the applicable setback recommendations published in the ARB's *Air Quality and Land Use Handbook*, unless dispersion modeling demonstrated that exposure would be below applicable non-cancer and cancer risk thresholds described in the preceding paragraph.

c. Project Impacts

None of the potential impacts identified hereafter occurs separate from the cumulative context of air pollutant emissions and concentrations discussed under the Environmental Setting heading earlier in this report. Indeed, the focus of the significance criteria is driven largely by that cumulative context. However, in some cases, the nature of the applicable significance criteria allows a determination of the level of significance for a given project independently from that context. In those cases, and consistent with *CEQA Air Quality Guidelines* guidance, impacts will be discussed under this heading. Remaining impacts will be discussed under the "Cumulative Impacts" heading.

Criteria Air Pollutants

Criteria Air Pollutant Emissions Related to Project Construction:

Construction of the project would include demolition of up to 230 existing duplex residences, substantial reconstruction or new construction of internal roadways and other infrastructure, and construction of new housing and related facilities.

Mobile and stationary construction equipment would be required to perform these activities. At one time or another during construction, mobile equipment in use on-site might include one or more excavators, backhoes, dozers and/or paving equipment. Stationary equipment could include one or more portable generators and/or air compressors. Table F-7 summarizes estimates of PM₁₀ emissions that would be generated by activities related to project construction.

Impact F-1 Projected construction phase PM₁₀ emissions would exceed the APCD's applicable significance threshold during site construction activities, resulting in a potentially *significant* impact.

Criteria Air Pollutant Emissions Related to Project Operations

The proposed residential and associated land uses would generate motor vehicle trips and associated vehicular air pollutant emissions. In addition, future project occupants would be expected to use ROG-emitting consumer products and to generate on-site emissions related to fuel combustion for heating, landscape maintenance, et cetera. These latter sources would be characterized as area-wide sources.

Table F-8 summarizes estimated emissions of key criteria air pollutants related to these sources. For ROG, emissions from area-wide sources and vehicular sources are estimated to be nearly equal, resulting in total estimated daily emissions of 105 pounds. For NO_x, estimated future vehicular emissions are similar to estimated vehicular emissions of ROG, but area-wide emissions of NO_x would be lower than for ROG. For both ozone precursors, total estimated operational emissions would remain below the applicable significance threshold.

Impact F-2 – For PM₁₀, based on conservatively high assumptions regarding the proportion of wood-burning appliances, estimated wintertime emissions from area-wide sources are 94 pounds per day, resulting in total operational PM₁₀ emissions of 148 pounds per day. As shown in Table F-8, these emissions exceed the applicable significance criterion, resulting in a potentially *significant* impact.

TABLE F-8 – ESTIMATED EMISSIONS OF KEY CRITERIA AIR POLLUTANTS RELATED TO PROJECT OPERATIONS

Parameter	Category	Emissions (lb/day)			
		ROG	NO _x	PM ₁₀	
				Without Mitigation	With Mitigation
Estimated Emissions Before Mitigation	Area-wide	54	15	94	27
	Vehicular	51	53	55	55
	TOTAL	105	68	148	82
Threshold		137	137	82	82
Significant?		No	No	Yes	No
SOURCES: MSW, 2006; ARB (Rimpo and Associates), URBEMIS 2002 (Air Emissions from Land Development) v. 8.7, April 2005.					

Toxic Air Contaminants

Toxic Air Contaminant Emissions Related to Building Demolition:

It is anticipated that the existing on-site buildings proposed for demolition as part of the project would contain asbestos and lead-based paint.

As discussed earlier in this report, the APCD has an adopted rule – Rule 424 – that incorporates various federal NESHAPs (including the NESHAP for asbestos) and is designed to prevent unacceptable environmental exposure to airborne asbestos. Compliance with this rule is required by law, and would be expected to maintain asbestos exposure at levels below significance.

This report has also discussed proposed APCD Rule 439 addressing recommended work practices related to lead abatement during building demolition. Based on APCD staff's experience with previous demolition activities at Fort Ord, staff anticipates that adoption of these practices will keep exposure to airborne lead compounds at levels below significance.

However, pending consideration by the Board of this proposed rule, compliance with its provisions is not required by law and therefore will not be assumed in this analysis. Some of the existing on-site buildings slated for demolition are near the school northwest of the site.

Others are near portions of both the University Villages and Marina Heights developments, portions that could be occupied before project-related building demolition is completed.

Impact F-3 – Health impacts related to airborne lead exposure generated during project demolition activities represent a potentially significant impact.

Toxic Air Contaminant Emissions Related to Other Aspects of Project Construction

Acute Risk (Acrolein)

Table F-9 summarizes results from the screening assessment of acute (one-hour) health risk related to construction-generated acrolein emissions (a component of diesel emissions) at the worst-case receiver distance. The first four data rows of this table show that – without mitigation, and applying the conservative dispersion modeling parameters incorporated into

the spreadsheet -- the predicted risk value is nearly three, which is above the significance threshold of one.

Impact F-4 Modeled predictions of construction related acrolein show a potentially significant impact based on APCD thresholds.

Cancer Risk (Diesel PM)

This report has previously described the numerous layers of uncertainty relating to assessing potential cancer risk from construction-related diesel exhaust emissions, and the fact that many of these uncertainties are expected to be reduced substantially through the activities of state agencies such as the ARB and OEHHA over the next one to two years. Pending the release, this analysis will apply a conservative assessment of the likelihood that significance thresholds could be exceeded.

Under worst-case propagation conditions, the predicted increment to PM levels at the worst-case receptor location attributable to diesel exhaust emissions related to project construction activities was about 0.2 ug/m³. Consistent with APCD guidance⁷³, that worst-case concentration was multiplied by 0.8 to obtain an estimated annual average concentration at that receptor location. Based on the applicable unit risk value and recommended 9/70 factoring of cancer risk for construction activities, the resulting estimated increment to cancer risk is approximately 0.6 per million, well below the 10 per million significant risk increase threshold. This effect is, accordingly, less than significant.

TABLE F-9 – ESTIMATED ACUTE HEALTH RISK (BASED ON ACROLEIN EMISSIONS) AT WORST-CASE RECEIVER DISTANCE

Analysis Scenario		Assumed Equipment (Within 50m by 50m Modeled Source Grid) Near a Given Receiver During the Worst-case Hour of Exposure						Assumed Effectiveness of Diesel Oxidation Catalyst (if Present)	Fuel Additive Used?	Contribution to Overall Hazard Index (Significance Threshold = 1)	
General	Specific	Type	No.	Engine Year	Horse-power	Load Factor	Cumulative Hours of Preceding Usage for Identified Equipment				
Unmitigated (APCD-default equipment parameters)		Loader	1	2000	170	0.54	8000	NA	No	1.73	
		Excavator	1	2000	147	0.57	8000	NA	No	1.58	
		Haul Truck	1	MBUAPCD fleet average characteristics per EMFAC 2002					NA	No	0.14
		Total									3.46
Mitigation Variations	1	Loader	1	2000	170	0.54	8000	75%	No	0.43	
		Excavator	1	2000	147	0.57	8000	75%	No	0.40	
		Haul Truck	1	MBUAPCD fleet average characteristics per EMFAC 2002					NA	No	0.14
		Total									0.97
	2	Loader	1	2006	170	0.54	2000		NA	No	0.39
		Excavator	1	2006	147	0.57	3000		NA	No	0.40
		Haul Truck	1	MBUAPCD fleet average characteristics per EMFAC 2002					NA	No	0.14
Total									0.94		
SOURCES: MSW, 2006; Craft, David, MBUAPCD, 2006; Eisenzimmer, Jay, Island Demo Incorporated, 2006; GW Demolition, 2006											

Exposure of Future Project Residents to Off-site Sources of Toxic Air Contaminants:

Proposed project residences would be exposed to DPM from motor vehicle traffic traveling along adjacent roadways.

The proposed demographics for project residents are unusual, in that it would be skewed towards the senior population. Aside from issues of likely cumulative duration of residency within the development (relevant to cancer risk), the average vulnerability of this population to non-cancer health effects from TACs is likely to be greater than the average vulnerability of the population as a whole. However, the authoritative RELs and siting guidelines related to TACs are already oriented to reflect the most vulnerable segments of the population, so applying them to this analysis provides adequate conservatism to the results.

The applicable siting guideline is the one excerpted earlier in this report from the *Air Quality and Land Use Handbook*: Avoiding the siting of "...new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 vehicles/day..."⁷⁴. Caltrans' published data for the relevant segment of Highway 1⁷⁵ indicate that daily traffic along this highway – on an annual average basis – is about 73,000 to 83,000. Among the vehicle types traveling along the highway, trucks would represent, by far, the greatest contributor to overall DPM emissions from it. Reported truck data along nearby segments of Highway 1⁷⁶ suggest that – at the closest approach to the project site – highway traffic is composed of about five percent trucks, a relatively typical (if not low) percentage for California freeway segments.

Future project homes nearest to Highway 1 would be about 1200 feet away from it. While traffic volumes might increase along Highway 1 in the future, those increases are not expected to be great enough to generate significant DPM impacts at a distance of 1200 feet, particularly when anticipated substantial future reductions in DPM emissions from trucks are anticipated in connection with ARB's continuing implementation of its *RRP* (discussed earlier in this report). Therefore, exposure of future project occupants to DPM from this source is expected to remain less than significant.

Future project residences are expected to be located much closer to the nearest surface streets. However, those surface streets are expected to accommodate traffic flows much lower than those along Highway 1, with lower truck percentages as well.

As described earlier in this report under the Environmental Setting heading, no nearby long-term sources of TACs were identified aside from motor vehicle traffic.

Impact F-5 -Based on data reported by the U.S. Army's contractor for their initial prescribed burn⁷⁷, potential future prescribed burns within Fort Ord boundaries are not expected to expose future project occupants to significant increases in TAC exposure. Therefore, the exposure of future project residences to TACs is expected to constitute a less-than-significant impact.

d. Cumulative Impacts

Generation of or Substantial Contribution to a Violation of a NAAQS or CAAQS for Carbon Monoxide:

As discussed above, the County is in attainment for the CO NAAQS and CAAQS, and monitoring within APCD boundaries in recent years has consistently shown worst-case annual CO concentrations well below the thresholds for standard violations.

Motor vehicle activity associated with the proposed project would have the potential to contribute to cumulative CO concentrations – for instance, at nearby intersections, where the

confluence of traffic and constraints to traffic flow tend to result in elevated CO concentrations nearby.

Table F-10 presents ambient CO concentration modeling results for the combination of analysis intersection and future scenario expected to generate the worst-case localized increases in CO concentration. The analyzed intersection is California Avenue / Imjin Parkway, and the future scenario is the "Background" scenario applied in the TIA to consider near-future conditions including traffic contributions from approved projects that are not yet both constructed and occupied⁷⁸.

TABLE F-10 – ESTIMATED CO CONCENTRATIONS AT WORST-CASE CURBSIDE RECEIVER LOCATION ADJACENT TO CALIFORNIA AVENUE / IMJIN PARKWAY INTERSECTION UNDER BACKGROUND CONDITIONS ^a

Averaging Period	Concentration					CAAQS Exceeded?
	Background	Background + Local Contributions			CAAQS	
		Without Project	Project Increment	With Project		
1-hour	2.0	7.7	3.9	11.6	20	No
8-hour	1	4	2	6	9.0	No

^a See text for a discussion of the basis for selecting this intersection and scenario for analysis.
 SOURCES: MSW, 2006; Garza, Vicente J., Debbie Niemeier et al, University of California at Davis, Transportation Project-Level Carbon Monoxide Protocol (UCD-ITS-RR-97-21), Revised December, 1997; Appendix A. (<http://www.dot.ca.gov/hq/env/air/coprot.htm>)

Reading from left to right from the second to the fifth column, Table F-10 shows background concentrations derived as described earlier in this report under the "Method of Analysis" heading, the sum of background and modeled locally-generated contributions to overall CO concentrations without the project, the estimated project-related increment to those CO concentrations (due to increased traffic and congestion), and the resulting with-project CO concentration estimates. The second column from the right presents the applicable CO CAAQS. As shown in the rightmost column, those CAAQS' are not exceeded.

Impact F-6 -Based on worst case modeling analysis derived from the EIR traffic report, the project's ambient CO concentration impacts are deemed less-than-significant.

Generation of or Substantial Contribution to a Violation of a NAAQS or CAAQS for Particulate Matter

The APCD's construction-related emissions threshold for PM₁₀ is applied as a generic indicator of the potential for those emissions to cause or substantially contribute to a violation of the PM₁₀ CAAQS. As discussed under Impact F1, predicted PM₁₀ emissions related to project construction exceed that threshold without mitigation. Accordingly, such unmitigated emissions could cause or substantially contribute to localized violations of the PM₁₀ CAAQS to result, violations that could be experienced within portions of the project site that are already occupied before project build-out and/or within adjacent portions of either Marina Heights or University Villages.

The *Interim Action for Ordnance and Explosives*⁷⁹ comprises a cleanup plan (with prescribed burning) for three areas within Fort Ord. As discussed earlier in this report, a prescribed burn

has already been completed within one of these three areas – Ranges 43-48. The next burn is planned for MRS-16, and will most likely be completed by 2007 (i.e., before the earliest likely initiation of occupancy of the project development). The third burn is proposed for Range 30A, near the south end of Fort Ord and about five miles south of the project site.

A U.S. Army representative has indicated that additional burns will likely be proposed in the future to clear additional areas where un-detonated munitions/explosives might be located.

All of those areas are likely to be in the southern portion of Fort Ord, and the typical area for each burn is likely to be smaller than that for Ranges 43-48. In addition, the Bureau of Land Management (BLM) expects to conduct periodic burns within Fort Ord to help replicate historical ecological conditions as part of the *Installation-Wide Multispecies Habitat Management Plan for Fort Ord*⁸⁰. Also, the University of California at Santa Cruz might perform a prescribed burn at the Fritzsche Army Airfield site (about one mile east-northeast of the project site) at some time in the future. These burns are likely to be short in duration (based on other burns that have occurred in the area). Additionally, advance notification of the burns generally occurs, which would give project residents the opportunity to remain indoors during the burn, temporarily relocate or otherwise avoid being exposed to smoke associated with the burn. Lastly, the U.S. Army currently offers hotel vouchers to potentially impacted residents to hotels located away from residential areas impacted by the smoke.

Impact F-7 -Based on the information currently available, the potential for significant (albeit brief and sporadic) exposure of future project occupants to inhalable PM from these potential future burns cannot be ruled out. Accordingly, exposure of future project occupants to temporary/intermittent elevations in PM levels represents a potentially significant impact.

Potential Inconsistency with Relevant Air Quality Plans

AMBAG⁸¹ indicates that:

“The combination of the existing and approved housing units in Monterey County (147,385) plus the 772 housing units/beds in the Cypress Knolls project is less than the regional forecasts for Monterey County (151,844). Therefore the Cypress Knolls Project is **consistent** with the 2004 regional forecasts and the Air Quality Management Plan.”

Therefore, no impact is identified.

4. Mitigation Measures

Mitigation F1: To mitigate fugitive dust emissions related to project construction, the following shall be implemented:

- Prepare an Erosion Control Plan to be reviewed and approved by the City, which should include the following as applicable:
 - Water all active construction areas as needed. Frequency should be based on the type of operation, soil, and wind exposure.
 - Prohibit all grading activities during periods of high wind (over 30 mph).
 - Haul trucks shall maintain at least 2'0" of freeboard.
 - Cover all trucks hauling dirt, sand, or loose materials.
 - Plant vegetative ground cover in disturbed areas as soon as possible.
 - Cover inactive storage piles.

- Install wheel washers at the entrance to construction sites for all exiting trucks.
- Sweep streets if visible soil material is carried out from the construction site.
- Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the APCD shall be visible to ensure compliance with Rule 402 (Nuisances).

Level of Significance After Implementation of the Mitigation Measures: Less than significant

Mitigation F-2: To mitigate PM₁₀ emissions related to residential fuel combustion, limit wood-burning appliances to wood fireplaces, and permit installation of such appliances into no more than 35 residential units.

Level of Significance After Implementation of the Mitigation Measures: Less than significant

Mitigation F-3: To mitigate the emission of airborne concentrations of lead compounds associated with project-related building demolition, implement the following APCD staff-recommended work practices contained in proposed Rule 439:

- As necessary to prevent visible emissions, sufficiently wet the structure prior to removal. Continue wetting as necessary during active removal and the debris reduction process.
- Demolish structure inward toward building pad. Laydown roof and walls so that they fall inward and not away from the building.
- All removal activities must cease when wind speeds exceed 15 miles per hour.

Level of Significance After Implementation of the Mitigation Measures: Less than significant

Mitigation F-4: To mitigate Toxic Air Contaminant emissions related to other aspects of Project Construction, before construction contracts are finalized, perform a follow-up assessment of acute health risk associated with acrolein based on more sophisticated dispersion modeling and, to the extent available at that time:

- Updated PM emission factors (ARB is expected to release a substantial update to its OFF-ROAD model shortly); and
- More specific construction activity parameters.

If such follow-up more detailed and exacting assessment (based on more exact construction parameter and updated PM emissions) shows impacts less than applicable standards, then no mitigation is necessary. If such assessment shows impacts greater than the applicable standard, or if the project proponent elects not to perform the assessment but rather proceed directly with the following mitigation, then the following would apply:

- Require a combination of off-road construction vehicle fleet characteristics, after-market retrofits, fuel types, additives and perhaps development phasing/duration that would reduce the acute acrolein hazard index below the significance threshold

of one. The following measures would be expected to contribute to this reduction:

- Use equipment with diesel engines newer than those shown in the first two data rows of Table F-10.
- Use equipment with engines having experienced fewer preceding cumulative hours of use than those shown in the same data rows of Table F-10 (and therefore having experienced less deterioration of performance).
- Install diesel oxidation catalysts on construction equipment that is compatible with but lacks such control devices, to reduce ROG (including acrolein) emission rates from diesel exhaust.
- Substitute a biodiesel blend for conventional petroleum-based diesel fuels for use in compatible construction equipment to reduce PM emissions. (Such fuel might also generate a small reduction in acrolein emissions.) Currently, at least one major construction manufacturer has released approval for use of a five percent biodiesel blend (B05) for all of their equipment and has indicated the possibility of using blends up to B20 with many of their products. Note, however, that currently-published authoritative data shows relatively modest acrolein emission reduction benefits from such blends.
- Use an ARB-approved diesel fuel additive to reduce emissions of ROG (potentially including reductions in acrolein emissions). An additive which has already been used in California and is currently being evaluated by the ARB⁸² is Viscon, a product specifically mentioned by APCD staff as a viable emission reduction technique.

Level of Significance after Implementation of the Measures

Based on the APCD's acute acrolein risk screening spreadsheet discussed under the Method of Analysis heading presented earlier in this report, Table F-9 identifies two mitigation variations that achieve the acute risk reduction goal for assumed combinations of demolition equipment. For either of the variations, mitigation would need to meet or exceed these parameters. For instance, for Mitigation Variation 1 shown in Table F-9, any model year for off-road equipment equal to or more recent than the assumed 2000 model year would be deemed to satisfy the mitigation target if all other minimum equipment parameters shown for that mitigation scenario were met. Likewise, horsepower ratings and/or cumulative engine usage hours at or below the indicated levels would meet the mitigation targets. Any other combination of these parameters that can be demonstrated to meet the goal (e.g., as computed using the APCD risk screening spreadsheet) would be acceptable. This is true even for combinations that allow for poorer performance in one parameter (e.g., higher cumulative hours of usage for indicated equipment) if it is more than compensated for by improvements in other parameters.

Table F-9 shows that each of the two representative mitigation variations specifically considered for reducing the acute health risk from acrolein would be expected to reduce that risk to or below the significant hazard index threshold of one. Mitigation strategies such as these would also contribute to a reduction in criteria air pollutant and cancer risk impacts.

Based on the applicable APCD spreadsheet modeling technique, and assuming that cumulative horsepower ratings for all such equipment operating simultaneously within a relatively small area (e.g., associated with demolition at a single building site) did not exceed about 320 horsepower, an off-road-construction-fleet-average ROG emission rate of 0.16 grams per horsepower-hour or lower would be expected to keep worst-case

acrolein exposure at the most exposed sensitive receptors below the significance threshold. That is the emissions rate (based on emissions data published by the ARB in January 2000) that the APCD's applicable spreadsheet assumes for year 2006 mobile equipment having a horsepower ratings of 120 to 175 horsepower (per piece of equipment). For a specific cluster of simultaneously-operating equipment, that rate could be higher if cumulative horsepower ratings for all clustered equipment were lower, but would need to be lower if those cumulative horsepower ratings were higher. Accordingly, the impact after mitigation would be less than significant if the techniques (e.g., biodiesel, etc.) set forth above are available in the market when construction occurs or if a follow-up assessment indicates the risk is within applicable standards. If follow-up assessment results in the risk not being within applicable standards, and if the techniques set forth above are not available in the market when construction occurs, then this impact would be significant and unavoidable.

Mitigation F-5: No mitigation is required for the Exposure of Future Project Residents to Off-site Sources of Toxic Air Contaminants found to be less than significant.

Mitigation F-6: No mitigation is required effects found to be less than significant for the generation of or substantial contribution to a violation of a NAAQS or CAAQS for carbon monoxide.

Mitigation F-7: For generation of or substantial contribution to a violation of a NAAQS or CAAQS for particulate matter neither the Applicant nor the City have authority to control the actions of the U.S. Army, BLM or UCSC regarding potential future prescribe burns within Fort Ord boundaries, nor over how or whether future occupants might choose to reduce their exposure to smoke from such events. Therefore, no feasible, effective and enforceable mitigation measure was identified, and this impact, though limited in occurrence, is considered significant and unavoidable.

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G. WATER RESOURCES

1. Environmental Issue

Carrying out the Proposed Project would create housing for senior citizens on approximately 190 acres of urbanized land previously developed for military housing that became dilapidated after the U.S. Army's closure of Fort Ord. Development of the senior housing redevelopment project would increase water use within the City of Marina compared to existing conditions. This section assesses whether the Proposed Project's demand for, and use of, water would cause significant adverse environmental impacts.

This EIR section supports the City's fulfillment of its obligation to independently assess and publicly disclose potential water-supply-related impacts of the Proposed Project under CEQA, CEQA Guidelines section 15083.5 and the S.B. 610 Water Supply Assessment (WSA) procedure established by Water Code section 10910 *et seq.* This EIR section also supports the City's compliance with the S.B. 221 water sufficiency verification procedure established in Government Code section 66473.7. The factual analysis in this EIR section draws upon and discusses a range of water-supply-related information, including information developed by the public water supplier for the Proposed Project, Marina Coast Water District (District or MCWD), and approved in the District's September 2004 Regional Urban Water Augmentation Project EIR, the District's December 2005 Urban Water Management Plan and the District's March 22, 2006 Cypress Knolls WSA. This EIR section evaluates the WSA pursuant to Water Code section 10911(c) and draws upon and discusses additional water-demand-related information developed by the City's water engineering consultant.

This EIR section provides three types of environmental impact analysis: project-level; program-level and cumulative. The project-level analysis focuses upon the effects of supplying water to meet the demand projected to arise from development of the 772-residential-unit Cypress Knolls senior housing project and related uses located within that project's boundary (the Proposed Project)

The program-level analysis anticipates that concurrent with the City's consideration of the Proposed Project, the City may also consider taking certain broad planning actions (like a general plan and zoning map amendment) to facilitate potential future development of a City-owned public park and a City-owned-and-operated senior center on properties adjacent to the Proposed Project site. The City has determined that it would be most environmentally conservative to combine a project-level analysis of the potential effects of supplying water to the senior housing portion of the project with a program-level analysis of the effects of also supplying water to an adjacent potential future new City park and new City senior center. The City determined that the program level of analysis for the City park and senior center is appropriate because those generally contemplated uses have not yet been proposed with a level of design detail that would allow a project-level environmental analysis. For example, the specific amounts and types of exterior landscaping and amenities have not yet been finally determined for either the park or senior center, making it speculative at this point to estimate future water demand with project-level certainty. Under this approach, the effects of supplying water to the senior housing portion and the contemplated potential future City park and senior center are all being analyzed and disclosed in the present EIR, but the City is committing to perform further, project-level CEQA review of the park and senior center prior to considering whether to grant any project-level approvals to actually construct those two City projects.

The cumulative impacts analysis considers the effects of supplying water to meet the demand

projected from the proposed Cypress Knolls project, combined with the projected water demand from existing and reasonably foreseeable probable future projects. The Monterey Peninsula Unified School District has expressed some preliminary interest that it might at some point in the future propose development of a K-8 school with some 850 students at the 18-acre site presently being contemplated at the program level for development of a City park adjacent to Cypress Knolls. Accordingly, this EIR section's cumulative impacts section takes a conservative approach and analyzes the need to meet water demand from the potential future development of a K-8 school on the park site, rather than the need to meet water demand from a park (i.e., a K-8 school is assumed to replace the park in the cumulative scenario).

2. Environmental Setting

This subsection describes the institutional and physical environmental setting against which the potential water supply-related effects of the Proposed Project are analyzed as required by CEQA Guidelines section 15125.

a. Public Water Supplier

The public water supplier for the Proposed Project is the Marina Coast Water District (MCWD), which is a special district organized for the purpose of furnishing a public water supply. MCWD has two primary service areas.

The "Central Marina" service area comprises an area of about 4.5 square miles within the City of Marina at the northwest end of the Salinas Valley. MCWD provides potable water service to all residential, commercial, industrial, and environmental and fire protection uses within Central Marina.

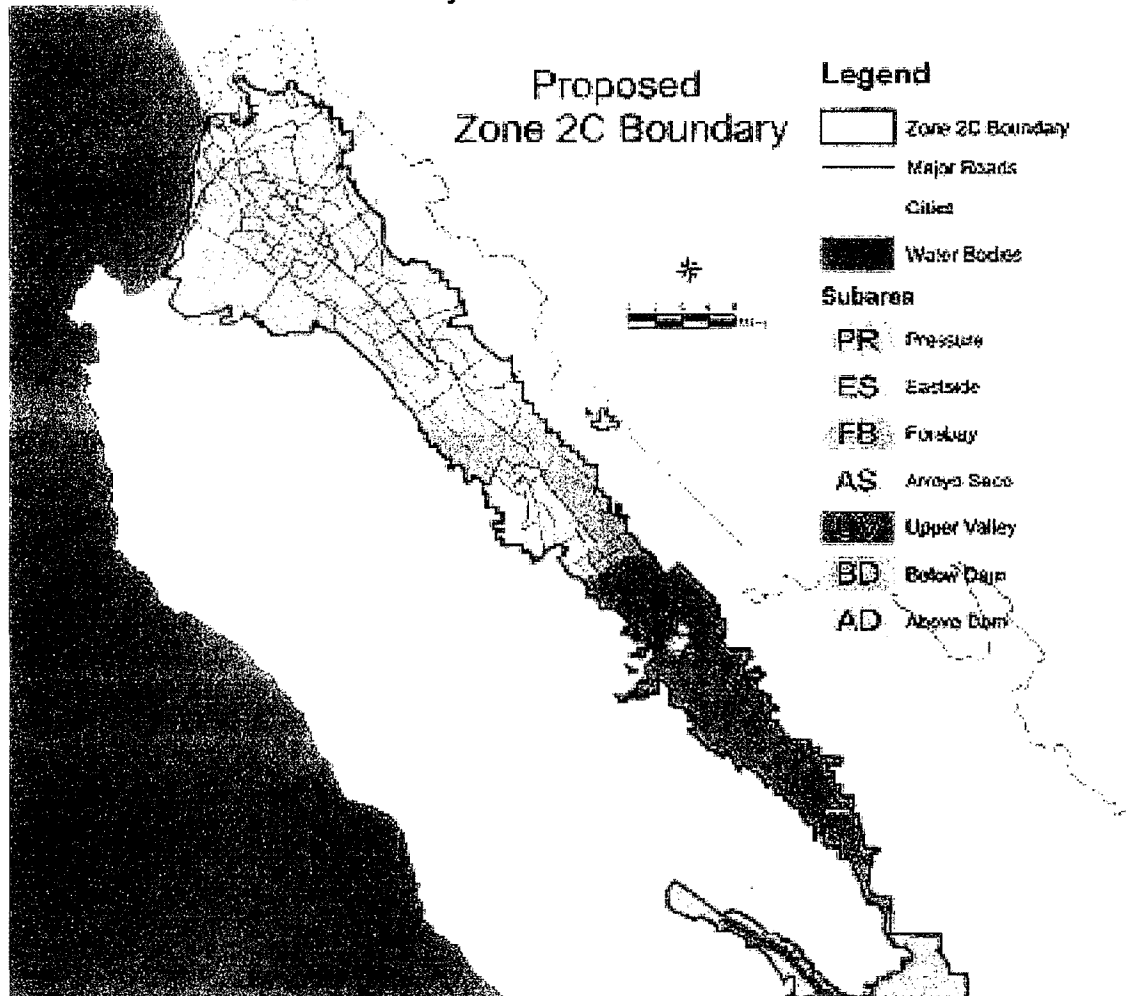
In 1997, the Fort Ord Reuse Authority (FORA) selected the MCWD to own and operate the former Fort Ord water system. In February 1998 MCWD and FORA executed an agreement for water and wastewater facilities. The FORA Board retains the authority to allocate Salinas Valley groundwater supplies as provided for under that certain Agreement Between the United States of America and the Monterey County Water Resources Agency Concerning Annexation of Fort Ord into Zones 2 and 2A of the Monterey County Water Resources Agency (MCWRA), Agreement No. A-06404 ("Annexation Agreement") dated September 1993. This Annexation Agreement establishes groundwater extraction rights of 6,600 acre-feet per year (AF/Y¹) at Fort Ord, an amount consistent with the average groundwater use at Fort Ord while it was under military operation. Consistent with this agreement, MCWD operates the former Fort Ord service area as a separate service area from a water allocation and financial perspective ("Ord Community service area"). That is, service costs and revenues in this area are maintained in separate accounts so that costs to serve this area are not subsidized by MCWD's other customers, and vice versa.

Two regional water management agencies have jurisdiction over water supplies within the former Fort Ord. The Monterey County Water Resources Agency (MCWRA) asserts management authority over groundwater from the Salinas Valley Groundwater Basin. That basin is depicted on Figure G-1. Salinas Valley groundwater supplies the majority of the water used at the former Fort Ord and supplies all MCWD's groundwater supplies for its Central Marina service area. The Monterey Peninsula Water Management District (MPWMD) is responsible for regulation and supply of the water from the Seaside Groundwater Basin.

¹ One acre-foot is equivalent to 325,851 gallons of water, which is an amount of water sufficient to cover one acre of land one foot deep.

MCWD does not use groundwater from the Seaside Basin to supply any of its service areas.

**Figure G-1
Salinas Valley Groundwater Basin Subareas**



Source: MCWD UWMP, 2005

b. Climate

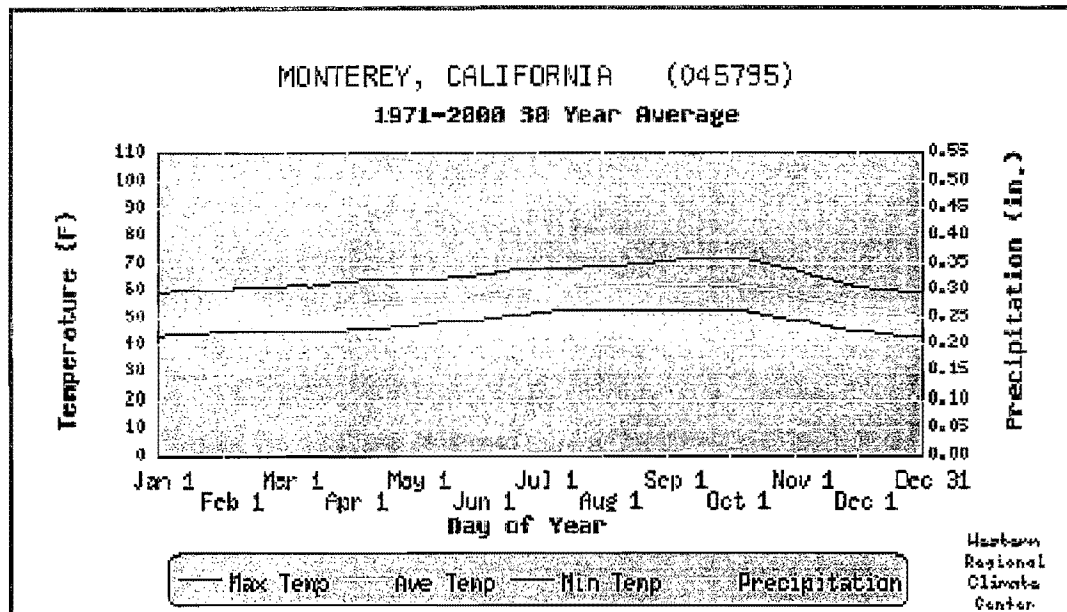
Marina has a cool summer-type Mediterranean climate with precipitation falling exclusively as rain, predominantly between October and May. The nearest official weather station is seven miles away in Monterey, California. Average climate data from this station from 1970-2000 is depicted in Figure G-2, Monterey Climate. The moderating effect of the Pacific Ocean and its relatively cold water allows for mild summertime temperatures in Marina. This effect suppresses summertime irrigation demands for landscaping as compared to inland locations, especially when advection fog moves in from the Pacific Ocean, enveloping the immediate coast in response to heating inland. Unlike inland locations, summertime temperatures generally peak in September rather than July. Peak summertime temperatures usually occur when high pressure is resident in the Great Basin (Santa Ana conditions), allowing for an offshore flow and compressional heating of the atmosphere. Precipitation averages about 20 inches annually. Table G-1 depicts monthly average evapotranspiration at the nearest California Irrigation Management Information System station (CIMIS).

Table G-1
Average Monthly Evapotranspiration in Inches at Castroville

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1.44	1.71	2.96	4.19	4.63	4.81	4.03	3.81	2.98	2.63	1.62	1.39	36.2

Source: MCWD UWMP, 2005

Figure G-2
Monterey Climate
1971 - 2000 Temperature and Precipitation



Data is smoothed using a 29 day running average.

- Max. Temp. is the average of all daily maximum temperatures recorded for the day of the year between the years 1971 and 2000.
- Ave. Temp. is the average of all daily average temperatures recorded for the day of the year between the years 1971 and 2000.
- Min. Temp. is the average of all daily minimum temperatures recorded for the day of the year between the years 1971 and 2000.
- Precipitation is the average of all daily total precipitation recorded for the day of the year between the years 1971 and 2000.

Source: NOAA, Western Regional Climate Center

c. Population

MCWD historically has served only the City of Marina, which incorporated in 1975. Table G-2 depicts Marina's growth from 1960 to 2000. Between 1920 and 1970, population increases for Marina were quite steady. From 1970 to 1980 the population nearly tripled. Growth rates moderated in the 1980s, with the population reaching a near-term peak in 1990. With the closure of Fort Ord as a military base in 1994, the City and MCWD experienced a small decline in population. The population in the City is expected to grow. See Table G-3.

**Table G-2
MCWD and City of Marina Population Growth**

MCWD and City of Marina Population Growth				
1960	1970	1980	1990	2000
3,310	8,343	20,647	26,436	25,101

Source: California Department of Finance

**Table G-3
MCWD Population Projections
City of Marina and Ord Community**

MCWD Population Projections – City of Marina and Ord Community					
	2005	2010	2015	2020	2025
Service Area Population	27,941	45,880	63,830	81,770	98,700

Source: California Department of Finance, and FE I R Fort Ord Reuse Plan, 1997

d. Water Supplies

(1) Current and Historic Groundwater Supplies and Basin Management

Potable water for MCWD's Central Marina and Ord Community service areas comes primarily from wells developed in the Salinas Valley Groundwater Basin (Figure G-3). The Salinas Valley lies along the Pacific Coast of Central California. The Salinas River is approximately 150 miles long and runs from south to north, where it discharges into the Pacific Ocean at Monterey Bay. Most of the river lies within Monterey County, although Nacimiento Creek and other tributaries originate further south, in San Luis Obispo County. The largest city is Salinas, which lies at the northern end of the valley, near the smaller coastal cities of Marina and Castroville. All Salinas Valley cities and farms rely upon groundwater as their primary source of supply.

As far back as 1933, during the Great Depression, state officials recognized that expected future development in the Salinas Valley would stress that Valley's principal source of water supply—the Salinas Valley Groundwater Basin. In that year, the State of California, Department of Public Works, Division of Water Resources, issued a Preliminary Report on identifying potential sites for surface water reservoirs, including Nacimiento and San Antonio creeks, on the west side of the Salinas Valley. The Preliminary Report noted that if built, those reservoirs would store, or conserve, winter mountain runoff for gradual release during the dry season to increase percolation of the surface water through the Salinas River's porous streambed and into the valley's groundwater supply.

In 1947, the State created the Monterey County Flood Control and Water Conservation District (MCFCWCD) to acquire water rights, to store water in surface or underground reservoirs, and to construct and to cooperate with the state or federal government in the construction of flood control and water conservation works. In 1957, MCFCWCD completed construction of Nacimiento Dam and Reservoir. This reservoir was developed to store 350,000 AF/Y. The reservoir would provide dry season water releases that artificially augment the Salinas Valley Groundwater Basin. In 1967, MCFCWCD completed construction of San Antonio Reservoir. This reservoir was developed to store 400,000 AF/Y. The reservoir provides more dry season

releases to augment the Salinas Valley Groundwater Basin. The old MCFCWCD eventually merged into the Monterey County Water Resources Agency (MCWRA or Agency), which now owns and operates the Nacimiento and San Antonio reservoirs as part of a deliberate plan that uses the Salinas Valley Groundwater Basin as a highly managed water storage and conveyance system. Under that plan of operation, water originating as winter rainfall in the headwaters of the Nacimiento and San Antonio creek watersheds is captured and stored for dry summer season reservoir releases that intentionally percolate into the Groundwater Basin, thus artificially augmenting the groundwater flow that gradually moves down the Salinas Valley until it is extracted by wells serving agricultural and municipal uses or is discharged through aquifer outcroppings under Monterey Bay.

For management purposes, the Salinas Valley Groundwater Basin is generally defined as underlying the Salinas Valley from San Ardo to the coast of Monterey Bay, and is divided into five hydrologically linked subareas: Pressure, East Side, Forebay, Arroyo Seco and Upper Valley (Figure G-1, *supra*). The basin is further divided in the Pressure subarea by distinct aquifers, commonly referred to as the 180-foot, 400-foot and 900-foot, or deep, aquifer. The 900-foot aquifer is a series of aquifers extending more than 1,000 feet deep, not all of which are hydraulically connected. The Salinas Valley Groundwater Basin is experiencing overdraft, with seawater intrusion of about 9,000 AF/Y at its coastal margins affecting portions of the 180-foot and 400-foot aquifer systems.

MCWD's total groundwater production, including production to serve the Ord Community lands, is about 4,670 AF/Y, or less than 1 percent of total annual basin withdrawals of about 500,000 AF/Y.² From 1999 through 2004, the average annual groundwater production for the Central Marina service area was 2,263 AF/Y, and the average annual production for the Ord Community service area was 2,283 AF/Y.³ In 2004, groundwater production for the Central Marina service area totaled 2,266 AF/Y, and production for the Ord Community service area totaled 2,420 AF/Y.⁴ Year 2004 production for the Ord Community service area constitutes less than one-half of 1 percent of the 500,000 AF/Y of total annual basin production cited in MCWD's 2005 UWMP and constitutes 36.7 percent of the 6,600 AF/Y production level approved by the 1993 Annexation Agreement between the U.S. Army and MCWRA.⁵ Other than MCWD, only a very small number of wells draw from the deep aquifer (900 foot), some of which also draw from the middle aquifer (400 foot). Prior to receiving recycled water for crop irrigation, there were agricultural lands in the Castroville area that pumped water from the deep aquifer. Those agricultural wells are now only used to meet supplemental needs during peak summer demand periods and also as part of the monitoring network overseen by the MCWRA.⁶ Delivery of recycled water to this area with commensurate reductions in groundwater extractions has contributed to a recovery in groundwater levels in this area.⁷

However, as a result of basin-wide pumping, groundwater levels in some basin subareas (Pressure and East Side) have declined over time. The other three basin subareas—the Forebay, Arroyo Seco and Upper Valley—tend to recharge rapidly during winter and recover historic groundwater levels each year.⁸

² MCWD 2005 UWMP at page 2-1.

³ MCWD 2005 UWMP at page 2-7.

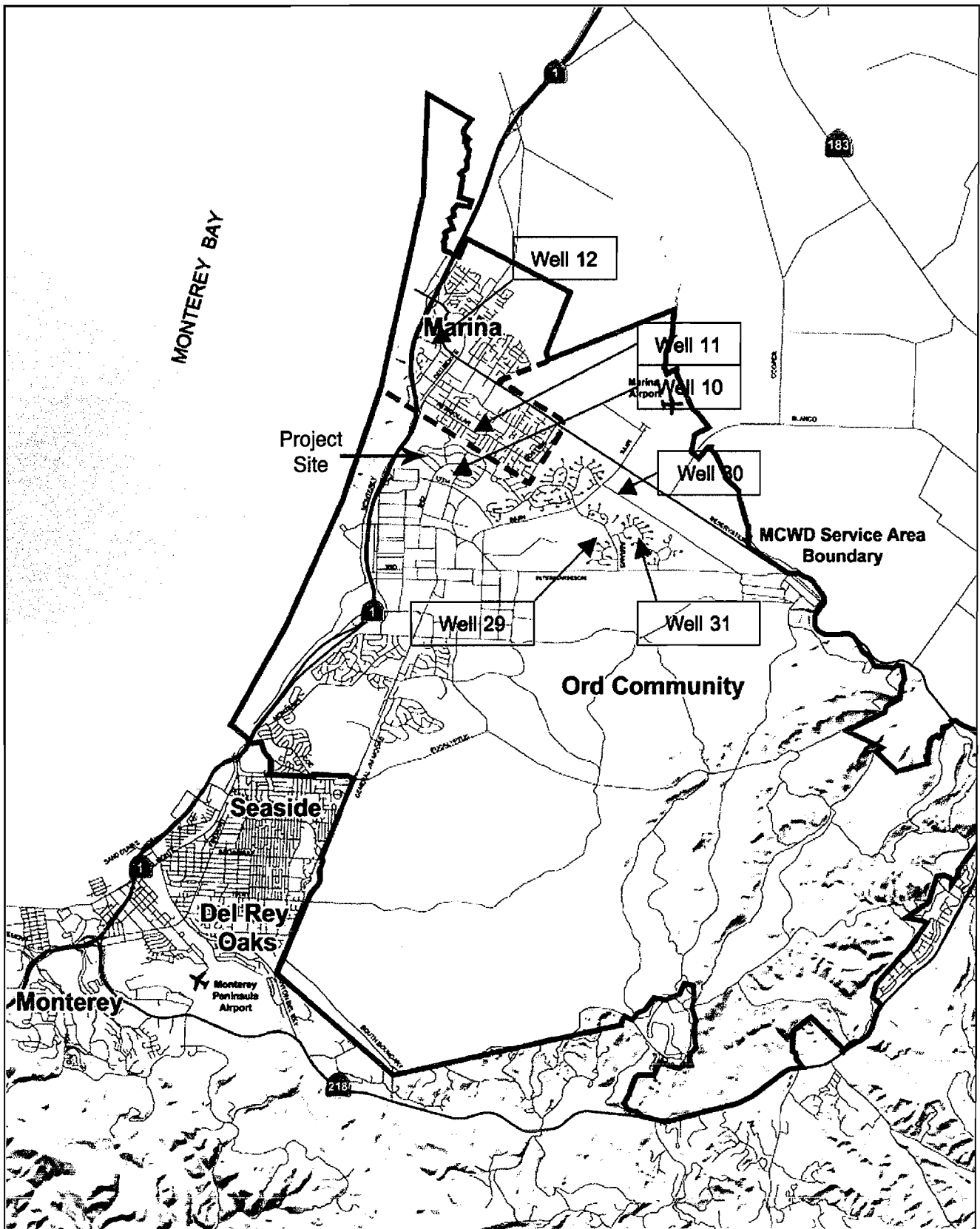
⁴ *Id.*

⁵ *Id.*

⁶ MCWD 2005 UWMP at pages 2-1 to 2-2.

⁷ *Id.*

⁸ *Id.* at page 2-2.



Marina Coast Water District Boundary
Map and Well Locations



Figure
G-3

Prior to the Salinas Valley's agricultural and other development, Salinas Basin groundwater would move through the basin and into the Monterey Bay through subsurface freshwater outcrops. Over time, the cumulative reductions of Groundwater Basin storage have contributed to a decrease in the amount of groundwater moving toward and into Monterey Bay. As a result, the basin has experienced a landward gradient of seawater (intrusion), where the seawater has entered certain coastal aquifers. While historic groundwater pumping throughout the basin created the overdraft, only the basin's coastal margin, adjacent or near to the Bay, actually have experienced seawater intrusion.

Two regional water management agencies have jurisdiction over groundwater production in the vicinity of the MCWD. The MCWRA asserts regulatory authority over the supply of water from the Salinas Valley Groundwater Basin, and the Monterey Peninsula Water Management District (MPWMD) has asserted regulatory authority over the Seaside Groundwater Basin. These two basins are adjacent to each other under Ord Community lands. The MCWD has cooperated with the affirmative groundwater management activities of MCWRA and MPWMD and, so, has not independently developed its own groundwater management plan pursuant to Water Code section 10750.

MCWRA is implementing a program to eliminate overdraft and intrusion known as the Salinas Valley Water Project (SVWP). The SVWP builds upon action taken in the 1940s when MCWRA's predecessor agency, the MCFCWCD, initiated development of the Nacimiento and San Antonio dams and reservoirs to artificially augment water resources within the Salinas Valley. Since the formation of the MCWD, MCWD has cooperated with the MCWRA in further water resources development and management within the Salinas Valley.

In 1991 and 1992, MCWRA developed and approved the Monterey County Water Recycling Projects (MCWRP) to deliver recycled municipal wastewater for irrigation use in the Castroville area, so that groundwater pumping would be reduced in that area. In those projects, recycled water is produced and distributed for agricultural irrigation use along the coast in lieu of pumping an equivalent amount of groundwater. Each acre foot of recycled water delivered for irrigation reduces demand on the Salinas Valley Groundwater Basin by one acre-foot in a program called "in lieu" recharge (use of recycled water "in lieu" of groundwater helps to recharge the basin). The recycled water projects have operated successfully for eight years, reducing basin overdraft and successfully fighting seawater intrusion.⁹

The next step in fully eliminating groundwater overdraft and seawater intrusion is the MCWRA's Salinas Valley Water Project (SVWP), which is discussed more fully below. The first phase of the SVWP is now in the permitting phase and is expected to begin construction in 2007.¹⁰ The SVWP will increase reservoir releases to the Salinas River. Some of the new water will increase artificial recharge of basin aquifers as the water flows over the porous riverbed, and some of that water will be diverted from the river near Marina to increase water deliveries and expand the in lieu recharge program in the Castroville area. In return for increasing the amount of water delivered through the MCWRP distribution system, the SVWP will require recipients of the additional water to reduce their coastal groundwater pumping.¹¹ MCWRA modeling concludes that this first phase of the SVWP will eliminate basin overdraft and intrusion. A second phase of the SVWP, examined at a program level in the 2002 SVWP EIR, calls for some of the newly developed surface water to be made available to coastal

⁹ MCWD 2005 UWMP at page 2-4.

¹⁰ *Id.*

¹¹ *Id.*

urban water agencies in the future. MCWRA has recently secured new federal grants to begin analyzing this second phase.¹²

MCWD is within MCWRA benefit zones that have paid for, and continue to pay for, ongoing operation of Nacimiento and San Antonio reservoirs and construction and operation of the Castroville in-lieu recharge project. Those benefit zones also will help pay for this third (SVWP) component of the MCWRA's program for developing and managing the Salinas Valley Groundwater Basin. As part of MCWD's ongoing participation in MCWRA's management program, MCWD has agreed to limit its pumping from the Salinas Basin to serve lands in the Marina area and outside the former Fort Ord Military Reservation, thereby directly contributing to the elimination of basin overdraft and intrusion in the most effective way possible.

As noted above, the potable water supply at the Ord Community service area is from the Pressure subarea of the Salinas Groundwater Basin. The southwestern portion of the Salinas basin underlies the northern and southeastern segments of the Ord Community. Additional water for irrigation at the Bayonet and Black Horse golf courses in the City of Seaside's portion of the Ord Community service area is drawn from the separate Seaside Groundwater Basin.

Yet another aspect of MCWRA's active management of the Salinas Valley Groundwater Basin is a set of agreements by which major groundwater producers near the coast have agreed to limit their groundwater pumping to specified levels. For example, a 6,600 AF/Y production limit is established by the Annexation Agreement for water service to the Ord Community service area¹³. Having acquired the Ord Community water system from the Army, MCWD is now subject to the Annexation Agreement's 6,600 AF/Y production limit for Ord Community water service. The Annexation Agreement allows for the extraction of up to 5,200 AF/Y from the 180-foot and 400-foot aquifers and up to 1,400 AF/Y from the deep aquifer. The combined 6,600 AF/Y groundwater extraction level equates to the actual long-term water demand from Army uses at Fort Ord prior to closure. To support implementation of the Fort Ord Reuse Plan, FORA has allocated this 6,600 AF/Y supply of Salinas Valley groundwater among its member land-use jurisdictions. Refer to Table G-4. Those member jurisdictions, in turn, allocate their portion of that FORA groundwater supply to individual redevelopment projects. The City was initially granted 1,175 AF/Y of FORA groundwater and subsequently was granted an additional 150 AF/Y of FORA groundwater as a loan from the FORA strategic reserve, bringing the total current water supply for the City of Marina's portion of the former Fort Ord to 1,325 AF/Y (as noted in Table G-4 below).¹⁴

A second, 1996 agreement between MCWRA and MCWD, titled "Annexation Agreement and Groundwater Mitigation Framework for Marina Area Lands," limits Salinas Valley groundwater pumping to an additional 3,020 AF/Y to serve Central Marina (*i.e.*, the City of Marina outside the Ord Community). Additionally, the 1996 agreement provides that two adjacent private landholdings within MCWD's LAFCO sphere of influence—the Armstrong Ranch and the Lonestar property—have been approved for annexation to MCWRA's zones 2 and 2A and have specified amounts of Salinas Valley groundwater available for use on those properties, all as noted in Table G-4. Table G-4 summarizes the existing water supply that is currently available to MCWD for the Proposed Project and planned future uses, based on demand allocated to existing uses and existing water supplies (which is further described in this

¹² *Id.*

¹³ Refer to Part 4(c) at page 5 of the Annexation Agreement.

¹⁴ See March 1, 2004, letter from FORA to MCWD (confirming additional 150 AF/Y of water for Marina's portion of former Fort Ord based on loan from FORA strategic reserve).

section.

