DRAFT
ENVIRONMENTAL IMPACT REPORT

MARINA HEIGHTS SPECIFIC PLAN/ ABRAMS "B" HOUSING PROJECT City of Marina

SCH No. 2003021012

Prepared for
City of Marina
Planning Department

by

Lamphier-Gregory
1944 Embarcadero
Oakland, CA 94606

July 2003

TABLE OF CONTENTS

		Page
PREFACE		
A.	Purpose of the Environmental Impact Report	P-1
B.	Organization of the Draft EIR	P-2
C.	Scope of the Draft EIR	P-4
D.	Public Review Process	P-5
EXECUTIVE SUMMARY		
A.	Purpose of the EIR	ES-1
B.	Proposed Project	ES-1
C.	Project Setting	ES-2
D.	Focus of the Draft EIR	ES-2
E.	Summary of Environmental Impacts	ES-4
1. PROJECT DESCRIPTION		
A.	Project Location	1-1
B.	Project Site	1-3
C.	Propose Project	1-3
D.	Future/Cumulative Development	1-12
E.	Required Permits and Approvals	1-12
2. LAND USE AND PLANNING		
A.	Introduction	2-1
B.	Setting	2-1
C.	Impacts and Mitigation Measures	2-6
3. TRAFFIC AND CIRCULATION		
A.	Introduction	3-1
B.	Setting	3-8
C.	Impacts and Mitigation Measures	3-50
4. AIR QUALITY		
A.	Setting	4-1
B.	Impacts and Mitigation Measures	4-11

5. NOISE
A. Setting 5-1
B. Impacts and Mitigation Measures 5-10

6. BIOLOGICAL RESOURCES
A. Introduction 6-1
B. Setting 6-2
C. Impacts and Mitigation Measures 6-13

7. HAZARDS AND HAZARDOUS MATERIALS
A. Setting 7-1
B. Impacts and Mitigation Measures 7-24

8. VISUAL QUALITY AND AESTHETICS
A. Setting 8-1
B. Impacts and Mitigation Measures 8-13

9. RECREATION
A. Setting 9-1
B. Impacts and Mitigation Measures 9-2

10. PUBLIC SERVICES AND UTILITIES
A. Setting 10-1
B. Impacts and Mitigation Measures 10-6

11. OVERVIEW OF PROJECT IMPACTS
A. Significant Unavoidable Impacts That Cannot Be Mitigated to a Level of Less Than Significant 11-1
B. Potentially Significant Impacts That Could Be Reduced to a Level of Less Than Significant Through Implementation of Identified Mitigation Measures 11-2
C. Impacts Determined Not to be Significant 11-4
D. Significant Irreversible Environmental Changes 11-14
E. Growth-Inducing Impacts 11-14
F. Cumulative Impacts 11-15

12. ALTERNATIVES TO THE PROJECT
A. Introduction 12-1
B. No Project Alternative 12-2
C. General Plan Consistency Alternative 12-4
D. Mitigated Alternative 12-11
E. Citizen-Initiated Alternative 12-14
F. Comparison of Specific Plan and Alternatives 12-20
G. Evaluation of Alternatives 12-21

13. REFERENCES
A. EIR Preparers 13-1
B. Persons and Organizations Contacted 13-2
C. Bibliography 13-2

APPENDICES
A. Notice of Preparation, Responses to Notice of Preparation and Written Comments Submitted at the January 23, 2003 Scoping Session
B. Air Quality Methodology and Assumptions
C. Fundamental Concepts of Community Noise

Figures

Figure 1.1 Project Vicinity 1-2
Figure 1.2 Marina Heights Specific Plan – Conceptual Site Plan 1-5
Figure 3.1 Project Location 3-2
Figure 3.2 Marina Heights Conceptual Land Plan – Vehicular Circulation 3-3
Figure 3.3 Street Network and Study Intersections 3-5
Figure 3.4 AM Peak Hour – Existing Conditions 3-10
Figure 3.5 PM Peak Hour – Existing Conditions 3-11
Figure 3.6 Recommended Major Road Extensions and Widenings 3-22
Figure 3.7 Recommended Signal Improvements 3-23
Figure 3.8 MST Lines #16 and #17 3-25
Figure 3.9 MST Line #20 3-26
Figure 3.10 MST Lines #25 and #26 3-27
Figure 3.11 MST Line #27 3-28
Figure 3.12 AM Peak Hour Volumes – Baseline Conditions 3-31
Figure 3.13 PM Peak Hour Volumes – Baseline Conditions 3-33
Figure 3.14 AM Peak Hour Volumes – Cumulative Without Project 3-41
Figure 3.15 PM Peak Hour Volumes – Cumulative Without Project 3-43
Figure 3.16 Specific Plan Street Network – Typical Cross Sections 3-52
Figure 3.17 Project AM Peak Hour Trip Assignment 3-55
Figure 3.18 Project PM Peak Hour Trip Assignment 3-57
Figure 3.19 AM Peak Hour Volumes – Baseline Plus Project 3-59
Figure 3.20 PM Peak Hour Volumes – Baseline Plus Project 3-61
Figure 3.21 AM Peak Hour Volumes – Cumulative With Project 3-69
Figure 3.22 PM Peak Hour Volumes – Cumulative With Project 3-71
Figure 5.1 Noise Measurement Locations 5-3
Figure 6.1 Vegetation Types 6-3
Figure 6.2 Occupied and Potential Habitat for Monterey Spineflower and Sand Gilia 6-9
Figure 7.1 Marina Heights Specific Plan Area Parcels 7-3
Figure 7.2 Landfill Gas Monitoring and Central Systems OU2 7-4
Figure 7.3 Operable Unit 2 and Sites 2 and 12 Groundwater Remedy Pipeline Routing, Former Fort Ord, California 7-5
Figure 8.1 Picture Locations 8-3

Figure 8.2	Intersection of Abrams Drive and Imjin Road	8-4
Figure 8.3	Intersection of Preston Drive and Horn Court in Preston Park	8-4
Figure 8.4	Abandoned Residences of MacArthur Drive and 32nd Regiment	8-5
Figure 8.5	MacArthur Drive and 17th Regiment in Pueblo del Mar	8-5
Figure 8.6	Interim Inc. Residences at Bayonet Court	8-7
Figure 8.7	Salinas Avenue Looking South	8-7
Figure 8.8	Salinas Avenue Looking Northeast	8-8
Figure 8.9	Bayer Drive Terminus Toward West	8-8
Figure 8.10	Northern Boundary of Specific Plan Area	8-9
Figure 8.11	Residential Development of Specific Plan Area	8-9
Figure 8.12	Oak Woodland from Washington Court	8-10
Figure 8.13	Marina Coast Water District Facility	8-10
Figure 8.14	Abrams Drive at Southwestern Intersection with Imjin Road	8-11
Figure 8.15	Abandoned Residence on 80th Artillery near Abrams Drive	8-11
Figure 8.16	Groundwater Monitoring Wells Along Abrams Drive	8-12
Figure 8.17	Former Landfill Site, Looking Toward Abrams Drive	8-12
Figure 8.18	Imjin Road Looking North Toward Bayer Drive Water Tank	8-14
Figure 8.19	New Imjin Road/12th Street Intersection	8-14
Figure 8.20	View of Abrams B Residences, Looking North	8-15
Figure 12.1	General Plan Consistency Alternative	12-6
Figure 12.2	Mitigated Alternative	12-12
Figure 12.3	Citizen-Initiated Alternative	12-16

Tables

Table 1-1	Square Footages by Housing Type	1-4
Table 2-1	Marina Heights Specific Plan Conforming Policies	2-10
Table 2-2	Marina Heights Specific Plan Non-Conforming Policies	2-24
Table 3-1	Study Intersections	3-4
Table 3-2	Highway 1 Peak Hour Volumes and LOS Summary	3-12
Table 3-3	Intersection LOS Summary	3-13
Table 3-4	Intersection Improvements Summary	3-18
Table 3-5	Trip Generation Rates for Cumulative Projects	3-40
Table 3-6	Project Trip Generation	3-54
Table 4-1	Federal and State Ambient Air Quality Standards	4-3
Table 4-2	Air Quality Data at the Salinas High School Monitoring Site, 2000-2002	4-4
Table 4-3	Attainment Status of the North Central Coast Air Basin, 2000	4-5
Table 4-4	Worst Case Carbon Monoxide Concentrations Near Intersection of Imjin Road and Abrams Drive, in PPM	4-20
Table 4-5	Specific Plan-Related Regional Emissions in Pounds Per Day	4-21
Table 5-1	Noise Measurements at Location #1 – Ord Market	5-5
Table 5-2	Noise Measurements at Location #2 – Park Playground	5-7
Table 5-3	Noise Measurements at Location #3 – Preston Park	5-8
Table 5-4	Noise Measurements at Location #4 – Carmel/Salinas	5-9
Table 5-5	State of California Noise Compatibility Guidelines	5-11

Table 5-6	Construction Equipment Noise Levels	5-13
Table 5-7	Baseline CNEL Distances	5-16
Table 5-8	2020 No Project CNEL Distances	5-17
Table 5-9	2020 With Project CNEL Distances	5-18
Table 5-10	Difference in Traffic Noise Level due to Specific Plan at 50 Feet	5-19
Table 7-1	Summary of Marina Heights Specific Plan Area Parcels Proposed for Development	7-6
Table 7-2	Summary of Parcels Adjacent or Surrounded by the Marina Heights Specific Plan Area	7-7
Table 7-3	Chemicals of Concern and Groundwater Remediation Goals – Operable Unit 2 – Groundwater Remedy	7-16
Table 10-1	Marina Heights Student Generation Rates Per Household	10-9
Table 10-2	Marina Heights - Water Demand Summary	10-11
Table 10-3	Projected Average Daily Wastewater Flow (Gallons Per Day)	10-13
Table 12-1	Comparison of Specific Plan and Alternatives	12-20
Table 12-2	Evaluation of Alternatives	12-21

(This page has been intentionally left blank.)

PREFACE

A. PURPOSE OF THE ENIVIRONMENTAL IMPACT REPORT

This Draft Environmental Impact Report (EIR) evaluates the potential environmental impacts that may be associated with implementation of the Marina Heights Specific Plan. The Lead Agency is the City of Marina, and the Project Applicant is Cypress Marina Heights Partners.

This Draft EIR has been prepared pursuant to CEQA (the California Environmental Quality Act, California Public Resources Code, Section 21000 *et seq.*) and the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3), as amended. Upon certification of the EIR as adequate and complete, the Planning Commission and City Council of the City of Marina will be in a position to decide whether to adopt the Specific Plan as presented, to reject the Specific Plan, or to modify the Specific Plan prior to adoption.

The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the environmental effects of proposed activities;
- Involve the public in the decision-making process;
- Identify ways that damage to the environment can be avoided or significantly reduced; and
- Prevent environmental damage by requiring changes in the project through the use of alternatives or mitigation measures.[1]

1 State of California, Governor's Office of Planning and Research, *California Environmental Quality Act Statutes and Guidelines*, 1995, Section 15002(a).

The Draft EIR is intended to "identify the significant effects of the Project on the environment, identify alternatives to the Project, and to indicate the manner in which those significant effects can be mitigated or avoided".[2] This EIR is meant to provide an objective, impartial source of information to be used by the Lead Agency, as well as by members of the public, in their considerations regarding the Specific Plan. The EIR itself does not determine whether or not the Specific Plan will be adopted, but only serves as an informational document in the local planning and decision-making process.

The analysis in the Draft EIR concentrates on the aspects of the Specific Plan that are likely to have significant adverse effects on the environment, and the Draft EIR identifies reasonable and feasible measures to mitigate (i.e., reduce or avoid) these effects. The CEQA Guidelines define "significant effect on the environment" as "a substantial, or potentially substantial adverse change in any of the physical conditions within the area affected by the project ...."[3] The Draft EIR also addresses less-than-significant environmental effects and, where appropriate, suggests mitigation measures to further reduce these impacts.

B. ORGANIZATION OF THE DRAFT EIR

The Draft EIR consists of the following major sections:

Preface - outlining the objectives of the Draft EIR and important preliminary information.

Executive Summary - which briefly summarizes the significant environmental impacts that may be associated with implementation of the Specific Plan, the identified mitigation measures, and the unavoidable impacts.

Project Description - providing detailed information about the Specific Plan, and the agencies which will be required to issue permits or approvals prior to development within the Specific Plan area.

Specific Environmental Topic Chapters - each of which addresses the areas of the environment, from land use to traffic and circulation, and all other aspects of the environment which may be affected by the Specific Plan. These chapters describe:

---

2 California, State of, California Environmental Quality Act, 1970, as Amended, Section 21002.1(a)

3 Ibid, Section 15382.

- The environmental setting or conditions which may affect or be affected by implementation of the Specific Plan;

- The significant environmental effects likely to result from implementation of the Specific Plan; and

- The mitigation measures that may be implemented to eliminate or substantially reduce the identified significant environmental effects.

All mitigation measures are stated with conditional language ("should") because they are recommendations, and not conditions of adoption for the Specific Plan, unless they are specifically adopted as conditions by the City. Under CEQA, an EIR is required to identify mitigation measures that could reduce identified impacts to a level of less than significant. However, the City is not required to adopt these mitigation measures, even after the EIR is certified as adequate and complete. The City could also require alternative mitigation measures that are equally effective, or it could find that the identified measures are infeasible and approve the Project without mitigation under a finding of overriding consideration.

Overview of Impacts - which addresses the general impacts associated with the Specific Plan as required by CEQA, including unavoidable impacts, impacts which have been determined to be less than significant, irreversible environmental changes which may result from implementation of the Specific Plan, growth-inducing impacts, and cumulative impacts.

Alternatives to the Project - which provides an assessment, comparison and evaluation of the likely environmental impacts which may be associated with the alternatives to the Specific Plan.

References - which identifies the authors of the Draft EIR, the agencies and organizations which were contacted during the preparation of the Draft EIR, and the bibliography of reports and other published materials used in the preparation of the Draft EIR.

Appendices - include the Notice of Preparation, responses to the Notice of Preparation, written comments submitted at the January 23, 2003 Scoping Session, air quality methodology and assumptions, and noise descriptors. A **Technical Appendix** with data related to the traffic analysis is bound separately.

The Draft EIR has been prepared for the City of Marina as the Lead Agency by Lamphier-Gregory, Urban Planning & Environmental Analysis and its affiliated subconsultants (see **Chapter 13**). All participants in the preparation of this Draft EIR have extensive experience and knowledge in their respective fields. The information in the Draft EIR has been compiled from a variety of sources, including published studies, applicable maps, aerial photographs and independent field investigations. Unless otherwise noted, all background documents are incorporated into this Draft EIR by reference, and are available at the City of Marina Planning Department.

C. SCOPE OF THE DRAFT EIR

Early in the evaluation of the Specific Plan, the Lead Agency (City of Marina) determined that the preparation of an EIR would be required under CEQA. Circulation of the Notice of Preparation prior to preparation of the EIR enabled government agencies and the public to comment on the areas of environmental concern which would need to be addressed during the preparation of the EIR. The Notice of Preparation and Responses to the Notice of Preparation are presented in **Appendix A**. The environmental factors to be evaluated in the EIR are:

- Aesthetics/Visual Quality
- Air Quality
- Biological Resources
- Land Use and Planning
- Traffic and Circulation
- Noise
- Hazards and Hazardous Materials
- Recreation
- Public Services/Utilities

Each of these topical areas is addressed in the Draft EIR in their respective chapters.

D. PUBLIC REVIEW PROCESS

The Draft EIR will be circulated for a 45-day public review period. During this time, the public and responsible agencies and organizations may submit written comments on the sufficiency or adequacy of the Draft EIR in evaluating the environmental effects that may be associated with implementation of the Specific Plan. The State Clearinghouse will circulate the Draft EIR to State agencies with jurisdiction over various aspects of the project, or which have other interests in the Specific Plan. A Public Hearing on the Draft EIR will be held, and oral and written comments received at the Public Hearing will be included in the Final EIR.

During the public review period, written comments on the Draft EIR should be submitted to:

Haywood Norton, Senior Planner
City of Marina
City Hall
211 Hillcrest Avenue
Marina, CA 93933

Responses to all comments received on the Draft EIR will be presented in the Final EIR, along with any necessary revisions to the text, tables and figures presented in the Draft EIR. The Final EIR will be presented to the Planning Commission and the City Council of the City of Marina for review and certification as an accurate and complete record, in accordance with Section 15080 of the CEQA Guidelines. Certification of the Final EIR does not constitute adoption of the Specific Plan, but only indicates that the potential environmental impacts which may be associated with implementation of the Specific Plan and the means of reducing or avoiding such impacts have been presented completely and adequately in the EIR document. Upon certification of the Final EIR as adequate and complete, the City Council must make a separate decision on the adoption, rejection or modification of the Specific Plan as proposed.

In accordance with the requirements of CEQA, where there remain significant environmental effects that cannot be avoided or substantially lessened, adoption of the Specific Plan can only take place following a formal statement of overriding considerations that: (a) specific economic, legal, social, technological or other considerations make infeasible the mitigation measures that would otherwise avoid or substantially lessen these significant effects, and (b) specific economic, legal, social, technological or other benefits of the proposed project outweigh the unavoidable adverse environmental effects.

(This page has been intentionally left blank.)

EXECUTIVE SUMMARY

A. PURPOSE OF THE EIR

This Draft Environmental Impact Report (EIR) evaluates the potential environmental effects associated with the implementation of the Marina Heights Specific Plan. The Draft EIR is intended to "identify the significant effects of the Project on the environment, identify alternatives to the Project, and to indicate the manner in which those significant effects can be mitigated or avoided."[1]

The EIR is meant to provide an objective, impartial source of information to be used by the Lead Agency (the City of Marina), as well as other agencies and the public, in their considerations regarding the adoption, rejection or modification of the Specific Plan as proposed. The EIR itself does not determine whether or not the Specific Plan will be adopted, but only serves as an informational document in the local planning and decision-making process.

B. PROPOSED PROJECT

The Project applicant has submitted the Marina Heights Specific Plan to the City of Marina. Under the proposed Specific Plan, 828 abandoned military housing units on a portion of the Former Fort Ord historically referred to as Abrams Park and Upper Patton Park would be demolished, to be replaced by 1,050 new residential units. In the adjacent Abrams "B" housing area, 194 existing residential units (192 units currently used as residences, 2 currently used for support purposes) would remain in place. An additional 12 existing transitional housing units operated by Interim, Inc. located between the Specific Plan area and the Abrams "B" area would also remain in place. No demolition, development or infrastructure improvements within the Abrams "B" area or in the Interim, Inc. area have been proposed under the Marina

1 California, State of, California Environmental Quality Act, 1970, as Amended, Section 21002.1(a).

Heights Specific Plan. The Specific Plan indicates that a 28-acre site (a portion of the landfill for the former Fort Ord) located adjacent to the Specific Plan area would be improved for use as an 18-acre public park, with the remaining 10 acres to be considered as a future school site (development of a school at this site is not proposed as part of the Specific Plan). Implementation of the Specific Plan would result in the development of 5.85 acres of sub-neighborhood parks, creation of an 8.53-acre Oak Grove Preserve, development of a 12.92-acre greenbelt/linear park approximately 150 feet wide, and additional greenbelt linkages totaling approximately 8.33 acres.

C. PROJECT SETTING

The Specific Plan area is located in the City of Marina in Monterey County, California. **Figure 1.1** includes a Specific Plan area location and regional vicinity map. The Marina Heights Specific Plan area includes a total of approximately 248 acres.

The area north of the Specific Plan area boundary is characterized by single-family residential units, with a Marina Coast Water District storage tank located on a parcel at the end of Bayer Drive. East of the Specific Plan area is Preston Park (a residential area comprised of rehabilitated military housing units) and the Pueblo del Mar transitional housing area (56 rehabilitated military housing units). Although the proposed extension of Carmel Avenue would pass east of the Pueblo del Mar area, this area is not included within the Marina Heights Specific Plan area. Southeast of the Specific Plan area, opposite the intersection of Abrams Road and Imjin Road, is the Ord Market. The Interim, Inc. transitional housing units and the Abrams "B" housing area are both located to the south of the Specific Plan area boundary. Between the Specific Plan area and Imjin Road is a portion of the former Fort Ord landfill, which has been suggested as a park/school site by some members of the community. Across Imjin Road from the Specific Plan area to the south is the former Fort Ord landfill. West of the Specific Plan area, across California Street, is the site of Cypress Knolls, a proposed senior housing development that is being reviewed by the City.

D. FOCUS OF THE DRAFT EIR

Early in the review of the Specific Plan, the Lead Agency (City of Marina) determined that the preparation of an EIR would be required under CEQA. Circulation of the Notice of Preparation prior to preparation of the EIR enabled government agencies and the public to comment on the areas of environmental concern that would need to be addressed during the preparation of the EIR. The Notice of Preparation and Responses to the Notice of

Preparation are presented in **Appendix A**. The environmental factors to be evaluated in the EIR are:

- Aesthetics/Visual Quality
- Air Quality
- Biological Resources
- Land Use and Planning
- Traffic and Circulation
- Noise
- Hazards and Hazardous Materials
- Recreation
- Public Services/Utilities

Each of these topical areas is addressed in the Draft EIR in their respective chapters.

Areas of controversy which have been identified during the environmental review of the Specific Plan include possible conflicts with the adopted goals and policies of the Marina General Plan, including:

- The provision of affordable housing within the Specific Plan area;
- The adequacy and availability of water to support the level of development proposed;
- The proposed residential density within the Marina Heights Specific Plan area;
- The extent to which development as proposed would actually support transit use; and
- The lack of neighborhood-serving commercial uses within the Specific Plan area.

E. SUMMARY OF ENVIRONMENTAL IMPACTS

A summary of all of the significant and potentially significant impacts associated with implementation of the Specific Plan is presented in the following Table, along with the anticipated level of significance of each impact following successful implementation of identified mitigation measures.

Land Use and Planning

An evaluation of Marina Heights Specific Plan consistency with the Marina General Plan is presented in Chapter 2 of the Draft EIR (see **Table 2-1** for Marina Heights Specific Plan Conforming Policies, and **Table 2-2** for Marina Heights Specific Plan Non-Conforming Policies). The Marina Heights Specific Plan indicates that some amendment to the Marina General Plan's policies and implementation measures will need to be modified for the Specific Plan to be carried out. The Draft EIR indicates that the Marina Heights Specific Plan may be inconsistent with a number of relevant policies identified in the Marina General Plan (see **Table 2-2**). As the Specific Plan is legally required to be consistent with the General Plan, achieving consistency could be achieved by either modifying the Specific Plan or by amending the General Plan. Where such inconsistencies have been identified, the Project Applicant intends to seek General Plan Amendments to resolve them. Current relevant General Plan policies that would require either modifications to the Specific Plan or amendment to accommodate development under the Specific Plan include those related to:

- Meeting the City's General Plan affordable housing requirement using existing housing off-site.

- Achieving residential densities at or above 7.5 dwelling units per acre to promote the efficient use of developable land and provide support for cost-effective transit.

- Service area requirements associated with sub-neighborhood parks.

- Linking residential growth to the development of new jobs in the local area.

- Limiting the number of units to be developed within the Abrams Park and Patton Park areas of the former Fort Ord.

- Protection of maritime chaparral areas west of the proposed Oak Grove Preserve.

- Providing sidewalk widths of at least five feet.
- Promoting an improved jobs/housing balance.
- Limiting blocks lengths to a maximum of 450 feet.
- Allocation of water to support development within the former Fort Ord.

Traffic and Circulation

- **Potential Impact 3.1: Unacceptable Levels of Service at California Avenue/12th Street Intersection.** The California Avenue/12th Street intersection would meet the peak-hour volume signal warrants as a result of high right turn volumes from the minor street approaches during the peak commute hours. This would represent a **significant** environmental impact associated with implementation of the Specific Plan.

  Mitigation Measure 3.1: Signalization of the California Avenue/12th Street Intersection. Signalization of the California Avenue/12th Street intersection is recommended. It is also recommended that separate left-turn and right-turn lanes be provided on the California Avenue approach to 12th Street. These mitigation measures would be implemented in connection with the Marina CIP. The City of Marina has determined that Project-related impacts at this intersection would be fully mitigated through payment of Project-related traffic impact fees.

The signalized and improved intersection would operate at LOS A during both AM and PM peak hours. Implementation of this mitigation measure would reduce the impact to a level of *less than significant*.

- **Potential Impact 3.2: Abrams Drive/12th Street Intersection Meets Caltrans' Peak-Hour Signal Warrant.** The Abrams Drive/12th Street intersection would meet the peak-hour volume signal warrants. This would represent a **significant** environmental impact associated with implementation of the Specific Plan.

  Mitigation Measure 3.2: Signalization of Abrams Drive/12th Street Intersection. It is also recommended that separate left-turn and right-turn lanes be provided on the Abrams Drive approach to 12th Street. The City of Marina has determined that Project-related impacts at this intersection would be fully mitigated by the installation by the Project Applicant of the traffic signal and improvements to Abrams Drive within the Specific Plan area.

With signalization and channelization, this intersection would improve to LOS A during both peak hours. Implementation of this mitigation measure would reduce the impact to a level of *less than significant*.

- **Potential Impact 3.3: Unacceptable Levels of Service at "Main Street"/Imjin Road Intersection.** Operation of the intersection of "Main Street"/Imjin Road would be unacceptable under the Baseline Plus Project Conditions, if the intersection is constructed with single-lane approaches and stop control on the Main Street approach to Imjin Road. This is a **significant** environmental impact associated with implementation of the Specific Plan.

  Mitigation Measure 3.3: Signalize "Main Street"/Imjin Road Intersection and Add Separate Right-Turn and Left-Turn Lanes. It is recommended that the proposed "Main Street"/Imjin Road intersection be signalized under Baseline Plus Project Conditions with a right-turn lane provided on the westbound (southbound) Imjin Road approach and a left turn lane on the eastbound (northbound) Imjin Road approach. Separate left and right turn lanes should be provided on the Main Street approach to Imjin Road. The City of Marina has determined that Project-related impacts at this intersection would be fully mitigated by the installation by the Project Applicant of the traffic signal.

With signalization and the channelization described above, the Imjin Road/Main Street intersection would operate at LOS D during the AM peak hour and LOS B during the PM peak hour under Baseline Plus Project Conditions, and the impact would be reduced to a level of *less than significant*.

- **Potential Impact 3.4: Unacceptable Levels of Service on Highway 1 Segments.** Traffic operations on Highway 1 south of 12th Street would be unacceptable in the southbound direction during the AM peak hour and in the northbound direction during the PM peak hour. This is a **significant** environmental impact associated with implementation of the Specific Plan.

  Mitigation Measure 3.4: Implement Regional Road Improvements to Reduce Traffic Volume on Highway 1. Planned improvements in the region will provide additional overall network road capacity and provide alternatives to Highway 1 for regional trips. The Project Applicant will pay FORA fees that will fund regional road improvements, including improvements to Highway 1. The City of Marina has determined that Project-related impacts on traffic volume on Highway 1 will be fully mitigated through payment of Project-related FORA traffic impact fees and implementation of regional transportation system improvements by FORA.

Implementation of planned road improvements, including improvements planned for Highway 1, will reduce the impact to a level of *less than significant.*

- **Potential Impact 3.5: Unacceptable Levels of Service at Del Monte Boulevard/Reservation Road Intersection.** Operation of the intersection of Del Monte Boulevard/Reservation Road would be unacceptable under the Cumulative With Project Conditions (2020), a **significant** environmental impact associated with implementation of the Specific Plan.

  Mitigation Measure 3.5: Add Lanes to Northbound Approach of the Del Monte Boulevard/Reservation Road Intersection. Under Cumulative With Project Conditions, the northbound approach of the Del Monte Boulevard/Reservation Road should be improved to include two left-turn lanes, two through lanes and one right-turn lane. Under the terms of the Option Agreement, through the payment of the appropriate impact fees, the Project Applicant will have contributed the development's "fair share" toward the mitigation of cumulative traffic impacts in Marina. The City of Marina has determined that Project-related impacts on this intersection will, therefore, be fully mitigated through payment of Project-related traffic impact fees.

With the intersection configuration defined above, the intersection will operate at LOS C during the AM peak hour and LOS D during the PM peak hour with Specific Plan-related trips included in the Cumulative With Project Condition (2020) forecasts, and the impact would be reduced to a level of *less than significant.*

- **Potential Impact 3.6: Unacceptable Levels of Service at Imjin Road/"Main Street" Intersection.** The Imjin Road/"Main Street" intersection would operate at LOS F during the AM and PM peak hours if operated as a stop controlled intersection, a **significant** environmental impact associated with implementation of the Specific Plan.

  Mitigation Measure 3.6: Signalize Imjin Road/"Main Street" Intersection and Add Separate Right-Turn and Left-Turn Lanes (same as **Mitigation Measure 3.3**, above).

With signalization and the channelization described above, the Imjin Road/"Main Street" intersection would operate at LOS B during the AM peak hour and LOS A during the PM peak hour under Cumulative With Project Conditions (2020). The impact would be reduced to a level of *less than significant.*

- **Potential Impact 3.7: Unacceptable Levels of Service at California/Main Street Intersection.** This intersection would operate at LOS C during the AM peak hour and LOS F during the PM peak hour if the intersection were designed as a standard four-leg intersection with stop control on the Main Street approaches. This is a **significant** environmental impact associated with implementation of the Specific Plan.

  Mitigation Measure 3.7: Design and Construct the California/Main Street Intersection as a Roundabout. While signalization of the intersection in conjunction with auxiliary lane channelization could achieve an acceptable level of service, it is recommended that this intersection be designed as a roundabout. The use of either a traffic signal or a roundabout would be at the discretion of the City of Marina. Intersection improvements at this intersection are included in the Marina CIP.

A roundabout design would operate at LOS A during the AM peak hour and LOS B during the PM peak hour under Cumulative With Project Conditions (2020). The impact would be reduced to a level of *less than significant.*

- **Potential Impact 3.8: Unacceptable Levels of Service at Imjin Road/Reservation Road.** Operation of the intersection of Reservation Road/Imjin Road would be unacceptable under the Cumulative With Project Conditions (2020), a **significant** environmental impact associated with implementation of the Specific Plan.

  Mitigation Measure 3.8: Provide Intersection Improvements and/or Construct Blanco Road Extension. If Blanco Road were not extended, intersection improvements in addition to the improvements described for the Cumulative Without Project Conditions (2020) would be required. The additional improvement required with Specific Plan development is a third through lane on eastbound Reservation Road, If the Blanco Road extension is not constructed, the following lane geometrics are required to mitigate Cumulative With Project Conditions (2020):

  - Northbound approach – one left turn lane, two through lanes and two right turn lanes (with right turn overlap signal control);
  - Southbound approach – one left turn lane, two through lanes and one right turn lane;
  - Eastbound approach – two left turn lanes, three through lanes and one right turn lane;
  - Westbound approach – three left turn lanes, two through lanes and one right turn lane.

If the Blanco Road extension is constructed, the following intersection configuration is recommended for Cumulative With Project Conditions (2020):

- Northbound approach – one left turn lane, two through lanes and one right turn lane (with right turn overlap control);
- Southbound approach – one left turn lane, two through lanes and one right turn lane;
- Eastbound approach – two left turn lanes, two through lanes and one right turn lane;
- Westbound approach – two left turn lanes, two through lanes and one right turn lane.

Under the terms of the Option Agreement, through the payment of the appropriate impact fees, the Project Applicant will have contributed the development's "fair share" toward the mitigation of cumulative traffic impacts in Marina. The City of Marina has determined that Project-related impacts on this intersection will, therefore, be fully mitigated through payment of Project-related traffic impact fees.

With Blanco Road not extended and with the recommended intersection design, the intersection will operate at LOS B during the AM peak hour and LOS C during the PM peak hour. With the Blanco Road extension and the recommended intersection design, the intersection will operate at LOS C during both AM and PM peak hours under Cumulative With Project Conditions (2020). This would reduce the impact to a level of *less than significant*. Since this improvement is currently not scheduled for completion until after 2020, if it becomes apparent that the mitigation measure identified is needed before then, the City should request that FORA reschedule this improvement for earlier completion.

Air Quality

- **Potential Impact 4.1: Possible Exposure to Toxic Air Contaminants During Demolition.** Existing housing units within the Specific Plan area are know to contain potentially hazardous materials such as lead-based paint and asbestos. Demolition of existing structures in the Specific Plan area could result in exposure to Toxic Air Contaminants such as lead-based paint and asbestos. This impact is considered potentially **significant.**

  Mitigation Measure 4.1: Develop and Implement a Demolition Plan and Removal Action Workplan. Lead and asbestos surveys should be reviewed/performed and a Demolition Plan for safe demolition of existing structures at the Specific Plan area should

be prepared. All transportation of hazardous or contaminated materials from the Specific Plan area should be performed in accordance with an approved Removal Action Workplan. The Demolition Plan should address both on-site worker protection and off-site resident protection from both chemical and physical hazards. All contaminated building materials should be tested for contaminant concentrations and should be disposed of at appropriate licensed landfill facilities. Prior to whole-scale demolition, hazardous building materials such as peeling, chipping and friable lead-based paint and asbestos containing building materials should be removed in accordance with all applicable guidelines, laws and ordinances. The Demolition Plan should include a program of air monitoring for dust particulates and attached contaminants. Dust control and suspension of work during dry windy days should be addressed in the Demolition Plan. Prior to obtaining a demolition permit from the Monterey Bay Unified Air Pollution Control District (MBUAPCD), an asbestos demolition survey should be conducted in accordance with the requirements of the MBUAPCD.

For the impact of flaking and peeling lead paint the requirements of Title 8, California Code of Regulations, Section 1532.1 (T8 CCR 1532.1) must be followed. These requirements include (but are not limited to) the following:

- Loose and peeling lead-containing paint should be removed prior to building demolition. Workers conducting removal of lead paint must receive training in accordance with T8 CCR 1532.1.

- The lead paint removal project should be designed by a DHS certified lead project designer, project monitor or supervisor,

- Workers conducting removal of lead paint must be certified by DHS in accordance with T8 CCR 1532.1,

- Workers that may be exposed above the Action Level must have blood lead levels tested prior to commencement of lead work and at least quarterly thereafter for the duration of the project. Workers that are terminated from the project should have their blood lead levels tested within 24 hours of termination,

- A written exposure assessment must be prepared in accordance with T8 CCR 1532.1,

- Any amount of lead waste that is generated from painted building components must be characterized for proper disposal in accordance with Title 22, Section 66261.24.

Implementation of this mitigation measure would reduce the potential air quality impact associated with the release of Toxic Air Contaminants due to the transportation of demolition waste to a *less than significant level.*

- **Potential Impact 4.2: Possible Exposure to Toxic Air Contaminants During Transportation.** Existing housing units within the Specific Plan area are know to contain potentially hazardous materials such as lead-based paint and asbestos. Potentially contaminated debris associated with lead and asbestos would be transported from the Specific Plan area for disposal. The possibility of exposure to Toxic Air Contaminants due to the transportation of hazardous demolition debris would represent a potentially **significant** environmental impact.

  Mitigation Measure 4.2: Develop and Implement a Demolition Plan and Removal Action Workplan. (see **Mitigation Measure 4.1**, above)

Implementation of this mitigation measure would reduce the potential air quality impact associated with possible exposure to Toxic Air Contaminants during demolition to a *less than significant level.*

- **Potential Impact 4.3: Exposure to Construction Dust and/or Diesel Exhaust.** Construction activities such as excavation and grading operations, construction vehicle traffic and wind blowing over exposed earth would generate fugitive particulate matter emissions that would affect local and regional air quality. The use of diesel-powered equipment could result in increased exposure of sensitive receptors in the vicinity to diesel exhaust. These impacts are considered potentially **significant**.

  Mitigation Measure 4.3.1: Construction Dust Control. All construction activities shall utilize the feasible control measures for construction emissions of PM_{10} appropriate to the size and nature of the construction area, as recommended by the MBUPCD's *CEQA Guidelines*. The following dust control measures shall be implemented by construction contractors during all construction phases:

- Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure. This could be expected to reduce estimated PM_{10} emissions from active, unpaved construction areas by approximately 50 percent.

- Limit, to the maximum extent feasible, all grading activities during periods of high wind (over 15 mph). This reduces the potential for exceedance of PM_{10} standards. If grading activity must take place during periods when wind speeds exceed 15 mph, additional watering of affected areas beyond twice each day will be necessary to effectively reduce PM_{10} emissions associated with wind-blown dust.

- Haul trucks off-site shall maintain at least 2'0" of freeboard. This could be expected to reduce estimated PM_{10} emissions associated with spills from haul trucks by approximately 90 percent.

- Cover all trucks hauling dirt, sand, or loose materials off-site, or provide other methods to prevent dust from spilling. This could be expected to reduce estimated PM_{10} emissions associated with spills from haul trucks by approximately 90 percent.

- Plant vegetative ground cover in disturbed areas as soon as reasonably possible. This could be expected to reduce estimated PM_{10} emissions associated with spills from inactive areas by between 5 and 99 percent.

- Cover intact storage piles left for more than 30 days, or unless otherwise determined by the City of Marina. This could be expected to reduce estimated PM_{10} emissions from storage piles by up to 90 percent.

- Install wheel washers on the entrance of construction sites for all exiting trucks. This could be expected to reduce estimated on-road PM_{10} by approximately 50 percent.

- Sweep streets if visible soil material is carried out from the construction site. This could be expected to reduce estimated on-road entrained PM_{10} by approximately 34 percent.

- Post a publicly visible sign that specifies the telephone number and person to contact regarding dust complaints. The person shall respond to complaints within 48 hours. The phone number of the Monterey Bay Unified Pollution Control

District shall be visible to ensure compliance with Rule 402 (Nuisance). This could minimize nuisance levels.

Mitigation Measure 4.3.2: Reductions in Diesel Exhaust During Site Preparation and Construction. Prior to initiating construction activity, the City of Marina and the Project Applicant should consult with the Monterey Bay Unified Air Pollution Control District to identify the types of grading, demolition and construction equipment that will be used within the Specific Plan area. Once the characteristics of specific equipment to be used have been identified, the MBUAPCD should provide recommendations for measures that can be implemented to reduce diesel emissions associated with such equipment (i.e., the substitution of diesel-powered equipment with non-diesel-powered equipment, the installation of exhaust control equipment, etc.).

Implementation of the above dust control measures would reduce construction-related air quality impacts associated with implementation of the Specific Plan to a *less than significant level.* For example, major reductions in construction-related PM_{10} could be accomplished by watering (which could reduce remaining emissions by 50 percent), by effectively covering stockpiles and inactive areas (with reductions of up to 80 percent anticipated), and by covering haul trucks (which could reduce 90 percent of emissions from that source).

- **Potential Impact 4.4: Possible Exposure to Landfill Gas.** High concentrations of landfill gas have been found at the Operable Unit 2 Landfill Boundary on the opposite side of Imjin Road from the Specific Plan area that could build up and accidentally be released in high enough concentrations to affect residents at the Specific Plan area. Concentrations of potentially explosive methane gas have also been measured within the boundaries of the landfill and present a slight chance of explosion that could affect the proposed development within the Specific Plan area. Although implementation of the Specific Plan would not affect the generation of landfill gases, residential development of the Specific Plan area (that does not currently support residents) could place future residents at possible risk of exposure to these gases. This represents a potentially **significant** environmental impact.

  Mitigation Measure 4.4: On-Going Mitigation/Monitoring/Evacuation Planning. Although on-going monitoring and mitigation associated with the former landfill is not the responsibility of the City of Marina or the Project Applicant, the following measures should continue to be pursued by the U.S. Army (responsible for landfill cleanup under the terms of the Federal Facilities Agreement for the former Fort Ord) to reduce risk associated with possible exposure to landfill gas:

- Maintain the current landfill gas extraction and treatment system.

- Continue to monitor landfill gas concentrations at the boundary of the OU2 Landfill.

- An evacuation plan must be prepared in the event of a fire or explosion at the landfill that is incorporated into the City of Marina's Standardized Emergency Management System Multi-Hazard Functional Plan.

- Ensure that the landfill boundary is fenced with locked gates.

- Ensure that all buried gas pipelines are permanently marked and that exposed pipelines and wells are fenced with locked gates.

Implementation of this mitigation measure would reduce the potential impact associated with possible exposure to landfill gas to a *less than significant level.*

- **Potential Impact 4.5: Increased Regional Emissions.** New traffic generated by the development of the Specific Plan area as proposed would increase regional emission by amounts greater than the MBUAPCD significance thresholds. This is considered a **significant unavoidable** impact.

As indicated in the MBUAPCD *CEQA Air Quality Guidelines* (page 8-8), mitigation measures implemented at residential projects can enhance the effectiveness of work-based transportation demand management (TDM) measures by addressing the "other" end of a commute trip, and represent a potentially significant source of travel reductions. While many feasible mitigation measures could be applied to residential projects, the MBUAPCD limits its guidance to two quantifiable, facility-based measures. This is due to the lack of quantified research on facility-based measures in residential projects. These two measures involve design elements that are incorporated within the Specific Plan: the provision of bicycle paths that link to the external network, and the provision of pedestrian facilities. However, as the estimated reduction in the number of trips that could be achieved through each of these measures is estimated to be on the order of 0.1 percent, these features alone would be insufficient to reduce Specific Plan-related vehicle trips to the extent necessary to bring estimated emissions below the significance thresholds set by the MBUAPCD.

The incorporation of bicycle paths and pedestrian facilities within the Specific Plan area as proposed would reduce Specific Plan-related impacts on regional air quality to a limited extent. While it may be possible for such features to reduce Specific Plan-related emissions of VOC and PM_{10} by 3.3 percent and 3.2 percent, respectively, to meet the established threshold values, there is currently no practical way to reduce the Specific Plan-related emissions by the 37.8 percent increment that would be necessary to bring Specific Plan-related impacts below MBUAPCD significance thresholds for NO_x. Therefore, the Specific Plan's impacts on regional air quality are considered **significant** and **unavoidable**.

Any project found to have a significant adverse impact on regional air quality would also be considered to have a significant cumulative impact. The implementation of the Specific Plan would, therefore, have a **significant** and **unavoidable cumulative** impact on regional air quality.

Noise

- **Potential Impact 5.1: Demolition, Grading and Construction Noise.** The noise emissions from demolition, grading and construction activities could exceed the background levels by more than 10 dB, thereby creating a significant noise impact that would change the nature of the noise environment substantially throughout this period. This represents a potentially **significant, temporary** environmental impact.

  Mitigation Measure 5.1.1: Noise Measurements. The Project Applicant should conduct periodic noise emission measurements for each truck periodically to ensure that the muffler systems are operating properly, and report the results of these measurement to the City of Marina Planning Department.

  Mitigation Measure 5.1.2: Driver Education. The Project Applicant should educate the drivers in the quietest possible operation of trucks, with particular care to acceleration and deceleration operations.

  Mitigation Measure 5.1.3: Minimize Truck Movement with Light Loads. The Project Applicant should ensure that the departure of dump trucks with light loads is minimized. Lightly loaded dump trucks are typically noisier than those that are heavily loaded due to a banging and clanging of unsprung loads.

Implementation of the above mitigation measures should reduce temporary noise impacts to a level of *less than significant*.

Biological Resources

- **Potential Impact 6.1: Removal of the Federally-Listed Endangered and State-Listed Threatened Sand Gilia.** Sand gilia was found in medium to low density within approximately 23 acres of the mixed maritime chaparral in the Specific Plan area. Implementation of the Specific Plan would result in the removal of all of the habitat for sand gilia on the site. This would represent a ***significant*** environmental impact. While the Habitat Management Plan (HMP) provides adequate mitigation for the species on the former Fort Ord, it does not provide authorization for incidental take under the California Endangered Species Act (CESA). This conflict with the state prohibition against take would be mitigated through execution of the Habitat Conservation Plan (HCP) and Implementing Agreement (IA) by regulatory authorities including FORA and the City of Marina, but would remain significant in the absence of these documents or until the following mitigation measure is implemented.

  Mitigation 6.1: Consultation with CDFG/Permitting. If the HCP and IA are not fully executed by all responsible agencies prior to initiation of construction, then the Project Applicant should obtain independent authorization for incidental take for sand gilia. The incidental take authorization will likely require mitigation for the loss of sand gilia through seed and seedbank salvage, and restoration or creation of habitat of an appropriate size and character at a suitable location on former Fort Ord.

Implementation of the mitigation measure identified above would reduce the impact associated with removal of sand gilia habitat to a level of *less than significant*.

- **Potential Impact 6.2: Removal of the Federally-Listed Threatened Monterey Spineflower.** Monterey spineflower is widespread throughout the Specific Plan area and during surveys conducted this year, was found in medium to high density within approximately 42 acres of the mixed maritime chaparral. Implementation of the Specific Plan would remove nearly all of the habitat for Monterey spineflower within the Specific Plan area. This would represent a ***significant*** environmental impact. However, the Habitat Management Plan (HMP) anticipates development of the Marina Heights Specific Plan area and mitigates the loss of Monterey spineflower through the set-aside and management of suitable habitat in other areas of former Fort Ord. Since implementation of the Specific Plan has no federal nexus, there is no conflict with the take prohibitions of the federal Endangered Species Act (ESA) and independent authorization from U.S. Fish and Wildlife Service (USFWS) is not required. The following mitigation measure is recommended to salvage seed and the seed bank in proposed development areas.

Mitigation 6.2: Seed Collection. Prior to initiation of ground disturbing activities, the Project Applicant should collect seed from Monterey spineflower plants and salvage topsoil within the occupied areas to be disturbed. Seed should be collected during the appropriate time of year April – June, by qualified biologists. At this time, the qualified biologist should also prepare a map that identifies specific distribution of the spineflower for topsoil preservation. The collected seed should be used in to revegetate temporarily disturbed areas, where practicable. The remainder of the seed should be used for reseeding and restoration efforts on designated reserve lands in the vicinity.

- **Potential Impact 6.3: Removal of Potential Habitat for the Black Legless Lizard/Loss of Individual Black Legless Lizards.** Habitat for black legless lizards exists within the maritime chaparral habitat at the Specific Plan area. The black legless lizard is not federally- or state-listed, but it is designated as a Species of Special Concern by California Department of Fish and Game (CDFG). Loss of potential habitat for the black legless lizard is anticipated, and mitigation is provided through the set-aside and management of habitat reserve areas within the boundaries of the former Fort Ord as described in the April 1997 Habitat Management Plan (HMP). However, it cannot be assumed that the impacts of the Specific Plan on the species are covered in the HMP until the Habitat Conservation Plan (HCP) and Implementing Agreement (IA) are finalized and signed. The amount of potential black legless lizard habitat that would be removed for implementation of the Specific Plan is moderate in comparison to the extent of available habitat in the vicinity. However, potential direct effects on individual lizards could occur during construction, and would be considered ***significant***.

  Mitigation 6.3: Construction Monitoring/Lizard Relocation. A qualified biologist should be designated to monitor construction activities and salvage and relocate any black legless lizards that are encountered during this process. The monitor should walk alongside the grading equipment in each new area of disturbance, and should have the authority to halt construction temporarily if necessary to capture and relocate legless lizards. Any legless lizards captured in the grading zone should be relocated as soon as possible to adjacent suitable habitat outside of the area of effect.

Implementation of the mitigation measures identified above would reduce the impact associated with loss of black legless lizards and their habitat to a level of *less than significant*.

- **Potential Impact 6.4: Construction Effects on Active Nests of Birds-of-Prey and Other Migratory Birds.** Active nests of birds-of-prey and other migratory birds are protected under the Migratory Bird Treat Act and under Section 3503.5 of the Fish and Game Code. Construction activities within or adjacent to the oak woodland habitat could

disturb active nests through direct removal (if trees are to be removed) or by causing abandonment by the adults. If nest removal or abandonment were to result from construction activities, it would constitute a ***significant*** environmental impact.

Mitigation 6.4: Pre-Construction Surveys/Avoidance of Active Nests. If construction activities are initiated between August and December (outside of the typical nesting season for the birds-of-prey and migratory birds expected to occur in the vicinity), then pre-construction surveys for active nests should not be necessary. If activities are initiated before August or after December, then pre-construction surveys for active nests within a certain radius of proposed activities are recommended. The radius of the area to be surveyed should be determined by a qualified biologist considering the nature of the construction activity, the topography and the density of trees in the vicinity. The goal is to determine if any active nests would be affected by construction activities such that it would cause abandonment of the nest. Additionally, if any trees are to be removed and/or trimmed the canopy should be surveyed for active nests prior to removal. If active nests are found and the biologist determines that construction activities would remove the nest or have the potential to cause abandonment, then those activities should be avoided until the young have fledged as determined through monitoring of the nest. Once the young have fledged, construction activities can resume in the vicinity.

Implementation of the mitigation measures identified above would reduce the impact associated with potential disturbance of active nests to a level of *less than significant*.

- **Potential Impact 6.5: Disturbance of Roosting Bats.** The seven special-status bat species that have the potential to inhabit the area could establish roosts in the abandoned buildings that could be disturbed during demolition. Potential impacts to these bat species were not addressed in the Habitat Management Plan (HMP), and would be regarded as a ***significant*** environmental impact.

  Mitigation 6.5: Pre-Construction Surveys/Avoidance of Maternity Roosts. Prior to building demolition, a qualified biologist should survey the buildings for presence of bats. If special-status species are present, the following measures should be implemented:

  - Demolition shall not occur when maternity roosts are present.

  - No construction within 300 feet will be permitted until any young bats are fledged.

  - The contractor should obtain a Memorandum of Understanding (MOU) with the California Department of Fish and Game (CDFG) in order to remove listed bat

species. Alternate habitat may need to be provided if bats are to be excluded from maternity roosts. A roost with comparable spatial and thermal characteristics should be constructed as directed by a qualified biologist. In the event that adult bats need to be handled and relocated, a qualified biologist should prepare and implement a relocation plan subject to approval by CDFG that includes relocating all bats found on-site to an alternate suitable habitat.

Implementation of the mitigation measures identified above would reduce the impact associated with potential disturbance of bat maternity roosts to a level of *less than significant.*

Hazards and Hazardous Materials

- **Potential Impact 7.1: Transportation of Hazardous Demolition Debris.** Existing housing units within the Specific Plan area are known to contain potentially hazardous materials such as lead-based paint and asbestos. During the demolition of structures and removal of potentially contaminated debris associated with lead and asbestos found during surveys, contaminated materials would be transported from the Specific Plan area for disposal. The possibility of exposure to hazardous demolition debris during transportation would represent a potentially **significant** environmental impact.

  Mitigation Measure 7.1: Develop and Implement a Demolition Plan and Removal Action Workplan. Lead and asbestos surveys should be reviewed/performed and a Demolition Plan for safe demolition of existing structures at the Specific Plan area should be prepared. All transportation of hazardous or contaminated materials from the Specific Plan area should be performed in accordance with an approved Demolition Plan and Removal Action Workplan. The Demolition Plan should address both on-site worker protection and off-site resident protection from both chemical and physical hazards. All contaminated building materials should be tested for contaminant concentrations and should be disposed of at appropriate licensed landfill facilities. Prior to whole-scale demolition, hazardous building materials such as peeling, chipping and friable lead-based paint and asbestos containing building materials should be removed in accordance with all applicable guidelines, laws and ordinances. The Demolition Plan should include a program of air monitoring for dust particulates and attached contaminants. Dust control and suspension of work during dry windy days should be addressed in the Demolition Plan. Prior to obtaining a demolition permit from the Monterey Bay Unified Air Pollution Control District (MBUAPCD), an asbestos demolition survey should be conducted in accordance with the requirements of the MBUAPCD.

For the impact of flaking and peeling lead paint the requirements of Title 8, California Code of Regulations, Section 1532.1 (T8 CCR 1532.1) must be followed. These requirements include (but are not limited to) the following:

- Loose and peeling lead-containing paint should be removed prior to building demolition. Workers conducting removal of lead paint must receive training in accordance with T8 CCR 1532.1.

- The lead paint removal project should be designed by a DHS certified lead project designer, project monitor or supervisor,

- Workers conducting removal of lead paint must be certified by DHS in accordance with T8 CCR 1532.1,

- Workers that may be exposed above the Action Level must have blood lead levels tested prior to commencement of lead work and at least quarterly thereafter for the duration of the project. Workers that are terminated from the project should have their blood lead levels tested within 24 hours of termination,

- A written exposure assessment must be prepared in accordance with T8 CCR 1532.1,

- Any amount of lead waste generated from painted building components must be characterized for proper disposal in accordance with Title 22, Section 66261.24.

Implementation of this mitigation measure would reduce the potential impact associated with the transportation of demolition waste to a level of *less than significant.*

- **Potential Impact 7.2: Possible Exposure to Hazardous Materials During Demolition.** Demolition of existing structures in the Specific Plan area could result in exposure to hazardous materials such as lead-based paint and asbestos, which would represent a potentially **significant** environmental impact.

  Mitigation Measure 7.2: Develop and Implement a Demolition Plan and Removal Action Workplan. (see **Mitigation Measure 7.1**, above.)

Implementation of this mitigation measure would reduce the potential impact associated with possible exposure to hazardous materials during demolition to a level of *less than significant.*

- **Potential Impact 7.3: Possible Exposure to Contaminated Groundwater.** Contaminated groundwater exists beneath the Specific Plan area. Eight extraction wells penetrate the contaminated aquifer and convey contaminated water through pipes underneath Abrams Road and 12th Street to a Groundwater Treatment Plant. The proposed development of the Specific Plan area would include mass grading in the immediate vicinity of wells and pipelines that routinely convey contaminated groundwater. This could increase the risk of accidental damage or destruction to wells and pipelines, and could result in exposure to contaminated groundwater. Residences are also proposed in the immediate vicinity of wells that penetrate the contaminated aquifer, which could increase the risk of tampering with the groundwater conveyance system and unauthorized penetration of the contaminated aquifer that could result in exposure to contaminated groundwater. The risk of exposure to contaminated groundwater within the Marina Heights Specific Plan area represents a potentially **significant** environmental impact.

  Mitigation Measure 7.3: Development and Enforcement of Groundwater Conveyance Access Restrictions and Setbacks. Restrictions should include (but need not be limited to):

  - Full compliance with existing deed restrictions providing for the Army's right to access for groundwater remediation system operation, maintenance, monitoring, and with Monterey County Code requirements which prohibit the installation of new unauthorized wells.

  - Prior to construction, pipelines and monitoring wells conveying contaminated groundwater must be located and marked.

  - During construction, a setback of 10 feet must be identified from all existing or relocated wells and pipelines, and no heavy equipment operations or grading should take place within the 10-foot setback except as may be required in connection with the relocation of existing pipelines and as coordinated with the U.S. Army.

  - All wells and pipelines must be monitored during construction, and a report must be submitted at the end of each day documenting any violations.

  - Following construction each well that is not located within a street must be completely enclosed within permanent low-level wire mesh fencing on all sides and the top. A locked gate should be the only access.

- Permanent markers should be placed that locate the buried groundwater treatment pipeline. The location of new utility trenches should be coordinated to minimize interference with existing or relocated buried pipelines.

Implementation of this mitigation measure would reduce the potential impact associated with possible exposure to contaminated groundwater to a level of *less than significant*.

- **Potential Impact 7.4: Possible Exposure to Landfill Gas.** The closed Operable Unit 2 landfill is located as near as 250 feet from the Specific Plan area, and the landfill gas treatment system is approximately one-quarter mile from the corner of the proposed school/park site adjacent to the Specific Plan area. High concentrations of landfill gas have been found at the landfill boundary on the opposite side of Imjin Road from the Specific Plan area, including concentrations of methane that are potentially explosive. While the concentrations have been reduced, the close proximity of the site to the recently closed landfill warrants precautionary mitigations. The covering of landfill gas vents and probes monitoring gas concentrations at the landfill perimeter are some of the mitigations already in place that would warn residents of any dangerous releases, However, the continued risk of exposure represents a potentially **significant** environmental impact.

  Mitigation Measure 7.4: On-Going Mitigation/Monitoring/Evacuation Planning. Although on-going monitoring and mitigation associated with the former landfill is not the responsibility of the City of Marina or the Project Applicant, the following measures should continue to be pursued by the U.S. Army (responsible for landfill cleanup under the terms of the Federal Facilities Agreement for the former Fort Ord) to reduce risk associated with possible exposure to landfill gas:

  - Maintain the current landfill gas extraction and treatment system.

  - Continue to monitor landfill gas concentrations at the boundary of the OU2 Landfill.

  - An evacuation plan must be prepared in the event of a fire or explosion at the landfill that is incorporated into the City of Marina's Standardized Emergency Management System Multi-Hazard Functional Plan.

  - Ensure that the landfill boundary is fenced with locked gates.

- Ensure that all buried gas pipelines are permanently marked and that exposed pipelines and wells are fenced with locked gates.

Implementation of this mitigation measure would reduce the potential impact associated with possible exposure to landfill gas to a level of *less than significant*.

- **Potential Impact 7.5: Potential Hazardous Emissions within One-Quarter Mile of Crumpton Elementary School.** The Monterey Peninsula Unified School District operates four schools within one mile of the Marina Heights Specific Plan area. The closest is Crumpton Elementary School, located 0.24 miles from the edge of the Specific Plan area at 460 Carmel Avenue. During the demolition of existing structures at the Specific Plan area, potentially hazardous materials (including asbestos and lead) will be removed from the site and could be released to the atmosphere if not handled properly or in the event of an accidental spill during transportation, affecting Crumpton Elementary School. This would represent a potentially **significant** environmental impact.

  Mitigation Measure 7.5: Develop and Implement a Demolition Plan and Removal Action Workplan. (see **Mitigation Measure 7.1**, above) These plans should address approved routes, truck cleaning and inspection, and contingencies for addressing spills and accidents.

Implementation of this mitigation measure would reduce the impact of hazardous material handling within one-quarter mile of an existing school site to a level of *less than significant*.

- **Potential Impact 7.6: Development within a Hazardous Materials Site.** The entire area of the former Fort Ord has been designated is an EPA Superfund Site (CA7210020676, California Region IX). The 2002 *Draft Final Five-Year Review Report for Fort Ord Superfund Site, Monterey, California,* documents the current clean-up status of sites across the base. The superfund site most prominently affecting the Specific Plan area is Operable Unit 2. Remediation of the groundwater plumes associated with Operable Unit 2 and nearby Sites 2 and 12 was initially estimated to take as long as 30 years. Given that treatment of the Operable Unit 2 groundwater plume commenced in 1995, remediation could last until 2025. The phasing of anticipated development within the Specific Plan area, therefore, overlaps the schedule for the on-going site remediation that affects the Specific Plan area. Human health risk has been assessed to be minimal in numerous reports, and the Monterey County Environmental Health Department has given a clean bill of health to parcels proposed for development, but only with numerous restrictions that are included in the deed of the transferred property. These restrictions are contingent upon the lifetime of expected treatment and remediation efforts. Any failure to comply

with established restrictions, or failure to meet treatment and remediation objectives that could adversely affect future development in the Marina Heights Specific Plan area would represent a potentially **significant** environmental impact.

Mitigation Measure 7.6: Compliance with Deed Restrictions. The development of mitigations shall be in accordance with deed restrictions. Individual property owners shall be notified of restrictions and the land use history of the site. Limitations on deed restrictions as a result of the success of treatment and remediation shall be reviewed periodically by the U.S. Army. Treatment and remediation reports shall continue to be accessible to the public.

Implementation of this mitigation measure would reduce the impact associated with development in an identified hazardous materials site to a level of *less than significant.*

Recreation

- **Potential Impact 9.1: Increased Demand on Existing Parks, Open Space and Other Recreational Facilities.** The arrival of new residents to the City as a result of the development of the Marina Heights Specific Plan area would lead to an increased demand for parks, open space and other recreational facilities, which could lead to the accelerated deterioration of existing parks and recreational facilities. This represents a potentially **significant** impact.

  Mitigation Measure 9.1: Payment of In-Lieu Fees and/or Compliance with General Plan Requirements. As proposed in the Specific Plan and the Option Agreement, the Project Applicant is obligated to pay $2,224 per unit in park development fees for the improvement of parks and recreational facilities to the City of Marina. Additionally, the Project Applicant has voluntarily agreed to provide funding of up to $1.5 million for the improvement of the adjacent park proposed at the former Fort Ord landfill site, and is providing sufficient sub-neighborhood parks and recreation trails within the Specific Plan area (in accordance with General Plan Section 2.16.3).

Implementation of the mitigation measure identified above would reduce impacts associated with Specific Plan-related demand for parks, recreational facilities and open space to a level of *less than significant.*

- **Potential Impact 9.2: Environmental Effects Associated with the Development of New Parks, Trails and Bike Paths.** Implementation of the Specific Plan would involve the development of new parks, trails and bike paths in an area where they do not

currently exist. Construction of these recreational facilities would entail environmental effects similar to those associated with the construction of residential structures within the Marina Heights Specific Plan area (i.e., construction dust, noise, etc.). These impacts are discussed within other Chapters of this EIR as appropriate. This represents a temporary potentially **significant** impact.

Mitigation Measure 9.2: Reduction of Construction-Related Dust and Noise. The effective implementation of **Mitigation Measure 4.3.1, Mitigation Measure 4.3.2** and **Mitigation Measure 5.1.1, Mitigation Measure 5.1.2** and **Mitigation Measure 5.1.3,** above, would reduce temporary adverse construction-related environmental effects associated with the development of parks, trails and bike paths within the Specific Plan area.

Implementation of the mitigation measure identified above would reduce impacts associated with Specific Plan-related construction of parks, trails and bike paths to a level of *less than significant.*

Public Services and Utilities

- **Potential Impact 10.1: Increased Demand on Public Safety Department.** Average response times to the Abrams Park and Preston Park areas were eight minutes (prior to the opening of the California Avenue extension), twice as long as the Department's response time goal. Development proposed under the Specific Plan would spread Public Safety Department resources even thinner, potentially lengthening already long response times in the absence of a substation in the vicinity. This would be a potentially **significant** impact associated with implementation of the Specific Plan, until the airport station is operational, as anticipated under the current CIP.

  Mitigation Measure 10.1: Payment of Impact Fees. The Project Applicant is obligated to pay the impact fees set out on Schedule E to the Option Agreement.

The above mitigation measure would reduce the Specific Plan's impact to a level of *less than significant.*

- **Potential Impact 10.2: Increased Student Demand on School District.** Development under the Specific Plan would bring about 735 new school students to the District. According to Jim Burnis, the District's Chief Business Officer, the Marina Heights development on its own would probably not have a significant impact on the school district. However, in addition to Marina Heights, there are currently an estimated 3,000 to

4,000 housing units planned or under construction within areas under District's jurisdiction. The proposed development of the Marina Heights Specific Plan area, together with these other housing developments, could have a potentially **significant cumulative** impact on the District's ability to accommodate new students, and could require the construction of additional school facilities.

Mitigation Measure 10.2: Payment of School Impact Fees. The Project Applicant should pay all current applicable school impact fees.

The above mitigation measure would reduce the impacts associated with the development-related increase in the number of students coming from the Specific Plan area to a level of *less than significant*.

1

PROJECT DESCRIPTION AND SETTING

A. PROJECT LOCATION & SETTING

The City of Marina is located on Monterey Bay, six miles north of Monterey along California State Highway 1. As with other communities on the Monterey Peninsula, Marina witnessed a tremendous amount of growth and development between 1930 and 1950. Marina encompasses approximately 9,000 acres, and the City's population was estimated at 25,101[1] in 2002. Located between the cities of Seaside and Marina, Fort Ord had a significant economic impact on the region before its formal closure in September 1993. Approximately 3,115 acres of the former Fort Ord (or about 12 percent of the total area of 28,000 acres) are within the City limits of Marina. An active military post for nearly 80 years, the physical characteristics of the former Fort Ord reflect the security concerns of the U.S. Army, with the number of access points linking the base and its surrounding communities intentionally restricted.

The Marina Heights Specific Plan area (approximately 248 acres) is located within the northern portion of the former Fort Ord (see **Figure 1.1**). Historically referred to as Abrams Park and Upper Patton Park, the property is located west of Imjin Road and south of Reservation Road. Currently, the 248-acre Marina Heights portion of the Specific Plan area consists of 828 abandoned residential units, all of which would be demolished in conjunction with implementation of the Specific Plan.

The 46-acre Abrams "B" area is bounded by Abrams Drive to the east, by Imjin Road to the south, by a portion of the Marina Heights Specific Plan area to the west, and by the Interim Inc. transitional housing area and a portion of the Marina Heights Specific Plan area to the north. No portion of the Abrams "B" area is within the Marina Heights Specific Plan area, and implementation of the Marina Heights Specific Plan would not result in any demolition of any of the 194 existing residential units, construction of any new residential units, or any infrastructure improvements within the Abrams "B" area.

---

[1] Monterey Peninsula Chamber of Commerce website, http://www.ci.marina.ca.us, February 25, 2003.

Figure 1.1 Project Vicinity



SOURCE: Aerial Photo-Pacific Aerial Surveys

SURROUNDING DEVELOPMENT

The area north of the Specific Plan area boundary is characterized by single-family residential units, with a Marina Coast Water District storage tank located on a parcel at the end of Bayer Drive. East of the Specific Plan area is Preston Park (a residential area comprised of rehabilitated military housing units) and the Pueblo del Mar transitional housing area (56 rehabilitated military housing units). Although the proposed extension of Carmel Avenue would pass east of the Pueblo del Mar area, this area is not included within the Marina Heights Specific Plan area. Southeast of the Specific Plan area, opposite the intersection of Abrams Road and Imjin Road, is the Ord Market. Across Imjin Road from the Specific Plan area to the south is the former Fort Ord landfill (a small portion of which is still in active use). West of the Specific Plan area, across California Street, is the site of Cypress Knolls, a proposed senior housing development that is being reviewed by the City.

B. PROJECT SITE

The existing topography within the Specific Plan area and the Abrams "B" area was largely the result of grading and development associated with the military residential developments built in the area during the 1960s, 1970s and 1980s. Prior to being developed, the area was characterized by maritime chaparral vegetation, which consists of low growing, wind tolerant tree and shrub species. During construction of the existing housing units within the Specific Plan area and the Abrams "B" area, much of this wind tolerant vegetation was removed, and the area's sand dunes excavated or leveled.

C. PROPOSED PROJECT

BACKGROUND

Late in 1997, Thomas Cooke Associates was retained by the City of Marina to conduct an "Abrams Park Housing Reuse Study. The final version of this study was accepted by the City Council in March, 1999, with the study's Alternative C identified as the preferred scenario for the remainder of the City'' program for the area. In August, 1999, the City Council approved a "Request for Qualifications/Proposals for a Master Housing Developer" for the Abrams Park and Upper Patton Park housing areas, and on June, 2000, the City Council selected Watt/Chadmar as the Master Developer for these areas. In October, 2000, the City Council adopted a new Marina General Plan, which established land use policies for the entire city, including the Abrams Park and Upper Patton Park

housing areas. In October, 2002, the City Council approved an Option Agreement with Cypress Marina Heights, L.P., for business terms associated with the proposed development of the Marina Heights site. An Administrative Draft of the Marina Heights Specific Plan was submitted to the City of Marina in November, 2002, and a study session on the proposal was held by the Planning Commission on November 7, 2002. In January, 2003, the Planning Commission determined that the preparation of an EIR would provide the appropriate level of CEQA environmental review for the Marina Heights Specific Plan.

PROPOSED DEVELOPMENT

Implementation of the Marina Heights Specific Plan would result in the demolition of all 828 existing abandoned housing units within the 248-acre Marina Heights Specific Plan area and the subsequent construction of 1,050 new housing units there (see **Figure 1.2**). The effects associated with the proposed demolition of these existing units are addressed in the appropriate impact analysis chapters. Each of the proposed housing units would be built one or two stories high in one of seven housing types. **Table 1-1** identifies the proposed range of square footages associated with each housing type:

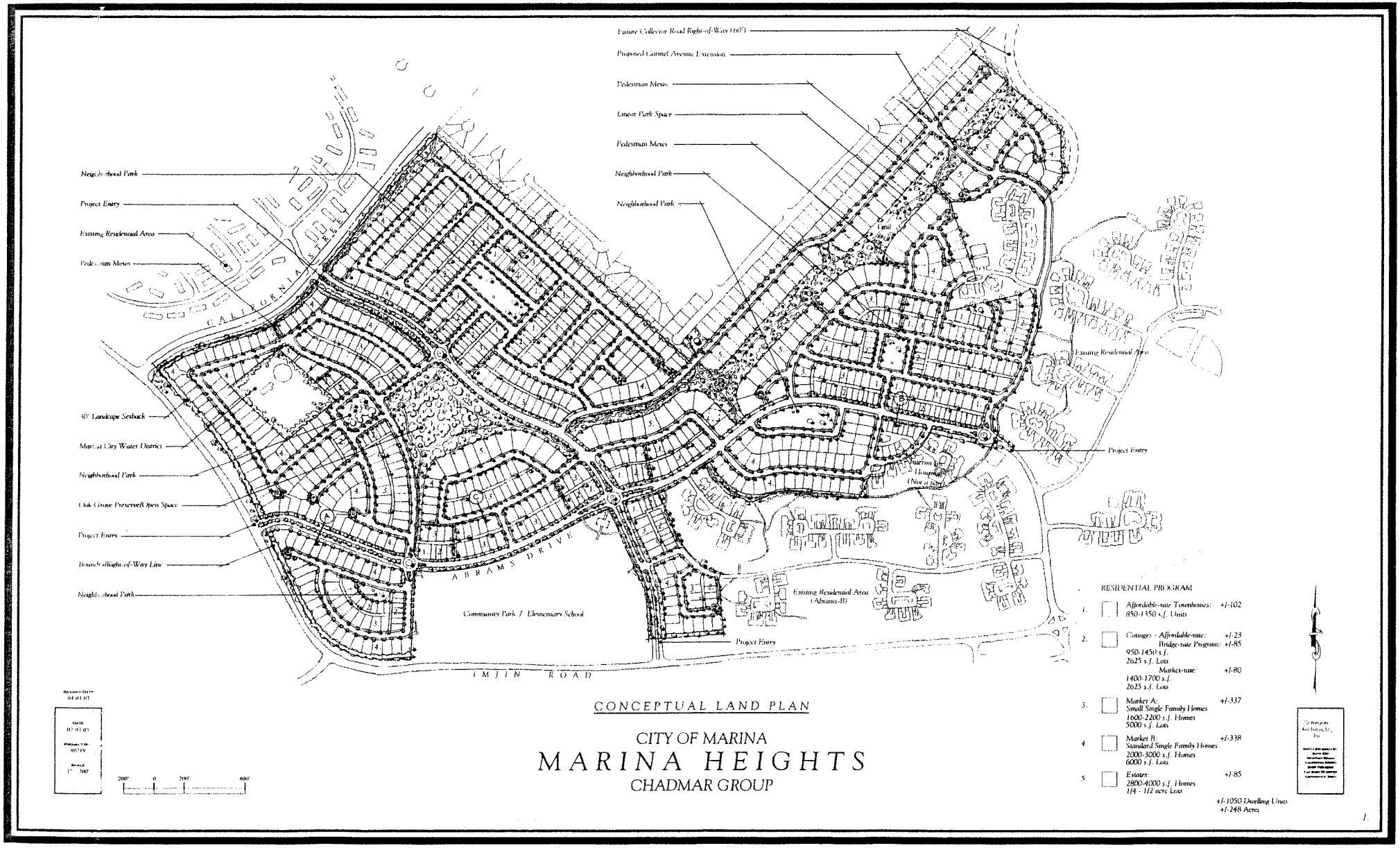
TABLE 1-1
SQUARE FOOTAGES BY HOUSING TYPE

HOUSING TYPE	NUMBER OF UNITS	SQUARE FOOTAGE RANGE
Affordable Townhomes	102	850 to 1,350
Market Rate Cottage	80	1,400 to 1,700
Affordable Cottage	23	950 to 1,450
Bridge Rate Cottage	85	950 to 1,450
Small Single Family	337	1,600 to 2,200
Standard Single Family	338	2,000 to 3,000
Estate	85	2,800 to 4,000
Total	**1,050**	**---**

Source: The Chadmar Group, *Marina Heights Specific Plan*, February 2003.

- 102 townhomes would be dispersed throughout the Marina Heights area, and would have one, two or three bedrooms each. These units would be one or two stories in height, and would each include a two-car garage.

Figure 1.2 Marina Heights Specific Plan – Conceptual Site Plan



- The market-rate cottages (80 of the 188 cottage units proposed) would be built on 2,625 square foot lots. Cottage units would have one, two or three bedrooms, and would be one or two stories in height.

- The affordable cottages (23 of the 188 cottage units proposed) would be built on 2,625 square foot lots. Cottage units would have one, two or three bedrooms, and would be one or two stores in height.

- The "bridge" cottages (85 of the 188 cottage units proposed) would be built on 2,625 square foot lots. Cottage units would have one, two or three bedrooms, and would be one or two stores in height.

- 337 small single-family homes would be built on 5,000 square foot lots. Each of these units would have three or four bedrooms, and be one or two stories in height, with a two-car garage.

- 338 larger single-family homes would be built on 6,000 square foot lots. Each of these units would have three or four bedrooms, and be one or two stories in height, with a two-car garage.

- 85 estate homes would be built on lots of one-quarter to one-half acre. Each of these units would have three to five bedrooms, and be one or two stories in height, with a two- or three-car garage.

Five distinct neighborhoods or districts have been proposed, as described in the Marina Heights Specific Plan:

1. The Village Center: Identified by it's location at the "cross roads" of Marina Heights. Higher density housing components, smaller scale neighborhood blocks and shorter distances between intersections will define this district as the core of the Marina Heights when an 18-acre community park and, possibly, a 10-acre elementary school are realized. Attached housing and smaller sized home sites will benefit with easy and direct access to major community facilities.

2. The Bluffs: Identified by its location a top of some of the highest points of Marina Heights, many home sites will overlook the Oak Grove Preserve below. Lot size will vary in size and configuration with a balance of view oriented lots and porch-front

homes that places garage doors towards alleys and lanes. Like the Village Center, this district will have a strong relationship to the city park site and elementary school.

3. The Oaks: Identified by its location directly adjacent to the Oak Grove Preserve/Open Space. These home sites will relate directly to the natural open space with neighborhood streets buffering the preserve as well as a neighborhood park or recreation center integrated with the oak tree preserve.

4. The Arroyos: Identified by its location along a major open space corridor called the "Arroyo". Home sites in this district will be able to access other Marina Heights amenities and community facilities through this wide, naturally vegetated open space that has historically linked pedestrians to points of interest on Fort Ord.

5. Park Lanes: Identified by its location around its own neighborhood park, the hub or focal point of this district. A majority of homes will be strongly oriented towards front yards and front porches creating a bond to tree-lined streets, emphasizing the pedestrian activities of children playing or an evening stroll towards the park. The automobile is placed to the rear with garage access from back lanes or alleys.

Within the 201.1 acres of the 248-acre Marina Heights Specific Plan area that would not be used for major collector streets ("Main Street" and Abrams Drive total approximately 19.2 acres) and open space areas (approximately 27.7 acres), proposed residential density would average approximately 5.2 dwelling units per acre (1,050 units/201.1 acres = 5.2 units per acre).

Implementation of the Specific Plan would not result in any changes in the current use of 194 existing residential units (192 units currently used as residences, 2 currently used for support purposes) in the "Abrams B" area. However, the Specific Plan indicates that 186 of the 192 existing, occupied housing units located within the adjacent Abrams "B" area would be subject to recorded affordability restrictions to ensure that 93 of those units would be affordable to households with very low incomes, and that 93 of those units would be affordable to households of very low, low or moderate incomes. The City's draft Housing Element, which the City Council approved for submission to the California Department of Housing and Community Development on May 13, 2003, indicates an intent to not displace current tenants of the Abrams "B" area. With the affordability restrictions in force within the Abrams "B" area, the affected 186 housing units would be classified as affordable housing units. In this way, the proponents of the Specific Plan seek to meet the affordable housing requirement established in the Marina General Plan, since the addition of the 186 existing housing units in Abrams "B" that

would be classified as affordable units could be added to the 125 new affordable housing units proposed within the Specific Plan area to obtain a total of 311 affordable housing units directly related to implementation of the proposed Specific Plan (311 affordable units divided by 1,242 total units within both the Specific Plan area and the Abrams "B" area equals 0.25, indicating that 25 percent of the housing stock within both areas would be classified as affordable). The Specific Plan also provides for the construction of an additional 85 Bridge Homes which would also be made available at below market rates, thereby raising the total number of below market rate units to 396, which corresponds to approximately 32 percent of the housing stock in both areas. No demolition, development or infrastructure improvements within the "Abrams B" area have been proposed under the Marina Heights Specific Plan, and no portion of the Abrams "B" area is within the Marina Heights Specific Plan area.

Within the Specific Plan area towards the westernmost end is a parcel owned by the Marina Coast Water District that supports a water storage tank. This MCWD parcel is not part of the Specific Plan area, and is not addressed in the Specific Plan.

A portion of the former Fort Ord landfill located between Abrams Road and Imjin Road adjacent to the Specific Plan area is anticipated to be developed with an 18-acre public park and, possibly, a 10-acre school site (although the construction of a school at that site is not proposed under the Specific Plan). The Project Applicant will pay the required in-lieu fees of $2,224 per unit and will finance up to $1.5 million of improvements at the 18-acre public park which would include installation of grass for recreation fields and the construction of a 2,500 square foot general purpose/administration building on-site for the City Department of Parks and Recreation. These improvements, as well as other recreational improvements associated with the implementation of the Specific Plan, will be memorialized between the Project Applicant and the City of Marina.

Implementation of the Specific Plan would result in the development of approximately 5.85 acres of sub-neighborhood parks, creation of an 8.53--acre Oak Grove Preserve, development of a 12.92-acre greenbelt/linear park approximately 150 feet wide, and 8.33 acres of linear park and open space areas that connect various open space elements along the border of and throughout the Marina Heights Specific Plan area.

Within the Marina Heights Specific Plan area, the majority of infrastructure (roads, utilities, etc.) would be replaced. Water and sewer infrastructure would be dedicated to and accepted by the Marina Coast Water District. A Landscape Maintenance District and/or Master Homeowners Association would be formed to pay for and take responsibility for the maintenance of street trees and landscaping in areas such as the roundabout and other

public places. Visitor parking associated with the proposed townhome units would be provided at a rate of one space for every five dwelling units.

CIRCULATION

Development of the Marina Heights Specific Plan area is intended to provide residents access to Imjin Road, which has been identified as part of a potential transit guideway. All streets within the Marina Heights Specific Plan area are proposed with two travel lanes, with one lane in each direction. A variety of block lengths, cul-de-sacs, roundabouts and alleys would be incorporated in the Marina Heights Specific Plan area to discourage through traffic and to facilitate a pleasant pedestrian street experience. The Marina Heights Specific Plan identifies three street types:

- The divided entry drive utilizes a 15' landscaped center median and one 15' wide lane in each direction. Sidewalks at a width of 5' are provided on each side of the divided entry drive, separated from the roadway by a 10' wide planting strip. Class II bike lanes, 5' wide, will be provided in each direction.

- The section of Abrams Drive/Main Street consists of a 24' wide street with 5' Class II bike lanes and an 8' parking pocket on each side. Sidewalks are 5' wide on each side, separated from the roadway by a 10' wide planting strip. Abrams/Main Street will serve as a pedestrian promenade through the site.

- Local Streets are currently reflected on plans to utilize an 18' wide street with 8' available for parking on each side (34' total). Sidewalks are shown 4' wide on each side, separated from the roadway by a 7' 6" wide planting strip.

Class I and Class II bikeways are proposed within the Marina Heights Specific Plan area. The Class I bikeway running parallel to the Arroyo area would provide one nine-foot lane for two-way travel, separated from auto traffic with landscape and plantings. Class II bike lanes (one 5' lane in each direction) would be provided within the paved area of the entry drives and along Abrams Drive/Main Street.

PROJECT OBJECTIVES

The Project Applicant has defined the Project Objectives as follows:

Neighborhood Districts:

- Create distinctive residential districts through placement of neighborhoods reflecting the natural and planned site conditions upon Marina Heights.
- Through the use of architectural style, orientation and landscaping, create the look of an established neighborhood.
- Provide a wide range of housing opportunities.
- Provide quality estate homes intended to attract corporate executives to Marina.
- Incorporate innovative architectural features for market rate, bridge and affordable housing units.
- Integrate housing types throughout the development.
- Integrate bridge housing throughout the development.
- Create a project where there is compatibility in quality of construction, scale and architectural details between market rate and affordable units.
- Provide home office areas in all single-family dwellings to encourage telecommuting.
- Replace deteriorating existing abandoned units with quality family homes.
- Increase densities over existing abandoned units.

Open Space: Parks & Preserves:

- Conserve important existing tree groves and open space corridors/links as passive open space and create new active open spaces for community and neighborhood use.

Vehicular Circulation:

- Promote safe and clear means of vehicular circulation through local or neighborhood lanes or streets, interior collector or "Main Streets" and connections or entry points to existing intersections and existing roads.

Bike Lane Paths:

- Promote the use of bicycles as an alternative means of transportation through the use of bike lanes to points within the Marina Heights and to points beyond.

Pedestrian Circulation:

- Create safe and viable paths for pedestrian circulation through sidewalks and parkways linking homes to community amenities, as well as pedestrian trails through open space corridors to off-site destinations.

- Create a streetscape that provides vehicular access while maintaining pedestrian priority (traffic calming intersections, parking pockets and shortened intersection crosswalk lengths, etc.)

The Redevelopment Agency of the City of Marina wishes to accomplish redevelopment of the Specific Plan area. It has identified the following objectives in the Redevelopment Plan, Redevelopment Project Area (Number Three), Former Fort Ord Redevelopment Project (April, 1999)

A. To improve the Project Area's overall economic and physical climate in order to provide increased private investment and employment.

B. To provide for improved traffic circulation, modern roads and pedestrian walkways, infrastructure (including sanitary sewer, storm drainage, water systems, electrical and street lighting).

C. To remove or renovate blighted properties, obsolete land uses and deteriorated structures.

D. To assist the local community in seeing that governmental, educational and performing art facilities are located in the project area.

E. To assist in implementing a habitat management program intended to protect and preserve the areas set aside as habitat reserves.

F. To undertake all such tasks and activities that will enhance the quality of life in the community by encouraging orderly growth, economic development, and environmental awareness.

G. To assist in the redevelopment of Fort Ord by financing certain public improvements which serve the project area.

H. To assure the preservation of the existing housing stock (those units which are economically feasible to rehabilitate), to provide new in-fill housing and to assure that housing is used to serve as an economic development tool to attract new business into the community.

I. To assure a housing stock that provides housing for all income ranges. Emphasis will be to develop programs that promote home ownership.

D. FUTURE/CUMULATIVE DEVELOPMENT

Anticipated future development in the vicinity of the Marina Heights Specific Plan area includes the Cypress Knolls senior housing development and the University Villages mixed use development, both west of the Specific Plan area within the former Fort Ord. The expansion of California State University at Monterey Bay is also expected to continue in the former Fort Ord, in areas beyond City of Marina jurisdiction. Additional development within the Marina Municipal Airport area, including that associated with the development of the MBEST center, is also expected to take place in the future. **Table 3-5** in **Chapter 3: Traffic and Circulation** provides a summary of the trip generation associated with cumulative projects included in the Draft EIR traffic analysis.

E. REQUIRED PERMITS AND APPROVALS

CITY OF MARINA PERMITS AND APPROVALS

The Project Applicant is seeking the following approvals from the City of Marina:

- General Plan Amendments, and
- Zoning Ordinance and Zoning Text Amendments
- Adoption of the Marina Heights Specific Plan
- Vesting Tentative Tract Map
- Development Agreement.

The Project Applicant will also be seeking approval of Zoning Ordinance Text and Map Amendments, and Tentative Subdivision and Final Map, although these have not yet been submitted to the City for review. This EIR is intended to provide adequate environmental

review for all City of Marina permits and approvals identified above, and as long as the Zoning Ordinance Text and Map Amendments, and Tentative Subdivision and Final Map are consistent with the Specific Plan, no additional environmental review would be anticipated when these are submitted.

OTHER AGENCY PERMITS AND APPROVALS

If the Habitat Conservation Plan (HCP) and Implementing Agreement (IA) with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) are not fully executed prior to the initiation of construction, then the Project Applicant will need to consult with CDFG on the loss of sand gilia and, if required, apply to CDFG for an independent incidental take permit.

Implementation of the Specific Plan will require a National Pollution Discharge Elimination System (NPDES) stormwater discharge permit from the Regional Water Quality Control Board (RWQCB). Before this NPDES permit will be granted, the Project Applicant must prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) to the RWQCB that provides specific measures to protect water quality at the site, both during and after construction. The RWQCB will determine the extent to which it has jurisdiction to regulate stormwater discharge from the Specific Plan area.

(This page has been intentionally left blank.)

2

LAND USE AND PLANNING POLICY

A. INTRODUCTION

This chapter of the EIR describes existing land uses within the Marina Heights Specific Plan area as well as its surrounding areas. It also provides an analysis of the relationship of the Specific Plan to the applicable land use plans and policies of the City of Marina and other agencies with jurisdiction over the site. Consistent with the CEQA Guidelines (Appendix G), the discussion of land use plans and policies is limited to those policies which have been adopted for the purpose of avoiding, mitigating or reducing adverse environmental impacts of development.

The "Setting" section of this chapter begins with a description of the existing land uses on and around the Specific Plan area. The chapter then reviews the current regulatory setting in place within the City of Marina. It considers all aspects of the General Plan which are applicable to the development of the Specific Plan area as currently proposed.

The second section ("Impacts and Mitigation Measures") summarizes the Specific Plan's relative conformance to relevant plans and policies, and identifies inconsistencies between the Specific Plan and certain policies in the current Marina General Plan. In most instances, where inconsistencies with the General Plan have been identified, the Specific Plan indicates that the Project Applicant expects to seek amendments to the General Plan.

B. SETTING

HISTORICAL LAND USE

The land use history of the City of Marina and the Specific Plan area are closely tied to the City's close proximity to the former Fort Ord. Located between the cities of Marina and Seaside, Fort Ord formally closed in September, 1993. Roughly 3,115 acres of the former Fort Ord (approximately 11 percent of the total area of the former military base) are within the city limits of Marina, including all of the Specific Plan area. These 3,100 acres

contain 700 barracks, more than 2,000 housing units, offices, classrooms, recreational facilities, training areas and a former military airfield (now the Marina Municipal Airport). An active military post for nearly eighty years, the physical characteristics of the former Fort Ord reflect the security concerns of the U.S. Army, with the number of access points linking the base and its surrounding communities intentionally restricted. As a result, there are few direct physical connections between the former Fort Ord and those portions of Marina that have developed along the periphery of the base (CGP2-3).

The Marina Heights Specific Plan area and the Abrams "B" area are located on lands that were part of the former Fort Ord and are now within the city limits of Marina. The historical land use of these areas reflect their role as part of a former military installation, as these areas were used to support housing for military families. Within the Specific Plan area, 828 existing abandoned military housing units would be demolished to enable development proposed under the Specific Plan. An additional 194 former military housing units are in active use in the Abrams "B" area, 192 currently used as residential units and 2 used for support functions. Twelve transitional housing units are also occupied adjacent to the Specific Plan area and the Abrams "B" area, operated by Interim, Inc. Much of the existing housing within the Specific Plan area and the Abrams "B" area was built during the 1960's, 1970's and 1980's, and the quality and type of housing reflects the U.S. Army's building requirements and site preparation techniques typical of that era. A 28-acre portion of the former Fort Ord landfill located adjacent to the Specific Plan area between Abrams Drive and Imjin Road has been legally closed, and all waste material has been removed. Groundwater remediation is still in progress in the vicinity of the former landfill.

SURROUNDING LAND USES

The Specific Plan area and the Abrams "B" area are located on what was once the northern periphery of the former Fort Ord, with a fenced boundary physically separating the former military base from the City of Marina. This physical barrier (and the abrupt transition from residential development within Marina to military installation) are evident in the surrounding land uses.

The Specific Plan area is roughly bounded by Abrams Drive and MacArthur Drive to the east, the Abrams "B" housing area, Imjin Road and a portion of the former Fort Ord landfill to the south, 12th Street to the southwest, California Avenue to the northwest, and existing residential development directly to the north, beyond the boundary of the former Fort Ord.

To the northeast of the Specific Plan area lies a site designated on the Marina General Plan Land Use Map for the possible future placement of a high school. Beyond this site lies Reservation Road, and across Reservation Road lies the Marina Municipal Airport.

Pueblo del Mar is adjacent to the eastern boundary of the Specific Plan area. The 56 units of occupied, rehabilitated military housing are being used as transitional housing.

Across the eastern boundary of the Specific Plan area lies Preston Park, an existing residential area rehabilitated military housing units that are now market-rate rental units.

To the south of Preston Park lies the Fredericks-Schoonover Park area, a rehabilitated military housing district currently being used as housing for students, faculty and staff at California State University at Monterey Bay.

Along the southern boundary of the Specific Plan area are two residential areas: one with 12 units of transitional housing operated by Interim, Inc., and the other identified as the Abrams "B" housing area, which supports a total of 194 rehabilitated former military housing units (192 occupied as residences and 2 used for support purposes).

Across Imjin Road and southwest of the Abrams "B" housing area is the site of the major portion of the former Fort Ord landfill, which has been closed and capped.

The portion of the former Fort Ord landfill immediately adjacent to the southern portion Specific Plan area has been previously identified as "Cell A" or "Area A". This portion of the landfill was legally closed and excavated. All wastes were removed and deposited as in the remainder of the landfill on the south side of Imjin Road between 1996 and 1998.

To the west of the Specific Plan area, beyond 12th Street, lies the site of the proposed University Villages, a planned mixed-use development.

To the northwest of the Specific Plan area, across California Avenue from the Specific Plan area and north of the proposed University Villages area, is the site of Cypress Knolls, a proposed senior housing development that is being reviewed by the City.

Abutting the Specific Plan area to the north, beyond the boundary of the former Fort Ord, is an existing residential area consisting of California-style single-family homes dating from the 1950's and 1960's. A fence runs the entire length of the boundary and demarcates the northern edge of the Specific Plan area. A water tank is located just to the north of the

Specific Plan area boundary at the end of Bayer Drive, near where the fence makes the 90-degree turn.

EXISTING LAND USE, MARINA HEIGHTS SPECIFIC PLAN AREA

The Marina Heights Specific Plan area falls within the City of Marina's Fort Ord planning sub-area. The Fort Ord sub-area is located south of Reservation Road and consists of approximately 1,700 acres within the city limits and an additional 2,200 acres within the City's adopted and proposed Sphere of Influence. A large portion of the incorporated area has already been developed in residential uses, although most of the military housing units (with the exception of Preston Park housing and those units being used as transitional housing under the provisions of the McKinney Act) are currently vacant. The three housing areas identified within the portion of the Fort Ord planning sub-area that is within the Marina city limits are Patton Park, Abrams Park, and Preston Park. The Marina Heights Specific Plan area includes the Abrams Park and Upper Patton Park areas. Within the 248-acre Specific Plan area are 828 abandoned residential units, all of which would be demolished to enable implementation of the Marina Heights Specific Plan. Also located within the Specific Plan area towards the westernmost end is a 3.94-acre parcel owned by the Marina Coast Water District that supports a 1,000,000 gallon water storage tank and pump station. This MCWD parcel is not part of the Specific Plan area, and is not addressed in the Specific Plan.

CITY OF MARINA GENERAL PLAN

The Specific Plan area is located within the city limits of Marina, and is thus subject to the provisions of the Marina General Plan. The General Plan is a comprehensive statement of the City of Marina's development policies for the area within its city limits and nearby surroundings, and meets California's statutory requirements for content (Government Code Section 65302). Specifically, the Marina General Plan is composed of four elements: Community Land Use, Community Infrastructure, Community Design and Development, and Program Implementation. The overall goal of the Marina General Plan is the creation of 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.

In the **IMPACTS AND MITIGATION MEASURES** section, below, a discussion of the relationship between the proposed development of the Specific Plan area and the specific goals and polices of the Marina General Plan which may relate to the implementation of the Specific Plan is provided.

OTHER PLANS POLICIES THAT AFFECT THE SPECIFIC PLAN AREA

The Fort Ord Base Reuse Plan

The Specific Plan area is located in the northern portion of the former Fort Ord, and is subject to the provisions of the Fort Ord Base Reuse Plan that was adopted by the Fort Ord Reuse Authority (FORA) in June, 1997. "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 Board's Reuse Plan." (FORA Base Reuse Plan: page 2-2). Although FORA has previously found the Marina General Plan to be generally consistent with the Base Reuse Plan, FORA review of any amendments to the General Plan that may be necessary to enable the adoption of the proposed Marina Heights Specific Plan would be required to determine Specific Plan consistency with the Base Reuse Plan.

The Fort Ord Habitat Management Plan

The Installation-wide Multi-species Habitat Management Plan for Former Fort Ord (HMP) was approved by both the U.S. Army and the U.S. Fish and Wildlife Service in April, 1997. It is a legally binding document, and all recipients of former Fort Ord lands will be required to abide by its management requirements and procedures. Under the HMP, 1,165 acres of the former Fort Ord lands within the Marina Planning Area (exclusive of Fort Ord Dunes State Park) will be maintained as open space and managed as habitat for designated species. No portion of the Marina Heights Specific Plan area has been designated for maintenance as open space for habitat purposes under the HMP.

The Marina Municipal Airport Comprehensive Land Use Plan

The Specific Plan area is beyond the Planning Area Boundary identified in the Marina Municipal Airport Comprehensive Land Use Plan (CLUP). It is not under common flight tracks for the airport. The proposed elementary school site (not within the Specific Plan area) is approximately 1.7 miles from the Marina Municipal Airport runway, consistent with the Monterey County Airport Land Use Commission's April 26, 1999 policy on locating educational facilities in the vicinity of airports.

C. IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Implementation of the Specific Plan would have a significant impact if it were to result in:

- A conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental impact; or

- The physical division of an established community.

Notwithstanding the first significance threshold set forth above, the mere fact that the Specific Plan requires a General Plan Amendment, or might be inconsistent with particular policies in the General Plan, does not per se amount to a significant environmental effect (See Baldwin v. City of Los Angeles (1999) 70 Cal. App 4th 819,842-843). Rather, inconsistency with current City policies embodying environmental protection commitments is simply an indication that adoption of the Specific Plan might lead to adverse effects on the physical environment. Under CEQA, significant environmental effects must involve an adverse change in physical conditions, as opposed to mere inconsistency with existing policies. Where City staff and consultants have identified areas where the Specific Plan may not conform with the policies of the General Plan, these inconsistencies could be resolved either through modification of the Specific Plan, or amendment of the current General Plan.

The following discussion reviews the Specific Plan and its consistency with land use plans and policies of the City of Marina as presented in the Marina General Plan, as well as the other criteria listed above.

Policy language contained in a City's General Plan is often subject to varying interpretations. Given this, some projects may be difficult to evaluate in a Draft EIR with respect to consistency or inconsistency with General Plan policies. This is particularly true when disparate General Plan policies conflict in the overall application to a given project. However, case law interpreting the Planning and Zoning Law[2] makes the following points clear: 1) that the meaning of such policies is to be determined by the City Council, as opposed to City staff, EIR consultants, or members of the public; and 2) that the City

[2] Government Code Section 65000 et seq.

Council's interpretations of such policies will prevail if they are "reasonable" even though other reasonable interpretations are also possible[3]. Courts have also recognized that, because General Plans often contain numerous policies emphasizing different legislative goals, a development project may be "consistent" with a General Plan, taken as a whole, even though the project may be inconsistent with certain policies[4]. Therefore, the following discussion represents the best attempt by City staff and the City's EIR consultant to evaluate the Specific Plan's consistency with the identified goals of the Marina General Plan. The conclusions below regarding Specific Plan consistency are not binding on the City Council.

CONFLICTS WITH LAND USE PLANS

The Marina Heights Specific Plan indicates that some of the Marina General Plan's current policies and implementation measures will need to be modified for the Specific Plan to be carried out. The Project Applicant intends to request General Plan Amendments that would allow the Specific Plan to be implemented within the Specific Plan area. General Plan Amendments would be requested for any policy with which the Specific Plan as currently proposed is non-conforming, as shown in **Table 2-2**.

Development of the Specific Plan area as proposed would result in the placement of new residential units and related infrastructure in areas that have been designated for other purposes on the Marina General Plan Land Use Map. In the western portion of the Specific Plan area, residential development has been proposed where the General Plan Land Use Map designates as Open Space an area along the boundary of the former Fort Ord, within an area designated as Public Facilities (a potential school site) on the General Plan Map, and within an area designated as Open Space in the General Plan Land Use Map in the vicinity of the MCWD parcel. In the central portion of the Specific Plan area, development has been proposed that would relocate the Open Space corridor shown in the General Plan Land Use Map, and the portion of the former Fort Ord landfill adjacent to the Specific Plan area that is shown on the General Plan Land Use Map as Open Space (the site of a future park) has been conceptualized as a community park/elementary school under the Specific Plan's Conceptual Land Plan (not within the Specific Plan area) although these land use decisions are within the control of the City and School District respectively, not the applicant.. In the eastern portion of the Specific Plan area, residential

---

[3] See No Oil, Inc. v. City of Los Angeles (1987) 196 Cal.App.3d 223, 245-246, 249.

[4] Sequoyah Hills Homeowners Association v. City of Oakland (1993) 23 Cal App. 4th 704, 719.

development has been proposed in a small area designated Open Space north of Abrams Drive and in the area designated Open Space along the northern boundary of the former Fort Ord. Residential development proposed both north and slightly south of the Carmel Avenue extension would take place on approximately 10 acres of an 51.7-acre area designated "Public Facilities" on the General Plan Land Use Map. This "Public Facilities" area has been identified by the City as the City's first priority site for a possible future high school site due to its central location and the absence of acquisition constraints. Many factors go into a school siting decision (e.g., proximity to the Marina Municipal Airport and the flight path, available acreage, size of projected student population, etc.). According to the school facilities planning guide ("School Site Analysis and Development") published by the California Department of Education School Facilities Planning Division, approximately 40 usable acres are required to develop a high school facility adequate to serve a student population ranging from 1,600 to 1,800; 36 usable acres would be needed to serve a student population of 1,400 to 1,600.

The site south of Reservation Road is one of three potential sites identified by the City of Marina in collaboration with the Monterey Peninsula Unified School District that could possibly support development of a high school. The other two sites are on lands conveyed to California State University at Monterey Bay and to the University of California for their Monterey Bay Education, Science and Technology Center for purposes other than a high school. As proposed, residential development would reduce the available acreage of the preferred high school site to approximately 40 acres.

The Monterey Peninsula Unified School District is required to undertake a separate environmental review pursuant to CEQA prior to acquiring any school site or developing any new school facility. The possible future development of a high school at any of the three possible sites identified by the City of Marina in the General Plan Land Use Map is, therefore, not the subject of this EIR.

The Project Applicant intends to request General Plan Amendments to modify the General Plan Land Use Map as necessary to allow the Specific Plan to be implemented within the Specific Plan area.

The tables that follow provide a summary of the extent to which the Marina Heights Specific Plan would be consistent with the relevant policies identified in the Marina General Plan. In **Table 2-1**, the relevant General Plan policies with which the Specific Plan would be generally consistent are identified and discussed. **Table 2-2** identifies apparent Specific Plan inconsistencies with relevant General Plan policies. The discussion of consistency in **Table 2-2** focuses only on those areas where a potential Specific Plan

inconsistency with the General Plan has been identified, and the portion of the General Plan section related to the inconsistency has been identified in ***bold italic*** type. Where inconsistencies have been identified, there are two possible approaches to resolving these inconsistencies: one would involve modifying the Specific Plan to conform to the General Plan policy, and the other would involve amending the General Plan to accommodate the implementation of the Specific Plan as proposed. Where inconsistencies have been identified in **Table 2-2**, the Project Applicant has submitted proposed amendments to the current General Plan to resolve the inconsistency. While the environmental effects associated with the implementation of the Specific Plan as proposed are addressed throughout the Draft EIR, the environmental effects associated with amending the General Plan to accommodate development of the Specific Plan area as proposed are briefly addressed at the end of each consistency discussion in **Table 2-2**.

PHYSICAL DIVISION OF AN ESTABLISHED COMMUNITY

The Marina Heights Specific Plan area is an existing residential area located in a portion of the former Fort Ord that is surrounded by previously-developed residential areas. The proposed development of the Specific Plan area would not result in the physical division of any established community.

Table 2-1: Marina Heights Specific Plan Conforming Policies

Plan Policy	Consistency Discussion
Land Use	
Housing	
Section 2.4.6: Construction of broad range housing types shall be permitted and promoted in order to provide greater housing choice and diversity. **Section 2.31.3:** 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.	Development of the Specific Plan area under the Marina Heights Specific Plan would result in the development of 210 new below market rate units, including 125 affordable units. In addition, the Specific Plan indicates that 186 of the 192 existing, occupied housing units located within the adjacent Abrams "B" area would be subject to recorded affordability restrictions to ensure that 93 of those units would be affordable to households with very low incomes, and that 93 of those units would be affordable to households of very low, low or moderate incomes. With the affordability restrictions in force within the Abrams "B" area, the affected 186 housing units would be classified as affordable housing units. In this way, the proponents of the Specific Plan seek to meet the affordable housing requirement established in the Marina General Plan, since the addition of the 186 existing housing units in Abrams "B" that would be classified as affordable units could be added to the 125 new affordable housing units proposed within the Specific Plan area to obtain a total of 311 affordable housing units directly related to implementation of the proposed Specific Plan (311 affordable units divided by 1,242 total units within both the Specific Plan area and the Abrams "B" area equals 0.25, indicating that 25 percent of the housing stock within both areas would be classified as affordable). The Specific Plan also provides for the construction of an additional 85 Bridge Homes which would also be made available at below market rates, thereby raising the total number of below market rate units to 396, which corresponds to approximately 32 percent of the housing stock in both areas. The phasing of the proposed residential development is not expected to exceed construction of 188 units per year. Since the required minimum of 15 percent of the total units identified as affordable would not be built within the Specific Plan area, a General Plan amendment would be necessary to enable the Project Applicant to meet the City's affordable housing requirements as proposed in the Specific Plan (see discussion of Section 2.31.2 in **Table 2-2**).
Section 2.31.8: New housing shall be built to development and construction standards that conserve water and energy.	Development within the Specific Plan area would be required to comply with all regulations related to the conservation of water and energy, and would be generally consistent with this policy.
Open Space	
Section 2.4.8: Where feasible, the community shall be demarcated from adjacent communities by permanent open space.	The portion of the Specific Plan area not adjacent to other portions of Marina (the portion along Imjin Road) is adjacent to a possible elementary school site and public park on a portion of the former Fort Ord landfill (not within the Specific Plan area). The major portion of the former landfill is located across Imjin Road from the Specific Plan area, and is expected to remain as open space now that landfill operations have ceased. The Specific Plan would be generally consistent with this policy.

Table 2-1: Marina Heights Specific Plan Conforming Policies

Plan Policy	Consistency Discussion
Section 2.4.9: Sufficient land shall be set aside to meet the outdoor recreation needs of existing and future residents.	Implementation of the Specific Plan would provide new parks and recreational trails within the Specific Plan area, and would result in improvements to an 18-acre portion of the former Fort Ord landfill (not within the Specific Plan area) for use as a public park. Since the acreage to be provided for sub-neighborhood parks would meet the standards established in Table 2.3 of the General Plan, implementation of the Specific Plan would be 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.	Open space in the form of natural undeveloped lands (Arroyo linear park, Oak Grove Preserve) and/or developed parklands have been proposed within the Specific Plan area. Although these areas would remain in private ownership, the Specific Plan indicates that the public's right of access and use of such areas, will be memorialized to the satisfaction of the City Attorney, consistent with this policy. Pending review and acceptance of the detailed design of trail linkages, it is assumed that they will be adequate and General Plan consistency will thereby be achieved.
Section 2.17: Maintenance of neighborhood parks, sub-neighborhood parks and playgrounds as required by the standards set forth in Table 2.3 shall be the responsibility of a homeowners' association or the City with funding assured through the establishment of a Mello-Roos assessment district or similar mechanism prior to approval of the applicable final subdivision map.	The Specific Plan indicates that maintenance of neighborhood and pocket parks will be the responsibility of a landscape maintenance district or homeowner association, which would be consistent with this policy.
Section 2.31.7: 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 the area and community at large.	The Specific Plan incorporates amenities such as common open space, pedestrian paths and bikeways and well-landscaped streets, and is generally consistent with this policy.

Table 2-1: Marina Heights Specific Plan Conforming Policies

Plan Policy	Consistency Discussion
Public Safety	
Section 2.4.7: Development shall be prohibited or restricted where natural conditions present a serious threat to life or may lead to the destruction of homes, businesses, or public facilities. **Section 4.100:** This section puts forth policies designed to prohibit or restrict development on land where there is significant potential for threat to life or property (100-year tsunami runup zone, areas of high to very high seismic risk, areas with high to very high susceptibility for liquefaction and lateral spreading, and areas within the 100-year floodplain).	No portion of the Specific Plan area has been identified as hazardous with respect to flooding, tsunami runup zones, slope failure or seismic activity, and the proposed development of the Specific Plan area would be generally consistent with these policies.

Table 2-1: Marina Heights Specific Plan Conforming Policies

Plan Policy	Consistency Discussion
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. **Section 4.25.3:** Curb radii should be limited to slow vehicles travel speeds and provide greater safety for pedestrian and bicyclist. **Section 4.25.6:** To offset narrower street widths, new development shall include, at least, fire sprinklers, non-combustible roofing, more frequent fire hydrants and prohibit against the parking of boats and recreational vehicles. **Section 4.28.4:** When future right-of-way alignments could encourage undesirable travel speeds and unrelated through movement, traffic calming devices should be employed. Similar measures should be used where collectors pass school, park or recreation sites so as to maintain low travel speeds utilizing narrow travel lanes, roundabouts and increasing the width of sidewalks at intersections.	The incorporation of a variety of traffic calming measures, including: narrow streets, roundabouts and stop signs within the Specific Plan area would tend to reduce travel speeds along non-collector streets in proposed residential areas, consistent with these policies. Street design within the Specific Plan area would be expected to comply with all curb radii requirements to reduce vehicle travel speeds. Fire sprinklers would be installed in all residential units to offset the reduced width of streets within the Specific Plan area.
Section 4.126.1: The City shall require erosion control and landscape plans for all new subdivisions or major projects on sites with potentially high erosion potential.	The Specific Plan indicates that the Project Applicant will develop landscape and grading plans that will incorporate best management practices to control erosion, consistent with this policy.

Table 2-1: Marina Heights Specific Plan Conforming Policies

Plan Policy	Consistency Discussion
Public Space Design Guidelines	
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 ground covers shall be incorporated into the design of future local residential streets. **Section 4.28.5:** Street landscaping should create a well-defined separation between vehicles and pedestrians and adjacent residences.	Street landscaping strips and curbside landscaping would be provided in the Specific Plan area with all three street types proposed, consistent with these policies.
Section 3.36 and Figure 3.3: Class I bikeways (paved paths set apart from vehicle traffic by intervening landscaped areas of physical barriers) shall be incorporated into the construction or reconstruction of the route segments designated in Figure 3.3, where widths or right-of ways permit. So as to permit joint use by pedestrians and bicyclists, these paths should have a minimum width of 9 feet when accommodating two-way movement and 6 feet when accommodating one-way movement. All new right-of-way acquisitions or dedications coterminous with the designed routes shall provide Class I facilities.	A Class I bikeway is proposed through the Arroyo area at Marina Heights. Class II bike lanes are proposed along Abrams Drive and Main Street within the Specific Plan area, which would not be consistent with the Class I bikeways shown in Figure 3.3 of the General Plan in these areas. However, Section 3.37 indicates that along those segments of Class I designated routes where site-specific constraints make it infeasible to accommodate a Class I standard, Class II bike lanes shall be provided. The Class II bike lanes proposed under the Specific Plan along Abrams Drive/Main Street would generally be consistent with the routing of the Class I bikeway shown in Figure 3.3.
Section 4.13.2: Major intersections that occur along major corridors should be highlighted with special design treatment.	The proposed divided entry roads off of Imjin Road and California Avenue will be designed as gateways to the Specific Plan area, and will adhere to applicable guidelines in the City Design Guidelines and Standards, consistent with this policy.

Table 2-1: Marina Heights Specific Plan Conforming Policies

Plan Policy	Consistency Discussion
Section 4.16.2: Future development should incorporate new windrows into site landscaping where appropriate so as to reinforce this distinctive landscape feature of citywide significance.	The Specific Plan indicates that the proposed 12.92-acre greenbelt and the 30-foot buffer area on the west end of the Specific Plan area would act as windrows, consistent with this policy.
Section 4.16.3: Within built-up areas, existing topography shall be retained to make natural land forms more evident. This requirement of the General Plan may be fulfilled by minimizing grading and cutting and filling for roadways, by providing public space with outlooks at the higher elevations, and by locating taller structures on the upper slopes of hills.	The natural topography within the Specific Plan area was modified with the grading that preceded the development of the existing military housing units. Although grading will be required within the Specific Plan area, the previous grading of the area would be expected to minimize the need for extensive cutting, consistent with this policy.
Section 4.18.1: The boundaries of the neighborhood or district should be clearly defined by open space buffers or roadways.	The proposed 12.92-acre greenbelt and the 30-foot buffer area on the west end of the Specific Plan area would help define the boundaries of the Specific Plan area. California Avenue, Imjin Road and portions Abrams Drive would also serve to define the boundaries of the Specific Plan area, consistent with this policy.
Section 4.18.3: Each area should have its own distinct street pattern, and a consistent and evident landscape scheme should be applied to its streets and associated fronting properties. **Section 4.25.1:** In keeping with the neighborhood identify policies prescribed above, a distinctive landscape concept should be established for each neighborhood.	Each of the five districts proposed within the Specific Plan area would be characterized by a distinct street pattern and an identifiable landscape scheme, consistent with these policies.

Table 2-1: Marina Heights Specific Plan Conforming Policies

Plan Policy	Consistency Discussion
Section 4.25.7: Street lighting and park and sport field lighting shall be shielded and consistent with Chapter IV of the City Design Guidelines and Standards. **Section 4.28.6:** Street landscaping consisting of street trees, groundcovers, street lights, and directional signage should be consistent along street segments within the same neighborhood, and should be easily distinguishable from that of related local streets. Street lighting shall be shielded.	The Specific Plan indicates that a Landscape Plan and a Lighting Plan will be developed in compliance with City Design Guidelines and Standards, the implementation of which would be consistent with these policies.
Section 4.28.2: The roadway between the curbs shall be limited to two 11-foot travel lanes and two 7-foot parking lanes except where segments are designated on Figure 3.3 as routes for Class II bikeways. When so designated, the striped bicycle lanes shall be 7-foot along side 11-foot travel lanes and may be reduced to 6-foot lanes alongside 12-foot travel lanes.	Local streets would be 34 feet wide with 8 feet designated for parking on each side. Abrams Drive/Main Street would provide 5 foot wide Class II bike lanes on each side of the 50-foot-wide street (this includes 8-foot wide parking pockets on each side).
Section 4.128.3: 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.	The Project Applicant will submit the Specific Plan to the relevant city design review boards, consistent with this policy.
Community and Economic Development	
Community Character	
Section 2.31.6: New housing shall be integrated into the fabric of the city. **Section 3.3.7:** Link existing and future areas of the city with an integrated system of roads,	Development of the Specific Plan area as proposed would enable the establishment of new linkages between the proposed development and existing residential areas in the vicinity.

Table 2-1: Marina Heights Specific Plan Conforming Policies

Plan Policy	Consistency Discussion
transit, footpaths and bikeways that connects neighborhoods, commercial areas, schools, parks, and other major community serving-destinations.	
Section 3.3.6: Protect existing and future residential areas from through-traffic that creates safety, noise, and pollution problems.	Development of the Specific Plan area would incorporate features such as roundabouts, narrow streets and a street layout that would tend to discourage through traffic in proposed residential areas. Although the proposed extension of Carmel Avenue would increase through traffic in the existing residential area north of the Specific Plan area, any related inconsistency with this policy must be balanced with other policies intended to provide enhanced integration between developed portions of the City and future development at the former Fort Ord (see discussion of Section 3.3.7).
Section 4.18.2: Major identifying features such as park, plaza or school sites should be provided.	Pocket parks, neighborhood parks, and a greenbelt/linear park have been proposed within the Specific Plan area, consistent with this policy.
Economic Considerations	
Section 2.4.5: 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.	The Specific Plan is consistent with this policy, since it does not proposed any commercial development within the Specific Plan area (strip-type or otherwise).
Section 2.4.11: The costs of providing the public facilities and services needed for new development shall be borne by new development unless the City chooses to help assume such costs in order to obtain identified community-wide benefits. The City will adopt development fee programs and/or other financing measures to ensure that new development pays the costs of new services and facilities needed to serve it. **Section 2.31.9:** A fair share of infrastructure and public service costs shall be borne by new housing.	The City Council approved the development fees for the Marina Heights project when it approved the Option Agreement on November 14, 2002. The per unit City fee is $10,185.21 in addition to $35,319/unit FORA fee (which adjusts for inflation annually). The Project Applicant will provide approximately $1,500,000 for improvements to the proposed adjacent City parks, in addition to those fees specified in the Option Agreement.

Table 2-1: Marina Heights Specific Plan Conforming Policies

Plan Policy	Consistency Discussion
Transportation and Access	
Section 2.91.4: Locate elementary and middle schools within walking distance to the households served.	An elementary school is proposed/may be developed on the site between Abrams Drive and Imjin Road at the site of a portion of the former Fort Ord landfill. This site would be within walking distance of households served within the Specific Plan area, so the Specific Plan would be generally consistent with this policy. However, as discussed in Chapter 7 (Hazards and Hazardous Materials), there may be constraints on the future development of a school at this site associated with proximity to a former landfill. Possible impacts related to locating a school in proximity to a former landfill will be subject to environmental review pursuant to the applicable provisions of the California Education Code, and are not the subject of this EIR.
Section 3.3.3: 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.	Although development proposed within the Specific Plan area would be limited to residential units, recreational facilities and supporting infrastructure, the proposed land use pattern would not preclude future residents from making multi-purpose trips and deferring trips during peak travel times when it is necessary to leave the Specific Plan area, consistent with this policy.
Section 3.3.5: Design the city to enable and encourage walking and biking as a major and safe means of travel.	Development of the Specific Plan area as proposed would incorporate features intended to encourage walking and biking, consistent with this policy.
Section 3.3.8: Where necessary and feasible, accept traffic congestion as a means to discourage and redirect traffic to routes and areas where increased vehicular traffic can be accommodated without disruption or degradation of the community. Likewise, accept traffic congestion as a means to encourage the use of alternative means of travel.	Most vehicles entering and exiting the Specific Plan area would be expected to use Imjin Road or California Avenue. California Avenue improvements have recently been completed, and Imjin Parkway is ultimately to become a four-lane arterial that could accommodate additional traffic without disruption or degradation of the community, consistent with this policy.
Section 3.7: Existing and future residential neighborhoods shall be protected from intrusion by heavy through-traffic and from safety, noise and pollution problems created by such traffic. To achieve this end, inter-city traffic shall be directed onto designated major arterials, and intra-city traffic to designated collector streets. The network of streets shall be designed to	Carmel Avenue would be extended under the Specific Plan, but would be limited to two lanes, with one in each direction, consistent with this policy.

Table 2-1: Marina Heights Specific Plan Conforming Policies

Plan Policy	Consistency Discussion
prevent or inhibit the use of local residential streets for intra-city or crosstown vehicular travel. All streets extended so as to be integrated with developed areas of the Armstrong Ranch and former Fort Ord shall be limited to two lanes, one lane in each direction. Streets affected are De Forest Road, Crescent Avenue, Beach Road east of Del Monte Boulevard, California Avenue, and Carmel Avenue.	
Section 3.8: To the extent feasible, roadway system improvements shall be implemented concurrent with major development as allowed by the plan.	Development of the Specific Plan area would be concurrent with proposed roadway system improvements, consistent with this policy
Section 3.33: To ensure that transit concerns are adequately addressed, draft Specific Plans or applications for subdivisions of 50 or more units shall be submitted to the Monterey-Salinas District for review and comments.	The City of Marina will submit the Specific Plan to the Monterey-Salinas District for review and comments, consistent with this policy.
Section 4.22: An overriding principle of the General Plan is to minimize the amount to the greatest extent possible any increase in right-of-way width or road width in the City so as to reduce the total amount of land devoted to roads, limit impervious surfaces, and facilitate safer and easier pedestrian movement. Accordingly, the specified rights-of-way within the former Fort Ord should be reduced wherever feasible from those shown on the For a Reuse Plan.	Subject to City approval, the Specific Plan proposes local streets that would be 34 feet wide, consistent with this policy.

Table 2-1: Marina Heights Specific Plan Conforming Policies

Plan Policy	Consistency Discussion
Section 4.25.5: Alleys should be encouraged, visible from adjoining streets and accommodate emergency vehicles.	The Specific Plan incorporates alleys, consistent with this policy.
Utilities and Services	
Section 3.3.10: Minimize consumption of water for urban purposes and make maximum possible use of recycled water. **Section 3.42:** The policies and programs of the General Plan promote water conservation and the use of recycled water to protect water quality and to ensure that the demand of future community development does not exceed the capacity to provide water in an environmentally acceptable way.	All residential units within the Specific Plan area would incorporate low-flow plumbing fixtures, and landscaping would be designed to minimize the demand for irrigation, with the capacity to utilize recycled water when it becomes available, consistent with these policies.
Section 3.3.11: Design storm water runoff facilities so as to contribute to the recharge of groundwater aquifers while protecting the water quality of both ground and surface water. **Section 3.57:** Storm drainage plans shall be prepared which identify containment of storm water onsite and accommodated by localized landscaped retention basins designed to convey runoff form a 10-year storm.	Development of the Specific Plan area would incorporate retention basins as components of open space elements and parks, which would be expected to provide groundwater recharge benefits and enhance water quality, consistent with these policies.

Table 2-1: Marina Heights Specific Plan Conforming Policies

Plan Policy	Consistency Discussion
Section 3.3.12: Ensure long-term availability of required facilities and services prior to the approval of new construction. **Section 3.48:** When the annual MCWD report has reached 65 percent of its available water allocation within an area for which a project is being considered, the City shall request a Provision of Service letter for all new or rehabilitated housing. The letter shall include the water requirements for the project (including potable landscaping needs), the districts commitment to provide the water and what the commitment will do to the remaining water balance for that part of the City. **Section 3.54:** All infrastructure required for adequate water supply shall be in place prior to or concurrent with new development. The cost of providing water shall be paid by impact fees. **Section 3.60:** All development projects requiring discretionary approval shall obtain verification of adequate wastewater treatment capacity from Monterey Regional Water Pollution Control Agency prior to project approval.	The Project Applicant will obtain formal verification of adequate capacity from affected providers of water, wastewater treatment and other services prior to the approval of new construction. If necessary, the Project Applicant will work with the MCWD to facilitate an appropriate Provision of Service letter. Existing water supply infrastructure will be replaced as necessary within the Specific Plan area prior to or concurrent with new residential, with applicable fees to be paid by the Project Applicant as per relevant MCWD ordinances. The Project Applicant will obtain verification from the Monterey Regional Water Pollution Control Agency that the existing wastewater treatment capacity is adequate to serve the proposed development within the Specific Plan area.
Section 3.3.14: Promote reductions in the generation of non-recyclable solid waste.	In the absence of new commercial or industrial activities within the Specific Plan area, there would be no significant generation of new non-recyclable solid waste within the Specific Plan area, and residents would be expected to participate in City-wide recycling programs, which would be consistent with this policy.

Table 2-1: Marina Heights Specific Plan Conforming Policies

Plan Policy	Consistency Discussion
Section 3.52: In order to disclose projected water demand relative to available water supply and explore effective means of achieving savings, environmental review shall be required for all proposed subdivisions that might generate significant water demands.	The Draft EIR provides environmental review for the Specific Plan, consistent with this policy.
Section 3.53.1: All new multifamily housing shall be required to install water meters for each unit.	Townhomes are the only new multifamily housing units that have been proposed within the Specific Plan area, and each unit would have a separate water meter, consistent with this policy.
Section 3.53.3: All new construction shall use low use fixtures and low-flow toilets.	All residential units within the Specific Plan area would incorporate low-flow plumbing fixtures, consistent with this policy.
Section 3.57.2: Pretreatment of storm water runoff from roads, parking area shall be provided using Best Management Practices.	The Specific Plan indicates that naturally sandy soil in retention basins will provide some filtering of stormwater runoff. Compliance with Regional Water Quality Control Board requirements related to the pretreatment of storm water runoff (including Best Management Practices) will be necessary within the Specific Plan area, consistent with this policy.
Section 3.57.3: Stormwater systems shall be designed in a manner which prevents soil erosion. **Section 4.127.2:** All new roads should be designed to allow for the localized retention, filtering of pollutants, and percolation of stormwater into the underlying aquifer.	The Specific Plan indicates that a storm drainage report and plan will be submitted to the City of Marina Public Works Director for review and approval. Implementation of the storm drainage plan would reduce the potential for soil erosion and percolation of stormwater into the underlying aquifer within the Specific Plan area, consistent with these policies.
Section 3.63.1: All new multifamily projects shall provide for trash enclosures of adequate size to accommodate the collection of both garbage and recyclable refuse.	The Specific Plan indicates that trash will either be stored in garages or a central trash enclosure(s) will be provided, consistent with this policy.
Section 3.63.2: Composting programs shall be instituted.	The Specific Plan indicates that, if applicable, the maintenance contractor for the Specific Plan area would institute and maintain a composting program, consistent with this policy.
Section 3.64: All utilities shall be placed underground.	All utilities within the Specific Plan area would be installed pursuant the requirements of relevant utility companies, and the Specific Plan indicates that they would be installed underground where feasible, consistent with this policy.

Table 2-1: Marina Heights Specific Plan Conforming Policies

Plan Policy	Consistency Discussion
Section 4.127.1: All storm drainage systems for new development shall be designed in accordance with Policy/Section 3.57 of the General Plan to retain stormwater on site and provide for its filtering and percolation.	The Specific Plan indicates that a storm drainage report and plan will be submitted to the City of Marina Public Works Director for review and approval, consistent with this policy.

Table 2-2: Marina Heights Specific Plan Non-Conforming Policies

Plan Policy	Consistency Discussion
Land Use	
Housing	
Section 2.31.2: ***All housing development over 20 or more dwellings shall include and maintain an appropriate percentage of below-market-rate housing*** based upon the results of the 2000 and 2010 census. ***In no case, however, shall the amount of affordable housing provided be less than 20 percent of the total number of units approved for any housing project subject to this requirement.***	Implementation of the Specific Plan would result in a sufficient number of affordable housing units to meet the City's numerical requirements, through affordability restrictions to be placed on existing housing units within the adjacent Abrams "B" area. With 20 percent of the housing units proposed required to be below market rate under this policy, the City would require 15 percent of all housing units built within the Specific Plan area to be affordable to low- and moderate-income households (with the remaining 5 percent of the below market rate units affordable to households with incomes ranging from 120 percent to 150 percent of median income). However, under the Specific Plan, the required minimum of 15 percent of the total units proposed that would be classified as affordable would not be located within the Specific Plan area. Although this inconsistency would not be expected to result in any environmental effects, a General Plan amendment would be necessary to enable the Project Applicant to develop the Specific Plan area with the housing mix proposed, and to meet the City's affordable housing requirements through the actions proposed in the Specific Plan.
Section 2.35.1: ***If the majority or all of the existing homes is replaced, new housing shall be provided in accordance with the Village Homes designation*** and shall include an integrated mix of housing types and mini-parks at the neighborhood level.	Development of the Specific Plan area as proposed would result in a residential density below the minimum 7.5 dwellings per acre required under the Village Homes designation, in conflict with this policy. The Project Applicant intends to submit a General Plan Amendment to reduce the density requirements of the Village Homes designation within the Specific Plan area.
Section 2.35.1: Former Fort Ord lands within Marina shall accommodate the following broad range of new housing types: Rehabilitated former military multi-family housing in the Abrams Park area plus new infill housing to replace deteriorating units. However, a majority or all of the units may be new housing if there is adequate demonstration that new housing will be provided with a similar or better quality and affordability than would have been possible for rehabilitation of most of the existing units plus new infill. ***A total of 846 units is permitted within the Abrams***	Development proposed under the Specific Plan would result in the demolition of 828 existing abandoned military housing units and the construction of 1,050 new residential units, a number that exceeds the total of 846 units permitted in Abrams Park and the 78 units permitted in Upper Patton Park, in conflict with these policies. Modification of the General Plan to accommodate development of the Specific Plan area as proposed would result in an increased population within the area, increased vehicle trips (with associated adverse air quality impacts), and increased demand for water, wastewater treatment and public services. Specific Plan-related impacts associated with traffic are addressed in Chapter 3 of the Draft EIR, Specific Plan-related impacts associated with air quality are addressed in Chapter 4 of the Draft EIR, and Specific Plan-related impacts associated with public services are addressed in Chapter 10 of the Draft EIR. The Project Applicant intends to submit a General Plan Amendment to enable the construction of 1,050 new residential units within the Specific Plan area.

Table 2-2: Marina Heights Specific Plan Non-Conforming Policies

Plan Policy	Consistency Discussion
Park area. **Section 2.36.3:** *A total of 78 low-density single-family houses on a portion of the Patton Park area to be cleared of deteriorated former military housing.*	
Density	
Section 2.4.4: 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. **Section 2.31.5:** 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. **Section 2.33.2:** Village homes, consisting of a mix of single-family detached houses, townhouses, and multifamily housing... Village homes are to be organized into a village type setting capable of supporting both local and regional transit, with residents being within walking distance of local shops, schools, and park and recreation facilities. The overall gross density should of the area designated for Village Homes should not exceed 8 units per	Marina General Plan Section 3.32 identifies 7 units per gross acre as the minimum residential density necessary to promote the long-term feasibility of cost-effective public transit. Under the Specific Plan, residential density would be less than 7 units per gross acre (approximately 5.4 units per gross acre). This could be expected to result in increased vehicle trips, with associated adverse effects on air quality. Specific Plan-related impacts associated with traffic are addressed in Chapter 3 of the Draft EIR, and Specific Plan-related impacts associated with air quality are addressed in Chapter 4 of the Draft EIR. The Project Applicant intends to submit a General Plan Amendment to reduce the density requirements of the Village Homes designation within the Specific Plan area.

Table 2-2: Marina Heights Specific Plan Non-Conforming Policies

Plan Policy	Consistency Discussion
gross acre, nor be less than 7.5 units per gross acre – pursuant to Section 2.35.1. **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.* **Section 3.32:** 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. Furthermore, all future residential development within 1,500 feet (approximately ¼ mile) 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).	
Open Space	
Section 2.12: To meet the needs of existing and future Marina residents and persons employed within the city, *outdoor park and recreation space shall be provided consistent with the standards of Table 2.3.*	In accordance with Section 2.16.3, the Project Applicant has agreed to pay for up to $1.5 million of improvements for an 18-acre public park on a portion of the former Fort Ord landfill (not within the Specific Plan area), and will provide sufficient acreage to meet the sub-neighborhood park standard, within the Specific Plan area. In addition, the development of the Specific Plan area would provide a Class I bike path through the proposed greenbelt buffer that could be linked with other trails, consistent with these policies. However, the parks shown on the Conceptual Land Plan do not meet the current 300-foot service area standard for sub-neighborhood parks. Approximately 16 percent of the proposed units would not be within the

Table 2-2: Marina Heights Specific Plan Non-Conforming Policies

Plan Policy	Consistency Discussion
Section 2.16.3: ***In former Fort Ord, with the exception of sub-neighborhood parks to serve new or renovated housing,*** the dedication of land for the recreational/equestrian trails, the West University Village Greenway and the hilltop park north of 8th Street, no further dedication of land for park and recreation purposes is required other than that designated for park and recreation use by former Fort Ord conveyances. Instead, all new residential, commercial and industrial development shall be required to pay in-lieu fees to finance the improvement of existing unimproved park and recreation sites and other General Plan-designated sites serving that area. See the Program and Implementation Element (Section 5) for further policies regarding the proportioning of responsibility for in-lieu park fees. **Section 2.18:** ***The required outdoor park and recreation area shown in Table 2.3 by type may be combined with other required outdoor recreation areas provided; (a) the service area criteria are met;*** and (b) the design of park and active-recreation areas provides, where necessary, sufficient separation between areas so as to simultaneously accommodate different age groups or potentially incompatible activities. To meet the recreation trail standard, a trail shall link the area served to an existing or planned trail so as to eventually	current 300-foot service area for proposed sub-neighborhood parks. Therefore, the submittal is not consistent with the current General Plan, and the Project Applicant intends to submit a General Plan Amendment to modify this requirement within the Specific Plan area.

Table 2-2: Marina Heights Specific Plan Non-Conforming Policies

Plan Policy	Consistency Discussion
create an integrated citywide trail system.	
Section 2.4.3: *Wherever possible, land with significant* agricultural, ***natural habitat***, or scenic value ***shall be retained and protected from degradation***. **Section 2.10.3:** ***The Marina Planning Area contains land designated for permanent retention as open space so as to protect maritime chaparral***, coastal scrub, and coast live oak woodlands and other plant and wildlife species that inhabit these areas.	The Marina General Plan Land Use Map identifies a portion of the Specific Plan area west of the proposed Oak Grove Preserve where development has been proposed as Open Space, and this maritime chaparral area provides habitat for the Monterey spineflower and the sand gilia, two special status plant species. Development in this area could eliminate or degrade natural habitat, in conflict with these policies. Modification of the General Plan to accommodate development as proposed within the Specific Plan area would have adverse effects on the Monterey spineflower and sand gilia, and effective mitigation would require implementation of the proposed Habitat Conservation Plan (HCP) or consultation with the California Department of Fish and Game, as discussed in Chapter 6 (Biological Resources). The Project Applicant will submit a General Plan Amendment to modify the General Plan Land Use Map to enable development of the area west of the proposed Oak Grove Preserve. If the proposed HCP/IA is ultimately approved prior to development of the Specific Plan area as proposed, the Project Applicant would comply with the provisions of the HCP/IA.
Public Space Design Guidelines	
Sections 3.38.1: So as to provide for safe, direct and pleasant pedestrian circulation, ***sidewalks should be a minimum of 5 feet on each side of residential streets*** and separated from the residential roadway by a planting strip with a minimum width of 6 feet. **Section 4.25.2:** A landscape strip or parkway shall be provided between curbside and sidewalk. ***Sidewalks shall be at least 5 feet in width.*** A permanent funding mechanism for these landscaped areas shall be established. **Section 4.26:** The pavement widths of local residential streets should only be as wide as necessary to accommodate the residences along the immediate street frontage. Road widths of 34-feet are appropriate for local residential streets. Parking	Along some local streets proposed within the Specific Plan area, sidewalk widths would be less than five feet, which would be in conflict with these policies. Modification of the General Plan to accommodate development of sidewalks within the Specific Plan area as proposed would not be expected to have any significant adverse environmental effects. The Project Applicant intends to submit a General Plan Amendment that would enable the construction of sidewalks with a width of 4 feet within the Specific Plan area.

Table 2-2: Marina Heights Specific Plan Non-Conforming Policies

Plan Policy	Consistency Discussion
should be allowed on both sides of the street. Beyond the paved road widths listed here, the rights-of-way for local residential streets shall include 11 and a half feet back of the face of the curb on each side; half a foot for the curb, a 6 foot planting strip, and *a 5 foot sidewalk adjoining the edge of the right-of-way.*	
Community and Economic Development	
Community Character	
Section 2.4.2: *The City shall prevent under-utilization of land within its UGB* that is appropriate for community development in order to ensure that development proceeds in an orderly and consistent manner and to minimize the dispersal of future growth in Monterey County to outlying areas with a high natural resource value. Accordingly, whenever feasible, the City shall encourage new development to locate within existing developed portion of Marina and Marina's former Fort Ord in preference to development of currently vacant, undeveloped lands located within the City's UGB.	For the purposes of this analysis, residential density is the primary measure of the relative efficiency in the use of land designated for future residential development within Marina. Development within the Specific Plan area under the Specific Plan could result in under-utilization of land designated for future development, since the residential density proposed is below the 7.5 units per acre minimum density established in the General Plan under the Village Homes designation. Development of the Specific Plan area as proposed would represent a more efficient utilization of land than the existing pattern of development in the former military housing area, and the proposed pattern of development could be considered a reasonable utilization of land at the residential densities proposed. The number of housing units anticipated within the Specific Plan area under the General Plan (720 units) would not require development of much of the 248-acre Specific Plan area if built at the minimum density required under the Village Homes designation (7.5 to 8 units per acre), which could result in under-utilization of a large portion of the Specific Plan area. Modification of the General Plan to permit development of the Specific Plan area at a lower density than specified could result in less efficient use of developable land and might not provide the density necessary to provide sufficient support for cost-effective transit operations (a minimum of 7 units per gross acre, according to General Plan Section 3.32). This could be expected to result in increased vehicle trips, with associated adverse effects on air quality. Specific Plan-related impacts associated with traffic are addressed in Chapter 3 of the Draft EIR, and Specific Plan-related impacts associated with air quality are addressed in Chapter 4 of the Draft EIR. The Project Applicant intends to submit a General Plan Amendment to enable a reduction in the density of residential development under the Village Homes designation within the Specific Plan area.

Table 2-2: Marina Heights Specific Plan Non-Conforming Policies

Plan Policy	Consistency Discussion
Economic Considerations	
Section 2.4.10: ***Land appropriate for community development shall be allocated and phased in a manner that enhances local employment and economic opportunities and provides the City with a strong economic and fiscal base.*** **Section 2.22:** The General Plan's housing and neighborhood policies and related programs have a dual function: to protect and enhance the quality of the city's existing housing stock and neighborhoods; and to accommodate a fair and reasonable share of growth over the next 20 years. The latter function should take place in a manner which responsibly addresses a full range of concerns, among which are (1) environmental concerns associated with the protection of land, air and water resources; (2) a desire to mitigate the closely related problems of traffic congestion and inappropriate use of land for development purposes; (3) concerns related to quality of life, including community appearance and housing and neighborhood stability; and (4) socioeconomic concerns related to affordability of housing, community diversity, ***a balance of housing with local jobs***, and the maintenance of a sound fiscal base for the	Development proposed within the Specific Plan area would be limited to new residential units, and the Specific Plan area has been designated for residential development in the FORA Reuse Plan and the Marina General Plan. Although phasing of development under the Specific Plan would add fewer than the maximum 200 new residential units each year specified in General Plan Section 2.31.1 and Section 5.8.1, the absence of any on-site employment opportunities (beyond home offices) would contribute to a continuing imbalance between the number of local jobs and the number of housing units in Marina, in conflict with these policies that are intended to enhance the local jobs/housing balance. Any residential development within Marina (including in the Specific Plan area) would have the same effect, in the absence of a formal mechanism to directly link new residential development with local job creation. Modification of the General Plan to accommodate development as proposed under the Specific Plan could be expected to result in a worsening of the current jobs/housing balance in the local area. Although bringing jobs and housing into balance might be expected to provide some opportunities for vehicle trip reduction (and related air quality benefits), this would become more unlikely after eliminating the General Plan requirement to link future residential development within the Specific Plan area with the creation of additional local jobs. Specific Plan-related impacts associated with traffic are addressed in Chapter 3 of the Draft EIR, and Specific Plan-related impacts associated with air quality are addressed in Chapter 4 of the Draft EIR.

Table 2-2: Marina Heights Specific Plan Non-Conforming Policies

Plan Policy	Consistency Discussion
community. The following policies and associated programs detail how the City of Marina intends to accomplish these objectives. **Section 2.27:** Unless a major imbalance of jobs and housing within Marina and its immediate environs is avoided, regional traffic congestion can be expected to worsen due to the generation of increasingly longer commute trips between housing (outside Marina environs) and new jobs created in the City. A major imbalance between jobs and housing within Marina would also help accelerate the pressure to convert prime agricultural lands in the County for housing development. Conversely, construction of new housing commensurate with new jobs within the expanded city limits of Marina will provide ample opportunity for Marina residents to both live and work within their community as well as avoiding or substantially reducing the adverse environmental and social effects associated with an imbalance. It will be a continuing challenge for Marina, in collaboration with Monterey County and other concerned cities, to prevent the significant county and community imbalances that will likely result from major job growth in the southern portion of Silicon Valley and a spill-over of housing demand to Monterey	

Table 2-2: Marina Heights Specific Plan Non-Conforming Policies

Plan Policy	Consistency Discussion
County. **Section 2.31.1:** New housing shall be phased and shall provide for the needs of all economic groups particularly with respect to matching the needs of the City's current and future workforce in order to promote the social and fiscal well being of the community. The issuance of building permits for new detached single-family homes on the former Fort Ord and Armstrong Ranch shall not exceed 200 units per year plus any unused increment from the previous year. ***The development of new and substantially rehabilitated homes, other than age-restricted housing, on Armstrong Ranch and the former Fort Ord shall be linked with the creation of jobs.***	
Transportation and Access	
Section 3.3.2: ***Reduce the length of travel time of work trips generated by local residents by maximizing opportunities for residents to work within the community.***	Development proposed within the Specific Plan area would be limited to new residential units, and both the FORA Reuse Plan and the Specific Plan area is designated for residential development under the General Plan. The absence of any on-site employment opportunities (beyond home offices) would not maximize opportunities for residents to work within the community. Modification of the General Plan to accommodate development as proposed under the Specific Plan could be expected to result in a worsening of the current jobs/housing balance in the local area. Although bringing jobs and housing into balance might be expected to provide some opportunities for vehicle trip reduction (and related air quality benefits), this would become less likely with the elimination of the General Plan requirement to link future residential development within the Specific Plan area with the creation of additional local jobs. Specific Plan-related impacts associated with traffic are addressed in Chapter 3 of the Draft EIR, and Specific Plan-related impacts associated with air quality are addressed in Chapter 4 of the Draft EIR. Any residential development on this site, which is indicated above is designated as residential in both the FORA Reuse Plan and the Marina General Plan,

Table 2-2: Marina Heights Specific Plan Non-Conforming Policies

Plan Policy	Consistency Discussion
	would face these same issues.
Section 3.23: *All future development shall be designed to help promote cost-effective local and regional transit service and minimize dependency on the private automobile for work, shopping, recreation, and other trip purposes.*	The residential density proposed within the Specific Plan is below the 7 units per gross acre identified in General Plan Section 3.32 as the minimum necessary to promote cost-effective transit operations. Modification of the General Plan to permit development of the Specific Plan area at a lower density than specified could result in less efficient use of developable land and would not provide the density necessary to provide sufficient support for cost-effective transit operations, according to the General Plan. This could be expected to result in increased vehicle trips, with associated adverse effects on air quality. Specific Plan-related impacts associated with traffic are addressed in Chapter 3 of the Draft EIR, and Specific Plan-related impacts associated with air quality are addressed in Chapter 4 of the Draft EIR. The Project Applicant intends to submit a General Plan Amendment that would enable development of the Specific Plan area at residential densities below those currently required under the Village Home designation.
Section 4.25.4: *Block lengths should not normally exceed 350 feet and only rarely exceed 450 feet.* When block lengths exceed 450 feet, short mid block alleys should be provided for emergency vehicle access and mid block paths for pedestrian and bicyclist. Connecting paths for pedestrians and bicyclists shall be provided at cul-de-sacs to connect neighborhoods.	Proposed block lengths within the Specific Plan area sometimes exceed 450 feet, in conflict with this policy. Modification of the General Plan to accommodate development as proposed under the Specific Plan with respect to block lengths would not be expected to have any significant adverse environmental effects. The Project Applicant intends to submit a General Plan Amendment that would enable the development of block lengths in excess of 450 feet within the Specific Plan area.
Utilities and Services	
Section 3.45: *In no event shall the City permit new development requiring water allocations in excess of available supply or in excess of its designated water allocation for that portion of former Fort Ord within the city.*	The total water allocation within the portion of the former Fort Ord under City of Marina jurisdiction is 1,175 acre-feet per year (AFY). Development of the Specific Plan area as proposed is estimated to require approximately 292 AFY. The Marina General Plan anticipates that development in the Specific Plan area would generate a water demand of 231 AFY. An additional 48.5 AFY supports existing residential uses in the Abrams "B" area. If the anticipated distribution of the total water allocation within the portion of the former Fort Ord under City of Marina jurisdiction were to remain unchanged, there would be insufficient water supply to support the level of development proposed in the Specific Plan area, and such development would be in conflict with this policy. If the City of Marina elects to shift the anticipated distribution of the water allocation to provide adequate water supply to support the proposed development of the Marina Heights portion of the Specific Plan area, then the City would be able to comply with this policy in the near-term. However, such a shift in the distribution of the water allocation could subsequently limit future development in other portions of

Table 2-2: Marina Heights Specific Plan Non-Conforming Policies

Plan Policy	Consistency Discussion
	the former Fort Ord that has been anticipated under the General Plan based on previously determined water distribution patterns.

3

TRAFFIC AND CIRCULATION

A. INTRODUCTION

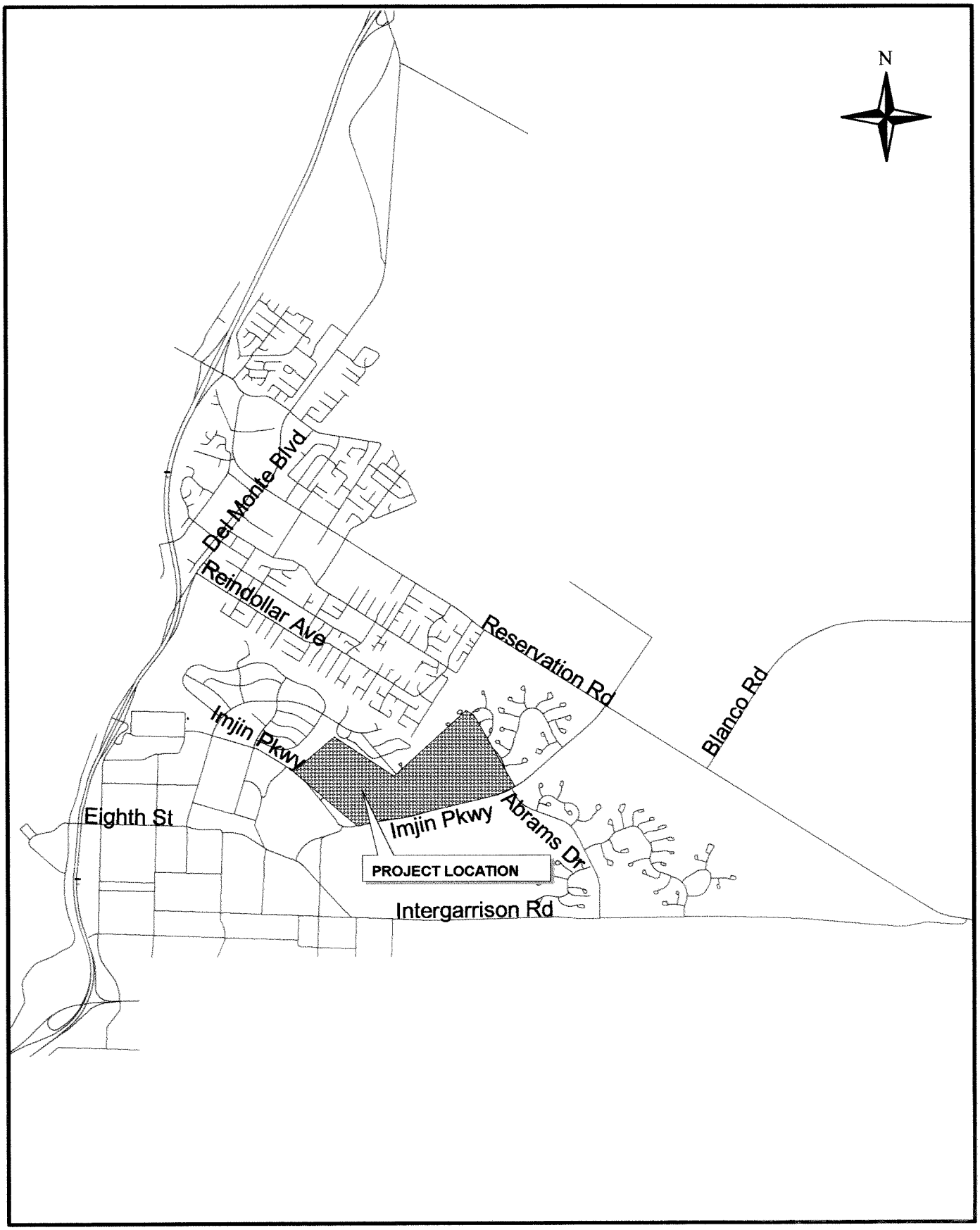
The 248-acre Marina Heights Specific Plan area is located on the former Fort Ord (see **Figure 3.1**). There are currently 828 abandoned residential units at the Specific Plan area, all of which are to be demolished under the Specific Plan.

The development of the Specific Plan area would involve the construction of 1,050 new housing units. There would be five entrances to the Specific Plan area, including the existing Imjin Road/Abrams Drive intersection, the Imjin Parkway (former 12th Street)/Abrams Drive intersection, a new Carmel Avenue extension, and a new "Main Street" within the Specific Plan area that would intersect with California Avenue and Imjin Road[1]. Imjin Road, Imjin Parkway (former 12th Street), California Avenue and the Carmel Avenue extension would provide access to other portions of Marina. Regional access is provided by Reservation Road, Imjin Road, Del Monte Boulevard and Highway 1 (see **Figure 3.2**).

The analysis conducted for the Draft EIR evaluated potential Specific Plan-related traffic impacts. Weekday AM peak hour and PM peak hour traffic conditions at the study intersections listed in **Table 3-1** (also see **Figure 3.3**) were evaluated as were operations on Highway 1 segments in Marina. Traffic conditions for the following scenarios were analyzed:

[1] Imjin Parkway (former 12th Street) was recently reconstructed and realigned at its intersection with Imjin Road to provide a continuous roadway connection between Reservation Road and 2nd Avenue. The missing section of this roadway between 2nd Avenue and Highway 1 is expected to be complete by the end of 2003. Imjin Road and former 12th Street have been renamed "Imjin Parkway". For this study, the original street names are used to identify intersections along this roadway (i.e., Imjin Road between Reservation Road and 12th Street and 12th Street between Highway 1 and Imjin Road.