Table G-4

MCWD Existing Water Supply Sources¹⁵	
	AF/Y
FORA groundwater allocation to City of Marina-Ord Community	1,325 ¹⁶
FORA groundwater allocation to City of Seaside	862
FORA groundwater allocation to CSU Monterey Bay	1,035
FORA groundwater allocation to Univ. of Calif. MBEST Center	230
FORA groundwater allocation to City of Del Rey Oaks	92.5
FORA groundwater allocation to City of Monterey	65
FORA groundwater allocation to County of Monterey	560
U.S. Army	1,577
FORA groundwater allocation to County/State Parks	45
FORA groundwater allocation to City of Marina (Sphere)	10
FORA groundwater line loss allowance (10%)	535
FORA Strategic Reserve	413.5
MCWD existing desalination plant	300 ¹⁷
Central Marina groundwater allocation	3,020
Armstrong Ranch groundwater allocation	920
Lonestar Property groundwater allocation	500
Rounded subtotal	11,490

It is important to understand MCWD's supply reliability to shortage during an average water year, a single dry year or multiple dry years. Such an analysis is most relevant to water supply systems that directly rely upon surface water sources of supply. The reliability of surface water sources of supply are directly affected by dry hydrologic conditions (i.e., low precipitation during wet season), which can immediately reduce the quantity of surface water available to meet demand.

Table G-5 depicts recent groundwater production for the Central Marina and Ord Community service areas. One benefit of relying upon Salinas Valley groundwater as the principal source of supply is that the supply is nearly unaffected by dry hydrologic periods.¹⁸ That is in contrast to the sharp supply reductions suffered by water suppliers that are reliant upon surface water sources of supply. During long dry periods, reservoirs run low and rivers can run dry. Although it is true that natural recharge of the Salinas Valley Groundwater Basin would be temporarily reduced during a single dry year or during a multiple dry year period, the volume of groundwater slowly moving through the basin is so immense and MCWD's wells are sufficiently deep that MCWD expects to be able to continue producing and serving groundwater to meet demand in its service areas.

Since the bulk of MCWD's existing supply is groundwater and the remainder is a desalination

¹⁵ Table data from MCWD 2005 UWMP, Table 2-1, at page 2-6.

¹⁶ As explained above, the City of Marina has received an additional 150 AF/Y of FORA groundwater, for a total of 1,325 AF/Y. See March 1, 2004, letter from FORA to MCWD confirming allocation of additional 150 AF/Y of FORA groundwater to City of Marina from FORA's strategic reserve. See Appendix 1 to Cypress Knolls WSA, which is included within this EIR as Appendix B.

¹⁷ See Agreement for Financing Repair and Operation of Desalination Plant, approved by the MCWD on July 12, 2006 ("Desalination Agreement").

¹⁸ MCWD 2005 UWMP at page 3-13 ("MCWD's groundwater supply is fully available in annual average, single dry year and multiple dry years.")

plant supply, short- and medium-term hydrologic events over a period of less than five years usually have little bearing on water availability. Groundwater systems tend to have large recharge areas. The Salinas Valley Groundwater Basin is aided by two large storage reservoirs, Nacimiento and San Antonio, providing about 700,000 acre-feet of storage. Those reservoirs regulate surface water inflow to the Groundwater Basin, shifting winter inflow into spring and summer reservoir releases for consumptive use and artificially increased basin recharge. As a result, water is available annually without regard to short-term dry periods. That is due to the large storage volume of the Salinas Valley Groundwater Basin, which operates to offset annual variations in surface runoff and recharge. MCWD's groundwater supply is therefore fully available in annual average, single dry year and multiple dry years.

**Table G-5
MCWD Groundwater Production (AF/Y) 1999-2004**

Calendar Year	City of Marina	Ord Community*
1999	2241	2396
2000	2300	2371
2001	2285	2228
2002	2306	2137
2003	2185	2146
2004	2266	2420

Ord Community figures include water that was used in the City of Marina's portion of the Ord Community.

Source: MCWD UWMP, 2005

(2) Water Quality Issues

There has been concern that seawater intrusion might someday degrade groundwater quality in the MCWD's Central Marina and Ord Community service areas so that new water treatment processes might possibly be required for continued potable water service. Similarly, there has been concern that hazardous substance contamination detected at the former Fort Ord might adversely affect the quality of water MCWD is serving within its Central Marina and Ord Community service areas. As discussed below, under existing conditions, both concerns are being actively managed to ensure ongoing protection of the quality of MCWD's groundwater sources of supply.

(A) Aquifer Systems

MCWD's wells for both its Central Marina and Ord Community service areas are located within the Pressure Subarea of the Salinas Valley Groundwater Basin (see Figure G-3 *supra* [well locations]; Figure G-1 *supra* [subareas]). Studies and investigations have allowed the delineation of three aquifer systems within the Pressure Subarea. These aquifers consist of aerially extensive, horizontally continuous, deposits of sand and gravel that exist at various depths below ground surface in the subarea. These aquifer systems have been designated as the 180-Foot, the 400-Foot and the 900-foot, or deep, aquifer systems. The 180-foot and 400-foot aquifers derive their names from the average depth at which the water bearing sand and gravel deposits are encountered. The deep aquifer consists of an aggregation of all sand and gravel deposits that exist below the 400-foot aquifer.

The 180-foot aquifer extends from Monterey Bay to Chualar beneath the Salinas Valley and westward from the valley under northern Ord Community and the central Marina. South of Chualar and in the Forebay area, the distinction between the 180- and 400- aquifer becomes less defined as the aquitards that separate the aquifers become more discontinuous.

The 400-foot aquifer is comprised of geological materials assigned to older alluvium deposits and Aromas Sand. The aquifer system is present beneath the northern Salinas Valley and also extends westward beneath the northern portions of the former Fort Ord and central Marina. In the Forebay area, the 400-Foot Aquifer locally blends with the 180-foot aquifer receiving recharge from the Salinas River through the overlying deposits.

Regionally, the deep aquifer is not used as extensively as the 180-foot and 400-foot aquifers. The MCWD is the only current significant user of the deep aquifer system. MCWD utilizes three wells that extract water solely from the deep aquifer to supply the Central Marina service area distribution system. The wells serving the Ord Community service area are located further inland than the Central Marina service area wells and do not extract water from the deep aquifer system. The deep aquifer system consists of two geologic formations - the Paso Robles and the underlying Purisma Formations. These formations are aerially extensive, stretching throughout the Salinas Basin and to the north and south. The lowermost unit extends to the north outcropping in Soquel and to the south where it grades into the Santa Margarita Formation, an important aquifer in the Seaside Basin. Although slightly arbitrary in definition, the deep aquifer is commonly believed to begin at depths of approximately 600 feet below sea level and extend to depths of 2,000 or more feet in some locations. Non-water bearing Monterey Shale that constitutes the bottom of the Salinas Valley Groundwater Basin underlies the deep aquifer system.

Because of the overlying clay layers that isolate the aquifer systems in the Pressure Subarea from potential surface water recharge, most importantly the Salinas River, the primary mechanism for recharge is from lateral flow that comes from the adjacent subareas. This means that most recharge for the aquifer systems in the Pressure Subarea comes from lateral flow from either the Eastside or Forebay Subareas. Additionally, the deeper aquifers are believed to be recharged in whole or in part by water that has moved through the overlying aquifers (i.e. flow from the 180-foot aquifer recharges the 400-foot aquifer that in turn recharges the deeper aquifers). Most of the recharge for the Pressure Subarea derives from the Forebay Subarea due to the presence of the Salinas River and MCWRA's active management of Nacimiento and San Antonio reservoirs to maximize groundwater recharge.

(B) MCWD Wells for Marina and Ord Community Service Areas

MCWD operates three new wells in the deep aquifer (MCWD-10, MCWD-11 and MCWD-12) that were installed in 1982, 1985 and 1989 respectively. (Figure G-3, *supra*) Seawater intrusion has not been detected at any location in the deep aquifer system. MCWD operates a monitoring well installed like a sentinel between Monterey Bay and the MCWD's new production wells. That monitoring well serves as an early warning system to identify any future seawater intrusion that might later affect MCWD's production wells, located further inland. That early warning would provide advance notice to install or begin operating one or more back-up wells to replace any potential future loss of production capacity due to water quality concerns. At this time there is no evidence that seawater intrusion will cause a reduction in MCWD's long-term (i.e., 20 years) production capacity.

In 1985, the U.S. Army installed three wells. Those wells are located near the intersection of Reservation and Blanco Roads in Marina (Figure G-3), the three wells draw from the 180-Foot

and 400-Foot Aquifers (well numbers FO-29, FO-30 and FO-31). Those are the wells currently supplying MCWD's Ord Community service area.

Although seawater intrusion is a potential threat to the future quality of water available to MCWD's existing well systems serving the Marina and Ord Community service areas, there is no current existing evidence that seawater is intruding into these wells, nor is there evidence that such intrusion will likely occur. MCWD is fully cooperating and participating with the MCWRA's program to actively manage and protect the long-term quality of the Salinas Valley groundwater resource. Existing management efforts, discussed above, include the successful implementation of the "in-lieu" recharge project that has affirmatively reduced pumping in the Castroville-area and the negotiation and implementation of the MCWRA Annexation Agreements that limit groundwater production and provide assessment revenue supporting MCWRA's ongoing activities to augment Basin water supplies. Those activities include ongoing operation of Nacimiento and San Antonio reservoirs to maximize groundwater recharge through dry-season storage releases that percolate through the Salinas River's streambed. As described in more detail below, those activities also include the MCWRA's development, approval and implementation of the SVWP to permanently end the threat of seawater intrusion to water quality along the coastal margin of the Salinas Valley Groundwater Basin.

(C) Groundwater Contamination, Cleanup and Control

The former Fort Ord was identified by the U.S. Environmental Protection Agency (EPA) as a National Priority List federal Superfund site on the basis of groundwater contamination discovered on the installation in 1990. Initial investigations pinpointed 39 sites of concern in addition to two Operable Units (the Fritzsche Army Airfield Fire Drill Pit and the Fort Ord landfill) which had been investigated during the 1980s. The sites of concern included motor pools, vehicle maintenance areas, dry cleaners, sewage treatment plants, firing ranges, hazardous waste storage areas, and unregulated disposal areas. An additional two sites were added during the investigation process: one, a defueling area located at Fritzsche Army Airfield; the other, a fire drill burn pit in East Garrison. In all, 43 sites were investigated.¹⁹

In June 2002, trichloroethylene (TCE), a cleaning solvent, was detected in one of the three water supply wells at the former Fort Ord. TCE levels were detected at levels below the Maximum Contaminant Levels (MCL) above which water may not be served for potable uses. The contamination is coming from an abandoned landfill and a fire training pit that were formerly used by the Army, but are now closed. The Army has responded to the landfill contamination problem by installing extensive groundwater cleanup systems to remove the contamination and prevent its further migration. The Army has also been monitoring groundwater quality at the former Fort Ord for a number of years to better understand the location and movement of groundwater contamination caused by the closed landfills.

The amount of TCE in one well was 0.53 to 0.81 parts per billion. State and federal safe drinking water MCL standards for TCE are set at 5.0 parts per billion, or approximately one full magnitude higher than detected. Detection of TCE, even at the low concentration levels, was reported by MCWD as required by law, to the California Department of Health Services (DHS). No additional action was deemed necessary by DHS because the concentration levels are well below the MCL of 5.0 parts per billion. Both MCWD and the Army regularly monitor the former Fort Ord wells to assess concentration changes.

¹⁹ See www.Fortordcleanup.com (Mactec Engineering and Consulting, Inc.).

MCWD continues to monitor the affected well, and all other wells, for TCE and/or any other contaminants on a regular basis. The District maintains close coordination with the U.S. Army Corps of Engineers, which manages the overall groundwater cleanup at the hazardous substance release sites on the former Fort Ord. The Defense Department is required by law to clean up the contamination to below allowable contaminant levels that protect public health, as set by the State Department of Health Services. Groundwater samples are taken quarterly and compiled in annual status reports. Additionally, all data is summarized in documents known as five-year reviews. It is expected that final cleanup of groundwater may take as much as another thirty years.

Because Fort Ord is on the National Priority List, section 9604(i) of the federal Superfund law (the Comprehensive Environmental Response Compensation and Liability Act, or CERCLA) requires the federal Agency for Toxic Substances and Disease Registry ("ATSDR") to complete an assessment of whether any hazardous substances at the site pose a threat to human health. ATSDR analyzed whether hazardous substances released at Fort Ord might threaten human health by contaminating drinking water wells serving Marina and Ord Community. ATSDR's final health assessment concludes as follows:

- There are no detections of groundwater contaminants at levels of health concern in the presently "active" drinking water wells on Ord Community. The water at Ord Community is safe to drink. Because the drinking water wells currently in use in the Ord Community are located far from sources of contamination, drilled to deep aquifers that are not likely to be contaminated, and monitored regularly, the Ord Community's drinking water supply should be safe to drink in the future.
- Because the concentration of groundwater contamination detected in the past in the Ord Community and Marina drinking water wells was low and the duration of exposure was short, adverse health effects will not likely result.
- The water supplied by drinking water wells presently used by Marina is safe to drink. Further, because Marina's drinking water wells are drilled to deep aquifers and the quality of the water is monitored regularly, Marina's drinking water should be safe to drink in the future.

See ATSDR Public Health Assessment, Fort Ord, Marina, Monterey County, California (Community Health Concerns and Potential Pathways of Exposure).

The Salinas Basin has experienced nitrate contamination, a pollutant coming primarily from animal confinement activities (dairies, feedlots) and from irrigated agriculture, sewage treatment plant effluent and septic tanks. This contaminant is a concern, particularly in upper reaches of the 180-Foot aquifer. Although several of the 180-foot aquifer wells in the Salinas Valley have exceeded the state health standard of 45 mg/L of nitrate as NO₃, nitrate levels in the 400-foot aquifer are low due to intervening clay layers between the 180- and 400-foot aquifers. No nitrate problems are evident in, or in the vicinity of, any of the MCWD's wells.²⁰ Due to the location of the nitrate sources at or near the ground surface, remote from MCWD's wells, with contamination in only the upper reaches of the shallowest, 180-Foot Aquifer, nitrate contamination does not pose a threat to MCWD's sources of groundwater supply. **(D) Salinas Valley Water Project**

²⁰ MCWD 2005 UWMP at page 2-17.

On June 4, 2002, the MCWRA adopted a basin-wide program, known as the Salinas Valley Water Project (SVWP), to continue addressing water supply issues in the Salinas Valley Groundwater Basin. MCWRA's adoption of the SVWP followed its certification of a Final Environmental Impact Report on June 4, 2002. The objectives of the SVWP are:

- Halting seawater intrusion;
- Continuing conservation of winter flows for increased recharge of the Salinas Valley Groundwater Basin through summer percolation releases'
- Providing flood protection;
- Improving long-term hydrologic balance between recharge and withdrawal; and
- Providing a sufficient water supply to meet water needs through the year 2030.

The SVWP was specifically developed to provide for the long-term management and protection of groundwater resources in the Salinas Valley Groundwater Basin by: (1) providing an augmented source of water to the Basin through reoperation of Nacimiento and San Antonio reservoirs and capturing of some of the new water via a seasonal surface diversion structure to expand MCWRA's "in-lieu" recharge project for Castroville area farmers; and (2) continuing conservation releases for increased recharge to the Groundwater Basin. To do that, the SVWP includes the following components:

- Modification of Nacimiento Dam spillway;
- Reoperation of Nacimiento and San Antonio reservoirs;
- Salinas River recharge, conveyance and diversion;
- Distribution/delivery of water; and
- Delivery area pumping management.

MCWRA has maintained and operated Nacimiento and San Antonio reservoirs since they became operational in 1957 and 1967, respectively. The operation of both reservoirs has been, and continues to be, for two primary hydrologic functions: flood control and conservation (i.e., storage and regulated release of runoff for Salinas Valley groundwater recharge through the Salinas River bed). The SVWP includes operation and maintenance of the Nacimiento and San Antonio reservoirs, modification of the spillway at Nacimiento Dam, and installation of a rubber inflatable dam on the Salinas River to allow for capture of about 10,000 acre-feet of dry weather flows to be delivered for agricultural irrigation in lieu of groundwater pumping.

The SVWP anticipates that current demands on the basin will decline by about 20,000 AF/Y by 2030 due to urban and agricultural conservation efforts, conversion of agricultural lands and some crop shifting.²¹ This overall decline is expected to occur despite a near doubling of the population served by the Salinas Valley Groundwater Basin, from 188,949 in 1995 to 355,829 in 2030. That population growth will increase urban demands by about 40,000 AF/Y. As specified in the SVWP, additional water to balance basin recharge with withdrawals will be

²¹ MCWD 2005 UWMP at page 2-19.

provided through capture and diversion of reservoir releases down the Salinas River, otherwise lost to the ocean; additional recycled water from the Monterey County Recycled Water Projects; and modification of the spillway at Nacimiento Reservoir, which will allow reoperation of this reservoir and the San Antonio Reservoir, producing the additional system yield. By 2030, a total additional yield of 37,000 AF/Y is expected.²²

Implementation of the SVWP is estimated to cost approximately \$4 million. Funding for the SVWP under a special property assessment was subject to a vote of property owners by mail-in ballot in accordance with Proposition 218. Results of the vote were announced on April 8, 2003. Parcel ballots were returned with an 85 percent weighted voting of assessed valuation voting yes, far greater than the majority plus 1 percent required for approval. Subsequent litigation challenged the Proposition 218 assessment²³ but was favorably resolved by MCWRA in a settlement that reduced assessment proceeds by only some \$130,000. MCWRA expects to make up that Project funding through acquisition of state grant funding, a low-interest state loan or increased fees and charges. A separate litigation has questioned the SVWP's effects on recreational use of Nacimiento and San Antonio reservoirs.²⁴ However, a final Environmental Impact Report/Environmental Impact Statement for the Project was certified in June of 2002, litigation challenging that EIR was dismissed, and the Project is proceeding through the permitting and final design process.

The State Water Resources Control Board (SWRCB) has provided at least \$1.4 million in funding to the MCWRA for development of the SVWP. After reviewing the technical documents assessing the projected beneficial effect of the SVWP on seawater intrusion, the SWRCB concluded "that seawater intrusion can be stopped."²⁵

(3) MCWD Existing 300 AF/Y Desalination Plant Supply

MCWD owns an existing desalination plant capable of producing up to 300 AF/Y of water.²⁶ The desalination plant uses a reverse osmosis membrane process in which seawater is forced at high pressure through semi-permeable membranes. The plant is located adjacent to MCWD's Marina headquarters at 11 Reservation Road. The plant was approved in 1995, constructed in 1997, produced its full permitted capacity in 1997-1998, and thereafter operated sporadically until February 2003, when an internal plant pump motor broke.²⁷ The cost to repair the plant, the high cost of operating the plant to produce potable water (approximately \$2,000 per acre foot), and the availability of much less expensive groundwater to meet MCWD's water service obligations, has resulted in the plant's standing idle since 2003.

The environmental impacts of constructing, operating and maintaining the desalination plant to serve up to 300 AF/Y of water to the District's Central Marina service area were analyzed in an Environmental Impact Report ("Desal EIR") prepared by MCWD and certified by MCWD Resolution 95-4, adopted October 11, 1995. A subsequent plant modification involving the use of an evaporation pond to facilitate continuous plant operation was analyzed in a Mitigated Negative Declaration approved by the MCWD in November 1998. As a result, prior to the Notice of Preparation for the Proposed Project, MCWD had obtained all regulatory permits needed to construct, operate and maintain its 300 AF/Y desalination plant (and indeed did

²² *Id.*

²³ *Salinas Valley Property Owners for Lawful Assessments v. MCWRA* (Monterey County Sup. Ct.), filed August 31, 2005.

²⁴ *Water World Resorts, Inc. v. County of Monterey*, Los Angeles County Superior Court Consolidated Case No. BC297778.

²⁵ See SVWP FEIR at page 2-129.

²⁶ Marina Coast Water District, *2001 Urban Water Management Plan*, December 5, 2001.

²⁷ MCWD Regional Urban Water Augmentation Project Draft Environmental Impact Report (June 2004) ("Augmentation Project DEIR") at page 3-12.

construct and operate the plant until 2003). On May 24, 2006, MCWD approved a CEQA Addendum concluding that the repair of the plant would cause no new or more severe significant environmental impacts and could be performed without further discretionary approvals.²⁸ MCWD concluded that this existing facility can quickly be returned to production and, therefore, "is considered an available supply in the context of [its] UWMP, and SB 610 and 221."²⁹

MCWD has approved an agreement that would make 300 AF/Y of water from its existing desalination plant available to the Marina Heights, MCP and Cypress Knolls redevelopment projects (Desalination Agreement). That supplemental source of supply is not needed to meet the projected water demand associated with the three projects. Rather, it would be available only as a back-up supply to provide supplemental water in the very unlikely event that the three projects were to need more water in the future than were then available to the projects. On May 24, 2006, the MCWD Board adopted Resolution 2006-38 certifying a CEQA addendum to the Desal EIR. On July 12, 2006 the MCWD Board held a public hearing at which it approved the Desalination Agreement. As a result, this is a reasonably foreseeable future water supply. The City has concluded that the desalination plant's water is not necessary to serve the three redevelopment projects. That is because the City has analyzed in detail the water demand project to arise from each project and has allocated sufficient FORA groundwater. The City has allocated sufficient FORA groundwater to the Marina Heights and MCP projects to satisfy their projected demand. Following any City approval of the currently proposed project, Cypress Knolls, the City would allocate sufficient FORA groundwater to meet the Proposed Project's projected demand. FORA has reviewed and approved the City's approvals of the Marina Heights and University Villages MCP projects, including their respective allocations of FORA groundwater, and has determined that they each are consistent with the FORA Reuse Plan, which requires that every project have a sufficient water supply." Nevertheless, the 300 AF/Y from the existing desalination plant is considered to be available as a supplemental source of supply. The desalination plant uses the Pacific Ocean as its source of supply, so its 300 AF/Y production capacity is unaffected by single dry hydrologic years or multiple dry hydrologic years.

(4) Water Supply Augmentation for Ord Community

On June 10, 2005, MCWD and FORA approved a new program to develop 3,000 AF/Y of new water supplies that will augment the total amount of water available to support ongoing redevelopment of the former Fort Ord. The environmental effects of the new program, called the Regional Urban Water Augmentation Project (Augmentation Project), were analyzed in a Final Environmental Impact Report that MCWD certified in September 2004. The following description of the Augmentation Project is incorporated by reference from MCWD's 2004 EIR.

The Augmentation Project evaluated in the EIR consists of two distinct alternatives and one hybrid alternative. One alternative considered wastewater recycling becoming the augmentation supply, another where desalination forms the supply, and a third "hybrid alternative" that would produce equal amounts of recycled and desalinated water (1,500 AF/Y recycled supply plus 1,500 AF/Y of desalination water). Three-hundred AF/Y of the hybrid-approach's recycled water was proposed for use on the Monterey Peninsula and 300 AF/Y of the hybrid-approach's desalination water was proposed as a possible replacement for the 300 AF/Y capacity of MCWD's existing desalination plant, which, as discussed above, has been idled due to mechanical and financial issues. Those proposals would leave 2,400 AF/Y of new

²⁸ MCWD Desalination Project EIR Addendum (May 2006) at page 1.

²⁹ MCWD 2005 UWMP at page 2-24.

water available to support redevelopment of former Fort Ord. The MCWD and FORA program approval specifically endorsed the "hybrid alternative" from the October 2004 Regional Urban Water Augmentation Project EIR and directed development of the new source of supply.³⁰ A capital fund collected by FORA as part of its development fee program on Fort Ord redevelopment projects is estimated to generate about \$33 million by 2015, which is available to carry out the Augmentation Project.

MCWD's adopted December 2005 UWMP deems the Augmentation Project to be a planned future supply that will become available to serve demand from planned future development during the next 25 years, so that the augmentation water is a reasonably foreseeable future supply for S.B. 610 water supply assessment purposes.³¹ The City considers the Augmentation Project to be a reasonably foreseeable planned future water supply that will be available to meet water demand from planned future development projects for purposes of both S.B. 610 and S.B. 221.

(A) Recycled Water Alternative

MCWD collects wastewater in its two wastewater collection systems serving the City of Marina and the Ord Community operated by MCWD. Wastewater is conveyed to an interceptor operated by the Monterey Regional Water Pollution Control Agency (MRWPCA). The wastewater is then conveyed to the MRWPCA regional treatment plant (RTP) northeast of Marina. Wastewater is treated to secondary treatment standards at the RTP facilities and that water not designated for further treatment and recycling is discharged via an ocean outfall. Water designated for further treatment is currently conveyed to the adjacent Salinas Valley Reclamation Plant (SVRP) that produced about 13,000 acre-feet of recycled water in 2003. The recycled water is delivered to farmland in the greater Castroville area, reducing demands on Salinas Valley groundwater and retarding seawater intrusion in that area. MCWD claims senior rights to recycled water through its agreement with the MRWPCA but does not yet use recycled water within its two service areas. That agreement was entered in 1989 between MCWD and MRWPCA, establishing MCWD's right to receive tertiary treated wastewater from the SVRP, pursuant to which MCWD has the right to obtain treated wastewater from MRWPCA's regional treatment plant equal in volume to that of the volume of MCWD wastewater treated by MRWPCA and additional quantities not otherwise committed to other uses.

The Marina and Ord Community systems currently generate about 2,600 AF/Y of wastewater. The SVRP is capable of producing an average of 29.6 million gallons of recycled water per day or about 33,000 AF/Y. MCWD operated its own water reclamation facility from 1994 to 1997 under the California Regional Water Quality Control Board (RWQCB) Waste Discharge Requirement (WDR) No 91-95 and Monitoring Report No. 92-95. These water reclamation requirements specify the user sites, water quantity, water quality, and a monitoring and reporting program. In 1997 MCWD discontinued production at its water reclamation facility and directed the raw wastewater flow to the MRWPCA RTP.

MCWD and MRWPCA have been jointly pursuing an urban recycled water project known as the Regional Urban Recycled Water Distribution Project (RURWDP), which forms the recycled water alternative in the Augmentation Project. Planning for this project found that a total of 1,727 AF/Y could be made available in Phase 1 of the RURWDP, with about 1,485 AF/Y of recycled water demands within MCWD able to be served without having to construct seasonal

³⁰ MCWD 2005 UWMP at pages 2-21 to 2-22; *see also* June 10, 2005, minutes from Joint MCWD and FORA board meeting for agenda item 5B.

recycled water storage. However, this level of recycled water supply, without having to provide seasonal storage, would only be available under terms and conditions of Amendment No. 3 to the 1992 MRWPCA/MCWRA Agreement. MCWD and MRWPCA have yet to complete negotiations for this project. The balance of the Phase I supply could be used in other jurisdictions on the Monterey Peninsula. Seasonal storage would allow recycled water, for which there would otherwise be little demand during the winter, to be made available for irrigation demands in warmer months, rather than simply be discharged to the ocean. Projected Phase II demands that could be served through additional distribution lines and seasonal storage facilities could bring the total recycled water demand to about 3,000 AF/Y, with 2,171 AF/Y of demand that could be served within MCWD. If recycled water is planned for a development area, MCWD will—subject to Monterey County Department of Environmental Health and State Department of Health Services approval—require its use for all recreational and common irrigated open space areas within the development in accordance with MCWD Code § 4.28.030, Recycled Water Service Availability. That requirement would assure the projected minimum amount of recycled water use as described in Table G-6 below.

Table G-6 depicts the minimum recycled water demands within MCWD that would be served by the recycled water alternative of the Regional Water Augmentation Project within its two phases. This demand is based on maximum reasonable irrigation efficiency for non-potable uses.

Table G-6

Minimum Recycled Water Use Potential Within MCWD

Jurisdiction	
Phase I - 2010	AF/Yr
Fort Ord Marina	380
Fort Ord - MoCo/Seaside	141
Fort Ord - Del Rey Oaks	320
Fort Ord Monterey Co.	19
Fort Ord CSUMB	100
Fort Ord Seaside	525
total	1,485
Phase II - 2025	
Fort Ord Marina	127
Marina - Armstrong Ranch	31
City of Marina	176
Fort Ord Monterey Co.	243
Fort Ord CSUMB	238
Fort Ord State Parks	5
Fort Ord Army	38
Fort Ord Seaside	204
Fort Ord Del Rey Oaks	4
total	2,171

Source: Regional Urban Water Distribution Project, Table 3-5 RBF Consulting, 2003

(B) Desalination Water Alternative

As part of the Augmentation Project program, MCWD evaluated construction of a new desalination plant capable of producing up to 3,000 AF/Y of potable water. Of the 3,000 AF/Y,

³¹ MCWD 2005 UWMP at 2-22.

2,400 AF/Y was proposed to augment the future needs for Ord Community and 300 AF/Y was proposed to replace the capacity of MCWD's existing desalination plant. An additional 300 AF/Y was proposed to satisfy demands on the Monterey Peninsula, outside of MCWD's service area.

The desalination water alternative would include construction of an 8,000 square-foot facility housing reverse osmosis membranes and pump facilities.³² On-site operational water storage of 1 million gallons would also be constructed with one or two storage tanks. Two seawater intake wells drilled to 40 feet below sea level would be constructed nearby. A brine disposal system to convey the reverse osmosis reject water back to the ocean would be constructed utilizing two radial arm (Raney-type) wells operating in reverse, discharging 3.66 million gallons per day. Those wells would be located about 2,000 feet north of the proposed plant on bluffs above the beach.

(C) Hybrid Alternative

MCWD's Augmentation Project EIR analyzed an alternative to the preceding two water augmentation approaches that combined those approaches into a single hybrid alternative encompassing both recycled and desalinated water.³³ Ultimately, this is the alternative approved for project-level development by MCWD and FORA on June 10, 2005.³⁴

The recycled water component would provide approximately 1,500 AF/Y of recycled water. MCWD concluded that an advantage of the hybrid approach is that production and use of 1,500 AF/Y of recycled water would avoid the expense and complexity of the seasonal water storage required to make use of the 3,000 AF/Y of recycled water that would be developed under the recycled-water-only alternative.³⁵ The desalination portion would also produce about 1,500 AF/Y of water, somewhat smaller than the desalination-only alternative, with half the number of intake and discharge wells being required, a smaller plant footprint, smaller distribution system and lower power requirements.³⁶

MCWD's adopted 2005 UWMP concludes that the Augmentation Project "is designed to support build-out under the development restrictions imposed by the current Reuse Plan for former Fort Ord." MCWD concluded that total production for the hybrid alternative would be 3,000 AF/Y with 2,700 AF/Y available to MCWD as noted above. Under the hybrid alternative the remaining 300 AF/Y would be provided to the Monterey Peninsula. MCWD expects to provide reclaimed water from the Augmentation Project water by 2008.³⁷ MCWD expects to provide desalinated water from the Augmentation Project by 2009.³⁸

Based on the MCWD's approval of the UWMP in December 2005, the MCWD's completion of the Augmentation Project EIR in 2004, the approval and direction of both MCWD and FORA in June 2005 to develop the Augmentation Project's hybrid alternative, and other actions taken by

³² MCWD 2005 UWMP at pages 2-24 to 2-25.

³³ See Regional Urban Water Augmentation Project EIR at pages 6-7 through 6-19.

³⁴ MCWD 2005 UWMP at pages 2-21 to 2-22; *see also* June 10, 2005, minutes from Joint MCWD and FORA board meeting for agenda item 5B.

³⁵ *Id.*

³⁶ *Id.*

³⁷ MCWD Resolution No. 2006-47 (adopted June 14, 2006) approves a \$930,000 consulting contract with RMC Water and Environmental to complete "tasks to continue a schedule that provides recycled water supply by 2008 and desalinated water supply by 2009."

³⁸ MCWD Resolution No. 2006-46 (adopted June 14, 2006) approves a \$237,000 consulting contract with Environmental Science Associates to complete "tasks to continue a schedule that provides desalinated water supply by 2009."

the MCWD to implement the hybrid alternative, including a requirement that development fees for Fort Ord be paid to support a capital improvement fund to support the Augmentation Project and the MCWD's execution of contracts to complete the design and permitting of the hybrid alternative on a schedule to start serving recycled water in 2008 and desalinated seawater from a new plant in 2009, the City considers the Augmentation Project to be a reasonably foreseeable planned future water supply that will be available to meet water demand from planned future development projects for purposes of both S.B. 610 and S.B. 221.

(5) MCWD Ongoing Water Augmentation Efforts

Public water suppliers, like MCWD, typically engage in ongoing efforts not only to protect their existing water supplies, but also to augment and diversify their portfolio of water supply sources. On April 26, 2005, MCWD approved a memorandum of understanding (MOU) with Clark Colony Water Company. The MOU establishes a process for the joint investigation of MCWD's potential to acquire and use certain pre-1914 appropriative surface water rights from the Arroyo Seco, which is a tributary of the Salinas River in Monterey County. The pre-1914 water rights at issue total 13,500 AF/Y. Although the City does not presently consider this water source to be sufficiently certain to count as a reasonably foreseeable future supply to meet water demand from planned future development projects under S.B. 610 and S.B. 221, the MCWD's approval of the MOU demonstrates that at some future date, this potential water supply may become a reasonably foreseeable future source of water. At present, this potential future source of supply is not considered available to meet demand from the Proposed Project, probable future projects or planned future uses.

(6) Drinking Water Treatment and Water Quality Monitoring

Water quality monitoring and lab analysis is performed by MCWD by its lab staff and under contract with state certified laboratories. Water samples from wells, water treatment plants, and point-of-use locations are collected and tested to assure water delivered to customers meets both state and federal standards. Results from water quality testing are published annually in the MCWD Consumer Confidence Report which can be found at http://www.mcwd.org/html/water_quality.html. MCWD reports that its water supplies not only meet but exceed the requirements of all current state and federal drinking water quality regulations.

Groundwater from the Marina and Ord water supply wells is disinfected with chlorine as a safeguard against microorganisms. In Marina, chlorine is also used to treat the naturally occurring sulfides that can cause odor.

MCWD's state-certified laboratory performs extensive water quality monitoring of the Marina and Ord drinking water supply. Regulations require weekly monitoring for coliform bacteria in the distribution system. The presence of coliform bacteria may indicate the presence of disease-causing organisms. One water sample from each of five sampling sites in Marina and from each of five in Ord is collected and analyzed each week. A different set of five is analyzed each week in a month for each water system. There are a total of 20 different sample sites in Marina and 20 different sample sites in the Ord Community from which water samples are collected.

To make sure that water quality is maintained from the source to delivery, MCWD's laboratory also performs weekly monitoring of general physical and chemical parameters. Each week five water samples are collected from the Marina and Ord coliform sampling sites, from the Marina and Ord source wells and from the water reservoir in Marina. The water samples are tested for

color, odor, turbidity, temperature, pH, conductivity, free chlorine residual and sulfides. In addition, the Marina and Ord source wells are also tested for chloride, fluoride, nitrate, bromide and sulfate. The purpose of this monitoring is to detect any abnormal concentrations that might indicate problems within the system.

When in operation, the state requires the MCWD to monitor water quality at different stages of the Marina Desalination Plant treatment processes. Water samples are collected from the ocean (Monterey Bay), at the plant's seawater intake well and from its finished product water on a daily, weekly, monthly and quarterly schedule. Water samples are tested for coliform organisms, free chlorine residual, pH, turbidity, conductivity, total dissolved solids, temperature, chloride, sulfate, alkalinity, hardness and corrosive index. This monitoring program ensures that the desalination plant is operating properly and is producing water that meets or exceeds state and federal standards.

MCWD monitors for compliance over 110 constituents in drinking water in varying schedules. Many of these constituents are naturally occurring substances. The Marina and Ord source wells, Marina's reservoir and the desalination plant are tested for general minerals such as calcium, magnesium, hardness; inorganic chemicals such as arsenic, chromium and other metals; organic chemicals such as solvents, pesticides and herbicides; radioactivity including radon; asbestos and other chemicals that are still not regulated and have no state or federal standards. Regulations also require that MCWD test for disinfection (chlorination) by-products such as total trihalomethanes and haloacetic acids in the distribution system. Lead and copper are tested from indoor water samples to check if materials used in home or building plumbing contribute to levels of lead and copper.

(7) Water Production System Physical Reliability

MCWD has undertaken specific measures to ensure its physical ability to supply water in the event that groundwater production is adversely affected by mechanical failure or any other potential problem, including water quality impairment. These measures are summarized here.

In the third quarter of 2005, MCWD completed installation of the Ord/Marina intertie project, which connects the Ord Community water production and distribution system to the Central Marina water production and distribution system. The interties permit the two water systems that have been operated separately (each with three wells) into a single, six-well system that can be operated in an integrated manner, if necessary. One benefit of this intertie is to ensure physical production reliability for the system as a whole. For example, in the event that an Ord Community service area well suddenly went out of production, MCWD could use the intertied system to maintain Ord Community service area water service levels by delivering increased production from one or more of the Marina wells—and vice-versa. That system redundancy is a basic emergency-response feature of MCWD's overall water production and distribution system for the Ord Community and Central Marina.

Each of the five interties connecting the Ord Community and Central Marina water systems is fitted with a bi-directional flow meter that continuously monitors and records the volume of water moving through each intertie, when it is being operated. Those meters, combined with the existing meters on the wells, ensure a full accounting for all water produced by MCWD. That accounting ensures that production of Salinas Valley groundwater delivered to the Ord Community remains within the 6,600 acre-foot-per year limitation imposed by the 1993 Annexation Agreement with the MCWRA, and that production of Salinas Valley groundwater delivered to the Central Marina service area remains within the 3,020 acre-foot-per year limitation imposed by the 1996 annexation agreement with the MCWRA.

MCWD is now developing a project to design, and ultimately to install, a new well in the Ord Community. On July 27, 2005, MCWD approved a contract for the predesign of Well No. 33 located in the vicinity of the intersection of Highway 68 and Reservation Road. That site is owned by the United States Bureau of Land Management. The new well would pump water into one or more proposed reservoirs that would operate in conjunction with a booster pump station(s). The predesign work includes installation of a test well to confirm capacity and final design parameters for the new Well No. 33. That work also includes the sizing and location of pipelines, reservoirs and booster stations, along with an identification of preliminary design issues that will support permitting and environmental review for the project. If test well results were unsatisfactory, a new test well location will be identified, designed and constructed. All of the preceding work is funded in MCWD's adopted fiscal year 2005/2006 budget, which allocates \$1.2 million to complete design and construction of the test well and related facilities.

Regulatory Setting

S.B. 610. Senate Bill (S.B.) 610, codified at Water Code section 10910 *et seq.*, requires that a public water supplier, at the request of a lead land-use agency (e.g., the City), prepare a water supply assessment (WSA) for certain development projects subject to CEQA review. The WSA must include, among other information, an identification of existing water entitlements relevant to the water supply identified for a proposed development project and the water actually received, or used, in prior years pursuant to those entitlements. The WSA must describe the water supplies projected to be available for the next 20 years during different hydrologic conditions, including a normal year, single dry year and multiple dry years. If the water demand for a proposed development project was included in a recently adopted urban water management plan, the water supplier may incorporate information from that plan into the proposed project's WSA. If the proposed development project's water demand was not included in an urban water management plan, then the supplier must discuss whether its projected supplies will meet the projected demand of the proposed project, in addition to other existing and planned future development.

A WSA is required if a proposed development project is: (1) a residential development of more than 500 dwelling units; (2) a shopping center or business employing more than 1,000 persons or having more than 500,000 square feet of floor space; (3) a commercial office building employing more than 1,000 persons or having more than 250,000 square feet; (4) a hotel or motel with more than 500 rooms; (5) an industrial or manufacturing establishment housing more than 1,000 persons or having more than 650,000 square feet or 40 acres; (6) a mixed use project containing any of the foregoing; or (7) any other project that would have a water demand at least equal to a 500 dwelling unit project.

The Proposed Project is subject to S.B. 610's WSA procedure. In compliance with CEQA Guidelines section 15083.5, the City of Marina requested that the MCWD, as the public water supplier for the Proposed Project, prepare a WSA. MCWD approved a WSA for the Proposed Project on March 22, 2006, (MCWD Resolution No. 2006-19) and has provided that WSA to the City for consideration. The WSA concluded there is sufficient water to continue serving existing development plus the Proposed Project. With respect to planned future development in City's jurisdictional area of the Ord Community, the WSA projects a future imbalance between MCWD's existing and projected water supplies, on one hand, and existing and projected future demand, on the other hand³⁹. However, the WSA explained that redevelopment of Fort Ord is

³⁹ The existing and projected water supply and demand for the remainder of the MCWD's service areas (i.e., Central Marina) are not imbalanced and the MCWD has concluded that there is sufficient water supply in the

only now beginning and that redevelopment plans are likely to be modified. Moreover, MCWD's 2005 Urban Water Management Plan projects that 2,400 AF/Y of new water being developed through its Regional Urban Water Augmentation Project "is designed to support build-out under the development restrictions imposed by the current Fort Ord Reuse Plan."⁴⁰ The Urban Water Management Plan explains that the projected future imbalance between water supply and demand would only arise if development limits in the current, adopted Reuse Plan "were lifted."⁴¹ As a result, the WSA concluded that there is uncertainty as to whether the projected future supply imbalance actually will materialize⁴². The city is required to determine, based on its own independent review of all relevant evidence in the entire record before it, whether there will be sufficient water supplies to continue serving existing developed land uses in addition to satisfying the new demand from the Proposed Project, and whether there will also be sufficient water supplies to meet demand from other planned future development. The WSA is discussed in this EIR section, and the WSA is made a part of this EIR as Appendix B.

CEQA Guidelines Section 15083.5. CEQA Guidelines section 15083.5 seeks to incorporate S.B. 610's WSA procedure into the CEQA review process, requiring that when a proposed project meets certain requirements, as set forth above, the lead land-use agency (e.g., the City) must request information about water supply sufficiency from the public water supplier that would serve the proposed project. If the water supplier concludes there would be insufficient water to continue serving existing development, the proposed project and planned future development, then the water supplier must describe its plans for developing additional water supplies. That information is then included within the CEQA document for the proposed project, and the lead land-use agency must then evaluate the water supplier's information and determine, based on its own independent review of all relevant evidence in the entire record before it, whether projected water supplies will be sufficient to serve existing development, the proposed project and planned future development. The results of that evaluation must be included in the land-use agency's CEQA findings for the proposed project.

S.B. 221. S.B. 221, codified at Government Code section 66473.7, applies to the final approval of residential subdivisions comprising more than 500 dwelling units. S.B. 221 requires an affirmative written verification that a sufficient water supply will be available to meet the projected water demand of the proposed subdivision. Like the S.B. 610 WSA, the S.B. 221 verification also must assess the sufficiency of existing and projected water supplies, on one hand, and existing and projected future demand, on the other hand, during normal, single dry and multiple dry years over a projected 20-year period. MCWD's WSA for the Proposed Project includes a written verification of supply concluding that projected water supplies are sufficient to meet projected demand from the Proposed Project (see Appendix B).

4. Environmental Impacts Analysis

This subsection analyzes the potential significance of the Proposed Project's demand for, and use of, water resources.

a. Significance Thresholds

The Proposed Project would have a significant impact with respect to water resources if:

Central Marina service area to meet existing and planned future uses for that service area. See MCWD Water Supply Assessment for Marina Station, approved by MCWD on January 4, 2006.

⁴⁰ MCWD 2005 UWMP at p. 3-10.

⁴¹ MCWD 2005 UWMP at p. 3-8.

⁴² See Appendix B for WSA at p. 16.

- The Proposed Project's projected total water demand could not be satisfied from either presently existing sources of supply or reasonably foreseeable planned future sources of supply.
- The Proposed Project's projected total water demand, combined with the projected water demand from existing and reasonably foreseeable planned future development, could not be satisfied from either presently existing sources of supply or reasonably foreseeable planned future sources of supply.

The first significance threshold, above, focuses upon the *project-specific* physical environmental effects of the Proposed Project. The second significance threshold focuses upon the *cumulative* physical environmental effects of the Proposed Project. For both significance thresholds, reliance on a reasonably foreseeable planned future source of supply to meet water demand of the Proposed Project or of other planned future uses in the same service area would not give rise to a significant water supply impact recognized in the present EIR, so long as the environmental effects of developing that future source of supply had already been reviewed in a separate CEQA document. This analytical approach avoids duplicative environmental review and properly puts responsibility for assessing the potential environmental impacts of developing a new water supply upon the lead agency that is actually developing that supply.

b. Environmental Baseline

Although CEQA allows use of environmental conditions existing at the time of military base closure as the baseline for analyzing the potential significance of environmental impacts resulting from project-by-project implementation of a reuse plan, like the one adopted by FORA in 1997, this EIR uses an updated, current baseline that reflects changes in physical environmental conditions since adoption of the 1997 FORA Reuse Plan. Pub. Res. Code section 21083.8.1; CEQA Guidelines section 15229. Thus, the physical environmental setting described above in subsection G.2 of this EIR comprises the environmental baseline against which the preceding thresholds are applied to determine the significance of any adverse physical changes caused by implementation of the Proposed Project.

c. Impact Analysis

(1) Projected Water Demand Associated With Proposed Project

The starting point for analyzing the potential significance of the Proposed Project's projected total demand for and use of water is a comparison of that projected demand and use to existing and reasonably foreseeable planned future sources of supply available from the Proposed Project's public water supplier, MCWD.

(A) Projected Water Demand From Proposed Project

The WSA adopted by MCWD on March 22, 2006, estimates that 156.1 AF/Y of water will be demanded and used by the Proposed Project at full build-out. (Appendix B, WSA at Table 2-1.) That demand and use level encompasses interior water use within the housing and other facilities comprising the 772-residential unit senior housing project and exterior water use for the specific landscaping that has been designed into the Proposed Project. The City has analyzed and concurs with MCWD's demand

projection methodology for the Proposed Project.⁴³ Table G-7, below, shows the water demand estimated for all specified interior and exterior components of the Proposed Project.

As set forth in Table G-7 above, the WSA projects that the Proposed Project will use 156.1 AF/Y of water. That projection estimates average annual water demands for the Cypress Knolls project, based upon water use factors that reflect local climate and geography for the specific land uses comprising the Proposed Project. The projection recognizes that plumbing fixtures in new development are required to comply with current plumbing code standards, requiring such water conservation measures as low-flow plumbing devices that are not found in the majority of existing development, which predates updated code standards. As of August 2005, all projects within the District are required to implement additional conservation measures in the construction of new development and remodeling. Those additional conservation requirements include incorporation of hot water recirculation systems and high-efficiency clothes washers for residential units, and zero-use urinals for non-residential construction. Residential water savings anticipated by these MCWD code requirements were incorporated in the WSA water consumption estimate. Among the water conservation features built into the fundamental design of the Proposed Project are:

- Interior installation of high-efficiency clothes and dish washers;
- Interior installation of recirculating hot water systems;
- Interior installation of tankless hot water heaters; and
- Exterior landscaping that embraces a xeriscape approach maximizing use of native drought-tolerant plant species and minimizing the use of turf, with all irrigation systems employing evapotranspiration controllers that match water application to actual weather conditions.
- Double-piping to use recycled water for exterior common area landscape irrigation.

The water demand estimate for the Proposed Project is expressed as a long-term average annual level of demand. In any given year, actual water demand will vary, depending upon the final mix of land uses in the project ultimately approved by the City of Marina, water-use behavior of the residents and property managers, and actual landscape development and maintenance practices. In any given year, consumption is expected to vary year-to-year by as much as 7 percent, depending on weather and precipitation, with the greater use in drier years. After the first few years after any given phase of development occurs, expected water use typically falls for landscape irrigation as new landscape plantings become established and require less, or no, irrigation.

The Table G-7 water demand factors incorporate an estimate of the persons per dwelling unit and irrigable area for exterior housing units and common areas. The disaggregation, or separation, of interior water demand from exterior water demand is further broken down through the subdivision of exterior irrigation water uses according to

⁴³ The WSA presents MCWD's water demand projection methodology in a table that divides the Proposed Project into two phases. The City has determined that the Proposed Project will not be phased. Accordingly, Table G-7 combines the WSA's two-phased presentation of the Proposed Project's water demand projection into a single projection for the entire Proposed Project. The Proposed Project's 156.1 AF/Y demand projection remains unchanged.

landscape types, including areas of xeriscape-type (drought tolerant) landscaping, ornamental landscaping and turf landscaping. The resulting water demand estimate reflects a higher than typical level of accuracy for expected water use for landscaping related to each type of housing. The open space areas designated for “xeriscape” type (drought tolerant) landscaping are defined in the project description as irrigated only to establish plantings. Supplemental irrigation for those plantings will be disconnected within three years of planting, resulting in no long-term demands on the MCWD system for that portion of the project site.

(B) Projected Water Demand From Proposed Project Plus Program-level City Park And City Senior Center

As discussed above, concurrent with but separate from considering approval of the Proposed Project that would require approximately 156.1 AF/Y of water, the City is contemplating taking certain preliminary broad planning actions (such as a General Plan and zoning map amendment) to facilitate potential future development of a City public park and a City senior center on properties adjacent to the proposed senior residential uses. The City has determined that it would be most environmentally conservative to combine a project-level analysis of the potential effects of supplying water to the Proposed Project with a program-level analysis of the effects of also supplying water to a separate, adjacent potential future new City park and new City senior center. At the time, if ever, that the City proposes actually to develop the park and/or senior center, the City would undertake project-specific further CEQA review.

To provide any meaningful analysis (even if just at the program level), the potential future City park site and senior center were assumed to have certain design attributes that are required to develop a water demand projection. Those project-level design attributes have not actually been proposed, but are merely a reasonable estimate developed for environmental analysis purposes only. Accordingly, the potential future City park site comprises approximately 18 acres, 90 percent of which is assumed to be landscaping (16.2 landscaped acres). Of the landscaped acreage, approximately 65 percent is assumed to be turf and approximately 7 percent is assumed to be ornamental landscaping. When MCWD’s 2.5 AF/acre demand factor for turf and 1.5 AF/acre demand factor for ornamental landscaping are applied (the remainder is assumed to be paved hardscape and other uses that do not require water), the resulting water demand assumed for the park totals approximately 28 AF/Y.

The potential future City senior center site is assumed for this program-level analysis only to comprise 2.62 acres with up to 6,000 square feet of building area. Interior uses might include meeting rooms, game rooms, reading rooms, two bathrooms, an additional sink and a drinking faucet. Some 40 percent of the site is assumed to constitute landscaping comprised of 60 percent xeriscape, 25 percent ornamental and 15 percent turf. When the appropriate interior demand factor is applied, the total water demand for the senior center is projected to be approximately 2.24 AF/Y, with 0.79 AF/Y of that demand arising from exterior irrigation. Combining these potential future demands, the projected water demand for the potential future City park and City senior center, together, would be approximately 30.24 AF/Y. However, that water demand will not, and cannot, actually arise as a result of the City actions that are now proposed and which are analyzed only at a program level in this EIR. Before that future water demand could arise, the City would have to propose project-level action to construct the park and senior center.