Figure 3.1: Project Location



Higgins Associates

A03-002\...\marinastreets.apr

Figure 3.2: Marina Heights Conceptual Land Plan – Vehicular Circulation

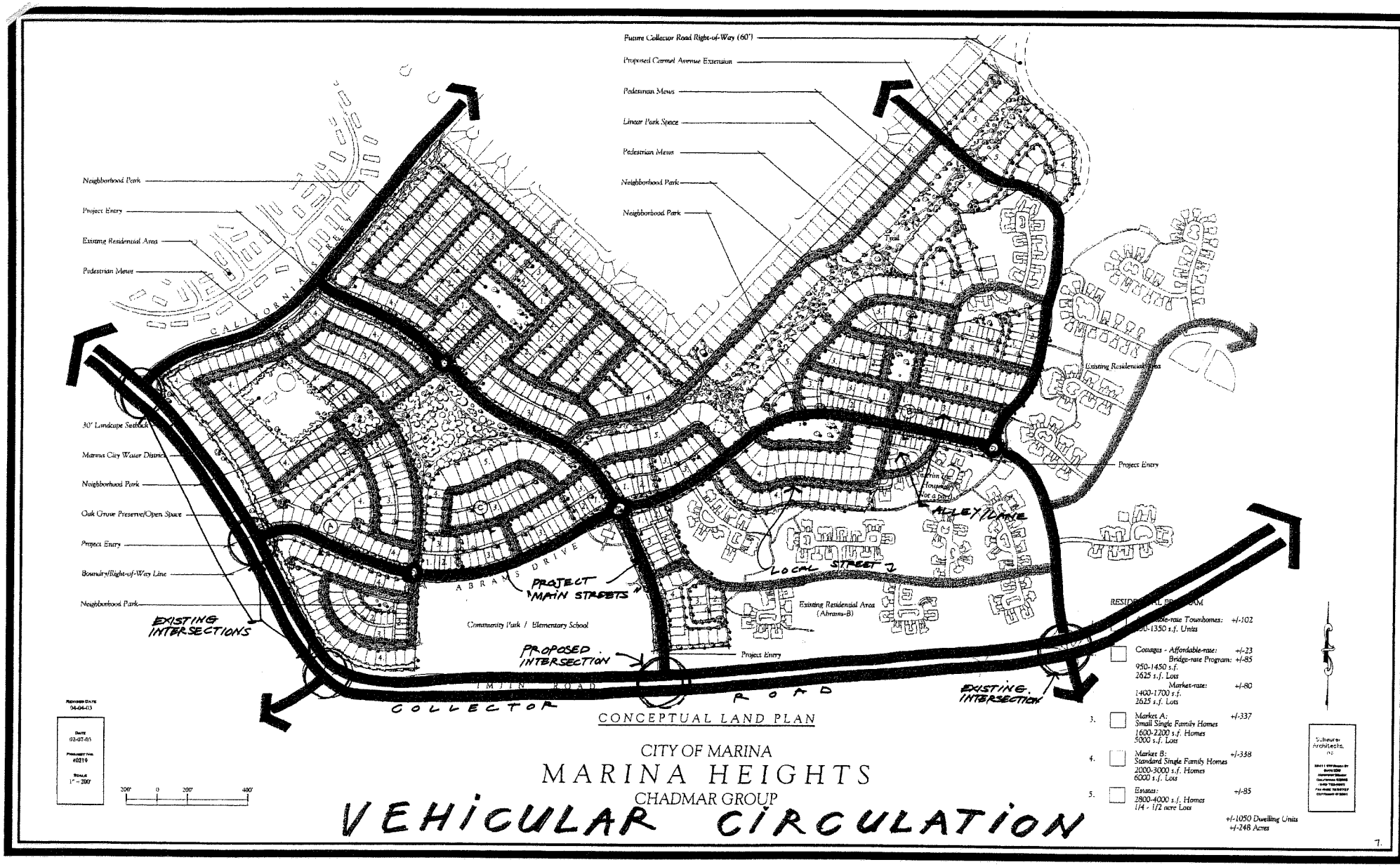


TABLE 3-1
STUDY INTERSECTIONS

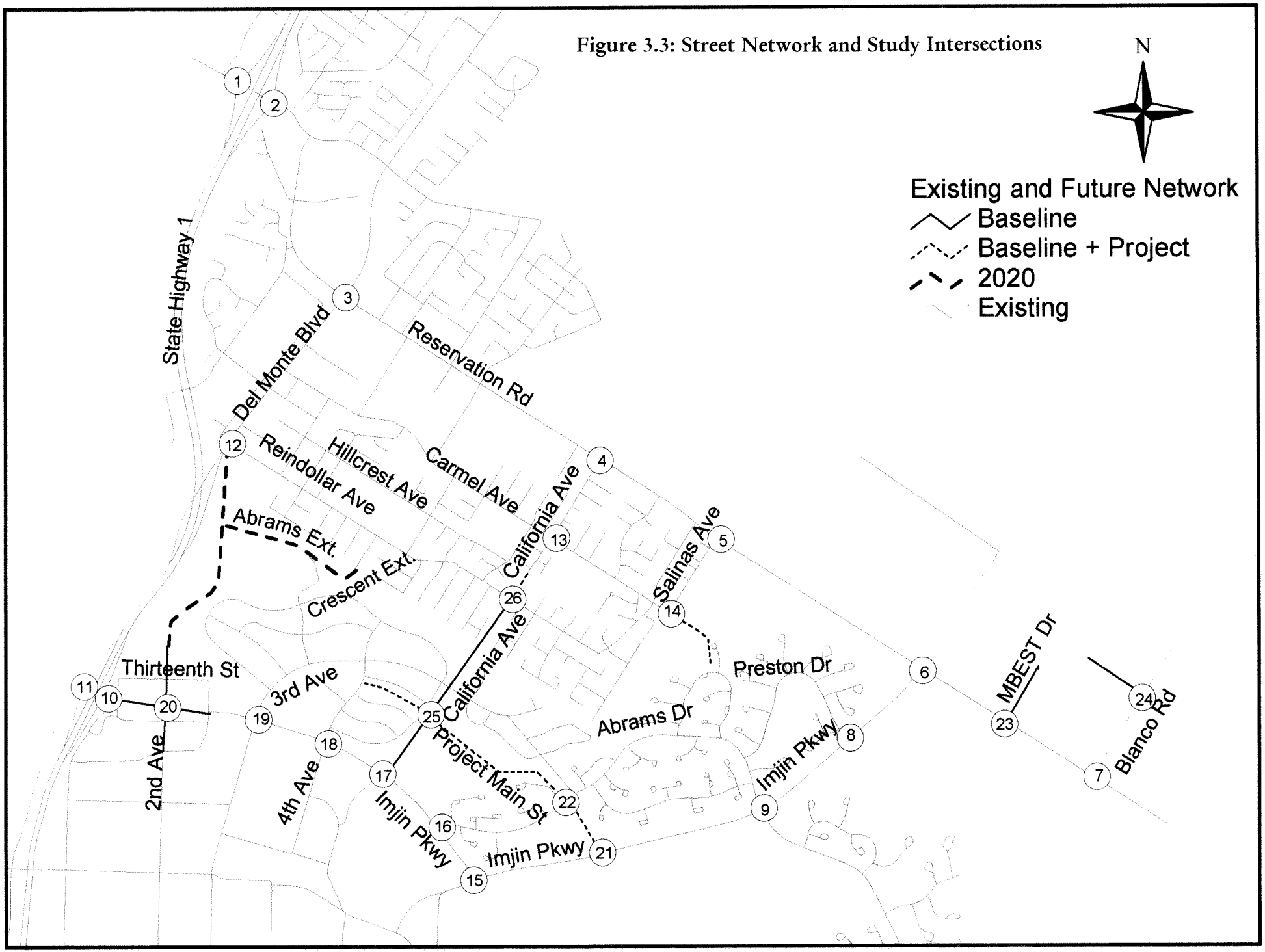
Existing Intersections:

1.	Hwy1 SB Ramp/Reservation Road
2.	Hwy1 NB Ramps/Reservation Road
3.	Del Monte Blvd./Reservation Rd.
4.	California Ave./Reservation Rd.
5.	Salinas Ave./Reservation Rd.
6.	Imjin Rd./Reservation Rd.
7.	Blanco Rd./Reservation Rd.
8.	Imjin Rd./Preston Dr.
9.	Imjin Rd./Abrams Dr.
10.	Hwy 1 NB Ramps/12th Street
11.	Hwy 1 SB Ramps/12th Street
12.	Del Monte Blvd./Reindollar Ave.
13.	California Ave./Carmel Ave.
14.	Salinas Ave./Carmel Ave.

Baseline and Future Intersections:

15.	Imjin Rd./12th Street
16.	Abrams Drive/12th Street
17.	California Avenue/12th Street
18.	4th Avenue/12th Street
19.	3rd Avenue/12th Street
20.	2nd Avenue/12th Street
21.	Project Main Street /Imjin Rd.
22.	Project Main Street /Abrams Dr.
23.	MBEST Dr./Reservation Rd.
24.	Blanco Rd./Research Dr.
25.	California Avenue/Project Main Street
26.	California Avenue/Reindollar Avenue

Figure 3.3: Street Network and Study Intersections



- Existing Traffic Conditions: Existing traffic conditions on the existing roadway network based on manual counts conducted from February 24 to 27, 2003 at the study intersections. The manual traffic counts were conducted before the 12th Street reconstruction was completed. Therefore, the existing conditions analysis reflects traffic conditions with 12th Street between Imjin Road and 2nd Avenue closed. Existing Highway 1 volumes are based upon Highway 1 traffic volumes collected in April 2003.

- Baseline Traffic Conditions: Using the County-wide traffic forecasting model for the Monterey County General Plan update to develop a baseline traffic condition that reflects existing conditions (Year 2003) with the opening of 12th Street as a four-lane divided arterial from Highway 1 to Imjin Road and the opening of California Extension between 12th Street and Reindollar Avenue. The baseline traffic condition analysis is based on the existing roadway network with 12th Street open for traffic.

- Baseline Plus Project Conditions: Traffic conditions with the complete occupation of the proposed project, added to the Baseline Conditions traffic volumes.

- Cumulative Conditions Without Project: Traffic conditions with Year 2020 traffic volumes and street network as identified in the FORA Capital Improvement Program (CIP), without traffic generated from the Specific Plan Area.

- Cumulative Conditions With Project: Traffic conditions with the complete occupation of the Specific Plan area, added to the Cumulative Conditions without Project traffic volumes.

The 12th Street corridor was under construction and was closed to through traffic at the time that this traffic study was initiated. Therefore, it was not possible to obtain existing intersection volume data along the 12th Street corridor for this study. In the time since completion of the traffic volume collection, 12th Street between 2nd Avenue and Imjin Road and California Avenue between Reindollar Avenue and 12th Street have been opened for traffic. The analysis of Existing Conditions reflects traffic conditions prior to the reopening of 12th Street.

A year 2003 baseline condition was included in the analysis that evaluates year 2003 AM and PM peak hour traffic conditions with 12th Street opened to traffic. The County-wide traffic forecasting model used by Higgins Associates for the County General Plan update was used to estimate the traffic diversions that will occur with the upgraded 12th Street corridor opened to traffic. Intersections 1 through 14, listed above, were included in the analysis of Existing Conditions. Intersections 15 through 26 were included in the analysis of Baseline, Project and/or Cumulative conditions.

For each scenario, intersection level of service (LOS) analyses were performed according to the *2000 Highway Capacity Manual* methodology, using the SYNCHRO software. LOS is a quantitative description of an intersection and roadway's operation, ranging from LOS A (or free-flow conditions) to LOS F (or jammed conditions). The **Technical Appendix** - Appendix A provides additional description of the level of service for signalized intersections. The **Technical Appendix** - Appendix B and Appendix C provide additional information with regards to the level of service for unsignalized intersections.

The City of Marina has adopted LOS D as the minimum acceptable level of service for city intersections. The County of Monterey has adopted LOS C as the minimum acceptable level of service for County intersections. LOS E is typically considered the standard for acceptability for the minor street approach at an unsignalized intersection. Caltrans seeks to maintain traffic operations at the cusp between LOC C and LOS D.

In order to determine the appropriateness of the existing study intersection geometrics, channelization and signal warrants were evaluated. The justification for the installation of a traffic signal at an unsignalized intersection is based on the eleven traffic signal warrants stated in the Caltrans Traffic manual. However, the decision to install a traffic signal should not be based purely on the warrants alone. Engineering judgment should be exercised on a case-by-case basis to evaluate the effect a traffic signal would have on certain types of accidents and traffic conditions at the subject intersection as well as at adjacent intersections.

In this study, this assessment was made on the basis of the Peak-Hour Volume Signal Warrant only (Warrant #11, described in the Caltrans Traffic manual). This method provided an indication of whether peak-hour traffic volumes are, or would be, sufficient to justify the further investigation into the installation of a traffic signal.

The traffic study also included the evaluation of bicycle circulation and pedestrian circulation needs, including connections to existing bike lanes and sidewalks. Transit service to the study area was also evaluated in the study. On-site circulation and access were evaluated.

Mitigation measures that would be required to improve existing conditions and mitigate Specific Plan-related and cumulative impacts are recommended. These mitigation measures include geometric improvements as well as traffic control measures.

B. SETTING

EXISTING TRAFFIC CONDITIONS

Existing Roadway Network

Direct access to the Specific Plan area is provided via Abrams Drive, Imjin Road, 12th Street, Carmel Avenue extension and California Avenue. Other major highways and streets in the vicinity of the study area include Reservation Road and State Route 1. A conceptual site plan of the Specific Plan area including the proposed circulation network is shown in **Figure 3.2**. The roadway network in the vicinity of the Specific Plan and the study area intersections are shown in **Figure 3.3**.

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 a 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.

State Route 1 provides regional as well as statewide access for the Monterey Peninsula. It is a four-lane freeway through Marina, with interchanges provided at 12th Street, South Del Monte Boulevard, Reservation Road and North Del Monte Boulevard.

Imjin Road is a two-lane arterial between Reservation Road and 12th Street. Imjin Road provides access to the Marina Municipal Airport and the planned UC-MBEST located north of Reservation Road, the California State University Monterey Bay (CSUMB) located south of Marina, and residential developments in between. The posted speed limit on Imjin Road is 45 miles per hour (MPH).

12th Street was under construction when this study was initiated. The street reopened to traffic in May, 2003, between Imjin Road and 2nd Avenue. Access between Highway 1 and the westerly terminus of reconstructed 12th Street is currently feasible via 2nd Avenue, 1st Avenue and the old 12th Street. The reconstructed 12th Street is a four-lane divided arterial with a posted speed limit of 45 MPH. A section of 12th Street between 2nd Avenue and

Highway 1, including the 12th Street/Northbound Highway 1 ramps intersection, remains to be constructed.

Existing Traffic Volumes

Existing AM and PM peak hour turning movements were collected at 14 existing intersections on Monday afternoon, February 24, both morning and afternoon on Tuesday, February 25, Wednesday, February 26, and Thursday, February 27, 2003. **Figure 3.4** and **Figure 3.5** present the existing AM and PM peak hour volumes, respectively. The traffic count data are included in **Technical Appendix** - Appendix D.

Seven-day, twenty-four hour machine tube counts were collected at four locations: Reservation Road both east and west of Imjin Road, Imjin Road south of Reservation Road, and Imjin Road east of 12th Street. Reservation Road currently carries about 27,100 vehicles per weekday east of Imjin Road and 25,900 vehicles per weekday west of Imjin Road. Imjin Road south of Reservation Road carries about 11,400 vehicles per weekday and Imjin Road north of 12th Street carries about 8,600 vehicles per weekday at the current time. The machine count data are included in **Technical Appendix** – Appendix E.

According to statistics published by Caltrans, State Highway 1 carried about 83,000 vehicles per day (vpd) south of 12th Street and 91,000 vpd north of 12th Street in 2002. North and south of Reservation Road, Highway 1 carried about 42,000 vpd in 2002. **Table 3-2** shows the existing AM and PM peak hour volumes on Highway 1 from south of 12th Street to north of Del Monte Boulevard (North). The existing AM and PM peak hour volumes on Highway 1 are based upon traffic counts collected on Highway 1 at the permanent count stations located at the Salinas River bridge north of Marina in April 2003. The counts were increased by 10 percent to reflect seasonal fluctuations on the regional road network.

Existing Traffic Operations

Intersection level of service calculations were performed for the study intersections according to the *2000 Highway Capacity Manual* methodology, using the SYNCHRO software. Signal phasing and timing information was obtained from the City of Marina and County of Monterey. **Table 3-3** presents the intersection Level of Service (LOS) at the 14 existing intersections for both AM and PM peak hours. All intersections except for Highway 1 southbound ramp/Reservation Road intersection operate at LOS C or better during both AM and PM peak hours. LOS calculation sheets are included in **Technical Appendix** – Appendix F.

Figure 3.4: AM Peak Hour – Existing Conditions

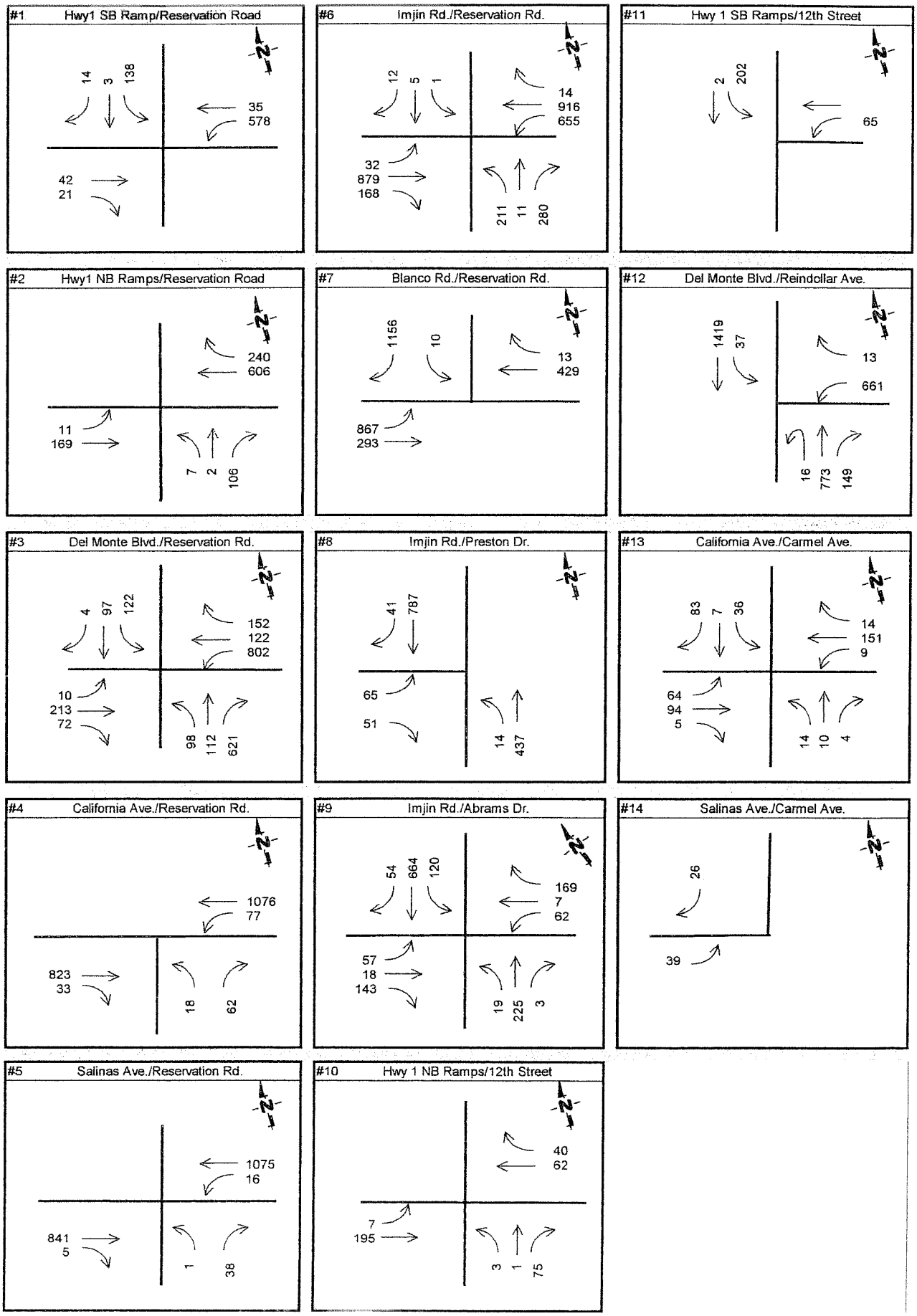


Figure 3.5: PM Peak Hour – Existing Conditions

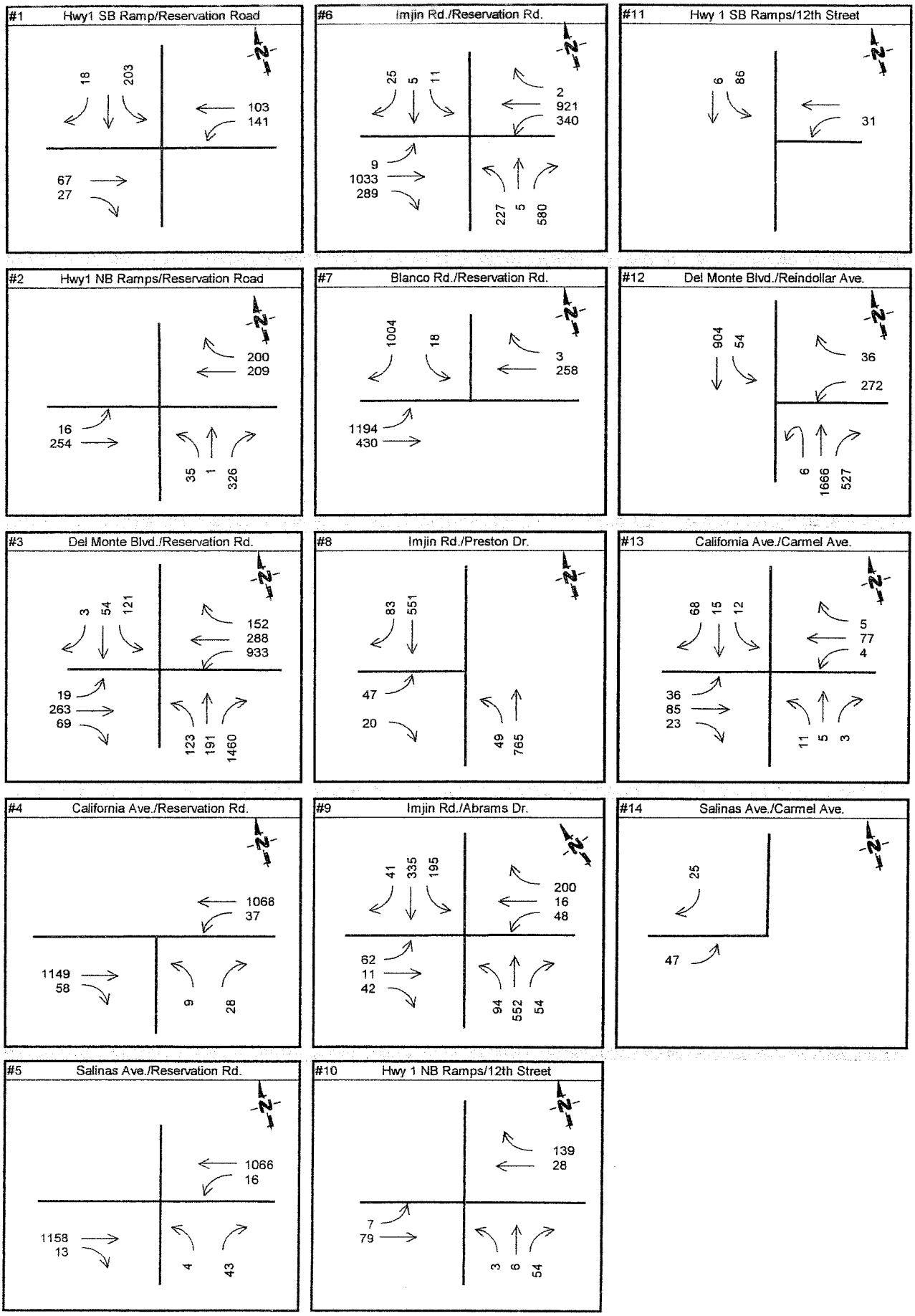


Table 3-2: Highway 1 Peak Hour Volumes and LOS Summary

Higgins Associates

HIGHWAY 1 VOLUMES

AM PEAK HOUR

	Existing Conditions		Existing Baseline Conditions		Project Conditions		Cumulative W/O Project		Cumulative With Project	
	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound
North of Del Monte North	2386	1024	2386	1024	2414	1110	3067	2120	3095	2206
Del Monte North-Reservation	2296	959	2296	959	2324	1045	2830	1804	2858	1890
Reservation-Del Monte	2740	1210	2740	1210	2768	1284	2652	1792	2680	1866
Del Monte -12th Street	4981	2040	4354	1798	4382	1872	3486	2366	3514	2440
South of 12th Street	4844	2009	4977	2049	5120	2095	4165	2859	4308	2905

PM PEAK HOUR

	Existing Conditions		Existing Baseline Conditions		Project Conditions		Cumulative W/O Project		Cumulative With Project	
	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound
North of Del Monte North	1563	2409	1563	2409	1660	2463	2572	2870	2669	2924
Del Monte North-Reservation	1438	2269	1438	2269	1535	2323	2378	2584	2475	2638
Reservation-Del Monte	1385	2486	1385	2486	1453	2535	2241	2543	2309	2592
Del Monte -12th Street	2561	4685	2193	3970	2261	4019	2986	3596	3054	3645
South of 12th Street	2504	4774	2541	5041	2632	5203	3556	4288	3647	4450

HIGHWAY 1 SEGMENT LEVELS OF SERVICE

AM PEAK HOUR

	Existing Conditions				Existing Baseline Conditions				Project Conditions				Cumulative W/O Project				Cumulative With Project			
	Southbound		Northbound		Southbound		Northbound		Southbound		Northbound		Southbound		Northbound		Southbound		Northbound	
	Den	LOS	Den	LOS	Den	LOS	Den	LOS	Den	LOS	Den	LOS	Den	LOS	Den	LOS	Den	LOS	Den	LOS
North of Del Monte North	20.9	C	9.0	A	20.9	C	9.0	A	21.1	C	9.7	A	27.1	D	18.6	C	27.6	D	19.4	C
Del Monte North-Reservation	20.1	C	8.4	A	20.1	C	8.4	A	20.3	C	9.1	A	24.8	C	15.8	B	25.2	C	16.6	B
Reservation-Del Monte	24.0	C	10.6	A	24.0	C	10.6	A	24.3	C	11.2	B	23.2	C	15.7	B	23.6	C	16.4	B
Del Monte -12th Street	30.0	D	11.9	B	25.5	C	10.5	A	25.4	C	10.9	A	20.3	C	13.8	B	20.6	C	14.3	B
South of 12th Street	28.9	D	11.7	B	30.0	D	12.0	B	31.2	D	12.2	B	24.3	C	16.7	B	25.4	C	17.0	B

PM PEAK HOUR

	Existing Conditions				Existing Baseline Conditions				Project Conditions				Cumulative W/O Project				Cumulative With Project			
	Southbound		Northbound		Southbound		Northbound		Southbound		Northbound		Southbound		Northbound		Southbound		Northbound	
	Den	LOS	Den	LOS	Den	LOS	Den	LOS	Den	LOS	Den	LOS	Den	LOS	Den	LOS	Den	LOS	Den	LOS
North of Del Monte North	13.7	B	21.1	C	13.7	B	21.1	C	14.5	B	21.6	C	22.5	C	25.2	C	23.4	C	25.7	C
Del Monte North-Reservation	12.6	B	19.9	C	12.6	B	19.9	C	13.4	B	20.6	C	20.8	C	22.6	C	21.7	C	23.1	C
Reservation-Del Monte	12.1	B	21.8	C	12.4	B	21.8	C	12.7	B	22.2	C	19.6	C	22.3	C	20.2	C	22.7	C
Del Monte -12th Street	14.9	B	27.7	D	12.8	B	23.2	C	13.2	B	23.5	C	17.4	B	21.0	C	17.8	B	21.3	C
South of 12th Street	14.6	B	28.4	D	14.8	B	30.5	D	15.4	B	31.9	D	20.8	C	25.1	C	21.3	C	26.1	D

Notes:
1. Den: Density -- passenger cars per mile per lane.
2. LOS -- Level of Service.

A03-002-Hwy1Volsg.xls

Table 3-3: Intersection LOS Summary

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	Existing Conditions (2003) AM Peak Hr Delay (sec)	LOS	Existing Conditions (2003) PM Peak Hr Delay (sec)	LOS	Baseline Conditions (2003) AM Peak Hr Delay (sec)	LOS	Baseline Conditions (2003) PM Peak Hr Delay (sec)	LOS	Baseline + Project Conditions AM Peak Hr Delay (sec)	LOS	Baseline + Project Conditions PM Peak Hr Delay (sec)	LOS	Cumulative Without Project Conditions AM Peak Hr Delay (sec)	LOS	Cumulative Without Project Conditions PM Peak Hr Delay (sec)	LOS	Cumulative With Project Conditions AM Peak Hr Delay (sec)	LOS	Cumulative With Project Conditions PM Peak Hr Delay (sec)	LOS
1	Highway 1 SB Ramps	Reservation Road	SB 1-L/T, 1-/R EB 1-T/R WB 1-L, 1-T	Two-Way Stop Worst Approach *With Signal*	D	**83.8** * Southbound *12.5*	**F** F *B*	**9.8** 20.0 Southbound *10.2*	**A** C *B*	**83.8** * Southbound *12.5*	**F** F *B*	**9.8** 20.0 Southbound *10.2*	**A** C *B*	**83.8** * Southbound *12.5*	**F** F *B*	**11.3** 22.3 Southbound *10.0*	**B** C *B*	* * Southbound *26.7*	F F *C*	**26.5** 49.9 Southbound *13.4*	**D** E *B*	* * Southbound *26.7*	F F *C*	**34.8** 64.2 Southbound *15.0*	**D** F *B*
2	Highway 1 NB Ramps	Reservation Road	NB 1-L/T, 1-R EB 1-L, 1-T WB 1-T, 1-R	Two-Way Stop Worst Approach *With Signal*	D	**1.2** 10.8 Northbound	**A** B	**5.0** 13.9 Northbound	**A** B	**1.2** 10.8 Northbound	**A** B	**5.0** 13.9 Northbound	**A** B	**1.2** 10.8 Northbound	**A** B	**5.0** 14.6 Northbound	**A** B	**1.5** 21.1 Northbound *5.7*	**A** C *A*	**6.2** 24.3 Northbound *42.8*	**A** C *D*	**1.5** 21.1 Northbound *5.7*	**A** C *A*	**6.8** 27.1 Northbound *40.1*	**A** D *D*
3	Del Monte Boulevard	Reservation Road	NB 1-L, 1-T, 2-R SB 2-L, 1-T, 1-T/R EB 1-L/T, 1-T/R WB 2-L, 1-T, 1-R	Signal *With Mitigation*	D	**19.3** *30.5*	**B** *C*	**23.7** *54.4*	**C** *D*	**16.7** *30.9*	**B** *C*	**19.7** *53.3*	**B** *D*	**16.8** 	**B** 	**20.4** 	**C** 	**43.9** 	**D** 	**93.8** 	**F** 	**44.6** 	**D** 	**96.6** 	**F**
4	California Avenue	Reservation Road	NB 1-L, 1-R EB 1-T, 1-T/R WB 2-T, 1-L	Two-Way Stop Worst Approach *With Signal*	D	**1.5** 27.7 Northbound	**A** D	**0.7** 31.5 Northbound	**A** D	**1.6** 14.9 Northbound	**A** B	**0.6** 12.7 Northbound	**A** B	**2.1** 20.0 Northbound	**A** C	**0.7** 15.0 Northbound	**A** C	* * Northbound *14.2*	F F *B*	* * Northbound *17.1*	F F *B*	* * Northbound *16.7*	F F *B*	* * Northbound *18.7*	F F *B*
5	Salinas Avenue	Reservation Road	NB 1-L/R EB 1-T, 1-T/R WB 2-T, 1-L	Two-Way Stop Worst Approach *With Mitigation*	D	**0.3** 13.5 Northbound	**A** B	**0.5** 20.3 Northbound	**A** C	**0.5** 11.3 Northbound	**A** B	**0.5** 11.0 Northbound	**A** B	**1.2** 17.8 Northbound	**A** C	**0.9** 15.5 Northbound	**A** C	**2.9** 58.2 Northbound *8.3*	**A** F *A*	**3.0** 73.1 Northbound *9.2*	**A** F *A*	**16.9** 287.5 Northbound *8.2*	**C** F *A*	**21.5** * Northbound *10.5*	**C** F *B*
6	Imjin Road	Reservation Road	NB 2-L, 1-T/R, 1-R SB 1-L, 1-T, 1-R EB 2-L, 2-T, 1-R WB 2-L, 2-T, 1-R	Signal *With Mitigation (w/o Blanco Rd Ext)* *With Mitigation (w/ Blanco Rd Ext)*	D	**27.3** 	**C** 	**26.8** 	**C** 	**29.3** 	**C** 	**31.0** 	**C** 	**30.6** 	**C** 	**30.1** 	**C** 	**109.0** *44.6* *30.2*	**F** *D* *C*	**148.1** *52.0* *26.9*	**F** *D* *C*	**148.2** *39.9* *30.4*	**F** *D* *C*	**170.7** *48.0* *27.2*	**F** *D* *C*
7	Blanco Road	Reservation Road	SB 2-L, 2-R EB 2-L, 2-T WB 1-L, 1-T	Signal *With Mitigation (w/o Blanco Rd Ext)* *With Mitigation (w/ Blanco Rd Ext)*	C	**10.4** 	**B** 	**11.6** 	**B** 	**10.4** 	**B** 	**11.6** 	**B** 	**11.7** 	**B** 	**12.1** 	**B** 	**32.0** *13.9* *23.7*	**C** *B* *C*	**58.7** *24.9* *30.1*	**E** *C* *C*	**40.1** *15.9* *28.9*	**D** *B* *C*	**65.3** *30.1* *31.2*	**E** *C* *C*
8	Imjin Road	Preston Drive	NB 1-L, 1-T SB 1-T, 1-R EB 1-L/R	Two-Way Stop Worst Approach *With Mitigation*	D	**5.0** 58.3 Eastbound *10.9*	**A** F *B*	**3.1** 64.0 Eastbound *7.9*	**A** F *A*	**25.7** * Eastbound *24.7*	**D** F *C*	**19.5** * Eastbound *17.2*	**C** F *B*	**41.7** * Eastbound *31.2*	**E** F *C*	**219.9** * Eastbound *31.4*	**F** F *C*	**279.0** * Eastbound *7.3*	**F** F *A*	**142.3** * Eastbound *8.9*	**F** F *A*	**260.4** * Eastbound *7.8*	**F** F *A*	**131.5** * Eastbound *10.5*	**F** F *B*

Note:
1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Level of Service analysis based on Highway Capacity Manual 2000.
4. * = Delay is over 300 seconds (5 minutes)

Table 3-3: Intersection LOS Summary (continued)

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	Existing Conditions (2003) AM Peak Hr Delay (sec)	Existing Conditions (2003) AM Peak Hr LOS	Existing Conditions (2003) PM Peak Hr Delay (sec)	Existing Conditions (2003) PM Peak Hr LOS	Baseline Conditions (2003) AM Peak Hr Delay (sec)	Baseline Conditions (2003) AM Peak Hr LOS	Baseline Conditions (2003) PM Peak Hr Delay (sec)	Baseline Conditions (2003) PM Peak Hr LOS	Baseline + Project Conditions AM Peak Hr Delay (sec)	Baseline + Project Conditions AM Peak Hr LOS	Baseline + Project Conditions PM Peak Hr Delay (sec)	Baseline + Project Conditions PM Peak Hr LOS	Cumulative Without Project Conditions AM Peak Hr Delay (sec)	Cumulative Without Project Conditions AM Peak Hr LOS	Cumulative Without Project Conditions PM Peak Hr Delay (sec)	Cumulative Without Project Conditions PM Peak Hr LOS	Cumulative With Project Conditions AM Peak Hr Delay (sec)	Cumulative With Project Conditions AM Peak Hr LOS	Cumulative With Project Conditions PM Peak Hr Delay (sec)	Cumulative With Project Conditions PM Peak Hr LOS
9	Imjin Road	Abrams Drive	NB 1-L, 1-T, 1-R SB 1-L, 1-T, 1-R EB 1-L/T, 1-R WB 1-L/T, 1-R	Signal *With Mitigation*	D	**8.7**	**A**	**7.9**	**A**	**17.0**	**B**	**29.3**	**C**	**19.5**	**B**	**43.4**	**D**	**129.9**	**F**	**186.4**	**F**	**165.8**	**F**	**227.7**	**F**
																		28.7	***C***	***35.4***	***D***	***29.1***	***C***	***38.2***	***D***
10	Highway 1 NB Ramp	12th Street	NB 1-L/T, 1-R EB 1-L/T, 1-T WB 1-T, 1-R	Two-Way Stop Worst Approach *With Mitigation* *Overall Intersection* *Worst Approach*	D	**2.1** 9.6 Northbound ***0.2*** *28.4*	**A** A ***A*** *D*	**2.0** 9.1 Northbound ***0.3*** *15.6*	**A** A ***A*** *C*	**3.7** 14.7 Northbound ***0.2*** *28.4*	**A** B ***A*** *D*	**125.1** 218.6 Northbound ***0.3*** *15.6*	**F** F ***A*** *C*	**4.1** 17.3 Northbound ***0.2*** *28.4*	**A** C ***A*** *D*	**201.0** * Northbound ***0.3*** *18.7*	**F** F ***A*** *C*	***0.2*** *38.9*	***A*** *E*	***0.3*** *31.9*	***A*** *D*	***7.8*** *	***A*** *F*	***14.8*** *	***B*** *F*
11	Highway 1 SB Ramp	12th Street	SB 1-L, 1-L/T WB 1-L	Two-Way Stop Worst Approach *With Signal*	D	**9.9** 10.8 Southbound	**A** B Southbound	**8.8** 9.3 Southbound	**A** A Southbound	* * Southbound ***8.6***	**F** F ***A***	**35.1** 122.3 Southbound ***5.4***	**E** F Southbound ***A***	* * Southbound ***10.9***	**F** F Southbound ***B***	**153.3** * Southbound ***7.3***	**F** F Southbound ***A***	* * Southbound ***13.6***	**F** F Southbound ***B***	* * Southbound ***10.8***	**F** F Southbound ***B***	* * Southbound ***16.9***	**F** F Southbound ***B***	* * Southbound ***13.7***	**F** F Southbound ***B***
12	Del Monte Boulevard	Reindollar Avenue	NB 1-L, 2-T, 1-R SB 1-L, 2-T WB 1-L, 1-L/R	Signal	D	**17.8**	**B**	**17.4**	**B**	**13.5**	**B**	**11.7**	**B**	**13.5**	**B**	**11.7**	**B**	**15.0**	**B**	**27.5**	**C**	**15.0**	**B**	**27.5**	**C**
13	California Avenue	Carmel Avenue	NB 1-L, 1-T/R SB 1-L, 1-T/R EB 1-L/T, 1-R WB 1-L/T, 1-R	All-Way Stop	D	**9.1**	**A**	**7.5**	**A**	**9.1**	**A**	**7.5**	**A**	**9.4**	**A**	**7.7**	**A**	**14.5**	**B**	**25.2**	**D**	**15.6**	**C**	**32.8**	**D**
14	Salinas Avenue	Carmel Avenue	Future Lane Configuration SB 1-L/R EB 1-T/R WB 1-L/T	Future Intersection Control Two-Way Stop Worst Approach	D									**4.6** 8.8 Southbound	**A** A Southbound	**6.2** 9.5 Southbound	**A** A Southbound	**6.5** 8.7 Southbound	**A** A Southbound	**6.9** 10.4 Southbound	**A** B Southbound	**5.3** 9.1 Southbound	**A** A Southbound	**6.9** 11.7 Southbound	**A** B Southbound

Note:
1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Level of Service analysis based on Highway Capacity Manual 2000.
4. * = Delay is over 300 seconds (5 minutes)

Table 3-3: Intersection LOS Summary (continued)

	N-S Street	E-W Street	Future Lane Configuration	Future Intersection Control	LOS Standard	Existing Conditions (2003) AM Peak Hr Delay (sec)	Existing Conditions (2003) AM Peak Hr LOS	Existing Conditions (2003) PM Peak Hr Delay (sec)	Existing Conditions (2003) PM Peak Hr LOS	Baseline Conditions (2003) AM Peak Hr Delay (sec)	Baseline Conditions (2003) AM Peak Hr LOS	Baseline Conditions (2003) PM Peak Hr Delay (sec)	Baseline Conditions (2003) PM Peak Hr LOS	Baseline + Project Conditions AM Peak Hr Delay (sec)	Baseline + Project Conditions AM Peak Hr LOS	Baseline + Project Conditions PM Peak Hr Delay (sec)	Baseline + Project Conditions PM Peak Hr LOS	Cumulative Without Project Conditions AM Peak Hr Delay (sec)	Cumulative Without Project Conditions AM Peak Hr LOS	Cumulative Without Project Conditions PM Peak Hr Delay (sec)	Cumulative Without Project Conditions PM Peak Hr LOS	Cumulative With Project Conditions AM Peak Hr Delay (sec)	Cumulative With Project Conditions AM Peak Hr LOS	Cumulative With Project Conditions PM Peak Hr Delay (sec)	Cumulative With Project Conditions PM Peak Hr LOS
15	Imjin Road (south leg)	Imjin (east leg) 12th Street (west leg)	NB 2-L, 1-R EB 1-T, 1-T/R WB 1-L, 2-T	Two-Way Stop Worst Approach *With Mitigation*	D					**11.5** 86.3 Northbound *9.4*	**B** F *A*	**10.1** 40.0 Northbound *38.9*	**B** E *D*	**16.5** 139.3 Northbound *10.3*	**C** F *B*	**16.8** 69.9 Northbound *44.4*	**C** F *D*	* * Northbound *19.4*	**F** F *B*	**213.6** * Northbound *45.0*	**F** F *D*	* * Northbound *23.2*	**F** F *C*	**256.6** * Northbound *54.3*	**F** F *D*
16	Abrams Drive	12th Street	SB 1-L/R EB 1-L, 2-T WB 1-T, 1-T/R	Two-Way Stop Worst Approach *With Signal*	D					**1.7** 13.6 Southbound	**A** B	**1.3** 11.9 Southbound	**A** B	**3.5** 18.7 Southbound *7.7*	**A** C *A*	**3.2** 24.0 Southbound *8.7*	**A** C *A*	**1.3** 20.5 Southbound *9.0*	**A** C *A*	**1.8** 37.1 Southbound *8.6*	**A** E *A*	**5.0** 53.7 Southbound *12.4*	**A** F *B*	**48.7** * Southbound *12.7*	**E** F *B*
17	California Avenue	12th Street	NB 1-L/T/R SB 1-L/T/R EB 1-L, 1-T, 1-T/R WB 1-L, 1-T, 1-T/R	Two-Way Stop Worst Approach *With Mitigation*	D					**1.4** 16.2 Southbound	**A** C	**1.4** 15.1 Southbound	**A** C	**4.7** 64.6 Southbound *11.3*	**A** F *B*	**2.9** 23.1 Southbound *9.3*	**A** C *A*	* * Southbound *17.5*	**F** F *B*	* * Southbound *24.5*	**F** F *C*	* * Southbound *21.3*	**F** F *C*	* * Southbound *32.2*	**F** F *C*
18	4th Avenue	12th Street	NB 1-L/T/R SB 1-L/T/R EB 1-L, 1-T, 1-T/R WB 1-L, 1-T, 1-T/R	Two-Way Stop Worst Approach *With Mitigation*	D					**0.1** 31.6 Southbound	**A** D	**0.2** 34.1 Southbound	**A** D	**0.1** 49.1 Southbound	**A** E	**0.3** 57.5 Southbound	**A** F	**4.0** 212.9 Southbound *12.4*	**A** F *B*	* * Southbound *20.1*	**F** F *C*	**5.8** * Southbound *13.8*	**A** F *B*	* * Southbound *25.6*	**F** F *C*
19	3rd Avenue	12th Street	NB 1-L, 1-T/R SB 1-L, 1-T/R EB 1-L, 1-T, 1-T/R WB 1-L, 1-T, 1-T/R	Two-Way Stop Worst Approach *With Signal*	D					**1.7** 41.4 Northbound	**A** E	**0.3** 34.2 Southbound	**A** D	**2.2** 74.7 Northbound	**A** F	**0.4** 60.6 Southbound	**A** F	**7.3** 96.5 Northbound *9.0*	**A** F *A*	**17.4** * Northbound *9.6*	**C** F *A*	**17.6** 291.7 Northbound *10.1*	**C** F *B*	**163.5** * Northbound *10.5*	**F** F *B*
20	2nd Avenue	12th Street	NB 1-L, 1-T, 1-T/R SB 1-L, 1-T, 1-T/R EB 1-L, 1-T, 1-T/R WB 1-L, 1-T, 1-T/R	All-Way Stop *With Signal*	D					**67.5** *10.2*	**F** *B*	**66.3** *10.7*	**F** *B*	**145.6** *15.5*	**F** *B*	**159.4** *12.2*	**F** *B*	**250.1** *25.5*	**F** *C*	* *54.1*	**F** *D*	* *26.7*	**F** *C*	* *46.3*	**F** *D*

Note:
1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Level of Service analysis based on Highway Capacity Manual 2000.
4. * = Delay is over 300 seconds (5 minutes)

Table 3-3: Intersection LOS Summary (continued)

	N-S Street	E-W Street	Future Lane Configuration	Future Intersection Control	LOS Standard	Existing Conditions (2003) AM Peak Hr Delay (sec)	Existing Conditions (2003) AM Peak Hr LOS	Existing Conditions (2003) PM Peak Hr Delay (sec)	Existing Conditions (2003) PM Peak Hr LOS	Baseline Conditions (2003) AM Peak Hr Delay (sec)	Baseline Conditions (2003) AM Peak Hr LOS	Baseline Conditions (2003) PM Peak Hr Delay (sec)	Baseline Conditions (2003) PM Peak Hr LOS	Baseline + Project Conditions AM Peak Hr Delay (sec)	Baseline + Project Conditions AM Peak Hr LOS	Baseline + Project Conditions PM Peak Hr Delay (sec)	Baseline + Project Conditions PM Peak Hr LOS	Cumulative Without Project Conditions AM Peak Hr Delay (sec)	Cumulative Without Project Conditions AM Peak Hr LOS	Cumulative Without Project Conditions PM Peak Hr Delay (sec)	Cumulative Without Project Conditions PM Peak Hr LOS	Cumulative With Project Conditions AM Peak Hr Delay (sec)	Cumulative With Project Conditions AM Peak Hr LOS	Cumulative With Project Conditions PM Peak Hr Delay (sec)	Cumulative With Project Conditions PM Peak Hr LOS
21	Project Main Street	Imjin Road	NB 1-L/T SB 1-T/R EB 1-L/R	Two-Way Stop Worst Approach *With Mitigation*	D									**95.3** * Southbound ***36.5***	**F** F ***D***	**35.1** * Southbound ***13.3***	**E** F ***B***	**N/A**		**N/A**		* * Southbound ***10.2***	**F** F ***B***	* * Southbound ***9.5***	**F** F ***A***
22	Project Main Street	Abrams Drive	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Roundabout	D									V/C = 0.17	**A**	V/C = 0.22	**A**	**N/A**		**N/A**		V/C = 0.22	**A**	V/C = 0.28	**A**
23	MBEST Drive	Reservation Road	SB 1-L, 1-L/R, 1/R EB 2-L, 2-T WB 3-T, 1-R	Signal	D									**6.2**	**A**	**5.4**	**A**	**11.3**	**B**	**23.1**	**C**	**12.8**	**B**	**30.0**	**C**
24	Blanco Road	Research Drive	NB 1-L, 2-T SB 2-T, 1-R EB 2-L, 1-R	Signal *With Mitigation*	C													**32.7** ***26.6***	**C** ***C***	**57.2** ***32.5***	**E** ***C***	**39.2** ***26.5***	**D** ***C***	**60.0** ***33.2***	**E** ***C***
25	California Avenue	Project Main Street	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop Worst Approach *With Mitigation* *Roundabout*	D									**5.0** 10.5 Westbound	**A** B	**2.9** 11.5 Westbound	**A** B	**9.7** 26.1 Eastbound V/C = 0.30	**A** D **A**	**107.4** * Eastbound V/C = 0.53	**F** F **A**	**18.0** 49.5 Westbound V/C = 0.34	**C** E **A**	* * Westbound V/C = 0.66	**F** F **B**
26	California Avenue	Reindollar Avenue	Baseline Conditions NB 1-L/R EB 1-T/R WB 1-L, 1-T	Baseline Conditions Two-Way Stop Worst Approach	D					**2.4** 11.2 Northbound	**A** B	**3.3** 12.0 Northbound	**A** B												
26	California Avenue	Reindollar Avenue	Baseline + Project and Cumulative NB 1-L, 1-T/R SB 1-L, 1-T/R EB 1-L, 1-T/R WB 1-L, 1-T/R	All-Way Stop	D									**8.6**	**A**	**8.6**	**A**	**10.1**	**B**	**16.7**	**C**	**10.4**	**B**	**18.4**	**C**

Note:
1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Level of Service analysis based on Highway Capacity Manual 2000.
4. * = Delay is over 300 seconds (5 minutes)

- The Highway 1 southbound ramp/Reservation Road intersection operated at LOS F during the AM peak hour and LOS A during the PM peak hour. The high delay at this intersection during the AM peak hour is due to the high volume of traffic turning left from westbound Reservation Road to the southbound Highway 1 on-ramp and the volume of traffic turning from the southbound Highway 1 off-ramp to eastbound Reservation Road. The existing peak hour volumes at Reservation Road/Southbound Highway 1 ramps intersection do not meet the Caltrans peak hour volume traffic signal warrants. Cumulative Condition volumes will meet the Caltrans peak hour volume warrant criteria. Caltrans peak-hour volume signal warrants are included in **Technical Appendix** – Appendix G. Channelization warrants are included in **Technical Appendix** – Appendix H.

- The Preston Drive approach to Imjin Road currently experiences high delay, while the intersection operates at an F level of service during the existing AM and PM peak hours.

Recommendations (Not Specific Plan-Related)

In evaluating existing traffic conditions as part of the EIR traffic analysis, Higgins Associates has identified possible improvements to alleviate existing congestion at study intersections in the absence of the Specific Plan. Although CEQA requires that the impact of a proposed project on existing traffic patterns be evaluated (see discussion on Baseline Plus Project Conditions in the **IMPACTS AND MITIGATION MEASURES** section, below), there is no requirement that a proposed project resolve existing traffic problems that are not project-related. Recommendations to improve existing conditions are summarized in **Table 3-4**. **Figure 3.6** and **Figure 3.7** summarize recommended road extensions and widenings, and new signal installations, respectively.

- To improve the Highway 1 southbound ramps/Reservation Road intersection operations in the absence of the Specific Plan, signalization of the intersection is required, since providing additional capacity via lane widenings is not feasible in this instance. With signalization, the intersection would operate at LOS B during the existing AM and PM peak hours.

- Signalization of the Preston Drive/Imjin Road intersection in the absence of the Specific Plan would improve operations to LOS B during the AM peak hour and LOS A during the PM peak hour.

Table 3-4: Intersection Improvements Summary

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	Existing Conditions (2003)	Baseline Conditions (2003)	Baseline + Project Conditions	Cumulative Without Project Conditions	Cumulative With Project Conditions
1	Highway 1 SB Ramps	Reservation Road	SB 1-L/T, 1-/R EB 1-T/R WB 1-L, 1-T	Two-Way Stop	D	1. Signalize	Same as Existing.	Same as Existing.	Same as Existing.	Same as Existing.
2	Highway 1 NB Ramps	Reservation Road	NB 1-L/T, 1-R EB 1-L, 1-T WB 1-T, 1-R	Two-Way Stop	D	None Required.	None Required.	None Required.	1. Monitor for signalization.	1. Monitor for signalization.
3	Del Monte Boulevard	Reservation Road	NB 1-L, 1-T, 2-R SB 2-L, 1-T, 1-T/R EB 1-L/T, 1-T/R WB 2-L, 1-T, 1-R	Signal	D	None Required.	None Required.	None Required.	1. Convert NB Del Monte from 1-L;1-T;2-R to 1-L;2-T;1-R	1. Convert NB Del Monte from 1-L;1-T;2-R to 2-L;2-T;1-R
4	California Avenue	Reservation Road	NB 1-L, 1-R EB 1-T, 1-T/R WB 2-T, 1-L	Two-Way Stop	D	None Required.	None Required.	None Required.	1. Signalize.	Same as Cumulative Without Project
5	Salinas Avenue	Reservation Road	NB 1-L/R EB 1-T, 1-T/R WB 2-T, 1-L	Two-Way Stop	D	None Required.	None Required.	None Required.	1. Signalize.	Same as Cumulative Without Project.
6	Imjin Road	Reservation Road	NB 2-L, 1-T/R, 1-R SB 1-L, 1-T, 1-R EB 2-L, 2-T, 1-R WB 2-L, 2-T, 1-R	Signal	D	None Required.	None Required.	None Required.	1. Modify NB Imjin from 2-L;1-T/R;1-R to 1-L;2-T;2-R 2. Add 2nd SB T lane on Imjin. 3. Add 3rd WB L turn lane OR OR 1. Modify NB Imjin from 2-L;1-T/R;1-R to 1-L;2-T;1-R 2. Add 2nd SB T lane on Imjin. 3. Construct Blanco Ext between Reservation Rd & Imjin Rd.	1. Modify NB Imjin from 2-L;1-T/R;1-R to 1-L;2-T;2-R 2. Add 2nd SB T lane on Imjin. 3. Add 3rd WB L turn lane. 4. Add 3rd EB T lane on Reser. OR 1. Modify NB Imjin from 2-L;1-T/R;1-R to 1-L;2-T;1-R 2. Add 2nd SB T lane on Imjin. 3. Construct Blanco Ext between Reservation Rd & Imjin Rd.
7	Blanco Road	Reservation Road	SB 2-L, 2-R EB 2-L, 2-T WB 1-L, 1-T	Signal	C	None Required.	None Required.	None Required.	1. Add 2nd WB through lane. OR Construct 2-6: 2. Construct Blanco Ext between Reservation Rd & Imjin Rd. 3. NB Approach: 1 L, 3 T, 1 R. 4. SB Approach: 2 L, 3 T, 1 free R. 5. EB Approach: 2 L, 2 T, 1 T/R. 6. WB Approach: 2 L, 2 T, 1 R.	1. Add 2nd WB through lane. OR Construct 2-6: 2. Construct Blanco Ext between Reservation Rd & Imjin Rd. 3. NB Approach: 1 L, 3 T, 1 R. 4. SB Approach: 2 L, 3 T, 1 free R. 5. EB Approach: 2 L, 2 T, 1 T/R. 6. WB Approach: 2 L, 2 T, 1 R.
8	Imjin Road	Preston Drive	NB 1-L, 1-T SB 1-T, 1-R EB 1-L/R	Two-Way Stop	D	1. Signalize	1. Signalize	1. Signalize	1. Signalize 2. Widen Imjin to 4 Lanes.	1. Signalize 2. Widen Imjin to 4 Lanes.

Note:
1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.

Table 3-4: Intersection Improvements Summary (continued)

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	Existing Conditions (2003)	Baseline Conditions (2003)	Baseline + Project Conditions	Cumulative Without Project Conditions	Cumulative With Project Conditions
9	Imjin Road	Abrams Drive	NB 1-L, 1-T, 1-R SB 1-L, 1-T, 1-R EB 1-L/T, 1-R WB 1-L/T, 1-R	Signal	D	None Required.	None Required.	None Required.	1. Widen Imjin to 4 Lanes. 2. Add 2nd L lane on SB Imjin approach to Abrams.	Same as Cumulative Without Project.
10	Highway 1 NB Ramp	12th Street	NB 1-L/T, 1-R EB 1-L/T, 1-T WB 1-T, 1-R	Two-Way Stop	D	None Required.	1. Add free flow right turn lane to NB off-ramp. 2. Change WB R turn lane to shared T/R. 3. Change EB approach to 1-L/T.	Same as Baseline.	Same as Baseline.	Same as Baseline.
11	Highway 1 SB Ramp	12th Street	SB 1-L, 1-L/T WB 1-L	Two-Way Stop	D	None Required.	1. Signalize 2. Convert 2 EB/1 WB lanes on bridge to 1 EB/2WB lanes. 3. Change SB Off Ramp from 1-L;1-L/T to 1-L;1-T. 4. Widen SB on-ramp to 2 lanes & transition to 1 lane.	Same as Baseline.	Same as Baseline.	Same as Baseline.
12	Del Monte Boulevard	Reindollar Avenue	NB 1-L, 2-T, 1-R SB 1-L, 2-T WB 1-L, 1-L/R	Signal	D	None Required.	None Required.	None Required.	None Required, unless the extension of 2nd Ave. requires reconfiguration due to change in the south leg.	Same as Cumulative Without Project.
13	California Avenue	Carmel Avenue	NB 1-L, 1-T/R SB 1-L, 1-T/R EB 1-L/T, 1-R WB 1-L/T, 1-R	All-Way Stop	D	None Required.	None Required.	None Required.	None Required.	None Required.
14	Salinas Avenue	Carmel Avenue	Future Lane Configuration SB 1-L/R EB 1-T/R WB 1-L/T	Future Intersection Control Two-Way Stop	D			None Required.	None Required.	None Required.

Note:
1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.

Table 3-4: Intersection Improvements Summary (continued)

	N-S Street	E-W Street	Future Lane Configuration	Future Intersection Control	LOS Standard	Existing Conditions (2003)	Baseline Conditions (2003)	Baseline + Project Conditions	Cumulative Without Project Conditions	Cumulative With Project Conditions
15	Imjin Road (south leg)	Imjin (east leg) 12th Street (west leg)	NB 2-L, 1-R EB 1-T, 1-T/R WB 1-L, 2-T	Two-Way Stop	D		1. Signalize 2. Add 2nd LT to WB Imjin approach.	Same as Baseline.	Same as Baseline.	Same as Baseline.
16	Abrams Drive	12th Street	SB 1-L/R EB 1-L, 2-T WB 1-T, 1-T/R	Two-Way Stop	D		None Required.	1. Signalize.	None Required.	Same as Baseline plus Project.
17	California Avenue	12th Street	NB 1-L/T/R SB 1-L/T/R EB 1-L, 1-T, 1-T/R WB 1-L, 1-T, 1-T/R	Two-Way Stop	D		None Required.	1. Signalize 2. Add an exclusive RT lane on the SB California Ave approach.	1. Signalize 2. Add an exclusive RT lane on the SB California Ave approach. 3. Add an exclusive RT lane on the NB California Ave approach.	Same as Cumulative Without Project
18	4th Avenue	12th Street	NB 1-L/T/R SB 1-L/T/R EB 1-L, 1-T, 1-T/R WB 1-L, 1-T, 1-T/R	Two-Way Stop	D		None Required.	None Required.	1. Signalize 2. Add an exclusive RT lane on the SB 4th Ave approach. 3. Add an exclusive RT lane on the NB 4th Ave approach.	Same as Cumulative Without Project
19	3rd Avenue	12th Street	NB 1-L, 1-T/R SB 1-L, 1-T/R EB 1-L, 1-T, 1-T/R WB 1-L, 1-T, 1-T/R	Two-Way Stop	D		None Required.	None Required.	1. Signalize	Same as Cumulative Without Project
20	2nd Avenue	12th Street	NB 1-L, 1-T, 1-T/R SB 1-L, 1-T, 1-T/R EB 1-L, 1-T, 1-T/R WB 1-L, 1-T, 1-T/R	All-Way Stop	D		1. Signalize	Same as Baseline.	Same as Baseline.	Same as Baseline.

Note:
1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.

Table 3-4: Intersection Improvements Summary (continued)

	N-S Street	E-W Street	Future Lane Configuration	Future Intersection Control	LOS Standard	Existing Conditions (2003)	Baseline Conditions (2003)	Baseline + Project Conditions	Cumulative Without Project Conditions	Cumulative With Project Conditions
21	Project Main Street	Imjin Road	NB 1-L/T SB 1-T/R EB 1-L/R	Two-Way Stop	D			1. Signalize. 2. Provide exclusive LT and exclusive RT lanes on SB Main St approach to Imjin. 3. Provide left and right turn channelization on Imjin at Main.	1. Widen Imjin to 4 Lanes.	1. Signalize 2. Provide exclusive LT and exclusive RT lanes on SB Main St approach to Imjin. 3. Provide left and right turn channelization on Imjin at Main. 4. Widen Imjin to 4 lanes.
22	Project Main Street	Abrams Drive	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Roundabout	D			None Required.	None Required.	None Required.
23	MBEST Drive	Reservation Road	SB 1-L, 1-L/R, 1/R EB 2-L, 2-T WB 3-T, 1-R	Signal	D			None Required.	None Required. (Widening at Imjin and Blanco intersections may result in widening at this intersection.)	Same as Cumulative Without Project.
24	Blanco Road	Research Drive	NB 1-L, 2-T SB 2-T, 1-R EB 2-L, 1-R	Signal	C			None Required.	1. Widen Blanco Road to 6 Lanes. 2. Add dual LT lane on WB & EB approaches.	Same as Cumulative Without Project.
25	California Avenue	Main Street	NB 1-L/T SB 1-T/R EB 1-L/R	Two-Way Stop	D			1. Design and construct as a roundabout.	1. Design and construct as a roundabout.	1. Design and construct as a roundabout.
26	California Avenue	Reindollar Avenue	Baseline Conditions NB 1-L/R EB 1-T/R WB 1-L, 1-T	Baseline Conditions Two-Way Stop	D		None Required.			
26	California Avenue	Reindollar Avenue	Baseline + Project and Cumulative NB 1-L, 1-T/R SB 1-L, 1-T/R EB 1-L, 1-T/R WB 1-L, 1-T/R	All-Way Stop	D			None Required.	None Required.	None Required.

Note:
1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.

Figure 3.6: Recommended Major Road Extensions and Widenings

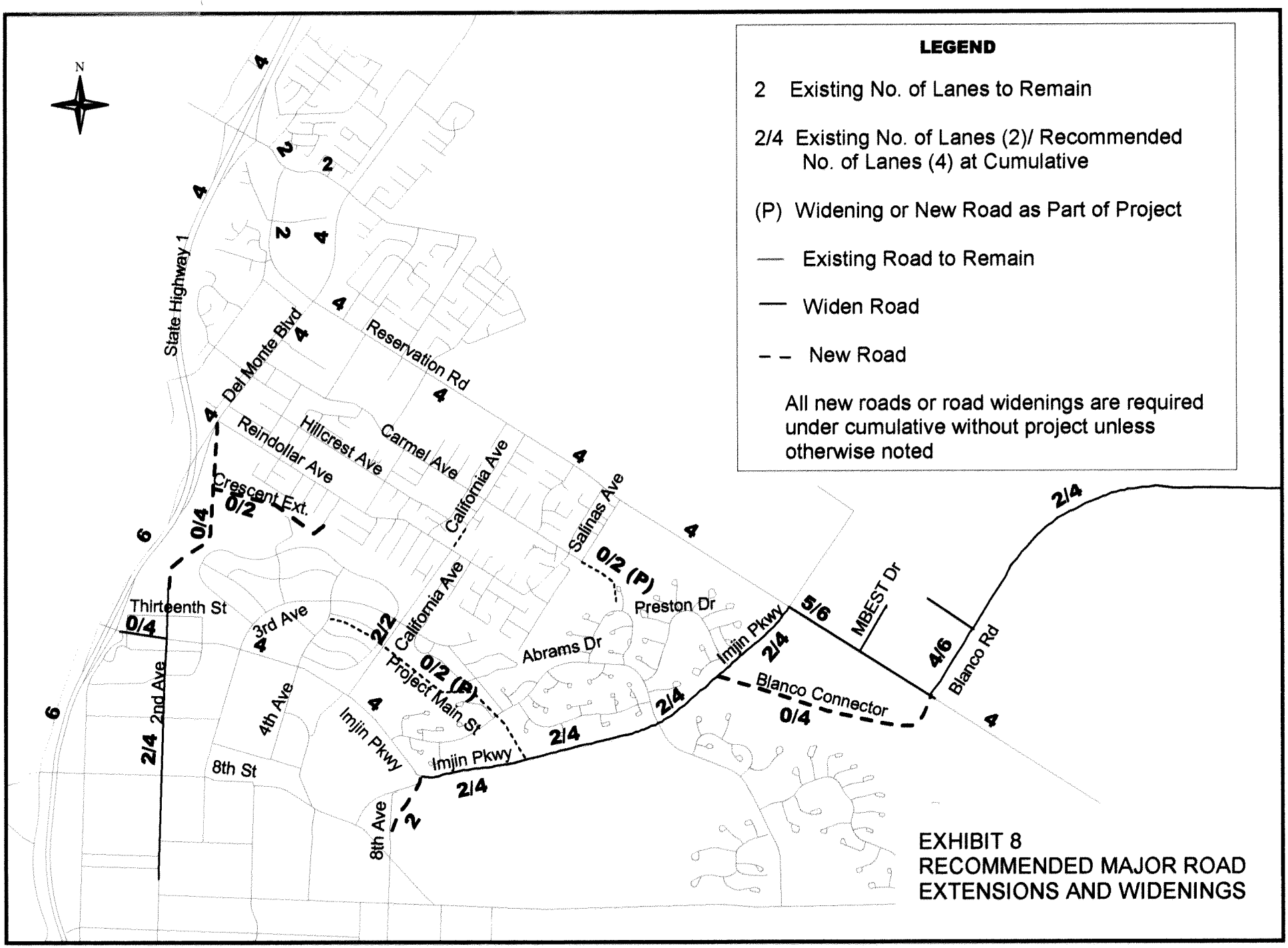
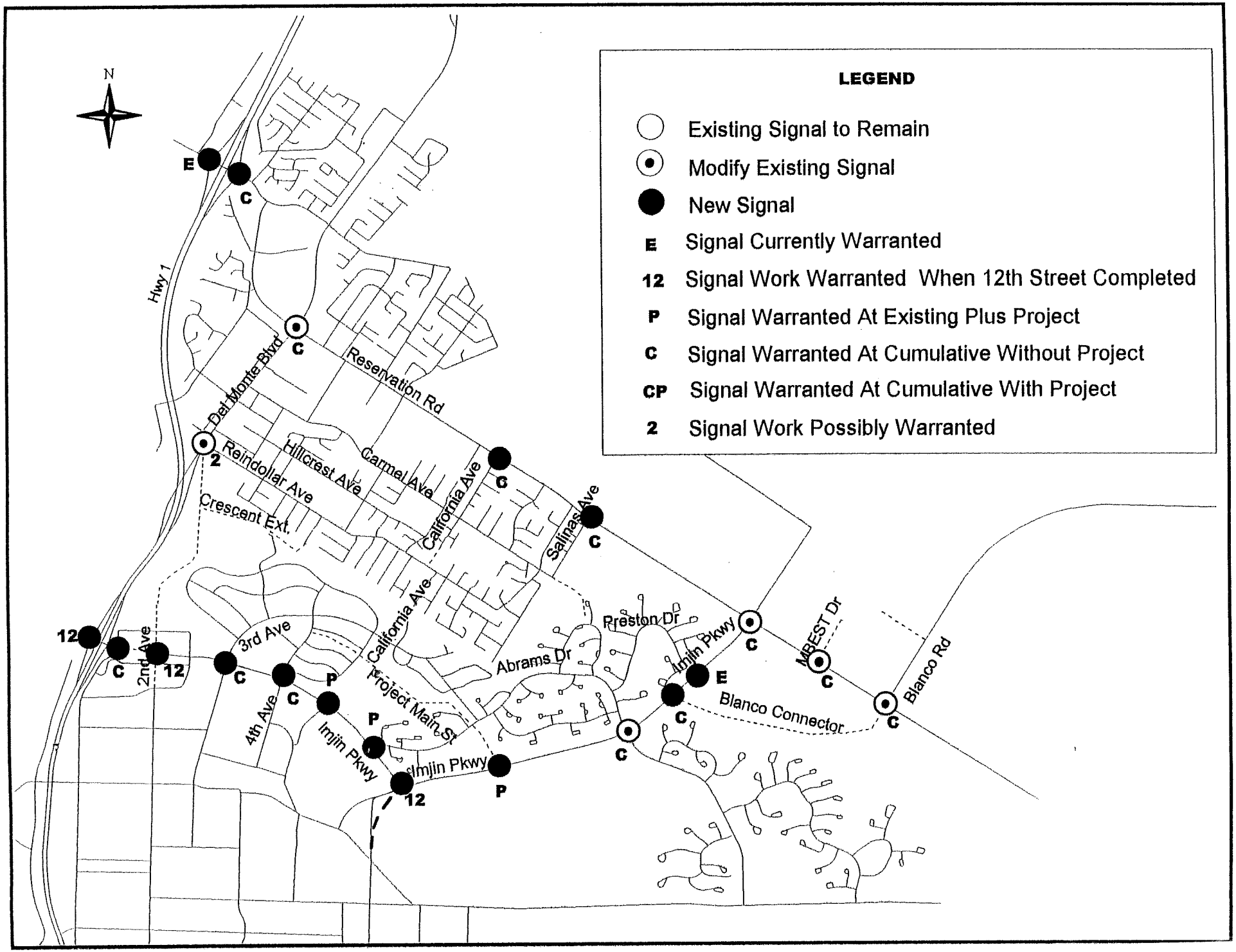


Figure 3.7: Recommended Signal Improvements



State Highway 1 segment operations were evaluated using the Highway Capacity Software (HCS) program. Existing Highway 1 segment levels of service are summarized in **Table 3-2**. All existing segments of Highway 1 in the vicinity of the City of Marina operate at LOS C or better, except the Highway 1 segments south of the Del Monte Boulevard-South interchange. The southbound Highway 1 segment between Del Monte Boulevard-South and 12th Street and the southbound segment south of 12th Street operate at LOS D during the AM peak hour. The northbound Highway 1 segments south of 12th Street and between 12th Street and Del Monte Boulevard-South operate at LOS D during the PM peak hour. While these segments operate at LOS D during the peak hours, all of these segments operate at or near the cusp of C/D except the southbound segment between Del Monte Boulevard-South and 12th Street. Therefore, operations on the southbound Highway 1 segment between Del Monte Boulevard-South and 12th Street are currently deficient.

Existing Bicycle and Pedestrian Circulation

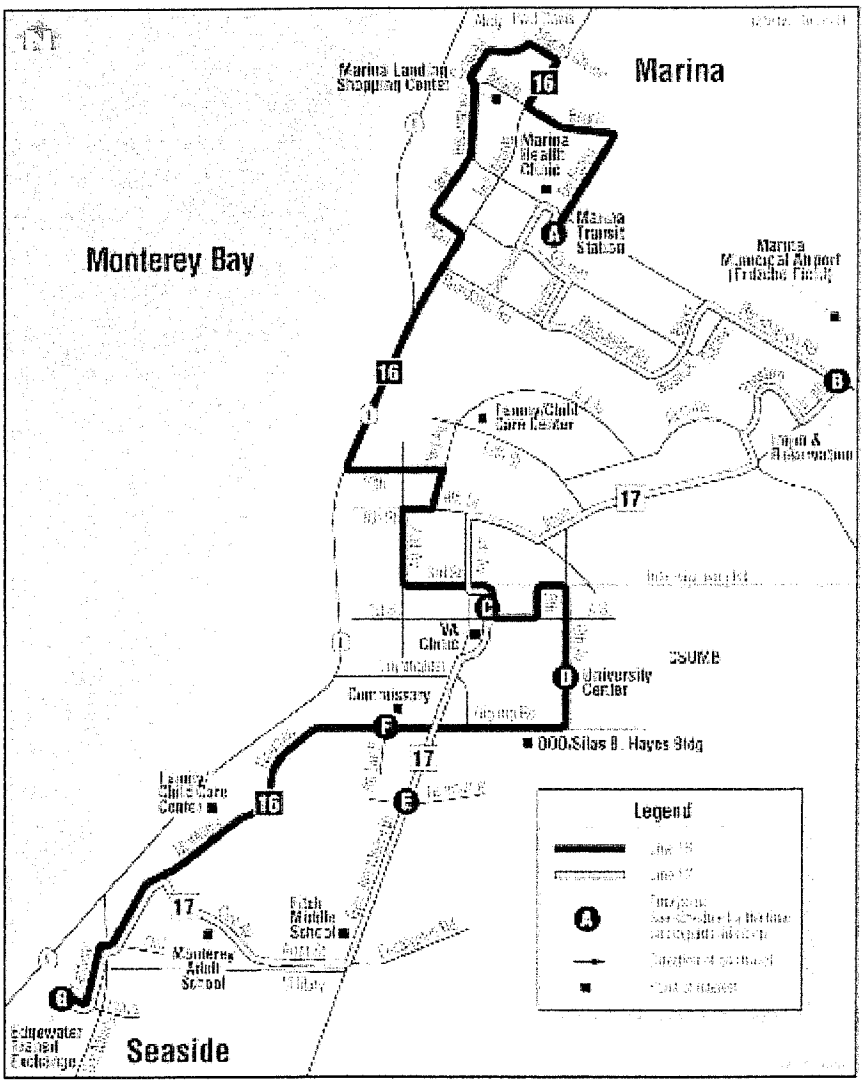
Within the study area, Reservation Road and Imjin Road provide Class II bike lanes. The Monterey Bay Recreation Trail, a Class I bike path, is parallel to Del Monte Boulevard within the study area. Bike lanes on Reservation Road provide a key connection between Salinas, Marina and the Monterey Bay Recreation Trail. Bike lanes on Imjin Road connect with the ones on General Jim Moors Boulevard via 8th Street and 4th Avenue. A Class I bike path is also located south of Reservation Road and terminates east of Salinas Avenue.

Sidewalks are provided on both sides of Reservation Road, Carmel Avenue, California Avenue, Reindollar Avenue and Preston Drive. Reconstructed 12th Street also includes sidewalks on both sides of the street. Pedestrian signals are located on all four corners of the Del Monte Boulevard/Reservation Road intersection. Pedestrian countdown signals are located at all four corners of the Imjin Road/Reservation Road intersection to facilitate pedestrian crossing.

Existing Public Transit Service

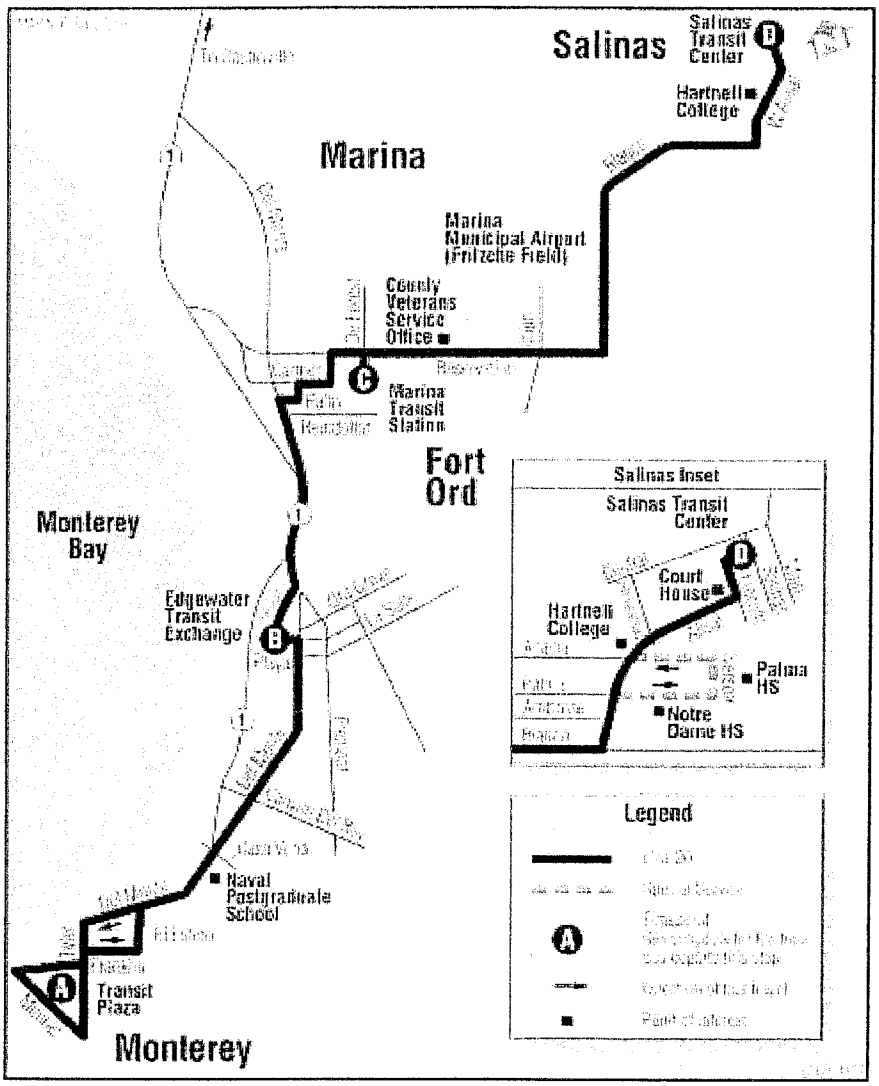
The largest single public transit provider in Monterey County is Monterey-Salinas Transit (MST). MST operates from five key transit centers: the Monterey Transit Plaza, the Salinas Transit Center, the Watsonville Transit Center, the Edgewater Transit Exchange and the Marina Transit Exchange. Each of these centers operates on a time-transfer "pulse" schedule providing easy connections and quick transfers to multiple routings. There are five fixed routes serving Marina. The transit lines are graphically depicted in **Figure 3.8**, **Figure 3.9**, **Figure 3.10** and **Figure 3.11**.

Figure 3.8: MST Lines #16 and #17



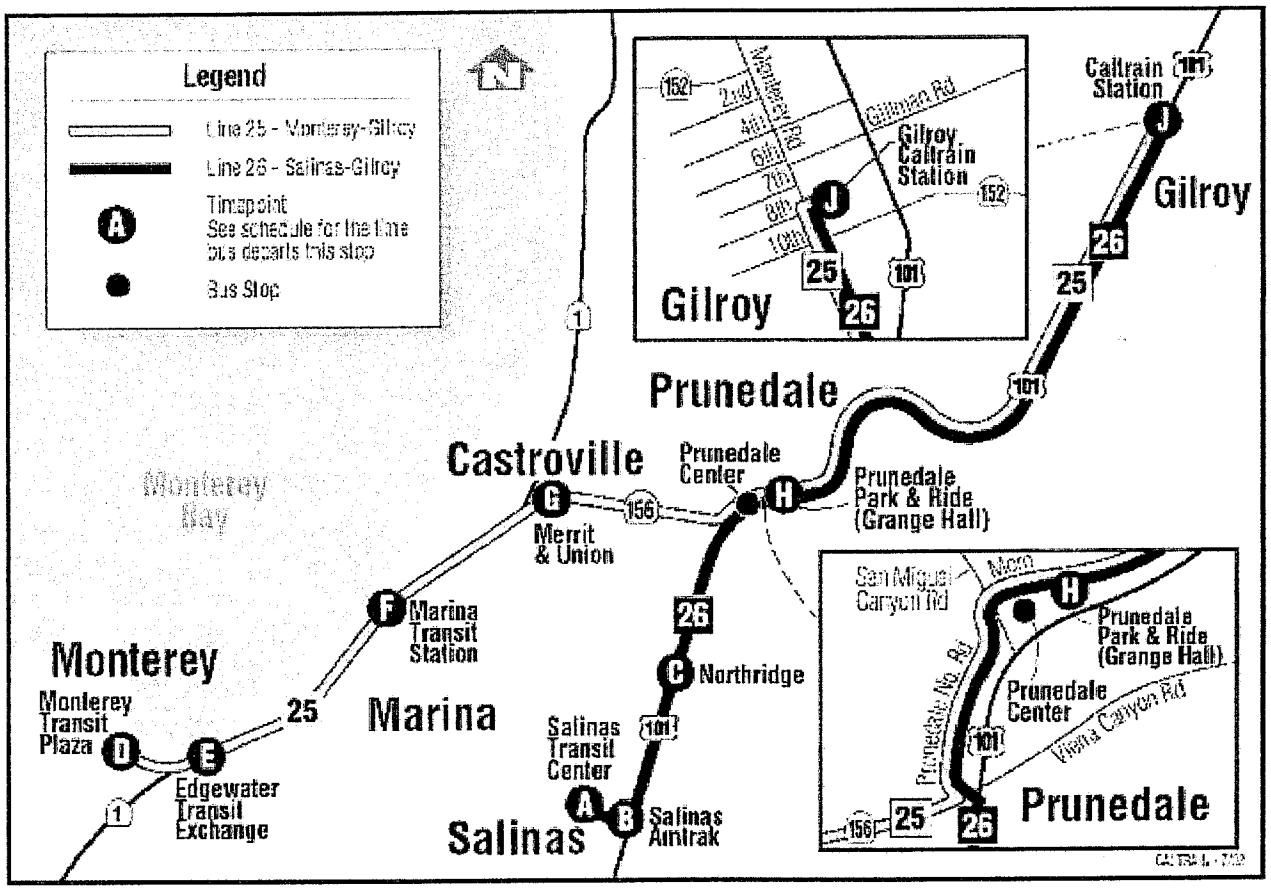
Source: Monterey-Salinas Transit (MST) 2003

Figure 3.9: MST Line #20



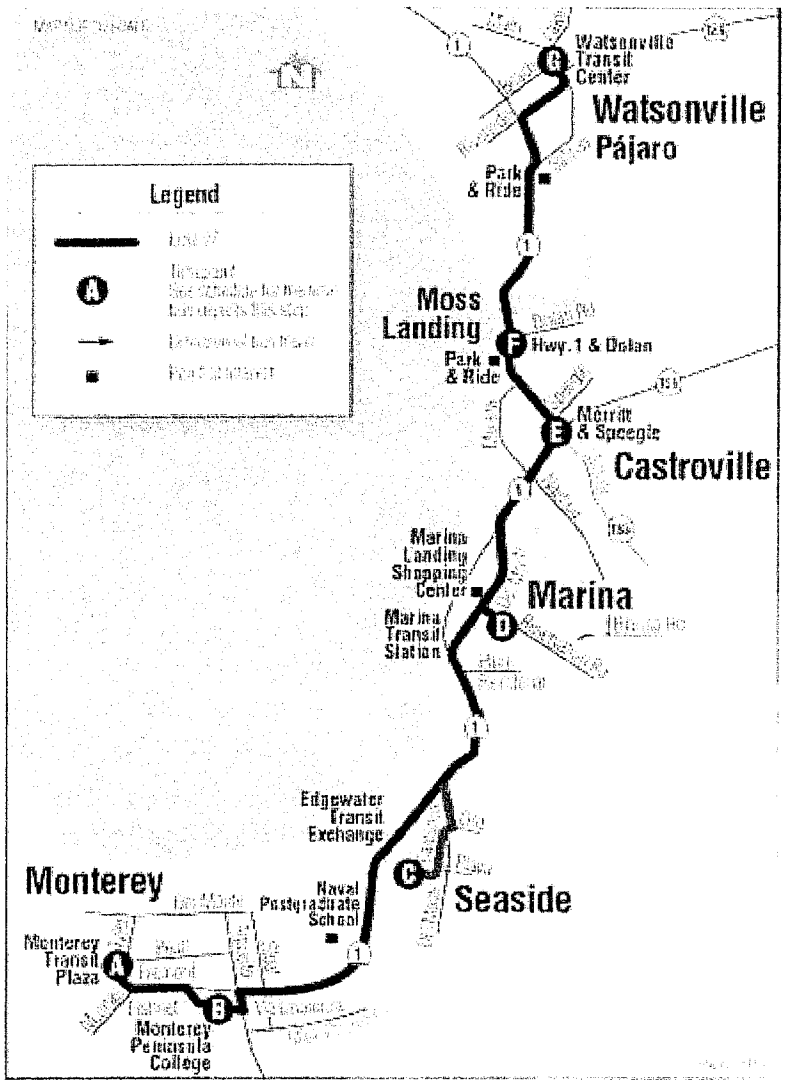
Source: Monterey-Salinas Transit (MST) 2003

Figure 3.10: MST Lines #25 and #26



Source: Monterey-Salinas Transit (MST) 2003

Figure 3.11: MST Line #27



Source: Monterey-Salinas Transit (MST) 2003

- Line #16 Edgewater/Marina: starts from the Edgewater Transit Exchange and serves Seaside and Marina via Monterey Road, Gigling Road and Highway 1. In Marina, Line #16 travels on Palm Street, Lake Drive, Reservation Road, Beach Drive, and DeForest Road, and terminates at the Marina Transit Exchange.

- Line #17 Edgewater/Marina: starts from the Edgewater Transit Exchange and serves the northern part of Seaside and Marina via Coe Avenue and General Jim Moore Boulevard. Line #17 provides direct service to the study area, traveling on Imjin Road, Preston Drive, Reservation Road, Reindollar Avenue and Carmel Avenue before terminating at the Marina Transit Exchange.

- Line #20 Salinas-Monterey via Marina: Line #20 serves as the backbone of the system, providing critical service between the communities of Salinas, Marina, Seaside and Monterey. In Marina, this route travels on Del Monte Boulevard and Reservation Road, stops at the Marina Transit Exchange, and continues on Reservation Road and Blanco Road.

- Line #25 Gilroy/Monterey: Line #25 provides interregional service between the Monterey Peninsula and the Caltrain station in Gilroy. The line starts from the Monterey Transit Plaza and makes a stop at the Marina Transit Exchange before continuing to Castroville.

- Line #27 Watsonville-Monterey: Line #27 provides interregional service between the Monterey Peninsula and the Watsonville Transit Center. In Marina, this line travels on Del Monte Boulevard, and stops at the Marina Transit Exchange.

BASELINE TRAFFIC CONDITIONS

Baseline Roadway Network

Since the segment of 12th Street between Imjin Road and Highway 1 was not completely open to traffic at the time of the traffic analysis, it was not possible to collect existing traffic volumes on 12th Street to document existing conditions. For this study, the County-wide traffic forecasting model used by Higgins Associates for the Monterey County General Plan update was used to develop a baseline traffic condition that reflects existing conditions with 12th Street reconstructed as a four-lane divided arterial between Highway 1 and Imjin Road. The LOS calculation worksheets are included in **Technical Appendix** – Appendix I. Caltrans peak-hour volume signal warrants are included in **Technical**

Appendix – Appendix G, and channelization warrants are included in **Technical Appendix** – Appendix H.

The planned street configuration information was obtained from Bestor Engineering in March, 2003.

Baseline Traffic Volumes

The completion of 12th Street is expected to divert regional traffic from the Reservation Road-Del Monte Boulevard corridor. The improved 12th Street will also provide better access to developments in the former Fort Ord area. In conjunction with the upgrading of 12th Street, California Avenue has been extended south from Reindollar to 12th Street. The California Avenue extension provides a new access route between the central Marina area and Highway 1 and Fort Ord area located south of 12th Street. The impact of the California Avenue extension on traffic patterns was also included in the modeling analysis. **Figure 3.12** and **Figure 3.13** present the baseline AM and PM peak hour volumes at all study intersections, respectively.

Intersection Operations Under Baseline Traffic Conditions

Table 3-3 presents the intersection Level of Service (LOS) at the study intersections for both AM and PM peak hours under the baseline traffic conditions.

- The Highway 1 southbound ramp/Reservation Road intersection would operate at LOS F during the AM peak hour and LOS A during the PM peak hour as described under Existing Conditions.

- The Imjin Road/Preston Drive Intersection would operate at LOS D during the AM peak hour and LOS C during the PM peak hour. The eastbound Preston Drive approach would operate at LOS F during both the AM and PM peak hours.

- Currently, two eastbound lanes and one westbound lane are provided on the 12th Street bridge. If the existing intersection layout remains, the Highway 1 northbound ramps/12th Street intersection would operate at LOS B during the AM peak hour and LOS F during the PM peak hour.

Figure 3.12: AM Peak Hour Volumes - Baseline Conditions

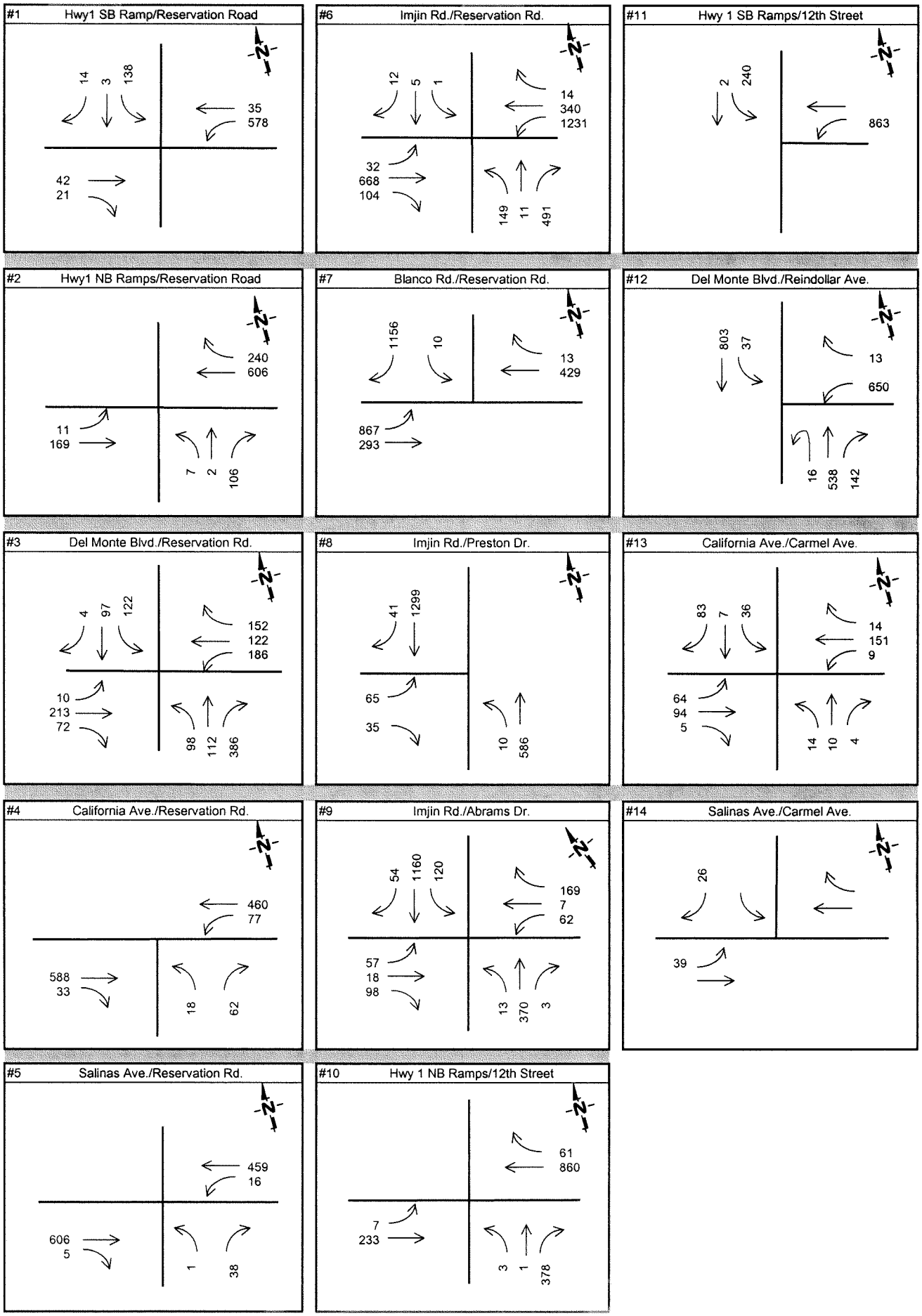


Figure 3.12: AM Peak Hour Volumes - Baseline Conditions (continued)

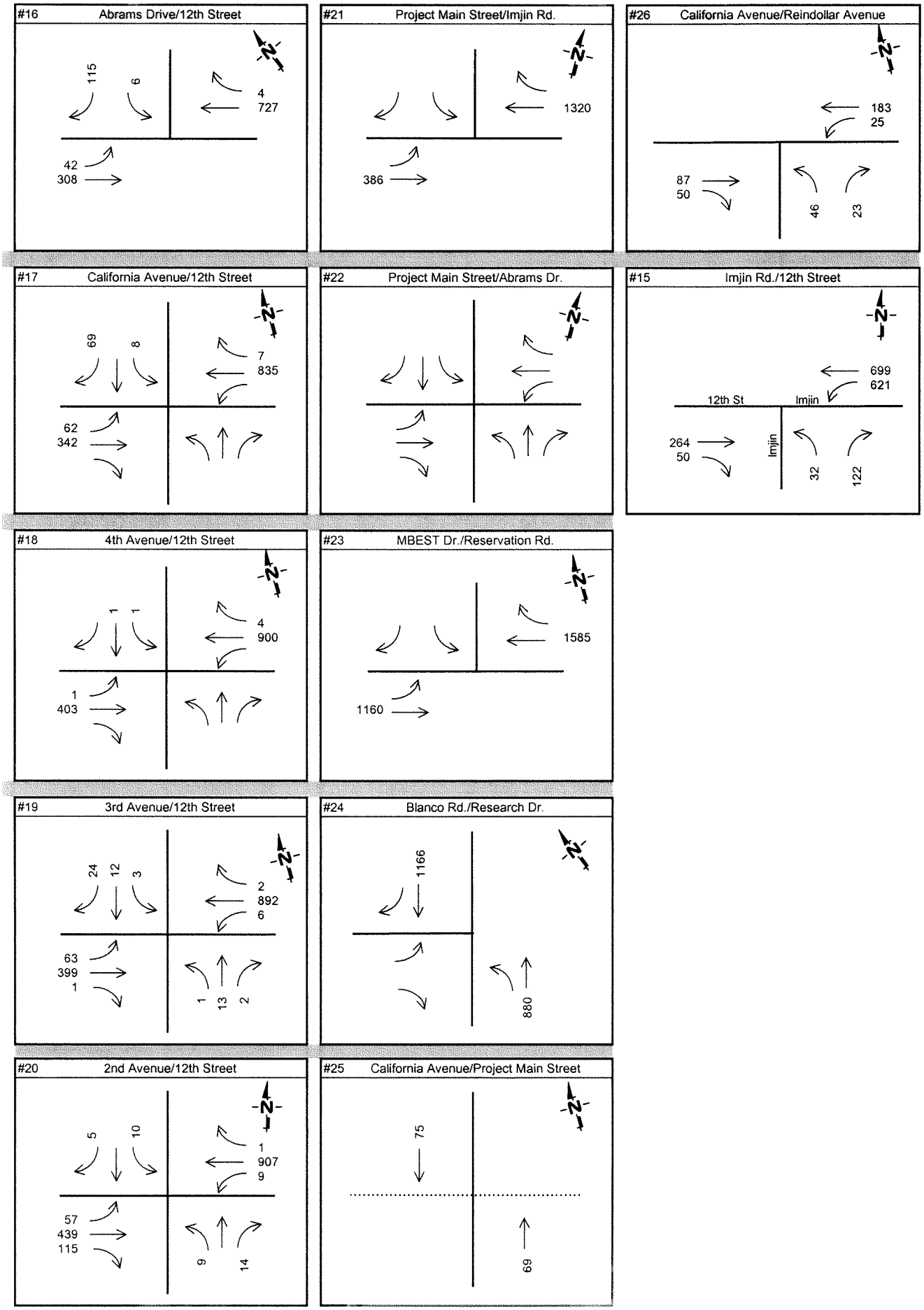


Figure 3.13: PM Peak Hour Volumes – Baseline Conditions

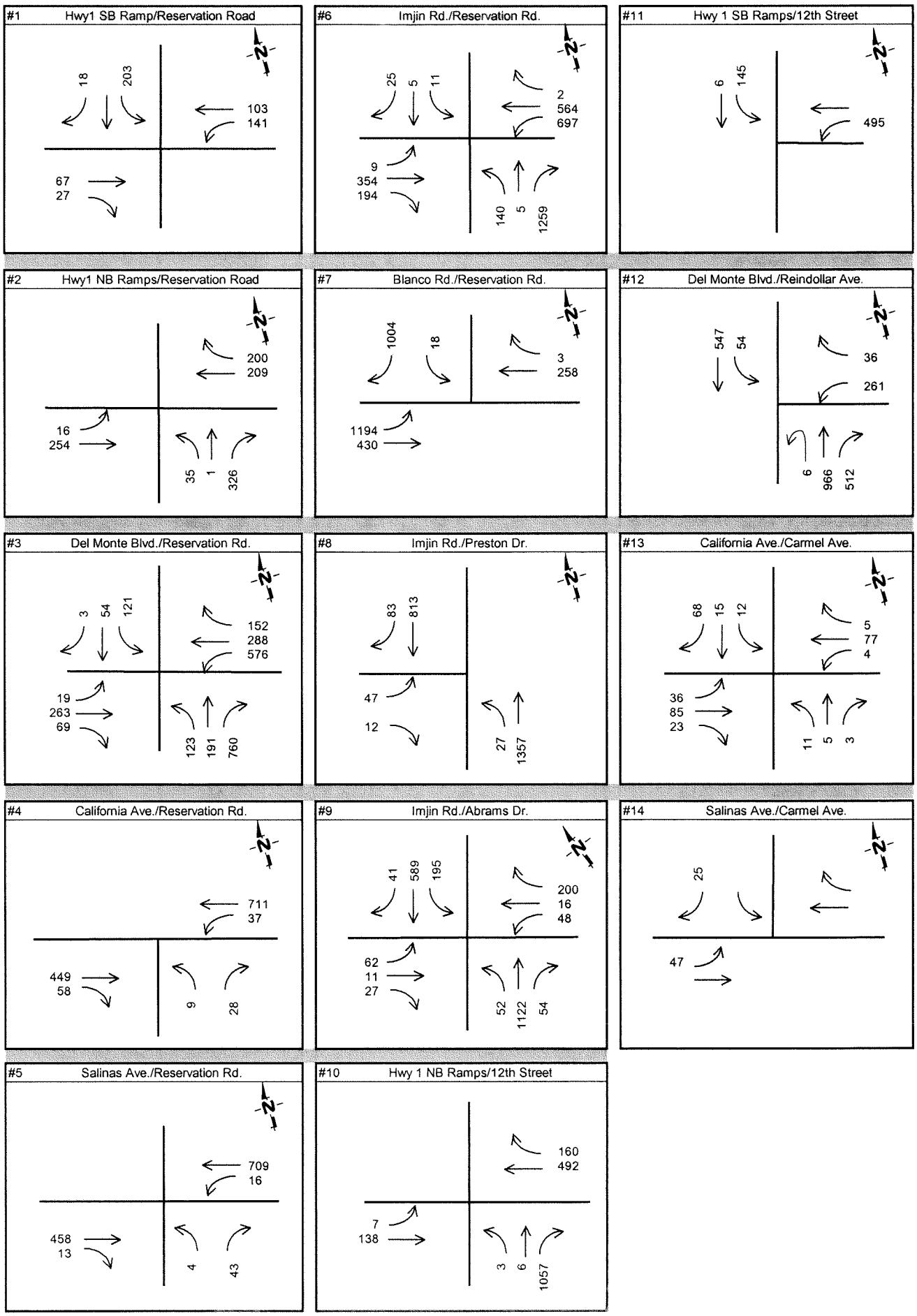
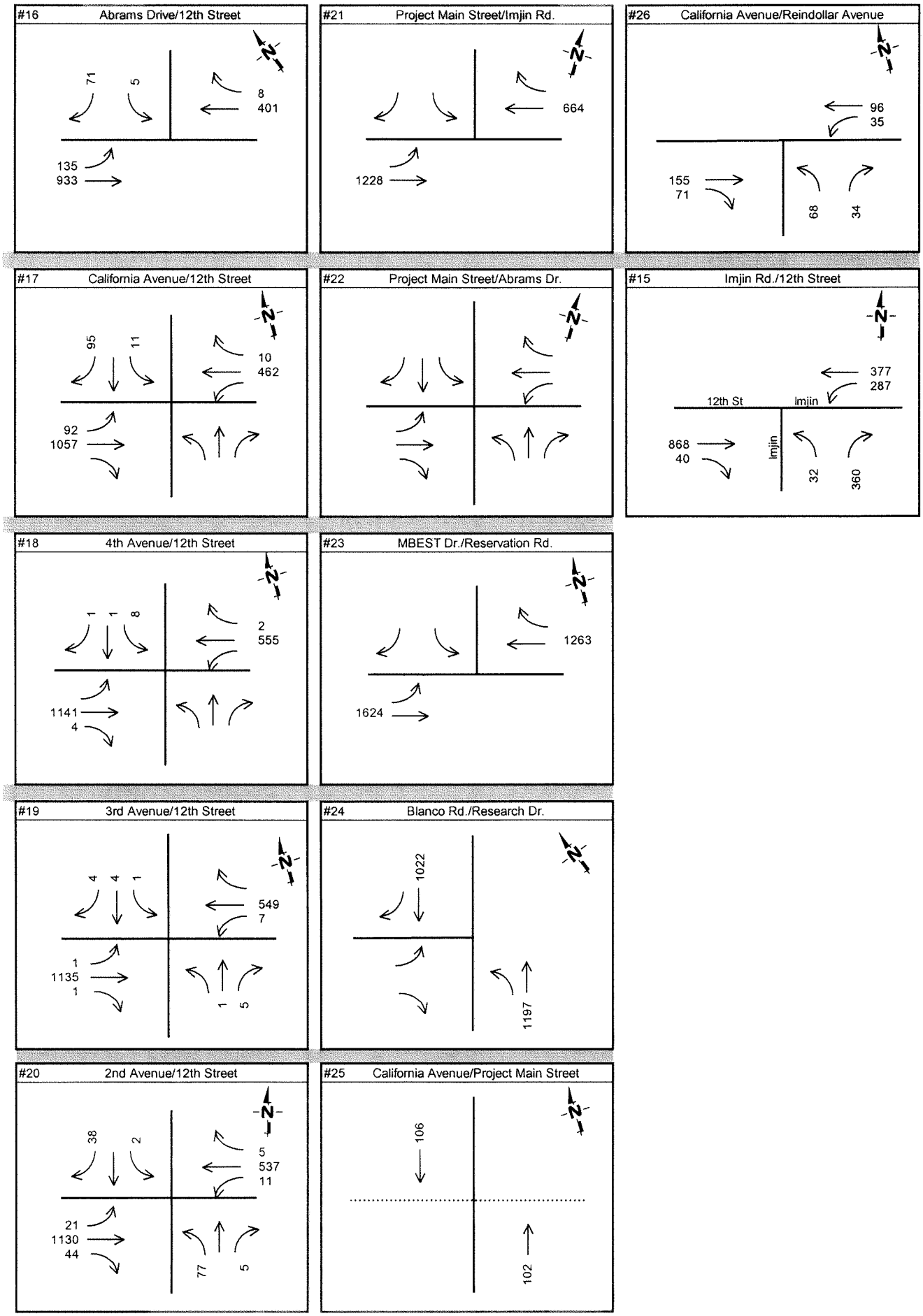


Figure 3.13: PM Peak Hour Volumes - Baseline Conditions (continued)



- The Highway 1 southbound ramp/12th Street intersection would operate at LOS F during the AM peak hour and LOS E during the PM peak hour under Baseline Conditions. At the current time, two eastbound travel lanes and one westbound travel lane is provided on the 12th Street bridge over Highway 1.

- The Imjin Road/12th Street intersection would operate at LOS B during both AM and PM peak hours. The northbound approach would operate at LOS F during the AM peak hour, and LOS E during the PM peak hour under Baseline Conditions.

- The 2nd Avenue/12th Street intersection would operate at LOS F during both AM and PM peak hours under Baseline Conditions. With the large eastbound and westbound volumes and lower northbound and southbound volumes, the all-way stop control would not allow the optimal intersection operation.

Other intersections would operate at LOS D or better under baseline traffic conditions. Peak-hour signal warrants or turning lane warrants would not be met at other unsignalized intersections under baseline conditions.

Recommendations (Not Specific Plan-Related)

In evaluating baseline traffic conditions as part of the EIR traffic analysis, Higgins Associates has identified possible improvements to alleviate congestion at study intersections under baseline conditions in the absence of the Specific Plan. Although CEQA requires that the impact of a proposed project on existing traffic patterns be evaluated (see discussion on Baseline Plus Project Conditions in the **IMPACTS AND MITIGATION MEASURES** section, below), there is no requirement that a proposed project resolve existing traffic problems that are not project-related. Recommendations to improve baseline traffic conditions are summarized in **Table 3-4**. **Figure 3.6** and **Figure 3.7** summarize recommended road extensions and widenings, and new signal installations, respectively.

- With signalization, the Highway 1 southbound ramp/Reservation Road intersection would operate at LOS B during both AM and PM peak hours in the absence of the Specific Plan.

- In the absence of the Specific Plan, signalization of the Imjin Road/Preston Drive intersection would result in LOS C operations during the AM peak hour and LOS B during the PM peak hour.

- The proposed modification to the Highway 1 northbound ramps/12th Street intersection include providing a free right turn lane on the Highway 1 northbound ramps approach to 12th Street, providing a free right turn lane on westbound 12th Street to the northbound Highway 1 onramp, and providing one lane in each direction on the 12th Street bridge over Highway 1. The improved intersection (per the Bestor Engineers' design) would operate at LOS A during both AM and PM peak hours in the absence of the Specific Plan.

- In the absence of the Specific Plan, Higgins Associates has recommended that the lanes on the 12th Street bridge over Highway 1 be configured to provide two westbound lanes and one eastbound lane in conjunction with the opening of the reconstructed 12th Street. This reconfiguration would better serve the higher volume of westbound to southbound traffic that is expected with the completion of 12th Street. In addition, widening the southbound Highway 1 on-ramp from 12th Street would be required to accept two left-turn movements from westbound 12th Street. With signalization and the recommended modification to the lane configuration on 12th Street, the 12th Street/Southbound Highway 1 ramps intersection would operate at LOS A during the AM and PM peak hours.

- It is recommended that the Imjin Road/12th Street intersection be signalized under Baseline Conditions in the absence of the Specific Plan. In addition, the addition of a second left-turn lane on the westbound Imjin Road approach is recommended to serve the volume of traffic turning left at this location. With signalization and the second left turn lane, the intersection would operate at LOS A during the AM peak hour and LOS D during the PM peak hour.

- It is recommended that this intersection be signalized under Baseline Conditions. With signalization, the intersection would operate at LOS B during both peak hours in the absence of the Specific Plan.

Highway 1 Operations Under Baseline Traffic Conditions

Under Baseline Conditions, all Highway 1 study segments operate at LOS C or better except the southbound Highway 1 segment south of 12th Street and the northbound segment south of 12th Street. The southbound segment operates at LOS D during the AM peak hour and the northbound segment operates at LOS D during the PM peak hour. Traffic volume on the northbound and southbound segments of Highway 1 south of 12th Street are expected to increase with the completion of 12th Street as traffic that may

currently be using the Fort Ord road network for north-south circulation is expected to divert to the Highway 1 and the 12th Street/Imjin Road corridors for north-south circulation. This diversion should result in better traffic operations of the northbound and southbound segments of Highway 1 between Del Monte Boulevard-South and 12th Street.

The levels of service on the deficient Highway 1 segments south of 12th Street are near the mid-range of the LOS D category. Therefore, under Baseline Conditions, traffic operations on Highway 1 south of 12th Street are considered deficient.

CUMULATIVE WITHOUT PROJECT CONDITONS

The 2020 traffic forecasts were based on the land use estimates provided by the City of Marina and the street network as identified in the FORA Capital Improvement Program (CIP) for FY 2002/2003 through 2021/2022 and the draft 2003 CIP update, and do not include traffic volumes associated with implementation of the Marina Heights Specific Plan. The roadway network for the FORA CIP includes the following new or upgraded facilities that would be necessary regardless of whether the Marina Heights Specific Plan is implemented or not:

- Completion of Highway 1 northbound off ramps/12th Street intersection improvements, including the completion of 12th Street between Highway 1 and 2nd Avenue;

- 8th Street Cutoff: upgrade/construct two-lane arterial from Highway 1 overpass to Inter-Garrison;

- Upgrade Inter-Garrison Road to a two-lane arterial from 8th Street Cutoff easterly to Reservation Road;

- Gigling Road: upgrade/construct new four-lane arterial from General Jim Moore Boulevard easterly to Eastside Road;

- Extend 2nd Avenue from Lightfighter Drive to Del Monte Boulevard and construct as a four-lane arterial;

- Widen General Jim Moore Boulevard from two lanes to four lanes from Normandy Road to Coe Avenue. Upgrade and reconstruct as two-lane arterial from Coe Avenue to Highway 218;

- Extension of California Avenue from Reindollar to Carmel, creating a two-lane arterial from Reservation Road to the California State University Monterey Bay (CSUMB) campus;

- Extension of Carmel Avenue south to Abrams Drive;

- Upgrade Eucalyptus Road to a two-lane collector from General Jim Moore Boulevard to Parker Flats cut-off;

- Construct a new two-lane arterial (Eastside Road) from intersection with Gigling Road northwesterly to intersection with Imjin Road;

- Extend existing Crescent Court southerly to join proposed Abrams Drive on the former Fort Ord; and

- Construct a new 2-lane arterial from intersection with the 2nd Avenue extension easterly to intersection with Crescent Court extension.

In addition, planned State highway improvements as identified in the FORA CIP are assumed. It is possible, but not likely, that other network extensions such as the California Road extension north of Reservation Road and Blanco Road connection would be completed by 2020. The FORA CIP does not include these major roadways within the 2020 time frame. Therefore, they are not included in the 2020 Cumulative Conditions network.

Cumulative Without Project Traffic Volumes

The County-wide traffic demand forecasting model was used to estimate year 2020 traffic volumes. The model was previously used for the County General Plan update, as well as the General Plan update for the City of Salinas. The model is currently being used for a number of planning studies in Monterey County, including the Rancho San Juan project and Fort Ord related planning studies.

Table 3-5 shows the cumulative development in the City of Marina that is included in the traffic forecasting model. The cumulative development includes new residential development throughout the City of Marina, including development of Marina's portion of the former Fort Ord, Armstrong Ranch. Development of the MBEST Center is

included in the model, as is development of the Marina Airport Industrial Park. Development of the Cypress Knolls project and the East Garrison project is included in the model as well.

The derived AM and PM peak hours volumes for the Cumulative Without Project Condition are presented on **Figure 3-14** and **Figure 3-15** for the AM and PM peak hours.

Cumulative Without Project Traffic Conditions

Table 3-3 shows the intersection levels of service under the Cumulative Without Project Conditions. The LOS calculation worksheets are included in **Technical Appendix** - Appendix L. Caltrans peak-hour volume signal warrants are included in **Technical Appendix** - Appendix G and channelization warrants are included in **Technical Appendix** - Appendix H. Recommended traffic improvements are included on **Table 3-4**, **Figure 3.6** and **Figure 3.7**. The level of service calculations assume construction of the transportation network improvements that are anticipated by 2020 as identified previously.

- The Highway 1 southbound ramp/Reservation Road intersection would operate at LOS F during the AM peak hour and LOS D during the PM peak hour.

- The Highway 1 northbound ramp/Reservation Road intersection would operate at LOS A during the AM peak hour and LOS A during the PM peak hour. Caltrans' peak-hour signal warrant would be met with PM peak hour volumes under the Cumulative Without Project Conditions due to the large right turn volume from the northbound off-ramp to eastbound Reservation Road.

- The Del Monte Boulevard/Reservation Road intersection would degrade to LOS F during the PM peak hour. While the completion of the 12th Street corridor is expected to divert trips from the Reservation Road-Del Monte Boulevard corridors, new development in the northern portion of the Marina will add new trips to the Reservation Road/Del Monte Boulevard intersection. These trips will have a north-south orientation.

- The California Avenue/Reservation Road intersection would operate at LOS F during both AM and PM peak hours. Peak-hour signal warrant would be met under the Cumulative Without Project Conditions.

Table 3-5: Trip Generation Rates for Cumulative Projects

TRIP GENERATION RATES

Land Use Type	Daily Trip Rate	AM Peak Hour Total	AM Peak Hour % of Daily Trips	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour % of Daily Trips	PM Peak Hour In	PM Peak Hour Out
Single Family Residential (per unit)	9.57	0.75	8%	25%	75%	1.01	11%	64%	36%
Attached Senior Housing (per unit)	3.48	0.07	2%	63%	37%	0.10	3%	59%	41%
Apartments (per unit)	6.63	0.51	8%	16%	84%	0.62	9%	67%	33%
Assisted Living	2.15	0.06	3%	61%	39%	0.17	8%	56%	44%
Office/R&D	8.11	1.24	15%	83%	17%	1.08	13%	15%	85%
Industrial (per 1,000 SF)	6.97	0.92	13%	88%	12%	0.98	14%	12%	88%
Elementary School	1.02	0.29	28%	59%	41%	0.00	0%	0%	0%
Jr. High School	1.45	0.46	32%	57%	43%	0.16	11%	47%	53%
High School	1.79	0.46	26%	70%	30%	0.15	8%	40%	60%
College/University	2.38	0.21	9%	80%	20%	0.21	9%	30%	70%
Hotel	8.92	0.67	8%	58%	42%	0.71	8%	49%	51%
Business Park	12.76	1.43	11%	84%	16%	1.29	10%	23%	77%
Auto Dealer (per 1,000 SF)	37.50	2.21	6%	73%	27%	2.80	7%	40%	60%

TRIP GENERATION FOR CUMULATIVE PROJECTS

	Land Use	Size	Daily Trips	AM Peak Hour Total	AM Peak Hour % of Daily Trips	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour % of Daily Trips	PM Peak Hour In	PM Peak Hour Out
Central Marina											
1.	Single Family Residential	70 DU's	670	53	8%	13	39	71	11%	45	25
2.	Multi-Family Residential	130 DU's	862	66	8%	11	56	81	9%	54	27
3.	Retail/Service	265,000 Sq. Ft.	12,756	286	2%	174	111	1,195	9%	573	621
4.	Office/R&D	90,000 Sq. Ft.	730	112	15%	93	19	97	13%	15	83
5.	Industrial/Service Commercial	110,000 Sq. Ft.	1,404	157	11%	132	25	142	10%	33	109
6.	Public Library	26,000 Sq. Ft.	1,060	31	3%	25	6	140	13%	63	77
7.	Park	-	-	-	-	-	-	-	-	-	-
MBEST Center & U.C. 8th Street Site											
8.	Multi-Family Residential	330 DU's	2,188	168	8%	27	141	205	9%	137	68
9.	Hotel/Conference Center	150 Rooms	1,338	101	8%	58	42	107	8%	52	54
10.	Retail/Service/Mixed Use	287,235 Sq. Ft.	13,434	300	2%	183	117	1,260	9%	605	655
11.	Office/R&D	675,673 Sq. Ft.	5,480	838	15%	695	142	730	13%	109	620
12.	Lt. Industrial	326,116 DU's	2,273	300	13%	264	36	320	14%	38	281
13.	Office/R&D	972,000 Sq. Ft.	7,883	1,205	15%	1,000	205	1,050	13%	157	892
14.	Retail/Service/Mixed Use	10,000 Sq. Ft.	1,551	41	3%	25	16	137	9%	66	71
East Garrison/Parker Flats											
	Residential	3,100 DU's	29,667	2,325	8%	581	1,744	3,131	11%	2,004	1,127
Marina's Former Fort Ord											
15.	Single Family Residential	400 DU's	3,828	300	8%	75	225	404	11%	259	145
16.	Multi-Family Residential	567 DU's	3,759	289	8%	46	243	352	9%	236	116
17.	Attached Senior Housing (per unit)	80 DU's	278	6	2%	4	2	8	3%	5	3
18.	Assisted Living	60 DU's	129	4	3%	2	1	10	8%	6	4
19.	Hotel/Motel	600 Rooms	5,352	402	8%	233	169	426	8%	209	217
20.	Retail/Service	491,250 Sq. Ft.	18,971	413	2%	252	161	1,795	9%	862	934
21.	Office/R&D	472,500 Sq. Ft.	3,832	586	15%	486	100	510	13%	77	434
22.	Lt. Industrial	955,500 Sq. Ft.	6,660	879	13%	774	105	936	14%	112	824
23.	Institutuional	1,800 Universit	4,284	378	9%	302	76	378	9%	113	265
	Schools										
24.	High School	1,300 Students	2,327	598	26%	419	179	195	8%	78	117
25.	Elementary School	625 Students	638	181	28%	107	74	0	0%	0	0
26.	Park	410 Acres	-	-	-	-	-	-	-	-	-
Armstrong Ranch											
27.	Single Family Residential	600 DU's	5,742	450	8%	113	338	606	11%	388	218
.28.	Multi-Family Residential	400 DU's	2,652	204	8%	33	171	248	9%	166	82
29.	Retail/Service/Mixed Use	174,240 Sq. Ft.	9,742	222	2%	136	87	906	9%	435	471
30.	Lt. Industrial	1,393,920 Sq. Ft.	9,716	1,282	13%	1,129	154	1,366	14%	164	1,202
	School										
31.	Elem	625 Students	638	181	28%	107	74	0	0%	0	0
32.	Jr	1,000 Students	1,450	460	32%	262	198	160	11%	75	85
Total			161,291	12,817	8%	7,760	5,057	16,964	11%	7,135	9,829

Higgins Associates

A03-002Ctgf.xls

Figure 3.14: AM Peak Hour Volumes - Cumulative Without Project

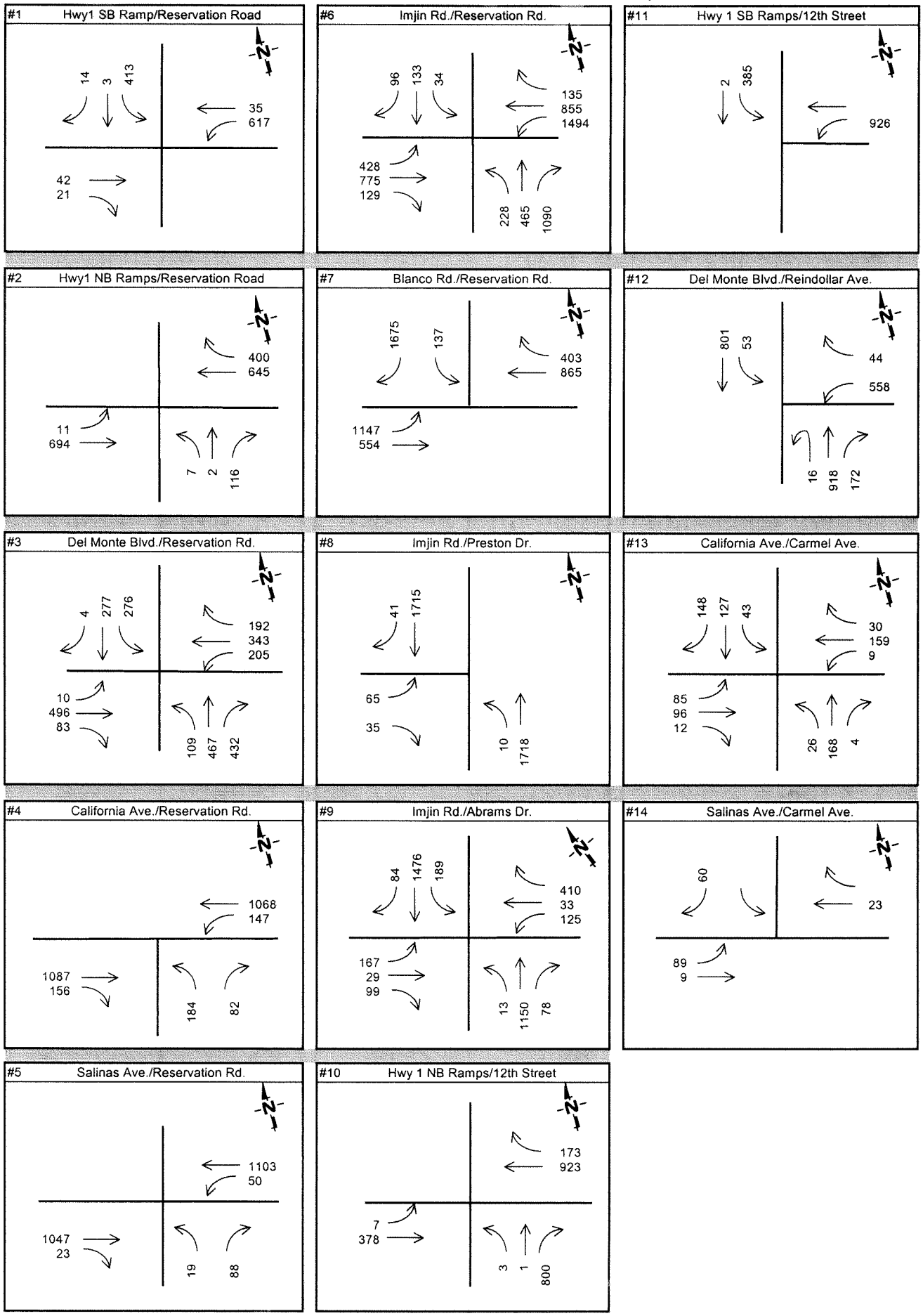


Figure 3.14: AM Peak Hour Volumes - Cumulative Without Project (continued)

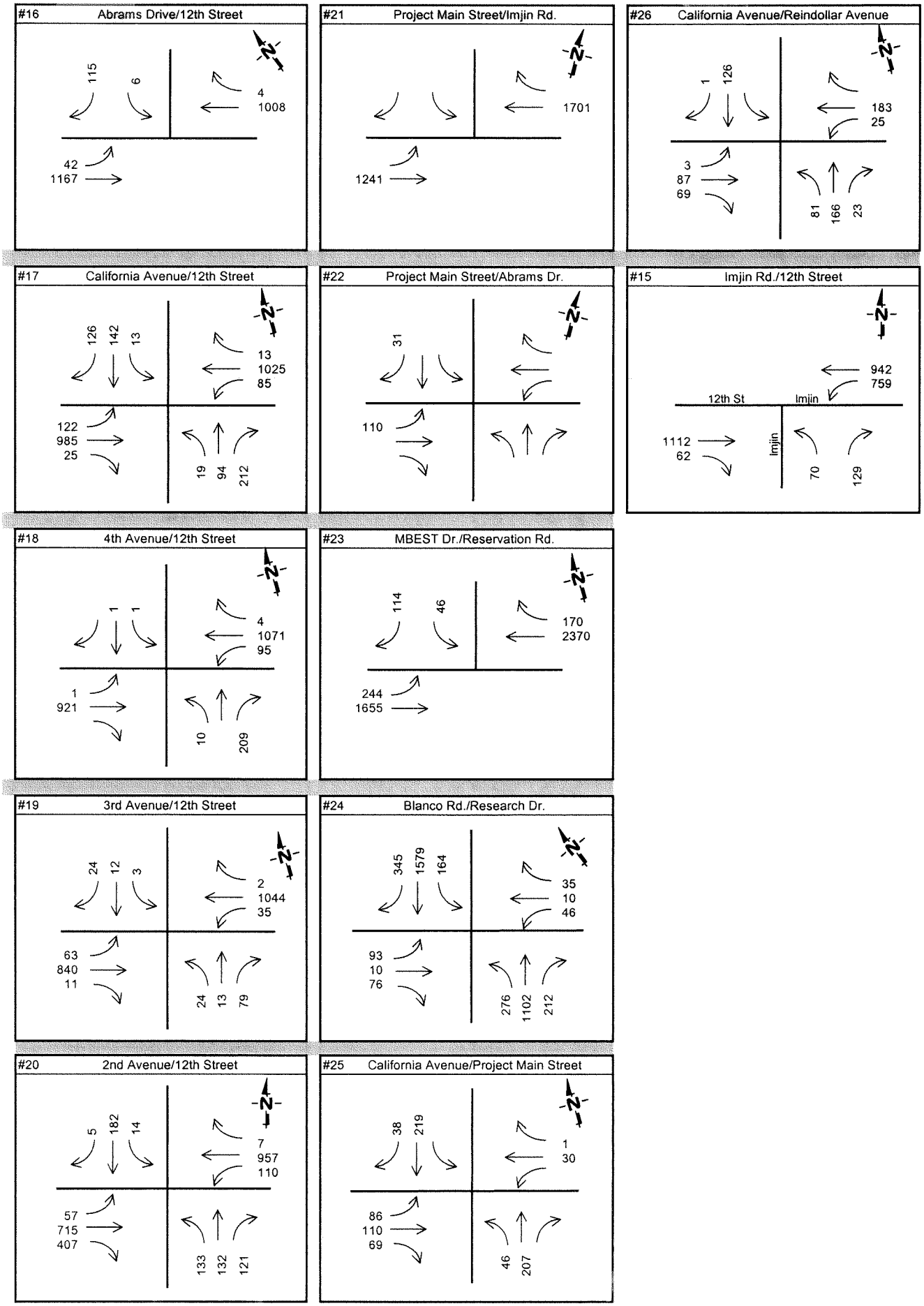


Figure 3.15: PM Peak Hour Volumes - Cumulative Without Project

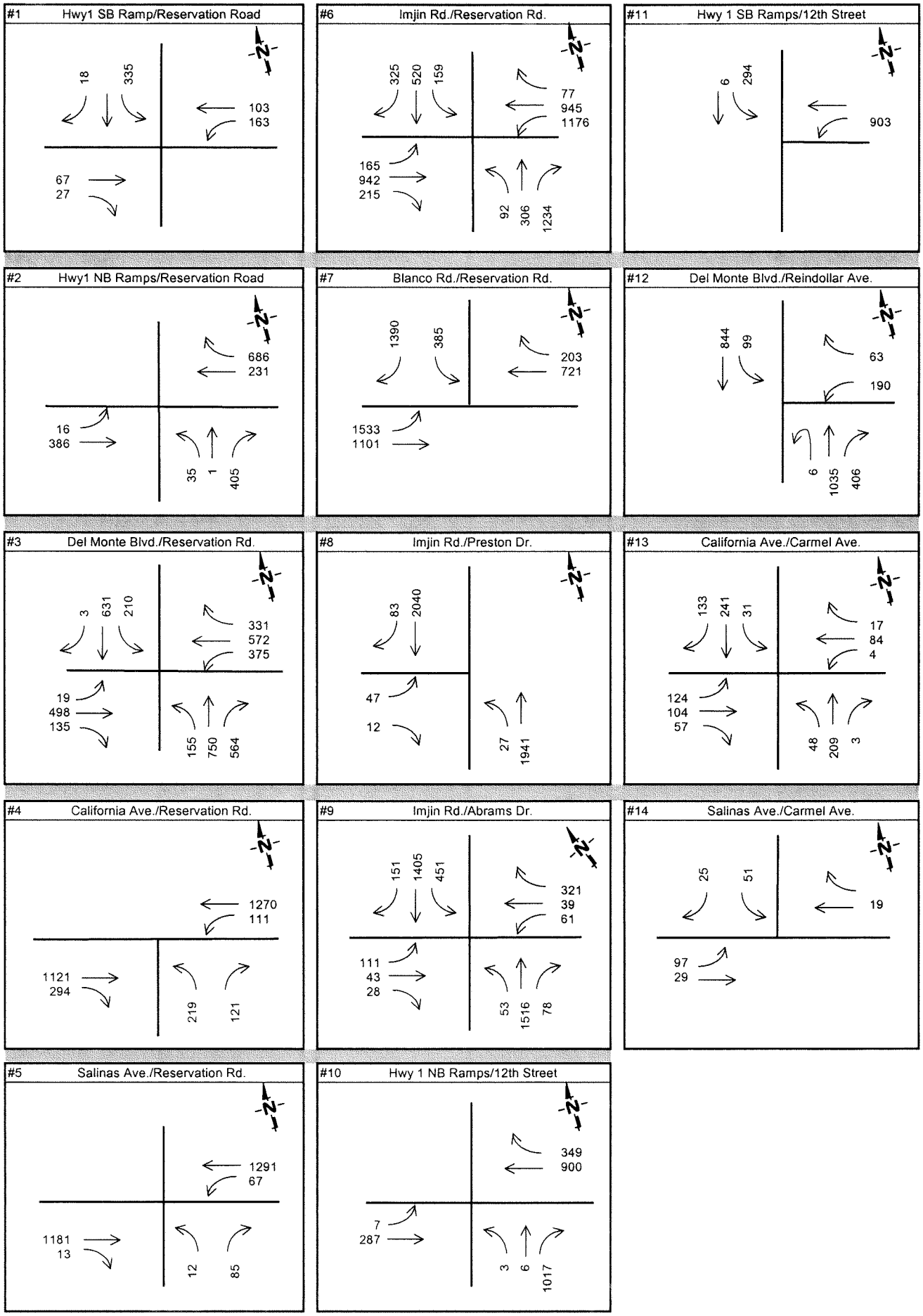
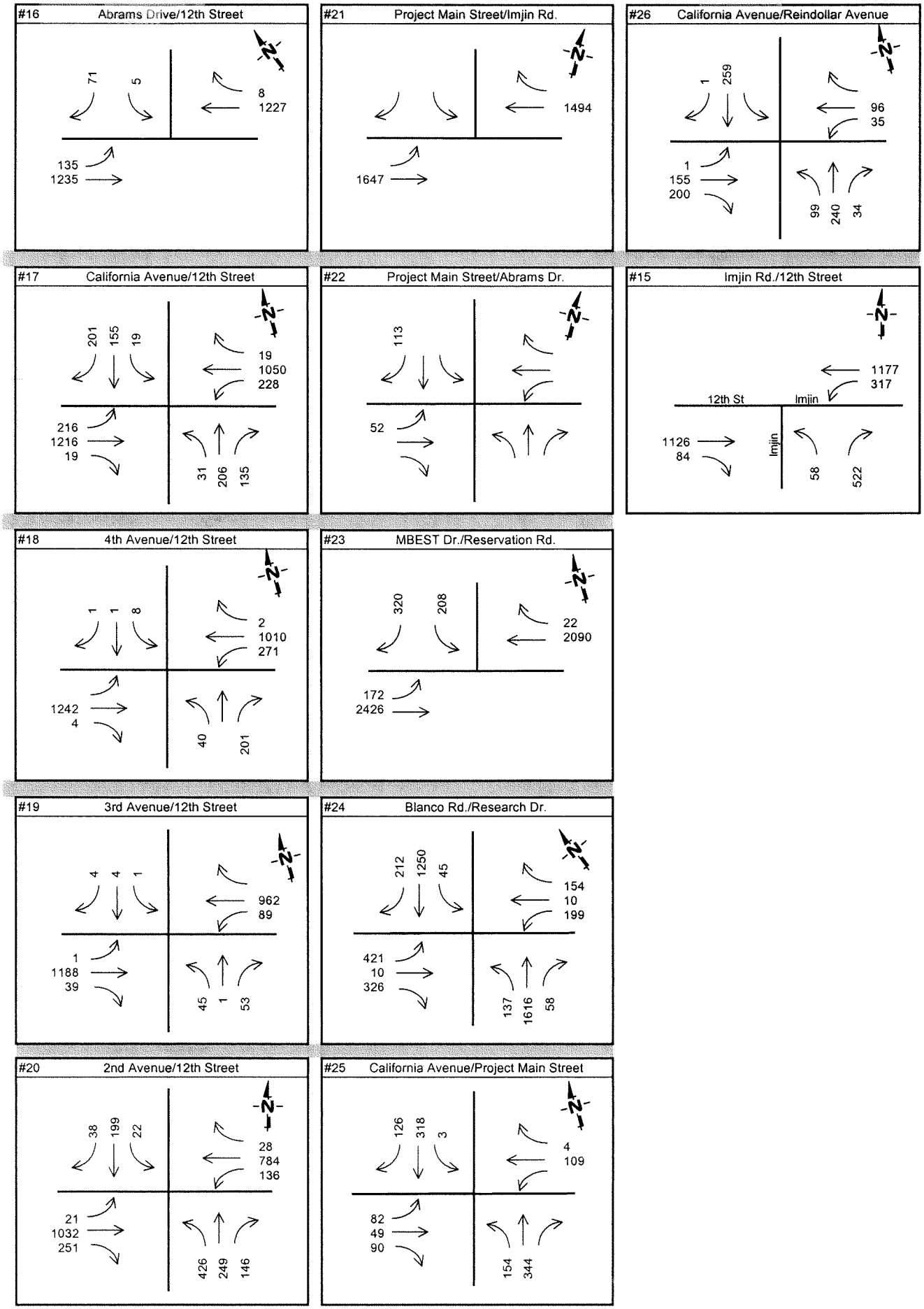


Figure 3.15: PM Peak Hour Volumes - Cumulative Without Project (continued)



- The Salinas Avenue/Reservation Road intersection would operate at an acceptable level (LOS A) during both AM and PM peak hours. The northbound street approach would operate at LOS F during the AM and PM peak hours.

- The Imjin Road/Reservation Road intersection operates at LOS F during both AM and PM peak hours under Cumulative Without Project Conditions.

- Under Cumulative Without Project Conditions, the Blanco Road/Reservation Road intersection would operate at LOS C during the AM peak hour and LOS E during the PM peak hour.

- The Imjin Road/Preston Drive intersection would operate at LOS F during the AM and PM peak hours.

- The Imjin Road/Abrams Drive intersection would operate at LOS F during both AM and PM peak hours.

- The Highway 1 southbound ramp/12th Street intersection would operate at LOS F during both AM and PM peak hours under Cumulative Without Project Conditions with the existing lane geometrics and traffic control.

  As part of the 12th Street improvement, the Highway 1 northbound ramps approach to 12th Street will be modified to include a free northbound off-ramp, along with other lane configuration changes, as shown on the Bestor Engineers' design plan. The improved intersection would operate at LOS A during both AM and PM peak hours under the Cumulative Without Project Conditions.

- The Imjin Road/12th Street intersection would operate at LOS F during both AM and PM peak hours as an unsignalized intersection under Cumulative Without Project Conditions.

- The California Avenue/12th Street intersection would operate at LOS F during both AM and PM peak hours. Peak-hour signal warrant would be met under the Cumulative Without Project Conditions.

- The 4th Avenue/12th Street intersection would operate at LOS A during the AM peak hour and LOS F during the PM peak hour under Cumulative Without Project Conditions. Peak-hour signal warrant would be met under the Cumulative Without Project Conditions.

- The 3rd Avenue/12th Street intersection would operate at LOS A during the AM peak hour and LOS C during the PM peak hour. The northbound 3rd Avenue approach to 12th Street would operate at LOS F during the AM and PM peak hours.

- The 2nd Avenue/12th Street intersection would operate at LOS F during both AM and PM peak hours as an all-way stop controlled intersection.

- The Blanco Road/Research Drive intersection would operate at LOS C during the AM peak hour and LOS E during the PM peak hour.

- The California Avenue/Project Main Street intersection is forecasted to operate at LOS A during the AM peak hour and LOS F during the PM peak hour under Cumulative Without Project Conditions modeled with single lane approaches with left and right turn channelization. During the PM peak hour, the eastbound approach is forecast to operate at LOS F.

Other intersections would operate at LOS D or better under Cumulative Without Project Conditions.

Recommendations (Not Specific-Plan Related)

In evaluating cumulative traffic conditions as part of the EIR traffic analysis, Higgins Associates has identified possible improvements to alleviate congestion at study intersections under baseline conditions in the absence of the Specific Plan. Although CEQA requires that the impact of a proposed project on cumulative traffic patterns be evaluated (see discussion on Cumulative Conditions With Project in the **IMPACTS AND MITIGATION MEASURES** section, below), there is no requirement that a proposed project resolve cumulative traffic problems that are not project-related. Recommendations to improve cumulative without project traffic conditions are summarized in **Table 3-4**. **Figure 3.6** and **Figure 3.7** summarize recommended road extensions and widenings, and new signal installations, respectively.

- With signalization in the absence of the Specific Plan, the Highway 1 southbound ramp/Reservation Road intersection would operate at LOS C during the AM peak hour and LOS B during the PM peak hour under Cumulative Without Project Conditions.

- In the absence of the Specific Plan it is recommended that the Highway 1 northbound ramp/Reservation Road intersection be monitored for possible signalization as the City of Marina continues to develop. Typically, a large right turn volume on a minor street approach can be at least partially discounted when analyzing signal warrant criteria or could be served by a free-flow right turn lane. A free-flow right turn lane from the northbound off-ramp is not recommended in this instance due to the relative short distance between the northbound off-ramp and Cardoza Avenue. With signalization, the Highway 1 northbound ramp/Reservation Road intersection would operate at LOS A during the AM peak hour and LOS D during the PM peak hour under Cumulative Without Project Conditions.

- To provide the capacity to serve the projected future demand, it is recommended that the south leg of the Reservation Road/Del Monte Boulevard intersection be reconfigured to provide one left turn lane, two through lanes and one right turn lane under Cumulative Without Project Conditions. With this configuration, the Reservation Road/Del Monte Boulevard intersection will operate at LOS C during the AM peak hour and LOS D during the PM peak hour, without implementation of the Specific Plan.

- With signalization, the California Avenue/Reservation Road intersection would operate at LOS B during both AM and PM peak hours under Cumulative Without Project Conditions.

- With signalization, the Salinas Avenue/Reservation Road intersection would operate at LOS A under Cumulative Without Project Conditions during both peak hours.

- The improvements required to improve traffic operations at the Imjin Road/Reservation Road intersection to acceptable levels depends on if the Blanco Road extension is constructed. The Blanco Road extension is included in the FORA CIP, but is scheduled for construction after year 2020. If the Blanco Road extension is not constructed, the following land geometrics are required to mitigate Cumulative Without Project Conditions:

Northbound approach – one left turn lane, two through lanes and two right turn lanes (with right turn overlap signal control);

Southbound approach – one left turn lane, two through lanes and one right turn lane;

Eastbound approach – two left turn lanes, two through lanes and one right turn lane;

Westbound approach – three left turn lanes, two through lanes and one right turn lane.

With the recommended intersection design, the intersection will operate at LOS D during both AM and PM peak hours.

If the Blanco Road extension is constructed, the following intersection configuration is recommended for Cumulative Without Project Conditions:

Northbound approach – one left turn lane, two through lanes and one right turn lane (with right turn overlap control);

Southbound approach – one left turn lane, two through lanes and one right turn lane;

Eastbound approach – two left turn lanes, two through lanes and one right turn lane;

Westbound approach – two left turn lanes, two through lanes and one right turn lane.

With the Blanco Road extension and the recommended intersection design, the intersection will operate at LOS C during both AM and PM peak hours under Cumulative Without Project Conditions.

- With a second through lane provided on westbound Reservation Road, the Blanco Road/Reservation Road intersection would operate at LOS B during the AM peak hour and LOS C during the PM peak hour under Cumulative Without Project Conditions. If the Blanco Road extension is constructed, three through lanes would be

required on northbound and southbound Blanco Road and in the eastbound direction on Reservation Road. The dual right turn lanes from southbound Blanco Road to westbound Reservation Road can be reduced to a single free-flow right turn lane when Blanco Road is extended to Imjin Road. This will allow two through lanes to be provided on Reservation Road in the westbound direction.

- Signalization and widening Imjin Road through the Imjin Road/Preston Drive intersection to four lanes is recommended in the absence of the Specific Plan. This intersection would improve to LOS A during both peak hours with these improvements.

- Recommended improvements include the widening of Imjin Road to a four-lane divided roadway through this intersection and providing a second left turn lane on the southbound Imjin Road approach to Abrams Drive. With the improvements, the intersection would operate at LOS C during the AM peak hour and LOS D during the PM peak hour under Cumulative Without Project Conditions.

- With signalization and modifications to the intersection lane geometrics that were described for the Baseline analysis conditions, the Highway 1 southbound ramp/12th Street intersection would operate at LOS B during both peak hours under Cumulative Without Project Conditions.

- With signalization and a second left turn lane on the westbound Imjin Road approach, the Imjin Road/12th Street intersection would operate at LOS B during the AM peak hour and LOS D during the PM peak hour in the absence of the Specific Plan.

- Signalization of the California Avenue/12th Street intersection is recommended under Cumulative Without Project Conditions. With signalization, the intersection would operate at LOS B during the AM peak hour and LOS C during the PM peak hour.

- Signalization of the 4th Avenue/12th Street intersection is recommended under Cumulative Without Project Conditions. With signalization, the intersection would operate at LOS B during the AM peak hour and LOS C during the PM peak hour.

- While the peak hour volume signal warrant would not be met under the Cumulative Without Project Conditions based on the traffic volume projections developed for this study, it is probable that the 3rd Avenue/12th Street intersection will eventually warrant signalization when parcels located near the intersection are developed to their full

potential. Therefore, this intersection is identified for signalization under Cumulative Without Project Conditions.

- With signalization, the 2nd Avenue/12th Street intersection would operate at LOS C during the AM peak hour and LOS D during the PM peak hour.

- To achieve acceptable operations at the Blanco Road/Research Drive intersection under Cumulative Conditions, Blanco Road would require widening to six lanes. Dual left turn lanes should be provided on both eastbound and westbound approaches from Research Drive to Blanco Road. With the recommended lane geometrics, the intersection will operate at LOS C during both peak hours under Cumulative Without Project Conditions.

- At the California Avenue/Project Main Street intersection, left turn lane and right turn channelization should be provided on the California Avenue approaches and two approach lanes should be provided on the eastbound Main Street approach. With these improvements, the intersection would operate at acceptable levels of service, but the minor street approaches would operate at LOS E in the absence of the Specific Plan.

Highway 1 Operations Under Cumulative Without Project Conditions

Under Cumulative Without Project Conditions, all Highway 1 study segments operate at LOS C or better except the southbound Highway 1 segment north of Del Monte Boulevard-North. This segment will operate at LOS D during the AM peak hour. The level of service is at the cusp of the LOS C/D ranges. Therefore, traffic operations on all segments of Highway 1 operate at acceptable levels of service under Cumulative Without Project Conditions.

C. IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Implementation of the Specific Plan would have a significant environmental impact if it were to result in:

- An increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system;

- Exceeding, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;
- A change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- A substantial increase in hazards due to a design feature;
- Inadequate emergency access;
- Inadequate parking capacity; or
- A conflict with adopted policies, plans or programs supporting alternative transportation.

BASELINE PLUS PROJECT CONDITIONS

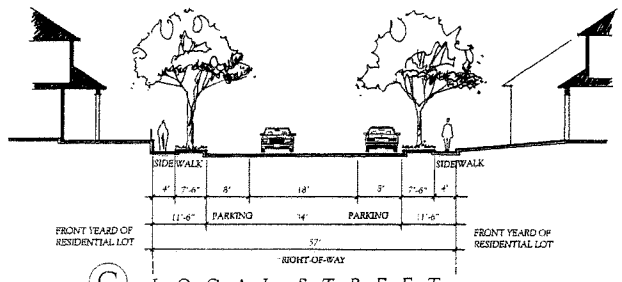
Baseline Plus Project Roadway Network and Project Entrances

The roadway network beyond the Specific Plan area would be the same as that under the baseline conditions discussed above.

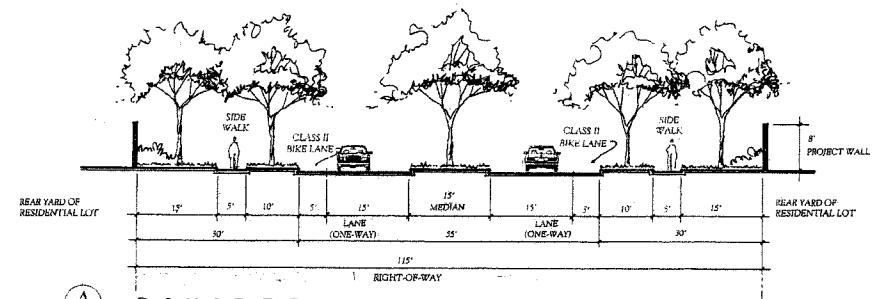
Within the Specific Plan area, all streets are proposed as two lanes, one lane in each direction. Three street types have been proposed, as shown in **Figure 3.16**. The divided entry drive would have a 15-foot landscaped center median and one 20-foot wide lane in each direction. Abrams Drive and Main Street will consist of a 24-foot wide travel way with 8 feet available for parking on each side. Local streets will have a 20-foot wide travel way with an additional 8 feet for parking on each side of the street. The Abrams Drive/Main Street intersection is designed to have a roundabout.

There would be five access points to the Specific Plan: the existing Imjin Road/Abrams Drive intersection, the existing 12th Street/Abrams Drive intersection, a connection to Carmel Avenue, a new "Main Street" that would intersect both Imjin Road and California Avenue. The planned configuration of the on-site street network is shown on **Figure 3.2**.