**Table G-7 Projected Water Demand
Cypress Knolls Senior Housing Project—Project Level Demand**

Water Distribution by Use category (%)						Water Demands AF/YR				Notes
Land Use	Lot Size Sq. Ft	No. Units	Person/ Unif	Xeriscape %	Ornamentals %	Turf %	Total Interior	Total Exterior	Total Demand	
Residential										
Single Family	6,000	63	1.8	18.0%	9.5%	2.5%	6.73	1.78	8.51	Int. demand 53 g/pp/day
Single Family	5,500	315	1.8	18.0%	9.5%	2.5%	33.66	8.15	41.81	Int. demand 53 g/pp/day
Single Family	5,000	168	1.8	18.0%	9.5%	2.5%	17.95	3.95	21.90	Int. demand 53 g/pp/day
Townhome Lot	4,500	50	1.8	18.0%	9.5%	2.5%	5.34	1.06	6.40	Int. demand 53 g/pp/day
Apartments	6.23 ac	116	2.4	36.0%	7.0%	2.0%	16.53	0.97	17.50	Int. demand 53 g/pp/day
Assisted Living	3.78 ac	60	1.0	28.0%	30.6%	2.4%	8.07	1.96	10.03	Int. demand 120 g/p/day
Total Res.							88.28	17.87	106.15	
Non-Residential										
	Acres or sq. ft.	Sq. ft. Building Coverage								
Support Services	4.25 ac	6300		5.0%	90.0%	5.0%	0.04	6.27	6.31	
Open Space	28.57 ac			1.5%	14.0%	15.0%	0.00	16.71	16.71	
Parklands	2.17 ac			10.0%	50.0%	15.0%	0.00	2.44	2.44	
Right of Way	33.30 ac			23.0%	12.4%	10.9%	0.00	15.27	15.27	
Community Center	7.82 ac			50.0%	18.0%	12.0%		4.46	4.46	
Administration	1,500						0.18		0.18	
Residential Services	1,275						0.15		0.15	
Commercial	1,900						0.40		0.40	
Café/restaurant	2,500						1.86		1.86	Est. 64 seats
Beauty salon	850						0.12		0.12	
Activity rooms	3,500						1.05		1.05	
Indoor pool	5,000						1.00		1.00	
Total Non Res.							4.80	45.15	49.95	
Total Project Demand									156.10	

Demand factors: Residential Interior use 59 g/per person/day (MCWD Conservation Feasibility Study, adjusted for add'l actions; xeriscape - 0.0 af/acre; ornamental - 1.5 af/acre

Turf - 2.5 af/acre; Support services-.00021 af/sf; Administration and Residential Services .00012 af/sf; Commercial .00021 af/sf;

Restaurant - .029 af/seat; Beauty salon .059af /seat; Activity .0003 af/sf; Pool .02 af per 100 SF

Support services= maintenance storage building rated at 1 person daily indoor sanitary demand 40 g/pp/day

Water distribution by Xeriscape, Ornamentals, and Turf rounded to nearest tenth of a percent.

Water demands rounded to the nearest hundredth of an acre-foot per year.

Prior to making any decision approving a future proposal to construct the park and senior center, the City would have to first complete project-level CEQA review for such a proposal, as stated above. The future project-level CEQA review for any proposal to construct the City park and senior center would assess the sufficiency of water supplies available at that time to serve the park and senior center.

(2) Project-specific Impact Analysis of Cypress Knolls Senior Housing Project

The existing supply of FORA groundwater available to serve the proposed Cypress Knolls project and additional future land uses is shown in Table G-8.

As described above, FORA and MCWD have agreed to limit use of Salinas Valley groundwater for the Ord Community to 6,600 AF/Y as part of the Monterey County Water Resources Agency's (MCWRA) active, ongoing management of the Salinas Valley Groundwater Basin. Of that amount, FORA has earmarked 1,325 AF/Y of that groundwater (based on a 1,175 AF/Y initial FORA groundwater allocation plus an additional 150 AF/Y of FORA groundwater as described below) for use in Marina's portion of the Ord Community. To be consistent with the MCWRA's basin management program, including the MCWRA's allocation of 6,600 AF/Y of Salinas Valley groundwater for use at Fort Ord, the succeeding analysis focuses on the sufficiency of that 1,325 AF/Y of FORA groundwater (which is part of the 6,600 AF/Y) to meet the projected water demand of the Proposed Project.

Table G-8 shows the amount of FORA groundwater available to meet new demand after existing water uses in Marina's portion of the Ord Community and FORA groundwater allocations to the previously approved Marina Heights and University Villages projects are subtracted from the City's 1,325 AF/Y allocation of FORA groundwater. Existing Ord-Marina water use is approximately 238 AF/Y, according to actual metered water service usage based on records analyzed by MCWD in preparing the WSA.⁴⁴ Subtracting that existing use level from the City's 1,325 AF/Y allocation of FORA groundwater leaves 1,087 AF/Y of FORA groundwater available to serve previously approved and allocated uses, including the Marina Heights project and the Marina Community Partners (MCP) component of the University Villages project, as well as the Proposed Project. The City's approval of the Marina Heights project included a water allocation of 292.39 AF/Y.⁴⁵ The City's approval of the University Villages specific plan included a water allocation of 593 AF/Y exclusively for the MCP component of the overall University Villages specific plan.⁴⁶ Subtracting those allocations from the 1,087 AF/Y of FORA groundwater leaves 201.61 AF/Y of FORA groundwater. Subtracting the 156.1 AF/Y of water demand projected to arise from the Cypress Knolls project would leave 45.51 AF/Y of FORA groundwater available for other uses in Marina's portion of the Ord Community. Subtracting the 9.2 AF/Y of temporary water use for a concrete batch plant operating under a short-term City lease would leave 36.31 AF/Y of FORA groundwater available for other uses in Ord-Marina.

The WSA that MCWD prepared for the Cypress Knolls project estimated that build-out of the

⁴⁴ Cypress Knolls WSA at p. 13 (included as Appendix B to this EIR); *see also* MCWD Conservation Report by Land Use Jurisdiction by Subdivision, dated April 14, 2006 (included as Appendix B to this EIR).

⁴⁵ Ordinance No. 2006-04 (included in Appendix B to this EIR).

⁴⁶ City Council Resolution No. 2005-129 (making Water Code section 10911(c) findings and allocating FORA groundwater to MCP component of University Villages specific plan. *See also* February 15, 2006, letter from City to MCWD confirming 593 AF/Y allocation of FORA groundwater to MCP component, only, of University Villages project.

Marina Heights project might require up to 349.5 AF/Y and that build-out of the MCP component of the University Villages specific plan might require up to 732 AF/Y, so that just 5.5 AF/Y of FORA groundwater remained available to meet the projected 156.1 AF/Y of water demand for the proposed Cypress Knolls project. However, MCWD's demand estimates were incorporated from earlier MCWD estimates from the Marina Heights and University Villages WSAs. Those estimates did not account for or acknowledge that after those WSAs were prepared, the City in its approval of the Marina Heights project limited the Marina Heights water allocation to 292.39 AF/Y⁴⁷, and the City in its approval of the University Villages specific plan limited that project's water allocation to 593 AF/Y exclusively for the MCP component of the overall University Villages specific plan.⁴⁸ Those allocations were based on the City's independent analyses based on all the evidence in the entire record before the City at the time it approved the Marina Heights and MCP projects. Moreover, the City's independent review of the record in connection with approval of the MCP project led to the City's determination that the demand projection underlying the MCWD's WSA overstated demand.⁴⁹ Although FORA reviewed and approved both the Marina Heights and MCP project approvals and water allocations, those approved water allocations were not taken into account by the incorporation approach that MCWD employed in preparing the Cypress Knolls WSA

Finally, it is important to note that approval of the proposed Cypress Knolls project would not immediately result in 156.1 AF/Y of new water consumption, just as approval of the earlier Marina Heights and MCP projects has not resulted in immediate consumption of their respective 292.39 AF/Y and 593 AF/Y FORA groundwater allocations. In reality, the water demand builds up gradually over time, as groups of residential units and other uses within each project are physically constructed, sold or leased and then occupied by the new home owners and tenants who start using water and thereby generating actual long-term water demand. The rate of unit construction, sales and leases, occupation and resulting water use depends upon real estate market conditions that, ultimately, could result in a long, slow build-out period or, possibly, even less than full build-out. It is anticipated that full build-out, and therefore full water demand, will not occur until at least year 2015.

Impact G-1: Table G-8 shows the amount of FORA groundwater projected to be available following total build-out of both the Marina Heights and MCP redevelopment projects as 201.6 AF/Y. Adding the projected demand from build-out of the Proposed Project to the projected demand from build-out of the Marina Heights and MCP projects would result in approximately 45.51 AF/Y of FORA groundwater remaining available to meet additional uses in Marina's portion of the Ord Community, assuming all three redevelopment projects completely build out and that no new water supplies become available for use in Ord-Marina. Subtracting the temporary 9.2 AF/Y water use for the short-term concrete batch

⁴⁷ Ordinance No. 2006-04 making Water Code section 10911(c) findings and allocating FORA groundwater to Marina Heights project.

⁴⁸ Ordinance No. 2006-04 (making Water Code section 10911(c) findings and allocating FORA groundwater to MCP component of University Villages specific plan.

⁴⁹ Exhibit B to the City's Resolution No. 2005-129 explains why use of appropriate water demand factors for the MCP project and University Villages specific plan show that less water will be consumed than the amount assumed in the WSA that MCWD prepared for the University Villages specific plan. The basis for that determination involved the City's independent review of the record and concluded that the WSA's method for calculating exterior non-residential water demand overstated demand. The support for the City's determinations in Resolution No. 2005-129 was explained in a report titled "Information Sources, Procedures and Comparisons, Water Demand Estimates for the University Villages Project, Marina, California (April 2005)," prepared by RBF Consulting. The City's Resolution No. 2005-129, Exhibit B to that resolution, and the RBF report are all contained in this EIR as Appendix B.

plant lease use would result in 36.31 AF/Y of FORA groundwater remaining available for additional uses. Thus, development of the Proposed Project would result in water demand from existing uses and previously approved-but-not-built-out uses (Marina Heights and MCP) that can be satisfied from presently existing sources of supply. Accordingly, the Proposed Project will have a **less-than-significant project-specific impact on water resources.**

Table G-8

Existing FORA Groundwater Supply Available After Meeting Cypress Knolls Project-level Demand	
	AF/Y
FORA groundwater allocation to City of Marina-Ord Community (Ord-Marina)	1,325 ⁵⁰
Less Ord-Marina existing water use	-238 ⁵¹
Less FORA groundwater allocation to Marina Heights project	-292.39
Less FORA groundwater allocation to MCP component of University Villages specific plan	-593
Less Cypress Knolls projected water demand	-156.1
FORA groundwater available to meet other Ord-Marina demand after Cypress Knolls project	= 45.51
Temporary concrete batch plant use	-9.2 ⁵²
FORA groundwater available during temporary batch plant use	= 36.31

Meanwhile, it is important to note that at the same time Marina Heights, MCP and the Proposed Project begin to build out, MCWD is carrying out actions to augment the water supplies available to serve the Ord Community. As discussed above, one such effort is the Regional

⁵⁰ March 1, 2004, letter from FORA to MCWD describing and confirming allocation of additional 150 AF/Y of FORA groundwater to City of Marina from FORA's strategic reserve. See Appendix 1 to Cypress Knolls WSA, which is included within this EIR as Appendix B.

⁵¹ The 238 AF/Y level of existing, or baseline, water use in Marina's portion of the Ord Community includes up to 8.5 AF/Y of existing water use that is being relocated from the existing FORA offices, Builders Exchange at 100 12th Street to the Imjin Parkway Office Park at the corner of Imjin Parkway and 2nd Street. Although the City projects that the relocation of these existing uses to the new office park facility is expected to reduce their water demand to approximately 5.16 AF/Y as a result of new, more efficient water fixtures, this EIR assumes the existing 8.5 AF/Y use level will continue as part of the 238 AF/Y of existing water demand described by MCWD in the Cypress Knolls WSA. On May 24, 2006, MCWD adopted Resolution No. 2006-35 approving a Construction and Transfer of Water, Sewer and Recycled Water Infrastructure Agreement for the Imjin Parkway Office Park which recognizes that the 8.5 AF/Y water account "would be relocated to the new Imjin Office Park."

⁵² Approximately 9.2 AF/Y of the 45.51 AF/Y of water will be used temporarily under a five-year use permit and associated five-year lease the City has approved to allow the temporary operation of a concrete batch plant located on a City-owned parcel at the former stockade facility on the south side of Imjin Parkway, near Imjin Road at 499 Ninth Street—all within the City's portion of the Ord Community. The City Redevelopment Agency adopted Resolution No. 2006-19 on January 24, 2006, approving the five-year batch plant lease with the possibility of one two-year extension. The City Planning Commission adopted Resolution No. 2005-09 on November 10, 2005, approving a five-year use permit for the batch plant, which provides that "This Use Permit is valid for a five (5) year period and will expire on February 28, 2011." MCWD is to serve the batch plant through the Fort Ord water system. Until additional water supplies become available for use in the City's portion of the Ord Community, the amount of FORA groundwater available for other uses within Ord-Marina is temporarily reduced by 9.2 AF/Y to accommodate the operation of the temporary batch plant. The resulting amount of available FORA groundwater, after accommodating the temporary batch plant water use, is 36.31 AF/Y.

Urban Water Augmentation Project, or Augmentation Project, which has been approved at a program level to develop up to 2,400 AF/Y of new water to support Ord Community redevelopment. MCWD's adopted 2005 Urban Water Management Plan concludes that this 2,400 AF/Y of water is at a sufficiently advanced stage of development to count as a planned future supply that will be available to meet planned future uses for purposes of Water Supply Assessments prepared under S.B. 610. MCWD's adopted 2005 UWMP explains that the Augmentation Project "is designed to support build-out under the development restrictions imposed by the current Reuse Plan for former Fort Ord."

The first component of the Augmentation Project to go on line is expected to make up to 1,500 AF/Y of reclaimed water available for exterior irrigation use, with 1,200 AF/Y of that water slated for use within the Ord Community. MCWD projects that reclaimed water will be available by 2008. That reclaimed water will be used to irrigate exterior landscaping that is now irrigated with potable FORA groundwater or that would otherwise be irrigated with potable FORA groundwater. Accordingly, each acre foot of reclaimed water used to irrigate existing landscaping or future landscaping that was assumed to use potable FORA groundwater would, in effect, free up an acre foot of potable FORA groundwater that would be redirected to serve other water uses. By 2009, the City projects that some 114 AF/Y of reclaimed water would be used within its portion of the Ord Community, with some 605 AF/Y of reclaimed water being used by 2015.⁵³

The second component of the Augmentation Project to go on line is expected to make up to 1,500 AF/Y of desalinated seawater available, with 1,200 AF/Y of that water slated for use within the Ord Community. MCWD projects that desalination water will be available in 2009.

Use of the reclaimed and desalination water will help to protect the Salinas Valley Groundwater Basin by augmenting local water supplies without increasing groundwater extractions, thus respecting the FORA groundwater allocation regime derived from the 1993 MCWRA annexation agreement establishing the 6,600 AF/Y limit on extraction of Salinas Valley groundwater for use on Fort Ord.

Finally, on July 12, 2006, MCWD approved the Desalination Agreement to make an additional 300 AF/Y of water available to the Marina Heights, MCP and Cypress Knolls redevelopment projects from MCWD's existing desalination plant.⁵⁴ That supplemental source of supply is not needed to meet the projected water demand associated with the three projects. Rather, it would be available as a future back-up supply to provide additional water to the projects, if for some reason it were needed in the future. CEQA review for the agreement has already been completed. On May 24, 2006, MCWD adopted Resolution No. 2006-38 certifying a CEQA Addendum. The City has concluded that the desalination plant's water is not necessary to serve the three preceding redevelopment projects because the City has allocated sufficient FORA groundwater to those projects, and FORA has approved the water allocations to those projects. Nevertheless, the MCWD's 2005 UWMP determined that the 300 AF/Y of water from the existing desalination plant is an available source of supply for purposes of S.B. 610 and S.B. 221 and has now approved an agreement specifically making that supply available to the three projects.

⁵³ See City of Marina Recycled Water Demand spreadsheet, contained in this EIR as Appendix B.
⁵⁴ MCWD Resolution 2006-53.

(3) Program-level Impact Analysis

The approximately 30.24 AF/Y of water demand projected for a potential future City park and City senior center considered in this EIR at a program level only (to assess a potential general plan and zoning change to allow the two potential future uses) could be served from the approximately 45.51 AF/Y of existing FORA groundwater projected to be available after build-out of the proposed Cypress Knolls project and the previously approved Marina Heights and MCP projects (and from the 36.31 AF/Y of water available after subtracting the 9.2 AF/Y of temporary demand from the short term concrete batch plant use). However, the City is not now proposing any project-level action that would allow construction of the two potential future uses, and such action would not occur until after completing further project-level CEQA review for these two potential future uses. Although existing water supplies are available to serve these two potential future uses, it also is reasonably foreseeable that additional water supplies also will be available in the future to serve the City park and senior center, as well as other planned future land uses. As noted below, the Augmentation Project is such a reasonably foreseeable source of additional water.

As discussed more fully above, MCWD has already approved a program to provide 1,200 AF/Y of reclaimed water and 1,200 AF/Y of desalination water for use within the Ord Community—a planned future water supply that MCWD's adopted 2005 Urban Water Management Plan concludes will be available to meet planned future uses within the Ord Community for purposes of Water Supply Assessments prepared under S.B. 610. The reclaimed water is scheduled to be made available by 2008, and the desalination water is scheduled to be available by 2009.

Impact G-2: 45.51 AF/Y of FORA groundwater is projected to be available for use within Marina's portion of the Ord Community following total build-out of the Marina Heights, MCP and proposed Cypress Knolls redevelopment projects, assuming all three redevelopment projects completely build out and that no new water supplies become available for use in Ord-Marina. (Refer to Table G-8). The total combined additional demand projected for the potential future City park and City senior center is approximately 30.24 AF/Y. Although that demand comes within the 45.51 AF/Y of available FORA groundwater⁵⁵, any project-level action to cause construction of the park or senior center will require further project-level CEQA review for these uses. Thus, development of the Proposed Project, combined with a program-level approval of the potential future City park and City senior center, would not create new water demand that exceeds available sources of supply. Accordingly, the Proposed Project, combined with the City's program-level approval of the potential future City park and City senior center, will have a **less-than-significant program-level impact on water resources**.

(3) Cumulative Impact Analysis

This EIR section analyzes the potential significance of the Proposed Project's cumulative

⁵⁵ The projected combined demand also comes within the 36.31 AF/Y of FORA groundwater available after subtracting the temporary 9.2 AF/Y of water use for the short-term concrete batch plant lease use. As discussed above, this currently existing lease terminates after five years, although there is the potential for a two-year extension. Even with the extension, the batch plant lease and associated water use are expected to end prior to any City action, if ever, to construct the City park and senior center. As discussed above, the City's commitment to performing further project-level CEQA review prior to approving any action to construct the park and senior center ensures an up-to-date assessment of water sufficiency for these two potential future uses.

impact on water resources based on whether the Proposed Project's projected water demand, combined with the projected water demand from existing, recently approved and reasonably foreseeable probable future projects could be satisfied from presently existing sources of supply and reasonably foreseeable probable future water supplies.

As discussed above, the City and MCWD have both concluded that existing water supplies are sufficient to serve the Proposed Project, plus existing development and recently approved development. With respect to probable future development, MCWD's 2005 Urban Water Management Plan concludes that "[t]he Regional Urban Water Augmentation Project is designed to support build-out under the development restrictions imposed by the current Reuse Plan for former Fort Ord."⁵⁶ As discussed above, the Augmentation Project's 2,400 AF/Y water supply is a probable future water supply that is reasonably projected to be available to serve probable future development projects.

Looking beyond the availability of existing and probable future water supplies to meet demand from the Proposed Project plus existing and probable future development, MCWD's UWMP projected that development of potential future land uses in the Ord Community from now through at least the year 2025, including within the City of Marina's portion of the Ord Community, would result in water demand that exceeds available supplies, including the 2,400 AF/Y of new water now being developed through MCWD's Augmentation Project.⁵⁷ Potential future land uses within the City of Marina's portion of the Ord Community include new parks, a K-8 school, an airport area golf course and business park, a new high school, an equestrian center, and unknown commercial development. These potential uses encompass both probable future projects as well as projects that are not probable (i.e., they are speculative in the sense that there is no specific development proposal, application, identified use, identified intensity of use, identified developer or identified funding source for such development).⁵⁸ Although MCWD's UWMP projects that the water demand from full development of potential future Ord Community land uses would exceed projected water supplies, the UWMP recognizes that this maximum potential development scenario is speculative, because it could occur only if current development limits imposed by the adopted FORA Reuse Plan "were lifted."⁵⁹ The UWMP emphasizes that: "If that limitation were lifted, and the long-term development that is projected by the land use jurisdictions beyond the current limits now imposed by the Base Reuse Plan were permitted and constructed in the future," additional water supplies beyond the planned 2,400 AF/Y Regional Urban Water Augmentation Project would be required."⁶⁰ Conversely, because redevelopment project approvals are restricted by Reuse Plan limitations, development that exceeds these limitations cannot be considered probable or planned for CEQA purposes. Consistent with the UWMP's recognition that a projected future imbalance between water supply and demand would only occur if current, legal development limits in the adopted Reuse Plan were lifted, the MCWD's WSA for the Proposed Project explains:

"It is important to keep this projected imbalance in perspective. Redevelopment of the former Fort Ord is only now beginning and the

⁵⁶ MCWD 2005 UWMP at p. 3-10.

⁵⁷ Cypress Knolls WSA at p. 16 (citing MCWD 2005 UWMP).

⁵⁸ No developer has been identified for the airport projects or the vacant land located at Fourth and Imjin. Future re-use intensity of the Marina Equestrian Center has not yet been determined. The School District has not determined permanent locations for a new K-8 school or the Marina High School. The City has not determined exact locations or construction dates for future parks.

⁵⁹ MCWD 2005 UWMP at p. 3-8.

⁶⁰ *Id.* (Emphasis supplied.)

actual pace and form of redevelopment is expected to change over time. As this development proceeds and plans are modified, the MCWD will be updating its UWMP projections in five-year intervals. The relative uncertainty that the projected supply imbalance will actually materialize does not justify investment in specific plans to develop supplies beyond the planned water augmentation project at this time.⁶¹

Meanwhile, in the Central Marina portion of MCWD's service area, which is separate from the Ord Community service area from a water allocation perspective⁶², MCWD projects a water surplus after accounting for the development that may occur through at least the year 2025. Of the 3,020 afy of Salinas Valley groundwater available for use in Central Marina under the 1996 annexation agreement approved by MCWRA, approximately 2,200 afy of such groundwater is now used by existing development, leaving approximately 820 afy available to serve future growth and development in Central Marina. Assuming increased water demand from the Central Marina development that may occur in the next two decades, MCWD's 2005 UWMP still projects a 388 afy groundwater surplus through at least year 2025.⁶³ Similarly, based on the groundwater allocated by the 1996 MCWRA annexation agreement for use on the RMC Lonestar (500 AF/Y) and the Armstrong Ranch lands (920 AF/Y), no water supply shortages are projected through year 2025 for those lands.⁶⁴ After accounting for the proposed Marina Station development at Armstrong Ranch, MCWD still projects a water surplus.⁶⁵

Impact G-3: The City and MCWD have concluded that the 2,400 AF/Y of Augmentation Project water is a reasonably foreseeable probable future water supply that will be available to serve probable future projects. Based on the cumulative water demand projected to arise from existing development, the Proposed Project and probable future projects that are allowed under the current, adopted Reuse Plan, and the conclusion of MCWD's 2005 UWMP that "[t]he Regional Urban Water Augmentation Project is designed to support build-out under the development restrictions imposed by the current Reuse Plan for former Fort Ord"⁶⁶, the City concludes that approval of the Proposed Project in combination with other probable future development will have a **less-than-significant cumulative impact on water resources**.

⁶¹ *Id.*

⁶² As discussed above, the Central Marina and Ord Community service areas historically were operated as separate water systems that are now interconnected, so that wells in one area can produce additional water to make up for a sudden well production problem in the other area. Compliance with the groundwater production limits imposed by the 1993 and 1996 MCWRA annexation agreements is assured by meters installed at each point where the two service area distribution systems are interconnected.

⁶³ MCWD 2005 UWMP, Table 3.4, at p. 3-9.

⁶⁴ *Id.* Although neither the RMC Lonestar nor the Armstrong Ranch lands are within MCWD's existing service area, it is contemplated that MCWD would annex those lands and provide water service to any development that were approved. In fact, MCWD has requested that the Monterey County Local Agency Formation Commission approve a service area annexation encompassing the proposed Marina Station development at Armstrong Ranch.

⁶⁵ MCWD 2005 UWMP at pp. 3-4 to 3-5 and Table 3.4 at p. 3-9; *see also* Marina Station WSA MCWD Resolution No. 2006-05, February 22, 2006

⁶⁶ *Id.* at p. 3-10.

H. WATER DISTRIBUTION AND FIRE FLOWS

1. Environmental Issue

The existing water system must be capable of delivering a reliable supply of water to the Project for domestic consumption and fire fighting purposes. For domestic consumption the pressure at the service connection should be maintained between 40 psi and 80 psi from no-flow conditions through delivery of the peak hourly demand.

Fire flows for high-density construction should be considered in the design of the water distribution system. The system should deliver an absolute minimum flow rate of 1500 gpm while maintaining a minimum pressure of 20 psi. The fire department may increase the fire flow requirements for increased hazards such as high-density land use, difficulty of access and longer response time. The department may also decrease the fire flow requirements for smaller structures and for other reasons such as the provision of fire sprinklers within the structures.

Project Specific and Program Level Analysis Assumptions

The issue of water distribution and fire flows can be analyzed adequately without special assumptions regarding the program level project components. Thus, the impacts and mitigations presented below apply to both the project and program level components.

2. Environmental Setting

The Project area is served by the (former) Fort Ord water system. Fire flow tests conducted by the City of Marina Public Safety indicate that available fire flow is, at best, marginal. In developments with wood-frame, duplex, residential structures, a 1500 gpm fire flow is a typical requirement, but this may be reduced to 1,000 gpm for all townhome structures in the Project provided they are under 3,600 square feet. However, higher fire flows will be required for the higher density apartment component. The flow tests indicate that about 1400 gpm is available for fire flow at the best test location. Flows from 1100 gpm to 1200 gpm are more typical throughout the Project area. (Refer to Technical Appendices Volume, Appendix F–Fire Flow Test Results.)

Additional testing verified the fire department's flow tests. Furthermore, the tests show that the static pressure is near 120 psi in portions of the system—much too high for normal domestic use.

Flow testing and system computer models determined that two pressure reducing valves (PRVs) connecting the Project's water system to the "backbone" of the Fort Ord system are not functioning properly. The high static pressure in the system indicates that at least one of the PRVs is stuck in a partially open position. The low fire flow capacity indicates that neither of the two PRVs is delivering its rated flow. Discussions with the Marina Coast Water District staff indicate that the district has tried to repair the PRVs with little success. The PRVs are simply too old to reliably provide water to the Project within the required parameters described above.

The system supplying this Project, upstream of the PRVs, is old but adequate. While considered reliable at this time it will be requiring increased maintenance as the age becomes a larger factor.

The minimum fire flow and flow duration requirements for one and two-family dwellings having a fire area which does not exceed 3,600 square feet shall need 1,000 gallons per minute. Fire flow and flow duration for dwellings having a fire area in excess of 3,600 square feet shall not be less than specified in Table A-III-1 of the 2001 Edition of the California Fire Code as adopted by the city. A reduction of fire flow of 50% may be granted for buildings with an approved fire sprinkler.

The minimum fire flow and flow duration for buildings other than one and two-family dwellings shall be as specified in Table A-III-1 of the 2001 Edition of the California Fire Code as adopted by the City. A reduction in required fire flow up to 50% may be granted for buildings with an approved fire sprinkler. Based on current flow tests, the project is required by City Ordinance to install fire sprinkler systems in all structures "unless other fire suppression mechanisms are approved by the Fire Chief."

3. Environmental Impacts

Project Impacts

When the operating pressure of the water system is too high there are two consequences. First, water consumption is higher because the high pressure forces water through fixtures at a higher rate. Second, there is a higher rate of failure of residential plumbing pipe and fixtures when the pressure is too high. Bursting pipes and fixtures will damage buildings and contents. Leaking pipes and fixtures will leak more water when the pressure is high.

Impact H1: The existing water distribution system does not provide minimum fire flows necessary for public safety purposes for attached structures having over 3,600 square feet of floor area, nor for the larger structures such as apartments and the assisted living facility. This is a potentially significant impact.

Deficient fire flow has the obvious impact of decreasing the ability of the fire department to fight fires. Fire department fire flow standards are based on the Uniform Fire Code.

Cumulative Impacts

The local system is attached to a larger transmission system. The transmission system provided a very comfortable supply during the tests, but the transmission system itself was not tested or inspected for condition or reliability. The age of the transmission system is assumed to be similar to that of the local distribution system. Continued aging of the supply system will cause a future decrease in reliability. An additional connection should be provided.

4. Mitigation Measures

Mitigation H1(a): Project residences shall be provided with a combination of fire sprinkler systems and/or fire flow and/or other mechanisms approved by the Fire Chief to meet the standards of the Uniform Fire Code and the Fire Division of the Marina Public Safety Department.

Level of Significance After Mitigation: Utilization of fire sprinklers and/or measures to achieve adequate fire flow and/or other mechanisms approved by the Fire Chief to meet

applicable standards will reduce safety hazards resulting from inadequate fire flows to less than significant levels.

Mitigation H1(b) To increase the performance of the water distribution system for fire flow purpose, provide a new connection between the system and the 16-inch well transmission line at Third Avenue and the California Road extension in a manner which will meet the minimum Project fire flow requirements determined by the Fire Safety Division of the Marina Public Safety Department.

Level of Significance After Mitigation: The measure will improve the delivery of fire flow or domestic flow within the Project to meet Project fire flow requirements and will reduce any impacts to less than significant levels. The measure will also increase the reliability of the system by providing a connection independent of the existing connections supplying the Project. This connection will assure continued system operation should the aging existing system fail and will provide an alternate point of connections that improve flexibility during system outages caused by maintenance of system failure, thus reducing any cumulative impacts to less than significant levels as well.

I. DRAINAGE

1. Environmental Issue

A small portion of the Project site¹ has been identified by the Federal Emergency Management Agency (FEMA) as lying within flood zone "AE" and is therefore considered to be subject to flooding from a 100-year flood. The "AE" zone designation means that conditions are present that causes concern of flooding. Residences should be at least one foot higher than the calculated flood level to assure the safety of people and property and to meet the requirements of the flood insurance program.

Project and Program Analysis

The project site is analyzed as a whole, not distinguishing the project and program level portions of the site, because the entire area contributes storm water to the watershed and proposed storm water basin. Construction of the proposed Tentative Tract storm drainage conveyances and basin are assumed to provide adequate capacity for the future potential program level land uses as a matter for standard City Public Works Department project approval requirements.

2. Environmental Setting and Flooding Standards

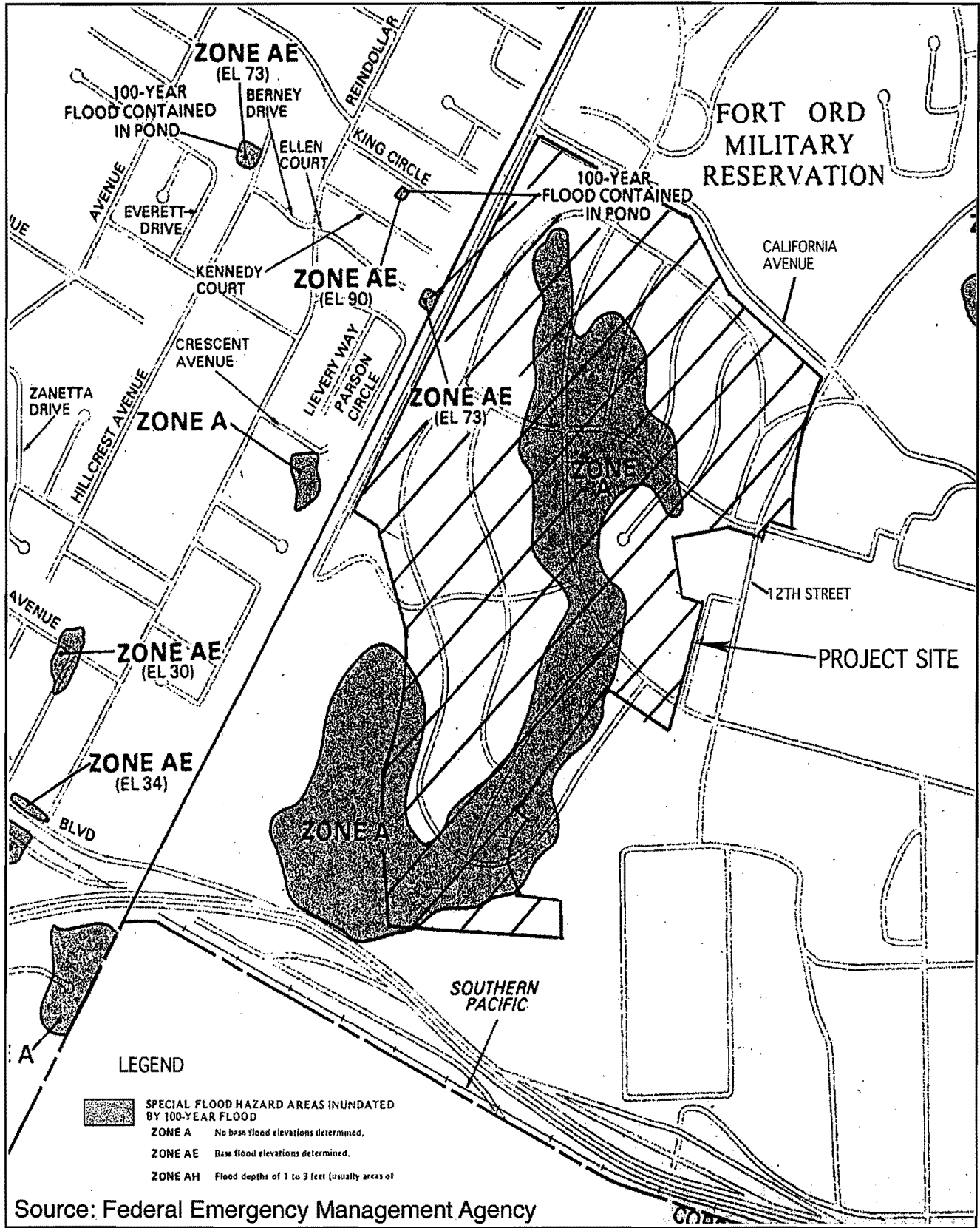
Until recently the project site was designated on the FEMA FIRM map with substantial areas in flood zone A as depicted on **Map 15- Previous FIRM Map**.

All of the runoff leaving these watersheds flows to an existing retention basin abutting Highway 1. EIR Technical Appendices Volume- Appendix C contains a calculation of capacity needed in this existing facility for the applicable 10, 25, 50 and 100 year storm events using City of Marina engineering standards for such calculations. This analysis determined that the basin volume has substantially more capacity than that required by the largest storm event.

FEMA Standards

Effective August 17, 2006 FEMA has issued a revised FIRM map covering this site. The new FIRM map takes into account more detailed study factors including soil characteristics. The FEMA FIRM indicates that the only portions of the site subject to flooding is the proposed retention basin itself (i.e., an area intended to hold storm runoff) which exists in a natural depression. The Flood zone designation AE means "zone A -elevation determined" (refer to **Map 16- FIRM Map for the Site**). The flood elevation on the FIRM map is elevation 32.0.

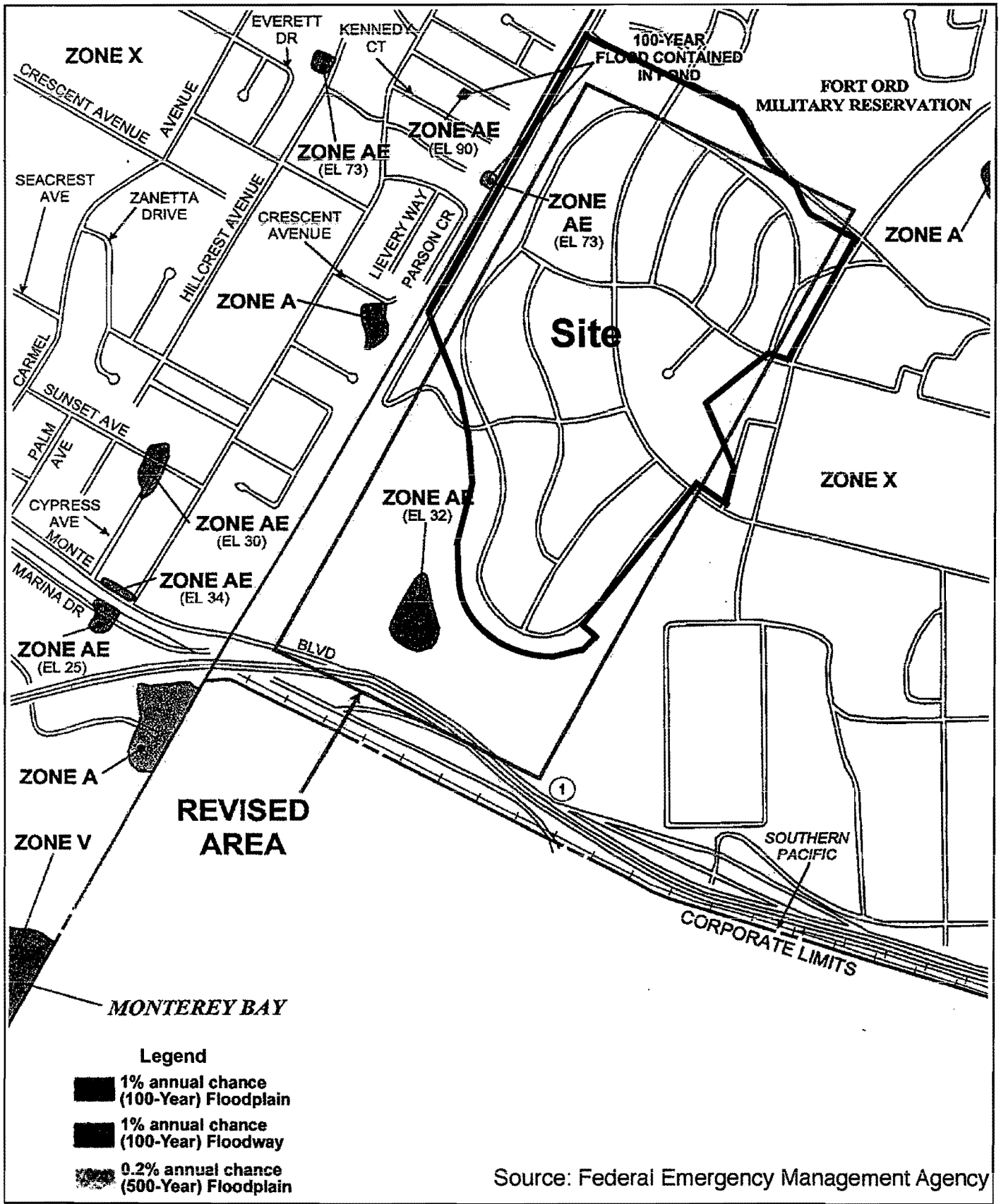
¹ FEMA Letter of Map Revision (LOMR) effective August 17, 2006, which issued a revised Flood Insurance Rate Map (FIRM) showing a small flood zone "A". Prior FIRMs, generated without any detailed study, showed a larger zone "A" area; the recent revised FIRM is based on recent detailed study.



Previous Flood Insurance Rate Map
(FIRM)



Map
15



3. Environmental Impacts

Significance Threshold

The project would have a significant impact if it resulted in any of the following impacts:

- Expose people or property to water related hazards such as flooding, or place within a 100-yr flood hazard area, structures, which would redirect flood flows; and
- Expose people or structures to a significant risk of loss, injury, or death involving flooding.

Project Impacts

Based on the FEMA Letter of Map Revision and FIRM map effective August 17,2006, no area of the Proposed Project site would be subject to flooding.

The redevelopment of the Project area will have no substantial impact on the flooding and the existing stormwater retention basin because there is adequate stormwater capacity in the existing basin and the new storm drainage system can be sized to accommodate post development flows.

Impact I-1: The Proposed Project could have areas of localized flooding if the Project does not provide stormwater conveyances sized to accommodate the 100 year storm event runoff. This condition is a potentially significant impact due to flooding.

Cumulative Impacts

The watershed for cumulative impact condition includes the project site, portions of the Marina Heights project to the east and portions of the developed City of Marina. The developed areas in the City have existing storm water retention and conveyances that are adequate for the essentially fully developed condition. When the Marina Heights project develops, storm drain improvement plans would as a matter of course be designed and integrated into the Cypress Knolls storm drain system, as part of City Public Works Public Improvement Plan review and approval. The sizing of conveyances for storm water would be determined at that time and no substantial cumulative impact is identified. In addition, because the site discharges all its stormwater to the basin, there is no off-site effect or impact on the stormwater conveyances.

4. Mitigation Measures

Mitigation I-1: To mitigate potential 100-year storm flooding impacts final Tract grading and drainage plans shall create storm drains to convey a 100-year storm volume to the retention basin, acceptable to the City Public Works Department.

Level of Significance After Implementation of the Mitigation Measures: The mitigation measure will eliminate the impact by providing for adequately sized stormwater conveyances.

J. VISUAL RESOURCES

1. Environmental Issue

As part of the General Plan update process the City has developed policies related to the visual quality of the community (see Section III Environmental Setting- Consistency with Adopted Plans and Policies). The CEQA Guidelines indicate projects should be evaluated to determine if scenic vistas would be obstructed as a result of the Project or if other aesthetic impacts would be caused by the Project.

Project Specific and Program Level Analyses

Building heights and massing, and approximate tree loss, would not vary dramatically depending upon the exact specific designs for the future potential city park and senior center (i.e., the program-level components of the proposed project). Accordingly, estimates of visual impacts from tree loss and building heights/massing for these program actions can be estimated without being speculative. Building heights/massing and tree loss for the proposed senior residential development are actually proposed. Accordingly, for the topic of Visual Resources, the project site is examined as a whole, including the two program-level parcels (i.e., the future potential park and senior center sites). The identified impacts and mitigation measures apply to both the project and program levels components.

2. Environmental Setting

Regional Setting

The Reuse Plan EIR describes the regional visual setting as follows:

Within its regional context, much of former Ford Ord is visually unique because it contains vast areas of natural and diverse vegetative cover, its shoreline appears relatively undisturbed, and it is mostly undeveloped. Most of the installation's development, largely confined to the Main Garrison and East Garrison and associated residential areas, consists of one- or two-story buildings. Mature landscaping surrounding these buildings partially conceals them from view, softens their appearance by helping blend them with their surroundings, and contributes to the natural character of the landscape. With the exception of a few areas near SR1 and in the north and northeast portions of the study area, former Fort Ord appears preserved as a largely natural area surrounded by intensively farmed land and increasing urban development.

The Reuse Plan EIR evaluates the visual quality of the former Fort Ord in terms of vividness, intactness, and unity and concludes:

The former Ford Ord exhibits relatively high visual quality, due to its vividness, intactness, and unity. Vividness of the study area, particularly when viewed from the Salinas Valley, the bay, and in background of heavily used tourist areas such as Fisherman's Wharf in Monterey, is moderate to high because of its generally undeveloped scenic appearance in contrast with nearby developed urban areas. The study area exhibits a generally high level of visual intactness because of its extensive natural vegetation cover and localized areas of development. Although some built elements contrast strongly in form with other elements in the former Fort Ord landscape, the visual unity of the study area is generally high. Constructed elements are generally consistent in architectural style, low in height, and surrounded by considerable continuous cover of mature vegetation that helps blend the

elements with their surroundings; these factors combine to produce a high degree of visual coherence.

Project Site Visual Setting

On the lands of the former Fort Ord in and nearby Marina, family housing is grouped into five distinct neighborhoods: Schoonover Park, Frederick Park, Preston Park, Abrams Park, and Patton Park. These areas are visually separated from one another by buffers of open space. A general pattern prevails of locating housing in hollows between ridges, and letting roads occupy the high ground. As a result, these former residential areas display a generally subordinate place in the visual setting in the northern end of the former Fort Ord where the Patton Park (Cypress Knolls) and Abrams Park exist.

The Proposed Project site typifies one of the dominant development patterns on the former Fort Ord which is the clustering of development along curvilinear streets. This relatively open pattern tends to visually separate these areas from the tighter, more rectilinear development pattern of the developed portions of the City adjoining the project site to the north as well as other parts of the former Fort Ord immediately south of the project site.

The proposed Project site contains a significant number of mature trees. This, combined with the low profile of structures and the undulation of the topography, creates a relatively "low key" visual appearance in which the landform and trees are more visually dominant than the built environment.

3. Regulatory Setting

The following comprises the regulatory setting for the issue of Visual Resources:

Fort Ord Reuse Plan. The Fort Ord Reuse Plan guides all development of the former Fort Ord. The Reuse Plan The Context and Framework Volume 1 contains in the Community Design Vision section related to Landscape and Open Space the following goals that apply to the Proposed project:

- Establish an open space corridor of a minimum of 100 feet along the entire eastern edge of State Highway 1, and landscape this Fort Ord corridor via a master landscape plan, to reinforce the regional landscape setting along the entryway to the northerly peninsula.
- Establish a pattern of landscaping of major and minor streets, including continuous street tree plantings to define gateways to the former Fort Ord and enhance the visual quality and environmental comfort within the community.
- Encourage a pattern of development at the neighborhood and district levels that ensures a generous provision of open space.

The Reuse Plan Volume 2- Reuse Plan Element, page 24, contains the following policy and program generally applicable to the visual quality of the proposed project:

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.

As detailed below under the heading of City of Marina General Plan, the cited policies in that document are intended to fulfill and implement the goals and policy listed above from the Reuse Plan.

Highway 1 Design Corridor Design Guidelines. This document (Design Guidelines) applies to properties within the former Fort Ord boundary limited to a narrow band along Highway 1 (SR1). The Design Guidelines serve to define 1) a common look and feel for the Highway 1 Corridor as outlined by the Reuse Plan, and 2) provide general guidelines to protect and enhance the character of the Highway 1 Corridor. The Design Guidelines are consistent with the land uses in the Reuse Plan, and protect the design goals included in that document.

California State Scenic Highway Program. The California State Scenic Highway Program was created by the Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. The program includes a list of highways that are either designated or eligible for designation as scenic highways. The section of Highway 1 (SR1) adjacent to the project site is designated an eligible State Scenic Highway. However, it has not been so designated.¹

City of Marina General Plan. The City of Marina General Plan includes the Community Design & Development section to guide the decisions that will shape the City's future physical and spatial form and appearance. The following goals and policies from the Community Design & Development section of the City of Marina General Plan (General Plan) relate to aesthetics and visual resources under "City Form and Appearance":

"4.13: Future improvements along the City's major travel corridors shall be designed to build upon the positive attributes of these travel corridors so as to enhance the image of the City and make the use of these corridors more pleasurable for both motorists and adjoining residents and businesses. To achieve this end, the following policies shall apply.

1: Each major travel corridor shall have a generally consistent streetscape appearance along designated segments shown in Figure 4.1 [Marina General Plan], so as to reinforce

¹ www.dot.ca.gov/hq/LandArch/scenice/cansys.htm

a sense of identity and continuity. This objective can be achieved by unified landscaping (trees, groundcover, paving, lights, and signage) of the right-of-way.

2: Significant natural features, major intersections, and points of special interest which occur along the corridor should be highlighted with special design treatment.

4.15: With the exception of its Monterey Bay frontage, there are no major defining natural topographic features within the existing City. But small-scale topographic features are important in local contexts. For example, along the east side of Highway One south of Reservation Road, high dunes buffer the City from the freeway and serve as a visual backdrop to areas of housing. More generally, the gentle undulating topography of the City's neighborhoods helps break up the generally linear pattern of both local streets and major crosstown routes such as Del Monte Boulevard and Reservation Road.

4.17: The form and appearance of the City is further defined by major areas which are readily distinguishable from other areas.... If each neighborhood or district could further develop a distinctive character, the organization of the City would become more evident and its image would become more appealing.

4.18: Figure 4.1 identifies those areas of the City where establishing a distinctive neighborhood or district appearance is desirable. Within the already built-up areas, existing distinctions should be retained and reinforced. Within new development or redevelopment areas, the following three design techniques should be applied:

1. The boundaries of the neighborhood or district should be clearly defined by open space buffers or roadways.
2. Major identifying features such as park, plaza, or school sites should be provided.
3. Each area should have its own distinct street pattern, and a consistent and evident landscape scheme should be applied to its street and associated fronting properties.

4.18.3: The visual character and scenic resources of the Marina Planning Area shall be protected for the enjoyment of current and future generations. To this end, ocean views from Highway 1 shall be maintained to the greatest possible extent....landscape screening and restoration shall be provided as appropriate; new development should be sited and designed to retain scenic views of inland hills from Highway 1,.....and architectural review of projects shall continue to be required to ensure that building design and siting, materials, and landscaping are visually compatible with the surrounding area."

3. Environmental Impacts

Impact Significance Criteria

In accordance with the State CEQA Guidelines, this analysis assumes that the Proposed Project would have significant visual or aesthetic impacts if it would:

- Have a substantial adverse effect on a scenic vista

- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
- Substantially degrade the existing visual character or quality of the site and its surroundings.
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

Project Impacts

Figure J-1a –Visual Analysis Viewpoints shows the viewing locations of the photographs on **Figures J-1 and J-2**. Key viewing areas are identified as SR1 and along the route of the future Del Monte Avenue extension which would run roughly parallel to SR1 but closer to the proposed Project site.

Figure J-1b, Photo 1, shows the view toward the site looking southeast from SR1 near the Del Monte Boulevard exit. Existing trees screen most of the project site and existing residential units nearest this viewpoint. The proposed project plans show these trees to be retained for their aesthetic and screening purposes.