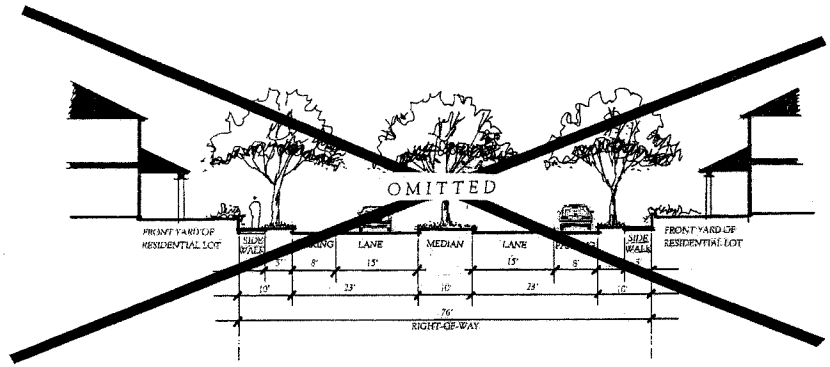
Figure 3.16: Specific Plan Street Network – Typical Cross Sections



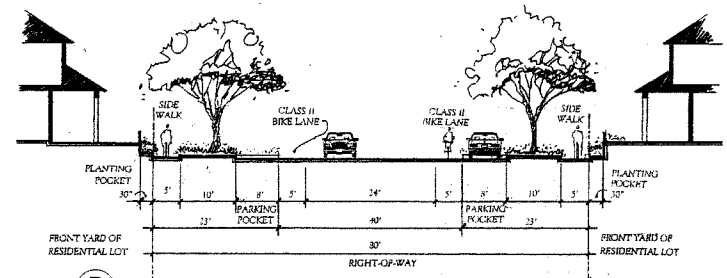
C LOCAL STREET



A DIVIDED ENTRY DRIVE



D DIVIDED PARKLANE DRIVE



B ABRAMS DRIVE / MAIN STREET

REVISED 04-04-03

DATE 02-07-03

PROJECT NO. 20219

SCALE 1/8"=1'-0"

STREET SECTIONS

NOTE: LANDSCAPING TYPICALLY ILLUSTRATED AT MATURE GROWTH.

CITY OF MARINA

MARINA HEIGHTS

CHADMAR GROUP

SCHEUNEN ARCHITECTS, INC.

4

Specific Plan Trip Generation

The development of the Specific Plan area as proposed would involve the construction of 1,050 new housing units. Trip generation associated with the Specific Plan was calculated based on the trip generation rates from *Trip Generation, 6th Edition*, published by the Institute of Traffic Engineers (ITE). The trip generation rates for Detached Single Family Homes (land use code 210) were used in the trip generation calculation for all housing types except for "affordable townhomes".

Table 3-6 presents Specific Plan trip generation for each housing type proposed. It is estimated that a total of 9,670 daily trips would be generated from within the Specific Plan area, of which 756 (185 in, 571 out) would be generated during the morning (AM) peak hour and 1,013 (650 in, 363 out) would be generated during the evening (PM) peak hour.

"Evaluating Traffic Calming Benefits, Costs and Equity Impacts" (Todd Litman, Victoria Transport Policy Institute, October 21, 1999), suggests that comprehensive traffic calming (which would include features of the Specific Plan intended to promote non-motorized travel) may reduce vehicle trips by between 0.1 and 0.2 per home per day. If so, then these features of the Specific Plan might be expected to reduce the projected total number of vehicle trips generated under the Specific Plan by between 105 and 210 trips per day.

Specific Plan Trip Distribution and Assignment

The project trip distribution was based on the projected baseline travel patterns and the For Ord Reuse Authority 2015 projections. Fifteen (15) percent of the trips were assigned to and from Highway 1 north and twenty-five (25) percent were assigned to and from Highway 1 south. The remaining trips were distributed to the local road network as follows: Salinas via Reservation Road and Blanco Road: 20 percent, Reservation Road commercial area: 7 percent, MBEST: 10 percent, Reservation Road east: 4 percent, CSUMB East Campus via Abrams Drive: 7 percent, CSUMB Central Campus via 8th Street: 5 percent, CSUMB West Campus via 3rd Avenue and General Jim Moore Boulevard: 3 percent, Carmel Avenue: 2 percent, and Reindollar Avenue: 2 percent.

Project trip assignment are presented in **Figure 3.17** and **Figure 3.18** for AM and PM volumes, respectively. Trips generated within the Specific Plan area were added to the baseline traffic volumes to create the Baseline Plus Project traffic volumes. **Figure 3.19** and **Figure 3.20** present the Baseline Plus Project AM and PM peak hour volumes, respectively.

Higgins Associates

Table 3-6: Project Trip Generation

PROJECT TRIP GENERATION
MARINA HEIGHT SUBDIVISION

PROJECT	SIZE	ITE Land Use Code	DAILY TRIP RATE	DAILY TRIPS	AM PEAK HOUR						PM PEAK HOUR					
					PEAK HOUR RATE	PEAK HOUR VOL.	IN		OUT		PEAK HOUR RATE	PEAK HOUR VOL.	IN		OUT	
Affordable Townhomes	102 units	230	5.86	598	0.44	45	17%	8	83%	37	0.54	55	67%	37	33%	18
Affordable Cottage Homes	23 units	210	9.57	220	0.75	17	25%	4	75%	13	1.01	23	64%	15	36%	8
"Bridge" Rate Cottage Homes	85 units	210	9.57	813	0.75	64	25%	16	75%	48	1.01	86	64%	55	36%	31
Market Rate Cottage Homes	80 units	210	9.57	766	0.75	60	25%	15	75%	45	1.01	81	64%	52	36%	29
Small Single Family Homes	337 units	210	9.57	3,225	0.75	253	25%	63	75%	190	1.01	340	64%	218	36%	123
Standard Single Family Homes	338 units	210	9.57	3,235	0.75	254	25%	63	75%	190	1.01	341	64%	218	36%	123
Estate Single Family Homes	85 units	210	9.57	813	0.75	64	25%	16	75%	48	1.01	86	64%	55	36%	31
PROJECT TOTAL	**1,050 units**			**9,670**		**756**		**185**		**571**		**1,013**		**650**		**363**

Note:

1. Trip generation is calculated using the daily and peak hour average trip generation rates from *Trip Generation, 6th Edition,* published by the Institute of Transportation Engineers 1997.

A03-002TripGeneration.xls - project

Figure 3.17: Project AM Peak Hour Trip Assignment

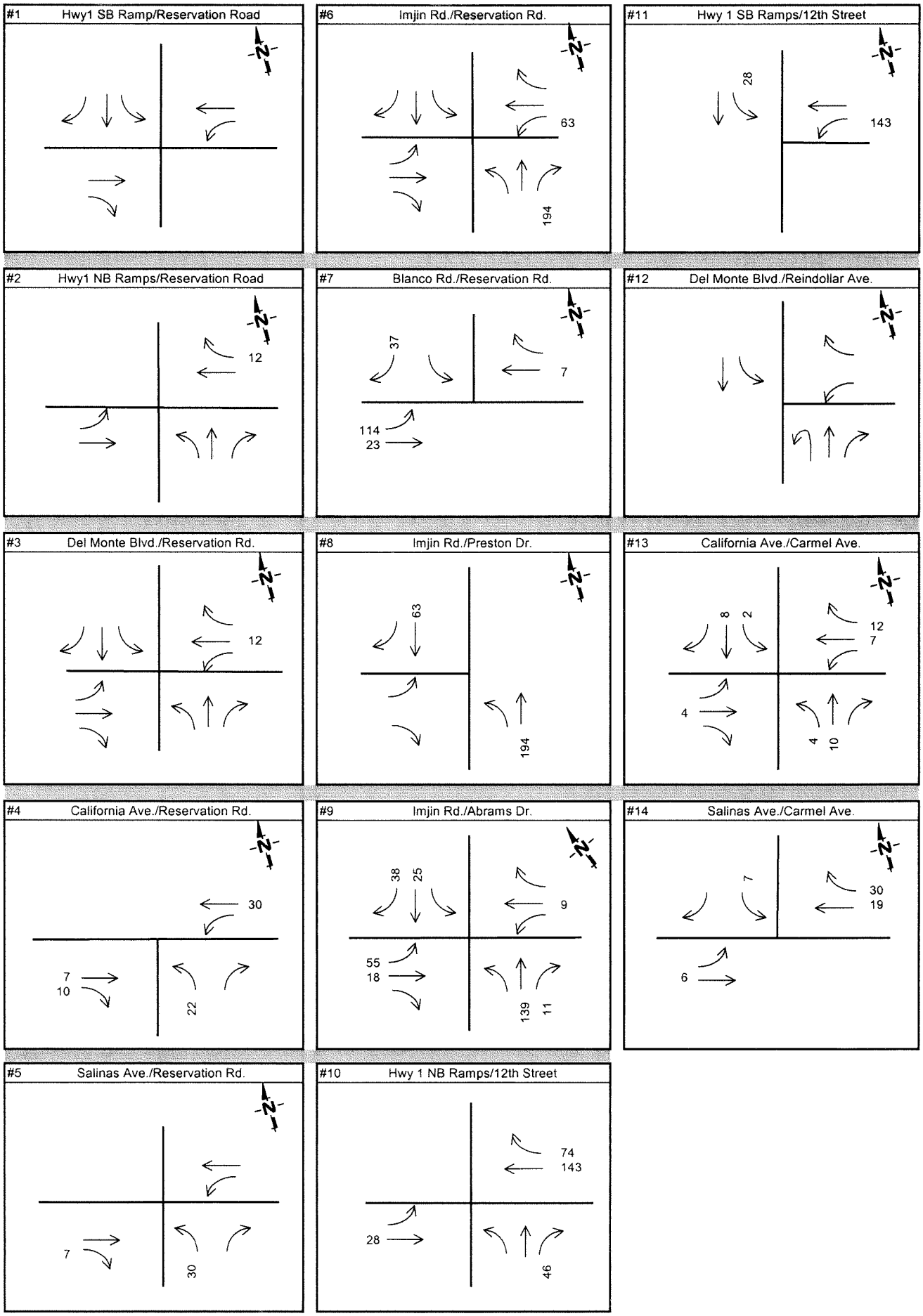


Figure 3.17: Project AM Peak Hour Trip Assignment (continued)

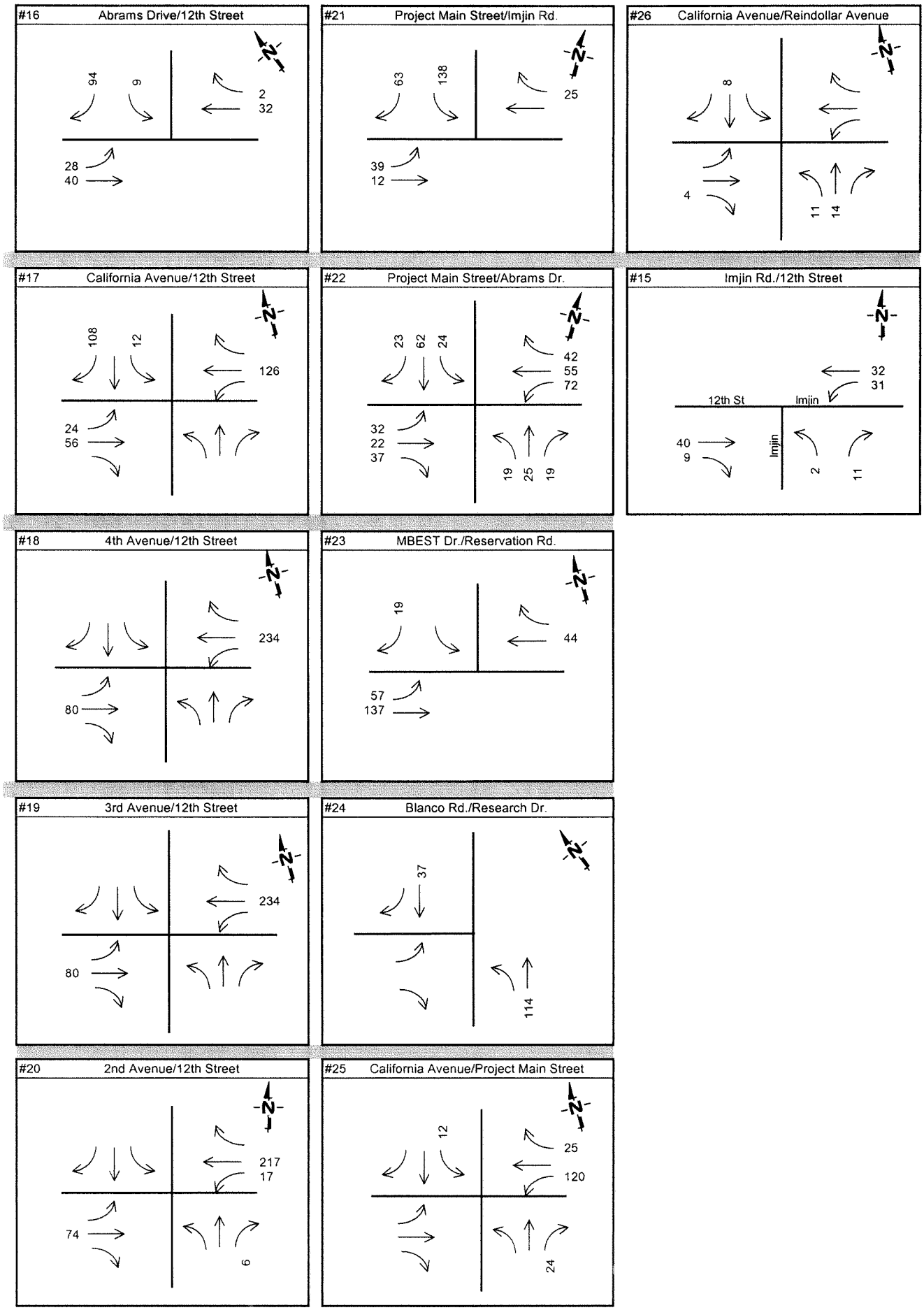


Figure 3.18: Project PM Peak Hour Trip Assignment

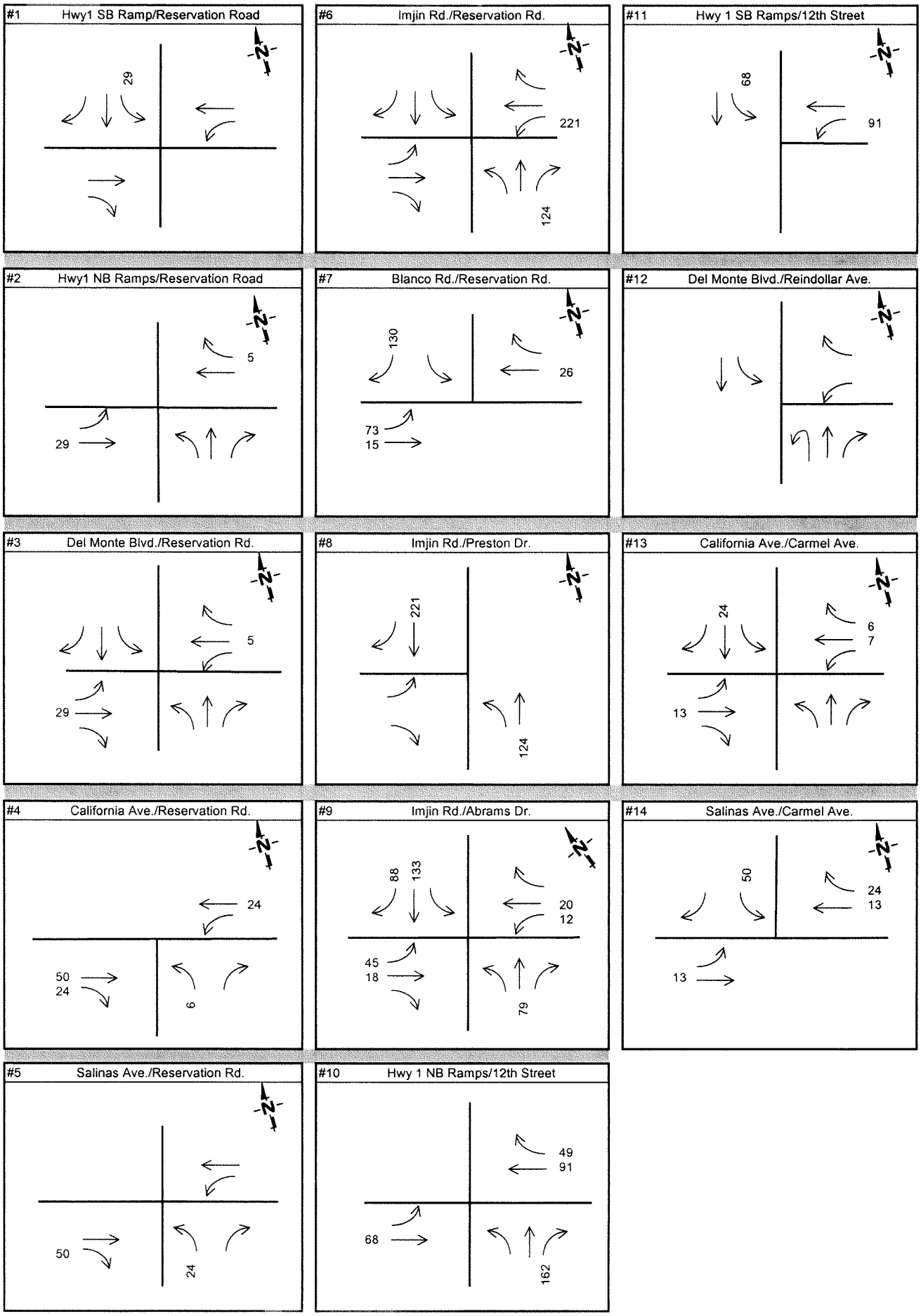


Figure 3.18: Project PM Peak Hour Trip Assignment (continued)

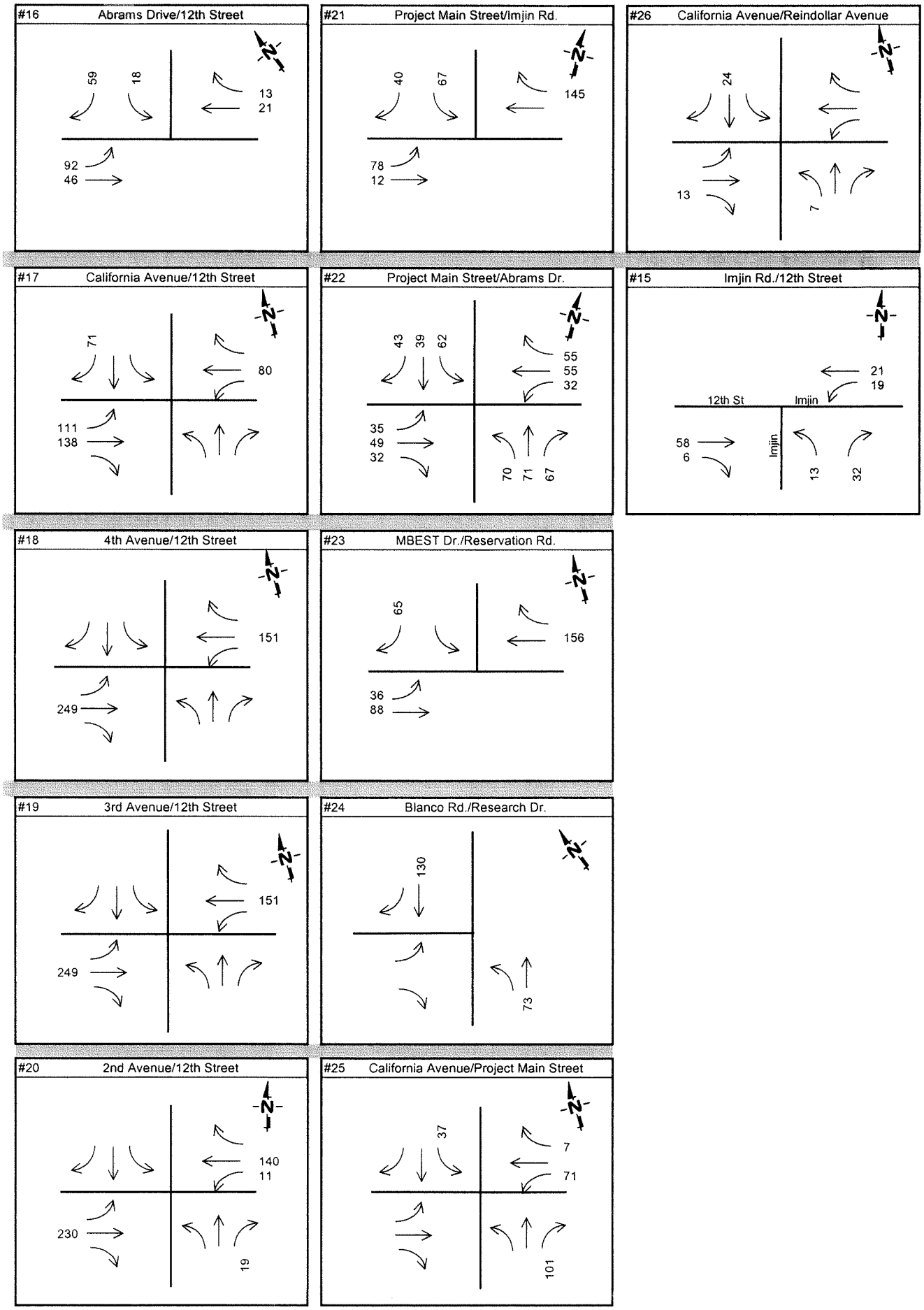


Figure 3.19: AM Peak Hour Volumes - Baseline Plus Project

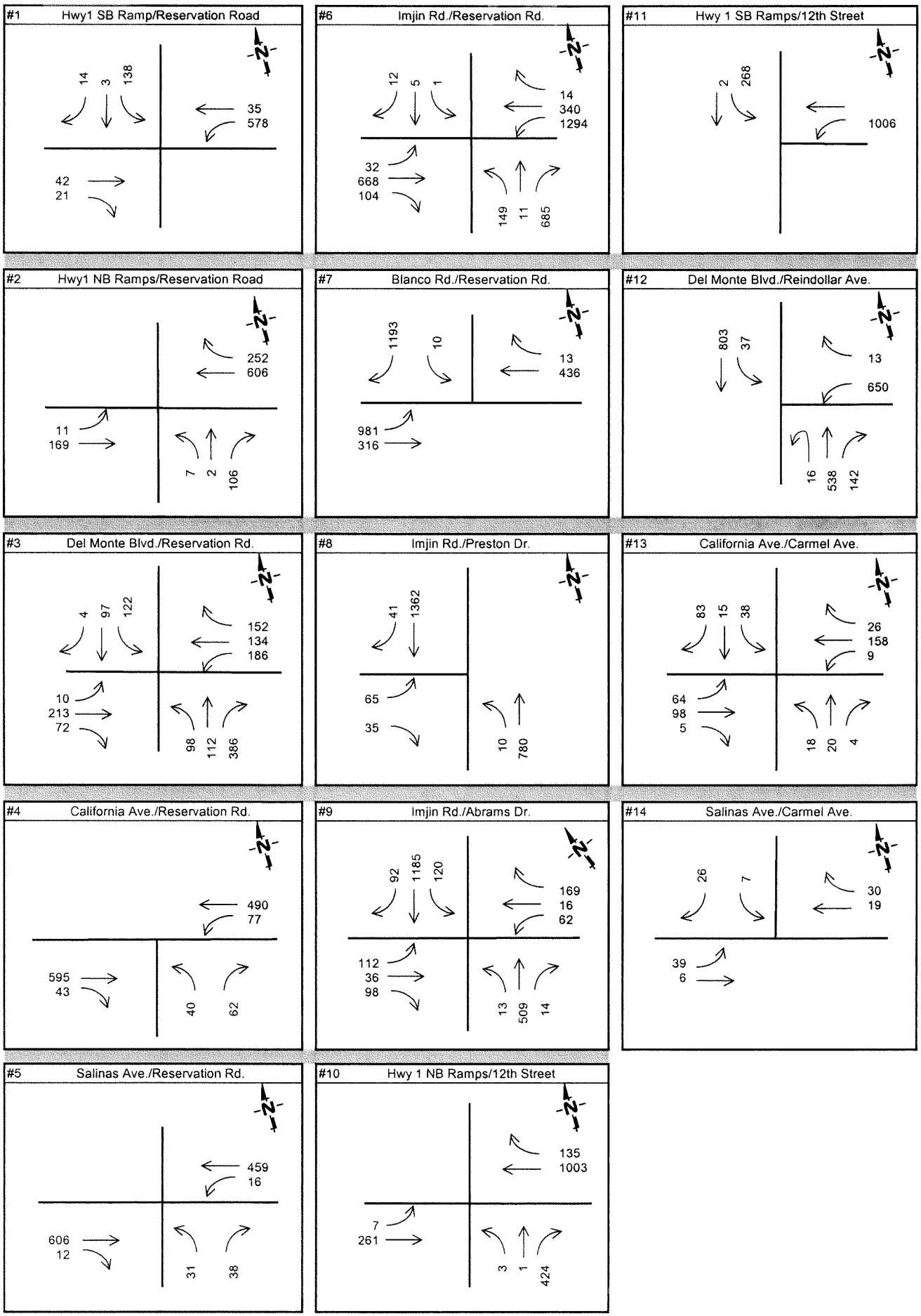


Figure 3.19: AM Peak Hour Volumes – Baseline Plus Project (continued)

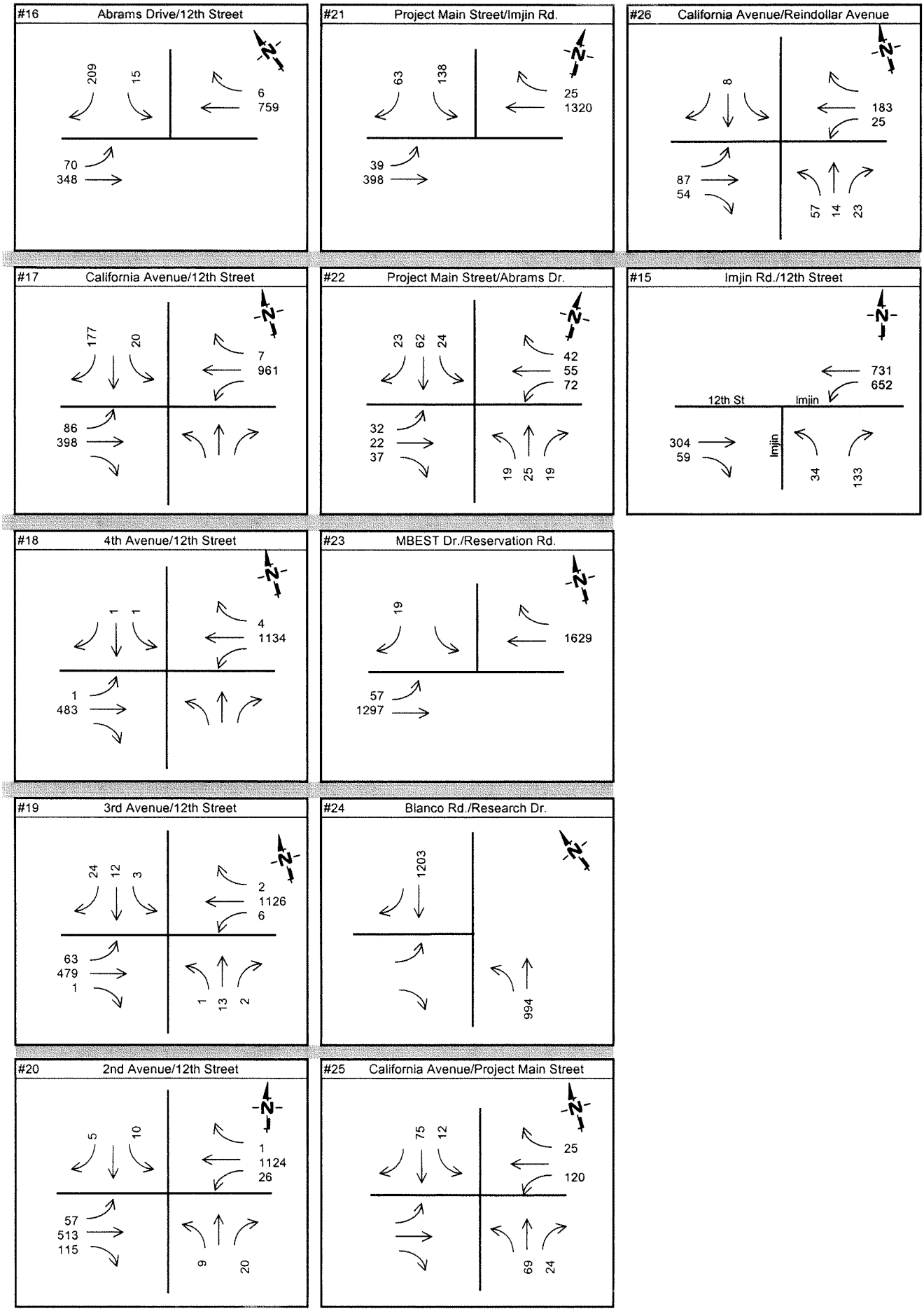


Figure 3.20: PM Peak Hour Volumes – Baseline Plus Project

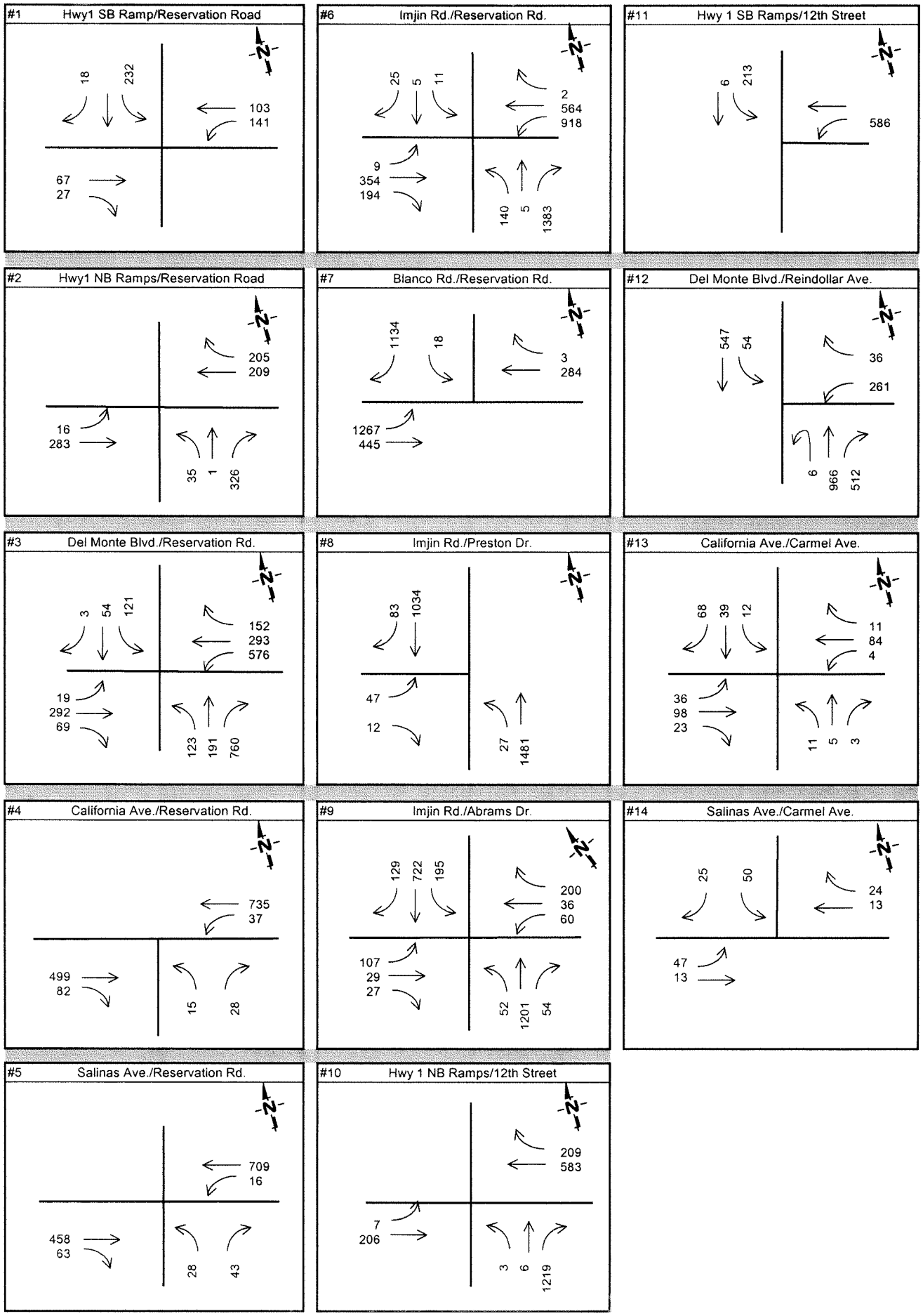
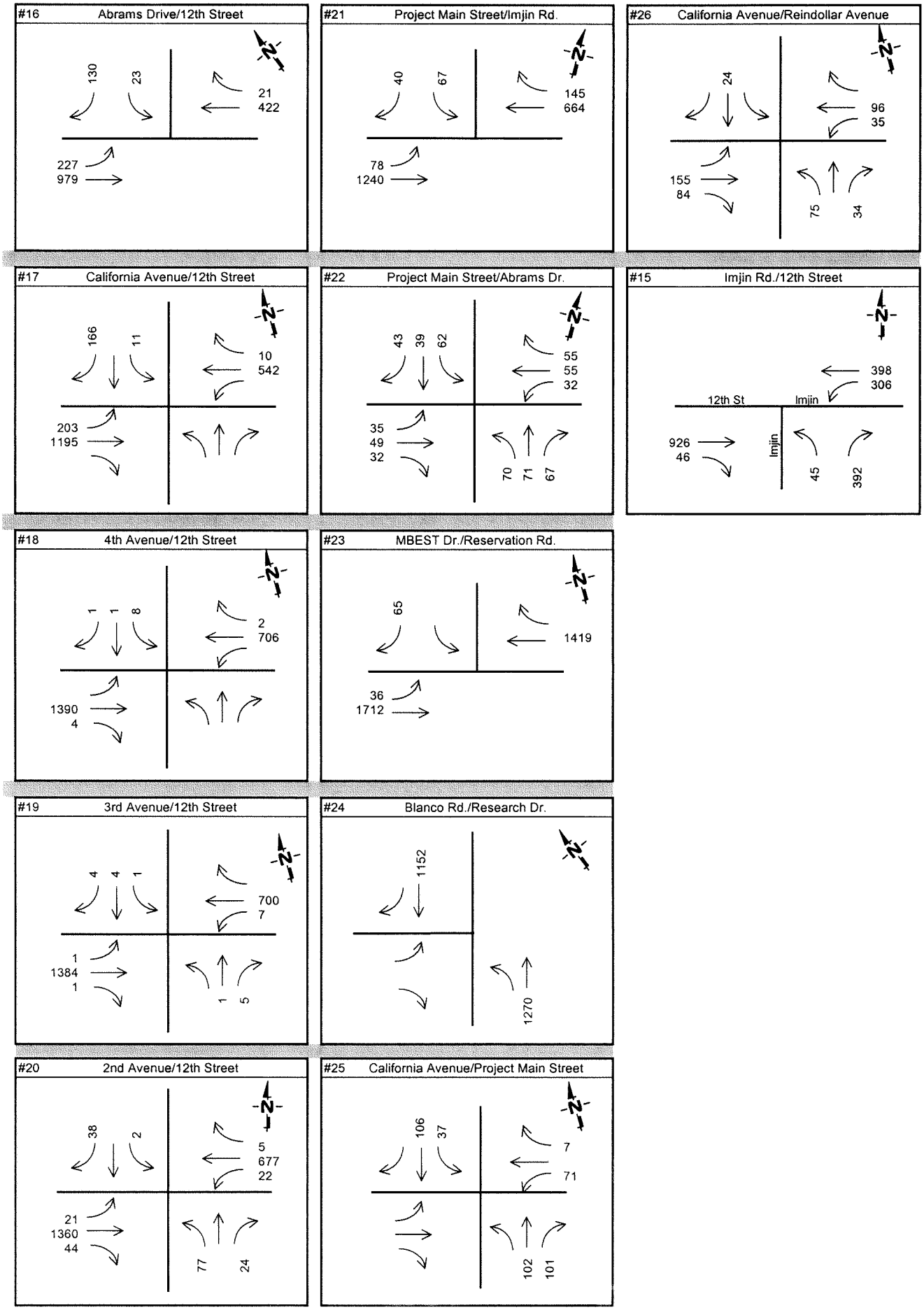


Figure 3.20: PM Peak Hour Volumes – Baseline Plus Project (continued)



Baseline Plus Project Traffic Conditions

Table 3-3 shows the intersection levels of service under the Baseline Plus Project conditions. The analysis of the Baseline Plus Project Conditions includes the intersections analyzed under the Baseline Conditions plus the proposed "Main Street"/Imjin Road intersection, the proposed "Main Street"/Abrams Drive intersection and the "Main Street"/California Avenue intersection. The extension of Carmel Avenue would change the Salinas Avenue/Carmel Avenue intersection to a "T" intersection, with stop control at the southbound Salinas Avenue approach. These four intersections were analyzed with a minimal number of lanes on each intersection approach, without left-turn or right-turn channelization. The LOS calculation worksheets are included in **Technical Appendix** - Appendix J. Caltrans peak-hour volume signal warrants are included in **Technical Appendix** - Appendix G and channelization warrants are included in **Technical Appendix** - Appendix H.

- The Highway 1 southbound ramp/Reservation Road intersection would operate at LOS F during the AM peak hour and LOS B during the PM peak hour. The LOS F operation during the AM peak hour is an existing condition. With signalization, the intersection would operate at LOS B during the AM and PM peak hours.

- The Imjin Road/Preston Drive intersection would operate at LOS E during the AM peak hour and LOS F during the PM peak hour. Under Baseline Without Project Conditions, the Imjin Road/Preston Drive intersection operates at LOS D during the AM peak hour and LOS C during the PM peak hour. Therefore, the Specific Plan-related impact to this intersection is considered significant. Signalization of the intersection would result in LOS C operations during the AM and PM peak hours and would mitigate the Specific Plan's impact to the intersection.

- The Highway 1 southbound ramp/12th Street intersection would operate at LOS F during both AM and PM peak hours. Mitigation described under Baseline Conditions is recommended at this intersection. This mitigation consists of reconfiguring the lanes on the 12th Street bridge to provide two westbound lanes and one eastbound lane, with the two westbound lanes continuing to the southbound Highway 1 on-ramp. The southbound off-ramp should be reconfigured to provide one left turn lane and one through lane. With signalization, this intersection would operate at LOS B during the AM peak hour and LOS A during the PM peak hour under Baseline Plus Project Conditions.

- Based on the existing intersection design, the Highway 1 northbound ramps/12th Street intersection would operate at LOS B during the AM peak hour and LOS F during the PM peak hour under the Baseline Plus Project conditions. The improved intersection, as shown on the Bestor Engineering design plan (see discussion in Baseline Conditions section, above), would operate at LOS A during both AM and PM peak hours. This intersection should be monitored to determine whether signalization may be required at some point in the future.

- The Imjin Road/12th Street intersection would operate at LOS C during both AM and PM peak hours. The northbound approach would operate at LOS F during both AM and PM peak hours if the intersection were maintained as an unsignalized intersection. As recommended for Baseline Conditions, it is recommended that this intersection be signalized and a second left turn lane be provided on the westbound Imjin Road approach to the intersection. With these improvements, the intersection would operate at LOS B during the AM peak hour and LOS D during the PM peak hour.

- The Abrams Drive/12th Street intersection would operate at LOS A during both AM and PM peak hours and the minor street approach would operate at LOS C. This intersection would meet the peak-hour volume signal warrants. Signalization is recommended under the Baseline Plus Project Conditions. It is recommended that separate left-turn and right-turn lanes be provided on the Abrams Drive approach to 12th Street. With signalization, this intersection would improve to LOS A during both peak hours under Baseline Plus Project Conditions.

- The California Avenue/12th Street intersection would operate at an overall LOS A during both AM and PM peak hours under Baseline Plus Project Conditions. The southbound approach would operate at LOS F during the AM peak hour and the intersection would meet the peak-hour volume signal warrants. Signalization of the California Avenue/12th Street intersection is recommended under Baseline Plus Project Conditions. It is recommended that separate left-turn and right-turn lanes be provided on the California Avenue approach to 12th Street. With signalization, this intersection would operate at LOS B during the AM peak hour and LOS A during the PM peak hour.

- The 4th Avenue/12th Street and 3rd Avenue/12th Street intersections would operate at an acceptable level (LOS A) during both AM and PM peak hours. The worst minor street approaches at these intersections would operate at LOS F during at least one of

the peak commute periods. However, the poor level of service on the minor street approaches is not the result of high volumes on these approaches, but a result of relatively high volumes of traffic on 12th Street. For the Baseline Condition and the Baseline Plus Project Condition, signalization of these intersections is not recommended. Signalization of the 12th Street/2nd Avenue, 12th Street/California Avenue, 12th Street/Abrams Drive and 12th Street/Imjin Road intersections is recommended under Baseline Plus Project Conditions. Traffic signals at the intersections adjacent to the 12th Street intersections at 3rd Avenue and 4th Avenue will create gaps in 12th Street traffic flows that will facilitate left turn movements at the 3rd Avenue and 4th Avenue intersections.

- The 2nd Avenue/12th Street intersection would operate at LOS F during both AM and PM peak hours. Signalization of the 12th Street/2nd Avenue intersection is recommended under Baseline Conditions. With signalization, the 12th Street/2nd Avenue intersection would operate at LOS B during the AM and PM peak hours under the Baseline Plus Project Conditions.

- The proposed "Main Street"/Imjin Road intersection would operate at LOS F during the AM peak hour and LOS E during the PM peak hour. Peak-hour volume signal warrant criteria would be met under the Baseline Plus Project Conditions. A right-turn lane would be warranted with the PM peak hour volumes on the westbound Imjin Road approach to "Main Street". It is recommended that the proposed "Main Street"/Imjin Road intersection be signalized under Baseline Plus Project Conditions with a right turn lane provided on the westbound Imjin Road approach and a left turn lane on the eastbound Imjin Road approach. Separate left and right turn lanes should be provided on the "Main Street" approach to Imjin Road. With signalization and the channelization described above, the Imjin Road/"Main Street" intersection would operate at LOS D during the AM peak hour and LOS B during the PM peak hour under Baseline Plus Project Conditions.

- It is anticipated that the California Avenue/Reindollar Avenue intersection will be improved to a four-leg intersection within five years. The improved intersection will include an all-way stop control and left turn channelization at all approaches. It is assumed that this improved intersection layout will be completed under the Baseline Plus Project Conditions. This intersection would operate at LOS A during both AM and PM peak hours.

- The California Avenue/Project Main Street intersection is forecasted to operate at LOS A during both AM and PM peak hours, modeled as an unsignalized intersection with single lane approaches with left and right turn channelization. Right turn channelization should be provided on the California Avenue northbound approach to Main Street and left turn channelization warrant is not met for the southbound approach.

Other intersections would operate at LOS D or better under Baseline Plus Project Conditions and would not require mitigation.

Highway 1 Operations Under Baseline Plus Project Traffic Conditions

With Specific Plan-related trips added to Highway 1, the segment levels of service are very similar to the Baseline Without Project levels of service. Only two segments operate at LOS D, and these segments were previously identified in the Baseline Without Project Condition. These levels of service are near the mid-range of the LOS D category. The addition of project trips to the southbound Highway 1 segment south of 12th Street during the AM peak hour and the northbound Highway 1 segment south of 12th Street during the PM peak hour is a significant Specific Plan-related impact.

Project Bicycle and Pedestrian Circulation

The overall design of the Specific Plan area would allow for and encourage the use of alternative modes of transportation. Typical street sections for the Specific Plan area are shown on **Figure 3.14**. Within the Specific Plan area, all divided entries, Abrams Drive, and the proposed "Main Street" will include Class II bike lanes. Sidewalks would be provided along both sides of internal neighborhood streets. The Specific Plan identifies a number of Class I and Class II bikeways and pedestrian links that will connect the Specific Plan area with the neighborhood park, school and residential areas to the southeast, east and north of the site. City staff believes there is a potential to provide a number of pedestrian and bike links through longer blocks. These links could provide better connections to parks and existing bike facilities.

The *1999 TAMC General Bikeways Plan* indicates that Class I bike lanes are proposed for Imjin Road between Reservation Road and 12th Street, Blanco Road, and along Reservation Road from Blanco Road to west of Imjin Road. Class II bike lanes are proposed for 12th Street, California Avenue, Carmel Avenue and Salinas Avenue. The planned bike facilities within the Specific Plan area will provide connections for residents

to access the existing and proposed bikeways in the vicinity. A map from *General Bikeways Plan* showing the existing and proposed bikeways in Marina is included in **Technical Appendix** - Appendix K.

CUMULATIVE WITH PROJECT CONDITIONS

Cumulative With Project Traffic Conditions

Trips generated by development under the Specific Plan were added to the cumulative traffic volumes to create the Cumulative With Project traffic volumes. **Figure 3.21** and **Figure 3.22** present the Cumulative With Project AM and PM volumes, respectively.

Table 3-3 shows the intersection levels of service under the Cumulative With Project Conditions. Recommended intersection improvements are described on **Table 3-4**. The LOS calculation worksheets are included in **Technical Appendix** - Appendix M. Caltrans peak-hour volume signal warrants are included in **Technical Appendix** - Appendix G and channelization warrants are included in **Technical Appendix** - Appendix H.

Intersection level of service results under Cumulative With Project Conditions are similar to level of service results under Cumulative Without Project Conditions. The primary exceptions are the Abrams Drive/12th Street. Project Main Street/Imjin Road, Main Street/Abrams Drive, and California Avenue/Main Street intersections, which directly serve the Specific Plan area.

- The Abrams Drive/12th Street intersection would operate at LOS A during the AM peak hour and LOS E during the PM peak hour under Cumulative With Project Conditions modeled as an unsignalized intersection. Signalization of the intersection is recommended under Baseline Plus Project Conditions. With signalization, the intersection will operate at LOS B during both peak hours under Cumulative With Project Conditions.

- The Project Main Street/Imjin Road intersection would operate at LOS F during the AM and PM peak hours if operated as a stop controlled intersection. Signalization of this intersection is recommended under Cumulative With Project Conditions. In addition, Imjin Road should be widened to four lanes, a right turn lane should be provided on the westbound (southbound) Imjin Road approach to the intersection and a left turn lane should be provided on the eastbound (northbound) Imjin Road approach to the intersection. The "Main Street" approach to Imjin Road should be

designed with separate left and right turn lanes. With the recommended mitigation measures, this intersection would operate at LOS B during the AM peak hour and LOS A during the PM peak hour.

- The Main Street/Abrams Drive intersection is designed as a roundabout. It would operate at LOS A during both AM and PM peak hours.

- California Avenue/Main Street intersection would operate at LOS C during the AM peak hour and LOS F during the PM peak hour, based on the assumption that all approaches have single lane and the intersection is operated with stop controls on the Main Street approaches to California Avenue. With left turn and right turn channelization on both approaches of California Avenue, this intersection would improve to LOS B during the AM peak hour, but remain at LOS F during the PM peak hour. While signalization of the intersection could achieve an acceptable level of service, it is recommended that this intersection be designed as a roundabout. A roundabout design would operate at LOS A during the AM peak hour and LOS B during the PM peak hour under Cumulative With Project Conditions.

- Under Cumulative With Project Conditions, the Del Monte Blvd./Reservation Road intersection would require additional mitigation that was not described for the Cumulative Without Project Condition. Under Cumulative With Project Conditions, the northbound Del Monte Boulevard approach to Reservation Road should be improved to include two left turn lanes, two through lanes and one right turn lane. With this intersection configuration, the intersection will operate at LOS C during the AM peak hour and LOS D during the PM peak hour with the Specific Plan-related trips included in the Cumulative With Project Condition forecasts.

- As with Cumulative Without Project Conditions, the mitigation required at the Reservation Road intersections with Imjin Road and Blanco Road depend on construction of the Blanco Road extension. If the Blanco Road extension is not constructed, the following intersection configuration is recommended for Cumulative With Project Conditions:

  Northbound approach – one left turn lane, two through lanes and two right turn lanes (with right turn overlap signal control);

  Southbound approach – one left turn lane, two through lanes and one right turn lane;

Figure 3.21: AM Peak Hour Volumes - Cumulative With Project

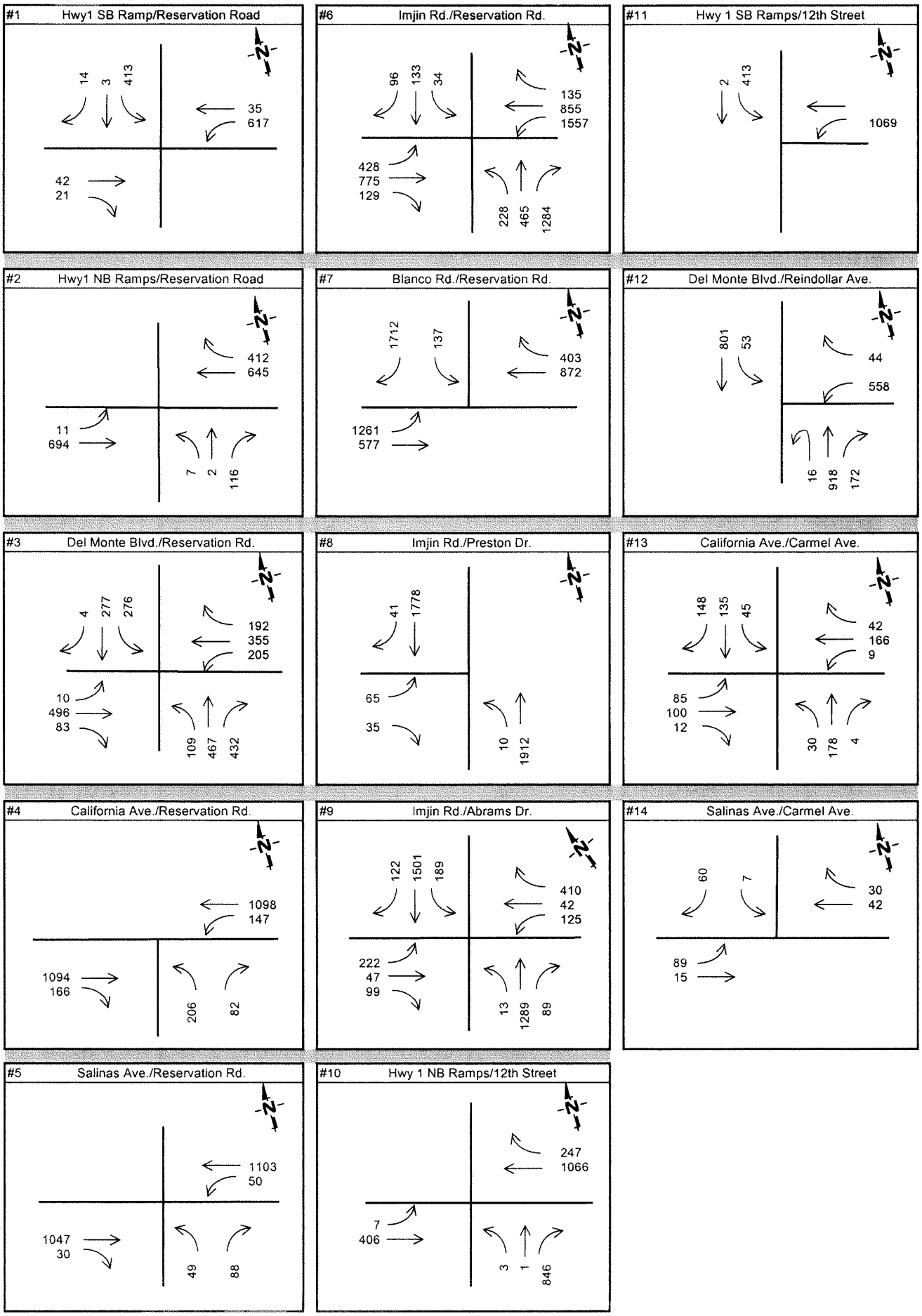


Figure 3.21: AM Peak Hour Volumes – Cumulative With Project (continued)

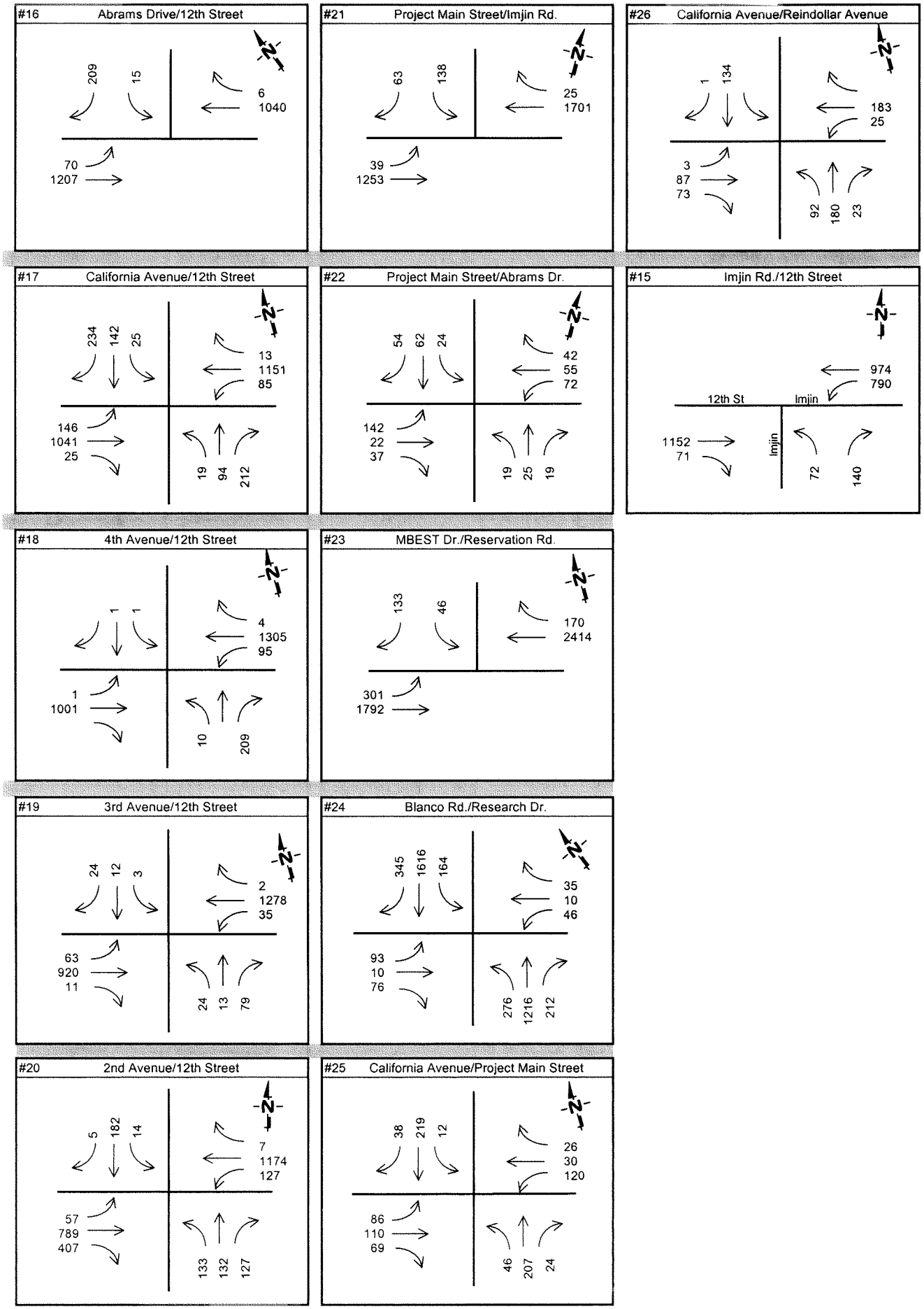


Figure 3.22: PM Peak Hour Volumes - Cumulative With Project

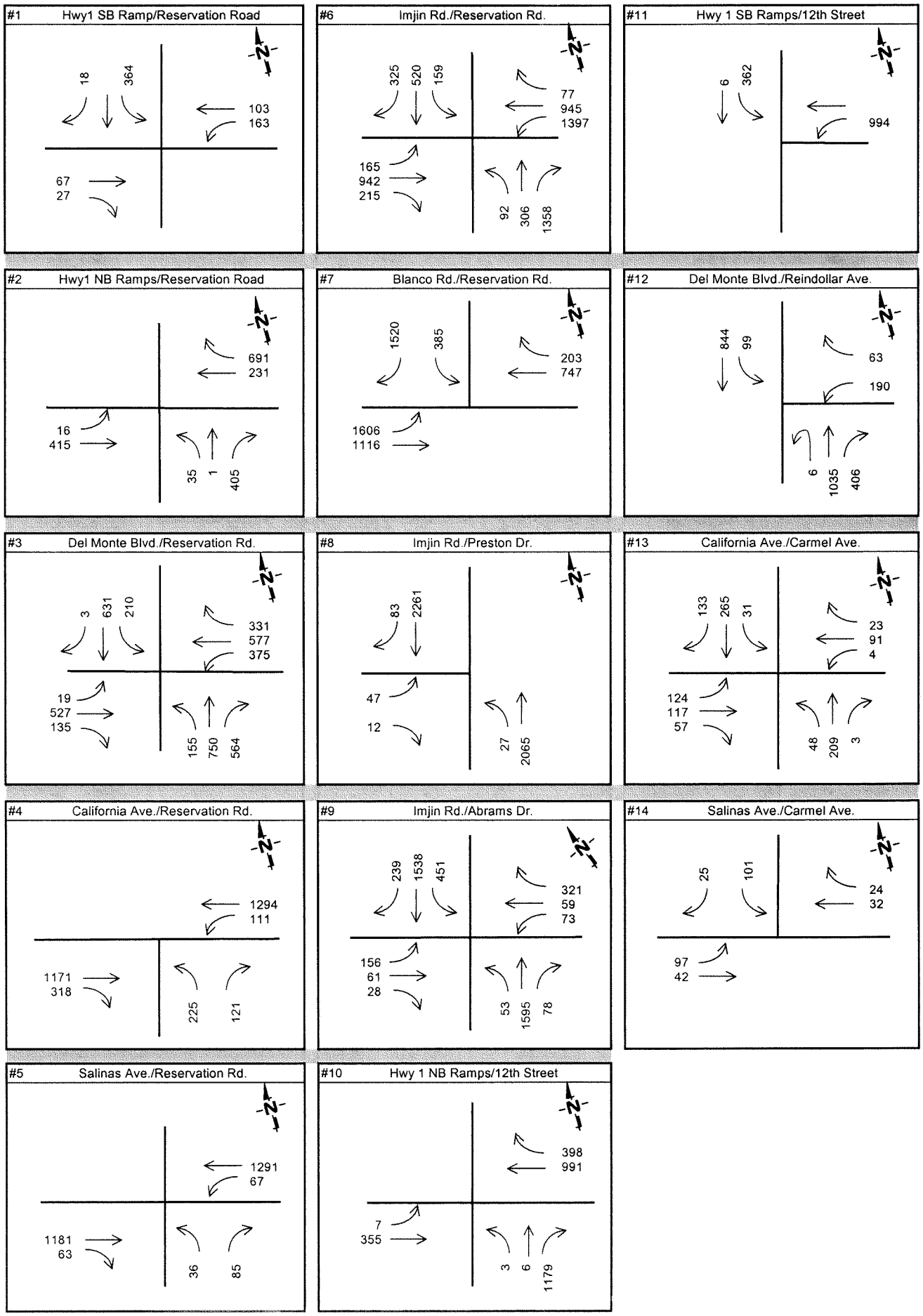
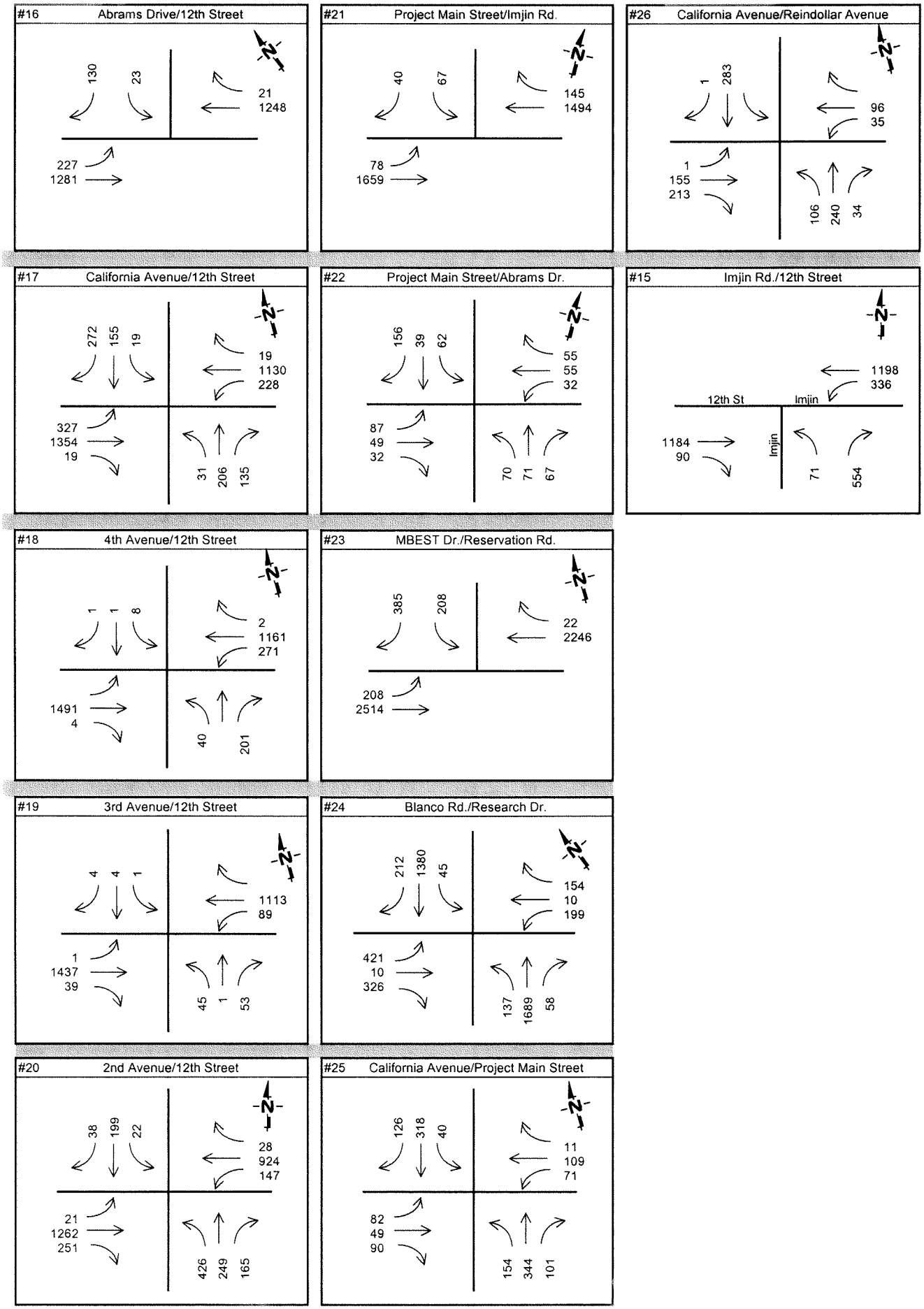


Figure 3.22: PM Peak Hour Volumes – Cumulative With Project (continued)



Eastbound approach – two left turn lanes, three through lanes and one right turn lane;

Westbound approach – three left turn lanes, two through lanes and one right turn lane.

If the Blanco Road extension is constructed, the following intersection configuration is recommended for Cumulative With Project Conditions:

Northbound approach – one left turn lane, two through lanes and one right turn lane (with right turn overlap control);

Southbound approach – one left turn lane, two through lanes and one right turn lane;

Eastbound approach – two left turn lanes, two through lanes and one right turn lane;

Westbound approach – two left turn lanes, two through lanes and one right turn lane.

At the other intersections that are not described above, mitigation measures described for the Cumulative Without Project Condition will serve Cumulative With Project Condition traffic volume forecasts.

Highway 1 Operations Under Cumulative With Project Conditions

Under Cumulative With Project Conditions, Highway 1 study segments between south of 12th Street and north of Del Monte North operate at LOS C or better except the northbound Highway 1 segment south of 12th Street. This segment operates at the cusp of the LOS C and LOS D ranges during the PM peak hour, and is considered acceptable. No mitigation is required on the Highway 1 study segments to serve the year 2020 Cumulative With Project Condition forecast volumes.

Since the completion of the Fort Ord Reuse Plan Program EIR, a Project Study Report (PSR) has been completed for the Highway 1 corridor between Route 218 and Light Fighter Drive. The PSR identified the need for the following Highway 1 improvements:

- 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);

- Construction of a northbound auxiliary lane on Highway 1 between the Fremont Boulevard interchange and the new Monterey Road interchange;

- Ramp modifications at the Highway 1/Fremont Boulevard interchange; and

- Widening of Highway 1 from four lanes to six lanes between Fremont Boulevard and Route 218.

Implementation of the Specific Plan will add new vehicle trips to the segments of Route 1 included in the PSR. The Project Applicant would contribute towards the cost of the Highway 1 improvements identified in the PSR through payment of the established per-unit FORA development fee.

SUMMARY OF RECOMMENDATION FOR MITIGATION MEASURES

Recommended improvements for all scenarios are summarized on **Table 3-4**, **Figure 3.6** and **Figure 3.7**. Project and Cumulative Condition significant impacts are described in this section. Mitigation measures that are included in the FORA CIP or City of Marina CIP are noted.

Baseline Plus Project Conditions

The same improvements for the Highway 1 southbound ramp/Reservation Road and Imjin Road/Preston Drive intersections recommended under the existing conditions are recommended under the Baseline Plus Project Conditions.

The same improvements for the Highway 1 southbound ramp/12th Street, Imjin Road/12th Street, and 2nd Avenue/12th Street intersections recommended under the Baseline Conditions are recommended under the Baseline Plus Project Conditions.

- **Potential Impact 3.1: Unacceptable Levels of Service at California Avenue/12th Street Intersection.** The California Avenue/12th Street intersection would meet the peak-hour volume signal warrants as a result of high right turn volumes from the minor street approaches during the peak commute hours. This would represent a

significant environmental impact associated with implementation of the Specific Plan.

RECOMMENDED MITIGATION MEASURE

> **Mitigation Measure 3.1: Signalization of the California Avenue/12th Street Intersection.** Signalization of the California Avenue/12th Street intersection is recommended. It is also recommended that separate left-turn and right-turn lanes be provided on the California Avenue approach to 12th Street. These mitigation measures would be implemented in connection with the Marina CIP. The City of Marina has determined that Project-related impacts at this intersection would be fully mitigated through payment of Project-related traffic impact fees.

RESULTING LEVEL OF SIGNIFICANCE

The signalized and improved intersection would operate at LOS A during both AM and PM peak hours. Implementation of this mitigation measure would reduce the impact to a level of *less than significant*.

- **Potential Impact 3.2: Abrams Drive/12th Street Intersection Meets Caltrans' Peak-Hour Signal Warrant.** The Abrams Drive/12th Street intersection would meet the peak-hour volume signal warrants. This would represent a **significant** environmental impact associated with implementation of the Specific Plan.

RECOMMENDED MITIGATION MEASURE

> **Mitigation Measure 3.2: Signalization of Abrams Drive/12th Street Intersection.** It is also recommended that separate left-turn and right-turn lanes be provided on the Abrams Drive approach to 12th Street. The City of Marina has determined that Project-related impacts at this intersection would be fully mitigated by the installation by the Project Applicant of the traffic signal and improvements to Abrams Drive within the Specific Plan area.

RESULTING LEVEL OF SIGNIFICANCE

With signalization and channelization, this intersection would improve to LOS A during both peak hours. Implementation of this mitigation measure would reduce the impact to a level of *less than significant*.

- **Potential Impact 3.3: Unacceptable Levels of Service at "Main Street"/Imjin Road Intersection.** Operation of the intersection of "Main Street"/Imjin Road would be unacceptable under the Baseline Plus Project Conditions, if the intersection is constructed with single-lane approaches and stop control on the Main Street approach to Imjin Road. This is a **significant** environmental impact associated with implementation of the Specific Plan.

RECOMMENDED MITIGATION MEASURE

Mitigation Measure 3.3: Signalize "Main Street"/Imjin Road Intersection and Add Separate Right-Turn and Left-Turn Lanes. It is recommended that the proposed "Main Street"/Imjin Road intersection be signalized under Baseline Plus Project Conditions with a right-turn lane provided on the westbound (southbound) Imjin Road approach and a left turn lane on the eastbound (northbound) Imjin Road approach. Separate left and right turn lanes should be provided on the Main Street approach to Imjin Road. The City of Marina has determined that Project-related impacts at this intersection would be fully mitigated by the installation by the Project Applicant of the traffic signal.

RESULTING LEVEL OF SIGNIFICANCE

With signalization and the channelization described above, the Imjin Road/Main Street intersection would operate at LOS D during the AM peak hour and LOS B during the PM peak hour under Baseline Plus Project Conditions, and the impact would be reduced to a level of *less than significant.*

- **Potential Impact 3.4: Unacceptable Levels of Service on Highway 1 Segments.** Traffic operations on Highway 1 south of 12th Street would be unacceptable in the southbound direction during the AM peak hour and in the northbound direction during the PM peak hour. This is a **significant** environmental impact associated with implementation of the Specific Plan.

RECOMMENDED MITIGATION MEASURE

Mitigation Measure 3.4: Implement Regional Road Improvements to Reduce Traffic Volume on Highway 1. Planned improvements in the region will provide additional overall network road capacity and provide alternatives to Highway 1 for regional trips. The Project Applicant will pay FORA fees that will fund regional road

improvements, including improvements to Highway 1. The City of Marina has determined that Project-related impacts on traffic volume on Highway 1 will be fully mitigated through payment of Project-related FORA traffic impact fees and implementation of regional transportation system improvements by FORA.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of planned road improvements, including improvements planned for Highway 1, will reduce the impact to a level of *less than significant*.

Cumulative Conditions Without Project (2020)

New and upgraded facilities as defined in the FORA CIP are assumed under both Cumulative Without Project Conditions (2020) and Cumulative With Project Conditions (2020). Within the Specific Plan area, the cumulative conditions roadway network includes extension of California Avenue from Reindollar to Carmel, Carmel Avenue extension, Crescent Court extension and Abrams Drive extension. The cumulative conditions identified below would occur regardless of whether the Marina Heights Specific Plan is implemented or not. The implementation of necessary improvements to remedy cumulative conditions would be carried out through the appropriate pro-rata share of traffic impact fees paid to FORA and/or the City of Marina in connection with future development projects, including development under the Specific Plan.

- **Unacceptable Levels of Service at Highway 1 southbound ramp/Reservation Road Intersection.** Under Cumulative Without Project Conditions (2020), the Highway 1 southbound ramp/Reservation Road intersection would operate at LOS F during the AM peak hour and LOS D during the PM peak hour. To achieve acceptable levels of service at the Highway 1 southbound ramp/Reservation Road intersection, the intersection should be signalized. Signalization of this intersection is included in the Marina CIP. With signalization, the intersection would operate at LOS C during the AM peak hour and LOS B during the PM peak hour under Cumulative Without Project Conditions (2020).

- **Highway 1 northbound ramp/Reservation Road Intersection Meets Caltrans' Peak-Hour Signal Warrant.** Although the Highway 1 northbound ramp/Reservation Road intersection would operate at LOS A during the AM peak hour and LOS A during the PM peak hour, Caltrans' peak-hour signal warrant would be met with PM peak hour volumes under the Cumulative Without Project Conditions (2020) due to

the large right turn volume from the northbound off-ramp to eastbound Reservation Road. The Highway 1 northbound ramp/Reservation Road intersection should be monitored by FORA and/or the City of Marina for possible signalization as the City of Marina continues to develop. Signalization of this intersection is included in the Marina CIP. With signalization, the Highway 1 northbound ramp/Reservation Road intersection would operate at LOS A during the AM peak hour and LOS D during the PM peak hour under Cumulative Without Project Conditions (2020).

- **Unacceptable Levels of Service at Highway 1 southbound ramp/12th Street Intersection.** Under Cumulative Without Project Conditions (2020), this intersection would operate at LOS F in the AM and PM peak hours. For the Highway 1 southbound ramps/12th Street intersection, it is recommended that the lanes on the bridge be configured to provide two westbound lanes and one eastbound lane in conjunction with the completion of the 12th Street reconstruction project. This reconfiguration would better serve the higher volume of westbound to southbound traffic that is expected with the completion of 12th Street. In addition, widening the southbound Highway 1 on-ramp from 12th Street would be required to accept two left-turn movements from westbound 12th Street. Under the terms of the Option Agreement, through the payment of the appropriate impact fees, the Project Applicant will have contributed the development's "fair share" toward the mitigation of cumulative traffic impacts in Marina. With signalization and the recommended modification to the lane configuration on 12th Street, the Highway 1 southbound ramps/12th Street intersection would operate at LOS B during the AM and PM peak hours under Cumulative Without Project Conditions (2020). However, this improvement is not currently listed in the FORA CIP, and a funding mechanism has not been identified. In reviewing the CIP each year, FORA has the opportunity to update the list of transportation improvement projects, and this improvement could be added to the CIP when conditions warrant.