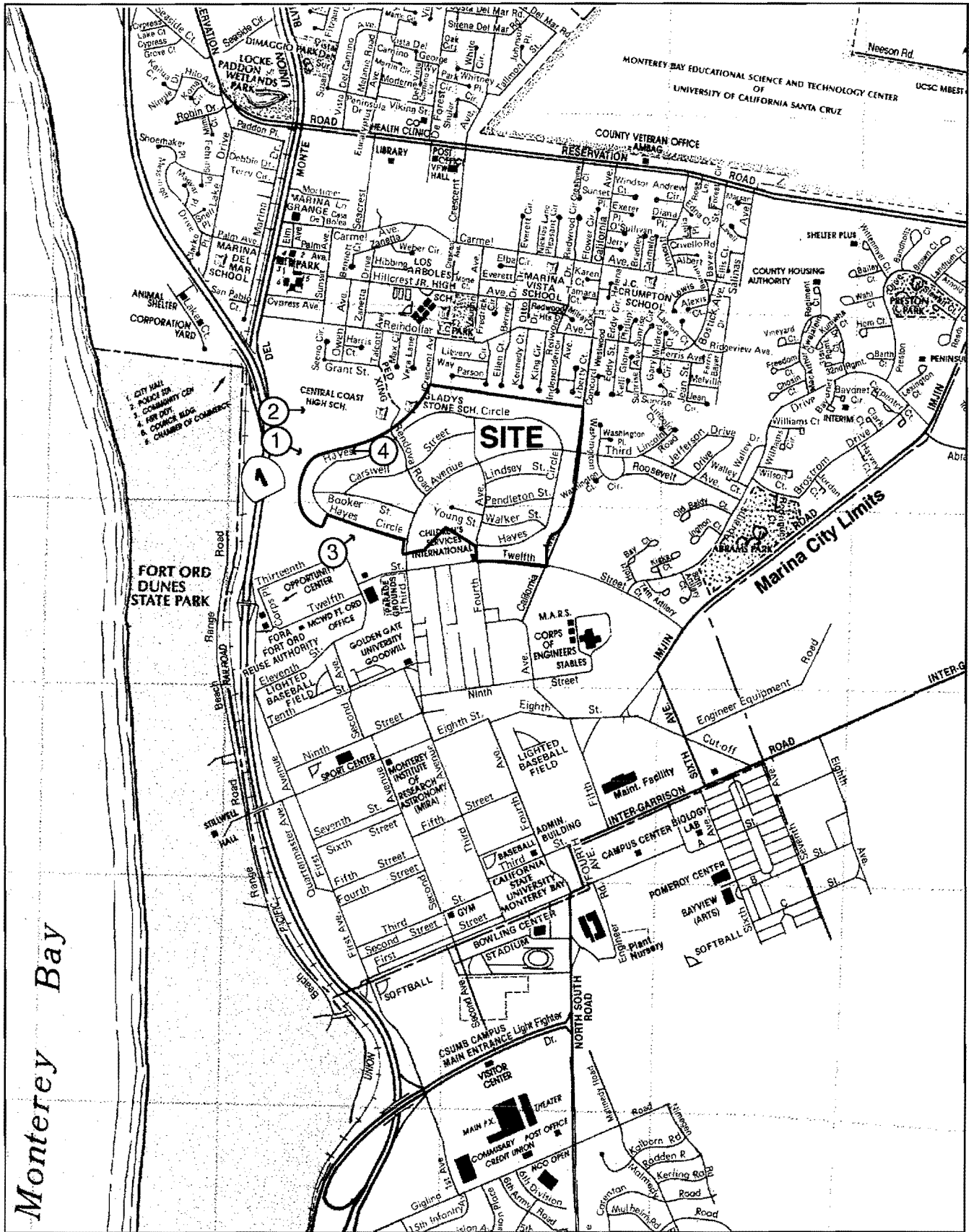
Figure J-1b, Photo 2, shows the view toward the site looking southeast from SR1 near the Del Monte Boulevard exit. Existing trees screen most of the residential units nearest this viewpoint. The proposed project plans show these trees to be retained for their aesthetic and screening purposes.

Figure J-1c, Photo 3, shows the view to the north from existing 13th Street. Although existing cypress trees screen the site from this viewing area, these trees may be removed by road construction in the future. The photograph suggests that the proposed Project is depressed and subordinate to the surrounding landscape with or without these trees. No significant visual impact is identified.

Figure J-1c, Photo 4, shows the view to the west from Hayes Street west of Rendova Road within the project. The location of SR1 is shown on the figure. This portion of the site is not screened from view looking from SR1.

Visual Impacts related to FORA and City Policies

The project is separated from Highway 1 by more than 100 feet by an adjoining parcel therefore the Reuse Plan landscape corridor goal is not applicable to this project. The other aspects of the Reuse Plan goals in the Context and Framework Section 3.0 listed above relate to provision of open space and landscape. The proposed project includes 30 acres of open space and eight acres devoted to neighborhood recreation and services. In addition, the proposed project includes setbacks from major perimeter streets. Based on these characteristics, the project is consistent with the basic Reuse Plan goal related to neighborhood design and no visual impact is identified. As noted above, the City General Plan policies implement and are consistent with the Reuse Plan policy I-1 and I-2. In particular, the proposed project is consistent with policies 4.13 (provision of streetscape/landscape to unify), 4.15 (retaining undulating landform that naturally screens and breaks up views across developed areas), 4.17 and 18 (creates a distinct neighborhood with identifying features, e.g. open space, community center, and with distinct street pattern).



Monterey Bay

Visual Analysis View Points



Figure J-1a



Photo 1- View to southeast from north bound Rte 1 exit at Del Monte Blvd



Photo 2- View to east from north bound Rte 1 exit at Del Monte Blvd

Visual Analysis Photos

Figure
J-1b



Photo 3- View to northeast from 13th Street (Fort Ord)



Photo 4- View to west from Hayes Circle west of Rendova Road

Visual Analysis Photos

Figure
J-1c

Visual Impacts from Proposed Structures

The proposed single-family residential land uses are proposed to be one and two story construction roughly at a height of under 30 feet. The apartment use, and the optional assisted living facility, would be no taller than 35 feet in height. The community center building is proposed to be maximum two stories (likely, one story with a second story loft area); for design aesthetics, the building may have a pitched roof and other design elements such as a modest “bell tower” that could reach to 40 feet at the highest portions assuming the City decision makers authorize that height. The proposed location of the structures that may be 40 feet tall are in the center of the site. The ground elevation in this area is roughly elevation 70. The ground elevation of the site at all the perimeter edges is near to or over elevation 100. Thus, a 40 tall structure would not be substantially above the ground level position of a viewer outside the site. Intervening trees and other single story structure on pads higher than elevation 70 would further diminish the visual effect of a 40 foot tall structure. These heights are consistent in scale with the existing setting and landform substantially the same as existing and would not create an adverse visual impact for this reason.

The potential future structures on the Open Space parcels include a senior center and park related structures such as restrooms and pavilions. In the cumulative condition, school buildings could be located on the park Open Space parcel, although a school would not be consistent with the Open Space designation and the parcel would have to be redesignated to permit a school. It is assumed at the program level that these structures would not exceed roughly 35 feet and would generally be lower than this height. At this scale the potential future structures are consistent with the existing and planned single and two story urban environment in the area and no adverse visual impact related to building scale is identified.

Visual Impacts from Tree Removal

The proposed Project would remove approximately 1,139 trees (53 of which are dead), plus a majority of the site’s 166 Eucalyptus; project design refinements and/or unexpected on-site construction issues also could require removal of a few additional trees. The trees that would be removed include Monterey pines, coast live oaks, ornamentals (primarily *Eucalyptus lehmanni*) and Monterey cypress (Refer to **Map 17 and 18- Trees to be Retained and Removed**) These trees and ornamentals are located in the central part of the site and, as noted above, removal would not create a significant adverse visual impact from the off-site view points identified as visually sensitive, e.g. State Route 1. (Although not a designated scenic highway, Highway 1 is considered a sensitive viewing area to be consistent with the FORA Reuse Plan and City General Plan policy.) These trees are not arranged in windrows or groves and are not visually dominant, however, the removal of the trees (which the project does not propose) would alter the existing landscape character of that portion of the site as seen from within and around the various public street access points into the site.

Impact J1- The Project would remove existing mature trees and related landscape within the central area of the site resulting in a significant visual change as viewed from within the project and along the various public streets and access points into the site. This is a significant but mitigable impact.

Impact J2- Based on the proposed tree removal and retention plan, the existing Cypress trees along the western perimeter of the proposed project site will be retained for their aesthetic and screening quality, however, as recommended by the arborist, they will be thinned to improve their health and viability. Accordingly, this impact would be less than significant.

Impact J3- Selected trees located in the northern portion of the proposed apartment site and along California Avenue are significant to visual character and scenic resources of the Marina Planning Area by providing landscape screening of the project site. At present, these trees are planned to be retained. It is possible, however, that these trees will need to be removed at the time development immediately adjacent to these trees (*e.g.*, when the apartments are constructed) occurs, depending upon the health of the trees at that time and the specifics of the development. This is a potentially significant but mitigable impact.

Under existing City ordinance Chapter 12.04–Tree Removal, Preservation and Protection, tree removal is subject to a Tree Compensation Plan and Tree Protection Plan and Program. This plan would be required as part of final project approval and is subject to site and Architectural Design Review. This ordinance is consistent with and implements the Reuse Plan Residential Land Use policy I.1.

As described above, site characteristics related to undulating and depressed landform and screening trees also serve to limit the effect of night street light illumination and residential lights. For this reason, no significant light or glare impact is identified.

Cumulative Impacts

The Reuse Plan EIR identified a potential significant and unavoidable cumulative impact on visual quality as a result of Fort Ord reuse due to development of the Highway 1 corridor:

The SR1 corridor would experience cumulative visual changes from both the proposed [Reuse] project and concurrent development in the adjoining cities. Further development of hotels and other projects within the foreground and middleground viewshed of the highway would create the most noticeable visual change. This could potentially result in an overall change in scenic character for this important stretch of highway at the gateway to the Monterey Peninsula, an important visitor destination of national importance. These changes would also likely be of concern to local residents who value the natural landscape image of the region. While the visual design quality and site-specific impact of the proposed [Reuse] project can be controlled through the policies and programs accompanying the *Fort Ord Reuse Plan* and described in Section 4.11.2, the off-site landscape modifications outside the former Fort Ord property are not under FORA's jurisdiction.

Other development planned in and around the former military base along Highway 1 would substantially change the existing visual character of the Highway 1 area. These changes were considered in the *Fort Ord Reuse Plan EIR* to be significant and unavoidable, as quoted above. However, because Proposed Project will retain key, visually significant trees along the proposed project site along the side facing Highway 1, as well as the retention of the general landform which acts to keep much of the development obscured from key viewing areas and continued low profile of structures, this project does not contribute to the Reuse Plan significant cumulative impact. Therefore, the cumulative effect of the project would be less than significant.

Beneficial Effect of the Project on Blight

The existing structures on the site have been abandoned and unoccupied for over ten years. The structures are dilapidated and the grounds are weedy and un-maintained. The resulting visual effect

is one of urban decay and blight. The proposed residential project would have the beneficial effect of alleviating visual blight. The existing structures on the 18-acre site subject to the proposed General Plan and zoning changes to facilitate a future potential park and senior center may or may not be removed until that land is developed, however the retention of the roughly dozen structures for an indefinite period before demolition is not considered a significant visual effect within the interior and north and west perimeters of the site.

4. Mitigation Measures

Mitigation J1: To mitigate significant impacts related to removal of existing trees within the project site, the applicant shall prepare a Tree Protection and Compensation Plan based on Marina Code requirements and based on detailed site surveys to identify trees to be protected, removed and replaced, and include fast growing local species, such as Monterey Cypress, and native Coast Live Oak. The Plan shall be reviewed and approved by the City Tree Committee.

Level of Impact after Mitigation: Implementation of an approved Tree Protection and Compensation Plan along with the typical landscape plan requirements of the City of Marina will mitigate the visual effect of loss of mature trees to less than significant levels. Although the compensatory tree plantings and new landscape do not provide immediate visual replacement of the vegetation lost to development, the overall visual setting will be improved with the implementation of the project and this tree replacement measure by removing visual blight. The interior of the site and north and east perimeters are less visually sensitive than the west and south perimeters, and new tree plantings will include fast growing native species.

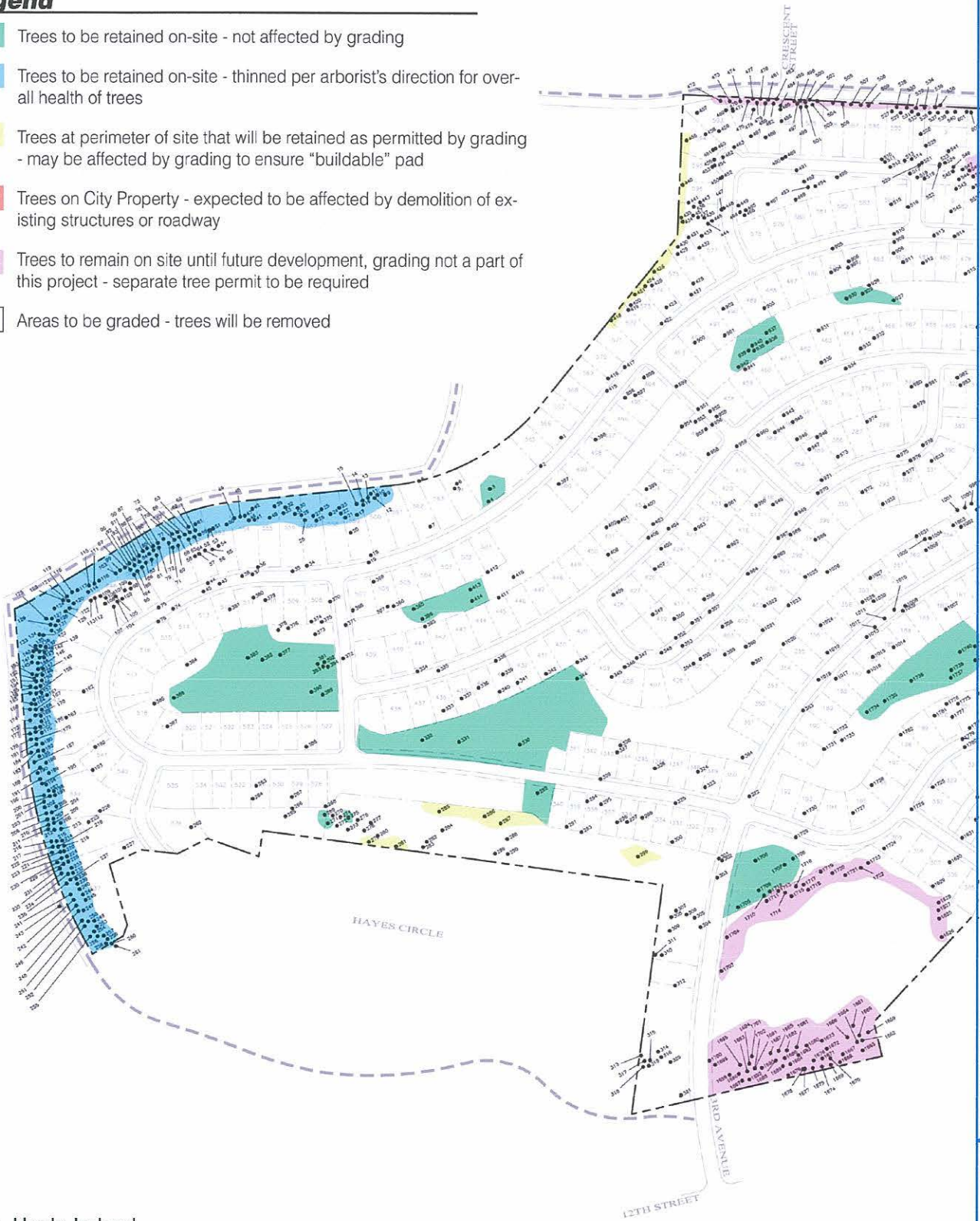
Mitigation J3: If these trees are removed, a Tree Protection and Compensation Plan must be prepared based on Marina Code requirements as determined by the City Council per the City's Tree Protection Ordinance addressing the replacement and/or retention of these trees. The plan shall require replacement at ratio as required by the Marina Code and are recommend to consist of native Monterey Cypress and Coast Live Oaks and other appropriate trees.

Level of Impact after Mitigation: Implementation of an approved Tree Protection and Compensation Plan addressing the replacement of these trees, if removed, will mitigate the visual effect of loss of mature trees to less than significant levels.

No significant impact is identified for cumulative visual effects, therefore no mitigation is required.

Legend

- Trees to be retained on-site - not affected by grading
- Trees to be retained on-site - thinned per arborist's direction for overall health of trees
- Trees at perimeter of site that will be retained as permitted by grading - may be affected by grading to ensure "buildable" pad
- Trees on City Property - expected to be affected by demolition of existing structures or roadway
- Trees to remain on site until future development, grading not a part of this project - separate tree permit to be required
- Areas to be graded - trees will be removed

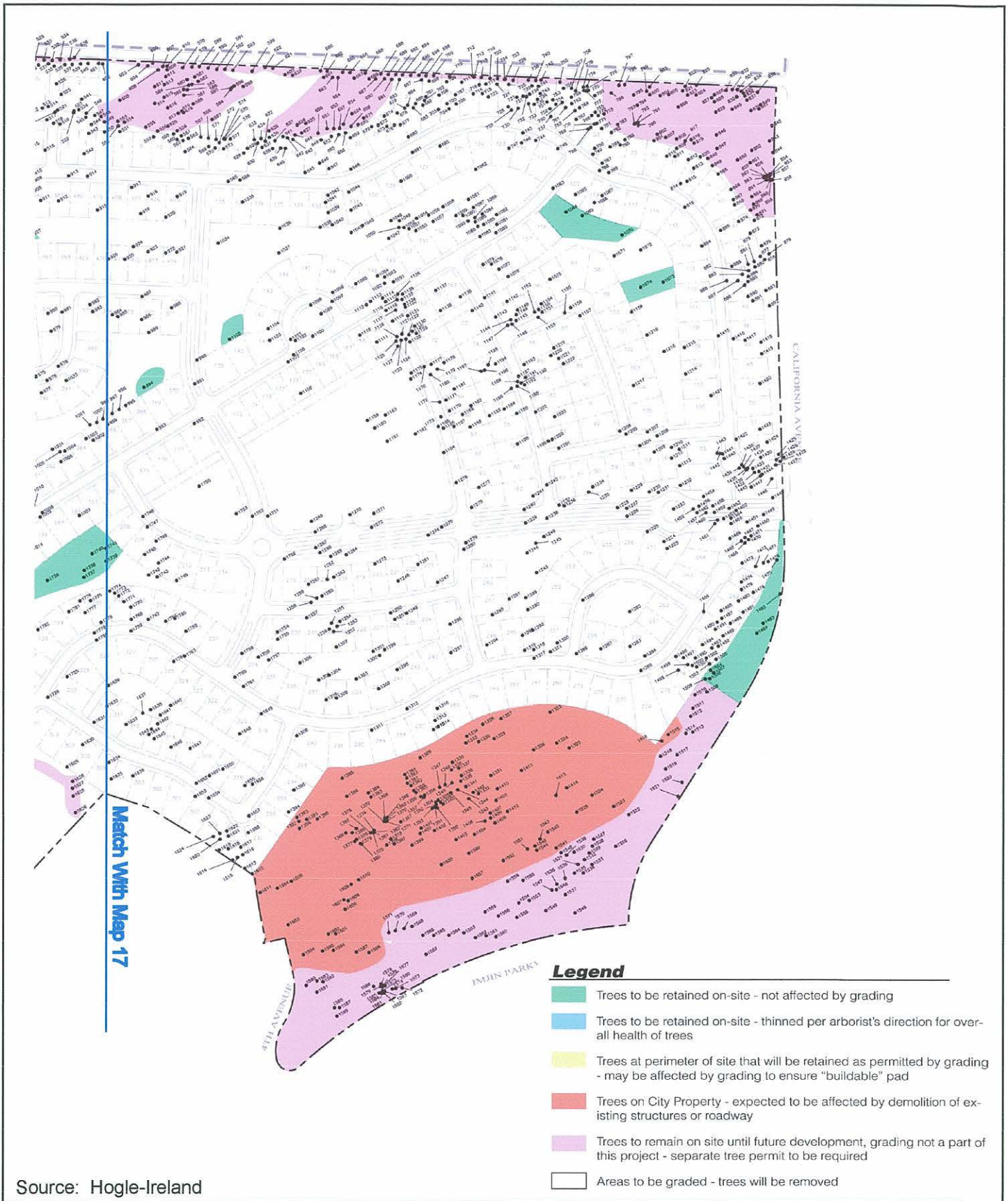


Source: Hogle-Ireland

Existing Tree Removal and Retention West Half of Project



Map
17



Existing Tree Removal and Retention East Half of Project



Map
18

K. WATER QUALITY

1. Environmental Issue

This section of the EIR analyzes surface runoff water quality issues. Issues related to water supply issues (including groundwater), and to flooding and drainage, are addressed in EIR sections IV-G Water Resources and IV-I Drainage, respectively.

Sources of information to describe existing conditions and for the analysis in this section include a variety of City and Fort Ord Reuse Authority planning documents, and other various analyses.

Comments related to water quality were received in response to the NOP (see Appendix A) from the Department of Health Services, and the analysis in this section below addresses those comments.

Program-level and project-level analysis and assumptions

For the subject of Water Quality related to surface runoff, the project level and program level Project are considered together because both would involve the potential to degrade water quality during construction activities. Thus the impacts and mitigation measures presented are applicable to both.

2. Environmental Setting

Surface water drainage in the regional watershed is collected in local drainage systems that either discharge directly to Monterey Bay or are retained in infiltration basins. The Proposed Project is located in the Seaside Area Sub-basin of the greater Salinas Valley Groundwater Basin. The Seaside Area Sub-basin includes the Cities of Seaside and Marina, and the western portion of the former Fort Ord. Groundwater levels in the sub-basin have been declining about one foot per year from the 1950's to at least 1997. Salt water intrusion total dissolved solids have been a problem in this sub-basin. Since the 1980's, seawater intrusion has slowed as a result of the decrease in water demand due to base closure, conservation, changes in groundwater well locations and depths, drought-related decreases in total pumping, and the construction and operation of the Castroville Seawater Intrusion Project.¹

The surface water quality from the project site presently is limited to fine soil particles, organic matter and residue from urban activities on the street surfaces. Presently, stormwater runoff most likely contains only a fraction of urban pollutants, such as oils, grease, heavy metals, pesticides, and coliform bacteria, than what is typically contained in urban runoff. As detailed in EIR section IV-L ("Effects Found to be Less Than Significant") under Geology and Soils, storm events can cause localized areas of erosion since the soil is highly sandy and prone to erosion from wind and rain.

The groundwater quality underlying the former Fort Ord is variable depending on location and former land use factors. Seawater intrusion, as discussed above, has migrated several miles inland into the 180- and 400-foot aquifers and could affect the deeper aquifer if groundwater pumping in the area were to increase above the safe yield of the groundwater basin.² In

¹ Fort Ord Reuse Authority, *Fort Ord Reuse Plan EIR* (SCH#96013030), May 1996, pages 4-45 and 4-46.

² Fort Ord Reuse Authority, *Draft Fort Ord Reuse Plan Environmental Impact Report*, May 1996, page 4-46.

addition, former land uses in the fort have resulted in three contaminated groundwater sites where remediation is ongoing under the authority of BRAC.

Regulatory Setting

U.S. Environmental Protection Agency (EPA) regulations implement the National Pollutant Discharge Elimination System (NPDES) permit system, which was established in the federal Clean Water Act (CWA) to regulate municipal and industrial discharges to surface waters of the U.S. Two types of non-point source discharges are controlled by the NPDES program: non-point source discharges caused by general construction activities; and discharges from municipal stormwater systems. The goal of the non-point source regulations is to improve the quality of stormwater discharged to other waters to the "maximum extent practicable" through the use of best management practices (BMPs).

The State Water Resources Control Board (SWRCB) and the RWQCB are responsible for ensuring implementation and compliance with the provisions of NPDES programs. The SWRCB adopted a State-wide general NPDES permit for stormwater discharges associated with construction activity (General Permit) that requires projects that disturb one or more acres of soil are required to obtain coverage under the General Permit. The Proposed Project would be required to comply with the General Permit as detailed below under Impacts and Mitigation Measures.

FORA prepared a deed restriction which covers the parcel within the project site explained in detail in the FOST described in section I and Section IV-C of the EIR. One of the deed restrictions required by the FOST is the restriction of drilling and construction of groundwater wells in the project site except for monitoring and/or treatment of groundwater contamination.

The City of Marina Land Use Element includes the following policies:

4.127.3: All potential major sources of water pollution shall comply with state and regional water quality programs, including the need to obtain a discharge permit from the State Water Resources Control Board for storm drain outfall classified as "industrial."

4.127.4: All construction activities involving improvement of roads, buildings and other structures, where applicable, shall maintain and enhance the quality of the environment of Monterey Bay in support of the bay's designation as a national marine sanctuary.

3. Environmental Impacts

Impact Significance Threshold

For the purposes of this EIR topic, the project would create a significant impact if it would:

- Violate any water quality standards, waste discharge requirements, or otherwise substantially degrade water quality.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

Refer to EIR Sections IV-G Water Supply, IV-L Effects found Less than Significant (Geology and Soils subsection) and IV-I Drainage for analyses and other relevant impact thresholds related to water quality.

Project Impacts

The project site topography is characterized by undulating terrain slopes comprised of sandy soils potentially subject to erosion. It is anticipated that increased rates of erosion could occur with project construction. The Proposed Project would include construction and demolition activities, involving grading and excavation that could cause soil erosion during storms. In addition, construction equipment spills could result in the release of pollutants, such as heavy metals, oil, grease, and other petroleum hydrocarbons. During storms, runoff from the site could carry sediment or other pollutants into the drainage system or into the pervious soil.

Impact K-1: The discharge of sediment or pollutants during construction into the proposed percolation ponds could affect water quality by introducing pollutants that could have an adverse effect on groundwater, a potentially significant impact.

Impact K-2: Urban stormwater runoff typically contains oil, grease, and heavy metals from vehicles and pesticides and herbicides from landscape areas. These runoff constituents carried in runoff could adversely affect receiving water quality (groundwater), a potentially significant impact.

The Proposed Project would result in the construction of structures, roads, parking lots, and other impervious surfaces that would represent an increase in the overall impervious surfaces on the site, however, the increase in the amount of impervious surfaces as compared to the current urbanized setting of the project site is not substantial because the Proposed Project would construct a stormwater drainage system that would capture all on-site runoff, up to the 100-year, 24-hour storm event, in facilities such as percolation basins resulting in an increase in groundwater recharge in the project site, compared to the current drainage system that conveys some on-site stormwater runoff to off-site. The Proposed Project would result in increase to the recharge of the underlying aquifer, a beneficial impact.

The City of Marina has implemented the Phase II NPDES requirements as presented in the Monterey Region Storm Water Management Plan (MRSWMP). At this time no specific ordinance has been passed to reflect the implementation of the Phase II stormwater regulations, but the City has informed developers that review of current development projects will be reviewed for compliance with stormwater regulations and BMPs. Post-construction measures in the MRSWMP require the City to implement structural and non-structural BMPs that would mimic pre-development quantity and quality runoff conditions from new development and redevelopment areas.

Cumulative Impacts

Cumulative development in the watershed could include development of currently undeveloped land. Increasing the amount of impervious surface cover over existing conditions would result in an associated increase in runoff. Runoff could carry increased levels of sediment (as a result of construction activities) and urban contaminants (post-construction activities) that could affect receiving water quality in the watershed. The Proposed Project would only contribute to this cumulative effect within the site itself in the proposed stormwater basin and not elsewhere in the watershed. Therefore the cumulative effect is less than significant.

As described above, any construction on one acre or more requires preparation of a SWPPP to comply with the requirements of the SWRCB NPDES Construction General Permit. The best management practices identified each project's SWPPP would help mitigate for the

impact of construction activities on storm water quality cumulatively, therefore no significant cumulative impact is identified.

4. Mitigation Measures

Mitigation Measure K-1: Compliance with the State General Construction Activity Permit, as recently modified by SWRCB resolution, and City standards applied uniformly to all projects over one acre would ensure that construction-related sediment or other contaminants that could adversely affect receiving water would be reduced to a less-than-significant impact.

Impact Level after Mitigation: Less than Significant.

Mitigation Measure K-2. Proposed Project shall be required to meet the Best Management Practices (BMP) standards for operational phase stormwater runoff (construction phase runoff impacts are addressed in Impact and Mitigation K-1) and to maintain the on-site BMPs. The Proposed Project shall implement BMPs to manage water quality by providing on-site runoff treatment in line with the on-site infiltration system. With this mitigation, the Proposed Project's stormwater pollutant load would be minimal, and would result in a less-than-significant impact.

Impact Level after Mitigation: Less than Significant.

L. EFFECTS FOUND TO BE LESS THAN SIGNIFICANT

1. Environmental Issue

The CEQA Guidelines indicate that the EIR should briefly discuss other topics that have been determined to involve impacts that are less than significant. For this EIR, these topics are recreation, energy, geology and soils, population and housing, and public services. Where indicated, this analysis references relevant, accurate and still-current information related to previous impact determinations from the Marina General Plan EIR (2000) and General Plan Update Technical Workbook (1998) prepared by the City of Marina and the Reuse Plan EIR.

2. Recreation

The City of Marina currently has a total of 63.94 acres of park land (including joint use at schools) and 33.79 acres of other recreation facilities (primarily a 27 acre equestrian center).

The City's target standard for outdoor recreation is 5.3 acres per 1,000 residents. Based on the current population the City will need 133 acres to meet existing needs. Existing parks and recreation facilities satisfy 48 to 68 percent of this need, depending on whether recreation facilities are included.

Designated park sites within the former Fort Ord area of the Marina Planning Area would provide about 260 acres of additional parkland and recreational facilities once fully developed and improved. This new park acreage, once developed, will enable Marina to fully meet its parkland standard for current and projected population.

• Environmental Impacts on Recreation

Impact Significance Criteria

The Project would have a significant impact if it would increase the use of existing recreation facilities such that substantial physical deterioration of the facility occurs; or if the Project includes or requires the need for new recreation facilities, which when constructed would have impacts on the physical environment.

Project Impacts

The Project will add population to the city and increase demand for some recreation services. Since the proposed Project population is planned to be predominantly elderly, the demand for certain active facilities would be less than a typical family with children.

The Project description includes areas designated for private senior recreation facilities which may include elements like tennis courts, swimming pool, basketball, walking and bicycle trails, and community center that includes facilities for social activities.

The comprehensive array of recreation opportunities proposed as part of the Project would offset any potential increased demand on city facilities. The 116 apartment units would not necessarily have access to these senior recreational facilities. In addition, to the extent applicable and not satisfied through dedications, the Project would also pay Quimby fees that are allocated by the City for construction of city parks and would generate tax revenues accruing to the city general fund which could be used for new parks, even though a substantial

proportion of Project resident recreation needs are met on site. The provision of on-site facilities for a substantial portion of residents would limit any potential environmental effect due to increased use at other City or regional recreational facilities to less than significant levels. Therefore, no significant project or cumulative impact on the quality of recreation facilities is identified and no mitigation is required

3. Energy

Implementation of the development and population growth envisioned in City General Plan anticipates that energy demand will increase in the Marina area. The General Plan EIR states that providers of natural gas and electricity have indicated that expanding the distribution networks to serve additional customers is not an obstacle, and the costs of such expansion would be borne by new customers and other rate-payers (the proposed project would not create the need to expand generation or distribution networks).¹ That EIR further concludes (and that conclusion remains accurate) that in the absence of a shortage of electricity and natural gas, this anticipated increase in energy demand would be a less than significant impact. Implementation of the Proposed Project would not, in itself, provide encouragement for either use of unusual or substantial amounts of fuel or energy or the wasteful use of these resources. The project and program level effects of the Proposed Project are considered less than significant.

4. Geology and Soils

There are a number of geologic hazards and potential geotechnical constraints that can impact planning and development in the Marina area. These include: 1) seismic shaking, 2) ground surface rupture due to faulting, 3) seismically-induced ground deformation such as liquefaction or differential settlement, 4) slope instability, 5) erosion, including both soil erosion and coastal erosion, 6) tsunami hazard, and 7) poor foundation conditions due to adverse soil properties.

This section will evaluate the proposed project with respect to these potential hazards.

• Environmental Setting

The soils within the Marina Planning Area are formed from two sources: 1) flood plain, channel and levee deposits of the Salinas River, and 2) dune sand deposited in both recent times and during the mid- to late-Pleistocene (the last few hundred thousand years). The river deposits underlie flood plains and basins adjacent to the Salinas River along the north and northeast boundary of the planning area.

Dune deposits comprise most of the planning area, including the proposed project site. The dune deposits are assigned four general classifications: active coastal dunes, Flandrian dunes, younger pre-Flandrian dunes and older pre-Flandrian dunes. The pre-Flandrian dunes are the most extensive surficial deposit in the planning area and occur over the project site. These older dunes have low topographic relief and consist of moderately consolidated, fine- to medium-grained sand that is up to 200 feet thick in some places. The soils on the site are classified as Baywood series. They are generally excessively well-drained, slightly to moderately erosive and low in fertility and organic content. The principal properties affecting use of site soils for development are summarized as follows:

¹ *Marina General Plan EIR*, May 2000, page 10-32

- Limitations for construction sites: Moderate
- Shrink-Swell potential: Low
- Erosion due to wind action: Moderate-High
- Seismic shaking: Moderate
- Liquefaction and lateral spreading: Low

According to the *General Plan Update Technical Workbook* summary:

The areas with the most significant geologic and seismic constraints in the Marina Planning Area occur within the Salinas River flood plain and on or adjacent to steep dune slopes, as a result of the potential for high to very high liquefaction and high to very high seismic shaking. Areas determined as unsuitable for development are zones of very high liquefaction potential and very high seismic shaking potential. The coastal erosion zone (up to 500 feet in width) is also considered unsuitable for most development. Areas where further geologic and/or geotechnical investigation and design/engineering mitigation will be needed include land within areas mapped as having a high liquefaction and high seismic hazard potential.

Contrary to previous mapping showing a fault zone passing through Marina, there is no known physical evidence to indicate the presence of the King City or Reliz fault in the Marina planning area.

A review of soils reports completed for projects within Marina indicates that soils found within Marina generally provide adequate support for structures and roads provided the requisite earthwork is performed in connection with new development.

• **Environmental Impacts on Geology and Soils**

The Reuse Plan EIR identified potential impacts for implementation of the various reuse projects related to Geology and Soil to be less than significant. Project scale information provided below supports that conclusion with respect to the Proposed Project.

Impact Significance Criteria

The CEQA Guidelines Appendix G states that a project will normally have a significant effect on the environment if it will cause substantial flooding, erosion or siltation, and/or expose people or structures to major geologic hazards. Flooding and Erosion effects are described and mitigated in Sections IV- I and IV-K respectively. This section focuses primarily upon seismic related events.

Seismic Shaking and Ground Rupture Due to Faulting

Recent studies contained in the City *General Plan Technical Workbook* and Marina General Plan EIR by the City's consultant, Nolan Associates, concludes:

There is no discrete field evidence supporting the existence or location of the fault in the planning area, and no convincing evidence in the literature or in Nolan Associates' reconnaissance studies was encountered that would indicate geologically youthful activity on a fault passing through the planning area.

Therefore, no significant impacts related to ground rupture would be expected.

The site has been mapped by Nolan Associates² as being in an area of moderate seismic hazard due to ground shaking. Conformance to the most current edition of the Uniform Building Code standards is required for all projects within the City of Marina in the building permit process and is supported by General Plan policies 2.4.7, 4.100, 4.102.1 and 4.102.2 to minimize adverse impacts from seismic events³. This impact is less than significant.

Seismically Induced Ground Deformation

Ground deformation associated with strong seismic shaking can manifest as differential settlement of soils, landsliding, liquefaction and lateral spreading. Landsliding is unlikely to be a hazard on this previous developed site and no significant changes in topography appear to be required to construct the project. Differential settlement could occur on the site if earthwork operations fail to adequately compact fills. Liquefaction hazard is low on this site and would not be expected to pose a significant hazard.

Since construction of fills normally follows site specific engineering design, on-site inspections and testing are required by the Uniform Building Code, the risk of differential settling and lateral spreading is considered less than significant

Slope Stability

In general, slope stability hazards in Marina are low due to the absence of slopes over 30%. The project site will not require creation of significant steep slopes, therefore no impact is identified.

Erosion

As a general matter, water and wind erosion is a significant constraint for site soils due to concentrated runoff or prolonged exposure of unvegetated soils to wind. Because the proposed project will comply with legal requirements to minimize runoff impacts (refer to section IV- K Water Quality for regulatory issues and mitigation measures), and will include landscaping, the generalized risk of significant erosion impacts that might create unsafe conditions or significant soil loss is considered low, and no further mitigation is necessary.

Tsunami Hazard

At an elevation above sea level of more than 100 feet and at a distance of about one mile from the ocean, the site is above the elevation subject to tsunami inundation

Cumulative Impact

The project would not contribute to a significant cumulative impact on soils and geology.⁴

On the basis of this analysis, and the EIR for the Fort Ord Reuse Plan and the City of Marina General Plan EIR, all potential impacts to geology and soils are considered less than significant and no mitigation is necessary.

² Figure A-3, Appendix A, General Plan Update Program Workbook.

³ Marina General Plan EIR, May 2000, page 4-34.

⁴ Ford Ord Reuse Plan EIR, p. 5-4.

4. Population and Housing

• Environmental Setting

The CEQA Guidelines Appendix G indicates that a proposed project should be evaluated to determine if the Project will alter the location, distribution, density or growth rate of population; or affect existing housing.

The Marina *General Plan EIR* provides the following summary of Housing and Population in the City⁵:

In January 1997 the California Department of Finance estimated that there were 8,569 housing units located within the city limits of Marina, with an additional 1,253 housing units supporting CSUMB located within Marina's Sphere of Influence at former Fort Ord. Of the 8,569 housing units, 557 located on the former Fort Ord were regarded as unfit for renovation, leaving a total of 8,012 available housing units within the city limits. Of these, 6,490 are located within the city limits, but outside former Fort Ord.

Even with inclusion of the predominantly multi-family housing in former Fort Ord, Marina's single-family housing still is the predominant housing type, comprising 55 percent of all housing units. However, as a result of inclusion of former Fort Ord's housing, the percentage of single-family housing in Marina is now significantly lower than Monterey County as a whole (75 percent) and the state average (73 percent). If the housing on the former military base is excluded, Marina's percentage of single-family housing would be the same as the state-wide average.

Residential Land Use Objective 'C' in the Ford Ord Reuse Plan is to: "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." The Reuse Plan indicates that Marina currently has a sufficient supply of low income housing units, and that the City's intention is to provide moderate and above moderate income housing in those portions of the former Fort Ord which are to be redeveloped within the city limits to achieve balanced housing supply and help maximize the market value of the housing stock.

The Association of Monterey Bay Area Governments (AMBAG) assigns each community within its jurisdiction a "fair share" of the regional housing needs, and the communities are then required to show how they will endeavor to meet these needs. ?

As part of the Marina's 2000 General Plan update, the City adopted an inclusionary housing requirement. Policy 2.3.1 of the General Plan stipulates that developments with 20 or more dwelling units shall include at least 20 percent of all units for affordable and "below-market-rate" housing. The Proposed project includes 116 proposed affordable apartments to meet the inclusionary requirement which is over the 108 units anticipated for Cypress Knolls in the Housing Element⁶.

⁵ Marina General Plan EIR, May 2000, pages 3-1,3-2, 3-6.

⁶ Housing Element 2004, Table 4-4B endnotes.

The following are additional Housing Element policies may be applicable to the Proposed Project⁷:

Policy 2- provide the opportunity for development of Marina's share of the region-wide housing need allocation for all income groups, as described in the AMBAG regional housing needs plan 2000-2007 for Monterey and Santa Cruz counties.

Policy 2 Program A states in part "The City will continue to provide density bonuses for projects providing affordable units in accordance with state law".

Policy 2 Program D-To further meet Marina's share of the RHNA as well as the needs of Marina's residents and workforce, a mix of housing types and sizes shall be required in new subdivisions or planned unit developments of 10 or more single-family detached and/or attached units.

Policy 3- Ensure that city site improvement standards, development review procedures, and development fees do not form an undue constraint to the development, conservation and rehabilitation of housing.

Policy 3 Program B- As part of the City's current Zoning Ordinance update, site improvement standards and development procedures should be reviewed to ensure that such standards and procedures do not unnecessarily constrain the development, conservation, and rehabilitation of affordable housing.

Policy 11- Provide opportunity for and encourage the development of adequate housing for the City's special needs groups including the elderly, handicapped, large families, single parent families, farmworkers, and those in need of emergency shelter.

The Proposed Project is consistent with Policy 2 by providing affordable housing. The project may be eligible for a density bonus pursuant to Program B. The Proposed project fulfills Program D by including a range in housing types.

The Proposed Project would require zoning and General Plan Amendments related to design features that may be permitted pursuant to Policy 3 and Policy 3 Program B.

The Proposed Project meets Policy 11 by providing senior and, possibly, assisted living housing.

• **Impact Significance Criteria**

The CEQA Guidelines Appendix G indicates that a project could have a significant effect if it :

- Induces substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)

⁷ Marina Housing Element of the General Plan, December 2004, pages 6-2, 6-10, 6-13, 6-28.

- Displaces substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere
- Displaces substantial numbers of people, necessitating the construction of replacement housing elsewhere

The Reuse Plan EIR included as significance criteria “changes in population or employment that result in substantial changes in the jobs to housing balance in the region” and this topic is addressed below as well.

• **Project Impacts on Housing and Population**

The project would not displace existing housing as the existing structures are uninhabitable. Population would not be displaced by the proposed project. Growth inducing effects are described in Section IV- M of the EIR.

The Project would create a total of 712 dwellings and, possibly, 60 assisted-living units. The former Patton Park includes 460 duplex units. The Project would result in a net increase of 312 residential dwellings and 60 assisted-living quarters in the City of Marina over the historic number of units at Patton Park, however for the purposes of this EIR section analysis the baseline population is considered zero. Since the Project is specifically designed almost entirely for elderly residents (the apartment units may or not be restricted to seniors), the actual occupancy would be likely to be less than the 2.73 persons/dwelling identified for the rest of the city. If the occupancy is 2.0 persons/dwelling or less, the increase in population would be about 1,424 persons (slightly higher if the apartments are not restricted to seniors), plus 60 in the potential assisted living facility.

Although the projected population increase is beyond those projected in the Reuse Plan EIR for the Cypress Knolls site, this change is not considered a significant effect in itself because the increase would not adversely impact the supply of public services and housing, as described elsewhere in this section,. The environmental effects of the increase in housing and resulting population increases are described and mitigated as set forth in the other impact analysis sections of this EIR.

The Proposed Project proposes a mix of housing, including some affordable housing units. Accordingly, the Project would help meet the City's “Fair Share” housing requirement. The Project would have a beneficial effect on the City's ability to meet its “Fair Share” housing quota.

• **Cumulative Impacts**

The cumulative project list of approved projects is contained in the Technical Appendices Volume of the EIR in Appendix E Traffic Study. Traffic Technical Appendix Exhibit 13 provides a list of these projects for the purpose of cumulative projects in this EIR. This shows 1,050 approved residential units in Marina Heights, campus housing for 492 students at CSUMB and an additional 53 residential units in other parts of the City. The long term cumulative scenario tabulates an additional 8,383 students at CSUMB and 950 residences at the Marina Station Project.

Approved and pending non-residential projects which would generate jobs include a variety of job generating commercial and office land uses as part of the proposed University Villages

project, a Reuse Plan project immediately south of the proposed project site, totaling about 90 acres. Its FEIR indicates that the University Villages project will generate an estimated 4,000 jobs.

In addition, the Reuse Plan EIR notes:

A balance between the number of jobs and housing units available in a specific area reduces excessive commute distances, automobile-related air pollution and emissions, and traffic congestion, which in turn imparts beneficial impacts to the surrounding environment. Implementation of the proposed [Fort Ord Reuse] Project would produce a jobs:housing ratio of 45,457 jobs to 22,232 dwelling units or 2.05 with the Project area. This would reverse the historically imbalanced jobs:housing ratios for the City of Seaside (.55 in 1991) and the City of Marina (.13 in 1991). It would create a surplus of jobs for the Project area population and reverse the strong local job shortage, while improving the overall housing supply which would benefit Monterey County.

The Proposed Project is designed to implement both Reuse Plan and Marina General Plan goals and policies related to housing. As a part of this implementation process the increase in population is considered foreseen and not adverse. The Proposed Project would not contribute to a cumulatively adverse impact on housing or population and no mitigation is required.

5. Public Services: Public Safety, Schools, Wastewater Treatment and Solid Waste Disposal

FIRE SAFETY

• Environmental Issue

This section addresses the existing level of service provided by the City and identifies projected impacts on fire protection capabilities.

• Environmental Setting

The City of Marina Public Safety Department provides both police and fire services to all areas within the City limits, although the City is evaluating the possibility of separating police and fire into discrete operations. The Safety Department presently has one operating fire station located on Palm Avenue, adjoining the Marina Civic Center. The fire station currently houses two fire engines and one four-wheel-drive "brush rig" for wildland fires. A second fire station at the Marina Municipal Airport was recently acquired but is not presently staffed; it houses one aircraft crash truck and a reserve engine.

Firefighting personnel include 32 public safety officers who are cross-trained as police officers and firefighters, and a volunteer force of 35 firefighters. Response time to emergency calls varies from three to five minutes within central Marina, but is greater to locations within the former Fort Ord. All officers are trained to provide basic life support medical services in the event of an emergency.

Within the former Fort Ord area, an existing fire station is located on North-South Road adjacent to and south of the CSUMB campus, within the City of Seaside. Fire services at this station are presently provided by the U.S. Navy, Naval Post-

Graduate School Fire Department, through an agreement with the U.S. Army. The Navy presently provides fire protection services to CSUMB, the POM Annex, FORA administration buildings and other former Fort Ord lands not yet conveyed to local or state jurisdictions. Preliminary planning efforts have evaluated the potential of locating another fire station on Eighth Street and Second Avenue on the former Fort Ord; the City of Marina also is researching the potential to consolidate fire services with the City of Seaside.

The City Fire Chief implements the fire prevention regulations of the Uniform Fire Code (Chapter 15.30 of the Marina Municipal Code). These regulations specify minimum safety standards for water flow, water pressure, street width and access, and turning radius for fire equipment. To enhance fire protection services, the City of Marina participates in a mutual aid agreement with all fire departments in Monterey County. The City also implements a Weed Abatement Program whereby all local properties are inspected on an annual basis to reduce fuel loads and associated fire hazards within the City.

The City of Marina's *General Plan* sets forth a number of policies pertaining to community fire protection, including:

- Maintaining a maximum response time within the City in accordance with the adopted Uniform Fire Code and other applicable ordinances.
- Building and maintaining structures so that they are easily and immediately accessible by police, fire and other public safety vehicles and apparatus.
- Separating land uses which handle, process or manufacture highly flammable materials from other land uses.
- Reserving land if needed in the northerly portion of the Planning Area for a fire station in order to maintain acceptable fire/emergency response times.

• Environmental Impacts

Impact Significance Criteria

As described above, impacts on public services can be deemed to arise from the provision of physical facilities (if those facilities could have physical adverse changes to the environment) which may be necessary to meet public service performance objectives, not from a short fall in meeting service objectives.

Project Impacts

The Public Safety Department has indicated that the primary effect of the proposed Project would be an increase in medical emergency responses to the site⁸. This is not considered a significant effect under CEQA.

Other fire related impacts and mitigations related to fire flows are contained in Section IV-H Water Distribution and Fire Flows.

⁸ Harald Kelley, City of Marina Fire Chief, personal communication August 7, 2006.

Cumulative Impacts

The Reuse Plan EIR notes that all the applicable local agencies within the Reuse Area should adopt various plans and policies to address cumulative impacts on fire safety (pages 4-59 and 4-59 of the Reuse Plan EIR). To provide eventual funding for new public safety facilities needed to meet cumulative needs, the City requires Reuse Plan projects to pay a development impact fee. No further mitigation is required.

POLICE

This evaluation analyzes the effects of the Project on existing levels of police service and the project-specific share of any necessary police service or facility expansions. Relevant issues include an assessment of the need for additional facilities to maintain acceptable service ratios, response times or other performance objectives.

• Environmental Setting

Routine police protection will be provided by the City of Marina. The City's police station is located at Hillcrest Avenue. The Police Department currently has approximately 32 sworn officers, equating to about 1.27 officers per 1,000 residents. The City is authorized to add four additional sworn officers in the 2006-2007 budget year.

The City's current level of service standard responds to service calls in three to five minutes. The current minimum staffing level is four uniformed officers on patrol duty within the City at all times.

Projects within the Reuse Plan area are required to pay an impact fee for public services and schools.

• Environmental Impacts

The Project would have a significant impact if it would result in substantial adverse physical effects associated with the need for new or physically altered police facilities, which are required to meet or maintain acceptable response times or performance objectives contained in the General Plan (*CEQA Guidelines Appendix G*).

Police service for the Project area will be hampered by the relatively limited access to the proposed Project relative to the Police Department's current service area, according to the Acting Police Chief. According to the Police Department an extension of the Department's service area at the southern city boundary will create an increase in calls for service and an increase in response time utilizing existing resources. To maintain present levels of service, the Police Department does not foresee an immediate need for additional staffing, however, the City considered designating areas of the former Fort Ord as a "sub" urban response time area since the current street network would be likely to result in a longer response time than for other parts of the City.

Under the CEQA Guidelines, revised to reflect case law, the need for increased police staff or equipment to meet performance objectives would not be considered an impact on the environment. An impact would be significant only if the provision of needed new facilities created a physical impact on the environment. Therefore, it does not appear that the Project would create an impact under CEQA.

- **Cumulative Impacts**

Additional urban growth within the existing city limits, especially other areas of the former Fort Ord, will place greater demands on the Police Department, and will tend to reduce existing emergency response times. According to the Acting Police Chief, the eventual development of Preston Park and Abrams housing at former Fort Ord and future airport area development could require new physical facilities for police. One site mentioned by the Planning Department was at 8th and 2nd Streets in the former Fort Ord, about the same distance from the Cypress Knolls site as the existing police station. However, no formal candidate sites for a police substation have yet been identified, therefore, quantification of potential impacts on the environment are premature and speculative.

As noted above, the need for personnel or equipment per se is not considered an environmental impact under CEQA and the project will not create the need for a new police station so no mitigation is required under CEQA.

SCHOOLS

- **Environmental Issue**

The Project has limited potential to add a significant number of students to the local school district because the proposed housing is predominantly for retired persons.

- **Environmental Setting**

The City of Marina, including the area within former Fort Ord, lies within the service area of the Monterey Peninsula Unified School District (MPUSD). The northerly, unincorporated portion of Marina's planning area lies within the boundaries of the North Monterey County Unified School District.

MPUSD currently serves elementary and high school students residing in the cities of Monterey, Marina, Seaside and Del Rey Oaks (including former Fort Ord lands now within the jurisdiction of these cities). Elementary and middle school enrollment within the City is about 2,400 students.

There are currently four elementary schools and one middle school within the Marina city limits, exclusive of former Fort Ord. Marina Del Mar, Crumpton, Marina Vista and Olson elementary schools presently serve students in kindergarten through fifth grade. Los Arboles Middle School serves students in grades six through eight. Approximately 500 high school students from Marina attended Seaside High School in the City of Seaside until August 2006, when the interim Marina High School opened with 350 students.

In former Fort Ord, two existing school sites are located within the Marina Planning Area. A former elementary school is now used as an interim high school and is located immediately west of Cypress Knolls. The second, former Stilwell Elementary School, is located within Marina's adopted SOI, in Frederick-Schoonover Park.

The Fort Ord Reuse Plan calls for the eventual construction of one additional high school and elementary school to serve students residing on the former military base. The Reuse Plan designates two alternative sites for the high school, including one immediately south of Reservation Road. The City will be considering designating, through a General Plan and zoning map amendment to "Open Space" (a designation that would permit a park), an 18 acre site as a potential future park site simultaneously with its consideration of the senior residential portion of the Proposed Project. In the future, if the School District wishes to pursue another school site, the potential park site could be considered as at that time as a possible site.

- **Environmental Impacts**

Impact Significance Criteria

The Project would have a significant impact if it would result in substantial adverse physical effects associated with the need for new or physically altered school facilities, which are required to meet acceptable class size objectives contained in school district policy (CEQA Guidelines).

Project Impacts

The Project would be unlikely to directly add a significant number of students because the Project is designated predominantly as a senior housing community. Although the Project is not expected to generate many students, the Project will pay any school fees that may be required by law. Therefore, no project or cumulative impacts are identified.

Secondary or Indirect Effects

To the extent that the Project creates jobs in the community that bring new families to the City, students will be added to the District. However, since schools in the area are currently within planned capacity, secondary indirect impacts on the environment resulting from new school construction are not foreseeable.

No mitigation is required for school impacts found to be less than significant.

SOILD WASTE DISPOSAL

- **Environmental Issue**

The California Integrated Waste Management Act requires cities to develop and monitor a plan to reduce their solid waste stream by certain mandated percentages. This subsection will analyze the proposed Project's potential effects on the City to meet the requirements of state law with respect to solid waste.

- **Environmental Setting**

According to the General Plan Update Technical Workbook:

"Solid waste generated by the City of Marina is collected by either the Carmel-Marina Corporation (which serves the urbanized area), or by the Monterey

Disposal Corporation (which serves former Fort Ord) and deposited at the Monterey Regional Waste Management District (MRWMD) facility located north of Marina. The District's 470-acre landfill has a total capacity of 32 million tons, with an available capacity of 26 million tons. MRWMD currently accepts approximately 1,000 tons of refuse per day from Monterey Peninsula cities, Carmel Valley, Big Sur, Moss Landing, Spreckels and the Highway 68/Toro Park area. It operates a materials recovery center for materials that can be recycled or composted, and for items that can be sold."

Marina, excluding the former Fort Ord, generated approximately 14,479 tons of solid waste per year in 2000. Regional landfill capacity does not pose a constraint in the near future. However, state law mandates a 25 percent waste stream diversion (which was to be attained by 1995) and a 50 percent diversion (to be attained by 2000). With implementation of waste reduction and diversion programs, and attainment of diversion objectives, the regional landfill should have 85 years of capacity remaining.

Curbside recycling programs, composting programs and public education efforts are typical strategies employed by local jurisdictions to achieve mandated diversion goals. As of 1997, the City of Marina had achieved close to a 50 percent waste stream diversion (MRWMD, personal communications). Through a franchise agreement with its private hauler, the City implements a curbside recycling program for single-family residential development.

• Environmental Impacts

Impact Significance Criteria

The Project would result in a significant impact if it would be served by a landfill with insufficient permitted capacity to accommodate the Project solid waste disposal needs, or fails to comply with federal, state and local statutes related to solid waste (CEQA Guidelines Appendix G).

• Project Impacts

The Project would have a typical residential waste stream. Based on existing site conditions and mitigation elsewhere in this EIR requiring drought tolerant landscape, the "green waste" component may be lower than typical. Generally, the residential waste stream is relatively recyclable (paper, plastic, aluminum, glass).

As a result, the Project does not have characteristics which would make it difficult to achieve the solid waste stream diversion targets required by law. It should be noted that until Fort Ord closed, the Project area housing contributed to 94 tons per day of solid waste from Fort Ord.⁹ Population projected from the project, at a ratio of 2.0 persons per dwelling (assuming the apartments are for seniors only), yields 1,424 persons, with an additional 60 in the potential assisted living facility. The target rate of 5.4 pounds per day mandated by the state for implementation of the Solid Waste Reduction and Recycling Program yields a waste stream of approximately 1,521 tons per year from the project

⁹ Fort Ord Reuse Plan EIR, p. 4-36.

(again, assuming the apartments are for seniors only). Waste would be slightly higher if the apartments are not restricted to seniors.

The Marina General Plan EIR did not identify a significant impact related to decreased landfill life. Solid waste impacts are mitigated to less than significant levels Citywide (including for this proposed project) by implementing adopted source reduction and recycling programs¹⁰ The project and program level parts of the Proposed Project would result in a less than significant impact on the solid waste stream.

The implementation of the Proposed Project would create demolition debris. The Marina Heights Specific Plan EIR estimated 53,000 tons of debris related to demolition of 828 existing structures. Cypress Knolls would involve demolition of 230 structures, resulting in about 14,777 tons of debris.

Due to the nature of some materials in the existing structures, some of the total material will need to be transported to the nearest facility for disposal of asbestos and lead based wastes, in this case the Kettleman City Landfill. This facility has capacity through 2010. Demolition of pavements in the Cypress Knolls project would yield materials that are typically recycled for reuse, and would not be expected to be added to the waste stream to either landfill.

• Cumulative Impacts

There is evidence that state mandated source reductions are being met by implementation of recycling programs in the City. This, coupled with the existing capacity of the regional landfill, would result in less than significant impacts on solid waste.

WASTEWATER TREATMENT

• Environmental Issue

The addition of increased wastewater flows from new land uses could outpace the ability of the regional wastewater treatment facility to handle, treat and dispose of effluent within its current discharge permit.

• Environmental Setting

MCWD provides wastewater collection service to all residential, commercial, and industrial development within the City of Marina and throughout the former Fort Ord. In 1997, the FORA selected MCWD to receive the Fort Ord wastewater collection systems. As mentioned above, the conveyance process was completed in late October 2001 when the U.S. Army transferred the deeds to FORA and FORA in turn transferred the wastewater facilities to MCWD.¹¹ Thus, MCWD owns and maintains the system of 65 miles of sewer mains and 18 lift stations used to collect and transport wastewater from the Ord Community to the MRWPCA regional sewer system.

¹⁰ Marina General Plan EIR, May 2000, page 10-31.

¹¹ Marina Coast Water District, <http://www.mcwd.org/html/faqs.html#25>, Accessed October 13, 2004.

MCWD also owns and maintains the system of sewer mains and lift stations in the City of Marina. However, this wastewater system is separate from that of the Fort Ord Community and is relatively new and compact, requiring a fraction of the maintenance and improvements compared to the Fort Ord Community system.¹² Installation of the sanitary sewer system at Fort Ord began in the early 1940s and although the system underwent expansion and some reconstruction when new housing areas were built after World War II, the original pipelines are still used.¹³ Since the closure of Fort Ord, wastewater generation had decreased due to the population decrease and the existing collection system is underused within the Fort Ord Community. Low flows and resulting longer wastewater residence times in the pipelines have increased the generation of hydrogen sulfide gas, which in turn has created a more corrosive environment. As a result, much of the existing concrete wastewater piping has experienced pipe deterioration from hydrogen sulfide corrosion.

MCWD's sewer system transports wastewater generated by the City of Marina and the Fort Ord Community to the MRWPCA's regional sewer system. MRWPCA's service area encompasses Northern Monterey County including the cities of Pacific Grove, Monterey, Del Rey Oaks, Seaside, Sand City, Marina, Salinas, Fort Ord Community, and Monterey County communities of Castroville, Moss Landing, and Boronda.¹⁴ MRWPCA's sewer system consists of interceptors, pump stations and force mains, which convey intercepted wastewater to the RTP, located two miles north of the City of Marina in the Monterey Regional Environmental Park. Secondary treatment wastewater is discharged, under an approved National Pollutant Discharge Elimination System (NPDES) permit, via a 48- to 60-inch outfall pipeline into the Monterey Bay approximately 2.5 miles off the coast or is piped to the SVRP for recycling.¹⁵ The RTP has a design capacity of 29.6 mgd but its use permit limits it to treat up to 27 mgd.¹⁶ In 2004, the average dry weather flows were approximately 21.5 mgd. Based on regional population forecasts for the MRWPCA service area, the RTP has sufficient capacity to serve proposed uses and new development in Marina, including portions of the former Fort Ord for at least the next 10 to 15 years.¹⁷ The MRWPCA has initiated the process to increase the permitted operational capacity of the RTP to the full 29.6 mgd and anticipates receiving the permit prior to reaching the RTP's existing permitted use of 27 mgd. Since the existing capacity of the RTP is sufficient, currently there are no capacity expansions planned. However, MRWPCA has a RTP Expansion Master Plan, which would be implemented when there is a need to expand the facility.¹⁸

Short-term constraints to new residential development may occur as a result of a MRWPCA requirement to limit wastewater treatment for new residential development. In 1998, MRWPCA passed Ordinance 98-01 limiting the allocation of available wastewater treatment capacity among MRWPCA member jurisdictions between 1998 and 2002. The Ordinance was extended by Ordinance 2004-04 under which the RTP allocation available to member jurisdictions as a whole is 7,066 housing units (Ordinance 2004-04 sunsets on

¹² Marina Coast Water District, <http://www.mcwd.org/html/faqs.html#25>, Accessed October 13, 2004.

¹³ United States Army, Former Fort Ord Environmental Cleanup,

<http://www.fortordcleanup.com/foprimer/infrastructure.asp>, Accessed October 14, 2004 cited in UV EIR, 2005

¹⁴ Monterey Regional Water Pollution Control Agency, *Wastewater Allocation Plan Initial Study*, June 2004.

¹⁵ Monterey Regional Water Pollution Control Agency, http://www.mrwpc.org/html/about_mrwpc.html, Accessed October 13, 2004.

¹⁶ Bob Jaques, Engineer, Monterey Regional Pollution Control Agency, written communication to EIP Associates.

¹⁷ *ibid.*

¹⁸ *ibid.*

September 30, 2008). Furthermore, due to the requirement to make only 85 percent of the allocation initially available for distribution, the total allocation available on a first come first served basis is 6,006 housing units.....Those projects generating more than 100,000 gallons per day would require review and approval by the MRWPCA.¹⁹ Upon the expiration of Ordinance 2004-04, a new allocation plan would be adopted using the updated Association of Monterey Bay Area Governments population projections.²⁰

• Environmental Impacts

Project Impacts

The proposed Project area formerly contributed to the 2.4 mgd flowing from Fort Ord to the wastewater facility. Since base closure the wastewater flows from former Fort Ord are down to 0.9 mgd. The proposed project would resume historic wastewater flows with the addition of flows from the new structures in the proposed development.

Wastewater generation has been calculated as 90% of domestic water demand in other Reuse Project EIR's. As detailed in section IV-G Water Resources, the project water demand is estimated at 156 AF/Y with 93.07 AF/Y as domestic (interior) use. Converted to an average daily flow in gallons, the project contribution to the wastewater facility is 0.083 million gallons per day (mgd). The project would not have a significant effect on the wastewater facility capacity.

Cumulative Impacts

The General Plan Update Technical Workbook notes:

Short-term constraints to new residential development may occur, however, as a result of a MRWPCA requirement to limit wastewater treatment for new residential development over the next four years [extended to 2008 in 2004]. Wastewater treatment service will be provided for all residential development within the agency's service area on a "first come, first served basis" until 70-80 percent of the residential allocation is reached. A 20 to 30 percent reserve will be maintained to allocate to future residential development within MRWPCA's service area. Commercial and industrial development is not affected by this limitation to wastewater treatment service.

This policy serves as a mechanism to avoid cumulative impacts resulting from regional growth in the short term. The wastewater facility has capacity to serve the cumulative demand of Reuse Plan projects including Cypress Knolls. The wastewater facility has sufficient existing capacity to accommodate proposed new uses and new development in Marina, including portions of the former Fort Ord base, for at least the next 10 to 15 years, or through year 2015 to year 2020. Therefore, the Proposed Project would not result in the need to either construct a new wastewater treatment facility or expansion of an existing facility and the cumulative impact would be less than significant..

No mitigation is required since the impact has been identified for wastewater disposal is determined to be less than significant.

¹⁹ Monterey Regional Water Pollution Control Agency, *Wastewater Allocation Plan Initial Study*, June 2004.

²⁰ Bob Jaques, Engineer, Monterey Regional Pollution Control Agency, written communication with EIP Associates, November 2004.

M. GROWTH-INDUCING EFFECTS

1. Environmental Issue

The CEQA Guidelines require that an EIR look at the potential for less direct effects that could lead to impacts on the environment, such as growth inducement. This section will examine the proposed project's potential for growth inducement.

A project may be growth inducing if:

- a) It removes impediments to growth.
- b) Extends community services or infrastructure.
- c) Encourages other activities or precedents which could cause substantial growth or impacts on the environment.
- d) It could indirectly lead to economic, population or housing growth.

2. Potential for Growth Inducement

The State CEQA Guidelines (Section 15126(g)) requires an EIR to discuss how a proposed project could directly or indirectly lead to economic, population, or housing growth. A project may be growth-inducing if it removes obstacles to growth, extends community service facilities or infrastructure, or encourages other activities or precedents which cause significant growth. The potential growth-inducing impacts of the proposed Project are discussed below in terms of these factors.

Economic, Population or Housing Growth

Construction and occupation of the residential Project will cycle money through the region and represents an infusion of capital which might lead to economic expansion. New jobs would be created in the short and long term by the Project, however, construction would not require a significant labor force from outside the region and would be of short duration.

The Project would result in a net increase of 242 residential dwellings and 60 assisted-living quarters in the City of Marina over the historic number of units at Patton Park. Since the Project is specifically predominantly designed for elderly residents, the actual occupancy would be likely to be less than the 2.73 persons/dwelling identified for the rest of the City. If the occupancy is 2.0 persons/dwelling or less, the increase in population would be about 1424 persons (slightly more if the apartment units are not restricted to seniors), plus 60 in assisted living. This change is not considered a significant effect since the increase is planned for in regional projections and will be phased over several years.

The Project would add an unspecified number of jobs to staff the assisted living center, community programs and maintenance, and administration.

Although the Project will continue the current job to housing ratio imbalance in the City in the short term, the reuse Plan EIR notes for the long term that:

A balance between the number of jobs and housing units available in a specific area reduces excessive commute distances, automobile-related air pollution and emissions, and traffic congestion, which in turn imparts beneficial impacts to the surrounding environment. Implementation of the proposed [Fort Ord Reuse] Project would produce a jobs:housing ratio of 45,457 jobs to 22,232 dwelling units or 2.05 with the Project area. This would reverse the

historically imbalanced jobs:housing ratios for the City of Seaside (.55 in 1991) and the City of Marina (.13 in 1991). It would create a surplus of jobs for the Project area population and reverse the strong local job shortage, while improving the overall housing supply which would benefit Monterey County.

Additionally, as the vast majority of the new residents created by the project would be retired seniors who would not be commuting to work, the commute- and traffic-congestion-related concerns related to a jobs:housing imbalance would not translate into impacts in the case of the proposed project.

Removal of an Impediment to Growth

Reuse of Fort Ord is not anticipated to eliminate any existing obstacles to growth. The development of Fort Ord into a civilian urban area is considered "in-fill" in that the property is currently developed with vacant military structures. The Proposed Project would not result in the extension of existing sewer and water lines to the site. Lines are already present on the site from its previous use, but they would have to be replaced to accommodate the civilian standards and the different demands associated with civilian use. Providing this infrastructure to the site is not considered growth inducing but is part of the planned development of this area of the City as allowed in the existing General Plan. New storm drainage, water distribution and sewer lines will be installed as needed to replace deteriorated infrastructure.

The public street improvements which will be constructed with the Project, or with the Project fees paid to the City, will only increase capacity to accommodate Project traffic or growth that is planned to occur under the orderly implementation of the City General Plan and the Fort Ord Reuse Plan. The improvements would not increase capacity to a degree that an impediment to growth is removed.

Potential for Land Use Intensification and Precedent-Setting Effects

In the case of the Fort Ord reuse, the Proposed Project is considered both "in-fill" and "reuse" because of the existing urban footprint and extensive infrastructure left behind by the military. Development of the Proposed Project would result in the construction of new residences. Adjacent properties are and will be developed with institutional, residential and commercial uses, and would not be subject to increased development pressures as they are already planned. Vacant properties to the south are currently proposed for commercial uses. Therefore, the development of the Proposed Project site would not increase pressure on the City to intensify the land use designations and zoning on adjacent or nearby properties. Demand by residents of the Proposed Project for goods and services, however, could encourage some population growth to the extent this demand cannot be met (which is unlikely) by the existing population and businesses in the area. Of course, the proposed project would directly increase population because it is a residential project, as set forth above. This would ultimately fulfill development as allowed in the City's General Plan.

Precedent setting effects are defined as the ability of a project to set an example of what can be achieved on parcels with similar land use designations and parcels of land situated in similar location within the City and with similar constraints. Parcels of land potentially susceptible to precedent-setting effects of the proposed Project include other parts of the former Fort Ord such as Abrams and Preston Park housing areas which are planned for orderly redevelopment under the Reuse Plan. There are no other large parcels similar to the proposed Project elsewhere in the Marina area.

The Project is immediately adjacent to developed portions of Marina and appears to be a logical priority for reuse of the former Fort Ord. Street connections necessary for the ultimate implementation of the Reuse Plan are directly adjacent to, and will be implemented with, the Project.

N. IRREVERSIBLE ENVIRONMENTAL CHANGES

1. Environmental Issue

Section 15126(f) of the State CEQA Guidelines states that for the preparation of EIRs, a discussion of any significant irreversible environmental changes which would be involved in the proposed action be provided. These irreversible environmental changes include: uses of non-renewable resources during the construction and operation phases of the Project, the commitment of future generations to the proposed uses, and any irreversible damage that would occur from development of the Project site.

In the short term, most changes that would occur on the site would be directly related to demolition and construction activities. Site preparation, including grading, road construction and utility lay-in would create short-term air quality and aesthetic impacts. Short term adverse construction impacts could be acutely felt by residents located near the development site. Beneficial effects may also occur in the short term by the provision of a potential increase in construction labor demand and by the partial expenditure of construction payrolls and supply budgets in the local area.

In the long term, the following effects would occur throughout the life of the Project:

- Increased traffic with associated air pollutant emissions and noise
- Permanent loss of area available to native plant communities
- Increased demand for fire and police protection
- Increased demand for water resources and wastewater treatment.

Two other categories of resources are involved in the proposed development of the property: 1) general industrial resources such as capital, labor, vehicle fuels, construction materials, etc., and 2) site-specific resources such as surface biota and soils. The proposed development represents a less-than-significant commitment of industrial and site-specific resources.

The permanent installation of construction materials will be considerable, and for the most part represents an irreversible and irretrievable commitment of resources. The labor and fuel used in the construction of the Project are irreversibly lost to alternative investment. The raw materials utilized by the Project, along with the energy resources utilized during the lifetime of the entire Project, will be irreversibly and irretrievably lost.

The site-specific commitment of resources could involve approximately 190 acres of land, most of which is already developed. Site preparation and construction will alter portions of the site's existing contours. The Project will be designed to limit wasteful consumption of energy by adhering to the requirements of Title 24 of the Uniform Building Code.

O. LAND USE

1. Environmental Issue

This section will evaluate consistency with adopted plans and policies related to land use, evaluate the potential for any land use conflicts with surrounding existing and planned land uses, and evaluate the potential to divide or disrupt an established neighborhood.

Project and Program Level Assumptions

For the purposes of this section, Project and Program level project components are considered equally. It should be noted, however, that if the City moves forward in the future with an actual proposal for development on the two parcels to be redesignated as Open Space (including, if those proposals are for a park and/or senior center), land use impacts potentially will have to be reevaluated as part of follow-up CEQA review for land use impacts once the exact specifics (e.g., location on a park of child's playground equipment vs. location on the park of a baseball field) of the proposals are known.

2. Environmental and Regulatory Setting

Environmental Setting

The project site is located adjacent to occupied land uses to the north and south: the residential neighborhood fronting Reindollar Avenue and the interim high school accessed currently from Crescent Avenue to the north and Veterans Transition Center housing to the south. These uses have the potential to be impacted by the proposed project. Relevant discussion of the environmental impacts that could occur affecting these land uses are contained in EIR sections IV-D Traffic, IV-E Noise and IV-F Air Quality and others. These sections also address the Project's impacts on planned land use to the east and southeast. Land to the west of the site is planned as natural open space under the General Plan.

General Regulatory Setting

The General Regulatory Setting is described in Section III of the EIR. The Proposed Project is evaluated for consistency with applicable Plans and Policies following.

3. Consistency with Adopted Plans and Policies

According to State CEQA Guidelines Section 15125(d), an EIR is required to discuss any inconsistencies between a proposed project and the applicable General Plan and applicable regional plans. Inconsistency by itself is not a significant environmental impact. An inconsistency that has physical environment implications can be a significant effect on the environment in some circumstances.

Not all the policies relevant to the Project in all General Plan Elements are listed below. Where policies have the potential to conflict with the Proposed Project or where they relate directly to a distinct topic analyzed in Chapter IV of this EIR (e.g., General Plan policies regarding visual resources) and relate to whether the environmental impact of the Proposed Project exceed the thresholds of significance, those policies are listed and discussed with that impact area.

CITY OF MARINA GENERAL PLAN

The following policies from the *City of Marina General Plan* relate to land use issues and are applicable to the Proposed Project:

Community Land Use

Section 2.4.5: Future land development, whether it involves development of new areas, infilling of existing neighborhoods or commercial areas, or redevelopment of former Fort Ord lands, shall have sufficient intensity to help ensure the long-term feasibility of public transit for work and other trip purposes, and to create a pedestrian oriented community.

Consistency- The proposed project has a higher density than envisioned in the current General Plan in order to ensure its long-term feasibility. It also has looped streets allowing residents to conveniently walk from place to place in the neighborhood and to the community facilities within the project. Transit is anticipated to be available to project residents. The project is consistent with this policy.

Section 2.4.7: Retail and personal-service uses shall be channeled into existing commercial areas and other identified commercial centers in the plan and efforts shall be taken to avoid strip-type commercial development.

Consistency- The project is consistent with the General Plan and Reuse plan land uses for the site. Commercial development is planned for the University Villages project to the south of Cypress Knolls. The project is consistent with this policy.

Section 2.4.8: Construction of broad range housing types shall be permitted and promoted in order to provide greater housing choice and diversity.

Consistency- The proposed project includes up to four types of housing with an emphasis on elderly housing. The project is consistent with this policy.

Section 2.4.10: Where feasible, the community shall be demarcated from adjacent communities by permanent open space.

Consistency- The project has open space buffers incorporated around three sides of the project. The project is consistent with this policy.

Section 2.4.11: Sufficient land shall be set aside to meet the outdoor recreation needs of existing and future residents.

Consistency- The proposed project includes substantial and sufficient open space for its residents and includes a site identified as a potential future park and is consistent with this policy.

Section 2.8: Wherever possible, public open space in the form of natural undeveloped lands and/or developed parklands shall be incorporated into all major subdivisions and developments, including residential, commercial and institutional (educational and civic) projects. Wherever feasible, major open space areas shall be linked to each other through the provision of wildlife/habitat corridors and/or recreational trails.

Consistency- In addition to the perimeter buffers noted above, the project includes internal open areas and a system of sidewalks and paths that link these areas to residential and community center areas. The project is consistent with this policy.

Section 2.31.2: It is the City of Marina's intent to promote construction of new housing that is environmentally and socially responsible. To ensure that housing continues to be available to households of lower income in Marina, affordable housing shall be provided pursuant to the housing requirement of the Housing Element of the City of Marina General Plan.

Consistency- The proposed project will include affordable housing units as required by City legal requirements, so is consistent with this policy. In addition the Project will include various water conserving measure including very drought tolerant landscape. The Proposed Project will comply with all applicable building code related energy conservation compliance requirements.

Section 2.31.4: New housing shall accommodate a broad range of life-styles including those associated with the presence of CSUMB and the MBEST Center, with people wishing to combine living and work space, and retired residents.

Consistency- The project includes market rate single-family detached units, possibly some attached units, apartments, including for retired residents who likely will take substantial advantage of CSUMB extended education offerings and, therefore, is consistent with this policy.

Section 2.31.6: New housing shall be constructed at densities and in patterns, which conserve land, reduce reliance on the private automobile and result in a walkable, attractive neighborhood.

Consistency- As described above under policy section 2.4.4 and 2.8 the project is designed to encourage walking.

Section 2.31.8: New housing shall be integrated into the fabric of the city in such a way that it complements existing housing areas and contributes to the overall stability, image and sense of community of the City. Accordingly, gated communities should be avoided and, if included as part of a development application, should be allowed only if significant public benefits are provided as part of the project.

Consistency- The project is proposed to potentially be a gated community. The applicant has indicated that needs of elderly residents are such that the security offered by a gated community is very desirable for prospective elderly buyers and will be important to implement the General Plan designation for senior housing. The project, however, includes significant public benefits such as eliminating blight, preserving open space, providing needed senior housing and amenities, provision of open space for a potential future park and senior center, and implementation of the General Plan's designation for the site, so may be found by the City Council to be consistent with this policy.

Section 2.31.9: Amenities such as common open space, pedestrian paths and bikeways and well-landscaped streets, shall be incorporated into the design of new housing areas to ensure long-term desirability and stability of these areas as well as contribute to the needs of the larger community. Single-family and Village Home dwellings may be clustered and designed to provide for additional common open space.

Consistency- The project is consistent with this policy (see 2.4.4, 2.8 and 2.31.5 above).

Section 3.3.1: Develop future areas of the city, and redevelop existing developed areas, in patterns and to densities that make the provision of frequent regional and local transit economically feasible.

Consistency- The project is comprehensively planned within the fabric of the Reuse Plan area to mix with other projects and regional circulation in a manner that encourages regional and local transit feasibility.

Section 3.3.2: To ensure the feasibility of future transit services, 80 percent or more of the city's residential growth shall be located within transit-served corridors designated in Figure 3.2 [of the General Plan]. Furthermore, all future residential development within 1,500 feet of designated transit routes shall be governed by minimum density requirements; [...] the minimum density for newly developing or redeveloping areas of the City shall be 7 units per gross acre (i.e. total development area excluding major roads, public facilities and open space, but including local streets and local open space features and amenities).

Consistency- The project is located between transit served corridors of California Ave and Del Monte Blvd. Portions of the project are further than 1,500 feet from these corridors, however most of the project is within 1,500 feet of these corridors. The project density is 4.88 units per acre. Section 3.3.2 needs to be read in conjunction with the corresponding land use designation on the Cypress Knolls Project site. The Proposed Project proposes increasing the density of the site over its current density and over what the General Plan currently calls for, which will further the above policy. Additionally, the City and the project applicants are working with Monterey-Salinas Transit to provide shuttle availability to the community to facilitate access to public transit, shopping, medical appointments, and other local travel to reduce the dependency on the private automobile. Additionally, the project provides interconnectivity through walking trails, sidewalks, and bicycle access. While the project does not precisely reach the goal of 7 units to the acre, it comes closer to reaching that goal than under the current General Plan. Adding additional units would be difficult given the topographical limitations on the site. In addition, increasing the number of units to the proposed level would create additional environmental impacts.

Section 3.3.4: Reduce the number and length of vehicular trips and limit overall traffic congestion by promoting land use patterns which allow for multipurpose trips and trip deferral during peak travel times.

Consistency- The project is consistent with this policy because retired person generally can defer travel at peak times, thus reducing congestion.

Section 3.3.5: Design the city to enable and encourage walking and biking as a major and safe means of travel.

Consistency- The project design encourages walking and biking and is consistent with his policy.

Section 3.3.8: Link existing and future areas of the City with an integrated system of roads, transit, footpaths and bikeways that connects neighborhoods, commercial areas, schools, parks, and other major community-serving destinations.

Consistency- The project is consistent with this policy linking streets to the existing infrastructure and providing a 30 foot easement for a pedestrian trail linking to the existing school (refer to section I-D Project Description and Map 3-Proposed project site plan).

Section 3.19 For both safety and quality-of-life purposes low travel speeds should be maintained on residential streets which do not serve as collector streets. Calming devices, such as speed bumps, narrowing of the street at intersections, stop signs, and roundabouts, should be used where necessary to discourage unrelated through travel or speeding vehicles.

Consistency- The project proposes traffic calming-devices including roundabouts and pedestrian crosswalks for the open space that will be raised and also function as speed bumps.

Section 3.38 So as to provide for safe, direct and pleasant pedestrian circulation, all new local residential and commercial streets shall comply with the following standards, unless more specific standards are provided elsewhere in the General Plan:

1. Sidewalks with a minimum width of 5 feet shall be provided on each side of residential streets, or on one side of cul-de-sacs and auto courts serving less than 7 units.

2. All new streets shall provide sidewalks separated from the residential roadway by a planting strip with a minimum width of 6 feet. The planting strip shall be landscaped with ground covers and street trees as provided for in the Community Development and Design Element.

Consistency- The project provides 5-foot wide sidewalks along all roadways. The streets in the senior housing development are designed to separate the sidewalk from the roadway with a 5-foot planting strip, except where a bicycle lane is proposed. In that condition the planting strip is replaced with the bicycle lane. The planting strip is designed to be landscaped with a mixture of ground cover and street trees to respect the water conservation needs of the area. The senior housing development, however, includes substantial trails within its open space areas to provide an attractive alternative to pedestrian circulation along the streets. This feature of the trails is an unusual benefit not provided in most developments. These trails, combined with sidewalks separated by a well-landscaped five-foot planting strip, may make the project consistent with this policy as meeting the intent of providing safe, direct and pleasant pedestrian circulation.

Section 3.20 In order to provide greater visual and physical separation between moving vehicles and pedestrians and moving vehicles and residences, curbside landscaping consisting of street trees and low-maintenance groundcovers shall be incorporated into the design of future local residential streets.

Consistency- The proposed project would include street trees and low-maintenance groundcovers as part of the design of local residential streets.

Section 3.45: In no event shall the City permit new development requiring water allocations in excess of the available supply or in excess of its designated water allocation for that portion of former Fort Ord within the City.

Consistency- The project is consistent with this policy (refer to section IV-G - Water Resources).

Section 3.53: The City of Marina, in conjunction with MCWD, shall continue to promote water-saving devices.

Consistency- Plumbing fixtures in the proposed project will comply with current plumbing code standards, requiring low flow plumbing devices. The project will also incorporate conservation requirements such as hot water recirculation systems, high efficiency clothes washers for residential units and zero-use urinals for non-residential construction. The project is consistent with this policy (refer to section IV-G -Water Resources).

Section 3.54: All infrastructure required for adequate water supply shall be in place prior to or concurrent with new development. The cost for providing water to new development shall be paid by impact fees set at a rate sufficient to cover the annual debt service of the new water supply system.

Consistency- The project will have all infrastructure required for adequate water supply in place concurrent with new development. The proposed projects meets this policy (refer to section IV-H Water Distribution and Fire Flows).

Section 4.19.2: Major identifying features such as park, plaza or school sites should be provided.

Consistency- The project includes significant open space, a Community Center that will function as a plaza and gathering place for residents, and a General Plan redesignation so as to facilitate a potential future park and potential future senior center is consistent with this policy.

Section 4.27.1: The pavement widths of local residential streets should only be as wide as necessary to accommodate the residences along the immediate street frontage and should provide for parking on both sides. Road widths of 34 feet are appropriate for local residential streets and should allow vehicles and bicycles to share the roadway without the need for a designated bikeway and allow for parking on both sides. In order to primarily facilitate the turning of fire apparatus, parking shall not be allowed within 20 feet of an intersection. In order to discourage parking at intersections, improve street appearance, and to improve pedestrian safety at intersections, street pavement width should be reduced to 22 feet within about 20 feet of the intersections.

Consistency- Pavement widths within the project have been designed to be only as wide as necessary to accommodate the residences along the immediate street frontage, with parking along one side of the roadways. Pavement widths on the residential fronting streets range from 29 feet to 36 feet. Vehicles and bicycles can share the roadways, however, a bike path is proposed along a perimeter circuit to promote biking fitness for the residents. Parking at intersections will be prohibited by marking the curbs and/or providing right-turn lanes as deemed

appropriate for the senior community. Therefore, the project may be found to be consistent with the intent of this policy.

Section 4.27.3: Beyond the paved road widths listed here, the rights-of-way for local residential streets shall include: 11 feet back of the face of the curb on each side, 0.5 foot for the curb, a 6 foot landscape strip, and a 5 foot sidewalk adjoining the edge of the right-of-way. In the vicinity of schools and other areas of high pedestrian traffic, sidewalk width should be increased to 6 feet.

Consistency- Per the discussion immediately above under Section 4.27.1, pavement widths within the project will vary according the specific project needs of each residential area. The intent of the specific dimension requirements must be read in light of the fact that the project is designed with substantial trails and paths as alternative pedestrian and cycling routes. The precise requirements of this section, therefore, may be less important in light of those trails and paths. Therefore, the project may be found to be consistent with the intent of this policy.

FORA REUSE PLAN

Following is a list of policies and programs from the FORA Reuse Plan that are applicable to the Cypress Knolls Project¹:

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:

- Land Use Actual Density- Designation Units/Gross Acre
- 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

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.

Consistency- The City General Plan and the proposed project are consistent with this objective and program because of the provision for needed senior, affordable and assisted living housing types and takes advantage of infill opportunities on the site to accomplish these.

¹Reuse Plan *Volume 2-Reuse Plan Elements, 1997*, pages 235 to 240

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-2.2: 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.

Consistency- Based on the analysis presented in section 3 below ABOVE?, the project is compatible with its surroundings and will not create land use conflicts resulting from significant environmental effects on the surroundings. The project includes adequate landscape setbacks from major streets.

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).

Consistency- The project has developed a mix of residential types and amenities to be market responsive and achieve a variety of economic goals. The City has determined that the existing structures on the site are no longer suitable for renovation and must be removed. The mix of housing types takes advantage of areas on the site to infill with affordable apartments and assisted living units. The Project is consistent with this Objective and Programs.

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

Consistency- The project includes program level actions to create parcels suitable for a park and senior center and is consistent with this objective.

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.

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.

Consistency- As noted above under consistency with Marina General Plan policies that have the similar intent to these Objective E policies, the Project is consistent with this Objective, policies and programs.

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.

Consistency- The provision for this type of housing has been made in the Veterans Transitions Housing area immediately south of the proposed project site and in the former Patton Park.

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.

Consistency- The proposed project provides affordable housing opportunities which is consistent with the Reuse Plan program G-1.1. The City requires all projects to comply with state and federal laws for accessibility, hence the project will be consistent with this objective.

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.

Consistency- The General Plan land use and housing elements are consistent with and implement Reuse Plan policy. Refer to section IV-L under Population and Housing where consistency with City affordable housing policy is determined.

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.

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.

Consistency- Refer to the consistency with applicable City policies related to development character and section IV-J Visual Resources where it is determined that the project fulfills the community design objectives of the General Plan and the Reuse Plan.

Applicable Design Objectives from The Reuse Plan *Volume 1-Context and Framework* are²:

3.1.2 Design Objectives

Community Form

Community form should be well defined and discernible; it should be distinctive within the larger Peninsula, but compatible with the form and character of other Peninsula communities. Development at the former Fort Ord will be related and connected to the adjacent cities of Marina and Seaside and will comprise important parts of those cities; however, the former Fort Ord area will also have its own distinct character consisting of definable edges, entries, and structure.

- Where appropriate establish a readily discernible edge to the new development.
- Create compact community form and patterns of development.
- Create distinctive and memorable entries to the area.
- Establish community form consistent with peninsula prototypes.
- Link the new neighborhoods with the surrounding cities' development fabric.
- Establish specific design and signage standards for the State Highway 1 Scenic Corridor to minimize the visual impact of development.

Consistency- As also discussed in Section IV-J, the project adheres to a compact form and preserves substantial open space, minimizes visual impacts, maintains a distinct neighborhood identity by adhering to existing neighborhood edges and topography, and

² Reuse Plan *Volume 1- Context and Framework*, 1997, pages 60,66 and 71

provides needed connections to existing neighborhoods.

Existing Neighborhoods

The existing neighborhoods at the former Fort Ord will form the nucleus of early development. These neighborhoods are of varying ages and in varying conditions, but each has a unique character and can ultimately anchor an important neighborhood. In some cases, existing neighborhoods will be infilled and redeveloped, changing the unit types or development pattern to be more viable and attractive to future residents. In other cases, existing neighborhoods will continue in their present form, to be extended and expanded, or to remain as distinct neighborhoods to be joined by the many new neighborhoods that will be added during the long term evolution of the area as a whole.

- Reinforce the positive character of existing residential areas through building and areawide improvements.
- Encourage infill of new housing at an appropriate scale to enhance existing neighborhoods.
- Reinforce linkages among existing neighborhoods and establish linkages to new neighborhoods and to village centers.
- Enhance the physical appearance of existing neighborhoods with special street and landscaping treatments.

Consistency- As discussed above the project is consistent with this aspect of the Objectives because it includes infill and mix housing types which will be attractive to new residents. It is also linked to its surroundings through street connections and trails, and complies with City policy for attractive landscape and streetscape treatments.

Landscape and Open Space

The visual character of the Peninsula is greatly determined by the quality of the natural and introduced landscape pattern and materials. The former Fort Ord encompasses a vast area which ranges from coastal sand dunes to upper reaches of oak woodland and chaparral. The Main Garrison area, where uses were principally located, has very little introduced or formal landscaping; consequently the image of the area is rather bleak and uninviting. As the former Fort Ord will be developed over time, major vegetation and landscaping should be introduced in these development areas to create a more inviting and pedestrian scale environment, and to integrate the site as a whole into the larger Peninsula environment.

Consistency- Refer to section IV-J Visual Resources where the applicable objective of landscape, scenic resources, retention of important trees and landscaping are addressed. The Project landscape will comply with City standards and is consistent with this objective.

The City's Consistency Determination

The FORA Master Resolution Chapter 8 to that resolution stipulates that the City cannot approve land use entitlements unless they are consistent with the Reuse Plan. The local agency (City) is required to submit legislative land use decisions to FORA for review and processing.

Under Chapter 8, FORA is charged with review of legislative land use decisions for consistency with the Reuse Plan subject to these findings:

Under Chapter 8 sections 8.02.020 and 8.02.030, FORA is charged with review of the City's legislative land use and development entitlement decisions for consistency with the Reuse Plan subject to these findings:

- the land use is not more intense than the uses permitted under the Reuse Plan.
- the development is not more dense than the density of use permitted under the Reuse Plan.
- the uses are in substantial conformance with applicable programs in the Reuse Plan.
- provides uses that do not conflict with or are incompatible with the uses permitted or allowed in the Reuse Plan.
- the development provides for the financing and/or installation of necessary infrastructure.
- the development provides for implementation of the Fort Ord Habitat Management Plan.
- the development is consistent with the Highway 1 Scenic Corridor design standards as such standards may be developed by the Authority Board.

In addition, the local agency must include the applicable open space and conservation, historic, wastewater disposal, water conservation and other policies and programs of the Reuse Plan, into its General Plan. The updated 2000 General Plan does this.

Substantial evidence exists to support a finding that the Proposed Project is consistent with Chapter 8 provisions related to conformity to the Reuse Plan. The City General Plan update Land Use Element, Conservation and Open Space Element, etc., combined with the specific mitigations described in this EIR, provide the basis for the necessary findings of consistency with the Reuse Plan.

Installation-Wide Multi-species Habitat Management Plan for Former Fort Ord

The impacts and mitigation findings in section IV-A Biological Resources did not identify any inconsistency with the Installation-Wide Multi-species Habitat Management Plan for Former Fort Ord (HMP).

3. Impact Analysis

Impact Significance Thresholds

The CEQA Guidelines provide the following impact significance thresholds for potential land use impacts. The Project could result in a significant impact if it would:

- Physically divide an established community
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect

- Conflict with any applicable habitat conservation plan or natural community conservation plan

Project Impacts

The proposed project would not divide an established community. Instead, the Project (notwithstanding its proposal for its senior residential component to be gated, but not the apartments or the program-level sites that may provide a future senior center and park) will serve to unite and integrate a neighborhood in to the fabric of Marina that was historically completely separated by Fort Ord boundaries from the neighborhood to the north. The project will provide links to surrounding streets that form a logical network of vehicular and pedestrian travel ways.

The land to the west of the site is designated Habitat Preserve and Other Open Space under the City General Plan. The impact analyses in section IV-A Biological Resources, Section IV-I Drainage and IV-K Water Quality did not identify potential to adversely impact this natural area. As noted above, the impacts and mitigation findings in section IV-A Biological Resources did not identify any inconsistency with the Installation-Wide Multi-species Habitat Management Plan for Former Fort Ord (HMP).

Because the Proposed Project is consistent with applicable policies described above and in Section IV-L under Housing and Population, and all other potential environmental effects, including the potential for conflicting land uses, are evaluated in detail under other EIR topic impact and mitigation sections, the Proposed Project is determined to have a less than significant impact on land use.

Cumulative Impacts

As described above and in Section IV-L under Housing and Population, the proposed project is consistent with and implements the applicable Reuse Plan and the City of Marina General Plan policies and programs related to Land Use. Therefore no impact is identified for cumulative land use issues.

V. Alternatives to the Proposed Project

A. INTRODUCTION

The purpose of this section is to describe a range of reasonable alternatives to the Project and evaluate the comparative environmental impacts of the alternatives (see Table AP). Pursuant to CEQA, the discussion includes the specific alternative of “No Project”, and identification of feasible alternatives capable of avoiding one or more significant adverse environmental effects or reducing them to a level of insignificance. This section also identifies the “environmentally superior alternative” as prescribed by CEQA.

According to the CEQA guidelines, the range of alternatives required is governed by the “rule of reason” that requires the EIR to set forth only those feasible alternatives necessary to permit an informed and reasoned choice by the decision-making body and informed public participation.

The EIR is required to discuss only potentially feasible alternatives, that is, alternatives that may be able to feasibly attain most of the Project’s basic objectives. Statutes and regulations governing CEQA generally define “feasible” to mean an alternative which is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological and legal factors. Factors generally taken into account in determining whether an alternative is feasible also include, but are not limited to, site suitability, economic viability, availability of infrastructure, General Plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and an ability to acquire, control or access an alternative site. The EIR must discuss alternatives that may potentially feasibly attain most of the Project’s basic objectives. The Lead Agency, after considering the entire record before it, makes the ultimate decision regarding the feasibility of alternatives, and the ability of the alternatives to meet project objectives and reduce environmental impact.

B. Prior Alternatives Considered and Rejected / Alternatives Considered Inappropriate

Prior Alternative Analysis and the Senior Housing Designation of the Cypress Knolls Site –

The Cypress Knolls Project site has been studied in at least two prior alternative analyses.

The *Fort Ord Reuse Plan EIR* (Reuse Plan EIR) (EDAW/EMC 1996) includes a discussion of four alternatives. As former base housing, the Patton Park area (Cypress Knolls) was considered residential in this analysis. All are pertinent to reuse of the 28,000 acre former military base, including the Cypress Knolls Project site. The alternatives which FORA studied at that time were:

- Alternative 6R (Revised Anticipated Reuse; from the U.S. Army’s FEIS). This alternative related to the Army’s preferred alternative for the Presidio of Monterey (POM) annex and reserve center and the disposal of lands excess to Army needs. In this alternative, approximately 83 percent of the former Fort Ord (including the Cypress Knolls Project site) would have been conveyed to public agencies, with three percent held by the Army as “No Proposed Use” and could have been sold by the Army to private entities. In this alternative, the remaining approximately 14 percent of the undeveloped land would have been developed with a total 27,000 jobs and 10,210 dwelling units. The buildout population would be approximately 22,800.
- Alternative 7 (the FORA 12-12-94 *Fort Ord Reuse Plan*; from the U.S. Army’s FEIR) This alternative reflected the first FORA Reuse Plan which had substantially higher employment

and population figures than subsequent iterations. This alternative proposed 13,800 dwelling units and 58,500 jobs. The total population was estimated to be 41,500 plus 20,000 CSUMB students by ultimate buildout.

- Alternative 8 (Modification of Alternative 7 to include additional lands that were declared excess from the U.S. Army's DSEIS). This alternative was slightly different than Alternative 7; it included two golf courses and 1,200 additional residential units proposed in conjunction with one of the golf courses. This alternative would have resulted in 15,000 dwelling units (plus CSUMB student accommodations) and 48,100 jobs. The buildout population would be approximately 45,100 plus 20,000 CSUMB students.
- No Project Alternative. This alternative was proposed in the Reuse Plan EIR for the purpose of discussing a scenario where the former Fort Ord was unable to adopt a reuse plan.

After considering all of these alternatives and certifying the EIR which assessed their impacts, FORA adopted the current Reuse Plan, which plans for a total of 22,232 dwelling units, 45,457 jobs, and a total population of 71,770 within the former Fort Ord¹. Of the total dwelling units, the City of Marina was designated as having the potential for 4,152. (Table 3.8-1). The Cypress Knolls Project area was designated as part of Planned Residential Development District. This included a total of 533 acres for up to 2,710 dwelling units. Thus, before designating this site as being best suited for residential development, FORA conducted an extensive analysis of options and alternatives. To support its final land use designations in the Reuse Plan, FORA adopted a CEQA Resolution² which states in section D.3 that one of the overriding considerations which justified the Plan's adoption was that "the Reuse Plan will provide for additional and needed senior housing opportunities."

When the City updated its General Plan to implement the Reuse Plan, it completed further alternatives analysis. The environmental impacts of the then-proposed General Plan and the alternatives were evaluated in the *Environmental Impact Report on the Draft Marina General Plan, May 2000*. The General Plan included land use designations and policies to ensure consistency with, and to implement, Reuse Plan goals and policies, related to moving forward with processing senior residential development entitlements for the site as proposed.

In addition to the No Project Alternative, the City evaluated in the General Plan EIR three Alternative Projects: (1) The Principle Based Alternative, which differed from the Draft General Plan primarily by using densities to achieve transit supportive land use patterns, and which was determined to have the same basic levels of impacts as the proposed General Plan; (2) The Limited Growth Alternative, which emphasized lower density single family residential over multifamily land uses, and included reducing the density on the Cypress Knoll site to large lot single family residential; and (3) The Open Space Alternative, which would have retained Patton Park at historic densities but would have reduced residential density in other areas of the City to produce a much lower net population increase in order to retain more open space. The second and third alternatives were determined to be only somewhat more effective in reducing overall environmental impacts were found to not provide enough residential land use to meet the City's "fair share" of the regional housing demand and were ultimately rejected.³ After considering the pros and cons of each alternative, the City adopted the General Plan update, which designated the

¹ Reuse Plan Volume 1 Context and Framework Table 3.3-1 and page 93.

² FORA CEQA Resolution www.baseuse.org/reuseplan/FLibrary/Find597.pdf

³ *Marina General Plan EIR, 2000*, pages 15-23 to 15-25.

Cypress Knolls site as Single Family Residential anticipated for senior residential use⁴. This designation implements FORA's goal – identified as an “overriding consideration” (as discussed above) for the environmental effects of the Reuse Plan of providing housing opportunities for seniors.

In light of the fact that two prior CEQA alternatives analyses have led FORA and the City to the conclusion that the Cypress Knolls site should be used for senior and affordable housing, it is not necessary for this EIR to revisit those determinations and assess alternatives which do not involve senior/affordable housing. The California Supreme Court has stated that reconsideration of prior local and regional land planning decisions on a subsequent project-by-project basis is “the antithesis of the comprehensive, long-range planning mandated by state law; preparation of an EIR for a proposed development should not provide occasion for reexamination of those” decisions. *Citizens of Goleta Valley v. County of Santa Barbara* (1990) 52 Cal.3d 553.

For these reasons, examining land uses on the site other than senior housing is not warranted.

Alternative Sites - The Proposed Project is considered an “infill” and “reuse” project because of the current urban conditions that exist on the project site. The Project seeks to implement the purposes of the public benefit conveyance from the U.S. Army and comparable alternative sites for reuse are not available. Any off-Fort Ord alternative site, therefore, is not reasonable because such an alternative would be fundamentally counter to one of the basic purposes of the Reuse Plan project and the economic development conveyance – namely to redevelop Fort Ord. As a result, off-Ord alternatives are not considered reasonable and are not evaluated. The analysis of various land use alternatives, including alternative land use patterns and designations over the whole Fort Ord in the Reuse Plan have been adequately addressed in that document. Therefore, consideration of an alternative site for the Proposed Project within Fort Ord is not appropriate here, because as stated above, the California Supreme Court has stated that reconsideration of prior local and regional land planning decisions on a subsequent project-by-project basis is “the antithesis of the comprehensive, long-range planning mandated by state law; preparation of an EIR for a proposed development should not provide occasion for reexamination of those” decisions.

Reuse of existing structures - A reduced scale project that utilizes the existing dwelling units on the site instead of demolishing and rebuilding the project is not considered a feasible alternative because of the seriously deteriorated condition of the buildings and some related infrastructure. Additionally, the lead and asbestos contained in the existing dwelling units creates a substantial hazard for occupants who would reoccupy rehabilitated units. Information outlined in the staff report to the Marina Redevelopment Agency Board / Marina City Council on December 7, 2004 (incorporated herein by reference) outlined in detail the reasons why replace of the dwelling units rather than rehabilitate was required. That information demonstrated that the structures were unsafe, did not meet seismic codes, and that utility and drainage infrastructure had deteriorated beyond repair in many areas. Based on that information, the City Council directed that the option no longer be pursued. Because it has already been considered and rejected as infeasible, the alternative of reuse of the existing structures is not examined here.

⁴ *Marina General Plan, policy 2.35*

Alternative program level land use designation - An alternative to the proposed Open Space land use designation on the potential park and senior center site is not appropriate because the proposed land use category (Open Space) is the lowest intensity land use category in the General Plan and the examined potential uses (a park and senior center) are among the most intense allowed in that land use category. For these reasons, no impact reduction would be expected with different land use designations. and the potential park and senior center are carried forward with each alternative, except the no project alternative.

Summary of Alternatives Carried Forward for Analysis

As a result of the prior alternative analysis and resulting land use designation and the other factors listed above, the alternative presented below all involve senior housing, a future potential park and senior center, and all involve the project site. In consultation with the City staff⁵ the alternatives to be examined were determined to be:

- o No Project
- o Reduced Scale Alternative – General (540 dwelling units)
- Reduced Scale Alternative – Traffic (386)

Pursuant to CEQA, the purpose of examining the reduced scale alternatives is to determine if a reduction in the number of units or intensity of land use would avoid significant impacts or reduce significant impacts to less than significant levels.