- **Unacceptable Levels of Service at Imjin Road/12th Street Intersection.** Under Cumulative Without Project Conditions (2020), this intersection would operate at LOS F in the AM and PM peak hours. The signalization of the Imjin Road/12th Street intersection is included in the Marina CIP. The addition of a second left-turn lane by FORA on the westbound Imjin Road approach is recommended to serve the volume of traffic turning left at this location. Conditions should be monitored to determine when this additional lane may be necessary. With signalization and the second left turn lane, the intersection would operate at LOS B during the AM peak hour and LOS D during the PM peak hour under Cumulative Without Project Conditions (2020).

- **Unacceptable Levels of Service at 2nd Avenue/12th Street Intersection.** Under Cumulative Without Project Conditions (2020), this intersection would operate at LOS F in the AM and PM peak hours. It is recommended that the 2nd Avenue/12th Street intersection be signalized. Signalization of this intersection is included in the Marina CIP. With signalization, the intersection would operate at LOS C during the AM peak hour and LOS D during the PM peak hour under Cumulative Without Project Conditions (2020).

- **Unacceptable Levels of Service at Del Monte Boulevard/Reservation Road Intersection.** The Del Monte Boulevard/Reservation Road intersection would degrade to LOS F during the PM peak hour under Cumulative Without Project Conditions (2020). To provide the capacity to serve the projected future demand, it is recommended that the south leg of the intersection be reconfigured to provide one left turn lane, two through lanes and one right turn lane under Cumulative Without Project Conditions (2020). With this suggested configuration, the Del Monte Boulevard/Reservation Road intersection will operate at LOS C during the AM peak hour and LOS D during the PM peak hour. However, this improvement is not currently listed in the Marina CIP, and a funding mechanism has not been identified.

- **Unacceptable Levels of Service at California Avenue/Reservation Road Intersection.** The California Avenue/Reservation Road intersection would operate at LOS F during both AM and PM peak hours. Peak-hour signal warrant would be met under the Cumulative Without Project Conditions (2020). To achieve acceptable levels of service at the California Avenue/Reservation Road intersection, the intersection should be signalized. Signalization of this intersection is included in the Marina CIP. With signalization, the intersection would operate at LOS B during the AM and PM peak hours under Cumulative Without Project Conditions (2020).

- **Unacceptable Levels of Service at Salinas Avenue/Reservation Road Intersection.** Although the Salinas Avenue/Reservation Road intersection would operate at an acceptable level (LOS A) during both AM and PM peak hours, the northbound street approach would operate at LOS F during the AM and PM peak hours. To achieve acceptable levels of service at the Salinas Avenue/Reservation Road intersection, the intersection should be signalized. Signalization of this intersection is included in the Marina CIP. With signalization, the intersection would operate at LOS A during both peak hours under Cumulative Without Project Conditions (2020).

- **Unacceptable Levels of Service at Imjin Road/Reservation Road.** Under the Cumulative Without Project Conditions (2020), this intersection would degrade to LOS F during both the AM and PM peak hours. The improvements required to improve traffic operations to acceptable levels depends on whether the Blanco Road extension is constructed or not. The Blanco Road extension is included in the FORA CIP, but is scheduled for construction after year 2020. If the Blanco Road extension is not constructed, the following lane geometrics are recommended:

  Northbound approach – one left turn lane, two through lanes and two right turn lanes (with right turn overlap signal control);

  Southbound approach – one left turn lane, two through lanes and one right turn lane;

  Eastbound approach – two left turn lanes, two through lanes and one right turn lane;

  Westbound approach – three left turn lanes, two through lanes and one right turn lane.

  If the Blanco Road extension is constructed, the following intersection configuration is recommended:

  Northbound approach – one left turn lane, two through lanes and one right turn lane (with right turn overlap control);

  Southbound approach – one left turn lane, two through lanes and one right turn lane;

  Eastbound approach – two left turn lanes, two through lanes and one right turn lane;

  Westbound approach – two left turn lanes, two through lanes and one right turn lane.

  With Blanco Road not extended and with the recommended intersection design, the intersection will operate at LOS D during both AM and PM peak hours. With the Blanco Road extension and the recommended intersection design, the intersection will

operate at LOS C during both AM and PM peak hours under Cumulative Without Project Conditions (2020). Since this improvement is currently not scheduled for completion until after 2020, if it becomes apparent that the mitigation measure identified is needed before then, the City should request that FORA reschedule this improvement for earlier completion.

- **Unacceptable Levels of Service at Blanco Road/Reservation Road Intersection.** Under the Cumulative Without Project Conditions (2020), this intersection would degrade to LOS E during the PM peak hour. The Blanco Road extension is included in the FORA CIP, but is scheduled for construction after year 2020. If Blanco Road were not extended, a second westbound through lane would be required on Reservation Road. If the Blanco Road extension were constructed, three through lanes would be required on northbound and southbound Blanco Road and in the eastbound direction on Reservation Road. The dual right turn lanes from southbound Blanco Road to westbound Reservation Road can be reduced to a single free-flow right turn lane when Blanco Road is extended to Imjin Road. This will allow two through lanes to be provided on Reservation Road in the westbound direction. Providing a second through lane on the westbound approach without Blanco Road extended would improve the intersection to LOS B during the AM peak hour and LOS C during the PM peak hour. If the Blanco Road extension were constructed and the identified intersection improvements were constructed, the intersection operations would improve to LOS C during the AM peak hour and LOS C during the PM peak hour. Since this improvement is currently not scheduled for completion until after 2020, if it becomes apparent that the mitigation measure identified is needed before then, the City should request that FORA reschedule this improvement for earlier completion.

- **Unacceptable Levels of Service at Imjin Road/Preston Drive Intersection.** The Imjin Road/Preston Drive intersection would operate at LOS F during both AM and PM peak hours under Cumulative Without Project Conditions (2020). Widening Imjin Road to four lanes in included in the FORA CIP. Signalization of this intersection is included in the Marina CIP. This intersection would improve to LOS A during both peak hours with these improvements.

- **Unacceptable Levels of Service at Imjin Road/Abrams Road Intersection.** The Imjin Road/Abrams Drive intersection would operate at LOS F during both AM and PM peak hours. Recommended mitigation measures include the widening of Imjin Road to a four-lane divided roadway through this intersection and providing a second left turn lane on the southbound Imjin Road approach to Abrams Drive. Upgrade of

the Imjin Road/Abrams Drive intersection is included in the Marina CIP. Widening Imjin Road to four lanes is included in the FORA CIP. With the improvements, the intersection would operate at LOS C during the AM peak hour and LOS D during the PM peak hour under Cumulative Without Project Conditions (2020).

- **Unacceptable Levels of Service at California Avenue/12th Street Intersection.** The California Avenue/12th Street intersection would operate at LOS F during both AM and PM peak hours. Peak-hour signal warrant would be met under the Cumulative Without Project Conditions (2020). To achieve acceptable levels of service at the California Avenue/12th Street intersection, the intersection should be signalized by FORA. It is also recommended that exclusive right-turn lanes be added on both northbound and southbound California Avenue approaches. The recommended right-turn lanes are included in the Marina CIP. With signalization, the intersection would operate at LOS B during the AM peak hour and LOC C during the PM peak hour under Cumulative Without Project Conditions (2020).

- **Unacceptable Levels of Service at 4th Avenue/12th Street Intersection.** The 4th Avenue/12th Street intersection would operate at LOS A during the AM peak hour and LOS F during the PM peak hour under Cumulative Without Project Conditions (2020). Peak-hour signal warrant would be met under the Cumulative Without Project Conditions (2020). To achieve acceptable levels of service at the 4th Avenue/12th Street intersection, the intersection should be signalized. With signalization, the intersection would operate at LOS B during the AM peak hour and LOS C during the PM peak hour. However, this improvement is not currently listed in the Marina CIP, and a funding mechanism has not been identified. In reviewing the CIP each year, the City of Marina has the opportunity to update the list of transportation improvement projects, and this improvement could be added to the CIP when conditions warrant.

- **Unacceptable Levels of Service at 3rd Avenue/12th Street Intersection.** Although the 3rd Avenue/12th Street intersection would operate at LOS A during the AM peak hour and LOS C during the PM peak hour, the northbound 3rd Avenue approach to 12th Street would operate at LOS F during the AM and PM peak hours. While the peak hour volume signal warrant would not be met under the Cumulative Without Project Conditions (2020) based on the traffic volume projections developed for this study, it is probable that the intersection will eventually warrant signalization when parcels located near the intersection are developed to their full potential. To achieve acceptable levels of service at the 3rd Avenue/12th Street intersection, the intersection should be signalized. The signalization of this intersection is included in the Marina

CIP. With signalization, the northbound 3rd Avenue approach would operate at LOS A during the AM and PM peak hours under Cumulative Without Project Conditions (2020).

- **Unacceptable Levels of Service at Blanco Road/Research Drive Intersection.** The Blanco Road/Research Drive intersection would operate at LOS C during the AM peak hour and LOS E during the PM peak hour. To achieve acceptable operations at this intersection under Cumulative Conditions (2020), Blanco Road would require widening to six lanes. Dual left turn lanes should be provided on both eastbound and westbound approaches from Research Drive to Blanco Road. With the recommended lane geometrics, the intersection would operate at LOS C during both peak hours under Cumulative Without Project Conditions (2020). However, this improvement is not currently listed in the Marina CIP, and a funding mechanism has not been identified. In reviewing the CIP each year, the City of Marina has the opportunity to update the list of transportation improvement projects, and this improvement could be added to the CIP when conditions warrant.

- **California Avenue/Main Street Intersection Warrants Auxiliary Channelization.** The California Avenue/Main Street intersection is forecast to operate at LOS A during the AM peak hour and LOS F during the PM peak hour under Cumulative Without Project Conditions (2020) modeled as a stop controlled intersection with single lane approaches. Left turn channelization would be warranted on the northbound California Avenue approach and right turn channelization would be warranted on the southbound California Avenue approach. Left turn and right turn channelization should be provided on the California Avenue approaches and two approach lanes should be provided on the eastbound Main Street approach. With the recommended lane geometrics, the intersection would operate at LOS A during the AM Peak hour and LOS A during the PM peak hour under Cumulative Without Project Conditions (2020).

Cumulative Conditions With Project

The same improvements for the Highway 1 southbound ramp/Reservation Road intersection under the Existing Conditions are recommended under the Cumulative Conditions With Project Conditions (2020).

The same improvements for the Highway 1 northbound ramp/12th Street, Highway 1 southbound ramp/12th Street, Imjin Road/12th Street, and 2nd Avenue/12th Street intersections under the Baseline Conditions are recommended under the Cumulative With Project Conditions (2020).

The same improvements for the Abrams/12th Street intersection under the Baseline Plus Project Conditions are recommended under the Cumulative With Project Conditions (2020).

The same improvements for the Highway 1 northbound ramps/Reservation Road, Salinas Avenue/Reservation Road, Blanco Road/Reservation Road, Imjin Road/Preston Drive, Imjin Road/Abrams Drive, Del Monte Boulevard/Reindollar Avenue, California Avenue/12th Street, 4th Avenue/12th Street, 3rd Avenue/12th Street, MBEST Drive/Reservation Road and Blanco Road/Research Drive under the Cumulative Without Project Conditions (2020) are recommended under the Cumulative Conditions With Project conditions (2020).

- **Potential Impact 3.5: Unacceptable Levels of Service at Del Monte Boulevard/Reservation Road Intersection.** Operation of the intersection of Del Monte Boulevard/Reservation Road would be unacceptable under the Cumulative With Project Conditions (2020), a **significant** environmental impact associated with implementation of the Specific Plan.

RECOMMENDED MITIGATION MEASURE

Mitigation Measure 3.5: Add Lanes to Northbound Approach of the Del Monte Boulevard/Reservation Road Intersection. Under Cumulative With Project Conditions, the northbound approach of the Del Monte Boulevard/Reservation Road should be improved to include two left-turn lanes, two through lanes and one right-turn lane. Under the terms of the Option Agreement, through the payment of the appropriate impact fees, the Project Applicant will have contributed the development's "fair share" toward the mitigation of cumulative traffic impacts in Marina. The City of Marina has determined that Project-related impacts on this intersection will, therefore, be fully mitigated through payment of Project-related traffic impact fees.

RESULTING LEVEL OF SIGNIFICANCE

With the intersection configuration defined above, the intersection will operate at LOS C during the AM peak hour and LOS D during the PM peak hour with Specific Plan-related trips included in the Cumulative With Project Condition (2020) forecasts, and the impact would be reduced to a level of *less than significant*.

- **Potential Impact 3.6: Unacceptable Levels of Service at Imjin Road/"Main Street" Intersection.** The Imjin Road/"Main Street" intersection would operate at LOS F during the AM and PM peak hours if operated as a stop controlled intersection, a **significant** environmental impact associated with implementation of the Specific Plan.

RECOMMENDED MITIGATION MEASURE

> **Mitigation Measure 3.6: Signalize Imjin Road/"Main Street" Intersection and Add Separate Right-Turn and Left-Turn Lanes** (same as **Mitigation Measure 3.3**, above).

RESULTING LEVEL OF SIGNIFICANCE

With signalization and the channelization described above, the Imjin Road/"Main Street" intersection would operate at LOS B during the AM peak hour and LOS A during the PM peak hour under Cumulative With Project Conditions (2020). The impact would be reduced to a level of *less than significant*.

- **Potential Impact 3.7: Unacceptable Levels of Service at California/Main Street Intersection.** This intersection would operate at LOS C during the AM peak hour and LOS F during the PM peak hour if the intersection were designed as a standard four-leg intersection with stop control on the Main Street approaches. This is a **significant** environmental impact associated with implementation of the Specific Plan.

RECOMMENDED MITIGATION MEASURE

> **Mitigation Measure 3.7: Design and Construct the California/Main Street Intersection as a Roundabout.** While signalization of the intersection in conjunction with auxiliary lane channelization could achieve an acceptable level of service, it is recommended that this intersection be designed as a roundabout. The use of either a traffic signal or a roundabout would be at the discretion of the City

of Marina. Intersection improvements at this intersection are included in the Marina CIP.

RESULTING LEVEL OF SIGNIFICANCE

A roundabout design would operate at LOS A during the AM peak hour and LOS B during the PM peak hour under Cumulative With Project Conditions (2020). The impact would be reduced to a level of *less than significant.*

- **Potential Impact 3.8: Unacceptable Levels of Service at Imjin Road/Reservation Road.** Operation of the intersection of Reservation Road/Imjin Road would be unacceptable under the Cumulative With Project Conditions (2020), a **significant** environmental impact associated with implementation of the Specific Plan.

RECOMMENDED MITIGATION MEASURE

Mitigation Measure 3.8: Provide Intersection Improvements and/or Construct Blanco Road Extension. If Blanco Road were not extended, intersection improvements in addition to the improvements described for the Cumulative Without Project Conditions (2020) would be required. The additional improvement required with Specific Plan development is a third through lane on eastbound Reservation Road, If the Blanco Road extension is not constructed, the following lane geometrics are required to mitigate Cumulative With Project Conditions (2020):

- Northbound approach – one left turn lane, two through lanes and two right turn lanes (with right turn overlap signal control);
- Southbound approach – one left turn lane, two through lanes and one right turn lane;
- Eastbound approach – two left turn lanes, three through lanes and one right turn lane;
- Westbound approach – three left turn lanes, two through lanes and one right turn lane.

If the Blanco Road extension is constructed, the following intersection configuration is recommended for Cumulative With Project Conditions (2020):

- Northbound approach – one left turn lane, two through lanes and one right turn lane (with right turn overlap control);
- Southbound approach – one left turn lane, two through lanes and one right turn lane;
- Eastbound approach – two left turn lanes, two through lanes and one right turn lane;
- Westbound approach – two left turn lanes, two through lanes and one right turn lane.

Under the terms of the Option Agreement, through the payment of the appropriate impact fees, the Project Applicant will have contributed the development's "fair share" toward the mitigation of cumulative traffic impacts in Marina. The City of Marina has determined that Project-related impacts on this intersection will, therefore, be fully mitigated through payment of Project-related traffic impact fees.

RESULTING LEVEL OF SIGNIFICANCE

With Blanco Road not extended and with the recommended intersection design, the intersection will operate at LOS B during the AM peak hour and LOS C during the PM peak hour. With the Blanco Road extension and the recommended intersection design, the intersection will operate at LOS C during both AM and PM peak hours under Cumulative With Project Conditions (2020). This would reduce the impact to a level of *less than significant*. Since this improvement is currently not scheduled for completion until after 2020, if it becomes apparent that the mitigation measure identified is needed before then, the City should request that FORA reschedule this improvement for earlier completion.

(This page has been intentionally left blank.)

4

AIR QUALITY

A. SETTING

LOCAL CLIMATE AND METEOROLOGY[1]

The City of Marina is located near the mouth of the Salinas Valley within the North Central Coast Air Basin (NCCAB), a 5,159 square mile area which encompasses the counties of Monterey, San Benito and Santa Cruz. The primary factor influencing the climate of this air basin is the semi-permanent high-pressure cell in the eastern Pacific. During much of the spring and summer, a stable inversion condition inhibits vertical air mixing in this cell, and contributes to frequent fogs in the coastal portions of the air basin as warmer onshore air passes over the cooler ocean. In winter, the high-pressure cell in the Pacific migrates southward, and has less influence on the climate of the air basin. With the arrival of winter storms, and in the absence of strong inversion conditions locally, air quality in the NCCAB is usually good through early spring. Winds are generally west and northwesterly, and are strongest during the spring and summer months. As a result of these winds, air quality in this coastal portion of the air basin, including the City of Marina, is generally relatively good. However, when temperature inversions limit the vertical air mixing, warmer inland valley areas have an increased risk of air pollution, particularly during the summer and fall.

AIR POLLUTION AND AMBIENT STANDARDS

The U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have both established ambient air quality standards for "criteria" pollutants. Primary standards are intended to protect the public health, while secondary standards are designed to protect the public welfare by reducing nuisances associated with reductions in visibility, soiling and other damage which may be associated with poor air quality. The Monterey Bay Unified Air Pollution Control District (MBUAPCD) is

---

1 Monterey Bay Unified Air Pollution District, *CEQA Air Quality Guidelines*, September 2002, pp. 6-2 – 6-2, and Bay Area Air Quality Management District, *BAAQMD CEQA Guidelines*, December 1999, pp. D-9 - D-10, and Lamphier-Gregory, *Marina Draft General Plan – Draft EIR*, May 2000, page 7-1

responsible for monitoring air quality within the North Central Coast Air Basin. As a Responsible Agency, the MBUAPCD implements rules and regulations for many direct and area sources of criteria pollutants.

Criteria pollutants currently include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulates of 10 microns or less (PM_{10}) and suspended particulates of 2.5 microns or less (PM_{25}). Ozone (O_3) is formed through a series of chemical reactions involving other pollutants (known as ozone precursors, such as reactive organic gases [ROG] and nitrogen oxides [NO_x]). It is the major component in smog, and exposure to ozone can entail adverse health impacts. Carbon monoxide (CO) is an odorless, colorless gas that can be lethal in high concentrations. The primary sources of carbon monoxide within the NCCAB are motor vehicles, and concentrations of this gas are greatest in areas near the intersections of roadways that carry high volumes of traffic. Volatile organic compounds (VOC), such as the criteria pollutants nitrogen dioxide (NO_2) and sulfur dioxide (SO_2), are classified as ozone precursors, which can contribute to the formation of smog. Motor vehicles are the primary source of VOC and NO_x within the NCCAB. The use of high sulfur fuels in petroleum refining and electricity generation may result in emissions of sulfur dioxide (SO_2). Most suspended particulates (PM_{10}) originate from road dust, construction activities and farming, with only a small percentage from mobile sources.

Federal and state Ambient Air Quality Standards (AAQS) for criteria pollutants are summarized in **Table 4-1**. These standards were developed independently with differing purposes and methods, although both federal and state standards are intended to avoid adverse health-related effects. For this reason, the federal and state standards differ in some cases (the California standards are generally more stringent). This is particularly true for ozone and PM_{10}.[2]

2 Particulate Matter is any material, except uncombined water, that exists in solid or liquid state in the atmosphere. The size of Particulate Matter can vary from coarse wind-blown dust particles to fine particle combustion products. Particulate Matter is further classified by nominal diameter. Respirable Particulate Matter is considered to have a nominal diameter of 10 microns or less and is designated PM_{10}. Fine Particulate Matter has a nominal diameter of 2.5 microns or less and is designated $PM_{2.5}$.

TABLE 4-1
FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour	0.12 ppm	0.09 ppm
	8-Hour	0.08 ppm	----
Carbon Monoxide	1-Hour	35.0 ppm	20.0 ppm
	8-Hour	9.0 ppm	9.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	----
	1-Hour	----	0.25 ppm
Sulfur Dioxide	24-Hour	0.14 ppm	0.04 ppm
	Annual	0.03 ppm	----
PM_{10}	24-Hour	150 :g/m^3	50 :g/m^3
	Annual	50 :g/m^3	20 :g/m^3
$PM_{2.5}$	24-Hour	65 :g/m^3	----
	Annual	15 :g/m^3	12 :g/m^3

Notes: ppm = parts per million
:g/m^3 = micrograms per cubic centimeter

Source: Monterey Bay Unified Air Pollution Control District, *CEQA Air Quality Guidelines*, September 2002, page 3-2

CURRENT AIR QUALITY

The Monterey Bay Unified Air Pollution Control District (MBUAPCD) operates a network of air quality monitoring sites in the three-county North Central Coast Air Basin. The site nearest the Specific Plan area with the most comprehensive data is located in Salinas at Salinas High School. An equidistant air quality monitoring site is located in Monterey at Silver Cloud Court, but it does not record data for all of the criteria pollutants. **Table 4-2** shows a summary of air quality data for the Salinas High School monitoring site for the period 2000-2002. Data are shown for ozone, carbon monoxide, PM_{10} and nitrogen dioxide. As shown on the table, there were no days exceeding the air quality standards for the time period 2000 - 2002.

TABLE 4-2:
AIR QUALITY DATA AT THE SALINAS HIGH SCHOOL MONITORING SITE, 2000-2002

Pollutant	Standard	Days Exceeding Standard In: 2000	2001	2002
Ozone	Federal 1-Hour	0	0	0
Ozone	State 1-Hour	0	0	0
Ozone	Federal 8-Hour	0	0	0
Ozone	State 8-Hour	0	0	0
Carbon Monoxide	State/Federal 8-Hour	0	0	0
PM_{10}	State 24-Hour	0	0	0
PM_{10}	Federal 24-Hour	0	0	0
PM2.5	Federal 24-Hour	0	0	No Data
Nitrogen Dioxide	State 1-Hour	0	0	0

Source: California Air Resources Board, http://www.arb.ca.gov/adam/cgi-bin/db2www/adamtop4.d2w/start, site assessed 2/27/03

Table 4-2 shows that concentrations of all federal and state criteria pollutants at the Salinas High School monitoring site meet both state and federal standards.

The data in **Table 4-2** provides a good characterization of conditions within the Marina area for regional pollutants such as ozone, nitrogen dioxide and PM_{10}. Concentrations of a local pollutant such as carbon monoxide, however, are not necessarily representative of concentrations that would be found near the Specific Plan area. For this reason, concentrations of carbon monoxide have been estimated using a computer simulation model that predicts concentrations based on information on roadway locations, traffic volumes and traffic conditions. The results of this analysis are described in the impacts discussion.

ATTAINMENT STATUS

The CARB, based on air quality monitoring data, designates air basins within the state where the federal or state ambient air quality standards are not met as "nonattainment areas." Due to differences between the federal and state standards, the designation of nonattainment areas is different under the federal and state legislation.

Under the federal Clean Air Act, the NCCAB is designated as a maintenance area for the federal one-hour ozone AAQS. The NCCAB was redesignated from a moderate nonattainment area to a maintenance area in 1997 after meeting the federal one-hour ozone standard in 1990. The NCCAB is an attainment area for the federal eight-hour ozone AAQS. Under the California Clean Air Act, the basin is a moderate nonattainment area for ozone. By law the NCCAB is designated a nonattainment-transition area after the state ozone AAQS was not exceeded more than three times at any monitoring station in the air basin for a year. However, the CARB does not recognize this distinction until it has validated the data. Additionally, the NCCAB is designated a nonattainment basin for the state PM_{10} AAQS. **Table 4-3** summarizes the attainment status of the NCCAB.

TABLE 4-3:
ATTAINMENT STATUS OF THE NORTH CENTRAL COAST AIR BASIN, 2000

Pollutant	Federal	State
Ozone (O_3) – 8 hour	Maintenance	Moderate Nonattainment
Ozone (O_3) – 1 hour	Attainment	N/A
Carbon Monoxide (CO)	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide (NO_2)	Attainment/Unclassified	Attainment
Sulfur Dioxide (SO_2)	Unclassified	Attainment
Inhalable Particulates (PM_{10})	Attainment	Nonattainment
Inhalable Particulates ($PM_{2.5}$)	Unclassified	N/A

Source: Monterey Bay Unified Air pollution Control District, *CEQA Air Quality Guidelines,* September 2002, page 6-4

Even though the NCCAB as a whole is not in full attainment, most stations in the NCCAB, including the Salinas air quality monitoring station, are within state and federal standards and have been for some time. Lower values are consistently shown for Salinas because it benefits from cool sea breeze winds that reduce ozone buildup. These influences are reduced at inland sites within the NCCAB (2-3). In addition the district can also have an additional burden when conditions permit for the transport of pollutants from the adjacent San Francisco Bay Area Air Basin.

Because the NCCAB is classified as a nonattainment area for ozone and PM_{10}, the California Clean Air Act requires local air pollution control districts to prepare Air Quality Attainment Plans. These plans must provide for district-wide emission reductions of five percent per year averaged over consecutive three-year periods or, if not, provide for adoption of "all feasible measures on an expeditious schedule." The current air quality plan

is the *2000 Air Quality Management Plan for the Monterey Bay Region*.[3] This plan contains mobile source controls, stationary source controls and transportation control measures to be implemented between 2000 and 2010.

TOXIC AIR CONTAMINANTS

Toxic Air Contaminants (TACs) are pollutants which may be expected to result in an increase in mortality or serious illness or which may pose a present or potential threat to human health. TACs are not considered criteria pollutants in that the federal and California Clean Air Acts do not address them specifically through the setting of National or State Ambient Air Quality Standards. Instead, EPA and the CARB regulate hazardous air pollutants and toxic air pollutants, respectively, through statutes and regulations. On the federal level, the EPA has established National Emission Standards for Hazardous Air Pollutants (NESHAPs) which include source-specific regulations that limit emissions of such pollutants. 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) which establish formal designation procedures for TACs, adopt thresholds for designated TACs, and establish regulatory procedures for facilities that emit TACs. On a regional level the MBUAPCD has adopted Rules 1000 and 1003, which establish and implement the state rules along with District-specific permitting processes pursuant to emission of TACs. The District also enforces the NESHAPs by reference in Rule 424 and addresses demolition and/or renovation activities which are subject to asbestos exposure in NESHAP under Rule 306.[4]

TOXIC AIR CONTAMINANT STATUS

Asbestos Containing Materials

Asbestos surveys were completed for 410 Abrams Park and Patton Park housing units, including some located within the Specific Plan area. These surveys indicate that all housing units surveyed contain friable and/or non-friable asbestos containing material (ACM). Wastewater lift station buildings were not surveyed. Two existing housing units within the Specific Plan area (Unit 8416 and Unit 8452) were found to contain friable and non-friable ACM, and the recommendation was for immediate total removal. Unit 8416 had pipe-fitting insulation with asbestos. Unit 8452 had asbestos in the laundry room and

---

4 Monterey Bay Unified Pollution Control District, *CEQA Air Quality Guidelines*, September 2002, page 9-2

furnace jackets. Twenty housing units surveyed within the Specific Plan area were found to contain friable and non-friable ACM, duct tape and sheet floor mastic, and the recommendation was for immediate repair and short-term removal. Remaining housing units surveyed were found to contain friable and/or non-friable ACM in fair to good condition. In the *Findings of Suitability to Transfer* report for the site, the Army states that they do not intend to remove ACM in any of the existing buildings. The Army indicated that inspection of the ACM present in the buildings is the responsibility of the owner, and recommended that prior to occupancy, the twenty-two surveyed units with ACM should be remediated (restrictions were to be included in the deed). Potential exposure to asbestos during demolition is a potentially significant environmental impact, and uncontrolled release of asbestos during demolition activity in the Specific Plan area could negatively impact local air quality. For a more detailed analysis on the how ACM hazards are rated, please see the discussion in **Hazards and Hazardous Materials** (Chapter 7), below.

Lead-Based Paint

Lead-based paint surveys were completed by the Army in both the Patton Park and Abrams Park housing areas. The first survey, conducted from November 1993 through March 1994, included the sampling of interior and exterior surfaces (e.g. walls, doorframes, baseboards, windowsills, downspouts, etc.) from 150 randomly selected housing units in Patton Park and 50 units in Abrams Park. One hundred and twenty five of the one hundred and fifty Patton Park units tested positive for lead. None of the Abrams Park Units tested positive for lead.

Further testing was completed in Patton Park as part of the December 2000 lead-based paint (LBP) risk assessment. Wipe and paint chip samples were collected from the interior of 148 randomly selected Patton Park housing units. Several of the windowsill and floor wipe samples had concentrations of lead dust exceeding allowable levels for those surfaces. Paint chip samples were also collected from locations of paint deterioration. These results corroborate the 1993 through 1994 survey, and confirm the presence of lead based paint in Patton Park housing units. HUD guidance requires treatment, including surface cleaning, and lead stabilization of deteriorated LBP surfaces, pending abatement. A lead control or management program is required to minimize lead exposure.

Additionally, 479 composite soil samples within the Patton Park housing area were collected using random sampling protocol and tested for lead. The samples were collected from house drip lines, yards and playgrounds. With the exception of two mid-yard samples, none of the lead levels exceeded the U.S. Environmental Protection Agency (EPA), U.S. Department of Housing and Urban Development (HUD), or State of

California lead criteria. The two mid-yard samples had lead concentrations exceeding the State of California's allowable lead limit of 1,000 mg/kg for lead in non-play areas. No soil in the Abrams Park housing area was tested for lead.

Results show the use of lead based paint was phased out between the construction of the Patton Park housing units and the Abrams Park housing units. Lead-based paint remains a potential hazard in the Patton Park housing area. There is a significant risk of exposure and dust migration during proposed demolition of the structures. Significant lead concentrations could remain in the environment for many years without suitable mitigations.

Air Monitoring and Landfill Gas Remediation Efforts

Ongoing air monitoring efforts have been continuing for some years on the capped landfill south of Imjin Road. The landfill, known as the Operable Unit 2 Landfill (OU2), represents a potentially significant air quality hazard due to accumulation of landfill gas. Landfill gas (LFG) is produced through anaerobic decomposition by bacterial action of organic waste into simpler forms such as organic acids, and ultimately methane and carbon dioxide. Methane is a potentially explosive gas that typically comprises about 55 percent of LFG. Smaller constituent landfill gases are hydrogen, ethane and volatile organic compounds (VOCs). These landfill gases are potentially explosive when mixed with air at concentrations between 5 and 15 percent by volume. Title 14 of the California Code of Regulations (CCR) and the California Integrated Waste Management Board (CIWMB) require that methane gas concentrations not exceed 5 percent by volume, the lower explosive limit (LEL). Regulations also require that trace gases must be controlled to prevent adverse acute and chronic exposure to toxic and carcinogenic compounds.

Recent air monitoring and extraction programs are documented in the *Draft Final Interim Remedial Action Report Groundwater Remedy Operable Unit 2*. Vents were installed through the cover of the OU2 landfill at 21 locations, and twenty-seven probes were initially monitored at 17 locations throughout the site. Determination of compliance with the California Integrated Waste Management Board (CIWMB) regulations for Solid Waste Landfills, Title 14, California Code of Regulations, Chapter 3, Article 7.8 is based on monitoring of the probes that measure LFG concentrations. A portable LFG analyzer was also used to measure methane, oxygen, carbon dioxide, balance gas (probably nitrogen), static pressure and the lower explosive limit at each of the 27 perimeter probes and 21 passive vents. Results show methane concentrations from June, 2000, measurements generally exceeded the 5 percent CIWMB standard, and volatile organic contents were mostly undetectable and sporadic, except for vinyl chloride, which was detected in 23 of

27 probes.

Due to high methane concentrations, another study was conducted in August, 2000, that focused on the eastern side of the landfill site (known as Cell F), since it is closest to occupied housing units. Results showed that methane was detectable in subsurface probes extending about 70 feet from the fence line along the east side of Cell F. Further testing corroborates methane exceeding the standard within site's boundaries. However, additional probes outside those boundaries establish subsurface methane concentrations to be less than the 5 percent, except along the eastern side of Cell F. Cell F is the cell furthest from the Specific Plan area. A pilot LFG and extraction system (originally installed in 2001) is intended to reduce LFG concentrations.

According to the *Draft Final Interim Remedial Action Report Groundwater Remedy Operable Unit 2,* the extraction system consists of a line of extraction wells outside the limits of the geomembrane cover. These wells span a length of approximately 1,000 linear feet at a spacing of 100 feet between wells. Two blowers, two 2,000-pound granulated activated carbon (GAC) units in series, a portable generator, ancillary piping, valves and instrumentation comprise the rest of the system. After initial operation, the system was modified by including potassium permanganate to treat vinyl chloride. The potassium permanganate is hydrated to about 15 percent moisture to form potassium hydroxide, manganese tetraoxide, and manganese dioxide that neutralizes the vinyl chloride. The two 2,000- pound GAC units have been replaced with four 300-pound units that were restarted in May, 2002, and continue to operate today.

The Five-Year Superfund Review Report (August 23, 2002) states that LFG concentrations exceed regulatory standards along the eastern boundary of Cell F, and migration of landfill gas is being addressed by a LFG extraction and treatment system pilot study, currently in progress. Ambient air monitoring near the closest residence (368 feet from the landfill perimeter) has been initiated. According to the five-year superfund review, the treatment system appears to be successfully treating the LFG problem.

Diesel Exhaust

The Specific Plan area is not located in the immediate vicinity of any identified diesel exhaust corridors, rail lines, transit stations, or parking/maintenance areas for diesel-fueled vehicles.

SENSITIVE RECEPTORS

The MBUAPCD defines "sensitive receptors" as "a location where human populations, especially children, seniors, and sick persons, are located where there is reasonable expectation of continuous human exposure according to the averaging period for the AAQS. These sensitive receptors are also considered very vulnerable to TACs. Sensitive receptors typically include residences, hospitals, and schools."[5] Current and possible future sensitive receptors within approximately one kilometer of the Specific Plan area are:

- To the northeast of the Specific Plan area lies a site within the city limits of Marina which is designated in the Marina General Plan for the possible future placement of a high school.

- Immediately across the eastern boundary of the Specific Plan area lies Preston Park, an existing residential area consisting of former Fort Ord military housing rehabilitated into market rate rental units.

- Included within the eastern boundary of the Specific Plan area are 56 units of occupied rehabilitated military housing being used as transitional housing (Pueblo del Mar)

- Southeast of the Specific Plan area is the Fredericks-Schoonover Park Area, a rehabilitated military housing district currently being used a student residences for students at California State University at Monterey Bay.

- Southwest of the Specific Plan area, beyond 12th Street lies the proposed University Villages, a planned mixed-use development within the former Fort Ord.

- Northwest of the Specific Plan area, across California Street, and north of the proposed University Villages, is the site of Cypress Knolls, a proposed senior housing development that is being reviewed by the City.

- Abutting the Specific Plan area to the north is an existing residential portion of Marina adjoining the boundary of the former Fort Ord.

- A possible elementary school site is identified adjacent to the Specific Plan area along Imjin Road.

---

5 Ibid, page 6-5

B. IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA[6]

Implementation of the Specific Plan would be considered to have a significant air quality impact if it were to:

1. Violate, conflict with or obstruct implementation of the applicable air quality plan;

   Based on this guideline, a *significant impact* on air quality is defined as:

   - The Project being inconsistent with the *2002 Air Quality Management Plan for the Monterey Bay Region.*

2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

   Based on this standard a *significant impact* on air quality is defined as:

   - Emitting more than 137 lbs./day of more direct and indirect of volatile organic compounds (VOC) or nitrous oxide (NO_X) emissions,
   - Directly emitting 550 lbs./day or more of carbon monoxide (CO),
   - Generating traffic that significantly affects intersection levels of service,
   - Directly emitting 82 lbs./day or more of particulate matter (PM_{10}) on site during operation or construction,
   - Generating traffic on unpaved roads that causes of 82 lbs./day or more of particulate matter (PM_{10}) emissions, or
   - Directly emitting 150 lbs./day or more of Sulfur Oxide (SO_X) emissions,

6 Monterey Bay Unified Pollution Control District, *CEQA Air Quality Guidelines*, September 2002, page 5-12

3. Result in a cumulatively considerable net increase of any criteria pollutant for which the region is nonattainment under applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

   Based on this standard a *significant impact* on air quality is defined as:

   - The Project being inconsistent with the *2002 Air Quality Management Plan for the Monterey Bay Region* for projects above de minimus levels,

4. Expose sensitive receptors to substantial pollutant concentrations; and

   Based on this standard a *significant impact* on air quality is defined as:

   - The Project causing a violation of any CO, PM_{10} or toxic air contaminant standards at an existing or reasonably foreseeable sensitive receptor,

5. Create or expose a substantial number of people to objectionable odors.

AIR QUALITY MANAGEMENT PLAN CONSISTENCY

The Association of Monterey Bay Area Governments (AMBAG) has reviewed the level of population growth anticipated proposed under the Specific Plan and has determined that the cumulative population growth added to the growth associated with the Marina Heights development (2,789) is less than the difference between the current population estimate for Marina and the population growth forecasted for 2005 (6,947 by year 2005). Therefore, the Specific Plan has been found by AMBAG to be consistent with the *2000 Air Quality Management Plan for the Monterey Bay Region* (see Letter of April 25, 2003 from Todd Muck for Nicolas Papadakis, Executive Director, Association of Monterey Bay Area Governments to John Courtney, Lamphier-Gregory in **Appendix A**).

DEMOLITION-RELATED IMPACTS

- **Potential Impact 4.1: Possible Exposure to Toxic Air Contaminants During Demolition.** Existing housing units within the Specific Plan area are know to contain potentially hazardous materials such as lead-based paint and asbestos. Demolition of existing structures in the Specific Plan area could result in exposure to Toxic Air Contaminants such as lead-based paint and asbestos. This impact is considered potentially **significant.**

RECOMMENDED MITIGATION MEASURES

Mitigation Measure 4.1: Develop and Implement a Demolition Plan and Removal Action Workplan. Lead and asbestos surveys should be reviewed/performed and a Demolition Plan for safe demolition of existing structures at the Specific Plan area should be prepared. All transportation of hazardous or contaminated materials from the Specific Plan area should be performed in accordance with an approved Removal Action Workplan. The Demolition Plan should address both on-site worker protection and off-site resident protection from both chemical and physical hazards. All contaminated building materials should be tested for contaminant concentrations and should be disposed of at appropriate licensed landfill facilities. Prior to whole-scale demolition, hazardous building materials such as peeling, chipping and friable lead-based paint and asbestos containing building materials should be removed in accordance with all applicable guidelines, laws and ordinances. The Demolition Plan should include a program of air monitoring for dust particulates and attached contaminants. Dust control and suspension of work during dry windy days should be addressed in the Demolition Plan. Prior to obtaining a demolition permit from the Monterey Bay Unified Air Pollution Control District (MBUAPCD), an asbestos demolition survey should be conducted in accordance with the requirements of the MBUAPCD.

For the impact of flaking and peeling lead paint the requirements of Title 8, California Code of Regulations, Section 1532.1 (T8 CCR 1532.1) must be followed. These requirements include (but are not limited to) the following:

- Loose and peeling lead-containing paint should be removed prior to building demolition. Workers conducting removal of lead paint must receive training in accordance with T8 CCR 1532.1.

- The lead paint removal project should be designed by a DHS certified lead project designer, project monitor or supervisor,

- Workers conducting removal of lead paint must be certified by DHS in accordance with T8 CCR 1532.1,

- Workers that may be exposed above the Action Level must have blood lead levels tested prior to commencement of lead work and at least quarterly thereafter for the duration of the project. Workers that are terminated from

the project should have their blood lead levels tested within 24 hours of termination,

- A written exposure assessment must be prepared in accordance with T8 CCR 1532.1,

- Any amount of lead waste that is generated from painted building components must be characterized for proper disposal in accordance with Title 22, Section 66261.24.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of this mitigation measure would reduce the potential air quality impact associated with the release of Toxic Air Contaminants due to the transportation of demolition waste to a *less than significant level.*

TOXIC AIR CONTAMINANT RELEASE DUE TO TRANSPORTATION, USE OR DISPOSAL OF HAZARDOUS MATERIALS

- **Potential Impact 4.2:** Existing housing units within the Specific Plan area are know to contain potentially hazardous materials such as lead-based paint and asbestos. Potentially contaminated debris associated with lead and asbestos would be transported from the Specific Plan area for disposal. The possibility of exposure to Toxic Air Contaminants due to the transportation of hazardous demolition debris would represent a potentially **significant** environmental impact.

RECOMMENDED MITIGATION MEASURE

Mitigation Measure 4.2: Develop and Implement a Demolition Plan and Removal Action Workplan. (see **Mitigation Measure 4.1**, above)

Demolition of buildings must be completed so as to minimize dust and protect worker's health. Debris should be removed and construction sites cleaned before new construction proceeds.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of this mitigation measure would reduce the potential air quality impact associated with possible exposure to Toxic Air Contaminants during demolition to a *less than significant level.*

CONSTRUCTION-RELATED IMPACTS

- **Potential Impact 4.3: Exposure to Construction Dust and/or Diesel Exhaust.** Construction activities such as excavation and grading operations, construction vehicle traffic and wind blowing over exposed earth would generate fugitive particulate matter emissions that would affect local and regional air quality. The use of diesel-powered equipment could result in increased exposure of sensitive receptors in the vicinity to diesel exhaust. These impacts are considered potentially **significant**.

Construction dust would affect local and regional air quality at various times during the construction at the Project site. Emissions during grading are primarily associated with the exhaust of large earth moving equipment and the dust that is generated through grading activities. Emissions in later stages of construction are primarily associated with construction employee commute vehicles, asphalt paving, mobile equipment, stationary equipment, and architectural coatings.

The Project Applicant has indicated that up to 50 acres within the Specific Plan area could be subject to excavation and earthmoving at any given time. In the absence of effective dust control measures, this level of activity could be expected to generate up to 1,900 pounds of PM_{10} per day of activity (50 acres x 38 pounds/day/acre). By contrast, minimal grading would be expected to generate up to 500 pounds of PM_{10} per day of activity (50 acres x 10 pounds/day/acre), in the absence of effective dust control measures. The actual intensity of grading and earthmoving at the Specific Plan area could be expected to vary from one day to the next, depending on the terrain being modified on any particular day.

The effects of Project-related construction activities would be increased dustfall and locally elevated levels of PM_{10} on a temporary basis within and near the Specific Plan area. Depending on the weather, soil conditions, the amount of activity taking place, and nature of dust control efforts, these impacts could affect those living and/or working within or near the Specific Plan area.

The use of diesel equipment during construction could result in a temporary risk of exposure of sensitive receptors in the vicinity to the particulate fraction of diesel exhaust, a toxic air contaminant.

RECOMMENDED MITIGATION MEASURES

Mitigation Measure 4.3.1: Construction Dust Control. All construction activities shall utilize the feasible control measures for construction emissions of PM_{10} appropriate to the size and nature of the construction area, as recommended by the MBUPCD's *CEQA Guidelines*. The following dust control measures shall be implemented by construction contractors during all construction phases:

- Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure. This could be expected to reduce estimated PM_{10} emissions from active, unpaved construction areas by approximately 50 percent.

- Limit, to the maximum extent feasible, all grading activities during periods of high wind (over 15 mph). This reduces the potential for exceedance of PM_{10} standards. If grading activity must take place during periods when wind speeds exceed 15 mph, additional watering of affected areas beyond twice each day will be necessary to effectively reduce PM_{10} emissions associated with wind-blown dust.

- Haul trucks off-site shall maintain at least 2'0" of freeboard. This could be expected to reduce estimated PM_{10} emissions associated with spills from haul trucks by approximately 90 percent.

- Cover all trucks hauling dirt, sand, or loose materials off-site, or provide other methods to prevent dust from spilling. This could be expected to reduce estimated PM_{10} emissions associated with spills from haul trucks by approximately 90 percent.

- Plant vegetative ground cover in disturbed areas as soon as reasonably possible. This could be expected to reduce estimated PM_{10} emissions associated with spills from inactive areas by between 5 and 99 percent.

- Cover intact storage piles left for more than 30 days, or unless otherwise determined by the City of Marina. This could be expected to reduce estimated PM_{10} emissions from storage piles by up to 90 percent.

- Install wheel washers on the entrance of construction sites for all exiting trucks. This could be expected to reduce estimated on-road PM_{10} by approximately 50 percent.

- Sweep streets if visible soil material is carried out from the construction site. This could be expected to reduce estimated on-road entrained PM_{10} by approximately 34 percent.

- Post a publicly visible sign that specifies the telephone number and person to contact regarding dust complaints. The person shall respond to complaints within 48 hours. The phone number of the Monterey Bay Unified Pollution Control District shall be visible to ensure compliance with Rule 402 (Nuisance). This could minimize nuisance levels.

Mitigation Measure 4.3.2: Reductions in Diesel Exhaust During Site Preparation and Construction. Prior to initiating construction activity, the City of Marina and the Project Applicant should consult with the Monterey Bay Unified Air Pollution Control District to identify the types of grading, demolition and construction equipment that will be used within the Specific Plan area. Once the characteristics of specific equipment to be used have been identified, the MBUAPCD should provide recommendations for measures that can be implemented to reduce diesel emissions associated with such equipment (i.e., the substitution of diesel-powered equipment with non-diesel-powered equipment, the installation of exhaust control equipment, etc.).

RESULTING LEVEL OF SIGNIFICANCE

Implementation of the above dust control measures would reduce construction-related air quality impacts associated with implementation of the Specific Plan to a *less than significant level.* For example, major reductions in construction-related PM_{10} could be accomplished by watering (which could reduce remaining emissions by 50 percent), by effectively covering stockpiles and inactive areas (with reductions of up to 80 percent anticipated), and by covering haul trucks (which could reduce 90 percent of emissions from that source).

LANDFILL GAS IMPACTS

- **Potential Impact 4.4: Possible Exposure to Landfill Gas.** High concentrations of landfill gas have been found at the Operable Unit 2 Landfill Boundary on the opposite side of Imjin Road from the Specific Plan area that could build up and accidentally be released in high enough concentrations to affect residents at the Specific Plan area. Concentrations of potentially explosive methane gas have also been measured within the boundaries of the landfill and present a slight chance of explosion that could affect the proposed development within the Specific Plan area. Although implementation of the Specific Plan would not affect the generation of landfill gases, residential development of the Specific Plan area (that does not currently support residents) could place future residents at possible risk of exposure to these gases. This represents a potentially **significant** environmental impact.

RECOMMENDED MITIGATION MEASURE

Mitigation Measure 4.4: On-Going Mitigation/Monitoring/Evacuation Planning. Although on-going monitoring and mitigation associated with the former landfill is not the responsibility of the City of Marina or the Project Applicant, the following measures should continue to be pursued by the U.S. Army (responsible for landfill cleanup under the terms of the Federal Facilities Agreement for the former Fort Ord) to reduce risk associated with possible exposure to landfill gas:

- Maintain the current landfill gas extraction and treatment system.
- Continue to monitor landfill gas concentrations at the boundary of the OU2 Landfill.
- An evacuation plan must be prepared in the event of a fire or explosion at the landfill that is incorporated into the City of Marina's Standardized Emergency Management System Multi-Hazard Functional Plan.
- Ensure that the landfill boundary is fenced with locked gates.
- Ensure that all buried gas pipelines are permanently marked and that exposed pipelines and wells are fenced with locked gates.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of this mitigation measure would reduce the potential impact associated with possible exposure to landfill gas to a *less than significant level.*

LONG-TERM LOCAL AIR QUALITY EFFECTS

Development of the Specific Plan area as proposed would generate substantial on-site and off-site traffic, increasing local levels of carbon monoxide (primarily at nearby intersections). Existing and future worst-case concentrations are predicted to be below applicable ambient air quality standards, so this impact is considered *less than significant.*

To assess the magnitude of Specific Plan-related impacts on local carbon monoxide levels, a screening form of the CALINE-4 computer simulation model was used. The screening procedure was applied to five selected intersections in the vicinity of the Specific Plan area to estimate future carbon monoxide levels in the area. A discussion of the methodology used in the CALINE-4 modeling is provided in the **Appendix C**.

The CALINE-4 screening procedure provides estimates of maximum one- and eight-hour concentrations, corresponding to the one- and eight-hour averaging times specified in the state and federal ambient air quality standards for carbon monoxide. **Table 4-4** lists the results of the CALINE-4 analysis for the peak one-hour and eight-hour traffic periods in parts per million for existing conditions (baseline) and future cumulative traffic conditions with and without implementation of the Specific Plan. The MBUAPCD's screening methodology for evaluating anticipated carbon monoxide levels does not provide values for years beyond 2010, and the traffic analysis prepared for the Draft EIR provides values for 2020, so for the purposes of this analysis, the "worst case" 2020 traffic values at the "worst case" intersection (Imjin Road and Abrams Drive at PM peak hour) have been evaluated using the 2010 values provided for the MBUAPCD screening model. The values obtained through using the screening model in this way would be expected to exceed anticipated values for the year 2020, since trends for the MBUAPCD screening model indicate a reduction in projected background carbon monoxide levels in the North Central Coast Air Basin with the passage of time between 2000 and 2010, a trend expected to continue beyond 2010.

TABLE 4-4:
WORST CASE CARBON MONOXIDE CONCENTRATIONS
NEAR INTERSECTION OF IMJIN ROAD AND ABRAMS DRIVE, IN PPM

Existing (Baseline)		Existing + Project (Baseline + Project)		Cumulative Without Project (2020)		Cumulative With Project (2020)	
1-Hr	8-Hr	1-Hr	8-Hr	1-Hr	8-Hr	1-Hr.	8 Hr.
7.09	4.06	7.56	4.39	6.88	3.92	7.15	4.11

The predicted future one-hour concentration values in **Table 4-4** are to be compared to the federal one-hour standard of 35 ppm and the state standard of 20 ppm. The predicted eight-hour concentration values in **Table 4-4** are to be compared to the state and federal standard of 9 ppm.

Table 4-4 shows that carbon monoxide concentrations for existing conditions at the "worst case" intersection are below the state/federal standards. By year 2010, concentrations are projected to be below current concentrations, despite increased traffic volumes and congestion, due to the gradual decline in emission rates from vehicles as older, more polluting, cars are retired and replaced with new, cleaner, cars. This trend of reduced carbon monoxide emissions from vehicles has resulted in continual reductions in measured concentrations of this pollutant in the region for the past 20 years, and this trend is expected to continue at least past the year 2010.

Table 4-4 indicates that implementation of the Specific Plan would increase local carbon monoxide concentrations at the "worst case" intersection of Imjin Road and Abrams Drive at the PM peak hour. Specific Plan-related traffic would increase concentrations by up to 0.47 ppm for the one-hour averaging time at the "worst case" Imjin Road and Abrams Drive intersection, and up to 0.33 ppm for the eight-hour averaging time at this intersection. Levels would remain below the state and federal standards. The Specific Plan's traffic-related impact on long-term local air quality is, therefore, considered *less than significant.*

REGIONAL AIR QUALITY EFFECTS

- **Potential Impact 4.5: Increased Regional Emissions.** New traffic generated by the development of the Specific Plan area as proposed would increase regional emission by amounts greater than the MBUAPCD significance thresholds. This is considered a **significant unavoidable** impact.

Vehicle trips generated by development proposed under the Specific Plan would result in air pollutant emissions affecting the entire North Central Coast Air Basin. Estimates of regional air emissions generated by Specific Plan-related traffic were made using the URBEMIS 2001 computer program (see **Appendix C**). **Table 4-5** indicates the estimated summer emissions of VOC (summer), NO_x, (summer) and PM_{10} (summer) associated with Specific Plan-related traffic (9,670 vehicle trips per day).

TABLE 4-5:
SPECIFIC PLAN-RELATED REGIONAL EMISSIONS IN POUNDS PER DAY

	Volatile Organic Compounds	Nitrogen Oxides	PM_{10}
Specific Plan-Related Regional Emissions	141.55	220.34	84.70
MBUAPCD Significance Threshold	137.00	137.00	82.00

Guidelines for the evaluation of project impacts issued by the MBUAPCD consider emission increases of VOC or NO_x to be significant if they exceed 137 pounds per day, and emission increases of PM_{10} to be significant if they exceed 82 pounds per day. Because Specific Plan-related emissions listed in **Table 4.5** would exceed these criteria in each category, development of the Specific Plan area as proposed would have a **significant adverse** impact on regional air quality.

RECOMMENDED MITIGATION MEASURES

As indicated in the MBUAPCD *CEQA Air Quality Guidelines* (page 8-8), mitigation measures implemented at residential projects can enhance the effectiveness of work-based transportation demand management (TDM) measures by addressing the "other" end of a commute trip, and represent a potentially significant source of travel reductions. While many feasible mitigation measures could be applied to residential projects, the MBUAPCD limits its guidance to two quantifiable, facility-based measures. This is due to the lack of quantified research on facility-based measures in residential projects. These two measures involve design elements that are incorporated within the Specific Plan: the provision of bicycle paths that link to the external network, and the provision of pedestrian facilities. However, as the estimated reduction in the number of trips that could be achieved through each of these measures is estimated to be on the order of 0.1 percent,

these features alone would be insufficient to reduce Specific Plan-related vehicle trips to the extent necessary to bring estimated emissions below the significance thresholds set by the MBUAPCD.

RESULTING LEVEL OF SIGNIFICANCE

The incorporation of bicycle paths and pedestrian facilities within the Specific Plan area as proposed would reduce Specific Plan-related impacts on regional air quality to a limited extent. While it may be possible for such features to reduce Specific Plan-related emissions of VOC and PM_{10} by 3.3 percent and 3.2 percent, respectively, to meet the established threshold values, there is currently no practical way to reduce the Specific Plan-related emissions by the 37.8 percent increment that would be necessary to bring Specific Plan-related impacts below MBUAPCD significance thresholds for NO_x. Therefore, the Specific Plan's impacts on regional air quality are considered **significant** and **unavoidable**.

Any project found to have a significant adverse impact on regional air quality would also be considered to have a significant cumulative impact. The implementation of the Specific Plan would, therefore, have a **significant** and **unavoidable cumulative** impact on regional air quality.

5

NOISE

A. SETTING

Three aspects of community noise are important in determining subjective response:

- Level (i.e., magnitude or loudness) of the sound.
- The frequency composition or spectrum of the sound.
- The variation in sound level with time.

An A-weighting frequency network is generally used so that measurements may be made and noise impacts readily assessed using basic acoustical instrumentation. This frequency weighting reflects the relative decreased human sensitivity to low frequencies and to extreme high frequencies, and is applied by an electrical filter in all U.S. and international standard sound level meters.

A single number called the equivalent sound level, typically referenced by its symbol L_{eq}, is a U.S. and international standard used to describe noise varying over a period of time. In California, the Community Noise Equivalent Level (CNEL)[1] has been the adopted standard since 1972 to apply a single number value to the noise environment over a twenty-four hour period. CNEL values are computed from 24 continuous hourly equivalent sound level values.

Appendix C, "Fundamental Concepts of Community Noise" in included as a further discussion of community noise concepts and nomenclature.

[1] Community Noise Equivalent Level (CNEL) — A descriptor for the 24-hour A-weighted average noise level. The CNEL concept accounts for the increased acoustical sensitivity of people to noise during the evening and nighttime hours. Sound levels during the hours from 7 p.m. to 10 p.m. are penalized 5 dB; sound levels during the hours from 10 p.m. to 7 a.m. are penalized 10 dB.

EXISTING NOISE ENVIRONMENT

The Marina Heights Specific Plan area is generally quiet, as the existing homes are unoccupied and there is little human activity. The background noise is dominated by wind over the terrain and by traffic on a few local thoroughfares. For much of the year the wind routinely blows at 15 to 20 knots from the ocean, particularly in the afternoons, often creating consistent background sound levels up to 50 dB, depending upon the local terrain conditions.

The main thoroughfares in the vicinity of the Specific Plan area are Reservation Road and Imjin Road. The slightly rolling topography generally breaks the sightlines to both roads within a city block. Therefore, the noise contribution from these roads is less than it would be with direct exposure, and the traffic noise from these roads generally contributes more to the background noise than to discrete local noise events.

The Marina Municipal Airport northeast of the Specific Plan area is a source of noise from light general aviation aircraft. These aircraft were observed to only overfly the Specific Plan area occasionally. It does not appear that any major aircraft or arrival routes traverse the Specific Plan area.

Those portions of the Specific Plan area immediately bordering Imjin Road receive more substantial noise from local traffic than areas not adjacent to this major roadway along the southern edge of the Specific Plan area. Traffic through the center of the Specific Plan area is currently light, as most cars seem to use the major thoroughfares rather than the local residential streets along the abandoned properties.

EXISTING SENSITIVE RECEPTORS

Environmental noise monitoring was performed March 18 - 19, 2003 at four locations on or in the vicinity of the Marina Heights Specific Plan area (see **Figure 5.1**). At each location, a Larson-Davis Model 700 sound monitoring system was mounted at a height of 8 to10 feet above the ground for a period of twenty-four hours. A ten-minute digital recording was also made at each monitor location to obtain a short-term time history, representing a more precise characterization of the short-term noise environment.

Figure 5.1: Noise Measurement Locations



The monitoring systems were calibrated, programmed and synchronized by computer before set-up in the field. Each system was housed in a secure weather-resistant container and mounted on an elevated structure to prevent tampering, and to minimize the acoustical shielding effects of local structures.

Each monitor was identically programmed to log the A-weighted sound level each half second and to compute hourly statistics of the noise environment beginning each hour, on the hour. The statistical information includes the equivalent sound level (i.e., L_{eq} values), and percentile values. These descriptors are explained along with other community noise concepts used in the report in **Appendix C**, "Fundamental Concepts of Community Noise." After the 24-hour recording the monitoring systems were downloaded to a computer and analyzed in Charles Salter Associates laboratory in San Francisco.

LOCATION #1 – ORD MARKET

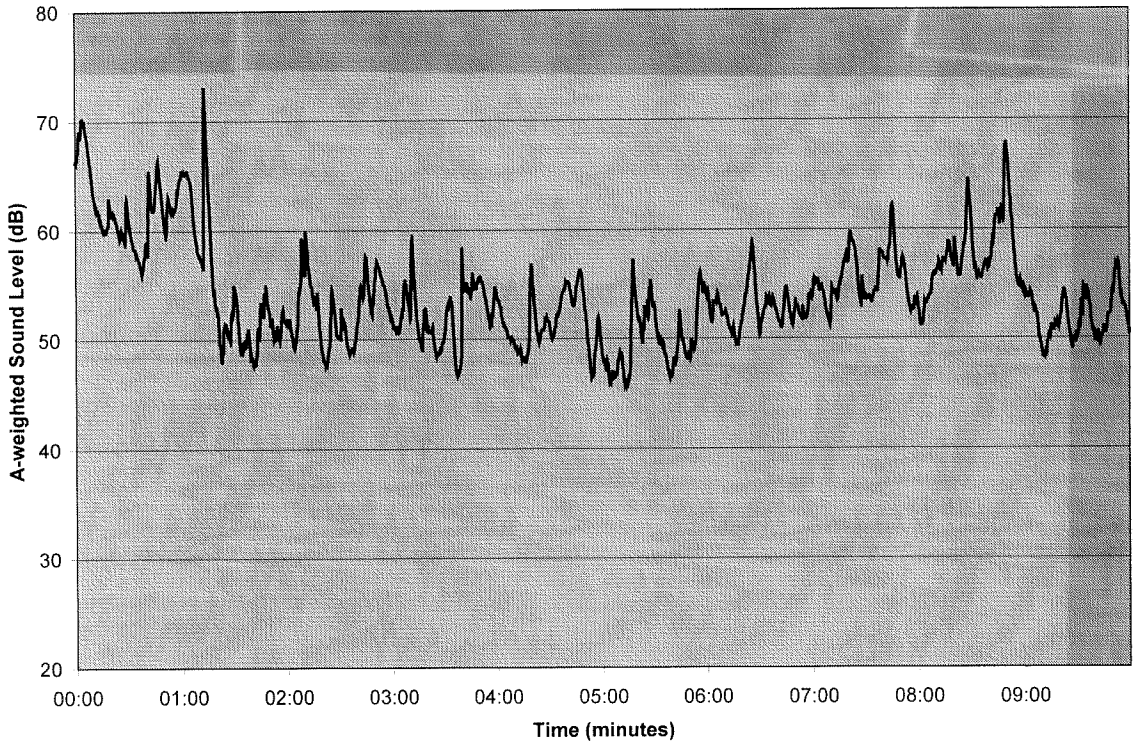
The first measurement location was in the Ord Market parking lot southeast of the Marina Heights Specific Plan area, at the intersection of Imjin Road and Abrams Drive. The monitor was placed on a utility pole, approximately 125 feet from Abrams Drive and 125 feet from Imjin Road. The noise environment was dominated by local traffic (cars and light trucks) along Imjin Road with occasional local traffic entering the market parking lot from Abrams Drive. Relatively high wind conditions of 15 knots prevailed for the first afternoon, diminishing in the evening and for the second day. In addition, pedestrians and occasional airplane flyovers made some contribution to the overall noise environment. **Table 5-1** presents the time history of the ten-minute recording and a table showing the hourly noise levels at this location. The CNEL measured over the 24-hour period was 61 dB and the DNL[2] was 61 dB.

LOCATION #2 – PARK PLAYGROUND

The second measurement location was in an abandoned park playground within the Marina Heights Specific Plan area. The park is bounded closely on three sides by Washington Circle, Roosevelt Drive and by Lincoln Drive. The monitor was placed atop the playground equipment approximately eight feet above the ground. This is a quiet area amidst abandoned housing, and about 3,000 feet (more than a half mile) from the nearest thoroughfare (Imjin Road, to the south). There were few cars on the local streets, and the predominant noise was from distant traffic and wind over the terrain.

[2] Day-Night Average Sound Level (DNL) — A descriptor established by the U.S. Environmental Protection Agency to represent a 24-hour average noise level with a penalty applied to noise occurring during the nighttime hours (10 p.m. - 7 a.m.) to account for the increased sensitivity of people during sleeping hours.

Table 5-1: Noise Measurements at Location #1 – Ord Market



Hour	Hourly Noise Level L_{eq} dB
12:00 – 13:00	62
13:00 – 14:00	60
14:00 – 15:00	61
15:00 – 16:00	64
16:00 – 17:00	62
17:00 – 18:00	62
18:00 – 19:00	60
19:00 – 20:00	57
20:00 – 21:00	57
21:00 – 22:00	55
22:00 – 23:00	54
23:00 – 0:00	51
0:00 – 1:00	49
1:00 – 2:00	46
2:00 – 3:00	47
3:00 – 4:00	46
4:00 – 5:00	49
5:00 – 6:00	52
6:00 – 7:00	57
7:00 – 8:00	60
8:00 – 9:00	60
9:00 – 10:00	61
10:00 – 11:00	58
11:00 – 12:00	64

Relatively high wind conditions of 15 knots prevailed for the first afternoon, diminishing in the evening and for the second day. Discrete aircraft flyover events were a significant noise source. Table 5-2 presents the time history of the ten-minute recording and a table showing the hourly noise levels. The CNEL measured over the 24-hour period was 52 dB and the DNL was 52 dB.

LOCATION #3 – PRESTON PARK

The third measurement location was in Preston Park, near the Marina Heights Specific Plan area. The monitor was placed on the goal posts of a playing field atop a knoll approximately 400 feet from children playing basketball at the other end of the park. This site is approximately 70 feet east of Preston Drive and 100 feet south of the intersection of Preston Drive and Wahl Court. The noise environment in this area is predominantly from low volume local traffic along Preston Drive and background noise from traffic on Imjin Road approximately 1,500 feet southeast. Relatively high wind conditions of 15 knots prevailed for the first afternoon, diminishing in the evening and for the second day. **Table 5-3** presents the time history of the ten-minute recording and a table showing the hourly noise levels. The CNEL measured over the 24-hour period was 54 dB and the DNL was 54 dB.

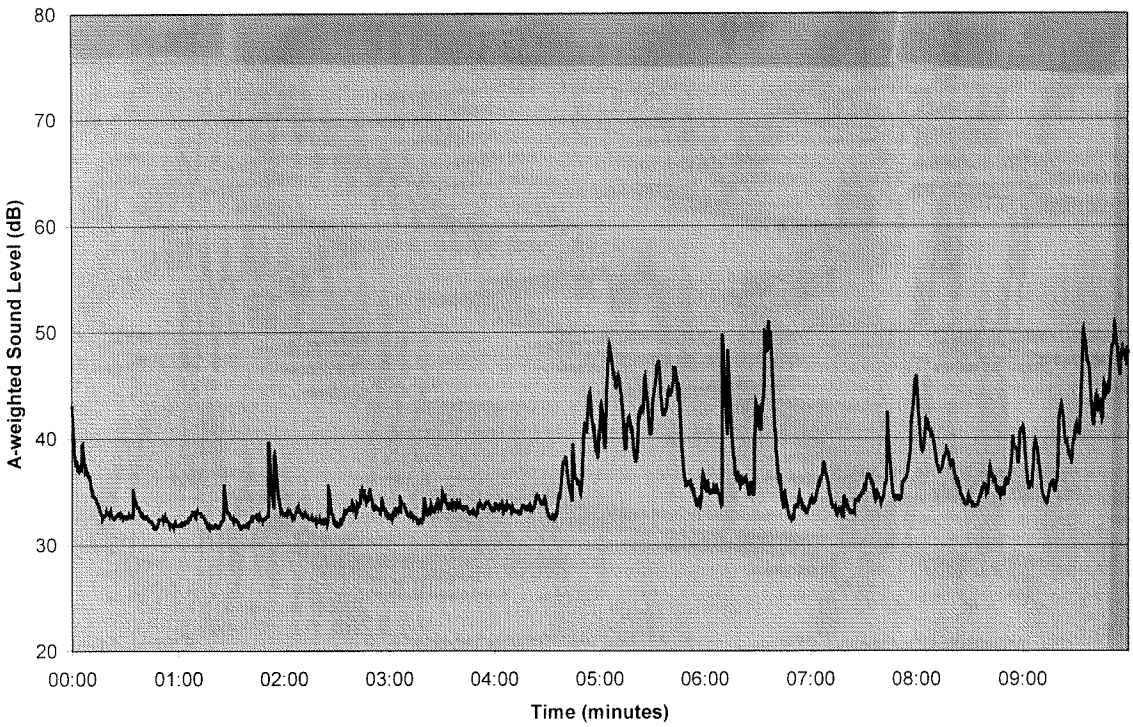
LOCATION #4 – CARMEL/SALINAS

The fourth measurement location was in an existing residential area at the intersection of Carmel Avenue and Salinas Avenue. This is currently the southeast terminus of Carmel Avenue, a roadway that would be extended into the Specific Plan area under the Specific Plan. The monitor was placed on a utility pole at an elevation of approximately twelve feet. The predominant noise source is local traffic on the two avenues and background noise from Reservation Road approximately 1,500 feet northeast. Relatively high wind conditions of 15 knots prevailed for the first afternoon, diminishing in the evening and for the second day. **Table 5-4** presents the time history of the ten-minute recording and a table showing the hourly noise levels. The CNEL measured over the 24-hour period was 59 dB and the DNL was 58 dB.

CITY OF MARINA NOISE STANDARDS AND GUIDELINES

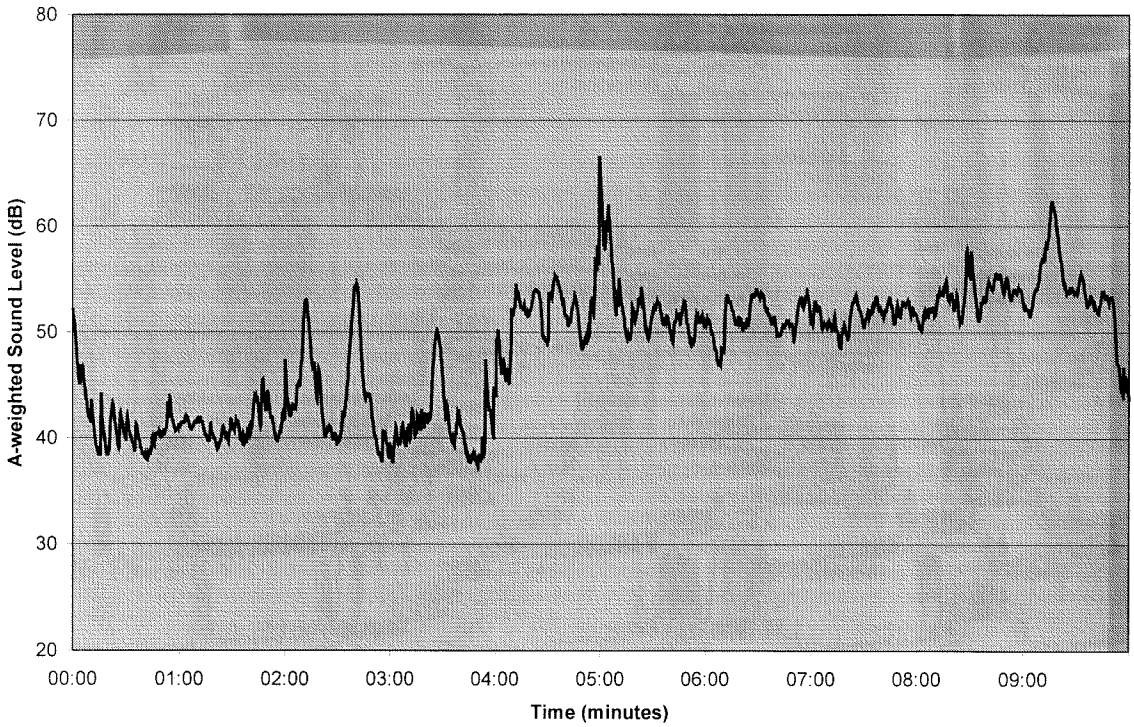
Noise exposure standards are implemented at either the receiver or source, and generally fall into two categories: (1) receiver-based noise compatibility guidelines for various land uses; and (2) ordinance limits for non-transportation-related noise.