As summarized in Section II on Table S, most significant impacts associated with the proposed Project can be reduced to less than significant levels by implementing the mitigation measures described in this EIR, except for cumulative traffic impacts, noise impacts related to construction, noise impacts related to cumulative traffic volumes and cumulative air quality.

C. No Project

Under the No Project alternative, the Proposed Project is not approved. The land would remain as it currently exists for an indefinite period of time, except that the existing structures would continue to deteriorate. The Proposed Project's effects on traffic, air quality, and on-site and off-site noise levels would be avoided. On-site effects on existing trees, sensitive plants, drainage, water quality and water use would be avoided.

The No Project alternative would not achieve the Reuse Plan objectives for beneficial reuse, provision of affordable and senior housing, attracting residents to the area to meet "fair share" housing requirements. Likewise, the No Project alternative would not meet the City's objectives detailed in the Project Description, including the implementation of the General Plan goals and objectives. Nor would it advance the objectives related to the City's Redevelopment Plan for the area.

No Project alternative would have the adverse effect of allowing blighted structures to remain on the Property and serve as an attractive nuisance with the potential to harbor criminal activity.

⁵ No commenters suggested any project alternatives during the scoping process or in response to the NOP.

D. REDUCED SCALE ALTERNATIVE – GENERAL (540 DWELLING UNITS)

The “Reduced Scale Alternative – General” alternative is similar to a project that was once proposed for the Site. That proposed project was analyzed for environmental impacts in 1999 in an uncertified Environmental Impact Report of the Cypress Knolls Project (Firma, 1999) (**See Map 19 Reduced Scale Project Alternative**). The Reduced Scale Alternative – General alternative roughly matches the historic density at Patton Park. This project alternative was selected for consideration because it would reduce site disturbance and water demand, as well as reduce traffic and related noise. The characteristics of the Reduced Scale Alternative – General alternative are:

- 400 residential units in duplex configuration utilizing existing graded pads
- 80 apartment units in two buildings
- 60 unit assisted living facility
- Private community center facilities (up to 20,000 s.f. of floor space)
- Repair and reuse of existing streets on the site
- Program-Level Planning for Open Space – Potential 18-Acre city park and 6,000 sf public senior center

The Reduced Scale Alternative - General alternative would result in changes in the following impacts:

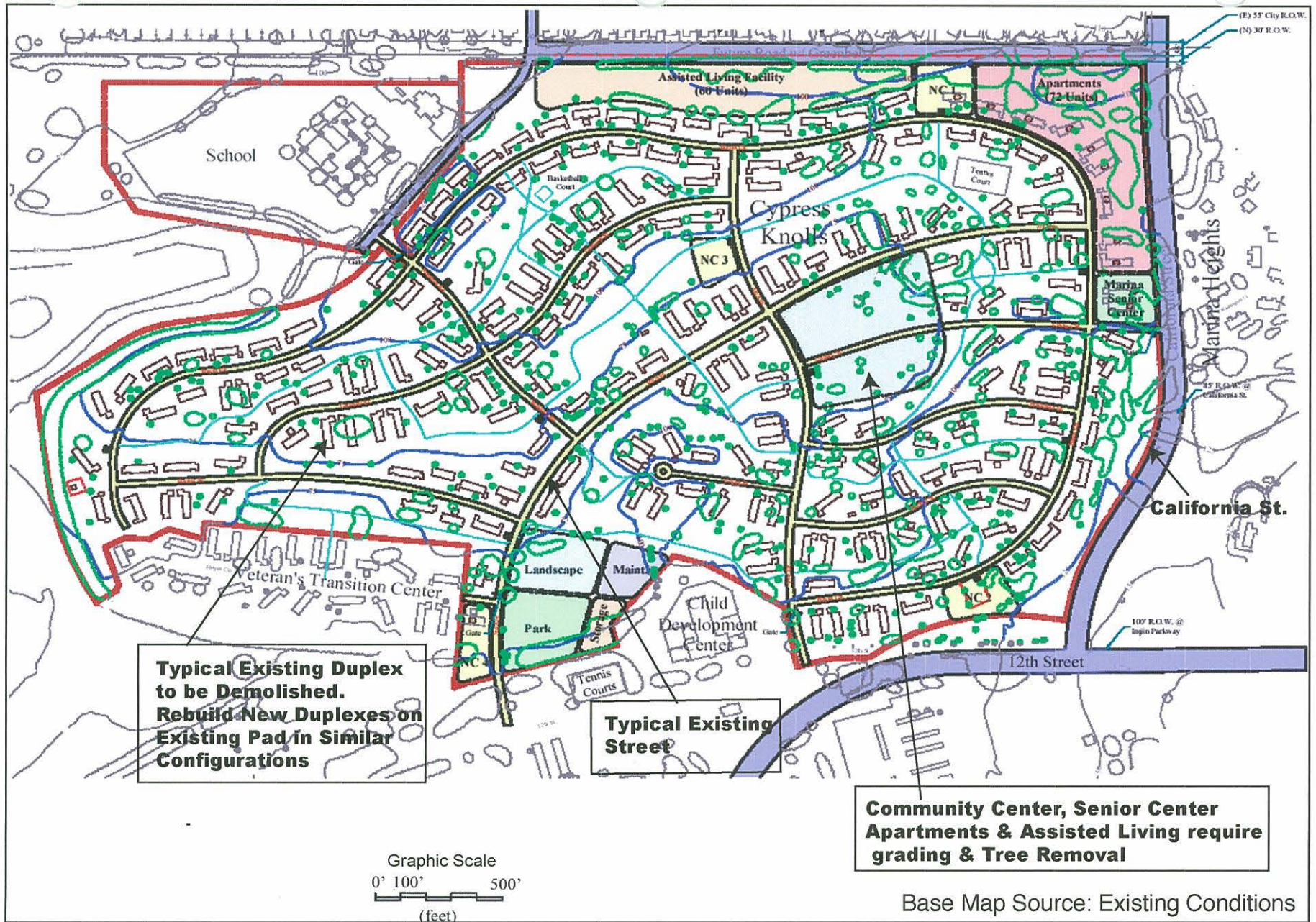
Traffic, Noise and Air Quality Impacts:

The net change in traffic trip generation would be 969 less trips daily, a 21% decrease, with about 17% fewer trips generated during the AM peak commute hour and 20% fewer trips generated during the PM peak commute hour. While these trip reductions would reduce the level of incremental project impact to the local road network, the significant traffic impacts identified for the proposed project would not be reduced to levels of insignificance with implementation of the reduced scale alternative. The traffic related impacts and mitigation measures recommended for the proposed project would also be applicable to this reduced scale alternative because the trip reduction for this project density and characteristics do not eliminate the need for any identified street or intersection improvements.

Traffic noise would be reduced incrementally but not to a level of less than significant. Cumulative noise levels would be lower, but not significantly since it requires a halving of traffic volume to change noise levels 3 dBA. Construction noise levels would be lower because less site grading activity but other phases of construction would have similar noise levels, thus the significant temporary noise impact during construction would not be avoided. This alternative would likely not reduce air quality impacts found to be significant to less than significant because the impacts relate to allowed number of fireplaces, construction stage dust etc, and not vehicular emissions.

Visual Resource Impacts:

The Reduced Scale Alternative - General alternative would retain the existing landform to a higher degree than the Proposed Project and possibly result in avoidance of removal of some of the existing trees on the site that the Proposed Project would remove. This would keep the existing visual character more intact, including retention of more existing mature



Reduced Scale Alternative



Map
19

trees. Development of the apartment and assisted living facility would be likely to require removal of some existing trees. The Proposed Project would replace removed trees at a ratio greater than 1:1, however, so in the long term there would be an increase in the overall number of mature trees. On balance this alternative would not avoid significant visual impacts related to tree removal (although these impacts for the Proposed Project are less than significant after mitigation, in any event).

This alternative has the potential to save all existing perimeter screening trees identified in section IV-J as needed to avoid significant visual impacts and would therefore be similar to the Proposed Project in that respect.

Water and Public Services Impacts:

Similar to the Proposed Project, the Reduced Scale Project – General alternative would result in less than significant impacts on water resources and wastewater treatment. Water demand would decrease by about 22% over the Proposed Project, and wastewater flows would be reduced by about 20% over the Proposed Project. This is the equivalent to 33 acre feet per year less water demand and 0.018 mgd wastewater flow. At the project level these changes are not significant; however, at the cumulative level, they do represent a modest lessening of cumulative impacts on water supply and wastewater treatment capacity identified in this EIR and the MCWD Water Service Assessment for the project. However, in both the Proposed Project scenario and this Reduced Scale Project – General scenario, the impacts are less than significant individually and cumulatively.

Although not a CEQA impact, the Reduced Scale Project would also reduce public safety service calls.

Biological Resource Impacts:

Utilization of existing graded pads and retention of existing streets would avoid or reduce removal of incidental, isolated areas of sensitive native plants now occurring in and among residences and on existing open areas between residences. The alternative project could reduce the loss of Maritime chaparral by about 90% over the Proposed Project. This would be a substantial reduction, however, the impact on this resource from the Proposed Project was identified as less than significant due to the isolated, fragmented nature of the community, among other reasons, as described in Section IV-A of the EIR.

Other impacts on biological resources such as wildlife, bats, roosting birds and sensitive plant species would be considered potentially the same significance level though perhaps not the same in extent.

Cultural Resources Impacts:

This alternative would not remove the potential of a significant impact on cultural resources because a substantial ground surface would still be disturbed. The same mitigation measures would be necessary in order to reduce the potential impact to less than significant.

Drainage and Water Quality Impacts:

This alternative would result in less developed area with less stormwater generation due to new impervious surfaces, however the need for flooding mitigation, stormwater retention and new storm drains and associated site work and disturbance would not be avoided. This alternative would disturb less ground surface and involve less total earthwork movement, lessening the risk and extent of potential siltation and erosion affecting water quality. However, it would not eliminate the need for mitigation of potentially significant effects related to siltation and erosion.

Water Distribution System Impacts:

This alternative project would not avoid the need for infrastructure upgrades and provision of adequate fire flows. The impacts would be similar to the Proposed Project, except that the total number of dwelling units requiring fire flow protection would be less.

Hazards:

The alternative project would not avoid the need for mitigation related to the release of airborne toxics during demolition.

Attainment of Project Objectives

The alternative project would reduce the total number of residential units available to senior citizens. As the provision for increased senior housing is a prime project objective, this alternative does not fulfill the objective of providing senior housing as well as the proposed project because it provides less dwelling units. The alternative project would decrease the number of apartment units, which are an important aspect of the affordable housing component of the project. As the provision of affordable housing is also a prime objective of the Proposed Project, this alternative does not meet this objective as well as the proposed project. In addition the decreased density does not fulfill the following FORA goal as well as the proposed project:

Goal A.vi. To generate development that will maximize revenues to FORA's CIP program and thereby help to finance base-wide improvements encompassed therein.

This reduced scale alternative also does not fulfill the following Redevelopment Agency goals detailed in Section I of the EIR because it retains substandard street widths and gradients and generates less property tax. For example, the following goals would not be met as fully as with the Proposed Project:

Goal B.ii. To eliminate or ameliorate existing substandard conditions, including substandard vehicular and pedestrian circulation, street design, parking, inadequate infrastructure, inadequate public improvements and facilities (including utility lines and storm drainage) which have contributed to the blight conditions within Project Area 3.

Goal B.v. To promote economic development opportunities in Project Area 3 which will in turn provide a basis of ongoing revenues to the City to support operation and capital projects, including the generation of property taxes, sales taxes from the purchases made by project residents, and other fees and other taxes.

There is a need for all of the dwelling units proposed in the Proposed Project. As a result, since this alternative would not fully address that need, the additional units would ultimately need to be developed elsewhere. In this respect, this alternative may not fulfill the following City General Plan goals because the reduced density may result in needed housing occurring in undeveloped areas, and may not be economically viable due to the unusual costs to abate hazardous materials, demolish infrastructure and provide substantial amenities. Thus, this alternative may be inconsistent with the following General Plan goals:

Goal C.i. To avoid sprawl in the region by making efficient use of existing developed/disturbed land by developing infill development rather than greenfield development at sufficient density so as to relieve development pressures on undeveloped/undisturbed lands.

Goal C.ii. To facilitate and further an orderly pattern of development by entitling development on lands already designated for community development purposes.

Goal E.ii. Develop the project at sufficient residential density to make economically viable (a) all the necessary demolition, hazardous materials abatement, utility and infrastructure improvements and other site redevelopment costs and (b) all the recreational and support amenities associated with a regional active senior community.

Conclusions Regarding the Reduced Scale Alternative- General

The Reduced Scale Alternative - General does not reduce any impact identified as significant and unavoidable in the EIR to a less than significant level with mitigation and does not achieve many of the project objectives. In addition, it could result in the needed dwelling units being developed elsewhere in a manner inconsistent with the "no sprawl" goal of the City's General Plan. For this reason, it does not appear the environmental benefits of the alternative outweigh the substantially decreased attainment of project objectives.

E. Reduced Scale Alternative – Traffic (386 Dwelling Units)

The Reduced Scale Alternative - Traffic alternative is a project that was developed to evaluate whether a lower level of project density would reduce or avoid traffic impacts identified in the region in this EIR. This project alternative proposed half the proposed project density, like Reduced Scale Alternative - General, also would reduce site disturbance and water demand, as well as reduce traffic-related noise. The characteristics of the Reduced Scale Alternative – Traffic are as follows:

- 298 residential units in duplex configuration utilizing existing graded pads
- 58 apartment units in two buildings
- 30 unit assisted living facility
- Private community center facilities (up to 10,000 s.f. of floor space)
- Repair and reuse of existing streets on the site

- Program-Level Planning for Open Space – Potential 18-Acre city park and 6,000 sf public senior center

The Reduced Scale Alternative - Traffic would result in changes in the following environmental impacts:

Traffic, Noise and Air Quality Impacts:

The net change in traffic trip generation would be 1,646 less trips daily, a 38% decrease, with about 16% fewer trips generated during the AM peak commute hour and 36% fewer trips generated during the PM peak commute hour. While these trip reductions would reduce the level of incremental project impact to the local road network, the significant traffic impacts identified for the proposed project would not be reduced to levels of insignificance with implementation of this reduced scale alternative. The traffic related impacts and mitigation measures recommended for the proposed project would also be applicable to this reduced scale project because the trip reduction for this project density and characteristics do not eliminate the need for any identified street or intersection improvements.

This is because the Proposed Project's contribution to the Level of Service at intersections operating at unacceptable levels before adding project traffic may be significant as a result of increasing delay by as little as one second or more (see significance criteria in Section IV-D). Accordingly, the Reduced Scale Alternative – Traffic would still add traffic (increasing delay by one second or more) and therefore would still result in the same significant impacts as the Proposed Project.

Traffic noise would be reduced incrementally but not to a level of less than significant. Cumulative noise levels would be lower, but not significantly since it requires a halving of overall traffic volume to change noise levels 3 dBA. Construction noise levels would be lower because less site grading activity but other phases of construction would have similar noise levels, thus the significant temporary noise impact during construction would not be avoided, though the period of duration would likely be reduced. Air quality impacts related to airborne toxics and construction stage PM₁₀ would still require mitigation to less than significant levels.

Visual Resource Impacts:

The Reduced Scale project would retain the existing landform to a higher degree than the Proposed Project and could result in avoidance of more existing trees on the site. This would keep the existing visual character more intact, including retention of more existing mature trees. Development of the apartment and assisted living facility would be likely to require removal of some existing trees.

Water and Public Services Impacts

Similar to the Proposed Project, the Reduced Scale Project – General alternative would result in less than significant impacts on water resources and wastewater treatment. Water demand would decrease by about 30% over the Proposed Project, This is the equivalent to 46 acre feet per year less water demand and 0.025 mgd wastewater flow. At the project level these changes are not significant, however, at the cumulative level, they

do represent a modest, but real, lessening of cumulative impacts on water supply and wastewater treatment capacity identified in this EIR and the MCWD Water Service Assessment for the project. However, in both the Proposed Project scenario and this Reduced Scale Project – Traffic scenario, the impacts are less than significant individually and cumulatively.

Although not a CEQA impact, the Reduced Scale Project would also reduce public safety service calls.

Biological Resource Impacts:

Utilization of existing graded pads and retention of existing streets would avoid or reduce removal of incidental, isolated areas of sensitive native plants now occurring in and among residences and on existing open areas between residences. The alternative project could reduce the loss of Maritime chaparral by about 90% over the Proposed Project. This would be a substantial reduction, however, the impact on this resource from the Proposed Project was identified as less than significant due to the isolated, fragmented nature of the community, among other reasons, as described in Section IV-A of the EIR.

Other impacts on biological resources such as wildlife, bats, roosting birds and sensitive plant species would be considered potentially the same significance level though perhaps slightly reduced in extent.

Cultural Resources Impacts:

This alternative would not remove the potential of a significant impact on cultural resources because a substantial ground surface area would still be disturbed. The same mitigation as identified for the Proposed Project would be required to bring this to a level of insignificance.

Drainage and Water Quality Impacts:

This alternative project would result in less developed area with less stormwater generation due to new impervious surfaces, however the need for flooding mitigation, stormwater retention and new storm drains and associated site work and disturbance would not be avoided. The alternative project would disturb less ground surface and involve less total earthwork movement, lessening the risk and extent of potential siltation and erosion affecting water quality. However, the alternative project would not eliminate the need for mitigation of potentially significant effects related to siltation and erosion.

Water Distribution System Impacts:

This alternative project would not avoid the need for infrastructure upgrades and provision of adequate fire flows. However, there would be a reduced number of units requiring the fire flow protection.

Hazards:

The alternative project would not avoid the need for mitigation related to the release of airborne toxics during demolition.

Reduced Scale Alternative – Traffic Attainment of Project Objectives

This alternative project would reduce the total number of residential units available to senior citizens further than Reduced Scale Alternative - General. However, like Reduced Scale Alternative - General, because the provision for increased senior housing is a prime project objective, this alternative does not fulfill to objective of providing senior housing as well as the proposed project. The alternative project would decrease the number of apartment units, which are an important aspect of the affordable housing component of the project. As the provision of affordable housing is also a prime objective of the Proposed Project, this alternative does not meet this objective as well as the proposed project. In addition the decreased density does not fulfill the following FORA goal as well as the proposed project:

Goal A.vi. To generate development that will maximize revenues to FORA's CIP program and thereby help to finance base-wide improvements encompassed therein.

This reduced scale alternative also does not fulfill the following Redevelopment Agency goals detailed in Section I of the EIR because it retains substandard street widths and gradients and generates less property tax. For example, the following goals would not be met as fully as with the Proposed Project:

Goal B.ii. To eliminate or ameliorate existing substandard conditions, including substandard vehicular and pedestrian circulation, street design, parking, inadequate infrastructure, inadequate public improvements and facilities (including utility lines and storm drainage) which have contributed to the blight conditions within Project Area 3.

Goal B.v. To promote economic development opportunities in Project Area 3 which will in turn provide a basis of ongoing revenues to the City to support operation and capital projects, including the generation of property taxes, sales taxes from the purchases made by project residents, and other fees and other taxes.

There is a need for all of the dwelling units proposed in the Proposed Project. As a result, since this alternative would not fully address that need, the additional units would ultimately need to be developed elsewhere. In this respect, this reduced scale alternative may not fulfill the following City General Plan goals because the reduced density may result in needed housing occurring in undeveloped areas and may not be economically viable due to the unusual costs to abate hazardous materials, demolish infrastructure and provide substantial amenities. Thus, this alternative may be inconsistent with the following General Plan goals:

Goal C.i. To avoid sprawl in the region by making efficient use of existing developed/disturbed land by developing infill development rather than greenfield development at sufficient density so as to relieve development pressures on undeveloped/undisturbed lands.

Goal C.ii. To facilitate and further an orderly pattern of development by entitling development on lands already designated for community development purposes.

Goal E.ii. Develop the project at sufficient residential density to make economically viable (a) all the necessary demolition, hazardous materials abatement, utility and infrastructure improvements and other site redevelopment costs and (b) all the recreational and support amenities associated with a regional active senior community.

Conclusions Regarding Alternative:

The Reduced Scale Alternative - Traffic does not reduce any impact identified as significant and unavoidable in the EIR to a less than significant level with mitigation, or provide a meaningful reduction in regional or local traffic volumes and required roadway improvements to meet future traffic volumes. It does not achieve many of the project objectives. In addition, it could result in the needed dwelling units being developed elsewhere in a manner inconsistent with the "no sprawl" goal of the City's General Plan. For this reason, it does not appear the environmental benefits of the alternative outweigh the substantially decreased attainment of project objectives.

F. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The CEQA Guidelines require the EIR to identify the environmentally superior alternative. The guidelines specify that an alternative may impede to some degree the attainment of project objectives, or be more costly, without it being disqualified from consideration. The purpose of the CEQA mandate for the EIR to include a discussion of alternatives is twofold: 1) to permit a reasoned choice by decision makers, and 2) to seek to reduce or eliminate impacts.

On **Table AP-1**, the proposed project (impacts after mitigation) is compared to the alternatives (impacts after assumed mitigation) discussed above. Reading left to right, other alternatives are compared to the project, therefore "Similar Impacts" means the alternative is expected to have the same general level of impact as those at the Project site, and the same kinds of necessary mitigations. "No impact" or "less impacts" means the alternative reduced the level of, or avoids, the impact resulting in the project. "Greater Significant Impact" means the alternative could have impacts of greater magnitude than the project and may result in higher levels of impact after mitigation measures are implemented.

The No Project alternative would be the environmentally superior project because at least in the short term, the No Project alternative would avoid all impacts. Where the No Project alternative is identified as superior, CEQA requires identification of another environmentally superior project.

Setting aside the No Project alternative, the environmentally superior project would be the Reduced Scale Alternative - Traffic of 386 total living units adhering to existing street layout and landform. This alternative does not completely avoid any of the significant impacts of the Proposed Project, but most impacts are incrementally reduced roughly proportionate to the decrease in density over the proposed Project. The primary factors related to this alternative's superiority are reduced impacts on traffic, but also to a lesser degree biological resources, visual resources, water supply, wastewater treatment and noise.

Table AP-1: Comparison of Alternative Projects – With Mitigation

Issue	Project	No Project	Reduced Scale Projects
Water Supply	Less than significant	No impact	Less impact
Drainage	Less than significant	No impact	Less impact
Traffic	Less than significant; significant in cumulative	No impact	Less impact; significant in cumulative
Visual Quality	Less than significant	Greater Impact (blight)	Less impact
Public Services	Less than significant	No impact	Less impact
Cultural Resources	Less than significant	No impact	Similar or Less impact
Air Quality	Less than significant; significant in cumulative	No impact	Less impact
Noise	Temporary significant from construction; significant in cumulative	No impact	Less but still significant impact
Biological Resources	Less than significant	No impact	Less impact
Water Quality & Drainage	Less than significant	No impact	Similar or Less impact
Hazards	Less than significant	No impact	Similar or Less impact
Water Distribution	Less than significant	No impact	Similar or Less impact

V. Alternatives to the Proposed Project

A. INTRODUCTION

The purpose of this section is to describe a range of reasonable alternatives to the Project and evaluate the comparative environmental impacts of the alternatives (see Table AP). Pursuant to CEQA, the discussion includes the specific alternative of “No Project”, and identification of feasible alternatives capable of avoiding one or more significant adverse environmental effects or reducing them to a level of insignificance. This section also identifies the “environmentally superior alternative” as prescribed by CEQA.

According to the CEQA guidelines, the range of alternatives required is governed by the “rule of reason” that requires the EIR to set forth only those feasible alternatives necessary to permit an informed and reasoned choice by the decision-making body and informed public participation.

The EIR is required to discuss only potentially feasible alternatives, that is, alternatives that may be able to feasibly attain most of the Project’s basic objectives. Statutes and regulations governing CEQA generally define “feasible” to mean an alternative which is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological and legal factors. Factors generally taken into account in determining whether an alternative is feasible also include, but are not limited to, site suitability, economic viability, availability of infrastructure, General Plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and an ability to acquire, control or access an alternative site. The EIR must discuss alternatives that may potentially feasibly attain most of the Project’s basic objectives. The Lead Agency, after considering the entire record before it, makes the ultimate decision regarding the feasibility of alternatives, and the ability of the alternatives to meet project objectives and reduce environmental impact.

B. Prior Alternatives Considered and Rejected / Alternatives Considered Inappropriate

Prior Alternative Analysis and the Senior Housing Designation of the Cypress Knolls Site –

The Cypress Knolls Project site has been studied in at least two prior alternative analyses.

The *Fort Ord Reuse Plan EIR* (Reuse Plan EIR) (EDAW/EMC 1996) includes a discussion of four alternatives. As former base housing, the Patton Park area (Cypress Knolls) was considered residential in this analysis. All are pertinent to reuse of the 28,000 acre former military base, including the Cypress Knolls Project site. The alternatives which FORA studied at that time were:

- Alternative 6R (Revised Anticipated Reuse; from the U.S. Army’s FEIS). This alternative related to the Army’s preferred alternative for the Presidio of Monterey (POM) annex and reserve center and the disposal of lands excess to Army needs. In this alternative, approximately 83 percent of the former Fort Ord (including the Cypress Knolls Project site) would have been conveyed to public agencies, with three percent held by the Army as “No Proposed Use” and could have been sold by the Army to private entities. In this alternative, the remaining approximately 14 percent of the undeveloped land would have been developed with a total 27,000 jobs and 10,210 dwelling units. The buildout population would be approximately 22,800.
- Alternative 7 (the FORA 12-12-94 *Fort Ord Reuse Plan*; from the U.S. Army’s FEIR) This alternative reflected the first FORA Reuse Plan which had substantially higher employment

and population figures than subsequent iterations. This alternative proposed 13,800 dwelling units and 58,500 jobs. The total population was estimated to be 41,500 plus 20,000 CSUMB students by ultimate buildout.

- Alternative 8 (Modification of Alternative 7 to include additional lands that were declared excess from the U.S. Army's DSEIS). This alternative was slightly different than Alternative 7; it included two golf courses and 1,200 additional residential units proposed in conjunction with one of the golf courses. This alternative would have resulted in 15,000 dwelling units (plus CSUMB student accommodations) and 48,100 jobs. The buildout population would be approximately 45,100 plus 20,000 CSUMB students.
- No Project Alternative. This alternative was proposed in the Reuse Plan EIR for the purpose of discussing a scenario where the former Fort Ord was unable to adopt a reuse plan.

After considering all of these alternatives and certifying the EIR which assessed their impacts, FORA adopted the current Reuse Plan, which plans for a total of 22,232 dwelling units, 45,457 jobs, and a total population of 71,770 within the former Fort Ord¹. Of the total dwelling units, the City of Marina was designated as having the potential for 4,152. (Table 3.8-1). The Cypress Knolls Project area was designated as part of Planned Residential Development District. This included a total of 533 acres for up to 2,710 dwelling units. Thus, before designating this site as being best suited for residential development, FORA conducted an extensive analysis of options and alternatives. To support its final land use designations in the Reuse Plan, FORA adopted a CEQA Resolution² which states in section D.3 that one of the overriding considerations which justified the Plan's adoption was that "the Reuse Plan will provide for additional and needed senior housing opportunities."

When the City updated its General Plan to implement the Reuse Plan, it completed further alternatives analysis. The environmental impacts of the then-proposed General Plan and the alternatives were evaluated in the *Environmental Impact Report on the Draft Marina General Plan, May 2000*. The General Plan included land use designations and policies to ensure consistency with, and to implement, Reuse Plan goals and policies, related to moving forward with processing senior residential development entitlements for the site as proposed.

In addition to the No Project Alternative, the City evaluated in the General Plan EIR three Alternative Projects: (1) The Principle Based Alternative, which differed from the Draft General Plan primarily by using densities to achieve transit supportive land use patterns, and which was determined to have the same basic levels of impacts as the proposed General Plan; (2) The Limited Growth Alternative, which emphasized lower density single family residential over multifamily land uses, and included reducing the density on the Cypress Knoll site to large lot single family residential; and (3) The Open Space Alternative, which would have retained Patton Park at historic densities but would have reduced residential density in other areas of the City to produce a much lower net population increase in order to retain more open space. The second and third alternatives were determined to be only somewhat more effective in reducing overall environmental impacts were found to not provide enough residential land use to meet the City's "fair share" of the regional housing demand and were ultimately rejected.³ After considering the pros and cons of each alternative, the City adopted the General Plan update, which designated the

¹ Reuse Plan Volume 1 Context and Framework Table 3.3-1 and page 93.

² FORA CEQA Resolution www.baseuse.org/reuseplan/FLibrary/Find597.pdf

³ *Marina General Plan EIR, 2000*, pages 15-23 to 15-25.

Cypress Knolls site as Single Family Residential anticipated for senior residential use⁴. This designation implements FORA's goal – identified as an “overriding consideration” (as discussed above) for the environmental effects of the Reuse Plan of providing housing opportunities for seniors.

In light of the fact that two prior CEQA alternatives analyses have led FORA and the City to the conclusion that the Cypress Knolls site should be used for senior and affordable housing, it is not necessary for this EIR to revisit those determinations and assess alternatives which do not involve senior/affordable housing. The California Supreme Court has stated that reconsideration of prior local and regional land planning decisions on a subsequent project-by-project basis is “the antithesis of the comprehensive, long-range planning mandated by state law; preparation of an EIR for a proposed development should not provide occasion for reexamination of those” decisions. *Citizens of Goleta Valley v. County of Santa Barbara* (1990) 52 Cal.3d 553.

For these reasons, examining land uses on the site other than senior housing is not warranted.

Alternative Sites - The Proposed Project is considered an “infill” and “reuse” project because of the current urban conditions that exist on the project site. The Project seeks to implement the purposes of the public benefit conveyance from the U.S. Army and comparable alternative sites for reuse are not available. Any off-Fort Ord alternative site, therefore, is not reasonable because such an alternative would be fundamentally counter to one of the basic purposes of the Reuse Plan project and the economic development conveyance – namely to redevelop Fort Ord. As a result, off-Ord alternatives are not considered reasonable and are not evaluated. The analysis of various land use alternatives, including alternative land use patterns and designations over the whole Fort Ord in the Reuse Plan have been adequately addressed in that document. Therefore, consideration of an alternative site for the Proposed Project within Fort Ord is not appropriate here, because as stated above, the California Supreme Court has stated that reconsideration of prior local and regional land planning decisions on a subsequent project-by-project basis is “the antithesis of the comprehensive, long-range planning mandated by state law; preparation of an EIR for a proposed development should not provide occasion for reexamination of those” decisions.

Reuse of existing structures - A reduced scale project that utilizes the existing dwelling units on the site instead of demolishing and rebuilding the project is not considered a feasible alternative because of the seriously deteriorated condition of the buildings and some related infrastructure. Additionally, the lead and asbestos contained in the existing dwelling units creates a substantial hazard for occupants who would reoccupy rehabilitated units. Information outlined in the staff report to the Marina Redevelopment Agency Board / Marina City Council on December 7, 2004 (incorporated herein by reference) outlined in detail the reasons why replace of the dwelling units rather than rehabilitate was required. That information demonstrated that the structures were unsafe, did not meet seismic codes, and that utility and drainage infrastructure had deteriorated beyond repair in many areas. Based on that information, the City Council directed that the option no longer be pursued. Because it has already been considered and rejected as infeasible, the alternative of reuse of the existing structures is not examined here.

⁴ *Marina General Plan, policy 2.35*

Alternative program level land use designation - An alternative to the proposed Open Space land use designation on the potential park and senior center site is not appropriate because the proposed land use category (Open Space) is the lowest intensity land use category in the General Plan and the examined potential uses (a park and senior center) are among the most intense allowed in that land use category. For these reasons, no impact reduction would be expected with different land use designations. and the potential park and senior center are carried forward with each alternative, except the no project alternative.

Summary of Alternatives Carried Forward for Analysis

As a result of the prior alternative analysis and resulting land use designation and the other factors listed above, the alternative presented below all involve senior housing, a future potential park and senior center, and all involve the project site. In consultation with the City staff⁵ the alternatives to be examined were determined to be:

- o No Project
- o Reduced Scale Alternative – General (540 dwelling units)
- Reduced Scale Alternative – Traffic (386)

Pursuant to CEQA, the purpose of examining the reduced scale alternatives is to determine if a reduction in the number of units or intensity of land use would avoid significant impacts or reduce significant impacts to less than significant levels.

As summarized in Section II on Table S, most significant impacts associated with the proposed Project can be reduced to less than significant levels by implementing the mitigation measures described in this EIR, except for cumulative traffic impacts, noise impacts related to construction, noise impacts related to cumulative traffic volumes and cumulative air quality.

C. No Project

Under the No Project alternative, the Proposed Project is not approved. The land would remain as it currently exists for an indefinite period of time, except that the existing structures would continue to deteriorate. The Proposed Project's effects on traffic, air quality, and on-site and off-site noise levels would be avoided. On-site effects on existing trees, sensitive plants, drainage, water quality and water use would be avoided.

The No Project alternative would not achieve the Reuse Plan objectives for beneficial reuse, provision of affordable and senior housing, attracting residents to the area to meet "fair share" housing requirements. Likewise, the No Project alternative would not meet the City's objectives detailed in the Project Description, including the implementation of the General Plan goals and objectives. Nor would it advance the objectives related to the City's Redevelopment Plan for the area.

No Project alternative would have the adverse effect of allowing blighted structures to remain on the Property and serve as an attractive nuisance with the potential to harbor criminal activity.

⁵ No commenters suggested any project alternatives during the scoping process or in response to the NOP.

D. REDUCED SCALE ALTERNATIVE – GENERAL (540 DWELLING UNITS)

The “Reduced Scale Alternative – General” alternative is similar to a project that was once proposed for the Site. That proposed project was analyzed for environmental impacts in 1999 in an uncertified Environmental Impact Report of the Cypress Knolls Project (Firma, 1999) (**See Map 19 Reduced Scale Project Alternative**). The Reduced Scale Alternative – General alternative roughly matches the historic density at Patton Park. This project alternative was selected for consideration because it would reduce site disturbance and water demand, as well as reduce traffic and related noise. The characteristics of the Reduced Scale Alternative – General alternative are:

- 400 residential units in duplex configuration utilizing existing graded pads
- 80 apartment units in two buildings
- 60 unit assisted living facility
- Private community center facilities (up to 20,000 s.f. of floor space)
- Repair and reuse of existing streets on the site
- Program-Level Planning for Open Space – Potential 18-Acre city park and 6,000 sf public senior center

The Reduced Scale Alternative - General alternative would result in changes in the following impacts:

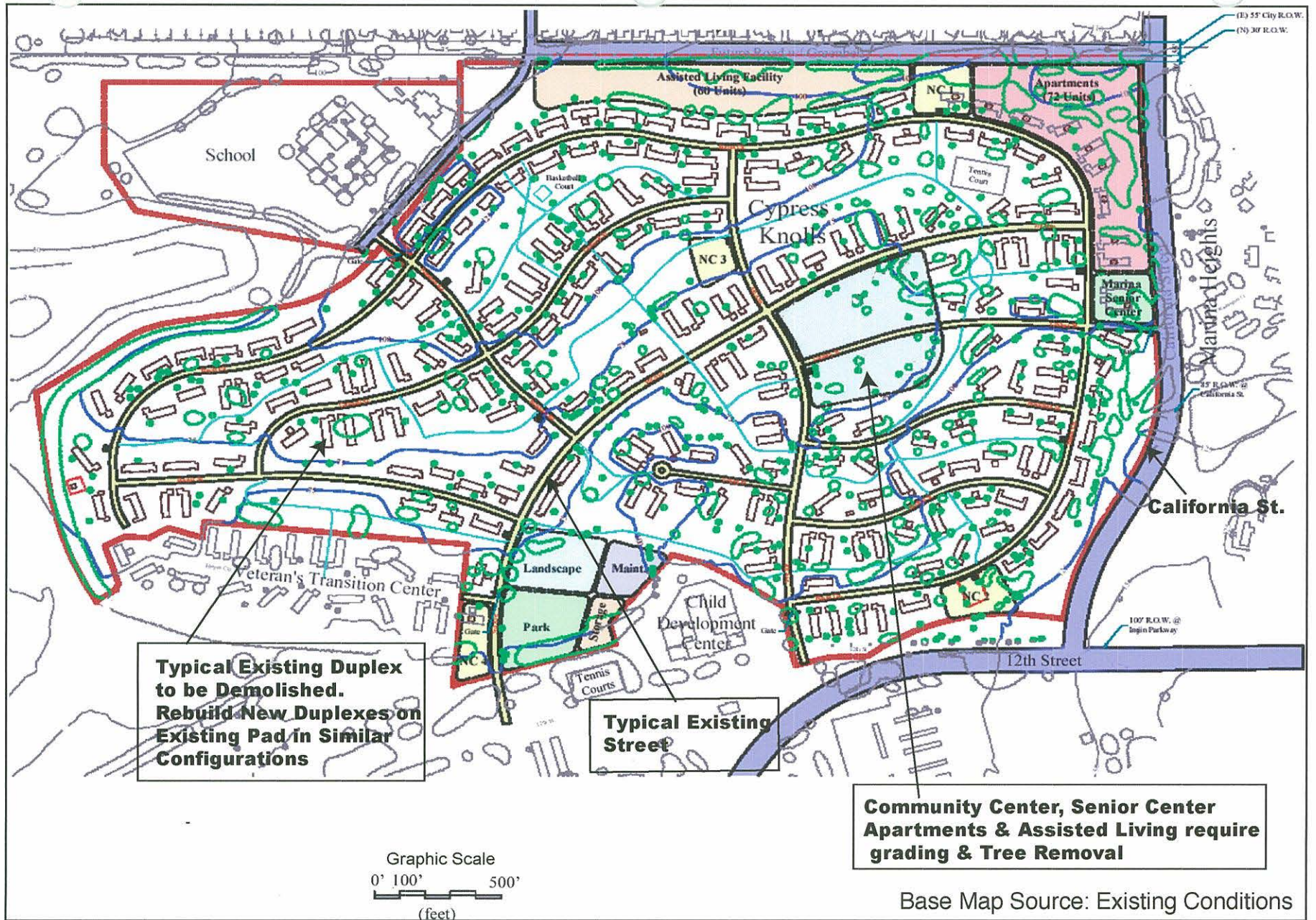
Traffic, Noise and Air Quality Impacts:

The net change in traffic trip generation would be 969 less trips daily, a 21% decrease, with about 17% fewer trips generated during the AM peak commute hour and 20% fewer trips generated during the PM peak commute hour. While these trip reductions would reduce the level of incremental project impact to the local road network, the significant traffic impacts identified for the proposed project would not be reduced to levels of insignificance with implementation of the reduced scale alternative. The traffic related impacts and mitigation measures recommended for the proposed project would also be applicable to this reduced scale alternative because the trip reduction for this project density and characteristics do not eliminate the need for any identified street or intersection improvements.

Traffic noise would be reduced incrementally but not to a level of less than significant. Cumulative noise levels would be lower, but not significantly since it requires a halving of traffic volume to change noise levels 3 dBA. Construction noise levels would be lower because less site grading activity but other phases of construction would have similar noise levels, thus the significant temporary noise impact during construction would not be avoided. This alternative would likely not reduce air quality impacts found to be significant to less than significant because the impacts relate to allowed number of fireplaces, construction stage dust etc, and not vehicular emissions.

Visual Resource Impacts:

The Reduced Scale Alternative - General alternative would retain the existing landform to a higher degree than the Proposed Project and possibly result in avoidance of removal of some of the existing trees on the site that the Proposed Project would remove. This would keep the existing visual character more intact, including retention of more existing mature



Reduced Scale Alternative



Map
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trees. Development of the apartment and assisted living facility would be likely to require removal of some existing trees. The Proposed Project would replace removed trees at a ratio greater than 1:1, however, so in the long term there would be an increase in the overall number of mature trees. On balance this alternative would not avoid significant visual impacts related to tree removal (although these impacts for the Proposed Project are less than significant after mitigation, in any event).

This alternative has the potential to save all existing perimeter screening trees identified in section IV-J as needed to avoid significant visual impacts and would therefore be similar to the Proposed Project in that respect.

Water and Public Services Impacts:

Similar to the Proposed Project, the Reduced Scale Project – General alternative would result in less than significant impacts on water resources and wastewater treatment. Water demand would decrease by about 22% over the Proposed Project, and wastewater flows would be reduced by about 20% over the Proposed Project. This is the equivalent to 33 acre feet per year less water demand and 0.018 mgd wastewater flow. At the project level these changes are not significant; however, at the cumulative level, they do represent a modest lessening of cumulative impacts on water supply and wastewater treatment capacity identified in this EIR and the MCWD Water Service Assessment for the project. However, in both the Proposed Project scenario and this Reduced Scale Project – General scenario, the impacts are less than significant individually and cumulatively.

Although not a CEQA impact, the Reduced Scale Project would also reduce public safety service calls.

Biological Resource Impacts:

Utilization of existing graded pads and retention of existing streets would avoid or reduce removal of incidental, isolated areas of sensitive native plants now occurring in and among residences and on existing open areas between residences. The alternative project could reduce the loss of Maritime chaparral by about 90% over the Proposed Project. This would be a substantial reduction, however, the impact on this resource from the Proposed Project was identified as less than significant due to the isolated, fragmented nature of the community, among other reasons, as described in Section IV-A of the EIR.

Other impacts on biological resources such as wildlife, bats, roosting birds and sensitive plant species would be considered potentially the same significance level though perhaps not the same in extent.

Cultural Resources Impacts:

This alternative would not remove the potential of a significant impact on cultural resources because a substantial ground surface would still be disturbed. The same mitigation measures would be necessary in order to reduce the potential impact to less than significant.

Drainage and Water Quality Impacts:

This alternative would result in less developed area with less stormwater generation due to new impervious surfaces, however the need for flooding mitigation, stormwater retention and new storm drains and associated site work and disturbance would not be avoided. This alternative would disturb less ground surface and involve less total earthwork movement, lessening the risk and extent of potential siltation and erosion affecting water quality. However, it would not eliminate the need for mitigation of potentially significant effects related to siltation and erosion.

Water Distribution System Impacts:

This alternative project would not avoid the need for infrastructure upgrades and provision of adequate fire flows. The impacts would be similar to the Proposed Project, except that the total number of dwelling units requiring fire flow protection would be less.

Hazards:

The alternative project would not avoid the need for mitigation related to the release of airborne toxics during demolition.

Attainment of Project Objectives

The alternative project would reduce the total number of residential units available to senior citizens. As the provision for increased senior housing is a prime project objective, this alternative does not fulfill the objective of providing senior housing as well as the proposed project because it provides less dwelling units. The alternative project would decrease the number of apartment units, which are an important aspect of the affordable housing component of the project. As the provision of affordable housing is also a prime objective of the Proposed Project, this alternative does not meet this objective as well as the proposed project. In addition the decreased density does not fulfill the following FORA goal as well as the proposed project:

Goal A.vi. To generate development that will maximize revenues to FORA's CIP program and thereby help to finance base-wide improvements encompassed therein.

This reduced scale alternative also does not fulfill the following Redevelopment Agency goals detailed in Section I of the EIR because it retains substandard street widths and gradients and generates less property tax. For example, the following goals would not be met as fully as with the Proposed Project:

Goal B.ii. To eliminate or ameliorate existing substandard conditions, including substandard vehicular and pedestrian circulation, street design, parking, inadequate infrastructure, inadequate public improvements and facilities (including utility lines and storm drainage) which have contributed to the blight conditions within Project Area 3.

Goal B.v. To promote economic development opportunities in Project Area 3 which will in turn provide a basis of ongoing revenues to the City to support operation and capital projects, including the generation of property taxes, sales taxes from the purchases made by project residents, and other fees and other taxes.

There is a need for all of the dwelling units proposed in the Proposed Project. As a result, since this alternative would not fully address that need, the additional units would ultimately need to be developed elsewhere. In this respect, this alternative may not fulfill the following City General Plan goals because the reduced density may result in needed housing occurring in undeveloped areas, and may not be economically viable due to the unusual costs to abate hazardous materials, demolish infrastructure and provide substantial amenities. Thus, this alternative may be inconsistent with the following General Plan goals:

Goal C.i. To avoid sprawl in the region by making efficient use of existing developed/disturbed land by developing infill development rather than greenfield development at sufficient density so as to relieve development pressures on undeveloped/undisturbed lands.

Goal C.ii. To facilitate and further an orderly pattern of development by entitling development on lands already designated for community development purposes.

Goal E.ii. Develop the project at sufficient residential density to make economically viable (a) all the necessary demolition, hazardous materials abatement, utility and infrastructure improvements and other site redevelopment costs and (b) all the recreational and support amenities associated with a regional active senior community.

Conclusions Regarding the Reduced Scale Alternative- General

The Reduced Scale Alternative - General does not reduce any impact identified as significant and unavoidable in the EIR to a less than significant level with mitigation and does not achieve many of the project objectives. In addition, it could result in the needed dwelling units being developed elsewhere in a manner inconsistent with the "no sprawl" goal of the City's General Plan. For this reason, it does not appear the environmental benefits of the alternative outweigh the substantially decreased attainment of project objectives.

E. Reduced Scale Alternative – Traffic (386 Dwelling Units)

The Reduced Scale Alternative - Traffic alternative is a project that was developed to evaluate whether a lower level of project density would reduce or avoid traffic impacts identified in the region in this EIR. This project alternative proposed half the proposed project density, like Reduced Scale Alternative - General, also would reduce site disturbance and water demand, as well as reduce traffic-related noise. The characteristics of the Reduced Scale Alternative – Traffic are as follows:

- 298 residential units in duplex configuration utilizing existing graded pads
- 58 apartment units in two buildings
- 30 unit assisted living facility
- Private community center facilities (up to 10,000 s.f. of floor space)
- Repair and reuse of existing streets on the site

- Program-Level Planning for Open Space – Potential 18-Acre city park and 6,000 sf public senior center

The Reduced Scale Alternative - Traffic would result in changes in the following environmental impacts:

Traffic, Noise and Air Quality Impacts:

The net change in traffic trip generation would be 1,646 less trips daily, a 38% decrease, with about 16% fewer trips generated during the AM peak commute hour and 36% fewer trips generated during the PM peak commute hour. While these trip reductions would reduce the level of incremental project impact to the local road network, the significant traffic impacts identified for the proposed project would not be reduced to levels of insignificance with implementation of this reduced scale alternative. The traffic related impacts and mitigation measures recommended for the proposed project would also be applicable to this reduced scale project because the trip reduction for this project density and characteristics do not eliminate the need for any identified street or intersection improvements.

This is because the Proposed Project's contribution to the Level of Service at intersections operating at unacceptable levels before adding project traffic may be significant as a result of increasing delay by as little as one second or more (see significance criteria in Section IV-D). Accordingly, the Reduced Scale Alternative – Traffic would still add traffic (increasing delay by one second or more) and therefore would still result in the same significant impacts as the Proposed Project.

Traffic noise would be reduced incrementally but not to a level of less than significant. Cumulative noise levels would be lower, but not significantly since it requires a halving of overall traffic volume to change noise levels 3 dBA. Construction noise levels would be lower because less site grading activity but other phases of construction would have similar noise levels, thus the significant temporary noise impact during construction would not be avoided, though the period of duration would likely be reduced. Air quality impacts related to airborne toxics and construction stage PM₁₀ would still require mitigation to less than significant levels.

Visual Resource Impacts:

The Reduced Scale project would retain the existing landform to a higher degree than the Proposed Project and could result in avoidance of more existing trees on the site. This would keep the existing visual character more intact, including retention of more existing mature trees. Development of the apartment and assisted living facility would be likely to require removal of some existing trees.

Water and Public Services Impacts

Similar to the Proposed Project, the Reduced Scale Project – General alternative would result in less than significant impacts on water resources and wastewater treatment. Water demand would decrease by about 30% over the Proposed Project, This is the equivalent to 46 acre feet per year less water demand and 0.025 mgd wastewater flow. At the project level these changes are not significant, however, at the cumulative level, they

do represent a modest, but real, lessening of cumulative impacts on water supply and wastewater treatment capacity identified in this EIR and the MCWD Water Service Assessment for the project. However, in both the Proposed Project scenario and this Reduced Scale Project – Traffic scenario, the impacts are less than significant individually and cumulatively.

Although not a CEQA impact, the Reduced Scale Project would also reduce public safety service calls.

Biological Resource Impacts:

Utilization of existing graded pads and retention of existing streets would avoid or reduce removal of incidental, isolated areas of sensitive native plants now occurring in and among residences and on existing open areas between residences. The alternative project could reduce the loss of Maritime chaparral by about 90% over the Proposed Project. This would be a substantial reduction, however, the impact on this resource from the Proposed Project was identified as less than significant due to the isolated, fragmented nature of the community, among other reasons, as described in Section IV-A of the EIR.

Other impacts on biological resources such as wildlife, bats, roosting birds and sensitive plant species would be considered potentially the same significance level though perhaps slightly reduced in extent.

Cultural Resources Impacts:

This alternative would not remove the potential of a significant impact on cultural resources because a substantial ground surface area would still be disturbed. The same mitigation as identified for the Proposed Project would be required to bring this to a level of insignificance.

Drainage and Water Quality Impacts:

This alternative project would result in less developed area with less stormwater generation due to new impervious surfaces, however the need for flooding mitigation, stormwater retention and new storm drains and associated site work and disturbance would not be avoided. The alternative project would disturb less ground surface and involve less total earthwork movement, lessening the risk and extent of potential siltation and erosion affecting water quality. However, the alternative project would not eliminate the need for mitigation of potentially significant effects related to siltation and erosion.

Water Distribution System Impacts:

This alternative project would not avoid the need for infrastructure upgrades and provision of adequate fire flows. However, there would be a reduced number of units requiring the fire flow protection.

Hazards:

The alternative project would not avoid the need for mitigation related to the release of airborne toxics during demolition.

Reduced Scale Alternative – Traffic Attainment of Project Objectives

This alternative project would reduce the total number of residential units available to senior citizens further than Reduced Scale Alternative - General. However, like Reduced Scale Alternative - General, because the provision for increased senior housing is a prime project objective, this alternative does not fulfill to objective of providing senior housing as well as the proposed project. The alternative project would decrease the number of apartment units, which are an important aspect of the affordable housing component of the project. As the provision of affordable housing is also a prime objective of the Proposed Project, this alternative does not meet this objective as well as the proposed project. In addition the decreased density does not fulfill the following FORA goal as well as the proposed project:

Goal A.vi. To generate development that will maximize revenues to FORA's CIP program and thereby help to finance base-wide improvements encompassed therein.

This reduced scale alternative also does not fulfill the following Redevelopment Agency goals detailed in Section I of the EIR because it retains substandard street widths and gradients and generates less property tax. For example, the following goals would not be met as fully as with the Proposed Project:

Goal B.ii. To eliminate or ameliorate existing substandard conditions, including substandard vehicular and pedestrian circulation, street design, parking, inadequate infrastructure, inadequate public improvements and facilities (including utility lines and storm drainage) which have contributed to the blight conditions within Project Area 3.

Goal B.v. To promote economic development opportunities in Project Area 3 which will in turn provide a basis of ongoing revenues to the City to support operation and capital projects, including the generation of property taxes, sales taxes from the purchases made by project residents, and other fees and other taxes.

There is a need for all of the dwelling units proposed in the Proposed Project. As a result, since this alternative would not fully address that need, the additional units would ultimately need to be developed elsewhere. In this respect, this reduced scale alternative may not fulfill the following City General Plan goals because the reduced density may result in needed housing occurring in undeveloped areas and may not be economically viable due to the unusual costs to abate hazardous materials, demolish infrastructure and provide substantial amenities. Thus, this alternative may be inconsistent with the following General Plan goals:

Goal C.i. To avoid sprawl in the region by making efficient use of existing developed/disturbed land by developing infill development rather than greenfield development at sufficient density so as to relieve development pressures on undeveloped/undisturbed lands.

Goal C.ii. To facilitate and further an orderly pattern of development by entitling development on lands already designated for community development purposes.

Goal E.ii. Develop the project at sufficient residential density to make economically viable (a) all the necessary demolition, hazardous materials abatement, utility and infrastructure improvements and other site redevelopment costs and (b) all the recreational and support amenities associated with a regional active senior community.

Conclusions Regarding Alternative:

The Reduced Scale Alternative - Traffic does not reduce any impact identified as significant and unavoidable in the EIR to a less than significant level with mitigation, or provide a meaningful reduction in regional or local traffic volumes and required roadway improvements to meet future traffic volumes. It does not achieve many of the project objectives. In addition, it could result in the needed dwelling units being developed elsewhere in a manner inconsistent with the "no sprawl" goal of the City's General Plan. For this reason, it does not appear the environmental benefits of the alternative outweigh the substantially decreased attainment of project objectives.

F. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The CEQA Guidelines require the EIR to identify the environmentally superior alternative. The guidelines specify that an alternative may impede to some degree the attainment of project objectives, or be more costly, without it being disqualified from consideration. The purpose of the CEQA mandate for the EIR to include a discussion of alternatives is twofold: 1) to permit a reasoned choice by decision makers, and 2) to seek to reduce or eliminate impacts.

On **Table AP-1**, the proposed project (impacts after mitigation) is compared to the alternatives (impacts after assumed mitigation) discussed above. Reading left to right, other alternatives are compared to the project, therefore "Similar Impacts" means the alternative is expected to have the same general level of impact as those at the Project site, and the same kinds of necessary mitigations. "No impact" or "less impacts" means the alternative reduced the level of, or avoids, the impact resulting in the project. "Greater Significant Impact" means the alternative could have impacts of greater magnitude than the project and may result in higher levels of impact after mitigation measures are implemented.

The No Project alternative would be the environmentally superior project because at least in the short term, the No Project alternative would avoid all impacts. Where the No Project alternative is identified as superior, CEQA requires identification of another environmentally superior project.

Setting aside the No Project alternative, the environmentally superior project would be the Reduced Scale Alternative - Traffic of 386 total living units adhering to existing street layout and landform. This alternative does not completely avoid any of the significant impacts of the Proposed Project, but most impacts are incrementally reduced roughly proportionate to the decrease in density over the proposed Project. The primary factors related to this alternative's superiority are reduced impacts on traffic, but also to a lesser degree biological resources, visual resources, water supply, wastewater treatment and noise.

Table AP-1: Comparison of Alternative Projects – With Mitigation

Issue	Project	No Project	Reduced Scale Projects
Water Supply	Less than significant	No impact	Less impact
Drainage	Less than significant	No impact	Less impact
Traffic	Less than significant; significant in cumulative	No impact	Less impact; significant in cumulative
Visual Quality	Less than significant	Greater Impact (blight)	Less impact
Public Services	Less than significant	No impact	Less impact
Cultural Resources	Less than significant	No impact	Similar or Less impact
Air Quality	Less than significant; significant in cumulative	No impact	Less impact
Noise	Temporary significant from construction; significant in cumulative	No impact	Less but still significant impact
Biological Resources	Less than significant	No impact	Less impact
Water Quality & Drainage	Less than significant	No impact	Similar or Less impact
Hazards	Less than significant	No impact	Similar or Less impact
Water Distribution	Less than significant	No impact	Similar or Less impact

VI. Document Preparation

A. Document Preparation

Firma

David Foote, ASLA, Principal Planner
Cristina Piraino, Environmental Planner

City of Marina

Anthony Altfeld, City Manager
Doug Yount, Development Services Director
Jennifer Coile, AICP, Cypress Knolls Project Manager
Elizabeth Caraker, AICP, Interim Planning Manager
Christi di Iorio, Interim Community Development Director
Robert Wellington and Associates, City Attorney

Keith B. Higgins & Associates

Keith Higgins, TE, CE
Dan Takacs, TE

Michael S. Weber Consulting

Michael Weber, Air Quality/ Acoustical Specialist

Rutan & Tucker, LLP

M. Katherine Jenson
Michael Houston

Denise Duffy and Associates

Erin Harwayne, Senior Planner/Environmental Scientist
Matt Johnson, Assistant Environmental Scientist/GIS Specialist

Vernal L. Yadon, Botanist

Bryan E. Bradford, Certified Arborist, Salinas Trees

Jim Brezak, RBF Consulting, Water Resource Specialist

Persons Interviewed / Persons Supplying Information

City of Marina

Steve Belcher, Interim Police Chief

Lt. Richard Janicki, Police Dept.

Michael Cooper, City Engineering Consultant

Peter Le, Civil Engineer

Neil Hudson, Interim Director of Public Works/City Engineer

Harald Kelley, Fire Chief

Marquez Transportation Engineering,
Ron Marquez, Contract Traffic Engineer to the City of Marina

Harris Associates,
John Brice, Project Manager

Harris Associates,
Mike Cooper, Senior Project Manager

Other Agencies and Individuals

Association of Monterey Bay Area Governments (AMBAG)
Todd Muck

Monterey Bay Unified Air Pollution Control District (MBUAPCD)
David Kroft

City of Marina
Harald Kelley, Fire Chief

Harris Associates,
John Brice, Project Manager

Harris Associates,
Mike Cooper, Senior Project Manager

Caltrans, Chris Shaeffer,
Intergovernmental Review Coordinator

Caltrans,
John Olejnik, District 5 Development Review Coordinator

Caltrans,
Roger Barnes, Traffic Engineer

Michael Shaw, Applicant

Bill Jennings, CFO Front Porch, Applicant

Martin Lakatos, Front Porch, Applicant

Pam Steele and Ann Kraus, Hogle-Ireland Planner for Applicant

Dave Fuller PE, WRD Engineering, Civil Engineer for Applicants

B. List of Major Sources (see EIR text and Appendix volume for citation to all the reports and sources relied upon)

Marina General Plan EIR, May 2000 and amended through December 2005

Marina Redevelopment Agency, *Former Fort Ord Redevelopment Project (Number Three)*, Marina Redevelopment Agency, May 1999.

U.S. Army Corps of Engineers, Sacramento District. 1997. *Installation-wide multi-species habitat management Plan for former Fort Ord*, California. April. Sacramento, CA.

Fort Ord Reuse Authority, *Fort Ord Reuse Plan EIR*, 1997

Marina Coast Water District *Urban Water Management Plan*. November 2005.

MCWD *Regional Urban Water Augmentation Project Draft Environmental Impact Report*. June 2004.

Federal Emergency Management Agency (FEMA) Letter of Map Revision, effective August 17, 2006.

Finding of Suitability for Transfer (FOST) Patton and Abrams Park Disposal Polygons Former Fort Ord, California, Department of Defense, March 2, 1998

City of Marina, *General Plan*, Adopted October 31, 2000, as subsequently amended

Higgins Associates, *Cypress Knolls, Marina, California: Traffic Impact Analysis Report (June 26, 2006)*.

Caltrans, Traffic and Vehicle Data Systems, *2004 Annual Average Daily Truck Traffic on the California State Highway System*, August 2005.

Appendix A
Notice of Preparation

Notice of Preparation

TO:

FROM: City of Marina
C/o Firma
849 Monterey Street
San Luis Obispo CA
93401

SUBJECT: Notice Of Preparation Of A Draft Environmental Impact Report

PROJECT TITLE: Cypress Knolls Residential Project

STATE CLEARINGHOUSE NUMBER: 2004081113 (issued August 2004)

The City will be the lead agency for an environmental impact report (EIR) for the project identified above. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project.

The project description and location are contained in the attached materials. No Initial Study is attached. In August 2004, the City issued a Notice of Preparation for a project on this property. Since then the project description has been revised to include demolition and replacement of existing residential units and an overall increase in the number of residential units.

As background, in 2000 a Final EIR (SCH # 98121102) was prepared by the City for a project on this site but the FEIR never had a public hearing for certification under CEQA. No EIR was completed for the project that was the subject of the August 2004 NOP.

The City will prepare a new updated EIR for the current, revised project as submitted by the applicant in the fall of 2004.

Based on the previous EIR, the following probable environmental effects are identified:

- cumulative traffic, air quality and noise impacts
- cumulative water impacts
- construction noise and air quality impacts
- biological resource impacts
- drainage impacts

Due to time limits mandated by State law, your response must be sent at the earliest possible date, but *not later than 30 days* after receipt of this notice.

Please send your response to Firma, the environmental consultant for the City, at the address above. We will also need the name of a contact person in your agency.

Signature:  David Foote ASLA

Date: 1.26.05

Title: Consultant

Phone: 805 781-9800/ fax 781-9803

**CYPRESS KNOLLS MAILING
LIST (4/04) Agencies &
requested mailings**

MRWPCA
ATTN: KEITH ISRAEL
5 HARRIS CT
MONTEREY CA 93940

MST
ATTN: ALAN FORREST
ONE RYAN RANCH RD
MONTEREY CA 93940

MRWMD
ATTN: DAVID MYERS
PO BOX 1670
MARINA CA 93933

TAMC
55-B PLAZA CIRCLE
SALINAS CA 93905

CA DEPT OF FISH & GAME
1416 9TH ST. 12TH FLOOR
SACRAMENTO CA 95814

CALTRANS DISTRICT 5
50 HIGUERA ST.
SAN LUIS OBISPO, CA 93401

AMBAG
Attn: Todd Muck
PO BOX 809
MARINA CA 93933

FORA
ATTN: STEVE ENDSLEY
100 12TH STREET
MARINA CA 93933

RAY PARKS
PO BOX 5473
CARMEL CA 93921

CYPRESS MARINA HEIGHTS
PO BOX 550
MARINA CA 93933

HIGGINS & ASSOCIATES
1330-B FIRST ST.
GILROY CA 95021

UC MBEST CENTER
ATTN: GRAHAM BICE
3180 IMJIN RD.
MARINA CA 93933

HOUSING AUTHORITY
ATTN: PATRICK DWIRE
123 RICO ST.
SALINAS CA 93907

C. FITZ
LANDWATCH
PO BOX 1876
SALINAS 93902

COLLIN GALLAGHER
973 HEATHER CIRCLE, APT 48E
SALINAS CA 93906

MBUAPCD
ATTN: DOUG QUESTIN
24580 SILVER CLOUD CT
MONTEREY CA 93940

CA DEPT OF FISH & GAME
20 LOWER RAGSDALE
MONTEREY CA 93940

CA DEPT. OF PARKS & REC
2211 GARDEN ROAD
MONTEREY CA 93940

FIRMA:
Attn: Dave Foote
849 Monterey Street, Ste. 205
San Luis Obispo, CA 93401

MONTEREY COUNTY BUIL
PLANNING
PO BOX 1208
SALINAS CA 93902

CITY OF SEASIDE PLANNING
440 HARCOURT AVE
SEASIDE CA 93955

US FISH & WILDLIFE
2493 PORTOLA RD. STE B
VENTURA CA 93003

MONTEREY COUNTY WA1
RESOURCES AGENCY
PO BOX 930
SALINAS CA 93902

MARINA COAST WATER DISTRICT
11 RESERVATION RD.
MARINA CA 93933

CRWQCB
81 HIGUERA ST. STE 200
SAN LUIS OBISPO CA 93401

MPUSD
Attn: Colette McLaughlin
PO BOX 1031.
MONTEREY CA 93942-10

MONTEREY COUNTY PUBLIC WORKS
312 EAST ALISAL ST.
SALINAS CA 93901

MS. MAGGIE FUSARI
UNIV. OF CALIF. NAT. RESERVES
C/O ENVIRONMENTAL STUDIES
1156 HIGH STREET
SANTA CRUZ, CA 95064

OPRState Clearinghouse
1400 Tenth Street
Sacramento CA 95812-304

DIRECTOR OF BASE REALIGNMENT
& CLOSURE
PO BOX 5008
MONTEREY CA 93944

HOUSING OFFICE, CSUMB
100 CAMPUS CTR, BLD 84 B
SEASIDE CA 93955

A. NOTICE OF PREPARATION

The City of Marina is the lead agency for the proposed Project. Section 15367 of the State CEQA guidelines defines the lead agency as “the public agency which has the principal responsibility for carrying out or approving a project”. As the lead agency, the City is responsible for the preparation of the EIR.

The issues to be examined in the EIR were identified by the City of Marina through early analysis of the Project and its potential environmental consequences. Although an Initial Study was not prepared, the City determined, on the basis of its early studies and analysis, that aspects of the Project, both individually and cumulatively, may cause a significant effect on the environment. Once a determination was made to prepare an EIR by the Planning Commission at a public hearing on January 13, 2005, this Notice of Preparation (NOP) was distributed on or about January 31, 2005 as required by CEQA, to inform other public agencies, interest groups and the public in general of the City’s intent to prepare an EIR. The NOP also provides an opportunity for those interested in the proposed Project to comment on the EIR’s contents. Additionally, the NOP was sent to the State Clearinghouse, which is responsible for forwarding it to state agencies that might be affected by this Project

Based on the City’s early Project analysis and EIR prepared for a similar project on this site, the following EIR topics were identified as necessary for study:

- Public Services (Schools, Police, Fire, Solid Waste, Wastewater)
- Drainage
- Hazardous Materials
- Traffic
- Noise
- Air Quality
- Water Supply
- Water Distribution and Fire Flows
- Biological Resources
- Visual Resources
- Cultural Resources
- Population and Housing
- Recreation
- Geology and Soils

B. SITE LOCATION AND PHYSICAL SETTING

The proposed Project site is located in the planned southwesterly quadrant of the City of Marina. The site is the northwesterly portion of the former Patton Park family housing area of the former Fort Ord. The site is east of Highway 1, west of the southern extension of California Avenue, and north of Imjin Parkway. The site is bordered on the north by the existing residential development accessed by Reindollar Avenue (see **Map 1–Location**).

The site comprises approximately 190 acres. The Project area is located on the northwest section of the former Fort Ord Army Base. Prior to its development as the Patton Park family housing area in the early 1960’s, the area was used for various Army training operations. Development of the site included grading and construction of infrastructure, roads, parking, private driveways, and 460 residential units comprised of 230 duplex units with an adjacent elementary school. The Patton Park family housing area was occupied until the base was closed in 1993.

The northern portion of the Project site is adjacent to an existing single family residential area within the City of Marina. Most of this housing fronts on cul-de-sacs which are accessible from Reindollar Avenue.

C. PROJECT DESCRIPTION

The Fort Ord Reuse Authority (FORA), the City of Marina, and the developer (Project Applicant) approved and signed a Memorandum of Understanding (MOU) in July of 1998. That MOU outlines the Project description and fundamental financial arrangements. Since then, the proposed project description has evolved from a development that consisted primarily of rehabilitation and reuse of existing residences on the property into a project proposal that would demolish the existing units and replace them with an increased number of housing units. In December 2004, the City Council accepted the revised project description and directed City staff to process the necessary entitlements and continue negotiations based on a new pro-forma for a 772-unit project.

The main objective of the Cypress Knolls Project is to provide housing and support services to persons of 55 years of age and over while providing the City of Marina and FORA with a successful base closure and reuse project. Although the precise final boundaries of the Project will not be determined until the property is transferred from the Fort Ord Reuse Authority (FORA), the anticipated future boundaries of the Project site have been established for planning purposes and are shown on the following Project application materials.

The approximately 190-acre Project site contains 460 residential units in 230 duplex configurations which are proposed to be demolished. The proposed project and Tentative Tract Map (see **Map 2 Proposed Project Site Plan**) include the following:

Table P-1 Proposed Project Tabulations

Residential units

- 517 residential single family units (261 lots 55 ft x 100 ft and 256 lots 55 ft x 80 ft)
- 79 townhome units (attached units)
- 116 affordable apartment units
- An optional program of no more than 60 beds in an assisted living facility to be built at the developer's election

Project Density

- 4.95 residential units per acre (residential development area is 156.04 acres)

Land Use Acreage

- 156.02 acres - Residential area and related open space
- 49.39 acres - Open space (interior and buffer areas)
- 4.79 acres - Assisted Living Facility
- 4.28 acres - Apartments
- 6.99 acres - Project Clubhouse
- 20.03 acres - School and park land dedication
- 3.17 acres - Support services
- 1.97 acres - City of Marina Senior Center land dedication

The Proposed project will utilize existing roads and infrastructure to the degree feasible. New interior streets within the residential area will be constructed (approximately 8,000 linear feet of

street total) and a new intersection of Crescent Ave with the new Patton Parkway along the northern project boundary will be constructed.

The Project is proposed to be undertaken in six phases. It is anticipated that the first four phases totaling 542 units can be implemented within the existing water allocation, the remaining phases would be contingent upon additional water source(s) or allocation. Table P-2 tabulates the project phases.

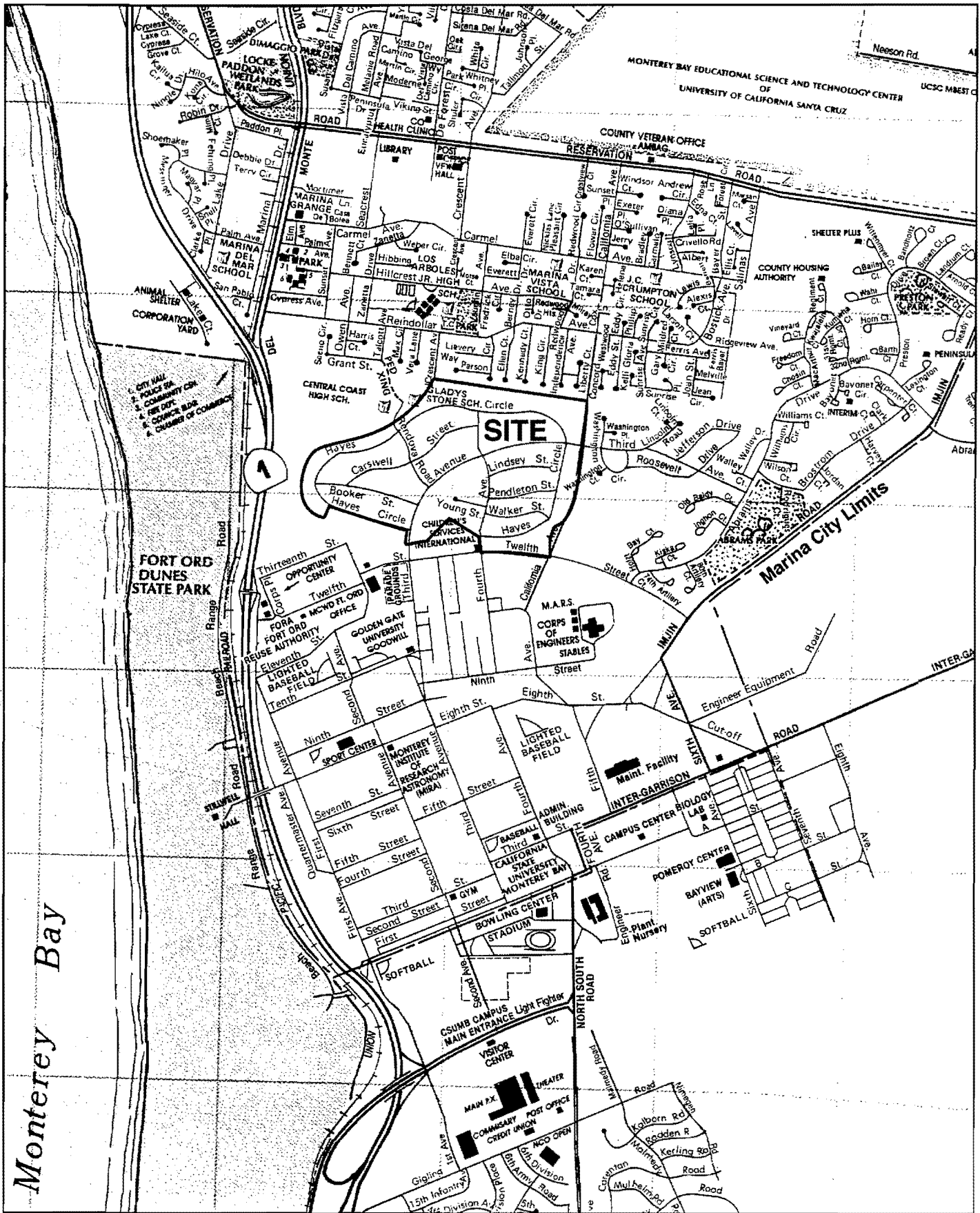
Table P-2 Project Phasing

Phase 1	196 residential units including 81 affordable apartment units, Dedication of Park and School site, Project Community Center Clubhouse (30,000 – 40,000 square foot facility), and Support Services (10,000 square foot facility).
Phase 2	115 residential units
Phase 3	115 residential units and financial contribution to City for the City Senior Center
Phase 4	114 residential units
Phase 5	170 residential units (including last 35 affordable housing apartment units)
Phase 6	Optional 60 bed assisted living facility

D. DISCRETIONARY ACTIONS COVERED BY THE EIR

Although not all of the possible discretionary actions intended to be covered by the EIR have been identified at the time of NOP circulation, the discretionary actions involved with the proposed Project include at least the following:

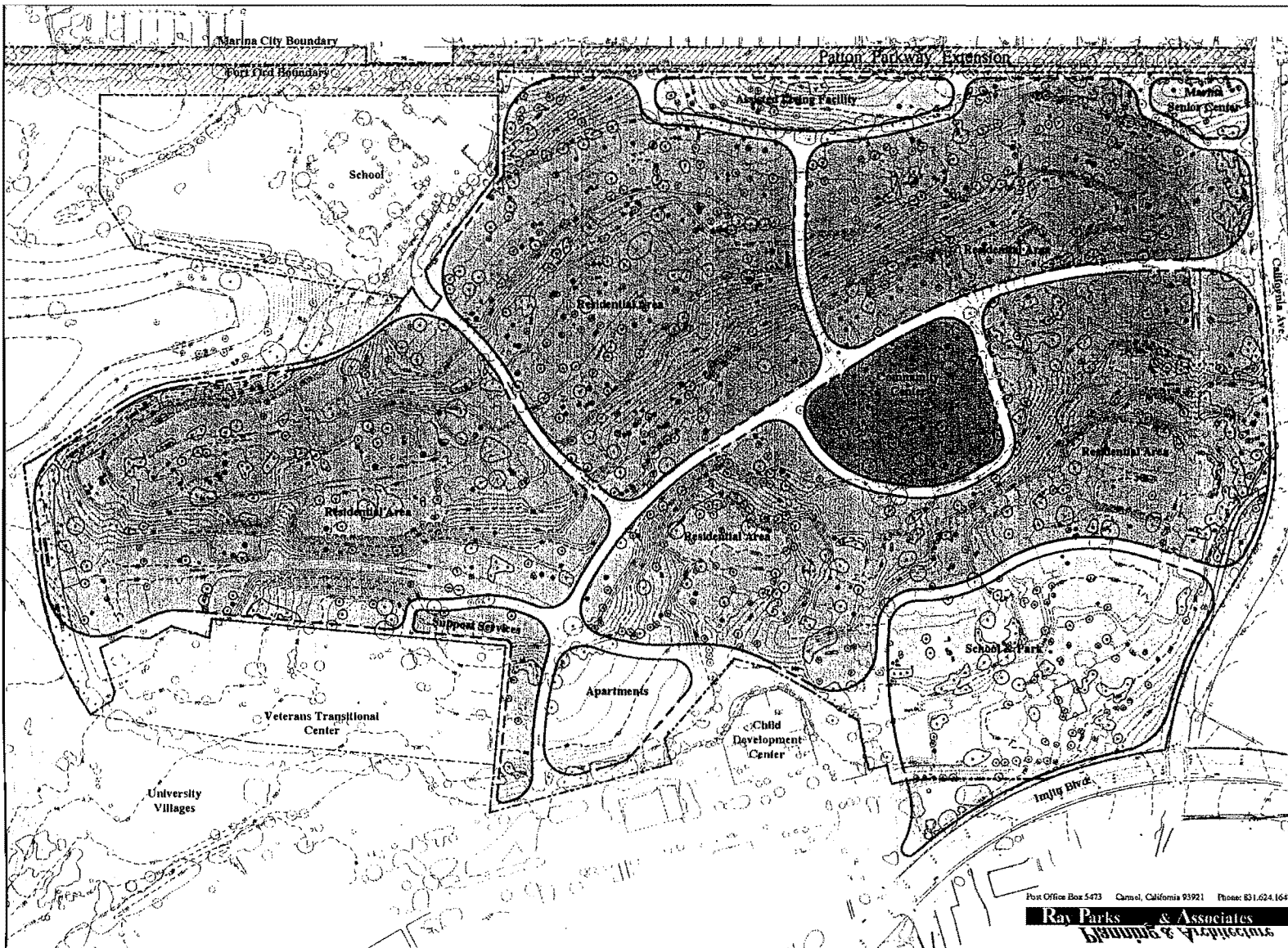
- Approval of a Development Agreement and/or Disposition and Development Agreement with the Redevelopment Agency to address certain aspects of the Project such as phasing, funding of off-site infrastructure improvements, and the provision of municipal services.
- Approval of Permanent Zoning Assignments and a Conditional Use Permit to allow for use of the site as proposed with a mix of residential unit types and densities, continuing care facilities and associated support services.
- Approval of a City General Plan and Zoning Ordinance text amendment to distinguish replacement, rehabilitated and new residential units.
- Approval of Tentative or Vesting and Final Tract maps.
- Approval by FORA as a responsible agency under CEQA, of all legislative land use decisions and development entitlements pursuant to Chapter 8 of the Fort Ord Reuse Authority Master Resolution.
- Design Review Approval and Tree Removal Permit for all site improvements.



PROJECT LOCATION MAP



Map
1



Conceptual Use Plan. 772 Units

Project Title
Cypress Knolls
Marina, Ca 93933

Sheet Title
Conceptual Use Plan. 772 Units

THIS DOCUMENT IS AN INSTRUMENT OF SERVICE. IT IS THE PROPERTY OF RAY PARKS & ASSOCIATES. IT IS TO BE USED ONLY FOR THE PROJECT AND FOR THE CLIENT'S USE ONLY. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.

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Post Office Box 5473 Carmel, California 93921 Phone: 831.624.1647

Ray Parks & Associates sheet
Planning & Architects **A0.2**



received
2/11/05



STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Arnold
Schwarzenegger
Governor

Jan Boel
Acting Director

Notice of Preparation

February 4, 2005

To: Reviewing Agencies
Re: Cypress Knolls Residential Project
SCH# 2004031113

Attached for your review and comment is the Notice of Preparation (NOP) for the Cypress Knolls Residential Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

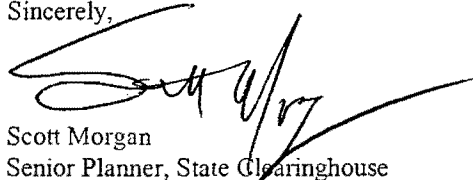
Please direct your comments to:

David Foote
City of Marina c/o Firma
849 Monterey Street
San Luis Obispo, CA 93401

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,



Scott Morgan
Senior Planner, State Clearinghouse

Attachments
cc: Lead Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2004081113
Project Title Cypress Knolls Residential Project
Lead Agency Marina, City of

Type NOP Notice of Preparation
Description The Fort Ord Reuse Authority (FORA), the City of Marina, and the developer approved and signed a Memorandum of Understanding (MOU) in July of 1998. That MOU outlines the project description and fundamental that consisted primarily of rehabilitation and reuse of existing residences on the property into a project proposal tha would demolish the existing units and replace them with an increased number of housing units. In December 2004, the City Council accepted the revised project description and directed City staff to process the necessary entitlements and continue negotiations based on a new pro-forma for a 772-unit project.

Lead Agency Contact

Name David Foote
Agency City of Marina c/o Firma
Phone 805-781-9800 **Fax** 805-781-9803
email
Address 849 Monterey Street
City San Luis Obispo **State** CA **Zip** 93401

Project Location

County Monterey
City Marina
Region
Cross Streets California Avenue

Parcel No.	Township	Range	Section	Base
-------------------	-----------------	--------------	----------------	-------------

Proximity to:

Highways Hwy 1
Airports
Railways
Waterways
Schools
Land Use Residential single family units
 Open space
 Assisted living facility

Project Issues Air Quality; Biological Resources; Drainage/Absorption; Forest Land/Fire Hazard; Geologic/Seismic; Noise; Other Issues; Population/Housing Balance; Public Services; Recreation/Parks; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Water Supply

Reviewing Agencies Resources Agency; California Coastal Commission; Department of Conservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 3; Office of Emergency Services; Native American Heritage Commission; California Highway Patrol; Department of Housing and Community Development; Caltrans, District 5; Integrated Waste Management Board; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 3

Date Received 02/04/2005 **Start of Review** 02/04/2005 **End of Review** 03/07/2005

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: Monterey

SN# 20070115

Resources Agency

- Resources Agency
Nadell Gayou
- Dept. of Boating & Waterways
David Johnson
- California Coastal Commission
Elizabeth A. Fuchs
- Colorado River Board
Gerald R. Zimmerman
- Dept. of Conservation
Roseanne Taylor
- California Energy Commission
Environmental Office
- Dept. of Forestry & Fire Protection
Allen Robertson
- Office of Historic Preservation
Wayne Donaldson
- Dept of Parks & Recreation
B. Noah Tilghman
Environmental Stewardship Section
- Reclamation Board
DeeDee Jones
- Santa Monica Mountains Conservancy
Paul Edelman
- S.F. Bay Conservation & Dev't. Comm.
Steve McAdam
- Dept. of Water Resources
Resources Agency
Nadell Gayou

- Fish & Game Region 3
Robert Floerke
- Fish & Game Region 4
William Laudermilk
- Fish & Game Region 5
Don Chadwick
Habitat Conservation Program
- Fish & Game Region 6
Gabrina Gatchel
Habitat Conservation Program
- Fish & Game Region 6 I/M
Tammy Allen
Inyo/Mono, Habitat Conservation Program
- Dept. of Fish & Game M
George Isaac
Marine Region

Other Departments

- Food & Agriculture
Steve Shaffer
Dept. of Food and Agriculture
- Depart. of General Services
Public School Construction
- Dept. of General Services
Robert Sleppy
Environmental Services Section
- Dept. of Health Services
Veronica Rameriz
Dept. of Health/Drinking Water

Independent Commissions, Boards

- Coachella Valley Mountains Conservancy
- Delta Protection Commission
Debby Eddy
- Office of Emergency Services
Dennis Castrillo
- Governor's Office of Planning & Research
State Clearinghouse
- Native American Heritage Comm.
Debbie Treadway

Fish and Game

- Depart. of Fish & Game
Scott Flint
Environmental Services Division
- Fish & Game Region 1
Donald Koch
- Fish & Game Region 2
Banky Curtis

- Public Utilities Commission
Ken Lewis
- San Gabriel & Lower LA Rivers
- San Joaquin River Conservancy
- State Lands Commission
Jean Sarino
- Tahoe Regional Planning Agency (TRPA)
Cherry Jacques

Business, Trans & Housing

- Caltrans - Division of Aeronautics
Sandy Hesnard
- Caltrans - Planning
Terri Pencovic
- California Highway Patrol
John Olejnik
Office of Special Projects
- Housing & Community Development
Lisa Nichols
Housing Policy Division

Dept. of Transportation

- Caltrans, District 1
Mike Eagan
- Caltrans, District 2
Don Anderson
- Caltrans, District 3
Jeff Pulverman
- Caltrans, District 4
Tim Sable
- Caltrans, District 5
David Murray
- Caltrans, District 6
Marc Birnbaum
- Caltrans, District 7
Cheryl J. Powell

- Caltrans, District 8
John Pagano
- Caltrans, District 9
Gayle Rosander
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Tom Dumas
- Caltrans, District 11
Marlo Orso
- Caltrans, District 12
Bob Joseph

Cal EPA

Air Resources Board

- Airport Projects
Jim Lerner
- Transportation Projects
Kurt Karperos
- Industrial Projects
Mike Tollstrup

California Integrated Waste Management Board

- Sue O'Leary
- State Water Resources Control Board
Jim Hockenberry
Division of Financial Assistance

State Water Resources Control Board

- Student Intern, 401 Water Quality Certification Unit
Division of Water Quality
- State Water Resources Control Board
Steven Herrera
Division of Water Rights

Dept. of Toxic Substances Control

- CEQA Tracking Center
- Department of Pesticide Regulation

Regional Water Quality Control Board (RWQCB)

- RWQCB 1
Cathleen Hudson
North Coast Region (1)
- RWQCB 2
Environmental Document Coordinator
San Francisco Bay Region (2)
- RWQCB 3
Central Coast Region (3)
- RWQCB 4
Jonathan Bishop
Los Angeles Region (4)
- RWQCB 5S
Central Valley Region (5)
- RWQCB 5F
Central Valley Region (5)
Fresno Branch Office
- RWQCB 5R
Central Valley Region (5)
Redding Branch Office
- RWQCB 6
Lahontan Region (6)
- RWQCB 6V
Lahontan Region (6)
Victorville Branch Office
- RWQCB 7
Colorado River Basin Region (7)
- RWQCB 8
Santa Ana Region (8)
- RWQCB 9
San Diego Region (9)

Other _____



Arnold
Schwarzenegger
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Jan Boel
Acting Director

Notice of Preparation

August 17, 2004

To: Reviewing Agencies

Re: Cypress Knolls Residential Project
SCH# 2004081113

Attached for your review and comment is the Notice of Preparation (NOP) for the Cypress Knolls Residential Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

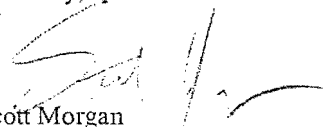
Please direct your comments to:

David Foote
City of Marina c/o Firma
849 Monterey Street
San Luis Obispo, CA 93401

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,


Scott Morgan
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2004081113
Project Title Cypress Knolls Residential Project
Lead Agency Marina, City of

Type NOP Notice of Preparation
Description The main objective is to provide senior housing, services, and health care to persons of average means while providing the City of Marina and FORA with a successful base closure and reuse project. The 194 acre project site contains 460 old residential units in 230 duplex units which are proposed to be demolished. The project proponent proposes to construct 328 single family residential units, 80 units in attached townhomes, 72 apartment units and 60 assisted living units, totaling 540 residential units, as well as associated resident community facilities and a Senior Center.

Lead Agency Contact

Name David Foote
Agency City of Marina c/o Firma
Phone 805-781-9800 **Fax** 805-781-9803
email
Address 849 Monterey Street
City San Luis Obispo **State** CA **Zip** 93401

Project Location

County Monterey
City Marina
Region
Cross Streets California Avenue
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways Hwy 1
Airports
Railways
Waterways
Schools
Land Use

Project Issues Aesthetic/Visual; Air Quality; Biological Resources; Drainage/Absorption; Forest Land/Fire Hazard; Geologic/Seismic; Noise; Other Issues; Population/Housing Balance; Public Services; Recreation/Parks; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Water Supply

Reviewing Agencies Resources Agency; Regional Water Quality Control Board, Region 3; Department of Parks and Recreation; Native American Heritage Commission; California Coastal Commission; Department of Conservation; Department of Water Resources; Department of Fish and Game, Region 3; Office of Emergency Services; California Highway Patrol; Department of Housing and Community Development; Caltrans, District 5; Integrated Waste Management Board; Department of Toxic Substances Control

Date Received 08/17/2004 **Start of Review** 08/17/2004 **End of Review** 09/15/2004

TOP Distribution List

Resources Agency

- Resources Agency
Nadell Gayou
- Dept. of Boating & Waterways
David Johnson
- California Coastal Commission
Elizabeth A. Fuchs
- Colorado River Board
Gerald R. Zimmerman
- Dept. of Conservation
Roseanne Taylor
- California Energy Commission
Environmental Office
- Dept. of Forestry & Fire Protection
Allen Robertson
- Office of Historic Preservation
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Don Chadwick
Region 5, Habitat Conservation Program
- Dept. of Fish & Game 6
Gabrina Gatchel
Region 6, Habitat Conservation Program
- Dept. of Fish & Game 6 I/M
Tammy Allen
Region 6, Inyo/Mono, Habitat Conservation Program
- Dept. of Fish & Game M
George Isaac
Marine Region

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Dept. of Food and Agriculture
- Dept. of General Services
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Environmental Services Section
- Dept. of Health Services
Wayne Hubbard
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Dennis Castrillo
- Governor's Office of Planning & Research
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- Native American Heritage Comm.
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- State Lands Commission
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Sandy Hesnard
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Terri Pencovic
- California Highway Patrol
John Olejnik
Office of Special Projects
- Housing & Community Development
Lisa Nichols
Housing Policy Division

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District 1
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Jeff Pulverman
District 3
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Tim Sable
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- Dept. of Transportation 5
David Murray
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- Dept. of Transportation 6
Marc Birnbaum
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- Dept. of Transportation 7
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District 7

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John Pagano
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- Dept. of Transportation 9
Gayle Rosander
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- Dept. of Transportation 10
Tom Dumas
District 10
- Dept. of Transportation 11
Mario Orso
District 11
- Dept. of Transportation 12
Bob Joseph
District 12

Cal EPA

Air Resources Board

- Airport Projects
Jira Lerner
- Transportation Projects
Kurt Karperos
- Industrial Projects
Mike Tollstrup

- California Integrated Waste Management Board
Sue O'Leary

- State Water Resources Control Board
Jim Hockenberry
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CEQA Tracking Center

Regional Water Quality Control Board (RWQCB)

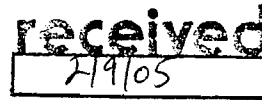
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Redding Branch Office
- RWQCB 6
Lahontan Region (6)
- RWQCB 6V
Lahontan Region (6)
Victorville Branch Office
- RWQCB 7
Colorado River Basin Region (7)
- RWQCB 8
Santa Ana Region (8)
- RWQCB 9
San Diego Region (9)

Other _____

Last Updated on 7/29/04

DEPARTMENT OF TRANSPORTATION

50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401-5415
PHONE (805) 549-3101
FAX (805) 549-3077
TDD (805) 549-3259
<http://www.dot.ca.gov/dist05/>



*Flex your power!
Be energy efficient!*

February 7, 2005

MON-001-84.48
SCH# 2004081113

David Foote
City of Marina c/o Firma
849 Monterey Street
San Luis Obispo, CA 93401

Dear Mr. Foote:

**COMMENTS TO REVISED NOTICE OF PREPARATION FOR CYPRESS KNOLLS
RESIDENTIAL PROJECT**

The California Department of Transportation, District 5, Development Review, has received the revised Notice of Preparation for the above referenced project. Notwithstanding the changes in the project description from the previous version, we are resubmitting our September 14, 2004 letter to you for staff consideration in preparing the environmental impact report and related traffic studies.

If you have any questions, please don't hesitate to call me at (805) 542-4751.

Sincerely,

JOHN J. OLEJNIK
Associate Transportation Planner
District 5 Development Review Coordinator

cc: Roger Barnes (D5); File

Enclosure

DEPARTMENT OF TRANSPORTATION

50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401-5415
PHONE (805) 549-3101
FAX (805) 549-3329
TDD (805) 549-3259
[.http://www.dot.gov/dist05](http://www.dot.gov/dist05)



*Flex your power!
Be energy efficient!*

September 14, 2004

Mr. David Foote
City of Marina c/o Firma
849 Monterey Street
San Luis Obispo, CA 93401

SUBJECT: Cypress Knolls Residential Project Notice of Preparation (NOP) for the Draft Environmental Impact Report

Dear Mr. Foote:

The California Department of Transportation (Department) District 5 has reviewed the Notice of Preparation (NOP) on the Draft Environmental Impact Report (DEIR) for the Cypress Knolls Residential Project. District 5 staff wants to reiterate support for the election to do an EIR. The ~190-acre project site is located on east side of Highway 1 and west of the southern extension of California Avenue. The Cypress Knolls project involves the demolition and replacement of 230 duplex units (460 units) with 328 single-family units, 80 townhouses, 72 apartments, 60 assisted living units, a community facility and a senior center. District 5 staff offers the following comments for your consideration:

- 1) To ensure the traffic analysis in the Draft EIR includes the information needed by District 5 to analyze the traffic impacts of this project to the state highway system, it is recommended that the traffic analysis in the DEIR be prepared in accordance with the Department's recently updated "*Guide for the Preparation of Traffic Impact Studies*."
- 2) The Department is responsible for the safety, operations, and maintenance of the State highway system pursuant to the California Streets and Highways Code. Therefore, the Department's level of service (LOS) standards should be used in the traffic analysis to determine the significance of any project's impact to the state highway system. The Department endeavors to maintain a target LOS at the transition **between** LOS C and LOS D on state highway facilities. In cases where a State highway facility is already operating at an unacceptable LOS, the Department's position is any project traffic trips added to these facilities should be considered a significant cumulative traffic impacts and should be mitigated accordingly.
- 3) The methodologies used to calculate the LOS for the State highway system should be consistent with the methods in the current version of the Highway Capacity Manual (HCM). All LOS calculations should also be included in the DEIR as an appendix and made available for review. Additionally, the project trip generation rates should be based on the latest edition of the Institute of Transportation Engineers (ITE) Trip Generation Report. The project trip generation and project trip distribution should be presented in tabular or graphic format in the DEIR. Any trip reduction credits for "pass-by trips" or internal trips must be justified with supporting data.
- 4) The traffic analysis in the DEIR should include information on existing traffic volumes within the study area, including the State highway system. This information should be based on recent traffic volumes (less than 2 years old) and identify the existing LOS for the State highway system.
- 5) The traffic analysis in the DEIR should include information on the cumulative traffic volumes within the study area, including the State highway system, and the associated LOS values. This cumulative analysis should also include a discussion about the land use and roadway network assumptions used in the forecasts. In order to fully address the cumulative traffic impacts of the proposed project, District 5 staff recommends that the long-term traffic analysis should be based upon a 20-year

timeframe or "Year 2025" conditions. A description of other proposed developments that may contribute traffic to the study area should also be provided. Finally, the roadway improvements that are assumed to be in place under the cumulative traffic analysis should be based on the list of "constrained" (i.e., funded) projects identified in the *2002 Monterey County Regional Transportation Plan (RTP)*.

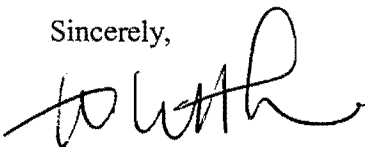
- 6) The project proponent should be responsible for mitigating any project-specific or cumulative traffic impacts to the state highway system in accordance with the California Environmental Quality Act (CEQA). For the proposed project, regional and/or interregional access to the project site is provided from Routes 1, 68, 101 and 156. We recommend that the traffic analysis include updated LOS analyses for those route segments, interchanges, and ramps. In the analyses surrounding Route 68, the DEIR should **not** assume the completed construction of the bypass.
- 7) Since the completion of the Fort Ord Reuse Plan Program EIR, a Project Study Report (PSR) has been completed for the Route 1 corridor between Route 218 and Light Fighter Drive. This PSR identifies feasible transportation improvements to relieve existing and future traffic congestion on Route 1 and to improve traffic safety and vehicular access to the cities of Seaside, Sand City, Marina, and the future development within Fort Ord, including the California State University at Monterey Bay (CSUMB) campus. The PSR identifies the need for the following Route 1 improvements: 1) construction of a new interchange on Route 1 between Fremont Boulevard and Light Fighter Drive (referred to as the Route 1/Monterey Road Diamond Interchange); 2) construction of a northbound auxiliary lane on Route 1 between the Fremont Boulevard interchange and the new Monterey Road interchange; 3) ramp modifications at the Route 1/Fremont Boulevard interchange; and 4) widening of Route 1 from four lanes to six lanes between Fremont Boulevard and Route 218.

The project proponent should contribute a pro rata share towards the cost of the Route 1 improvements identified in the PSR. The payment of a pro rata share towards these improvements should render the project's contribution to the state highway system to less than cumulatively considerable levels in accordance with Section 15064 and Section 15130 of the CEQA Guidelines. As part of the mitigation-monitoring program in the Final EIR, we recommend that proof of the payment of the pro rata share be provided to District 5.

- 8) It should be clarified in the Draft EIR if the project proponent will participate in the Fort Ord Reuse Authority (FORA) traffic mitigation program.

Thank you in advance for your consideration and action upon these issues. District 5 staff would like to request a copy of the Draft EIR for review when it becomes available. We suggest the Lead Agency consider a consultation with the Department to discuss assumptions and trip generators. If you have questions regarding our comments please contact me at (805) 549-3099.

Sincerely,



Keith Hinrichsen
Development Review
Caltrans Planning, District 5
keith_hinrichsen@dot.ca.gov

Cc: D. Murray – Branch Chief Dev Review; R. Barnes – Traffic Ops; C. Shaeffer – Dev. Review; A. Cook – TAMC; M. McCumsey – Reg Plng

STATE OF CALIFORNIAArnold Schwarzenegger, Governor**NATIVE AMERICAN HERITAGE COMMISSION**

915 CAPITOL MALL, ROOM 364
 SACRAMENTO, CA 95814
 (916) 653-4082
 Fax (916) 657-5390



February 17, 2005

David Foote
 City of Marina c/o Firma
 849 Monterey Street
 San Luis Obispo, CA 93401

RE: SCH# 2004081113 – Cypress Knolls Residential Project, Monterey County

Dear Mr. Foote:

The Native American Heritage Commission has reviewed the above mentioned NOP. To adequately assess and mitigate project-related impacts on archaeological resources, the Commission recommends the following actions be required:

1. Contact the appropriate Information Center for a record search. The record search will determine:
 - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
 - If any known cultural resources have already been recorded on or adjacent to the APE.
 - If the probability is low, moderate, or high that cultural resources are located in the APE.
 - If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
 - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
3. Contact the Native American Heritage Commission for:
 - A Sacred Lands File Check. Requests must be made in writing with the County, Quad map name, township, range and section.
 - A list of appropriate Native American Contacts for consultation concerning the project site and to assist in the mitigation measures.
4. Lack of surface evidence of archeological resources does not preclude their subsurface existence.
 - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
 - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
 - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5 (e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

If you have any questions, please contact me at (916) 653-4038.

Sincerely,


 Debbie Pillas-Treadway
 Environmental Specialist III

CC: State Clearinghouse



received
 2/16/05

February 14, 2005

DISTRICT
 BOARD
 MEMBERS

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 Jack Barlich
 Del Rey Oaks

VICE CHAIR:
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 County

Anna Caballero
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 Monterey County

Arturo Medina
 San Juan
 Bautista

John Myers
 King City

Ellen Pirie
 Santa Cruz
 County

David Foote
 City of Marina
 c/o Firma
 849 Monterey Street
 San Luis Obispo, CA 93401

SUBJECT: NOP OF AN EIR FOR CYPRESS KNOLLS RESIDENTIAL DEVELOPMENT

Dear Mr. Foote:

Staff has reviewed the referenced document which is for a 712 residential units subdivision and have the following recommendations for the air quality analysis:

1. Direct and indirect source emissions (VOC and NO_x) from all proposed operational activities should be quantified and assessed. VOC and NO_x emissions need not be quantified for "typical" construction activity. Staff should be consulted regarding potential construction equipment to be used on the project.
2. If project or cumulative traffic would cause LOS to decline from D or better to E or F, dispersion modeling should be undertaken to determine if carbon monoxide concentrations would violate ambient air quality standards at sensitive receptor locations.
3. Project operational and construction PM₁₀ emissions should be quantified. If emissions would exceed 82 lb/day, the project would have a significant impact on air quality. However, PM₁₀ modeling could be undertaken to verify or dispute this finding per the District's CEQA Air Quality Guidelines.
4. If the project might expose sensitive receptors in adjacent land uses to air quality problems such as odors or toxic air contaminants (e.g., diesel exhaust during construction), the DEIR should include an assessment of these impacts. .
5. Mitigation measures should be identified for any significant impacts on air quality. The EIR should quantify the emission reduction effectiveness of each measure, identify agencies responsible for implementation and monitoring, and conclude whether mitigation measures would reduce impacts below significance levels.

6. Project consistency with the 2004 Air Quality Management Plan for the Monterey Bay Region should be addressed. Consistency is used by the District to determine a project's cumulative impact on regional air quality (i.e., ozone levels). AMBAG should be contacted for a formal consistency determination, which should be included in the DEIR.
7. The project includes the demolition of 460 residential units. These units could include asbestos and lead based paint. Mike Sheehan, District Compliance Division, should be contacted regarding District demolition requirements. Additionally, the disposal of demolition materials and truck traffic associated with this activity including exposure of sensitive receptors to diesel exhaust should be addressed.
8. The impact on future residents of emissions from prescribed burns on the former Fort Ord should be addressed.

The District's 2004 CEQA Air Quality Guidelines can be used to help prepare the air quality analysis. The Guidelines are available at the District's website - www.mbuapcd.org. Please do not hesitate to call if you have any questions.

Sincerely,



Jean Getchell
Supervising Air Quality Planner
Planning and Air Monitoring Division



AMBAG
ASSOCIATION OF MONTEREY BAY AREA GOVERNMENTS

March 10, 2005

Mr. David Foote
City of Marina
211 Hillcrest Avenue
Marina, CA 93933

Re: MCH# 020528- Notice of Preparation of Draft Environmental Impact Report Cypress Knolls Residential Project

Dear Mr. Foote:

AMBAG's Regional Clearinghouse circulated a summary of notice of your environmental document to our member agencies and interested parties for review and comment.

The AMBAG Board of Directors considered the project on **March 9, 2005** and has no comments at this time.

Thank you for complying with the Clearinghouse process.