Table 5-2: Noise Measurements at Location #2 – Park Playground



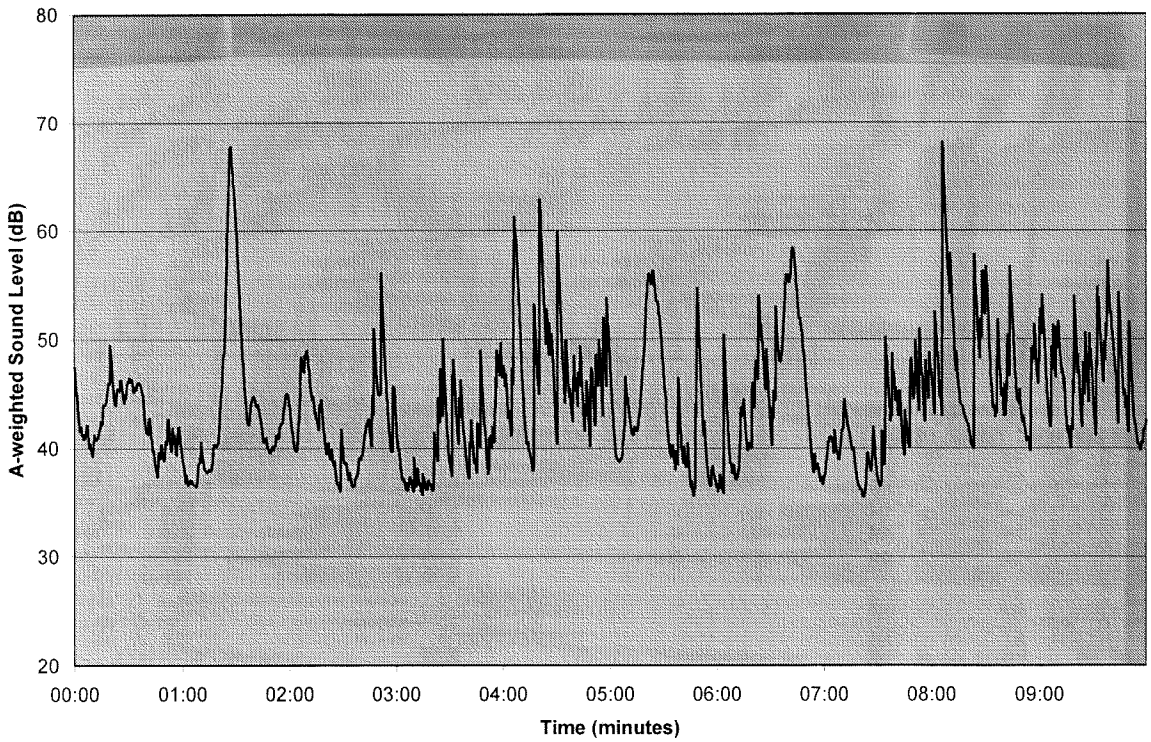
Hour	Hourly Noise Level L_{eq} dB
12:00 – 13:00	56
13:00 – 14:00	54
14:00 – 15:00	57
15:00 – 16:00	59
16:00 – 17:00	54
17:00 – 18:00	51
18:00 – 19:00	49
19:00 – 20:00	44
20:00 – 21:00	42
21:00 – 22:00	41
22:00 – 23:00	37
23:00 – 0:00	36
0:00 – 1:00	39
1:00 – 2:00	39
2:00 – 3:00	39
3:00 – 4:00	39
4:00 – 5:00	35
5:00 – 6:00	39
6:00 – 7:00	46
7:00 – 8:00	47
8:00 – 9:00	45
9:00 – 10:00	37
10:00 – 11:00	45
11:00 – 12:00	47

Table 5-3: Noise Measurements at Location #3: Preston Park



Hour	Hourly Noise Level L_{eq} dB
12:00 – 13:00	57
13:00 – 14:00	57
14:00 – 15:00	60
15:00 – 16:00	60
16:00 – 17:00	56
17:00 – 18:00	55
18:00 – 19:00	52
19:00 – 20:00	47
20:00 – 21:00	45
21:00 – 22:00	44
22:00 – 23:00	42
23:00 – 0:00	40
0:00 – 1:00	42
1:00 – 2:00	44
2:00 – 3:00	42
3:00 – 4:00	38
4:00 – 5:00	37
5:00 – 6:00	42
6:00 – 7:00	48
7:00 – 8:00	52
8:00 – 9:00	48
9:00 – 10:00	46
10:00 – 11:00	48
11:00 – 12:00	47

Table 5-4: Noise Measurements at Location #4 – Carmel/Salinas



Hour	Hourly Noise Level L_{eq} dB
12:00 – 13:00	60
13:00 – 14:00	64
14:00 – 15:00	61
15:00 – 16:00	62
16:00 – 17:00	57
17:00 – 18:00	60
18:00 – 19:00	56
19:00 – 20:00	55
20:00 – 21:00	56
21:00 – 22:00	52
22:00 – 23:00	47
23:00 – 0:00	54
0:00 – 1:00	45
1:00 – 2:00	40
2:00 – 3:00	43
3:00 – 4:00	39
4:00 – 5:00	38
5:00 – 6:00	43
6:00 – 7:00	52
7:00 – 8:00	58
8:00 – 9:00	55
9:00 – 10:00	51
10:00 – 11:00	56
11:00 – 12:00	56

Since local jurisdictions are preempted from regulating noise generation from noise sources such as cars, trucks, trains, airplanes, etc., the City of Marina intends to implement noise controls through receiver-based noise compatibility guidelines and through its noise ordinance.

Currently, the City is in the process of formalizing noise compatibility guidelines. However, the Planning Director advises that the City will follow the State of California guidelines for noise (see **Table 5-5**). Additionally the City intends to develop a noise ordinance to regulate activities that may include such sources as mechanical equipment, amplified sounds, or hours of heavy equipment operation.

Noise Standards and Guidelines

The land use compatibility noise guidelines by the State of California for residential and transient lodging uses, State guidelines indicate that noise levels of up to 60 to 65 dBA (DNL or CNEL) are normally acceptable depending on the type of residential use. For office/commercial uses as well as schools, libraries, churches, hospitals and nursing homes, State guidelines indicate that noise levels up to 70 dBA (DNL or CNEL) are considered normally acceptable. For industrial uses, noise levels up to 75 dBA are considered normally acceptable. Normally acceptable is defined as satisfactory for the specified land use, assuming that conventional construction is used in buildings.

Under most of these land use categories, overlapping ranges of acceptability and unacceptability are presented, leaving some ambiguity in areas where noise levels fall within the overlapping range. For purposes of this analysis, the most conservative interpretation is followed where noise levels fall within this range (i.e., if a noise level falls within the overlapping range for normally and conditionally acceptable, it is identified as conditionally acceptable).

B. IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In the City of Marina, a significant noise increase is defined by comparing existing and projected noise levels with the following criteria:

- Compliance with the State of California land use compatibility guidelines;

Table 5-5: State of California Noise Compatibility Guidelines

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE Ldn or CNEL, dBA 55 60 65 70 75 80
Residential - Low Density Single Family, Duplex, Mobile Homes	
Residential - Multi-Family	
Transient Lodging - Motels, Hotels	
Schools, Libraries, Churches, Hospitals, Nursing Homes	
Auditoriums, Concert Halls, Amphitheaters	
Sports Arena, Outdoor Spectator Sports	
Playgrounds, Neighborhood Parks	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	
Office Buildings, Business Commercial and Professional	
Industrial Manufacturing Utilities, Agriculture	

INTERPRETATION

NORMALLY ACCEPTABLE
Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

NORMALLY UNACCEPTABLE
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements and needed noise insulation features included in the design.

CLEARLY UNACCEPTABLE
New construction or development should generally not be undertaken.

Source: California Governor's Office of Planning and Research (1990), prepared by Lamphier-Gregory.

- A determination of whether construction-related noise peaks would result in speech interference effects;

- Compliance with the noise sections of the Uniform Building Code (UBC), California Annex, for multi-family housing;

- A determination of whether an incremental traffic noise increase on local roadways would be noticeable to most residents.

These criteria are derived from CEQA Guidelines Appendix G: Environmental Checklist Forms, the City of Marina noise guidelines and standards, and criteria defined by the U.S. Environmental Protection Agency indicating whether annoyance or speech interference could result. Potential impacts are considered to be mitigated to a less-than-significant level if the recommended mitigation would reduce noise levels to below specified threshold limits.

The primary consideration for most environmental noise impact assessments is the annoyance caused by noise. For the purposes of this evaluation, and consistent with Appendix G of the CEQA Guidelines, a Project may be deemed to have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas. This analysis uses speech interference criteria, in the context of impact duration and time of day, to identify "substantial" increases in noise from temporary construction activities, and local noise ordinance standards to identify substantial increases in noise from long-term operational-phase activities. Speech interference criteria (rather than sleep disturbance, for example) are applied to construction noise since construction work would occur during the daytime hours.

For the multi-family portion of the project, where a common wall is planned between dwellings units, the noise standards of the UBC must be enforced by the City of Marina building department.

CONSTRUCTON NOISE IMPACTS

Construction noise impact arises from the following two types of operation:

- Demolition, building erection and finishing of the residences.
- Noise from heavy trucks arriving and leaving the site.

Demolition, Building Erection and Finishing

The noisiest phase of construction will be the initial phases requiring demolition of existing residences, excavation and grading.

The equipment required for all construction operations is listed in Table 5-6. These noise levels are taken largely from a report published by the U.S. Environmental Protection Agency in 1974. While this noise emission data is dated, it is typically used in construction assessment to model a worst-case condition. Generally, the noise emission levels from these equipment items on a typical construction site are quieter by 5 dB or more than those shown in the table as a result of noise reduction technology. These noise emission levels were all measured under full load operation, producing the highest possible noise levels. Additionally, none of the noise levels assumes any attenuation from natural or manmade barriers between the source and receiver.

TABLE 5-6
CONSTRUCTION EQUIPMENT NOISE LEVELS

Demolition and Grading	A-Weighted Sound Level at 50 Feet
Backhoe with hoe ram	90
Dump truck	88
Building Erection	
Forklift 80	
Welding truck	80
Backhoes	85
Scissor lift	80
Concrete mixer	85
Concrete pump	82
Finishing	
Backhoe85	
Small landscape grader	80
Forklift 80	
Scissor lift	80

The noisiest phase of the operation is the initial phase consisting of demolition of the existing structures and grading of the site. These operations would employ excavators and a backhoe with a hoe ram. Without noise mitigation, there would be line-of-sight noise propagation between the heavy equipment and the adjacent homes. Maximum noise levels at homes adjacent the demolition sites may reach as high as 90 dB, and up to 80 dB at the façade of the nearest residence. More typically, the maximum noise levels would be 10 dB below this, up to 80 dB at the property line and 70 dB at the façade. The noise would persist during the construction weekday periods.

The demolition and grading phase of this project would constantly dominate the noise environment for all nearby residences. In all cases, the noise emissions from these construction activities would exceed the background levels by more than 10 dB, thereby creating a significant noise impact that would change the nature of the noise environment substantially throughout this period. Background noise levels of 60 dB and above hamper normal speech. Therefore, normal speech communication would be difficult in the outdoor backyard areas of affected residences.

The existing homes may generally be expected to provide about 20 dB of noise attenuation with windows closed. This would reduce the anticipated façade noise from about 70 dB to about 50 dB. While normal speech communication is expected to be possible in these homes under closed window conditions, the construction noise is expected to be very annoying. Substantial adverse community reaction may be expected from an unmitigated construction noise environment during this construction phase.

- **Potential Impact 5.1: Demolition, Grading and Construction Noise.** The noise emissions from demolition, grading and construction activities would exceed the background levels by more than 10 dB, thereby creating a significant noise impact that would change the nature of the noise environment substantially throughout this period. This represents a potentially **significant, temporary** environmental impact.

RECOMMENDED MITIGATION MEASURES

Mitigation Measure 5.1.1: Noise Measurements. The Project Applicant should conduct periodic noise emission measurements for each truck periodically to ensure that the muffler systems are operating properly, and report the results of these measurement to the City of Marina Planning Department.

Mitigation Measure 5.1.2: Driver Education. The Project Applicant should educate the drivers in the quietest possible operation of trucks, with particular care to acceleration and deceleration operations.

Mitigation Measure 5.1.3: Minimize Truck Movement with Light Loads. The Project Applicant should ensure that the departure of dump trucks with light loads is minimized. Lightly loaded dump trucks are typically noisier than those that are heavily loaded due to a banging and clanging of unsprung loads.

Additionally, all construction equipment will comply with all applicable State and Federal noise standards. A compliance program will be established for construction, and local residents will be advised of a telephone contact to register noise complaints.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of the above mitigation measures should reduce temporary noise impacts to a level of *less than significant*.

TRAFFIC NOISE IMPACTS

Implementation of the Specific Plan would cause a minimal increase in traffic noise levels along local roadways providing access to the site. Using noise-modeling techniques specified by the Federal Highway Administration (FHWA-RD-77-108 with updated California Vehicle Noise Emission [CALVENO] factors) and traffic volumes in this EIR, noise modeling was completed for the streets and segments shown in **Table 5-7**, **Table 5-8** and **Table 5-9**.

Traffic level increases and attendant noise exposure increases were smaller for this project than for many. The largest increase is 3 dB for Carmel Avenue (see **Table 5-10**). Since this project extends several streets into new areas and closes others, it is not possible to define the impact solely in terms of noise level increases along existing roadways. Specifically, the extension of Carmel Avenue will increase noise at locations where no street currently exists. Likewise, the reorientation of roadways causes a nearly 4-dB decrease in noise along 3rd Avenue. The figure below graphically depicts the greatest change in noise exposure from the project for specific roads, in terms of noise level change at a distance of 50 feet.

Table 5-7: Baseline CNEL Distances

	Street Name	Segment	Volume (cars/hr)	Speed (mph)	Percent Trucks	Distance to CNEL Contour 70	65	60	55	50
1	Hwy 1 SB Off Ramp	at Reservation Road	0	35	1.0%	0	0	0	0	0
2	Hwy 1 SB On Ramp	at Reservation Road	168	40	1.0%	8	17	37	80	171
3	Reservation Rd.	East of Hwy. 1	1300	35	1.0%	25	54	116	250	539
4	Reservation Rd.	West of Hwy. 1	711	35	1.0%	17	36	78	167	360
5	Hwy 1 NB On Ramp	at Reservation Road	217	40	1.0%	9	20	44	94	203
6	Hwy 1 NB Off Ramp	at Reservation Road	362	35	1.0%	11	23	49	107	230
7	Del Monte Blvd.	North of Reservation Rd.	540	35	1.0%	14	30	65	139	300
8	Del Monte Blvd.	South of Reservation Rd.	1773	35	1.0%	31	66	143	307	662
9	Reservation Rd.	East of Del Monte Blvd.	2160	35	1.0%	35	76	163	351	755
10	Reservation Rd.	West of Del Monte Blvd.	765	35	1.0%	18	38	81	176	378
11	Reservation Rd.	East of California Ave.	1225	35	1.0%	24	52	112	240	518
12	Reservation Rd.	West of California Ave.	1227	40	1.0%	30	64	139	299	645
13	Salinas Ave.	South of Reservation Rd.	76	25	1.0%	2	5	12	25	54
14	Reservation Rd.	East of Salinas Ave.	1226	45	1.0%	36	79	169	365	786
15	Imjin Rd.	North of Reservation Rd.	57	45	1.0%	5	10	22	47	102
16	Imjin Rd.	South of Reservation Rd.	2300	45	1.0%	56	120	258	555	1196
17	Reservation Rd.	East of Imjin Rd.	2887	55	1.0%	92	197	425	916	1973
18	Blanco. Rd.	North of Reservation Rd.	2219	55	1.0%	77	166	357	769	1656
19	Blanco. Rd.	South of Reservation Rd.	0	45	1.0%	0	0	0	0	0
20	Reservation Rd.	East of Blanco. Rd.	709	55	1.0%	36	77	167	359	774
21	Imjin Rd.	South of Preston Dr.	2209	45	1.0%	54	116	251	540	1164
22	Preston Dr.	West of Imjin Rd.	169	25	1.0%	4	9	20	42	91
23	Imjin Rd.	North of Abrams Dr.	2209	45	1.0%	54	116	251	540	1164
24	Imjin Rd.	South of Abrams Dr.	1892	45	1.0%	49	105	226	487	1050
25	Abrams Dr.	East of Imjin Rd.	524	30	1.0%	12	25	54	116	249
26	Abrams Dr.	West of Imjin Rd.	209	30	1.0%	6	14	29	63	135
27	Hwy. 1 NB On Ramp	North of 12th St.	173	40	1.0%	8	17	38	81	175
28	Hwy. 1 NB Off Ramp	South of 12th St.	1063	35	1.0%	22	47	101	219	471
29	12th St.	East of Hwy. 1 NB Ramps	2487	35	1.0%	39	83	179	385	830
30	12th St.	West of Hwy. 1 NB Ramps	637	35	1.0%	16	33	72	155	335
31	Hwy. 1 SB Off Ramp	North of 12th St.	151	35	1.0%	6	13	28	60	128
32	Hwy. 1 SB On Ramp	South of 12th St.	501	40	1.0%	16	35	76	165	355
33	Del Monte Blvd.	North of Reindollar Ave.	1603	35	1.0%	29	62	133	287	619
34	Del Monte Blvd.	South of Reindollar Ave.	2286	35	1.0%	36	78	169	364	785
35	Reindollar Ave.	East of Del Monte Blvd.	863	25	1.0%	13	27	58	126	271
36	California Ave.	North of Carmel Ave.	141	25	1.0%	4	8	17	38	81
37	California Ave.	South of Carmel Ave.	61	25	1.0%	2	5	10	21	46
38	Carmel Ave.	East of California Ave.	186	25	1.0%	5	10	21	45	97
39	Carmel Ave.	West of California Ave.	300	25	1.0%	6	13	29	62	134
40	Carmel Ave.	East of Salinas Ave.	0	25	1.0%	0	0	0	0	0
41	Carmel Ave.	West of Salinas Ave.	72	25	1.0%	2	5	11	24	52
42	Imjin Rd.	North of 12th St.	12	45	1.0%	2	4	8	17	36
43	Imjin Rd.	South of 12th St.	719	45	1.0%	26	55	119	256	551
44	12th St.	West of Imjin Rd.	1317	45	1.0%	38	82	178	383	825
45	Abrams Dr.	North of 12th St.	219	30	1.0%	6	14	30	65	139
46	12th St.	West of Abrams Dr.	1540	45	1.0%	42	92	197	425	915
47	California Ave.	North of 12th St.	208	25	1.0%	5	10	23	49	105
48	California Ave.	South of 12th St.	0	25	1.0%	0	0	0	0	0
49	12th St.	East of California Ave.	1540	45	1.0%	42	92	197	425	915
50	12th St.	West of California Ave.	1706	45	1.0%	45	98	211	455	980
51	4th Ave.	North of 12th St.	12	25	1.0%	1	2	3	7	16
52	4th Ave.	South of 12th St.	5	30	1.0%	1	1	2	5	11
53	12th St.	East of 4th Ave.	1706	45	1.0%	45	98	211	455	980
54	3rd Ave.	North of 12th St.	11	30	1.0%	1	2	4	9	19
55	3rd Ave.	South of 12th St.	18	30	1.0%	1	3	6	12	26
56	12th St.	East of 3rd Ave.	1697	45	1.0%	45	98	210	453	976
57	12th St.	West of 3rd Ave.	1690	45	1.0%	45	97	210	452	974
58	2nd Ave.	North of 12th St.	66	30	1.0%	3	6	13	29	63
59	2nd Ave.	South of 12th St.	137	30	1.0%	5	10	22	47	102
60	12th St.	West of 2nd Ave.	1847	45	1.0%	48	103	223	480	1033
61	Project Main St.	North of Imjin Rd.	0	35	1.0%	0	0	0	0	0
62	Imjin Rd.	East of Project Main St.	1892	45	1.0%	49	105	226	487	1050
63	Imjin Rd.	West of Project Main St.	1892	45	1.0%	49	105	226	487	1050
64	Project Main St.	North of Abrams Dr.	0	35	1.0%	0	0	0	0	0
65	Project Main St.	South of Abrams Dr.	0	35	1.0%	0	0	0	0	0
66	Abrams Dr.	East of Project Main St.	0	30	1.0%	0	0	0	0	0
67	Abrams Dr.	West of Project Main St.	0	30	1.0%	0	0	0	0	0
68	MBEST Dr.	North of Reservation Rd.	0	25	1.0%	0	0	0	0	0
69	Reservation Rd.	East of MBEST Dr.	2887	45	1.0%	65	139	300	646	1391

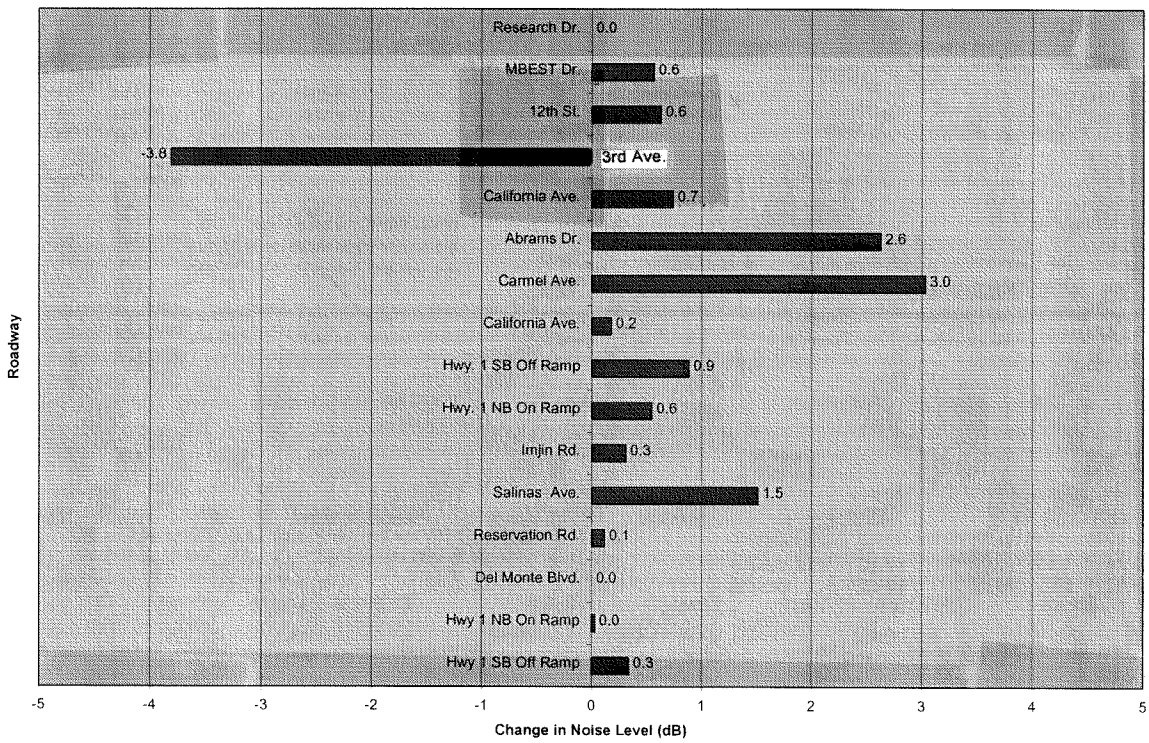
Table 5-8: 2020 No Project CNEL Distances

	Street Name	Segment	Volume (cars/hr)	Speed (mph)	Percent Trucks	Distance to CNEL Contour 70	65	60	55	50
1	Hwy 1 SB Off Ramp	at Reservation Road	353	35	1.0%	10	23	49	105	226
2	Hwy 1 SB On Ramp	at Reservation Road	190	40	1.0%	9	19	40	86	186
3	Reservation Rd.	East of Hwy. 1	2376	35	1.0%	37	81	173	374	805
4	Reservation Rd.	West of Hwy. 1	883	35	1.0%	19	42	90	193	416
5	Hwy 1 NB On Ramp	at Reservation Road	703	40	1.0%	21	44	96	206	445
6	Hwy 1 NB Off Ramp	at Reservation Road	441	35	1.0%	12	26	56	122	262
7	Del Monte Blvd.	North of Reservation Rd.	1944	35	1.0%	33	70	152	327	704
8	Del Monte Blvd.	South of Reservation Rd.	2610	35	1.0%	40	86	185	398	857
9	Reservation Rd.	East of Del Monte Blvd.	2550	35	1.0%	39	84	182	392	844
10	Reservation Rd.	West of Del Monte Blvd.	1382	35	1.0%	26	56	121	260	561
11	Reservation Rd.	East of California Ave.	2623	35	1.0%	40	86	185	399	860
12	Reservation Rd.	West of California Ave.	2904	40	1.0%	53	115	247	531	1145
13	Salinas Ave.	South of Reservation Rd.	177	25	1.0%	4	9	20	44	94
14	Reservation Rd.	East of Salinas Ave.	2624	45	1.0%	61	131	281	606	1306
15	Imjin Rd.	North of Reservation Rd.	1552	45	1.0%	43	92	198	427	920
16	Imjin Rd.	South of Reservation Rd.	1359	45	1.0%	39	84	181	391	842
17	Reservation Rd.	East of Imjin Rd.	2349	55	1.0%	80	172	371	798	1720
18	Blanco. Rd.	North of Reservation Rd.	3511	55	1.0%	104	225	484	1044	2248
19	Blanco. Rd.	South of Reservation Rd.	2669	45	1.0%	61	132	284	613	1320
20	Reservation Rd.	East of Blanco. Rd.	2462	55	1.0%	82	177	382	824	1775
21	Imjin Rd.	South of Preston Dr.	1268	45	1.0%	37	80	173	373	804
22	Preston Dr.	West of Imjin Rd.	169	25	1.0%	4	9	20	42	91
23	Imjin Rd.	North of Abrams Dr.	3955	45	1.0%	80	172	370	797	1716
24	Imjin Rd.	South of Abrams Dr.	3141	45	1.0%	68	147	317	683	1472
25	Abrams Dr.	East of Imjin Rd.	993	30	1.0%	18	38	82	177	382
26	Abrams Dr.	West of Imjin Rd.	425	30	1.0%	10	22	47	101	217
27	Hwy. 1 NB On Ramp	North of 12th St.	362	40	1.0%	13	29	62	133	286
28	Hwy. 1 NB Off Ramp	South of 12th St.	1023	35	1.0%	21	46	99	213	459
29	12th St.	East of Hwy. 1 NB Ramps	3750	35	1.0%	51	109	235	507	1091
30	12th St.	West of Hwy. 1 NB Ramps	1194	35	1.0%	24	51	110	236	509
31	Hwy. 1 SB Off Ramp	North of 12th St.	300	35	1.0%	9	20	44	94	203
32	Hwy. 1 SB On Ramp	South of 12th St.	909	40	1.0%	25	53	114	245	528
33	Del Monte Blvd.	North of Reindollar Ave.	2041	35	1.0%	34	73	157	338	727
34	Del Monte Blvd.	South of Reindollar Ave.	2475	35	1.0%	38	83	178	384	827
35	Reindollar Ave.	East of Del Monte Blvd.	758	25	1.0%	12	25	53	115	248
36	California Ave.	North of Carmel Ave.	755	25	1.0%	11	25	53	115	248
37	California Ave.	South of Carmel Ave.	562	25	1.0%	9	20	44	94	203
38	Carmel Ave.	East of California Ave.	243	25	1.0%	5	12	25	54	116
39	Carmel Ave.	West of California Ave.	550	25	1.0%	9	20	43	93	200
40	Carmel Ave.	East of Salinas Ave.	99	25	1.0%	3	6	14	30	64
41	Carmel Ave.	West of Salinas Ave.	170	25	1.0%	4	9	20	43	92
42	Imjin Rd.	North of 12th St.	0	45	1.0%	0	0	0	0	0
43	Imjin Rd.	South of 12th St.	981	45	1.0%	31	68	146	314	678
44	12th St.	West of Imjin Rd.	2445	45	1.0%	58	125	268	578	1246
45	Abrams Dr.	North of 12th St.	219	30	1.0%	6	14	30	65	139
46	12th St.	West of Abrams Dr.	2668	45	1.0%	61	132	284	613	1320
47	California Ave.	North of 12th St.	816	25	1.0%	12	26	56	121	261
48	California Ave.	South of 12th St.	774	25	1.0%	12	25	54	117	252
49	12th St.	East of California Ave.	2667	45	1.0%	61	132	284	613	1320
50	12th St.	West of California Ave.	2733	45	1.0%	62	134	289	623	1341
51	4th Ave.	North of 12th St.	12	25	1.0%	1	2	3	7	16
52	4th Ave.	South of 12th St.	517	30	1.0%	11	25	53	115	247
53	12th St.	East of 4th Ave.	2734	45	1.0%	62	134	289	623	1342
54	3rd Ave.	North of 12th St.	12	30	1.0%	1	2	4	9	20
55	3rd Ave.	South of 12th St.	555	30	1.0%	12	26	56	120	259
56	12th St.	East of 3rd Ave.	2673	45	1.0%	61	132	285	614	1322
57	12th St.	West of 3rd Ave.	2282	45	1.0%	55	119	256	552	1190
58	2nd Ave.	North of 12th St.	557	30	1.0%	12	26	56	121	260
59	2nd Ave.	South of 12th St.	1407	30	1.0%	22	48	104	224	482
60	12th St.	West of 2nd Ave.	2552	45	1.0%	59	128	276	595	1282
61	Project Main St.	North of Imjin Rd.	0	35	1.0%	0	0	0	0	0
62	Imjin Rd.	East of Project Main St.	3141	45	1.0%	68	147	317	683	1472
63	Imjin Rd.	West of Project Main St.	3141	45	1.0%	68	147	317	683	1472
64	Project Main St.	North of Abrams Dr.	165	35	1.0%	6	14	29	63	136
65	Project Main St.	South of Abrams Dr.	0	35	1.0%	0	0	0	0	0
66	Abrams Dr.	East of Project Main St.	0	30	1.0%	0	0	0	0	0
67	Abrams Dr.	West of Project Main St.	165	30	1.0%	5	12	25	54	115
68	MBEST Dr.	North of Reservation Rd.	722	25	1.0%	11	24	52	112	240
69	Reservation Rd.	East of MBEST Dr.	2000	45	1.0%	51	109	235	506	1089

Table 5-9: 2020 With Project CNEL Distances

	Street Name	Segment	Volume (cars/hr)	Speed (mph)	Percent Trucks	Distance to CNEL Contour 70	65	60	55	50
1	Hwy 1 SB Off Ramp	at Reservation Road	382	35	1.0%	11	24	51	110	238
2	Hwy 1 SB On Ramp	at Reservation Road	190	40	1.0%	9	19	40	86	186
3	Reservation Rd.	East of Hwy. 1	2439	35	1.0%	38	82	176	380	819
4	Reservation Rd.	West of Hwy. 1	912	35	1.0%	20	43	92	197	425
5	Hwy 1 NB On Ramp	at Reservation Road	708	40	1.0%	21	45	96	207	447
6	Hwy 1 NB Off Ramp	at Reservation Road	441	35	1.0%	12	26	56	122	262
7	Del Monte Blvd.	North of Reservation Rd.	1944	35	1.0%	33	70	152	327	704
8	Del Monte Blvd.	South of Reservation Rd.	2610	35	1.0%	40	86	185	398	857
9	Reservation Rd.	East of Del Monte Blvd.	2584	35	1.0%	40	85	183	395	851
10	Reservation Rd.	West of Del Monte Blvd.	1416	35	1.0%	26	57	123	265	570
11	Reservation Rd.	East of California Ave.	2697	35	1.0%	41	88	189	407	876
12	Reservation Rd.	West of California Ave.	3008	40	1.0%	54	117	253	544	1172
13	Salinas Ave.	South of Reservation Rd.	251	25	1.0%	6	12	26	55	119
14	Reservation Rd.	East of Salinas Ave.	2624	45	1.0%	61	131	281	606	1306
15	Imjin Rd.	North of Reservation Rd.	1592	45	1.0%	43	94	202	434	936
16	Imjin Rd.	South of Reservation Rd.	1460	45	1.0%	41	88	190	410	883
17	Reservation Rd.	East of Imjin Rd.	2410	55	1.0%	81	175	377	812	1749
18	Blanco. Rd.	North of Reservation Rd.	3714	55	1.0%	108	233	503	1083	2334
19	Blanco. Rd.	South of Reservation Rd.	2913	45	1.0%	65	140	302	650	1400
20	Reservation Rd.	East of Blanco. Rd.	2503	55	1.0%	83	179	387	833	1794
21	Imjin Rd.	South of Preston Dr.	1369	45	1.0%	39	85	182	393	846
22	Preston Dr.	West of Imjin Rd.	169	25	1.0%	4	9	20	42	91
23	Imjin Rd.	North of Abrams Dr.	4300	45	1.0%	84	181	391	842	1815
24	Imjin Rd.	South of Abrams Dr.	3365	45	1.0%	72	154	332	715	1541
25	Abrams Dr.	East of Imjin Rd.	1043	30	1.0%	18	39	85	183	394
26	Abrams Dr.	West of Imjin Rd.	596	30	1.0%	13	27	59	126	272
27	Hwy. 1 NB On Ramp	North of 12th St.	411	40	1.0%	14	31	67	144	311
28	Hwy. 1 NB Off Ramp	South of 12th St.	1185	35	1.0%	23	51	109	235	506
29	12th St.	East of Hwy. 1 NB Ramps	4279	35	1.0%	55	119	257	553	1192
30	12th St.	West of Hwy. 1 NB Ramps	1353	35	1.0%	26	55	119	257	553
31	Hwy. 1 SB Off Ramp	North of 12th St.	368	35	1.0%	11	23	50	108	232
32	Hwy. 1 SB On Ramp	South of 12th St.	1000	40	1.0%	26	56	121	261	563
33	Del Monte Blvd.	North of Reindollar Ave.	2041	35	1.0%	34	73	157	338	727
34	Del Monte Blvd.	South of Reindollar Ave.	2475	35	1.0%	38	83	178	384	827
35	Reindollar Ave.	East of Del Monte Blvd.	758	25	1.0%	12	25	53	115	248
36	California Ave.	North of Carmel Ave.	785	25	1.0%	12	25	55	118	254
37	California Ave.	South of Carmel Ave.	586	25	1.0%	10	21	45	97	209
38	Carmel Ave.	East of California Ave.	269	25	1.0%	6	12	27	58	124
39	Carmel Ave.	West of California Ave.	570	25	1.0%	10	21	44	95	205
40	Carmel Ave.	East of Salinas Ave.	199	25	1.0%	5	10	22	47	102
41	Carmel Ave.	West of Salinas Ave.	196	25	1.0%	5	10	22	47	101
42	Imjin Rd.	North of 12th St.	0	45	1.0%	0	0	0	0	0
43	Imjin Rd.	South of 12th St.	1051	45	1.0%	33	71	153	329	709
44	12th St.	West of Imjin Rd.	2543	45	1.0%	59	128	275	593	1279
45	Abrams Dr.	North of 12th St.	401	30	1.0%	10	21	45	97	209
46	12th St.	West of Abrams Dr.	2886	45	1.0%	65	139	300	646	1391
47	California Ave.	North of 12th St.	968	25	1.0%	14	29	63	136	292
48	California Ave.	South of 12th St.	774	25	1.0%	12	25	54	117	252
49	12th St.	East of California Ave.	2885	45	1.0%	65	139	300	646	1391
50	12th St.	West of California Ave.	3103	45	1.0%	68	146	315	678	1460
51	4th Ave.	North of 12th St.	12	25	1.0%	1	2	3	7	16
52	4th Ave.	South of 12th St.	517	30	1.0%	11	25	53	115	247
53	12th St.	East of 4th Ave.	3104	45	1.0%	68	146	315	678	1460
54	3rd Ave.	North of 12th St.	43	30	1.0%	2	5	10	22	47
55	3rd Ave.	South of 12th St.	231	30	1.0%	7	14	31	67	144
56	12th St.	East of 3rd Ave.	2665	45	1.0%	61	132	284	612	1319
57	12th St.	West of 3rd Ave.	2639	45	1.0%	61	131	282	608	1311
58	2nd Ave.	North of 12th St.	557	30	1.0%	12	26	56	121	260
59	2nd Ave.	South of 12th St.	1437	30	1.0%	23	49	105	227	488
60	12th St.	West of 2nd Ave.	2922	45	1.0%	65	140	302	651	1403
61	Project Main St.	North of Imjin Rd.	330	35	1.0%	10	22	47	100	216
62	Imjin Rd.	East of Project Main St.	3365	45	1.0%	72	154	332	715	1541
63	Imjin Rd.	West of Project Main St.	3271	45	1.0%	70	151	326	702	1512
64	Project Main St.	North of Abrams Dr.	470	35	1.0%	13	27	59	127	273
65	Project Main St.	South of Abrams Dr.	311	35	1.0%	10	21	45	96	208
66	Abrams Dr.	East of Project Main St.	320	30	1.0%	8	18	39	83	179
67	Abrams Dr.	West of Project Main St.	449	30	1.0%	10	22	48	104	225
68	MBEST Dr.	North of Reservation Rd.	823	25	1.0%	12	26	56	122	262
69	Reservation Rd.	East of MBEST Dr.	2244	45	1.0%	55	118	253	546	1176

TABLE 5-10
Difference in Traffic Noise Level due to Specific Plan at 50 Feet



Due to the minor increase in noise levels of 3 dB from the project, the increased noise exposure is expected to be unnoticed by most residents. Based on the significance criteria outlined above, Specific Plan-related traffic noise increases would be a ***less than significant*** impact, and no mitigation would be required.

LAND USE COMPATABILITY

The only anticipated land use compatibility issue related to noise is expected during the construction phase (see **Potential Impact 5.1**, above, and related **Mitigation Measures**). Since this is a temporary condition, there would be a *less than significant* impact, and no mitigation would be required.

CUMULATIVE NOISE IMPACTS

Under future cumulative traffic growth conditions without implementation of the Specific Plan, noise levels along local roadways are projected to increase by up to 2 dB. When cumulative future noise increases are considered with Specific Plan–related noise increases, the combined noise increases would be less than 3 dB over existing noise levels. Given that a 3-dB increase is barely noticeable to most people, and below the 5 dB significance criterion, cumulative (with Project) noise increases of less than 3 dB would be *less than significant*, and no mitigation would be required.

6

BIOLOGICAL RESOURCES

A. INTRODUCTION

The Marina Heights Specific Plan area is situated on approximately 248 acres within the boundaries of former Fort Ord. The area was historically referred to as Abrams Park and upper Patton Park, and contains more than 800 abandoned residential units and associated infrastructure. The units were constructed within what was probably relatively dense maritime chaparral habitat. The habitat was cleared for the houses, streets and organized play areas (baseball fields, basketball courts, tot lots), but between the developed areas, some native vegetation remains, interspersed with non-native weedy species and ornamental plantings. Currently, elements of native vegetation are found throughout the Specific Plan area, and there is good representation of intact maritime chaparral in several areas. Following is a description of the existing biological resources in the Marina Heights Specific Plan area, an evaluation of the impacts on those resources resulting from implementation of the Specific Plan and recommended mitigation measures (where appropriate) is presented.

Methods

Since the Marina Heights Specific Plan area is within the boundaries of former Fort Ord, the area was previously surveyed in 1992 and 1993 by Jones & Stokes Associates for the *Flora and Fauna Baseline Study of Fort Ord, California* (U.S. Army Corps of Engineers 1992) and the *Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord, California* (U.S. Army Corps of Engineers 1997). In June and July 2002, Vernal Yadon conducted field surveys and completed a biological assessment of the Specific Plan area for the Chadmar Group. All of these documents were reviewed by Zander Associates prior to conducting field work, which was to consist of a reconnaissance survey to verify the information provided by Vern Yadon.

Zander Associates initially surveyed the property on April 9, 2003 and identified several locations of sand gilia (*Gilia tenuiflora* ssp. *arenaria*). This special-status plant species was acknowledged as potentially occurring by Vern Yadon, but his fieldwork was completed too late in the season to verify its presence/absence on the site. Zander Associates returned to the site on April 17, 2003 to generally map the locations of sand gilia and Monterey spineflower (*Chorizanthe pungens* var. *pungens*) and to delineate the extent of occupied habitat observed on this date for these species.

Topographic maps (scale 1" = 100') provided by the project engineers were used to locate positions in the field and to delineate the extent of the various habitat types observed, as well as the occurrences of sand gilia and Monterey spineflower. The extent of habitat types and the estimated extent of occupied habitat for the two plant species were calculated using CAD.

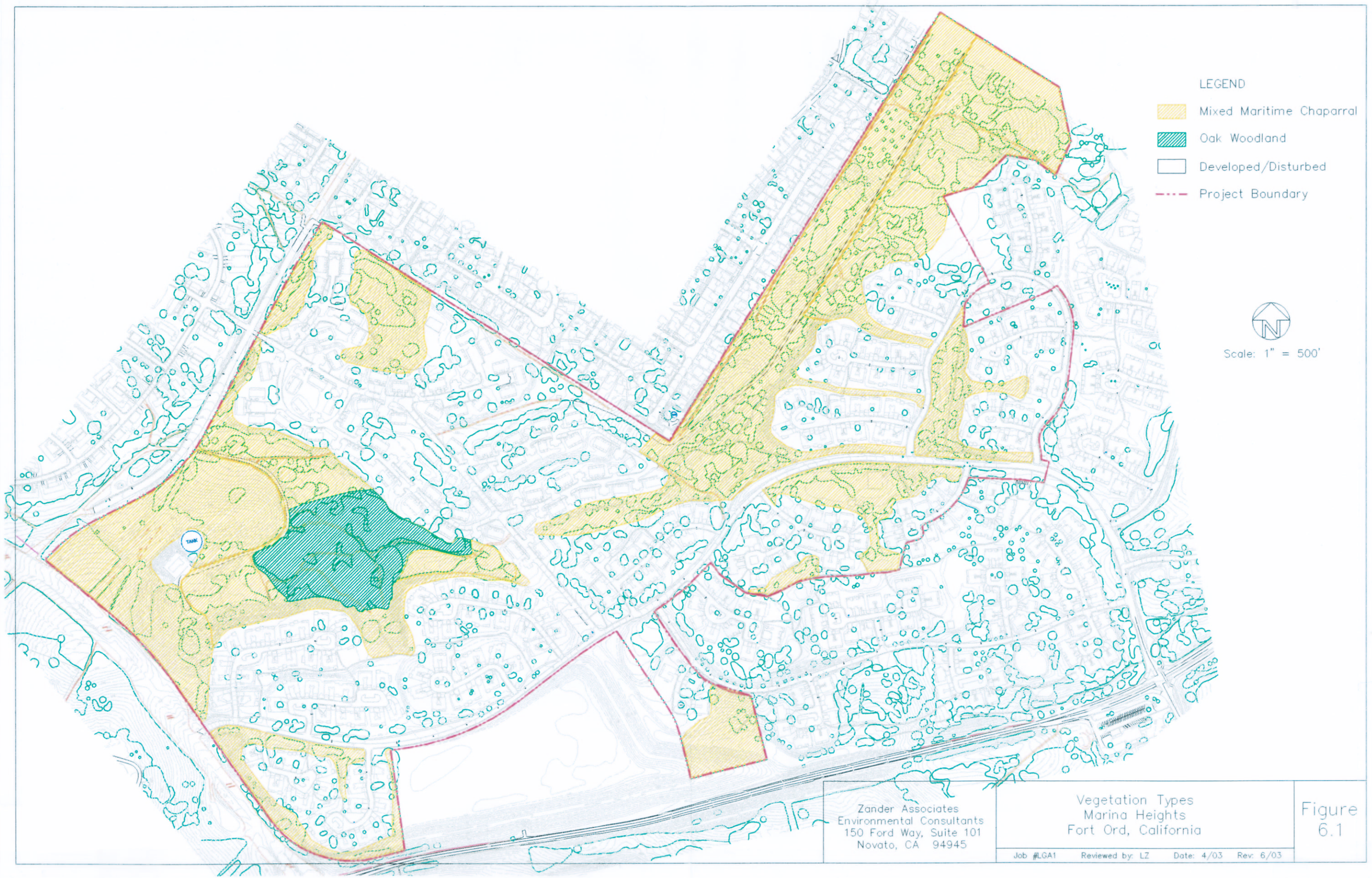
B. SETTING

Existing Conditions

The Marina Heights Specific Plan area is situated within an area dominated by a mixture of maritime chaparral, coastal scrub and oak woodland vegetation that was modified for development of the now abandoned residential units, but remains intact in some areas and elements of native vegetation are present throughout the site. In and around the residential units, the vegetation is a combination of non-native annual grasses, exotic weeds and landscape trees and shrubs but there are also bare sand areas being colonized by the native maritime chaparral species. Monterey pine and Monterey cypress were planted throughout the site, probably for visual screening and to create wind breaks, and there is a concentrated planting area in the northeastern portion of the Specific Plan area. Naturally-occurring oak woodland is present along the base of a south-facing slope in the western portion of the site. A description of the plant species observed in each of these habitat types is provided below, along with a discussion of the animals that would be expected to occur in these habitats.

Mixed Maritime Chaparral

Mixed maritime chaparral consists of elements of maritime chaparral and coastal scrub with scattered oaks and planted Monterey pine and Monterey cypress. It is the dominant plant community in the Specific Plan area encompassing approximately 99 acres (see **Figure 6.1**).



Zander Associates
Environmental Consultants
150 Ford Way, Suite 101
Novato, CA 94945

Vegetation Types
Marina Heights
Fort Ord, California

Job #LGA1 Reviewed by: LZ Date: 4/03 Rev: 6/03

Figure 6.1

The mixed maritime chaparral is comprised of three distinct subcategories in the Specific Plan area: intact maritime chaparral; chaparral/coastal scrub/oak woodland mosaic; chaparral/ruderal mosaic with elements of chaparral or coastal scrub comprising at least 50 percent of the ground cover.

Intact Maritime Chaparral

Relatively intact stands of maritime chaparral are found at two sites within the Specific Plan area. One site is in the northeast corner north of 17th Regiment Court and the other is on the slopes surrounding the Marina Coast Water District Facility. This habitat is characterized by a wide variety of low- to moderate-growing evergreen, sclerophyllous (hard-leaved) shrubs such as shaggy-barked manzanita (*Arctostaphylos tomentosa* ssp. *tomentosa*), sandmat manzanita (*Arctostaphylos pumilla*), chamise (*Adenostoma fasciculatum*), Monterey ceanothus (*Ceanothus cuneatus* var. *rigidus*), and false heather (*Ericameria ericoides*).

Chaparral/Coastal Scrub/Oak Woodland Mosaic

This mosaic includes all of the maritime chaparral species characteristic of the intact habitat areas mixed in with elements of coastal scrub and oak woodland. The Coastal scrub elements include coyote bush (*Baccharis pilularis*), California sage (*Artemisia californica*), deer weed (*Lotus scoparius*), California coffeeberry (*Rhamnus californica*) and poison oak (*Toxicodendron diversilobum*). Oak woodland elements are primarily coast live oak (*Quercus agrifolia*) and they occur scattered throughout this habitat.

A linear swath of this vegetation mosaic, approximately 200 to 300 feet in width, follows the northeastern boundary of the Specific Plan area. This swath contains both chaparral and coastal scrub species with scattered oak trees but relatively few introduced species. Other areas with predominantly native chaparral and coastal scrub species include the west facing slopes above the Marina Coast Water District Facility, the open slopes east and west of Washington Court, and the north-facing slopes south of 80th Artillery Court.

Chaparral/Ruderal Mosaic

This mosaic consists of native chaparral and coastal scrub elements mixed with non-native grasses, shrubs and ornamental plantings. The ruderal component comprises less than 50% of the ground cover and in some cases the ground cover consists of mostly native species but the tree canopy is planted Monterey pine (*Pinus radiata*) and Monterey cypress (*Cupressus macrocarpa*). This is particularly evident in the northeastern portion of the

Specific Plan area where there is a grove of planted Monterey pine and Monterey cypress with an understory of bare sand and scattered chaparral species such as sandmat manzanita, deer weed and false heather.

Patches of the chaparral/ruderal mosaic are found on the terraces between housing rows west and east of MacArthur Drive, south of Abrams Drive between Williams Court and Bayonet Drive, and south of Brostrom Drive.

Many special-status plant species occur in the mixed chaparral habitat type within the Specific Plan area, including sandmat manzanita, Eastwood's ericameria (*Ericameria fasciculata*), Monterey ceanothus, Monterey spineflower and sand gilia. These species are not restricted to the intact maritime chaparral habitat but are found throughout the various subcategories described.

Maritime chaparral supports a great diversity of wildlife species. Birds such as the orange-crowned warbler, California towhee, California thrasher, wrentit and California quail feed and nest in the chaparral. Small mammals such as California pocket mouse and brush rabbit find forage and cover in this habitat and serve as prey for gray fox, bobcat, and western rattlesnake.

Oak Woodland

Although there are coast live oaks scattered throughout the mixed maritime chaparral habitat, intact oak woodland only occurs in one portion of the Specific Plan area, at the base of a south-facing slope near the Marina Coast Water District facilities. The oak woodland in this area is fairly dense at the base of the slope, but begins to thin near the top where it is replaced with mixed maritime chaparral species. The primary oak species in this area is coast live oak and the understory species include coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), California coffeeberry (*Rhamnus californica*), climbing bedstraw (*Galium porrigens* var. *porrigens*), and creeping snowberry (*Symphoricarpos mollis*). Oak woodland comprises approximately 10 acres in the Specific Plan area (see **Figure 6.1**).

Typically, oak woodlands provide good habitat for a variety of wildlife species. Oak trees serve as nesting sites and provide cover for many birds and mammals. Acorns are a valuable food source for several animal species, including the California quail, western gray squirrel and black-tailed deer. Other representative animal species of oak dominated forests include arboreal salamander, western screech owl, scrub jay, and Virginia opossum.

Developed/Disturbed

The Specific Plan area includes approximately 139 acres of disturbed areas encompassing the abandoned houses and associated infrastructure (see **Figure 6.1**). Around the houses and streets, there are areas where there has been a significant amount of surface disturbance and the vegetation consists of a combination of ruderal grasses and forbs and landscape species. Dominant species in these areas include ripgut brome (*Bromus diandrus*), wild oat (*Avena fatua*), iceplant (*Carpobrotus edulis*), filarees (*Erodium* spp.), several species of wattle (Acacia spp.), and a variety of other landscape plantings. While elements of mixed maritime chaparral may be beginning to colonize some of these areas, the dominant species (> 80 percent cover) consist of non-native ruderal grasses and forbs.

Special-Status Species

For the purpose of the Draft EIR, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS); those considered "species of concern" by the USFWS; those listed or proposed for listing as rare, threatened, or endangered by the California Department of Fish and Game (CDFG); plants occurring on lists 1B or 2 of the California Native Plant Society's *Inventory of Rare and Endangered Vascular Plants of California, Sixth Edition* (2001); and animals designated as "Species of Special Concern" by the CDFG.

Previous surveys conducted within the Specific Plan area identified six special-status plant species and potential for seven special-status animals on the site. As a result of surveys conducted by Vern Yadon in 2002 and Zander Associates in 2003, all but one of the special-status plants previously identified on the site were confirmed to be present. The potential presence of special-status animals is based on Zander Associates' knowledge of the habitat requirements for these species, and their assessment of the existing habitat conditions in the Specific Plan area. Zander Associates did not conduct species-specific surveys for special-status animals for this project. A discussion of the results of the Zander Associates evaluation follows.

Plants

Six special-status plant species have been documented to occur in the vicinity of the Specific Plan area - Monterey spineflower (*Chorizanthe pungens* var. *pungens*), sand gilia (*Gilia tenuiflora* ssp. *arenaria*), sandmat manzanita (*Arctostaphylos pumilla*), toro manzanita (*Arctostaphylos montereyensis*), Eastwood's ericameria (*Ericameria fasciculata*) and Monterey ceanothus (*Ceanothus cuneatus* var. *rigidus*).

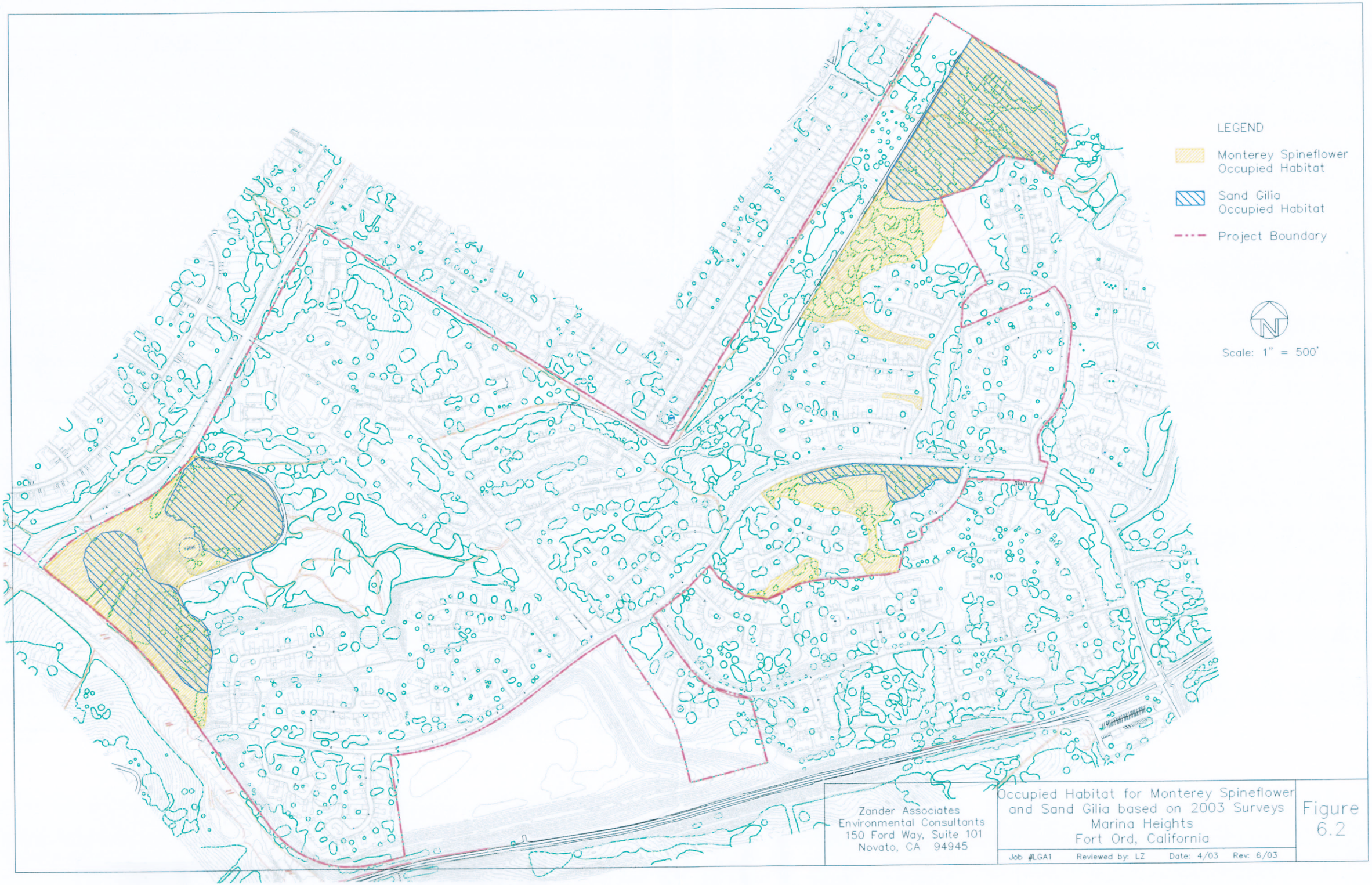
Monterey spineflower is a federally-listed threatened species. It occurs on sandy soils within coastal dune, coastal scrub, grassland, and other plant communities. Zander Associates found Monterey spineflower widespread throughout the mixed maritime chaparral habitat in the Specific Plan area, including in areas adjacent to houses, roads, and trails. The species is not restricted to the intact maritime chaparral habitat and appears to be colonizing former disturbed areas. Based on the surveys conducted by Zander Associates this year, Monterey spineflower was found to occupy approximately 42 acres in the Specific Plan area (see **Figure 6.2**).

Sand gilia is a federally-listed endangered species and a state-listed threatened species. It occurs in sandy soils in open, wind-sheltered areas, most often on level ground or on shallow slopes with stabilized sand. Zander Associates found sand gilia in several locations within the Specific Plan area, primarily within the mixed maritime chaparral. The sand gilia was often found in association with Monterey spineflower but was less widespread and occurred in more localized patches. Based on the reconnaissance-level surveys conducted for this study, Zander Associates estimates that the extent of habitat occupied by sand gilia within the Specific Plan area this year is approximately 23 acres (see **Figure 6.2**). Because sand gilia is an annual plant and because there is suitable habitat for the species throughout the mixed maritime chaparral habitat, it may be more widespread within the Specific Plan area in any given year and could occupy up to an estimated 56 acres.

Sandmat manzanita and Toro manzantia are perennial shrubs that are considered rare, threatened, or endangered in California by the California Native Plant Society (CNPS List 1B). These species typically occur in sandy soils within chaparral or woodland plant communities. Sandmat manzanita occurs throughout the Specific Plan area, and is included in the landscaping of the existing houses and parks. Toro manzanita was not identified within the Specific Plan area.

Eastwood's ericameria is an evergreen shrub in the sunflower family that occurs in sandy openings within closed-cone coniferous forest and coastal scrub habitats. The species is on CNPS List 1B and is considered a "species of concern" by the USFWS. Eastwood's ericameria is common on the property within the mixed maritime chaparral habitat.

Monterey ceanothus is also common within the mixed maritime chaparral habitat in the Specific Plan area. The USFWS considers this a species of concern but it has no state status. This plant is an evergreen shrub that occurs on sandy hills and flats, and is common throughout the maritime chaparral habitat on former Fort Ord.


LEGEND
Monterey Spineflower Occupied Habitat
Sand Gilia Occupied Habitat
Project Boundary
Scale: 1" = 500'
Zander Associates
Environmental Consultants
150 Ford Way, Suite 101
Novato, CA 94945
Occupied Habitat for Monterey Spineflower and Sand Gilia based on 2003 Surveys
Marina Heights
Fort Ord, California
Job #LGA1 Reviewed by: LZ Date: 4/03 Rev: 6/03
Figure 6.2

Animals

The *Flora and Fauna Baseline Study* for Fort Ord identifies potential habitat for six special-status animal species within the Marina Heights Specific Plan area: California horned lizard (*Phrynosoma coronatum*), black legless lizard (*Anniella pulchra nigra*), loggerhead shrike (*Lanius ludovicianus*), Monterey dusky-footed woodrat (*Neotoma fuscipes luciana*), Monterey ornate shrew (*Sorex ornatus salerius*), and Salinas harvest mouse (*Reithrodontomys megalotis*). Additionally, migratory and nesting birds are protected under Section 3503.5 of the Fish and Game Code and the Migratory Bird Treaty Act and could nest in trees within the oak woodland habitat on the site. Following is a brief discussion of each of the special-status animal species and an evaluation of their potential occurrence within the Specific Plan area.

California horned lizards inhabit open country, especially sandy areas, washes, flood plains, and wind-blown deposits in a wide variety of habitats, including shrublands, woodlands, riparian habitats and annual grassland. Warm, sunny, open areas are a main habitat requirement, along with patches of loose soil where the lizard can bury itself. This species is a federal species of concern and a California Species of Special Concern. The California horned lizard is known to occur in many habitat types on former Fort Ord, and there is suitable habitat for this species within the Specific Plan area.

The black legless lizard is a federal species of concern and a state Species of Special Concern. Legless lizards are fossorial animals that burrow in sand and leaf litter beneath plants and feed on insects and other invertebrates. The black legless lizard is found in loose, friable sandy soils in a variety of habitat types. Potential habitat for this species is present in the mixed maritime chaparral habitat in the Specific Plan area.

The loggerhead shrike is a federally listed species of concern and a state listed Species of Special Concern. It prefers open woodland habitats with scattered trees, shrubs, posts, fences, or other perches. Nests are usually built in trees and shrubs; however, structures such as telephone poles and abandoned buildings are also used. Although this species is uncommon in Monterey County, it has been observed in the annual grasslands near the Marina Airport (ACOE 1992). This species could nest in areas within the Specific Plan area.

The Monterey dusky-footed woodrat is a federal "species of concern" and a California Species of Special Concern. The Monterey dusky-footed woodrat is restricted to western and central Monterey County and northwestern San Luis Obispo County (ACOE 1993). This subspecies is typically found within dense chaparral or oak woodland habitats with

moderately dense understory growth and abundant dead wood for nest construction. Potential habitat for the Monterey dusky-footed woodrat is present in the dense chaparral and oak woodland areas near the Marina Coast Water District facility and in the chaparral in the northern portion of the Specific Plan area, north of 17th Regiment Court.

Monterey ornate shrew is a California Species of Special Concern. It occupies a variety of mostly moist riparian woodland habitats. Little is known about this species, since it is difficult to locate and does not survive well in traps due to very high metabolic rates. Shrews are often short-lived (less than a year), and several generations may occur in a single year. The habitats within the Specific Plan area appear to be too dry for the Monterey ornate shrew and, therefore, it is unlikely this species would occur.

Salinas harvest mouse is a California Species of Special Concern that occupies both fresh and saltwater marshes, annual grasslands, and scrub habitats. The Flora and Fauna Baseline Study identified the oak woodland within the Specific Plan area as potential habitat for the Salinas harvest mouse but because the area is relatively dry, it does not appear to be suitable for this species.

The Migratory Bird Treaty Act (16 USC 703) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, and their eggs and nests. As used in the act, the term "take" is defined as meaning, "to pursue, hunt, capture, collect, kill or attempt to pursue, hunt, shoot, capture, collect or kill, unless the context otherwise requires." Most native bird species in the vicinity of the Specific Plan area are covered by this act. The California Fish and Game Code (Section 3511) also provides protection for certain species as listed in the Section. Section 3503.5 of the Fish and Game Code specifically protects the nests and eggs of birds-of-prey and essentially overlaps with the Migratory Bird Treaty Act.

Potential nesting sites for birds-of-prey and other migratory birds exist in the trees that are in the coast live oak woodland and that are scattered amongst the maritime chaparral in the northern portion of the site. In practice, abiding by the Migratory Bird Treaty Act and Section 3503.5 of the Fish and Game Code usually means to avoid removal of trees with active nests until such time as the young have fledged and the nest is abandoned.

There are seven special-status bat species with ranges in Monterey County that are known to utilize buildings or trees for roosts. These species include: Townsend's western big-eared bat (*Plecotus townsendii*), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis*), small-footed myotis (*Myotis ciliolabrum*), long-eared myotis (*Myotis evotis*), fringed myotis (*Myotis thysanodes*), and long-legged myotis (*Myotis volans*). All but three of the

Myotis species are State Species of Special Concern. The small-footed myotis, long-eared myotis and fringed myotis are federal species of concern. The abandoned buildings and dense oak woodland within the Specific Plan area could provide suitable roosting habitat for these bat species.

C. IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Impacts on biological resources resulting from the implementation of the Marina Heights Specific Plan were considered significant if they would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any special-status species.

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans or by CDFG or USFWS.

- Interfere substantially with the movement of any resident or migratory fish or wildlife species.

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

- Conflict with the "take" provisions in the federal or state endangered species law.

The following assessment of impacts is based on the Conceptual Land Plan (Scheurer Architects, Revised April 4, 2003). Implementation of the Marina Heights Specific Plan would result in the removal of all of the abandoned housing, realignment of roads and maximization of development of the site. As a result, the majority of the maritime chaparral habitat and associated special-status plant species that remain on the site would be removed. The oak woodland area near the Marina Coast Water District facility would be preserved and incorporated into the design of the Specific Plan area.

The impacts associated with development of the Specific Plan area were anticipated in the April 1997 *Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord, California* (HMP). The HMP addresses impacts to biological resources through

establishment of large, contiguous habitat conservation areas and corridors to compensate for future development in other areas of the former military base. It identifies what type of activities can occur on each parcel at former Fort Ord, and parcels are designated either for development with no restrictions, for habitat preserves with management guidelines, or for habitat preserves with some development allowed. All of the Specific Plan area is within a designated development area and, therefore, the loss of HMP species is anticipated and accommodated by the HMP; there are no HMP requirements for this parcel. Mitigation for the loss of maritime chaparral habitat and associated special status species as a result of development within the Marina Heights Specific Plan area was provided through establishment of habitat reserve areas elsewhere on Fort Ord.

However, the HMP serves as the basis of direct consultation between the Army and the U.S. Fish and Wildlife Service; it does not provide specific authorization for incidental take of state or federally listed species to other parties. To extend the incidental take coverage provided by the HMP, the principal parties that have or will be acquiring land at the former Fort Ord are in the process of preparing a Habitat Conservation Plan (HCP) and Implementing Agreement (IA), which will formalize the HMP's requirement for all non-federal entities on the former Fort Ord.[1] Until the HCP and IA are executed, the loss of state or federally listed species must be addressed on a project-by-project basis.

Since there is no federal "nexus" for the Marina Heights Specific Plan (e.g., the Specific Plan area is not on federal land, no federal funding is involved), and implementation of the Specific Plan would comply with state laws, there is no prohibition against removing the one federally listed plant species on the site (Monterey spineflower) without a permit. However, there are State of California take prohibitions that apply to the one state listed species on the site (sand gilia), and thus, separate take authorization and project-specific mitigation measures are necessary in the absence of the HCP/IA. Further discussion is provided below under the specific impact assessments for sand gilia and Monterey spineflower.

This impact analysis assumes that the requirements of the HMP will be implemented by all responsible parties, and that implementation of these requirements will mitigate significant impacts to species covered under the HMP.

[1] Federal entities would still be required to consult with the USFWS under Section 7 of the ESA, but such consultation would be streamlined.

Removal of Ruderal Disturbed Habitat

Approximately 139 acres of developed areas, ruderal grassland and landscaping would be removed for construction within the Specific Plan area. The loss of these habitats would not constitute a significant impact because of their low value for native wildlife. However, there are native maritime chaparral species interspersed within the developed areas, including some special-status species such as Eastwood's ericameria, sandmat manzanita and Monterey ceanothus.

Considering that Eastwood's ericameria, sandmat manzanita and Monterey ceanothus are relatively abundant in the greater Monterey Bay area, and there are several thousand acres of maritime chaparral in designated habitat reserve lands on former Fort Ord, the loss of a few individual plants for implementation of the Specific Plan would not have a substantial adverse effect on the species, and would not be considered a significant impact. No mitigation beyond that provided in the HMP is recommended.

Removal of Mixed Maritime Chaparral Habitat

Approximately 99 acres of mixed maritime chaparral habitat would be removed for implementation of the Specific Plan. The special-status species associated with this habitat on the site include Monterey spineflower, sand gilia, Eastwood's ericameria, sandmat manzanita, and Monterey ceanothus. The loss of mixed maritime chaparral habitat and its associated special-status species within the Marina Heights Specific Plan area is a ***significant*** impact. However, the HMP anticipates development of this parcel and mitigates the loss of this habitat and associated species through the set-aside and management of large contiguous blocks of maritime chaparral in other areas of former Fort Ord. No mitigation beyond that provided in the HMP is recommended. Impacts to Monterey spineflower and sand gilia are discussed separately, below.

- **Potential Impact 6.1: Removal of the Federally-Listed Endangered and State-Listed Threatened Sand Gilia.** Sand gilia was found in medium to low density within approximately 23 acres of the mixed maritime chaparral in the Specific Plan area. Implementation of the Specific Plan would result in the removal of all of the habitat for sand gilia on the site. This would represent a ***significant*** environmental impact. While the Habitat Management Plan (HMP) provides adequate mitigation for the species on the former Fort Ord, it does not provide authorization for incidental take under the California Endangered Species Act (CESA). This conflict with the state prohibition against take would be mitigated through execution of the Habitat Conservation Plan (HCP) and Implementing Agreement (IA), but would remain

significant in the absence of these documents or until the following mitigation measure is implemented.

RECOMMENDED MITIGATION MEASURE

Mitigation 6.1: Consultation with CDFG/Permitting. If the HCP and IA are not fully executed by all responsible agencies prior to initiation of construction, then the Project Applicant should obtain independent authorization for incidental take for sand gilia. The incidental take authorization will likely require mitigation for the loss of sand gilia through seed and seedbank salvage, and restoration or creation of habitat of an appropriate size and character at a suitable location on former Fort Ord.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of the mitigation measure identified above would reduce the impact associated with removal of sand gilia habitat to a level of *less than significant*.

- **Potential Impact 6.2: Removal of the Federally-Listed Threatened Monterey Spineflower.** Monterey spineflower is widespread throughout the Specific Plan area and during surveys conducted this year, was found in medium to high density within approximately 42 acres of the mixed maritime chaparral. Implementation of the Specific Plan would remove nearly all of the habitat for Monterey spineflower within the Specific Plan area. This would represent a ***significant*** environmental impact. However, the Habitat Management Plan (HMP) anticipates development of the Marina Heights Specific Plan area and mitigates the loss of Monterey spineflower through the set-aside and management of suitable habitat in other areas of former Fort Ord. Since implementation of the Specific Plan has no federal nexus, there is no conflict with the take prohibitions of the federal Endangered Species Act (ESA) and independent authorization from U.S. Fish and Wildlife Service (USFWS) is not required. The following mitigation measure is recommended to salvage seed and the seed bank in proposed development areas.

RECOMMENDED MITIGATION MEASURE

Mitigation 6.2: Seed Collection. Prior to initiation of ground disturbing activities, the Project Applicant should collect seed from Monterey spineflower plants and salvage topsoil within the occupied areas to be disturbed. Seed should be collected during the appropriate time of year April – June, by qualified biologists. At this

time, the qualified biologist should also prepare a map that identifies specific distribution of the spineflower for topsoil preservation. The collected seed should be used in to revegetate temporarily disturbed areas, where practicable. The remainder of the seed should be used for reseeding and restoration efforts on designated reserve lands in the vicinity.

- **Potential Impact 6.3: Removal of Potential Habitat for the Black Legless Lizard/Loss of Individual Black Legless Lizards.** Habitat for black legless lizards exists within the maritime chaparral habitat at the Specific Plan area. The black legless lizard is not federally- or state-listed, but it is designated as a Species of Special Concern by California Department of Fish and Game (CDFG). Loss of potential habitat for the black legless lizard is anticipated, and mitigation is provided through the set-aside and management of habitat reserve areas within the boundaries of the former Fort Ord as described in the April 1997 Habitat Management Plan (HMP). However, it cannot be assumed that the impacts of the Specific Plan on the species are covered in the HMP until the Habitat Conservation Plan (HCP) and Implementing Agreement (IA) are finalized and signed. The amount of potential black legless lizard habitat that would be removed for implementation of the Specific Plan is moderate in comparison to the extent of available habitat in the vicinity. However, potential direct effects on individual lizards could occur during construction, and would be considered ***significant.***

RECOMMENDED MITIGATION MEASURE

Mitigation 6.3: Construction Monitoring/Lizard Relocation. A qualified biologist should be designated to monitor construction activities and salvage and relocate any black legless lizards that are encountered during this process. The monitor should walk alongside the grading equipment in each new area of disturbance, and should have the authority to halt construction temporarily if necessary to capture and relocate legless lizards. Any legless lizards captured in the grading zone should be relocated as soon as possible to adjacent suitable habitat outside of the area of effect.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of the mitigation measures identified above would reduce the impact associated with loss of black legless lizards and their habitat to a level of *less than significant.*

Loss of Individual Coast Horned Lizards

The coast horned lizard can be relatively mobile, and as such is likely to avoid the construction areas and construction equipment. However, there is still a potential for individuals to be lost. No substantial loss of habitat for this species is expected to result from implementation of the Specific Plan. The species is not federally- or state-listed, and is relatively common in the vicinity. Loss of a few individual coast horned lizards is not likely to have a substantial adverse effect on the species and, therefore, would not be considered a significant impact. No mitigation is recommended.

- **Potential Impact 6.4: Construction Effects on Active Nests of Birds-of-Prey and Other Migratory Birds.** Active nests of birds-of-prey and other migratory birds are protected under the Migratory Bird Treat Act and under Section 3503.5 of the Fish and Game Code. Construction activities within or adjacent to the oak woodland habitat could disturb active nests through direct removal (if trees are to be removed) or by causing abandonment by the adults. If nest removal or abandonment were to result from construction activities, it would constitute a ***significant*** environmental impact.

RECOMMENDED MITIGATION MEASURE

Mitigation 6.4: Pre-Construction Surveys/Avoidance of Active Nests. If construction activities are initiated between August and December (outside of the typical nesting season for the birds-of-prey and migratory birds expected to occur in the vicinity), then pre-construction surveys for active nests should not be necessary. If activities are initiated before August or after December, then pre-construction surveys for active nests within a certain radius of proposed activities are recommended. The radius of the area to be surveyed should be determined by a qualified biologist considering the nature of the construction activity, the topography and the density of trees in the vicinity. The goal is to determine if any active nests would be affected by construction activities such that it would cause abandonment of the nest. Additionally, if any trees are to be removed and/or trimmed the canopy should be surveyed for active nests prior to removal. If active nests are found and the biologist determines that construction activities would remove the nest or have the potential to cause abandonment, then those activities should be avoided until the young have fledged as determined through monitoring of the nest. Once the young have fledged, construction activities can resume in the vicinity.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of the mitigation measures identified above would reduce the impact associated with potential disturbance of active nests to a level of *less than significant.*

- **Potential Impact 6.5: Disturbance of Roosting Bats.** The seven special-status bat species that have the potential to inhabit the area could establish roosts in the abandoned buildings that could be disturbed during demolition. Potential impacts to these bat species were not addressed in the Habitat Management Plan (HMP), and would be regarded as a ***significant*** environmental impact.

RECOMMENDED MITIGATION MEASURE

Mitigation 6.5: Pre-Construction Surveys/Avoidance of Maternity Roosts. Prior to building demolition, a qualified biologist should survey the buildings for presence of bats. If special-status species are present, the following measures should be implemented:

- Demolition shall not occur when maternity roosts are present.

- No construction within 300 feet will be permitted until any young bats are fledged.

- The contractor should obtain a Memorandum of Understanding (MOU) with the California Department of Fish and Game (CDFG) in order to remove listed bat species. Alternate habitat may need to be provided if bats are to be excluded from maternity roosts. A roost with comparable spatial and thermal characteristics should be constructed as directed by a qualified biologist. In the event that adult bats need to be handled and relocated, a qualified biologist should prepare and implement a relocation plan subject to approval by CDFG that includes relocating all bats found on-site to an alternate suitable habitat.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of the mitigation measures identified above would reduce the impact associated with potential disturbance of bat maternity roosts to a level of *less than significant.*

(This page has been intentionally left blank.)

7

HAZARDS AND HAZARDOUS MATERIALS

A. SETTING

Background

The Marina Heights Specific Plan area is on land located within the United States Army's Fort Ord Military Base. The base operated from 1917 until 1991, when it was named for closure and preparation for land transferal began. A community group addressing the impacts of Base Closure, Base Reuse and the ultimate transferal of land to surrounding jurisdictions was formed that became the Fort Ord Reuse Authority (FORA) in April 1994, after passage of State Senate Bill SB-899. FORA is a 13-member board representing Monterey County and the cities of Marina, Seaside, Carmel, Del Rey Oaks, Sand City, Monterey, Pacific Grove, and Salinas, and it has been given the responsibility for implementing the local community's reuse planning. FORA completed an updated Fort Ord Base Reuse Plan in June, 1997.