Sincerely,

Nicolas Papadakis
Executive Director

SERVING OUR REGIONAL COMMUNITY SINCE 1968
445 RESERVATION ROAD, SUITE G ♦ P. O. BOX 809 ♦ MARINA, CA 93933-0809
(831) 883-3750 ♦ FAX (831) 883-3755 ♦ www.ambag.org

received
3/8/05

MONTEREY COUNTY



DEPARTMENT OF PUBLIC WORKS

312 E. Alisal Street, Salinas, CA 93901-4371 • (831) 755-4800 • FAX (831) 755-4958

Ronald J. Lundquist, P.E., Interim Public Works Director

FEBRUARY 28, 2005

DAVID FOOTE ASLA
FIRMA CONSULTANTS INC
849 MONTEREY ST #205
SAN LUIS OBISPO CA 93401

SUBJECT: RESPONSE TO NOTICE OF PREPARATION OF DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE CYPRESS KNOLLS RESIDENTIAL PROJECT (SCH2004081113).

We have received your Notice of Preparation (NOP) of the Draft Environmental Impact Report (DEIR) for the Cypress Knolls Residential Project. As the Public Works Department for Monterey County, this project's potential impacts to the surrounding traffic circulation network is of vital interest to us, given the severe congestion currently experienced in the project vicinity.


The following information and recommendations is offered to aid with the environmental review process:

- Any mitigation measures proposed by the project should conform to regional planning documents, such as the Monterey County General Plan and Transportation Agency of Monterey County Regional Transportation Plan.
- The DEIR/Traffic Study should address project impacts on all county, regional, and city roadways.
- The Traffic Study should identify mitigation measures for all traffic circulation impacts on County roadways that cause the Levels of Service (LOS) to drop below LOS "C."
- LOS calculations should be analyzed using the latest edition of the Highway Capacity Manual.
- In developing cumulative scenarios for the traffic analysis, traffic forecasts should be consistent with regional traffic model projections.
- At a minimum, the following project scenarios should be analyzed: "Existing Conditions," "Existing Plus Project," "Cumulative No Project," and "Cumulative Plus Project."
- The Project should strive to provide alternative modes of transportation that will reduce the peak demand on roadways in the project area; the DEIR should address the needs and benefits of providing pedestrian/bicycle facilities.

Thank you for taking our comments into consideration. We look forward to reviewing your project's DEIR. Please contact me at (831) 755-8970 if you have any questions.

Sincerely,

RONALD J. LUNDQUIST, P.E.
INTERIM PUBLIC WORKS DIRECTOR

By 
Enrique M. Saavedra, P.E.
Senior Transportation & Development Engineer

ES:reh

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION

50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401-5415
PHONE (805) 549-3111
FAX (805) 549-3329
TDD (805) 549-3259
<http://www.dot.gov/dist05>



*Flex your power!
Be energy efficient!*

May 7, 2004

Mon-001/68/156-var

Jeffrey Dack, AICP
Planning Department
City of Marina
211 Hillcrest Ave
Marina, CA 93933

SUBJECT: Cypress Knolls Public Notice

Dear Mr. Dack:

The California Department of Transportation (Department) District 5 has received the Public Notice that a public hearing regarding the Cypress Knolls Project. This hearing will be used to determine whether or not an Environmental Impact Report (EIR) should be the appropriate vehicle for environmental review. District 5 staff is in agreement with City staff that an EIR is appropriate.

Traffic / Transportation in this area is becoming an increasingly complex area of study. The Coastal Cities are experiencing dynamic growth, the regional transportation agency is updating the regional transportation plan, funding mechanisms and approaches toward managing and focusing growth and growth's relationship with transportation. And the unincorporated areas adjacent or near Marina are receiving updated General Plan guidance. These activities will influence project impacts as well as the City's interrelationships as a whole.

A project of this size will influence regional and interregional transportation corridors, particularly State Routes 1, 68 and 156. With respect to SR 68, however, it will be important that the EIR not assume the bypass is constructed for the cumulative condition analysis.

Staff anticipates receipt of a Notice of Preparation in the event a project EIR is proposed and accepted. Additional recommendations for treatment will be discussed at that time. If you have any questions, you may call me at (805) 542-4751.

Sincerely,

A handwritten signature in cursive script that reads "Chris Shaeffer".

Chris Shaeffer

District 5 Development Review Branch

cc: DMurray, District 5 Planning; RBarnes, District 5 Traffic Operations; ACook, TAMC

"Caltrans improves mobility across California"



September 9, 2004

Mr. David Foote
City of Marina
Planning Department
211 Hillcrest Avenue
Marina, CA 93933

**Re: MCH # 090409 – Notice of Preparation of Draft Environmental Impact
Report for Cypress Knolls Residential Project**

Dear Mr. Foote:

AMBAG's Regional Clearinghouse circulated a summary of notice of your environmental document to our member agencies and interested parties for review and comment.

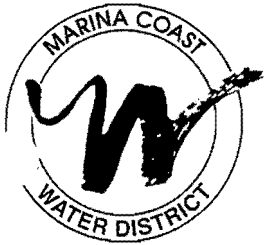
The AMBAG Board of Directors considered the project on **September 8, 2004** and has no comments at this time.

Thank you for complying with the Clearinghouse process.

Sincerely,

A handwritten signature in black ink, appearing to read "Nicolas Papadakis", is written over a horizontal line.

Nicolas Papadakis
Executive Director



received
8/31/04

MARINA COAST WATER DISTRICT

11 RESERVATION ROAD • MARINA, CA 93933-2099
Home Page: www.mcwd.org
TEL: (831) 384-6131 • FAX: (831) 384-2479

DIRECTORS
CHARLES H. SCHOLL
President
THOMAS P. MOORE
Vice-President
DAVID W. BROWN
KENNETH K. NISHI
ROBERT D. O'BRIEN

August 25, 2004

David Foote, ASLA
City of Marina
c/o FIRMA
849 Monterey Street
San Luis Obispo, CA 93401

Subject: Notice of Preparation of a Draft Environmental Impact Report for the
Cypress Knolls Residential Project – Comments

Dear Mr. Foote:

Marina Coast Water District is pleased to submit these comments on the subject document.

1. Senate Bill 610 modified the California Water Code to require a Water Supply Assessment for certain developments. Specifically, projects that meet the criteria included in section 10912 of the Water Code must have a Water Supply Assessment completed by the local water purveyor. After review of the NOP, it appears that the subject project requires the completion of a Water Supply Assessment.

As the public water supplier for this project, Marina Coast Water District will complete the Water Supply Assessment in accordance with all regulations. That document will be presented to the Marina Coast Water District Board of Directors for action. Upon their approval that document can be circulated as part of the Draft EIR and used by the City of Marina in its consideration of the proposed project.

2. Marina Coast Water District has several requirements that must be followed in the planning and construction of any development within its boundaries. I would like to highlight a few of these for your review and consideration. Section 3.36.030 S *New Construction* of Marina Coast Water District's code provides direction regarding minimum water conservation requirements. I encourage you to review this section and include water conservation methods in your proposed project.
3. Marina Coast Water District has a policy that requires recycled water plumbing be installed at new construction sites. I draw your attention to chapter 4.28 *Recycled Water* subsection 4.28.030 C which states that "All new private or public irrigation systems, whether currently anticipating connection

to the recycled system or which shall be connected to the potable water system temporarily while awaiting availability of recycled water, shall be constructed of purple PVC pipe ...”

4. In September 2003 the Marina Coast Water District Board of Directors adopted *Procedures Guidelines and Design Requirements and Standard Plans and Specifications for Construction of Domestic Water, Sewer and Recycled Water Facilities* and the *In-Tract Policy*. The process outlined in these documents and subsequent amendments shall be followed. Your attention is drawn to the *In-Tract Policy* requiring all costs for in-tract water and wastewater system improvements and a proportionate share of the out-of-tract improvements to be borne by the developer.

When you are ready to proceed with your project, we would like to meet with you to discuss the proposed project details and permit requirements. Please contact me if you have any questions or would like to discuss these comments in detail.

Sincerely,



Marc A. Lucca, P.E.
District Engineer

xc: M. Armstrong – MCWD
D. Yount – City of Marina



MONTEREY BAY

Unified Air Pollution Control District
serving Monterey, San Benito, and Santa Cruz counties

received
8/31/04

AIR POLLUTION CONTROL OFFICER
Douglas Quetin

24580 Silver Cloud Court • Monterey, California 93940 • 831/647-9411 • FAX 831/647-8501

August 26, 2004

David Foote
City of Marina
c.o Firma
849 Monterey St.,
San Luis Obispo, CA 93401

SUBJECT: NOP OF DEIR FOR CYPRESS KNOLLS RESIDENTIAL PROJECT

Dear Mr. Foote:

Staff has reviewed the referenced document and has the following recommendations for a scope of work for the air quality analysis:

1. Direct and indirect source emissions (VOC and NO_x) from all proposed operational activities should be quantified and assessed. VOC and NO_x emissions need not be quantified for "typical" construction activity. Staff should be consulted regarding potential construction equipment to be used on the project.
2. If project or cumulative traffic would cause LOS to decline from D or better to E or F, dispersion modeling should be undertaken to determine if carbon monoxide concentrations would violate ambient air quality standards at sensitive receptor locations.
3. Project operational and construction PM₁₀ emissions should be quantified. If emissions would exceed 82 lb/day, the project would have a significant impact on air quality. However, PM₁₀ modeling could be undertaken to verify or dispute this finding per the District's CEQA Air Quality Guidelines.
4. If the project might expose sensitive receptors in adjacent land uses to air quality problems such as odors or toxic air contaminants (e.g., diesel exhaust), the DEIR should include an assessment of these impacts. The impact of prescribed burning on sensitive receptors who would reside in the project area should also be addressed.
5. Mitigation measures should be identified for any significant impacts on air quality. The EIR should quantify the emission reduction effectiveness of each measure, identify agencies responsible for implementation and monitoring, and conclude whether mitigation measures would reduce impacts below significance levels.

DISTRICT BOARD MEMBERS

CHAIR:
Ellen Pirie
Santa Cruz County

VICE CHAIR:
Jack Barlich
Del Rey Oaks

Anna Caballero
Salinas

Lou Calcagno
Monterey County

Tony Campos
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Bob Cruz
San Benito County

: Gualltieri
.lola

Edith Johnsen
Monterey County

Butch Lindley
Monterey County

Arturo Medina
San Juan Bautista

John Myers
King City

6. Project consistency with the 2004 Air Quality Management Plan for the Monterey Bay Region should be addressed. Consistency is used by the District to determine a project's cumulative impact on regional air quality (i.e., ozone levels). AMBAG should be contacted for a formal consistency determination, which should be included in the DEIR.
7. If District permits are required, they should be identified.

The District's 2004 CEQA Air Quality Guidelines can be used to help prepare the air quality analysis. The Guidelines are available at the District's website - www.mbuapcd.org. Please do not hesitate to call if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Janet Brennan". The signature is fluid and cursive, with a large initial "J" and "B".

Janet Brennan
Supervising Planner
Planning and Air Monitoring Division



Department of Toxic Substances Control



Terry Tamminen
Agency Secretary
Cal/EPA

8800 Cal Center Drive
Sacramento, California 95826-3200

Arnold Schwarzenegger
Governor

September 15, 2004

Mr. David Foote
City of Marina c/o FIRMA
89 Monterey Street
San Luis Obispo, California 93401

REVIEW OF THE NOTICE OF PREPARATION (NOP) FOR THE CYPRESS KNOLLS RESIDENTIAL PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT (EIR), SCH #2004081113 DATED AUGUST 17, 2004

Dear Mr. Foote:

Thank you for providing the Department of Toxic Substances Control (DTSC) the opportunity to review the NOP for the draft EIR for the Cypress Knolls Residential Project.

DTSC is the State's lead agency for the environmental cleanup and realignment of closing military bases and maintains jurisdiction over all hazardous substance and hazardous waste issues with the exception of petroleum contamination. The basis for DTSC's regulatory authority is found in California Health and Safety Code, Division 20, Chapters 6.5 (Hazardous Waste Control), Chapter 6.8 (Hazardous Substances Account Act), and California Code of Regulations, Title 22, Division 4.5.

The Central Coast Regional Water Quality Control Board (CCRWQCB) has authority over the remediation of petroleum sites and the protection of the waters of the State of California. The CCRWQCB regulatory authority is found in the Porter-Cologne Water Quality Control Act, California Water Code and California Code of Regulations, Title 23, Division 3, Chapter 15 and 16. In addition, the Air Resources Board would be concerned with impacts to air quality.

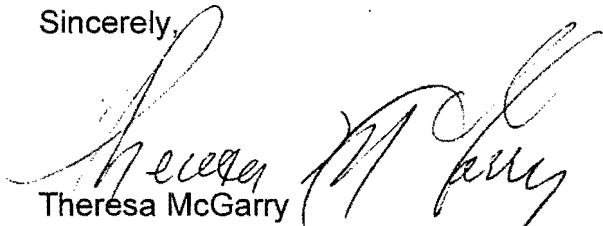
DTSC generally reviews environmental documents to determine whether the proposed project could have potential impact on public health and worker safety because of the possible presence of residual chemical contaminants and/or Munitions and Explosives of Concern (MEC). It appears that the project area has one MEC site. The site is Munitions Response Site (MRS) 1 which is included as a Track 1, Category 3 candidate for the upcoming Proposed Plan and Record of Decision. MRS Site 1 is the former

Mr. David Foote
September 15, 2004
Page 2

Flame Thrower Range and is proposed as No Further Action related to MEC. The Army will however recommend that ordnance recognition and safety training be conducted prior to construction activities and that the landowner notify the Army prior to intrusive activities. We recommend that you review the Track 1 Remedial Investigation and Feasibility Study dated June 21, 2004 and coordinate your project with the Army.

If you have any questions, please feel free to contact me at (916) 255-3664.

Sincerely,



Theresa McGarry
Hazardous Substances Scientist
Office of Military Facilities

cc: Mr. Michael Houlemard
Fort Ord Reuse Authority
100 12th Street, Building 2880
Marina, California 93933

Ms. Gail Youngblood
BRAC Environmental Coordinator
Department of the Army
Commander, DLIFLC and POM (Fort Ord)
ATTN: ATZP-EP
Presidio of Monterey, California 93955-5006

Mr. Grant Himbaugh
Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo California 93401

Mr. Guenther Moskat
California CEQA Tracking Center
Post Office Box 806
Sacramento, California 95812-0806

Mr. David Foote
September 15, 2004
Page 3

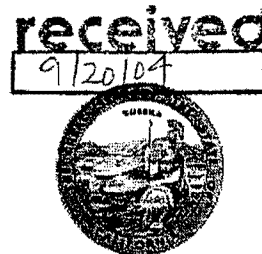
cc: Office of Planning and Research
State Clearinghouse
Post Office Box 3044
Sacramento, California 95812-3044

Mr. Roman Racca
Project Manager
Office of Military Facilities
Department of Toxics Substances Control
8800 Cal Center Drive
Sacramento, California 95826-3200



SANDRA SHEWRY
Director

State of California—Health and Human Services Agency
Department of Health Services
Northern California Drinking Water Field Operations Branch
Monterey District



ARNOLD SCHWARZENEGGER
Governor

September 15, 2004

State Clearinghouse (SCH)
P.O. Box 3044
Sacramento, CA 95812-3044

Schedule No. 2004081113

Title: Cypress Knolls Residential Project Notice of Preparation

The Department of Health Services, Drinking Water Field Operations Branch (Department), Monterey District office, has received and reviewed the above-cited document and provides the following comments:

1. The Department has the responsibility of ensuring that public water systems comply with the Safe Drinking Water Act and other regulations, including the California Waterworks Standards. These statutes and regulations require that water utilities provide an adequate quantity and quality of water to customers. The California Waterworks Standards also specify criteria for the water supply infrastructure design. The Department recommends the Draft Environmental Impact Report (DEIR) address the infrastructure to be used for the planned residential project. There has been discussion for some of the Ord Community reuse projects to use the existing infrastructure for utilities. If this is planned at Cypress Knolls, please evaluate the ability to accurately locate all water and wastewater infrastructure to ensure the piping is not impacted during the construction of the project and that the water utility will have legal access to all pipeline alignments. Efforts should be made to develop as-built plans for the water and wastewater distribution system.
2. The Department has the responsibility for reviewing all new proposals for the use of recycled water to ensure compliance with California Code of Regulations, Title 22, Water Recycling Criteria. The Water Recycling Criteria require the submission of an engineering report to the Regional Water Quality Control Board (RWQCB) and the Department of Health Services before recycled water projects are implemented. If the project is intended to use recycled water for public areas or irrigation of the residential landscaping via a dual plumbed project, The DEIR should evaluate the effectiveness of the water utility's Cross Connection Control Program and improvements or mitigations needed to ensure there will be adequate public health protection to domestic water users once the recycled water distribution system is in place.
3. The Department will require that the separation criteria between the water, wastewater and recycled water pipelines comply with the California Waterworks Standards and the

Department's *Guidance Criteria for the Separation of water Mains and Non-Potable Pipelines* (attached).

We look forward to reviewing the DEIR. If you have any questions regarding these comments, please contact me at (831) 655-6933.

Sincerely,

A handwritten signature in cursive script that reads "Betsy Lichti".

Betsy S. Lichti, P.E.
District Engineer, Monterey District
DRINKING WATER FIELD OPERATIONS BRANCH

BSL/bl
Enclosure

cc: CDHS-DWP Environmental Coordinator
Monterey County Environmental Health
David Foote, City of Marina c/o Firma, 849 Monterey Street, San Luis Obispo, CA 93401

Memorandum

Date: April 14, 2003 (Revised Date: October 16, 2003)

To: Regional and District Engineers

From: David P. Spath, Ph.D., Chief (*Original signed by Dave*)
Drinking Water and Environmental Management
601 North 7th Street, MS 216
Sacramento, CA 95814
(916) 322-2308

Subject: **GUIDANCE MEMO NO. 2003-02: GUIDANCE CRITERIA FOR THE SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES**

The purpose of this memo is to update guidance dated April 5, 1983 for consistency with proposed 2003 regulations. Should there be any modification to the proposed Water Works Standards that may impact the content of this guidance, the guidance will be amended accordingly.

GUIDANCE: CRITERIA FOR THE SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES

BACKGROUND

When buried water mains are in close proximity to non-potable pipelines, the water mains are vulnerable to contamination that can pose a risk of waterborne disease outbreaks. For example, sewers (sanitary sewer mains and sewage force mains) frequently leak and saturate the surrounding soil with sewage due to structural failure, improperly constructed joints, and/or subsidence or upheaval of the soil encasing the sewer. If a nearby water main is depressurized and no pressure or negative pressure occurs, that situation is a public health hazard that is compounded if an existing sewer is broken during the installation or repair of the water main. Further, failure of a water main in close proximity to other pipelines may disturb their bedding and cause them to fail. In the event of an earthquake or other disaster, simultaneous failure of all pipelines could occur.

The most effective protection against this type of drinking water contamination is adequate construction and separation of non-potable pipelines and water mains. The Waterworks Standards (Title 22, Chapter 16, Section 64572) provide separation criteria for new construction. However, when these criteria cannot be met, the risk of contamination can be reduced by increasing the structural integrity of pipe materials and joints, and ensuring minimum separation requirements are met. Therefore, the following guidance details construction criteria for the installation of water mains and non-potable pipelines to minimize the risk of contamination of drinking water.



Memorandum

Date: April 14, 2003 (**Revised Date: October 16, 2003**)

To: Regional and District Engineers

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Drinking Water and Environmental Management
601 North 7th Street, MS 216
Sacramento, CA 95814
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DEFINITIONS

- COMPRESSION JOINT - A push-on joint that seals by means of the compression of a rubber ring or gasket between the pipe and a bell or coupling.
- CONTINUOUS SLEEVE - A protective tube of high-density-polyethylene (HDPE) pipe with heat fusion joints or other non-potable metallic casing without joints into which a pipe is inserted.
- DISINFECTED TERTIARY RECYCLED WATER - Wastewater that has been filtered and subsequently disinfected in accordance with Section 60301.230, Chapter 3 (Water Recycling Criteria), Title 22, California Code of Regulations.
- HOUSE LATERAL - A sewer line connecting the building drain and the sanitary sewer main serving the street.
- SUPPLY LINE - Pipelines conveying raw water to be treated for drinking purposes in accordance with Section 64572 ©, proposed Water Works Standards.
- WATER MAIN – Means any pipeline, except for user service lines, within the distribution system in accordance with Section 64551.70, proposed Water Works Standards.
- RATED WORKING WATER PRESSURE - A pipe classification system based on internal working pressure of the fluid in the pipe, type of pipe material, and the thickness of the pipe wall.
- SANITARY SEWER MAIN - A gravity sewer conveying untreated municipal wastewater.
- SEWAGE FORCE MAIN - A pressurized sewer conveying untreated municipal wastewater.

APPLICABILITY

Note that the construction criteria presented in this document apply to house laterals that cross above a water main, but not to those house laterals that cross below a water main.

Water mains or non-potable pipelines that are 24-inches in diameter or larger may pose a higher degree of public health concern because of the large volumes of flow involved. Therefore, installation of water mains or non-potable pipelines 24-inches in diameter or larger should be reviewed and approved in writing by the Department on a case-by-case basis prior to construction.

In no case, should water mains and non-potable pipelines conveying sewage or other liquids be installed in the same trench.

REGULATORY REQUIREMENTS

Any new development project in which all the underground facilities are being constructed for the first time must comply with the following regulatory requirements:

Existing requirements:

Section 64630. (Title 22 CA Code of Regulations) Water Main Installation"

- (c) Water mains shall be installed at least:
 - (1) Ten feet (3 meters) horizontally from and 1 foot (0.3 meters) higher than sanitary sewer mains located parallel to the main.
 - (2) One foot (0.3 meters) higher than sanitary sewer mains crossing the main.
 - (3) Ten feet (3 meters), and preferably 25 feet (7.5 meters), horizontally from sewage leach fields, cesspools, seepage pits and septic tanks.

- (d) Separation distances specified in (c) shall be measured from the nearest outside edges of the facilities.

- (e) Where the requirements of (c) and (d) cannot be met due to topography, inadequate right-of-way easements, or conflicts with other provisions of these regulations, lesser separation is permissible if:
 - (1) The water main and the sewer are located as far apart as feasible within the conditions listed above.
 - (2) The water main and the sewer are not installed within the same trench.
 - (3) The water main is appropriately constructed to prevent contamination of the water in the main by sewer leakage.

- (f) Water mains shall be disinfected according to AWWA Standard C601-81 before being placed in service.

- (g) Installation of water mains near the following sources of potential contamination shall be subject to written approval by the Department on a case-by-case basis:
 - (1) Storage ponds or land disposal sites for wastewater or industrial process water containing toxic materials or pathogenic organisms.
 - (2) Solid waste disposal sites.
 - (3) Facilities such as storage tanks and pipe mains where malfunction of the facility would subject the water in the main to toxic or pathogenic contamination.

Although the following requirements have not yet been adopted, they should be within the next two years and should be used as guidance for future construction.

Proposed requirements as of the date of this document:

Section 64572. Water Main Separation

(a) New water mains and new supply lines shall not be installed in the same trench as, and shall be at least 10 feet horizontally from, and one foot vertically above, any parallel pipeline conveying:

- (1) Untreated sewage,
- (2) Primary or secondary treated sewage,
- (3) Disinfected secondary-2.2 recycled water (defined in section 60301.220),
- (4) Disinfected secondary-23 recycled water (defined in section 60301.225), and
- (5) Hazardous fluids such as fuels, industrial wastes, and wastewater sludge.

(b) New water mains and new supply lines shall be installed at least 4 feet horizontally from, and one foot vertically above, any parallel pipeline conveying:

- (1) Disinfected tertiary recycled water (defined in section 60301.230), and
- (2) Storm drainage.

(c) New supply lines conveying raw water to be treated for drinking purposes shall be installed at least 4 feet horizontally from, and one foot vertically below, any water main.

(d) If crossing a pipeline conveying a fluid listed in subsection (a) or (b), a new water main shall be constructed perpendicular to and at least one foot above that pipeline. No connection joints shall be made in the water main within eight horizontal feet of fluid pipeline.

(e) The vertical separation specified in subsections (a), (b), and (c) is required only when the horizontal distance between a water main and pipeline is ten feet or less.

(f) New water mains shall not be installed within 100 horizontal feet of any sanitary landfill, wastewater disposal pond, or hazardous waste disposal site, or within 25 feet of any cesspool, septic tank, sewage leach field, seepage pit, or groundwater recharge project site.

(g) The minimum separation distances set forth in this section shall be measured from the nearest outside edge of each pipe barrel.

ALTERNATIVE CRITERIA FOR CONSTRUCTION

Water Mains, and Sewers and Other Non-potable Fluid-carrying Pipelines

When new water mains, new sanitary sewer mains, or other non-potable fluid-carrying pipelines are being installed in existing developed areas, local conditions (e.g., available space, limited slope, existing structures) may create a situation in which there is no alternative but to install water mains, sanitary sewer mains, or other non-potable pipelines at a distance less than that required by the regulations [existing Section 64630 (proposed Section 64572)]. In such cases, through permit action, the Department may approve

alternative construction criteria. The alternative approach is allowed under the proposed regulation Section 64551(c):

“A water system that proposes to use an alternative to the requirements in this chapter shall demonstrate to the Department how it will institute additional mitigation measures to ensure that the proposed alternative would not result in an increased risk to public health.”

Appropriate alternative construction criteria for two different cases in which the regulatory criteria for sanitary sewer main and water main separation cannot be met are shown in **Figures 1 and 2**.

- **Case 1** - New sanitary sewer main and a new or existing water main; alternative construction criteria apply to the sanitary sewer main.
- **Case 2** - New water main and an existing sanitary sewer main; alternative construction criteria may apply to either or both the water main and sanitary sewer main.

Case 1: New Sanitary Sewer Main Installation (Figures 1 and 2)

Zone Special Construction Required for Sanitary Sewer Main

- A Sanitary sewer mains parallel to water mains shall not be permitted in this zone without prior written approval from the Department and public water system.
- B If the water main paralleling the sanitary sewer main does not meet the Case 2 Zone B requirements, the sanitary sewer main should be constructed of one of the following:
1. High-density-polyethylene (HDPE) pipe with fusion welded joints (per AWWA C906-99);
 2. Spirally-reinforced HDPE pipe with gasketed joints (per ASTM F-894);
 3. Extra strength vitrified clay pipe with compression joints;
 4. Class 4000, Type II, asbestos-cement pipe with rubber gasket joints;
 5. PVC sewer pipe with rubber ring joints (per ASTM D3034) or equivalent;
 6. Cast or ductile iron pipe with compression joints; or
 7. Reinforced concrete pressure pipe with compression joints (per AWWA C302-95).

- C If the water main crossing below the sanitary sewer main does not meet the requirements for Case 2 Zone C, the sanitary sewer main should have no joints within ten feet from either side of the water main (in Zone C) and should be constructed of one of the following:
1. A continuous section of ductile iron pipe with hot dip bituminous coating; or
 2. One of the Zone D options 1, 3, 4, or 5 below.
- D If the water main crossing above the sanitary sewer main does not meet the Case 2 Zone D requirements, the sanitary sewer main should have no joints within four feet from either side of the water main (in Zone D) and be constructed of one of the following:
1. HDPE pipe with fusion-welded joints (per AWWA C906-99);
 2. Ductile iron pipe with hot dip bituminous coating and mechanical joints (gasketed, bolted joints);
 3. A continuous section of Class 200 (DR 14 per AWWA C900-97) PVC pipe or equivalent, centered over the pipe being crossed;
 4. A continuous section of reinforced concrete pressure pipe (per AWWA C302-95) centered over the pipe being crossed; or
 5. Any sanitary sewer main within a continuous sleeve.

Case 2: New water mains Installation (Figures 1 and 2)

Zone Special Construction Required for Water Main

- A No water mains parallel to sanitary sewer mains shall be constructed without prior written approval from the Department.
- B If the sanitary sewer main paralleling the water main does not meet the Case 1 Zone B requirements, the water main should be constructed of one of the following:
1. HDPE pipe with fusion welded joints (per AWWA C906-99);
 2. Ductile iron pipe with hot dip bituminous coating;
 3. Dipped and wrapped one-fourth-inch-thick welded steel pipe;
 4. Class 200, Type II, asbestos-cement pressure pipe;

5. Class 200 pressure rated PVC water pipe (DR 14 per AWWA C900-97 & C905-97) or equivalent; or
 6. Reinforced concrete pressure pipe, steel cylinder type, per AWWA (C300-97 or C302-99 or C303-95).
- C If the sanitary sewer main crossing above the water main does not meet the Case 1 Zone C requirements, the water main should have no joints within ten feet from either side of the sanitary sewer main (in Zone C) and be constructed of one of the following:
1. HDPE pipe with fusion-welded joints (per AWWA C906-99);
 2. Ductile iron pipe with hot dip bituminous coating;
 3. Dipped and wrapped one-fourth-inch-thick welded steel pipe;
 4. Class 200 pressure rated PVC water pipe (DR 14 per AWWA C900-97 & C905-97); or
 5. Reinforced concrete pressure pipe, steel cylinder type, per AWWA (C300-97 or C301-99 or C303-95).
- D If the sanitary sewer main crossing below the water main does not meet the requirements for Case 1 Zone D, the water main should have no joints within eight feet from either side of the sanitary sewer main (in Zone D) and should be constructed as for Zone C.

Water Mains and Pipelines Conveying Non-potable Fluids

When the basic separation criteria cannot be met between water mains and pipelines conveying non-potable fluids, the requirements described above for sanitary sewer mains should apply. This includes the requirements for selecting special construction materials and the separation requirements shown in Figures 1 and 2. Note that not all construction materials allowed for sanitary sewer mains will be appropriate for other non-potable fluid lines. For example, certain plastic lines may not be appropriate for the transport of some fuel products. The selection of compatible materials of construction for non-potable fluids is a decision to be made by the project engineer.

Water Mains and Sewage Force Mains

- Sewage force mains shall not be installed within ten feet (horizontally) of a water main.

- When a sewage force main must cross a water main, the crossing should be as close as practical to the perpendicular. The sewage force main should be at least one foot below the water main.
- When a new sewage force main crosses under an existing water main, and a one-foot vertical separation cannot be provided, all portions of the sewage force main within eight feet (horizontally) of the outside walls of the water main should be enclosed in a continuous sleeve. In these cases, a minimum vertical separation distance of 4 inches should be maintained between the outside edge of the bottom of the water main and the top of the continuous sleeve.
- When a new water main crosses over an existing sewage force main, the water main should be constructed of pipe materials with a minimum rated working pressure of 200 psig or the equivalent.

Water Mains and Tertiary Treated Recycled Water or Storm Drainage

The basic separation criteria for water mains and pipelines conveying tertiary treated recycled water or storm drainage lines are a 4-foot horizontal separation where lines are running parallel and a 1-foot vertical separation (water line above recycled or storm drainage) where the lines cross each other.

When these criteria cannot be met, the Zone A criteria apply where lines are running parallel, and the Zone C and Zone D criteria apply where the lines cross each other as shown on Figures 1 and 2. For these situations, the Zone "P" criteria are in effect and prohibit construction less than 1 foot in parallel installations and less than 4 inches in vertical (crossing) situations.

For tertiary treated recycled water and storm drainage lines, the Zone B criteria (requirements for special pipe) do not apply as the basic separation criteria is a four-foot horizontal separation criteria for parallel lines. The tertiary treated recycled water lines should be constructed in accordance with the color-coding, and labeling requirements per Section 116815, California Health and Safety Code of Regulations.

MISCELLANEOUS GUIDANCE

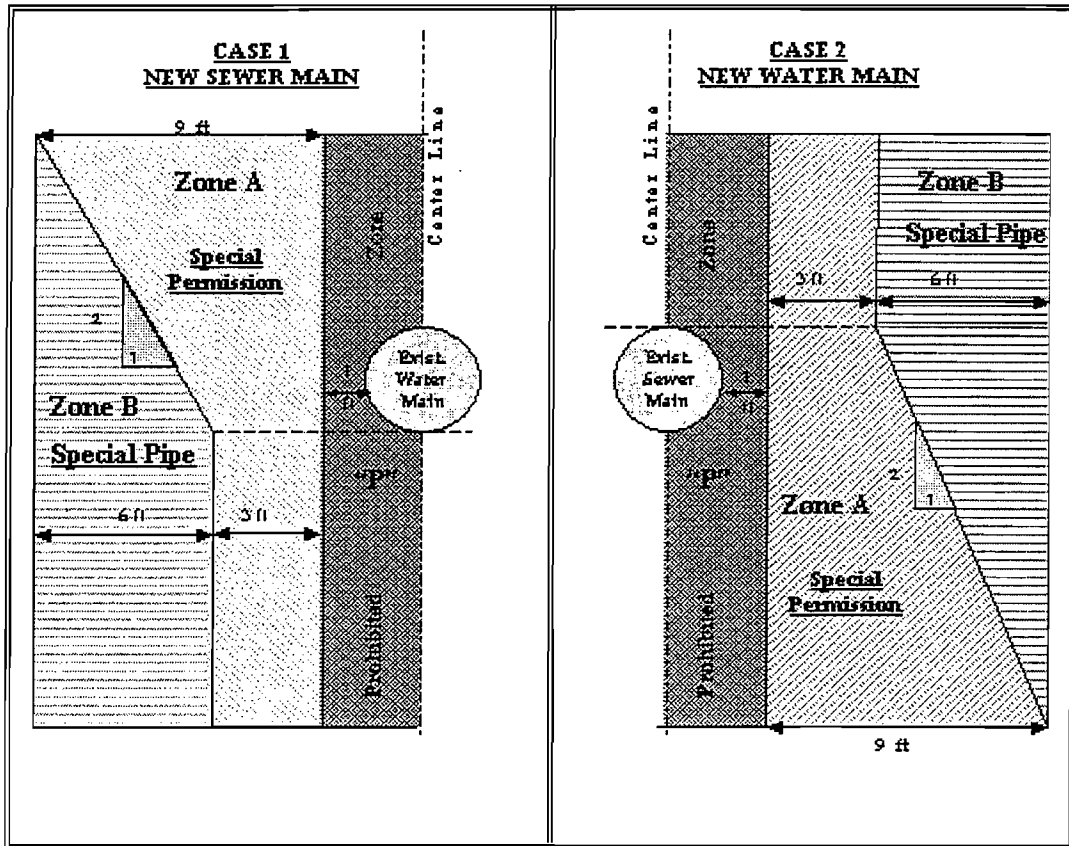
- More stringent requirements may be necessary if conditions such as high groundwater exist. HDPE or similar pipe may be required to provide flexibility to move without potential joint leaks.
- Sanitary sewer mains should not be installed within 25 feet horizontally of a low head (5 psig or less pressure) water main.
- New water mains and sanitary sewer mains should be pressure tested in accordance with manufacturer's specifications.

- When installing water mains, sewers, or other pipelines, measures should be taken to prevent or minimize disturbances of existing pipelines. Disturbance of the conduit's supporting base could eventually result in pipeline failure.
- Special consideration should be given to the selection of pipe materials if corrosive conditions are likely to exist. These conditions may be due to soil type and/or the nature of the fluid conveyed in the conduit, such as a septic sewage producing corrosive hydrogen sulfide.

NOTE: Dimensions are from the outside of the water main to the outside of the other pipeline, manhole, or sleeve.

FIGURE 1 PARALLEL CONSTRUCTION

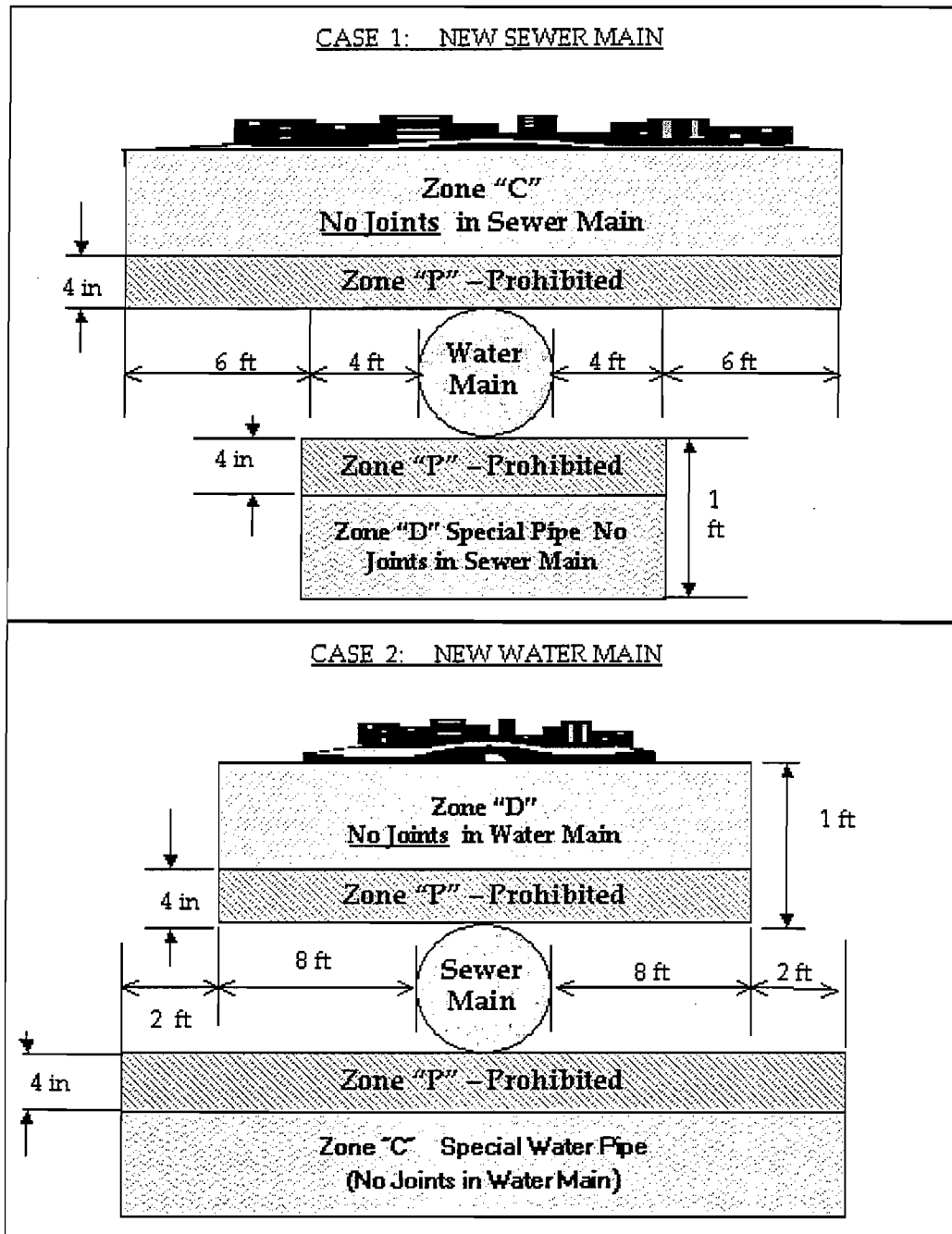
Not To Scale



Note: Zones identical on either side of center lines.

Zones "P" is a prohibited zone. Section 64630 (e) (2) California Code of Regulations, Title 22 (Current); or Section 64572 (a) California Code of Regulations, Title 22 (Proposed).

FIGURE 2 CROSSINGS
Not To Scale



received
9/15/04

MST

MONTEREY-SALINAS TRANSIT

JOINT POWERS AGENCY MEMBERS:

City of Carmel-by-the-Sea • City of Del Rey Oaks • City of Marina • City of Monterey • City of Pacific Grove
City of Salinas • City of Seaside • County of Monterey

September 13, 2004

Mr. David Foote, ASLA
C/o Firma
849 Monterey St.
San Luis Obispo, CA 93401

RE: Cypress Knolls Project

Dear Mr. Foote:

Thank you for the opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report for the Cypress Knolls Project. MST recommends that public transit be considered during the preparation of the Draft EIR. In that regard, please refer to MST's letter of May 7, 2004, (attached) to Jeff Dack, planning director for the City of Marina, that addresses several key issues related to this project. In addition, I have enclosed a copy of MST's *Designing for Transit* handbook.

If you have any questions regarding this matter, please contact me at (831) 393-8129.

Sincerely,



B. Hunter Harvath, AICP
Planning Manager

Attachment

Enclosure

MST

MONTEREY-SALINAS TRANSIT

JOINT POWERS AGENCY MEMBERS:

City of Carmel-by-the-Sea • City of Del Rey Oaks • City of Marina • City of Monterey • City of Pacific Grove
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Enclosure

MST

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JOINT POWERS AGENCY MEMBERS:

*City of Carmel-by-the-Sea • City of Del Rey Oaks • City of Marina • City of Monterey • City of Pacific Grove
City of Salinas • City of Seaside • County of Monterey*

May 7, 2004

Mr. Jeffrey P. Dack, AICP
Director of Planning
City of Marina
211 Hillcrest Avenue
Marina, CA 93933

Re: Cypress Knolls Project

Dear Mr. Dack:

Thank you for the opportunity to comment on the Environmental Review Determination for a possible EIR for the Cypress Knolls project. MST is pleased to see that this development is being planned to provide housing, services and health care to persons of average means. The inclusion of affordable housing, a senior center and an assisted living facility will meet the needs of hundreds of current and future residents of the City of Marina.

In reviewing the 1999 EIR that was prepared – but ultimately not certified – for the Cypress Knolls project, I found that public transit was only briefly considered and acknowledged as an alternative and possible mitigation measure. Because the anticipated residents of this community will be of modest means and, due to age or illness, may not be able to drive their own cars, public transit is sure to play an even more important role than it would in just a typical single-family residential subdivision. In that regard, I would recommend that a new EIR be prepared that properly and adequately addresses access to transit. I would also suggest that you revisit the private shuttle service and allow MST – through its buses or its Paratransit RIDES service -- to meet the transportation needs of the residents. Because the FORA impact fees provide money for MST vehicles and facilities only and not for operating service, MST would request that a portion of the money set aside for the private shuttle service be dedicated to enhanced transit service in the area for the benefit of the residents. Experience has shown that MST can provide service at a lower cost than a charter service can.

Currently, MST serves the edge of the Cypress Knolls property via Imjin Parkway and California Avenue on its Lines 16/17 Edgewater-Marina. However, rerouting of one or both of these lines through the development would be necessary in order to adequately serve the residents and workers. Therefore, we strongly suggest that the applicant should be required to supply a separate “Site Access and Transit Plan.” This should show the bus stop configurations

Mr. Jeff Dack
May 7, 2004
Page 2 of 2

and the surrounding area, including residential areas and employment centers in the area, and how traffic, bicycles, pedestrians, and transit users will flow to, through, and from the project site. This mitigation should be required before certification of the EIR. MST should also be a responsible party for review and sign-off as to the transit stop design and pedestrian access. Mitigation measures in the EIR should state that the design of the bus stop and transit user access be consistent with MST's *Designing for Transit*, pending consultation with MST staff. For the convenience of the project designer, I have enclosed a copy of this design manual.

Again, thank you for the opportunity to comment on the scope of the EIR. If you have any questions about these comments, please do not hesitate to call me at 393-8129.

Sincerely,

A handwritten signature in black ink, appearing to read "B. Hunter Harvath". The signature is stylized with a large, sweeping flourish at the end.

B. Hunter Harvath, AICP
Planning Manager

Enclosure

DEPARTMENT OF TRANSPORTATION

50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401-5415
PHONE (805) 549-3101
FAX (805) 549-3329
TDD (805) 549-3259
<http://www.dot.gov/dist05>



*Flex your power!
Be energy efficient!*

September 14, 2004

Mr. David Foote
City of Marina c/o Firma
849 Monterey Street
San Luis Obispo, CA 93401

SUBJECT: Cypress Knolls Residential Project Notice of Preparation (NOP) for the Draft Environmental Impact Report

Dear Mr. Foote:

The California Department of Transportation (Department) District 5 has reviewed the Notice of Preparation (NOP) on the Draft Environmental Impact Report (DEIR) for the Cypress Knolls Residential Project. District 5 staff wants to reiterate support for the election to do an EIR. The ~190-acre project site is located on east side of Highway 1 and west of the southern extension of California Avenue. The Cypress Knolls project involves the demolition and replacement of 230 duplex units (460 units) with 328 single-family units, 80 townhouses, 72 apartments, 60 assisted living units, a community facility and a senior center. District 5 staff offers the following comments for your consideration:

- 1) To ensure the traffic analysis in the Draft EIR includes the information needed by District 5 to analyze the traffic impacts of this project to the state highway system, it is recommended that the traffic analysis in the DEIR be prepared in accordance with the Department's recently updated "*Guide for the Preparation of Traffic Impact Studies.*"
- 2) The Department is responsible for the safety, operations, and maintenance of the State highway system pursuant to the California Streets and Highways Code. Therefore, the Department's level of service (LOS) standards should be used in the traffic analysis to determine the significance of any project's impact to the state highway system. The Department endeavors to maintain a target LOS at the transition **between** LOS C and LOS D on state highway facilities. In cases where a State highway facility is already operating at an unacceptable LOS, the Department's position is any project traffic trips added to these facilities should be considered a significant cumulative traffic impacts and should be mitigated accordingly.
- 3) The methodologies used to calculate the LOS for the State highway system should be consistent with the methods in the current version of the Highway Capacity Manual (HCM). All LOS calculations should also be included in the DEIR as an appendix and made available for review. Additionally, the project trip generation rates should be based on the latest edition of the Institute of Transportation Engineers (ITE) Trip Generation Report. The project trip generation and project trip distribution should be presented in tabular or graphic format in the DEIR. Any trip reduction credits for "pass-by trips" or internal trips must be justified with supporting data.
- 4) The traffic analysis in the DEIR should include information on existing traffic volumes within the study area, including the State highway system. This information should be based on recent traffic volumes (less than 2 years old) and identify the existing LOS for the State highway system.
- 5) The traffic analysis in the DEIR should include information on the cumulative traffic volumes within the study area, including the State highway system, and the associated LOS values. This cumulative analysis should also include a discussion about the land use and roadway network assumptions used in the forecasts. In order to fully address the cumulative traffic impacts of the proposed project, District 5 staff recommends that the long-term traffic analysis should be based upon a 20-year

Cypress Knolls Residential Project NOP for DEIR
September 14, 2004
Page 2

timeframe or "Year 2025" conditions. A description of other proposed developments that may contribute traffic to the study area should also be provided. Finally, the roadway improvements that are assumed to be in place under the cumulative traffic analysis should be based on the list of "constrained" (i.e., funded) projects identified in the *2002 Monterey County Regional Transportation Plan* (RTP).

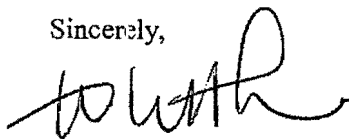
- 6) The project proponent should be responsible for mitigating any project-specific or cumulative traffic impacts to the state highway system in accordance with the California Environmental Quality Act (CEQA). For the proposed project, regional and/or interregional access to the project site is provided from Routes 1, 68, 101 and 156. We recommend that the traffic analysis include updated LOS analyses for those route segments, interchanges, and ramps. In the analyses surrounding Route 68, the DEIR should **not** assume the completed construction of the bypass.
- 7) Since the completion of the Fort Ord Reuse Plan Program EIR, a Project Study Report (PSR) has been completed for the Route 1 corridor between Route 218 and Light Fighter Drive. This PSR identifies feasible transportation improvements to relieve existing and future traffic congestion on Route 1 and to improve traffic safety and vehicular access to the cities of Seaside, Sand City, Marina, and the future development within Fort Ord, including the California State University at Monterey Bay (CSUMB) campus. The PSR identifies the need for the following Route 1 improvements: 1) construction of a new interchange on Route 1 between Fremont Boulevard and Light Fighter Drive (referred to as the Route 1/Monterey Road Diamond Interchange); 2) construction of a northbound auxiliary lane on Route 1 between the Fremont Boulevard interchange and the new Monterey Road interchange; 3) ramp modifications at the Route 1/Fremont Boulevard interchange; and 4) widening of Route 1 from four lanes to six lanes between Fremont Boulevard and Route 218.

The project proponent should contribute a pro rata share towards the cost of the Route 1 improvements identified in the PSR. The payment of a pro rata share towards these improvements should render the project's contribution to the state highway system to less than cumulatively considerable levels in accordance with Section 15064 and Section 15130 of the CEQA Guidelines. As part of the mitigation-monitoring program in the Final EIR, we recommend that proof of the payment of the pro rata share be provided to District 5.

- 8) It should be clarified in the Draft EIR if the project proponent will participate in the Fort Ord Reuse Authority (FORA) traffic mitigation program.

Thank you in advance for your consideration and action upon these issues. District 5 staff would like to request a copy of the Draft EIR for review when it becomes available. We suggest the Lead Agency consider a consultation with the Department to discuss assumptions and trip generators. If you have questions regarding our comments please contact me at (805) 549-3099.

Sincerely,



Keith Hinrichsen
Development Review
Caltrans Planning, District 5
keith_hinrichsen@dot.ca.gov

Cc: D. Murray – Branch Chief Dev Review; R. Barnes – Traffic Ops; C. Shaeffer – Dev. Review; A. Cook – TAMC; M. McCumsey – Reg Plng



ASSOCIATION OF MONTEREY BAY AREA GOVERNMENTS

August 8, 2006

Michael Weber
MSW Consulting
2023 N Street, Suite 102
Sacramento, CA 95814

Dear Mr. Weber:

This letter is in response to your July 17, 2006 request for a determination of consistency of the Cypress Knolls Project in the City of Marina with the *Air Quality Management Plan for the Monterey Bay Region* (AQMP).

Consistency of this project with the AQMP was analyzed by comparing the total potential population growth facilitated by the project with the forecasted growth for Monterey County. The *2004 Population, Housing Unit, and Employment Forecasts* adopted by the AMBAG Board of Directors on April 14, 2004 are the forecasts used for this consistency determination.

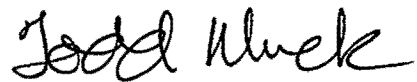
AMBAG staff surveyed each jurisdiction in Monterey County to determine the number of housing units that jurisdictions have approved but have not yet received a building permit. The total number of units is 8,395. Building permit data was also collected. A total of 373 housing units have received building permits between January and April 2006. The California Department of Finance estimates there are 138,617 dwelling units in Monterey County as of 1/01/06. Combined, there are 147,385 existing, approved, and or permitted housing units in Monterey County.

The Cypress Knolls Project consists of a total of 712 residential units plus up to 60 beds in an assisted living facility. Occupancy of the housing units is estimated to take place by 2010. The *2004 Population, Housing Unit, and Employment Forecast* forecasts there will be 151,844 housing units in Monterey County by the year 2010.

The combination of the existing and approved housing units in Monterey County (147,385) plus the 772 housing units/beds in the Cypress Knolls Project is less than the regional forecasts for Monterey County (151,844.) Therefore the Cypress Knolls Project is **consistent** with the 2004 regional forecasts and the Air Quality Management Plan.

Please feel free to contact me if you have any questions about this determination.

Sincerely,

A handwritten signature in black ink that reads "Todd Muck". The signature is written in a cursive style with a large, prominent "T" and "M".

Todd Muck, AICP
Senior Planner

cc: Jean Getchell, MBUAPCD