The Army and contractors, including IT Corporation (IT), and Harding Lawson and Associates (HLA), have produced numerous environmental studies and reports on hazardous substances located or believed to be present within various Fort Ord sites. Many of these reports can be viewed online as part of the Army's Base Realignment and Closure (BRAC) Administrative Record[1]. Basewide surveys for human and environmental hazards and remediation feasibility studies were conducted soon after announcement of base closure. The National Environmental Policy Act (NEPA) requirements for land transfer analyses culminated in the preparation of documents including:

- Final Environmental Impact Statement (FEIS), Fort Ord Disposal and Reuse (June 1993);
- Subsequent FEIS Record of Decision (December 1993);
- Supplemental Environmental Impact Statement (SEIS), Fort Ord Disposal and Reuse (June 1996); and

[1] U.S. Army, Former Fort Ord Parcel Database, 2003.

- Subsequent SEIS Record of Decision (June 1997).

Early transfer of land occurred prior to the 1997 SEIS Record of Decision, including parcels transferred to the California State University and University of California for educational and economic development under special federal authority. Fritzsche Army Airfield was transferred to the City of Marina and became available for commercial business in October, 1995. In addition to the environmental documents already mentioned, Findings of Suitability to Transfer (FOST) documents were completed for specific parcels and collections of parcels that provide detailed descriptions of local environmental conditions.

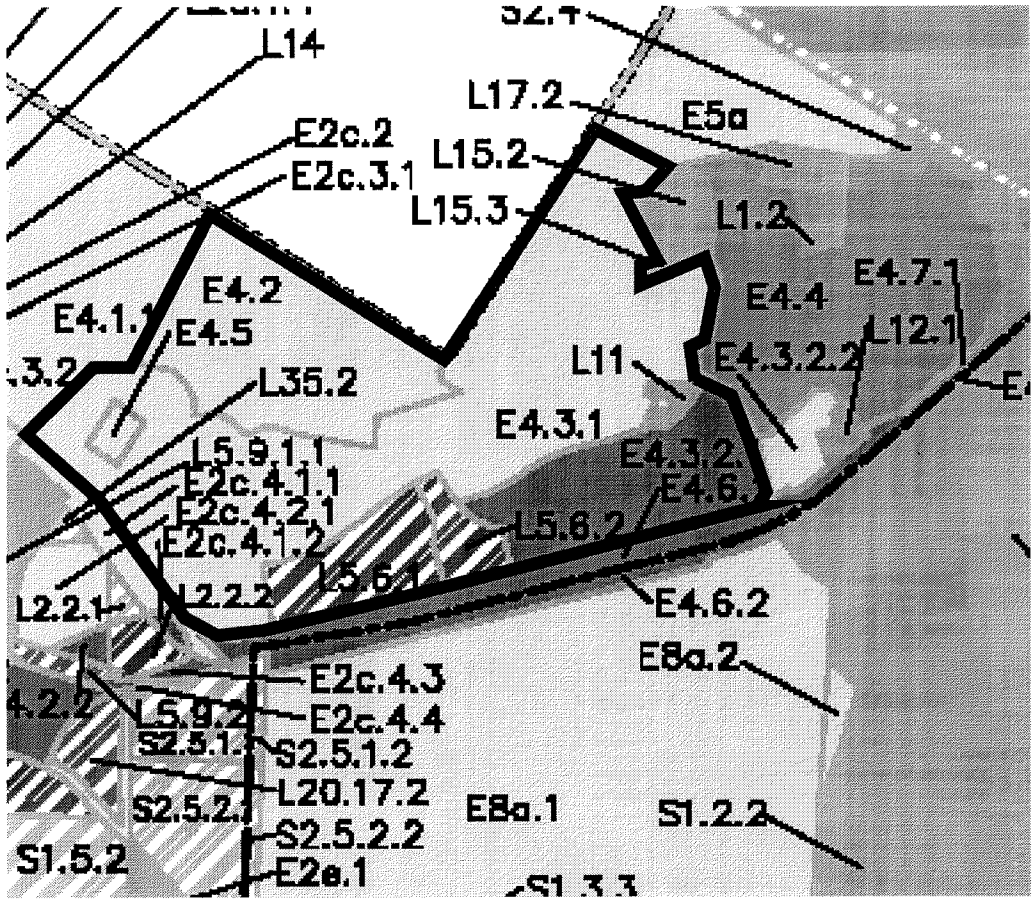
Involved Parcels

Eight parcels were evaluated for hazards and hazardous materials in this analysis (see **Figure 7.1**). These include parcels E 4.2-Upper Patton Housing, E 4.3.1.1 and E 4.3.1.2-Abrams A Housing, E 4.3.2.1-Abrams B Housing, E 4.5-Water Treatment Facility, L 5.6.1-Abrams Park, L 5.6.2-Marina Park Offices and L11-Abrams Housing/Interim. The adjacent Operable Unit 2 (OU2) landfill, groundwater treatment and landfill gas treatment systems were also examined. The OU2 landfill is shown on **Figure 7.2**, and the Groundwater Treatment System is shown on **Figure 7.3**. The parcels evaluated comprise former military housing tracts and a portion of the inactive and excavated Fort Ord Municipal Landfill. The transfer status of individual parcels is included in the Army's parcel database[2]. Parcels proposed for new residential development in the Marina Heights Specific Plan area are E 4.2, E 4.3.1.1, and L 5.6.2. Four parcels have already been transferred to the City of Marina under an economic development conveyance: E 4.2, E 4.3.1.1, E 4.3.1.2, and L11. Parcel E 4.5 is in the process of being transferred to the Marina Coast Water District, and Parcels E 4.3.2.1, L 5.6.1, and L 5.6.2 have not yet been transferred. Parcel descriptions are included in **Table 7-1** and **Table 7.2**.

Reports on Findings of Suitability to Transfer (FOST) and Findings of Suitability to Early Transfer (FOSET) were completed for Upper Patton Housing and portions of Abrams Housing, as well as a Water Treatment Facility to allow for transferal to the Fort Ord Reuse Authority under an Economic Development Conveyance (EDC). Parcel E 4.3.2.1 contained an Ordnance and Explosives Site (OE-13A) that was included in several reports, including the *Final After Action Report OE Gridstats Sampling, Inland Range Contract, Site OE-13A*. The City of Marina refers to this parcel as Abrams "B".

[2] U.S. Army, Base Realignment and Closure Administrative Record, 2003 (http://www.fortordcleanup.com/adminrec/arsearch.asp)

Figure 7.1: Marina Heights Specific Plan Area Parcels



CAT A NO ORDNANCE/EXPLOSIVES, EDC, ENVIRONMENTALLY CLEAN

CAT A NO ORDNANCE/EXPLOSIVES, NON EDC, ENVIRONMENTALLY CLEAN

CAT B NO ORDNANCE/EXPLOSIVES, EDC, ENVIRONMENTAL REMEDIATION

CAT B NO ORDNANCE/EXPLOSIVES, NON EDC, ENVIRONMENTAL REMEDIATION

CAT C ORDNANCE/EXPLOSIVES REMOVED, EDC, NO LAND USE CONTROLS

CAT C ORDNANCE/EXPLOSIVES REMOVED, NON EDC, NO LAND USE CONTROLS

TRANSFERRED

Parcel E 4.2: Upper Patton Housing
Parcel E 4.3.1: Abrams A Housing
Parcel E 4.3.2: Abrams B Housing
Parcel E 4.5: Water Pumping and Treatment Facility
Parcel L 5.6.1 Former Cell A, OU2 Landfill)
Parcel L 5.6.2: Marina Park Offices (Former Cell A, OU2 Landfill)
Parcel L11: Interim Incorporated

PREPARED BY DIRECTORATE OF BASE REALIGNMENT AND CLOSURE
PRESIDIO OF MONTEREY, CALIFORNIA
REVISED 10-18-99

Figure 7.2: Landfill Gas Monitoring and Control Systems OU2

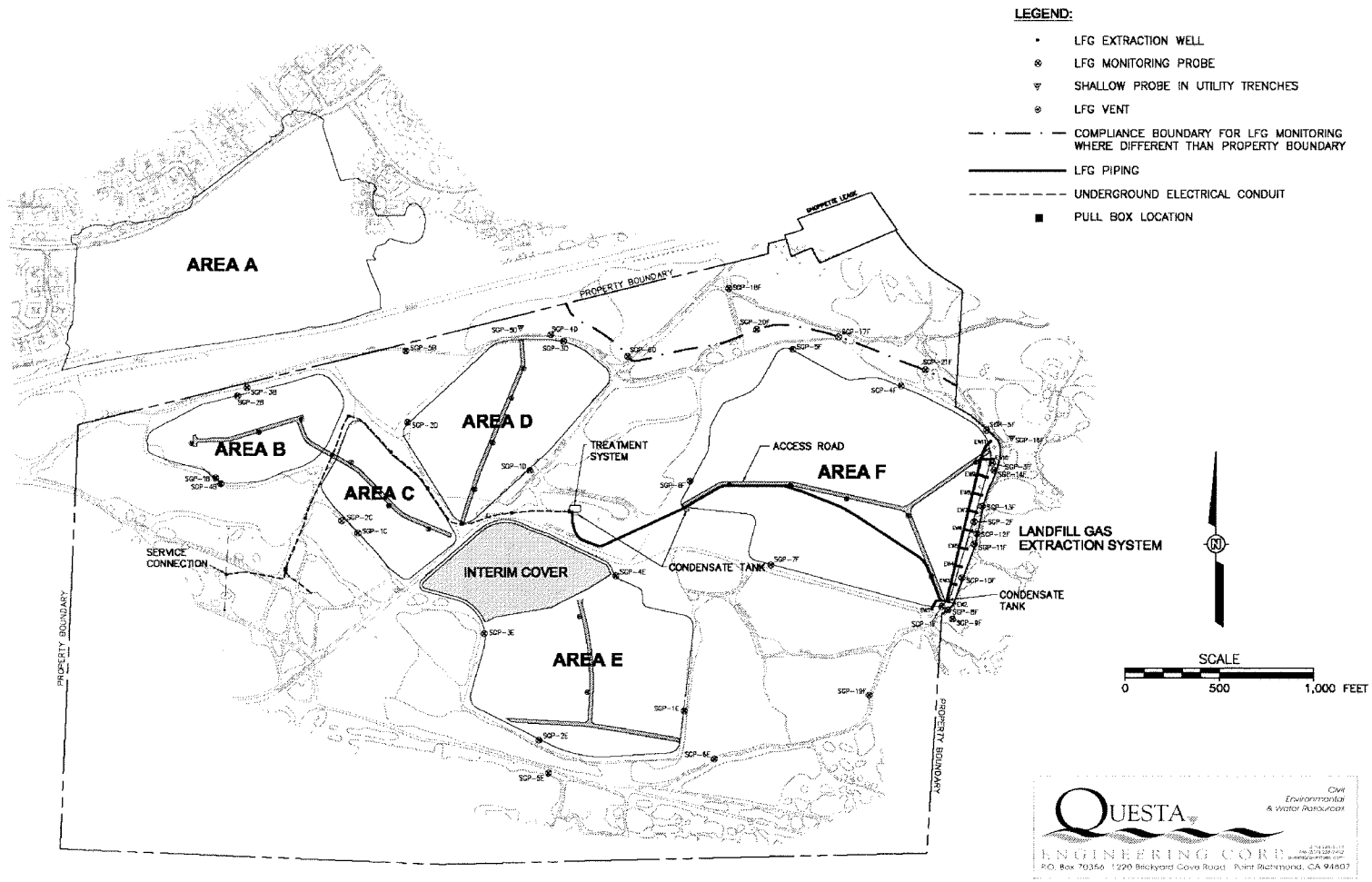
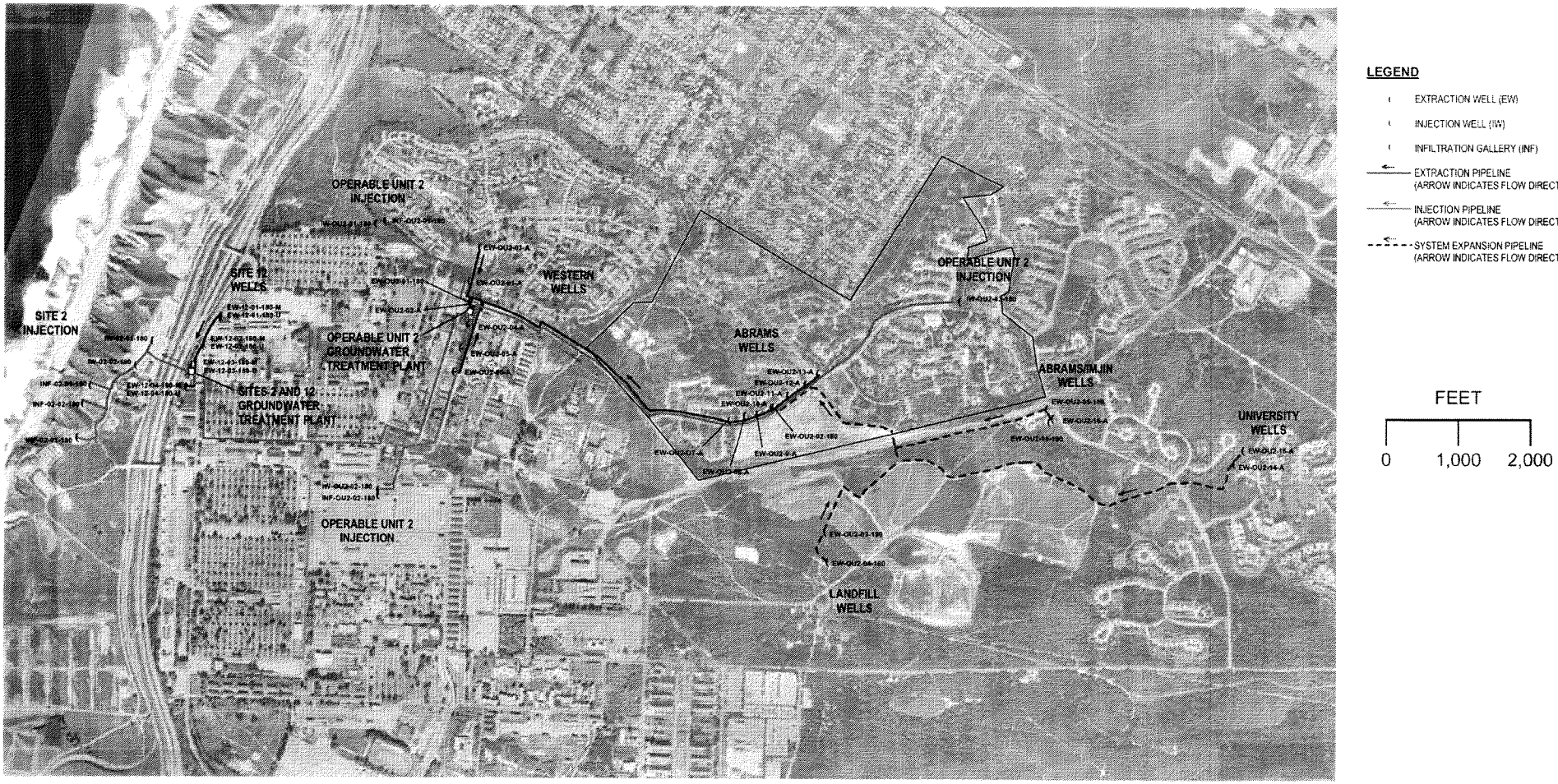


Figure 7.3: Operable Unit 2 and Sites 2 and 12 Groundwater Remedy Pipeline Routing, Former Fort Ord, California



QUESTA ENGINEERING CORP.
Civil Environmental & Water Resources
P.O. Box 70356 1220 Brickyard Cove Road Point Richmond, CA 94807

TABLE 7-1
SUMMARY OF MARINA HEIGHTS SPECIFIC PLAN AREA PARCELS PROPOSED FOR DEVELOPMENT

Parcel Name	Transfer Status	Proposed Use	HAZMAT Issues	Surface Clean-up Status	*Army Requirements*	Additional Recommended Mitigations Prior to Development
Upper Patton Housing	Transfer Completed	Residential	Lead Paint. Asbestos.	None in progress	Lead and asbestos abatement included in deed restrictions.	Approved demolition plan with dust control. Continued landfill gas/groundwater treatment and monitoring.
Abrams A Housing	Transfer Completed	Residential	Asbestos. Contaminated Groundwater Conveyance.	None in progress	Lead and asbestos abatement included in deed restrictions. Pipeline and well access. No new well development.	Approved demolition plan with dust control. Setback and protection of wells/pipelines. Continued landfill gas/groundwater treatment and monitoring.
Marina Park Offices	Not Started	Residential	Asbestos. Contaminated Groundwater Conveyance.	Former OU2, Cell A. Excavated and Clean Closed.	Lead and asbestos abatement included in deed restrictions. Pipeline and well access. No new well development.	Approved demolition plan with dust control. Setback and protection of wells/pipelines. Continued landfill gas/groundwater treatment and monitoring.

TABLE 7-2
SUMMARY OF PARCELS ADJACENT OR SURROUNDED BY MARINA HEIGHTS SPECIFIC PLAN AREA

Parcel Name	Transfer Status	Proposed Use	HAZMAT Issues	Surface Clean-up Status	*Army Requirements*	Additional Recommended Mitigations Prior to Development
Abrams B Housing	Not Started	None	Asbestos. Ordnance/Explosives. Contaminated Groundwater Conveyance.	Further Evaluation Required	Lead and asbestos abatement included in deed restrictions. Pipeline and well access. No new well development. Further Evaluation for Ordnance/Explosives.	None
Water Treatment Facility	In Progress	Excluded: Marina Community Water District Site	Lead Paint. Asbestos.	None in progress	Not Found.	None
Abrams Park	Not Started	Excluded: Park/ School	Proximity to Landfill. Contaminated Groundwater Conveyance.	Former OU2, Cell A. Excavated and Clean Closed.	Access to Pipelines and Wells. No new well development.	School site requires emergency planning and monitoring.
Abrams Housing / Interim	Transfer Completed	None	Asbestos.	None In Progress	Not found.	None

Parcels L 5.6.1 and L 5.6.2 overlie the former Fort Ord Municipal Landfill (Operable Unit 2, Part A). These two parcels have been the subject of several reports documenting remedial work, including excavation and consolidation of waste to the landfill on the south side of Imjin Road. Other reports that were reviewed examine the plume of contaminated groundwater that underlies a portion of the area proposed for development, the approved groundwater monitoring, extraction and treatment systems, and measures to address and prevent the accumulation and migration of landfill gas beneath and beyond the former Fort Ord landfill.

Hazardous Materials Storage and Use

Upper Patton and Abrams Park Housing (Parcels E 4.2, E 4.3.1.1 and E 4.3.1.2)

Patton Park housing units located in Parcel E4.2 were constructed between 1962 and 1969. The Abrams Park housing units located in Parcels E4.3.1.1 and E 4.3.1.2 were constructed between the mid-1970's and 1980. Some of the Abrams Park units were constructed over a portion of Cell A of the Fort Ord landfill that was active between 1956 and 1966. Some of the housing units on Parcel E4.3.2.1 (Abrams "B") were constructed on an earlier practice mortar range known as OE-13A. These parcels are considered separately.

Parcels E 4.2, E 4.3.1.1 and E 4.3.1.2 together comprise approximately 241 acres according to the U.S. Army's parcel database[3], and represent the bulk of the area included in the Marina Heights Specific Plan. Parcels E 4.2 and E 4.3.1 would contain a majority of the proposed 1,050 housing units. Parcel L 5.6.2 would contain the remaining units, and is discussed in the next section. Most of the existing former military housing units within the Marina Heights Specific Plan area were abandoned between 1992 and 1994, and have not been maintained. During a site visit on January 8th, 2003, many individual housing units were observed to have peeling paint and damaged roofs. The infrastructure for these housing units, including sewage lines, sewage lift stations, water lines, and electrical lines, remains in place, and is in poor condition. Several sewer manhole covers were noted to be missing or damaged, and represented a potential fall-in hazard.

The 192 occupied housing units contained in Abrams "B" adjacent to the Marina Heights Specific Plan area were renovated by 2002 according to the *FORA Annual Report FY 2001-2002* in an effort to assist the Department of Defense with work force housing.

Most multi-use former military installations contain areas where a range of hazardous materials are present or believed to be present, as is the case with the former Fort Ord. The *Findings of Suitability for Early Transfer with a CERCLA 120(h)(3) Covenant Deferral Housing Areas and Former Garrison Parcels, December 2001* that includes Parcel E 4.2 and a portion of Parcel 4.3.1 categorized asbestos, lead-based paint (LBP), radiological, and ordnance and explosive (OE) hazards separately. Also researched were underground and aboveground storage tanks, solid waste management units (SWMU) and the groundwater monitoring program. The *Community Environmental Response Facilitation Act (CERFA) Report* (April 8, 1994), was used as a primary reference document.

---

[3] U.S. Army, Base Realignment and Closure Administrative Record, 2003 (http://www.fortordcleanup.com/adminrec/arsearch.asp)

Asbestos Containing Materials

Asbestos surveys were completed for 410 Abrams and Patton Park Housing Units, including some located on the subject parcels. Surveys show all 410 existing housing units surveyed contain friable and/or non-friable asbestos-containing material (ACM). Wastewater lift station buildings were not surveyed. The asbestos survey rated ACM-related hazards from 1 to 13. Ratings of 1 to 5 were assigned to recommend immediate repair. A rating of 1 was assigned when immediate total removal was recommended. A rating of 2 was given when immediate repair, short-term removal was recommended.

Two existing housing units located within the Marina Heights Specific Plan area (Unit 8416 and Unit 8452) were found to contain friable and non-friable ACM, and were assigned a rating of 1 (immediate total removal recommended). Unit 8416 had pipe-fitting insulation with asbestos. Unit 8452 had asbestos in the laundry room and furnace jackets. Twenty housing units within the Marina Heights Specific Plan area were found to contain friable and non-friable ACM, duct tape and sheet floor mastic, and rated 2 (immediate repair, short-term removal recommended). Remaining housing units were found to contain friable and/or non-friable ACM in fair to good condition rated 9 to 13.

In the Findings of Suitability to Transfer report for the site, the Army states that they do not intend to remove ACM in any of the buildings, that inspection and abatement of the ACM present in the buildings is the responsibility of the owner, and that if the units were to remain and be used for residential purposes, prior to occupancy, the twenty-two units with ACM rated 1 through 5 should be remediated (restrictions were to be included in the deed). Potential exposure to asbestos during demolition is significant even for units with ACM ratings greater than 5. Abrams Park housing units built on top of Landfill Cell A were already demolished to allow for landfill excavation.

Lead-Based Paint

Lead-based paint surveys were completed by the Army in both the Patton Park and Abrams Park housing areas. The first survey, conducted from November 1993 through March 1994, included the sampling of interior and exterior surfaces (e.g. walls, doorframes, baseboards, windowsills, downspouts, etc.) from 150 randomly selected housing units in Patton Park and 50 units in Abrams Park. One hundred and twenty five of the one hundred and fifty Patton Park units tested positive for lead. None of the Abrams Park units tested positive for lead.

Further testing was completed in Patton Park as part of the December 2000 lead based paint (LBP) risk assessment. Wipe and paint chip samples were collected from the interior of 148 randomly selected Patton Park housing units. Several of the windowsill and floor wipe samples had concentrations of lead dust exceeding allowable levels for those surfaces. Paint chip samples were also collected from locations of paint deterioration. These results corroborate the 1993 through 1994 survey and confirm the presence of lead based paint in Patton Park housing units. HUD guidance requires treatment, including surface cleaning, and lead stabilization of deteriorated LBP surfaces, pending abatement. A lead control or management program is required to minimize lead exposure.

Additionally, 479 composite soil samples within the Patton Park housing area were collected using random sampling protocol and tested for lead. The samples were collected from house drip lines, yards and playgrounds. With the exception of two mid-yard samples, none of the lead levels exceeded the U.S. Environmental Protection Agency (EPA), U.S. Department of Housing and Urban Development (HUD), or State of California lead criteria. The two mid-yard samples had lead concentrations exceeding the State of California's allowable lead limit of 1,000 mg/kg for lead in non-play areas. No soil in the Abrams Park housing area was tested for lead.

Results show the use of lead based paint was phased out between the construction of the Patton Park housing units and the Abrams Park housing units. Lead-based paint remains a potential hazard in the Patton Park housing area. There is a significant risk of exposure and dust migration during proposed demolition. Significant lead concentrations could remain in the environment for many years without suitable mitigations.

Radiological

According to the Findings of Suitability for Early Transfer (FOSET) Report, no radiological surveys have been conducted within the buildings currently standing within the Marina Heights Specific Plan area because no radioactive materials were reportedly used or stored in buildings within the Abrams Park and Patton Park housing units. No radon was detected in any of the buildings located on the subject parcels as part of a radon monitoring program completed in 1994 (*Findings of Suitability for Early Transfer with a CERCLA 120(h)(3) Covenant Deferral Housing Areas and Former Garrison Parcels, December 2001).*

Ordnance and Explosives (OE)

An Ordnance and Explosives (OE) site (designated as OE 13A) underlies a portion of the Abrams "B" housing area which is located within Parcel E 4.3.2.1. A more detailed description of OE 13A is presented in the section titled Abrams "B" Parcel (Parcel E4.3.2.1 and OE Site 13A), below. Ordnance and Explosives sites in the general vicinity that have been subject to individual remediation include OE Sites 1, 2, 6 and Site 39[4]. These sites were evaluated for sampling and removal actions, remediated, and finally evaluated as requiring no further action in 1998 and 1999. In the Findings of Suitability for Early Transfer (FOSET) Report the Army states "OE was used throughout the history of Fort Ord, the potential exists for OE to be present on the parcels. This notice will be included in the deed." An example of recently discovered ordnance and explosives comes from a letter written to the Environmental Protection Agency, dated November 27, 2002. This letter reported discovery of 20-mm ammunition at 1611 Chosin Court, located in the Abrams Park housing area. Although OE 13A was identified as a practice mortar range, it is believed that only practice mortar rounds (inert training devices) were used in that area.

Pesticides and Herbicides

Application of pesticides and herbicides was routine around the residential areas of Fort Ord, according to available pesticide application records dating from 1985. Records show the type of pesticide used, location and date of application. Pesticides used in residential areas of Fort Ord are listed below. Diazinon is the only pesticide that is no longer in use. All the other pesticides are considered safe for residential or outdoor use[5].

- Carbamates-methylcarbamates (Ficam, Baygon); carbaryl (Sevin); propoxur (Terminate)
- Chloropyfifos (Dursban, Empire)
- Diazinon
- Herbicides: glyphosphate (Round-up, Rodeo); 2-4D; Amitrole; sulfometuron methyl (Oust)
- Propetamphos (Safrotin)

[4] U.S. Army, Finding of Suitability to Transfer (FOST) Track 0 Parcels, Former Fort Ord, California, August 22, 2002.

[5] U.S. Army, Finding of Suitability for Early Transfer (FOSET) With a CERCLA 120 (h) (3) Covenant Deferral Housing Areas and Former Garrison Parcels, Former Fort Ord, California, December 1, 2001.

- Pyrethrum and synthetic Pyrethroids pyrethrin; phenothrin; resmethrin; cypermethrin (Demon), cyfluthrin (Tempo)

- Rodenticides: chlorophacinone; strychnine, brodificoum; zinc phosphide

- Thurgicide (Dipel)

Underground Storage Tanks

Underground storage tanks (UST) 4970.1, 6020.1, 6054.1, 6120.1, 6130.1 and 6225.1, associated with the sewage lift stations, were removed and closure granted by the Monterey County Department of Health. USTs 4970.1, 6020.1, 6054.1, and 6120.1 were granted closure in a letter dated April 6, 1994; UST 6130.1 and 6225.1 were granted closure in a letter dated December 13, 1995. According to Environmental Health Department Staff, the requirements for closure include testing of soils in the excavation pit of each UST for total petroleum hydrocarbons (TPH); Benzene, Toluene, EthylBenzene and Xylenes (BTEX); Diesel/Gasoline; Methyl-Tertiary Butyl Ether (MTBE); and heavy metals. Determination that concentrations of these contaminants were less than the action level ensured no further corrective action. The action level for most hydrocarbons in soils is 100 parts per million (ppm) according to Monterey County Environmental Health Department Staff (personal communication; March, 2003).

Aboveground Storage Tanks

USTs 6130.1 and 6225.1 were replaced with aboveground storage tanks (ASTs) 6130-B-1 and 6625. These tanks contain diesel fuel and are used to support generators at sewage lift stations. These ASTs were transferred by the Fort Ord Reuse Authority to Marina Coast Water District.

Solid Waste Management Units

The Operable Unit 2 (OU2) landfill is a solid waste management unit located across Imjin Road from the Marina Heights Specific Plan area. Cell A of the landfill (Parcels L 5.6.1 and L 5.6.2), was excavated, and all solid waste was removed from Cell A and deposited within the remainder of the landfill on the south side of Imjin Road between 1996 and 1998. A *Draft Final Interim Remedial Action Report Groundwater Remedy, Operable Unit 2, Former Fort Ord* report, dated September 2002 (Draft OU2 Groundwater Remedy, 2002), was reviewed for this report that documents the closure and remediation status of OU2. The *Draft Final Five-Year Review Report, First Five Year Review Report for Fort Ord Superfund Site, Monterey, California*

(August 23, 2002) concluded that Cell A appears revegetated with no sign of erosion. During a site visit on January 8, 2003, it was noted that erosion control netting had been placed over small portions of the excavated Cell A. The report does document erosion of the Cell F liner due to animal burrowing that is scheduled for repair in 2003. In addition to groundwater monitoring, gas monitoring is being conducted along the perimeter of the landfill. A pilot test is in progress to reduce the volume of landfill gas at the property line of Cell F to meet regulatory standards. Portions of the Marina Heights Specific Plan area are located within 1,000 feet of the existing landfill, and methane concentrations in excess of the regulatory limit of 5 percent by volume have been detected at the landfill boundary. The Department of Toxic Substances Control has been advised by the California Integrated Waste Management Board that given this proximity, there is a potential concern for gas accumulation within structures located less than 1,000 feet from the landfill boundary. The California Code of Regulations, Title 27, section 21190 covers landfill regulations. A detailed discussion of current air and groundwater monitoring efforts related to Landfill Operable Unit 2 is presented below.

Summary of Compliance

The subject parcels are contained within CERFA parcels 202, 128 and CERFA disqualified parcel 4. The State Department of Toxic Substances Control and US EPA issued letters of concurrence (dated April 18 and 19, 1994, respectively) identifying CERFA Qualified parcel 128 as "uncontaminated". Parcel 4 was disqualified due to its location above the Fort Ord Landfill (OU2) groundwater contamination plume. According to the CERFA report, "CERFA disqualified parcels include any areas in which CERCLA hazardous substances or petroleum products have been disposed of and subsequently fully remediated". A pump and treatment system was installed to remediate the groundwater contaminant plume that is described in detail in a later section of this chapter. This includes an extensive system of monitoring, extraction and injection wells. The Army reserves the right of access to these wells, and the right to place additional wells as necessary to accomplish remediation goals that could require 30 years to achieve. The Baseline Risk Assessment for OU2 indicates no groundwater threat for occupants of buildings on the parcels, provided groundwater from the contaminated aquifer is not used as a source of drinking water. Well drilling and use of groundwater is prohibited. Tampering and interference with the wells and pipelines that run underneath Abrams Road and 12th Street are also prohibited. Well and pipeline locations are shown on **Figure 7.3**, above.

Water Pumping and Treatment Facility (Parcel E4.5)

The Water Pumping and Treatment Facility is still in the process of being transferred to the Marina Coast Water District through the Fort Ord Reuse Authority as of February 2003. The 3.94-acre parcel is not included in the Marina Heights Specific Plan area, but is surrounded by the Marina Heights Specific Plan area. The parcel contains four facilities identified as 4974-4976 and 4978. A water pump, water treatment building and ground storage tank were constructed between 1954 and 1956. These facilities were found to contain asbestos and lead-based paint according to the Army's survey. The fourth facility, another water pump, was not surveyed and it is not known if it contains asbestos or lead-based paint.

Abrams "B" Parcel

Approximately the southern two-thirds of this 46.2-acre parcel is overlaid by an Ordnance and Explosives Site (Site OE 13A), formerly a practice mortar range. It is also referred to as the Abrams "B" parcel. One hundred and ninety-two former military housing units contained in this parcel were recently renovated and are currently occupied. The OE site was identified as a practice mortar range, and it is believed that only practice mortar rounds (inert training devices) were used in this area. No evidence of ordnance and explosives was found during construction of Abrams "B" housing units. Initial sampling by an OE contractor in 1994 also found no evidence of ordnance and explosives. The Phase 1 Engineering Evaluation/Cost Analysis (EE/CA) required further testing and additional confirmatory sampling grids to be set up. Two OE scrap items (expended grenade fuse and an expended illumination signal) were found at one of the two sample grid locations that had not been previously surveyed or sampled that were subsequently added outside the eastern end of OE 13A. The site is scheduled for further evaluation in the OE Remedial Investigation/Feasibility Study (RI/FS).

The southwestern portion of site OE 13A overlies part of the Operable Unit 2 landfill. This area was excavated between 1996 and 1998 to permanently relocate landfill material buried in OU2, Cell A. A number of OE items associated with the landfill were removed during excavation. These excavated areas were backfilled with trench spoils determined to be non-contaminated and re-graded[6].

[6] U.S. Army, Finding of Suitability for Early Transfer (FOSET) With a CERCLA 120 (h) (3) Covenant Deferral Housing Areas and Former Garrison Parcels, Former Fort Ord, California, December 1, 2001.

Marina Park Offices and Excavated OU2 Cell A

These parcels formerly contained Cell A of the OU2 landfill (detailed discussion follows), a portion of OE 13A, and Installation Restoration Program (IRP) Site 26. The portion of OE 13A overlying these parcels was excavated. IRP Site 26, contained within Parcel L 5.6.1, was declared a "no action site" by the U.S. Army. Previously constructed Abrams Park housing units on parcel L 5.6.2 were demolished to allow for excavation and remediation of OU2. The Marina Heights Specific Plan indicates that housing is again planned for Parcel L 5.6.2.

IRP Site 26

Installation Restoration Program (IRP) Site 26 was identified as sewage pump stations located in buildings 5871 and 6143. According to the Findings of Suitability for Early Transfer Report for the site, an approval letter for no further remedial action of IRP sites 26, 28, and 29 was recorded on October 10, 1995 by the U.S. Army.

Landfill Operable Unit 2

Background of Operable Unit 2

Operable Unit 2 was used for residential and on-base waste disposal from 1956 until 1987, when interim closure of the facility began. The landfill was divided into 6 cells, designated A through F. The oldest cell, now designated Area A, was used from 1956 until 1966. It is the only cell located north of Imjin Road.

During landfill operations, trench disposal methods were typically used. Waste was placed in parallel trenches approximately 30 feet wide, 10 to 15 feet apart, and 10 to 30 feet deep. Waste was typically covered with approximately two feet of native dune sand excavated during trenching operations.

Since trenches were unlined and underlain by fine to coarse-grained sands, rapid infiltration promoted contamination of groundwater beneath the landfill. The legacy of this groundwater contamination continues to the present day. The two contaminated aquifers of interest within OU2 are the unconfined A-aquifer and the confined Upper 180-foot aquifer. Depth to groundwater in the A-aquifer is approximately 100 to 180 feet below ground surface (BGS), and flow is generally to the north. Flow deviates to the west and east from a north-trending groundwater divide that extends along the eastern portion of the OU2 landfills to the Marina Municipal Airport (formerly Fritzsche Army Airfield). Depth to groundwater in the upper 180-foot aquifer is between 110 and 220 feet and generally flows east toward the Salinas

Valley. Deeper aquifers remain unaffected, according to groundwater monitoring results.

Several documents, including the *Draft Final Interim Remedial Action Report Groundwater Remedy Operable Unit 2* detail closure, remediation, and groundwater treatment activities to date. Remedial action is being completed according to the Operable Unit 2 Record of Decision (OU2 ROD) signed in 1994 by the U.S. Army. Remediation of OU2 includes both landfill closure and groundwater restoration. Chemicals of concern in the groundwater and groundwater remediation goals are presented in **Table 7-3**. Three alternatives were chosen to execute and accomplish the basic remedial action objectives.

1. Placement of an engineered cover system over the landfills to restrict rainfall infiltration and prevent further leaching to groundwater.

2. Extraction, treatment and recharge of groundwater that contains volatile organic compounds (VOCs) from the upper aquifer at and downgradient of the landfills.

3. Extraction, treatment and recharge of groundwater from the 180 foot aquifer downgradient of the landfills as an interim action to prevent further migration of VOCs.

TABLE 7-3
CHEMICALS OF CONCERN AND GROUNDWATER REMEDIATION GOALS – OPERABLE UNIT 2 – GRUNDWATER REMEDY

Chemical of Concern (COC)	Federal MCL	State MCL	Aquifer Cleanup Level	Discharge Limit for Treated Water
Benzene	5.0	1.0	1.0	0.5
Carbon Tetrachloride	5.0	0.5	0.5	0.5
Chloroform	100	-	2.0	0.5
1, 1-Dichloroethane	-	5.0	5.0	0.5
1,2-Dichloroethane	5.0	0.5	0.5	0.5
cis-1,2-Dichloroethene	70	6.0	6.0	0.5
1,2-Dichloropropane	5.0	-	1.0	0.5
Methylene Chloride	5.0	-	5.0	0.5
Tetrachloroethene	5.0	5.0	3.0	0.5
Trichloroethene	5.0	5.0	5.0	0.5
Vinyl Chloride	2.0	0.5	0.1	0.1

Subsequently, several explanations of significant difference (ESD) reports clarified and amended proposed remedial actions outlined in the original OU2 ROD in 1995, 1996 and 1997.

The original OU2 ROD plan was for all six cells to be covered with an engineered cover system or cap with some excavation on the perimeter of the northern portion of the landfill. Subsequent evaluations indicated that all of Area A and some perimeter areas of the main landfill should be removed and consolidated into the main landfill south of Imjin Road. The revised approach allowed clean spoils excavated from Area A to be used as foundation cap and general fill for the other cells. It also consolidated landfill waste and eliminated the need for direct monitoring and maintenance in an area planned for future residential development. This modification to the original ROD was addressed in the Army's 1996 ESD. The *Remedial Action Work Plan, Operable Unit 2 Landfill Closure*[7] presented the revised remedial action plan. This modification has expedited transferal of land and development proposals.

Landfill Closure

Remedial action for Cell A (the former landfill parcel adjacent to the Marina Heights Specific Plan area) was conducted from 1996 to 1998. Excavated refuse and impacted soil from Area A was utilized as general fill in Areas B, C, D, and F. Remedial Action completed at Area A is described in the *Draft Final Remedial Action Confirmation Report, Area A, Operable Unit 2 Landfills*[8]. No further remedial actions requiring post-closure operation or maintenance of Area A is deemed necessary, according to the report. Construction of engineered cover for landfill cells south of Imjin Road was completed from 1997 to 1998, except for Area E. Area E was closed in December, 2002. Operation and maintenance procedures for the OU2 Landfill are documented in the *Draft Final Post-Closure Operation and Maintenance Plan, Areas B through F (Landfill O & M Plan)*[9]. Procedures include monitoring for landfill gas (LFG) and operation of a landfill gas mitigation system adjacent to Area F. Extraction and treatment of LFG on the eastern perimeter of Area F is continuing and is described in the *Air Monitoring and Landfill Gas Remediation Efforts* section of this chapter, below.

Post-Remediation Health Hazard

The Army conducted a post-remediation screening for Area A to evaluate potential risks to human health from chemicals remaining in the soil. Chemicals of Potential Concern (COPC) were identified as detected chemicals not normally detected, or with site concentrations exceeding background concentrations. Maximum chemical concentrations of the selected chemicals at the site were compared to Environmental Protection Agency (EPA) Region IX Preliminary Remediation Goals (PRGS) for residential receptors.

---

[7] IT Corporation, Remedial Action Work Plan, Operable Unit 2 Landfill Closure, 1996.
[8] IT Corporation, Draft Final Remedial Action Confirmation Report, Area A, Operable Unit 2 Landfills, 2001.
[9] IT Corporation, Draft Final Post-Closure Operation and Maintenance Plan, Areas B through F (Landfill O & M Plan), 2000.

Maximum chemical concentration calculations were based on soil screening levels (SSLs). According to the EPA's *Soil Screening Guidance User's Guide*, SSLs are risk-based concentrations derived from equations combining exposure information assumptions with EPA toxicity data, and are designed to be protective of people in a residential setting. Chemical concentrations at the site were calculated and summed to derive potential cancer and non-cancer health risks (the equations used to calculate risks can be found in the EPA's *Soil Screening Guidance User's Guide*). Risk calculations are based on a one-in-a-million (10^{-6}) individual excess cancer risk for carcinogens and a hazard quotient (HQ) of 1 for non-carcinogens.

Based on their calculations, the Army concluded non-cancerous health effects resulting from human exposure to soil at the former OU2 Cell A is "not expected", and the potential cancer risk is within the EPA's risk management range of 10^{-6} (one extra cancer case out of a million) to 10^{-4} (one extra cancer case out of 10,000). They also determined that the risk factor assessed by the ratio sum was more influenced by maximum PCB detections from the utility excavation along Abrams Drive, than from remnant soil after excavation in Cell A.

Residual risks were also calculated based on average concentrations of chemicals, rather than maximum concentrations. According to these calculations, non-cancerous health effects at Area A due to residential exposure were determined unlikely, Cumulative estimated cancer risk of 5×10^{-7} (one extra cancer case out of 2 million) was lower than the EPA's risk management range of 10^{-6} to 10^{-4}. Based on these findings, the Army evaluates the incremental cancer risk to future residents as a result of soil exposure at Area A to be very low (i.e., low enough to recommend no restriction on land use for soil at Area A).

These results do not calculate exposure from chemicals in the landfill cells south of Imjin Road. These cells require groundwater and air monitoring due to their proximity to the Marina Heights Specific Plan area. The next section of this report documents the existing OU2 groundwater plume treatment system, and is followed by a discussion of current air monitoring and landfill gas extraction efforts.

Groundwater Treatment

The Operable Unit 2 Groundwater Treatment System began in October 1995 with 15 extraction wells, 3 recharge wells, 5 infiltration wells and a groundwater treatment plant (GWTP). Aquifer cleanup levels and discharge limits for treated water are presented in **Table 7-3**, above. Treated water is either injected directly into the contaminated aquifer to recharge the aquifer, or is conveyed to infiltration wells that inject treated water into the vadose zone above the contaminated aquifer. The goal is for treated water to continuously dilute

contaminated water until aquifer levels are met. Treatment commenced on October 23, 1995 and initially operated at a capacity between 400 and 450 gallons per minute (gpm). Primary treatment was by granular activated carbon (GAC), while secondary treatment for removal of vinyl chloride and methylene chloride was provided by ultraviolet oxidation. The UV-oxidation system was discontinued after May 20, 1998. At that time, the groundwater plume model indicated inadequate capture, and seven new extraction wells were constructed to treat groundwater further east and south of the existing wells. Groundwater treatment plant capacity was also increased. In 1999, a new pipeline was installed to convey a portion of the treated groundwater from the OU2 GWTP to the Sites 2 and 12 GWTP, which is located in another part of the former Fort Ord. Combined groundwater for the two treatment systems is discharged to the aquifer at Site 2.

Currently there are 22 extraction wells, 2 infiltration galleries and 3 back-up injection wells, a recharge pipeline to the Sites 2 and 12 GWTP and the OU2 GWTP. The OU2 GWTP contains four GAC adsorption vessels, two backwash tanks, one effluent tank, ancillary pumps, piping, electrical power, instrument control, and a SCADA system. Average treatment capacity is about 1,100 gpm, with instantaneous flow capacity exceeding 1,400 gpm. The expanded treatment system began operation in April 2001, and appears to be operating successfully.

The infrastructure for the groundwater treatment system impacts the proposed development within the Marina Heights Specific Plan area since it crosses the proposed development area. Eight of the extraction wells (EW-OU2-7, 8, 9, 10, 11, 12, 13, and EW-OU2-02-180) were observed on January 8th, 2003, in yards and medians adjacent to existing Abrams Park housing units along the north margin of Abrams Road. Figure 3-4 of the *Draft Final Interim Remedial Action Report Groundwater Remedy, Operable Unit 2,* shows the buried extraction pipeline running along the north side of Abrams Road from the northeast corner of Cell A to the 12th Street Intersection. The pipeline continues along the north side of 12th street to the OU2 Groundwater Treatment Plant, located between 3rd Avenue and 4th Avenue. The injection pipeline conveys treated water in the opposite direction and continues beneath Abrams Road, beyond the northeast corner of Cell A, to injection well (IW-OU2-O3-180), near the intersection of Abrams Road and MacArthur Drive.

Groundwater Treatment Results and Future Actions

Statistical evaluations of contaminant concentrations from OU2 treatment system influent samples indicate contaminant concentrations are gradually decreasing over time. The total mass of the Chemicals of Concern (COC) in the groundwater is being reduced in accordance with the objectives stated in the OU2 Record of Decision. In seven years of operation, the

average concentration of trichloroethylene (TCE) in influent to the GWTP has been reduced from a peak concentration of approximately 20 parts per billion (ppb) to 10 ppb by 2002.

The Army is scheduled to continue operating the system until the aquifer cleanup levels (ACL) are achieved. It was estimated that this could take up to 30 years from initiation in 1995, depending on hydrogeological and operational parameters. The Community Environmental Response Facilitation Act requires a formal review of the remedy every five years. The first review was completed last year, and concluded the operation is successful.

The time frame for the proposed development of the Marina Heights Specific Plan area overlaps the Army's treatment schedule. For this reason, a system of institutional controls has been developed to prevent public exposure to contaminated groundwater at the former Fort Ord, a potentially significant impact. Monterey County Ordinance 04011 prohibits the installation of public water wells in areas of recognized groundwater contamination, including the Marina Heights Specific Plan area. Additionally, the Army places deed restrictions prohibiting well installation in deeds and state land use covenants, following the form of the Fritzsche Army Air Field Covenant to Restrict Use of Property (CRUP) during the Base Realignment and Closure (BRAC) property transfer process. The well installation restrictions are included in the deed to the City of Marina, and must be honored in the proposed development of the Marina Heights Specific Plan area. Additional clauses placed in deeds during the property transfer process include covenants providing the Army with continued access to the property to perform remediation system operation, maintenance and monitoring. This includes access to the extraction and injection pipelines and wells that run underneath Abrams Road, and that are located within the Marina Heights Specific Plan area. The Army also plans to verify institutional controls precluding groundwater well installation periodically.

Current Contamination Levels and Health Risks

The Specific Plan area includes parcels transferred for civilian use to the City of Marina after a Findings of Suitability to Transfer (FOST) was completed in December of 2001. At that time, it was determined that proposed land use did not change sufficiently to alter the exposure assumptions that were used during the original risk assessment and development of Aquifer Cleanup Levels (ACLs). One of those assumptions is based on the baseline risk assessment for the OU2 groundwater plume demonstrating that the groundwater plume does not pose a threat to occupants of the buildings on the property, provided groundwater from the contaminated aquifer is not used as a drinking source. Currently, the groundwater remedy is functioning as intended and achieving performance goals of the original conceptual design. Treatment is scheduled to proceed until ACLs are met.

Aquifer cleanup levels for the COPCs were identified in the OU2 Record of Decision and are based on state or federal Maximum Contaminant Levels (MCLs) for Drinking Water. Additional chemicals, including chloroform, 1, 2-dichloropropane, tetrachloroethylene, and vinyl chloride were assigned ACLs based on risk calculations for each chemical that estimated a combined cancer risk of 6×10^{-5} (Dames and Moore, 1993). Testing results for Operable Unit 2 groundwater plume influent (extracted, untreated groundwater) that are summarized in AHTNA's Quarterly Groundwater Treatment Systems Operation Data Summary Report – July through September 2002 show that concentrations of the chemicals of concern in the influent are already below aquifer cleanup levels, with the exception of trichloroethylene. Selected state and federal MCLs have not changed since the original risk assessment, with the exception of vinyl chloride. The Army concludes that toxicity values for vinyl chloride are still within the parameters used for the original risk calculations. The *Draft Final Interim Remedial Action Report for the OU2 Groundwater Remedy* asserts the ACLs designated for OU2 remain protective of human health and the environment. The health risk assessment assumes cleanup proceeds without interference or disruption. This does not consider the potential for disruption or damage to the groundwater treatment system resulting in greater human exposure to chemicals of concern as a result of proposed development within the Marina Heights Specific Plan area, including proposed mass grading activities and trenching for new utilities.

Air Monitoring and Landfill Gas Remediation Efforts

Air monitoring efforts have focused on the capped Operable Unit 2 Landfill, located south of Imjin Road. The OU2 landfill represents a potentially significant hazard due to accumulation of landfill gas. Landfill gas (LFG) is produced through anaerobic decomposition by bacterial action of organic waste into simpler forms such as organic acids and, ultimately, methane and carbon dioxide. Methane is a potentially explosive gas that typically comprises about 55 percent of LFG. Smaller constituent landfill gases are hydrogen, ethane and volatile organic compounds (VOCs). These landfill gases are potentially explosive when mixed with air at concentrations between 5 and 15 percent by volume. Title 14 of the California Code of Regulations (CCR) and the California Integrated Waste Management Board (CIWMB) require methane gas concentrations not to exceed 5 percent by volume, the Lower Explosive Limit (LEL) at the landfill or alternate boundary. Regulations also require that trace gases must be controlled to prevent adverse acute and chronic exposure to toxic and carcinogenic compounds.

Ambient air monitoring at the landfill was completed in October 2000, November 2000, September 2001 and September 2002. A history of recent air monitoring that has led to development of the current gas extraction and treatment system is documented in the *Draft*

Final Interim Remedial Action Report Groundwater Remedy Operable Unit 2. The alternate boundary for the OU2 landfill was initially designated as the perimeter fence line, and vents were installed through the cover of the OU2 landfill at 21 locations along the center ridge of each cell. Twenty seven probes were initially monitored at 17 locations around cells B through F. Determination of compliance with the California Integrated Waste Management Board (CIWMB) regulations for Solid Waste Landfills, Title 14, California Code of Regulations, Chapter 3, Article 7.8 is based on monitoring of the probes that measure LFG concentrations. A portable LFG analyzer was also used to measure methane, oxygen, carbon dioxide, balance gas (probably nitrogen), static pressure and the lower explosive limit at each of the 27 perimeter probes and 21 passive vents. Results show methane concentrations from June, 2000, measurements generally exceeded the 5 percent CIWMB standards, but that volatile organic contents were mostly undetectable and sporadic except for vinyl chloride, detected in 23 of 27 probes.

Due to high methane concentrations, another study was conducted in August, 2000, that focused on the eastern side of Cell F, which is closest to occupied housing units. Results showed methane was detectable in subsurface probes extending about 70 feet from the fence line along the east side of Cell F. Further testing corroborates methane exceeding the CIWMB standard within the fence line. However, additional probes outside the fence line establish subsurface methane concentrations to be less than the 5 percent standard, except along the eastern side of Cell F (which is the cell furthest from the Marina Heights Specific Plan area).

A pilot LFG and extraction system, originally installed in 2001, is intended to reduce LFG concentrations.

According to the *Draft Final Interim Remedial Action Report Groundwater Remedy Operable Unit 2,* the extraction system consists of a line of extraction wells outside the limits of the geomembrane cover. These wells span a length of approximately 1,000 linear feet at a spacing of 100 feet between wells. Two blowers, two 2,000-pound granulated activated carbon (GAC) units in series, a portable generator, ancillary piping, valves and instrumentation comprise the rest of the system. After initial operation, the system was modified by including potassium permanganate to treat vinyl chloride. The potassium permanganate is hydrated to about 15 percent moisture to form potassium hydroxide, manganese tetraoxide, and manganese dioxide that neutralizes the vinyl chloride. The treatment system currently operates along the north side of Area E, following construction of a pipeline across Area F. The two 2,000- pound GAC units have been replaced with four 300-pound units that were restarted in May, 2002, and continue to operate today.

The Five-Year Superfund Review Report (August 23, 2002) states that LFG concentrations exceed regulatory standards along the eastern boundary of Cell F, and migration of landfill gas is being addressed by a LFG extraction and treatment system pilot study, currently in progress. Ambient air monitoring near the closest residence (368 feet from the landfill perimeter) has been initiated. According to the five-year superfund review, the treatment system appears to be successfully treating the LFG problem.

The latest air monitoring report from Shaw Environmental and Infrastructure Incorporated (January 30, 2003) documents the status of the landfill gas extraction and treatment system, and also ambient air monitoring results completed from September 14 to September 15, 2002. Sampling stations were located at downwind and upwind locations, with downwind sampling stations located between 150 and 700 feet from the eastern perimeter of Area F. One of the upwind stations was located near the intersection of 12th Street and 4th Avenue, immediately west of the Specific Plan area. Concentrations of chemicals of concern at each of these stations were found to be less than the permissible exposure limit, but eight compounds were found at concentrations exceeding the preliminary remediation goals (PRGs).

- 1,3-Butadiene exceeded the PRG at Station K with a concentration of 0.037 parts per billion by volume (ppbv), 12 times the PRG (it was not found in other downwind stations).

- 1,4 Dicholorobenzene exceeded the PRG at Station M with a concentration of 0.051 ppbv, 1.02 times the PRG (it was also found at Station P with a concentration of 0.014 ppbv, well below the PRG).

- 1,4-dioxane exceeded the PRG at Station M with a concentration of 3.0 ppbv, 18 times the PRG (it was also found in background samples with a maximum concentration of 0.75 ppbv).

- Carbon tetrachloride exceeded PRG at all 7 stations, with a maximum concentration of 0.11 ppbv, 6 times the PRG.

- Benzene exceeded the PRG at all 7 stations, with a maximum concentration of 0.28 ppbv, 4 times the PRG.

- Chloromethane exceeded the PRG at all 7 stations, with a maximum concentration of 1.0 ppbv, 2 times the PRG.

- 1,2-dichloroethane exceeded the PRG at Station K and Station M, with a maximum concentration of 0.02 ppbv, 1.1 times the PRG (it was also found at the background sample stations with a maximum concentration of 0.021 ppbv).

- Tetrachloroethene was found above the PRG in one background sample, but not in any of the downwind samples.

Air monitoring reports represent a "snapshot" of existing conditions, and are prepared quarterly.

Cancer risks were found to be slightly higher than the cancer risk of 1×10^{-6} considered acceptable by the EPA and DTSC. According to the report, VOC's measured in ambient air southeast of the landfill could potentially pose a risk to nearby residents assuming they are exposed for durations between 6 and 30 years. Closure of Area E in December of 2002, following the latest sampling, has likely further diminished concentrations, and the landfill gas extraction and treatment system appears to be working in reducing concentrations of hazardous gas, especially methane. Vents opened in the center of Cells B, C, D, E and F are now covered by geomembrane with no significant increase in gas pressure. The LFG extraction and treatment system is scheduled to continue operation until preliminary remediation goals are met and assessed health risks fall below EPA standards.

B. IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Implementation of the Specific Plan would have a significant impact if it were to result in:

- The creation of a significant hazard to the public or the environment through the routine transportation, use or disposal of hazardous materials;

- The creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Hazardous emissions within one-quarter mile of an existing or proposed school;

- The handling of hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school;

- Development located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (if such development would create a significant hazard to the public or the environment);

- Development located in an area covered by an airport land use plan (or, where such a plan has not been adopted, within two miles of a public airport or public use airport), if it would result in a safety hazard for people residing or working in the project area;

- Development within the vicinity of a private airstrip, if it would result in a safety hazard for people residing or working in the project area;

- Impairment or physical interference with the implementation of an adopted emergency response plan;

- Impairment or physical interference with the implementation of an adopted emergency evacuation plan; or

- Exposure of people or structures to significant risk of loss, injury or death involving wildland fires (including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands).

ROUTINE TRANSPORTATION, USE OR DISPOSAL OF HAZARDOUS MATERIALS

- **Potential Impact 7.1: Transportation of Hazardous Demolition Debris.** Existing housing units within the Specific Plan area are known to contain potentially hazardous materials such as lead-based paint and asbestos. During the demolition of structures and removal of potentially contaminated debris associated with lead and asbestos found during surveys, contaminated materials would be transported from the Specific Plan area for disposal. The possibility of exposure to hazardous demolition debris during transportation would represent a potentially **significant** environmental impact.

The California Division of Occupational Safety and Health (DOSH) and the Federal Occupational Safety and Health Administration (OSHA) define safe exposure thresholds for all construction work where an employee may be occupationally exposed to lead, including lead-containing paints and coatings. Regulations include procedures to be followed based on anticipated exposure resulting from construction activities performed. Since demolition procedures in the Specific Plan area may involve potential worker exposure above the DOSH action level for lead, the requirements of Title 8, California Code of Regulations, Section 1532.1 (T8 CCR 1532.1) must be followed.

RECOMMENDED MITIGATION MEASURE

Mitigation Measure 7.1: Develop and Implement a Demolition Plan and Removal Action Workplan. Lead and asbestos surveys should be reviewed/performed and a Demolition Plan for safe demolition of existing structures at the Specific Plan area should be prepared. All transportation of hazardous or contaminated materials from the Specific Plan area should be performed in accordance with an approved Demolition Plan and Removal Action Workplan. The Demolition Plan should address both on-site worker protection and off-site resident protection from both chemical and physical hazards. All contaminated building materials should be tested for contaminant concentrations and should be disposed of at appropriate licensed landfill facilities. Prior to whole-scale demolition, hazardous building materials such as peeling, chipping and friable lead-based paint and asbestos containing building materials should be removed in accordance with all applicable guidelines, laws and ordinances. The Demolition Plan should include a program of air monitoring for dust particulates and attached contaminants. Dust control and suspension of work during dry windy days should be addressed in the Demolition Plan. Prior to obtaining a demolition permit from the Monterey Bay Unified Air Pollution Control District (MBUAPCD), an asbestos demolition survey should be conducted in accordance with the requirements of the MBUAPCD.

For the impact of flaking and peeling lead paint the requirements of Title 8, California Code of Regulations, Section 1532.1 (T8 CCR 1532.1) must be followed. These requirements include (but are not limited to) the following:

- Loose and peeling lead-containing paint should be removed prior to building demolition. Workers conducting removal of lead paint must receive training in accordance with T8 CCR 1532.1.

- The lead paint removal project should be designed by a DHS certified lead project designer, project monitor or supervisor,

- Workers conducting removal of lead paint must be certified by DHS in accordance with T8 CCR 1532.1,

- Workers that may be exposed above the Action Level must have blood lead levels tested prior to commencement of lead work and at least quarterly thereafter for the duration of the project. Workers that are terminated from the project should have their blood lead levels tested within 24 hours of termination,

- A written exposure assessment must be prepared in accordance with T8 CCR 1532.1,

- Any amount of lead waste generated from painted building components must be characterized for proper disposal in accordance with Title 22, Section 66261.24.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of this mitigation measure would reduce the potential impact associated with the transportation of demolition waste to a level of *less than significant.*

ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS TO THE ENVIRONMENT

- **Potential Impact 7.2: Possible Exposure to Hazardous Materials During Demolition.** Demolition of existing structures in the Specific Plan area could result in exposure to hazardous materials such as lead-based paint and asbestos, which would represent a potentially **significant** environmental impact.

RECOMMENDED MITIGATION MEASURE

Mitigation Measure 7.2: Develop and Implement a Demolition Plan and Removal Action Workplan. (see **Mitigation Measure 7.1**, above.)

Demolition of buildings must be completed so as to minimize dust and protect worker's health. Debris should be removed and construction sites cleaned before new construction proceeds.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of this mitigation measure would reduce the potential impact associated with possible exposure to hazardous materials during demolition to a level of *less than significant.*

- **Potential Impact 7.3: Possible Exposure to Contaminated Groundwater.** Contaminated groundwater exists beneath the Specific Plan area. Eight extraction wells penetrate the contaminated aquifer and convey contaminated water through pipes underneath Abrams Road and 12th Street to a Groundwater Treatment Plant. The proposed development of the Specific Plan area would include mass grading in the immediate vicinity of wells and pipelines that routinely convey contaminated groundwater. This could increase the risk of accidental damage or destruction to wells and

pipelines, and could result in exposure to contaminated groundwater. Residences are also proposed in the immediate vicinity of wells that penetrate the contaminated aquifer, which could increase the risk of tampering with the groundwater conveyance system and unauthorized penetration of the contaminated aquifer that could result in exposure to contaminated groundwater. The risk of exposure to contaminated groundwater within the Marina Heights Specific Plan area represents a potentially **significant** environmental impact.

RECOMMENDED MITIGATION MEASURE

Mitigation Measure 7.3: Development and Enforcement of Groundwater Conveyance Access Restrictions and Setbacks. Restrictions should include (but need not be limited to):

- Full compliance with existing deed restrictions providing for the Army's right to access for groundwater remediation system operation, maintenance, monitoring, and with Monterey County Code requirements which prohibit the installation of new unauthorized wells.

- Prior to construction, pipelines and monitoring wells conveying contaminated groundwater must be located and marked.

- During construction, a setback of 10 feet must be identified from all existing or relocated wells and pipelines, and no heavy equipment operations or grading should take place within the 10-foot setback except as may be required in connection with the relocation of existing pipelines and as coordinated with the U.S. Army.

- All wells and pipelines must be monitored during construction, and a report must be submitted at the end of each day documenting any violations.

- Following construction each well that is not located within a street must be completely enclosed within permanent low-level wire mesh fencing on all sides and the top. A locked gate should be the only access.

- Permanent markers should be placed that locate the buried groundwater treatment pipeline. The location of new utility trenches should be coordinated to minimize interference with existing or relocated buried pipelines.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of this mitigation measure would reduce the potential impact associated with possible exposure to contaminated groundwater to a level of *less than significant*.

- **Potential Impact 7.4: Possible Exposure to Landfill Gas.** The closed Operable Unit 2 landfill is located as near as 250 feet from the Specific Plan area, and the landfill gas treatment system is approximately one-quarter mile from the corner of the proposed school/park site adjacent to the Specific Plan area, and 1,300 to 1,400 feet from the southeast portion of the Specific Plan area. High concentrations of landfill gas have been found at the landfill boundary on the opposite side of Imjin Road from the Specific Plan area, including concentrations of methane that are potentially explosive. While the concentrations have been reduced, the close proximity of the site to the recently closed landfill warrants precautionary mitigations. The covering of landfill gas vents and probes monitoring gas concentrations at the landfill perimeter are some of the mitigations already in place that would warn residents of any dangerous releases, However, the continued risk of exposure represents a potentially **significant** environmental impact.

RECOMMENDED MITIGATION MEASURE

Mitigation Measure 7.4: On-Going Mitigation/Monitoring/Evacuation Planning. Although on-going monitoring and mitigation associated with the former landfill is not the responsibility of the City of Marina or the Project Applicant, the following measures should continue to be pursued by the U.S. Army (responsible for landfill cleanup under the terms of the Federal Facilities Agreement for the former Fort Ord) to reduce risk associated with possible exposure to landfill gas:

- Maintain the current landfill gas extraction and treatment system.
- Continue to monitor landfill gas concentrations at the boundary of the OU2 Landfill.
- An evacuation plan must be prepared in the event of a fire or explosion at the landfill that is incorporated into the City of Marina's Standardized Emergency Management System Multi-Hazard Functional Plan.
- Ensure that the landfill boundary is fenced with locked gates.

- Ensure that all buried gas pipelines are permanently marked and that exposed pipelines and wells are fenced with locked gates.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of this mitigation measure would reduce the potential impact associated with possible exposure to landfill gas to a level of *less than significant.*

HAZARDOUS EMISSIONS WITHIN ONE-QUARTER MILE OF AN EXISTING SCHOOL

- **Potential Impact 7.5: Potential Hazardous Emissions within One-Quarter Mile of Crumpton Elementary School.** The Monterey Peninsula Unified School District operates four schools within one mile of the Marina Heights Specific Plan area. The closest is Crumpton Elementary School, located 0.24 miles from the edge of the Specific Plan area at 460 Carmel Avenue. During the demolition of existing structures at the Specific Plan area, potentially hazardous materials (including asbestos and lead) will be removed from the site and could be released to the atmosphere if not handled properly or in the event of an accidental spill during transportation, affecting Crumpton Elementary School. This would represent a potentially **significant** environmental impact.

RECOMMENDED MITIGATION MEASURE

Mitigation Measure 7.5: Develop and Implement a Demolition Plan and Removal Action Workplan. (see **Mitigation Measure 7.1**, above) These plans should address approved routes, truck cleaning and inspection, and contingencies for addressing spills and accidents.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of this mitigation measure would reduce the impact of hazardous material handling within one-quarter mile of an existing school site to a level of *less than significant.*

HAZARDOUS EMISSIONS WITHIN ONE-QUARTER MILE OF A POSSIBLE SCHOOL SITE

The parcel (L 5.6.2) that formerly contained a portion of Cell A of Landfill Operable Unit 2 adjacent to the Specific Plan area has been identified as a future park/possible school site in the Marina Heights Specific Plan. If a school is constructed over the parcel, it would be within 1,000 feet of Cell B and portions of Cells C and D of the capped landfill south of Imjin Road.

The corner of the proposed park/school site is also located approximately one-quarter mile from the active Operable Unit 2 landfill gas treatment plant. This plant is self-contained, but an accidental release would affect the possible school site. Under California law, extensive environmental evaluation of the proposed school site would be required prior to any decision by the Monterey Peninsula Unified School District to accept the proposed site as suitable for a new school.

HANDLING OF HAZARDOUS WASTES WITHIN ONE-QUARTER MILE OF A SCHOOL

Crumpton Elementary School is located one-quarter mile from the edge of the proposed development at 460 Carmel Avenue. As indicated above, during the demolition of existing structures at the Marina Heights Specific Plan area, potentially hazardous materials will be removed from the site and could be released to the environment, potentially affecting Crumpton Elementary School (see **Potential Impact 7.5** and **Mitigation Measure 7.5**, above).

Additionally, the parcel that formerly contained Cell A of Landfill Operable Unit 2 has been identified as a possible future park/school site in the Marina Heights Specific Plan. If a school is constructed over the parcel, it will be within 1,000 feet of Cell B and portions of Cells C and D of the capped landfill south of Imjin Road. Although the landfill is covered, leachate and gas lines will have to be maintained indefinitely and an accident would affect a school located across the street. Acquisition of property and construction of public school facilities is subject to separate environmental review pursuant to applicable requirements of the California Education Code and is not the subject of this Draft EIR.

DEVELOPMENT LOCATED ON A SITE WHICH IS INCLUDED ON A LIST OF HAZARDOUS MATERIALS SITES

- **Potential Impact 7.6: Development within a Hazardous Materials Site.** The entire area of the former Fort Ord has been designated is an EPA Superfund Site (CA7210020676, California Region IX). The 2002 *Draft Final Five-Year Review Report for Fort Ord Superfund Site, Monterey, California,* documents the current clean-up status of sites across the base. The superfund site most prominently affecting the Specific Plan area is Operable Unit 2. Remediation of the groundwater plumes associated with Operable Unit 2 and nearby Sites 2 and 12 was initially estimated to take as long as 30 years. Given that treatment of the Operable Unit 2 groundwater plume commenced in 1995, remediation could last until 2025. The phasing of anticipated development within the Specific Plan area, therefore, overlaps the schedule for the on-going site remediation that affects the Specific Plan area. Human health risk has been assessed to be minimal in numerous

reports, and the Monterey County Environmental Health Department has given a clean bill of health to parcels proposed for development, but only with numerous restrictions that are included in the deed of the transferred property. These restrictions are contingent upon the lifetime of expected treatment and remediation efforts. Any failure to comply with established restrictions, or failure to meet treatment and remediation objectives that could adversely affect future development in the Marina Heights Specific Plan area would represent a potentially **significant** environmental impact.

RECOMMENDED MITIGATION MEASURE

Mitigation Measure 7.6: Compliance with Deed Restrictions. The development of mitigations shall be in accordance with deed restrictions. Individual property owners shall be notified of restrictions and the land use history of the site. Limitations on deed restrictions as a result of the success of treatment and remediation shall be reviewed periodically by the U.S. Army. Treatment and remediation reports shall continue to be accessible to the public.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of this mitigation measure would reduce the impact associated with development in an identified hazardous materials site to a level of *less than significant.*

DEVELOPMENT LOCATED IN AN AREA COVERED BY AN AIRPORT LAND USE PLAN

There are three airports within 10 miles of the Marina Heights Specific Plan area. These are the Marina Peninsula Airport, Monterey Jet Center, and the Marina Municipal Airport (formally Fritzsche Army Airfield). The comprehensive land use plan for the Marina Municipal Airport (located less than one mile northeast of the Specific Plan area) does not include the Specific Plan area.

DEVELOPMENT WITHIN THE VICINITY OF A PRIVATE AIRSTRIP

No private airstrip is identified within the vicinity of the Marina Heights Specific Plan area.

IMPAIRMENT OR PHYSICAL INTERFERENCE WITH THE IMPLEMENTATION OF AN ADOPTED EMERGENCY RESPONSE PLAN

The emergency response plan for the City of Marina (Standardized Emergency Management System Multi-Hazard Functional Plan, adopted in August 1999) designates two emergency

response centers: one at 211 Hillcrest Avenue and the other in Administrative Building 781 at the Marina Municipal Airport. Proposed development within the Marina Heights Specific Plan area should not impact operations at these sites, and overall implementation of the Specific Plan should not be affected as long as emergency access roads (including Reservation Road and Imjin Road) are designed to accommodate increased traffic resulting from development anticipated under the Specific Plan.

IMPAIRMENT OR PHYSICAL INTERFERENCE WITH THE IMPLEMENTATION OF AN ADOPTED EMERGENCY EVACUATION PLAN

The evacuation plan is included in the Standardized Emergency Management System Multi-Hazard Functional Plan for the City of Marina, adopted in August, 1999. This plan designates two emergency response centers: one at 211 Hillcrest Avenue and the other in Administrative Building 781 at the Marina Municipal Airport. Overall implementation of the Specific Plan should not be affected as long as evacuation routes (including Reservation Road and Imjin Road) are designed to accommodate increased traffic resulting from development anticipated under the Specific Plan.

EXPOSURE OF PEOPLE OR STRUCTURES TO SIGNIFICANT RISK OF LOSS, INJURY OR DEATH INVOLVING WILDLAND FIRES

The Marina Heights Specific Plan area is surrounded by development. Lack of wildland corridors adjacent to the Specific Plan area and limited vegetation indicates no potential impact associated with wildland fires.

(This page has been intentionally left blank.)

8

VISUAL QUALITY AND AESTHETICS

A. SETTING

The Specific Plan area is located on what was once the northern periphery of the former Fort Ord, with a fenced boundary physically separating the former military base from civilian residential development in the City of Marina. This physical barrier, and the abrupt transition from residential development within Marina to military installation, are evident in the surrounding land uses. The Specific Plan area is roughly bounded by Abrams Drive and MacArthur Drive to the east, the Abrams "B" housing area, Imjin Road and a portion of the former Fort Ord landfill to the south, 12th Street to the southwest, California Avenue to the northwest, and existing residential development to the north, beyond the boundary of the former Fort Ord.

The major portion of the Specific Plan area was used to support housing for military families. Within the Specific Plan area, 828 existing abandoned military housing units would be demolished to enable development proposed under the Specific Plan. A 28-acre portion of the former Fort Ord landfill adjacent to the Specific Plan area between Abrams Road and Imjin Road has been officially closed and excavated.

Pueblo del Mar is a neighborhood adjacent to the eastern boundary of the Specific Plan area. The 56 units of occupied, rehabilitated military housing are being used as transitional housing. Across the eastern boundary of the Specific Plan area lies Preston Park, an existing residential area of rehabilitated military housing units that are now market rate rental units.

Along the southern boundary of the Specific Plan area are two residential areas: one with 12 units of transitional housing operated by Interim, Inc., and the other identified as the Abrams "B" housing area, which supports a total of 194 rehabilitated former military housing units (192 occupied as residences and 2 used for support purposes).

Across Imjin Road and southwest of the Abrams "B" housing area is the site of the major portion of the former Fort Ord landfill, a small portion of which is still being actively used to support cleanup operations elsewhere within the landfill. To the northwest of the Specific Plan area, across California Avenue and north of the proposed University Villages area, is Cypress Knolls, a planned senior community currently in development.

Abutting the Specific Plan area to the north, beyond the boundary of the former Fort Ord, is an existing residential area consisting of California-style single-family homes dating from the late 1950's through the early 1990's, with most homes built during the 1960's and 1970's. A fence runs the entire length of the boundary and demarcates the northern edge of the Specific Plan area. A water tower is located just to the north of the Specific Plan area boundary at the end of Bayer Drive, near where the fence makes the 90-degree turn.

Also located within the Specific Plan area towards the westernmost end is a 2.94-acre parcel owned by the Marina Coast Water District that supports a water storage tank. This MCWD parcel is not part of the Specific Plan area, and is not addressed in the Specific Plan.

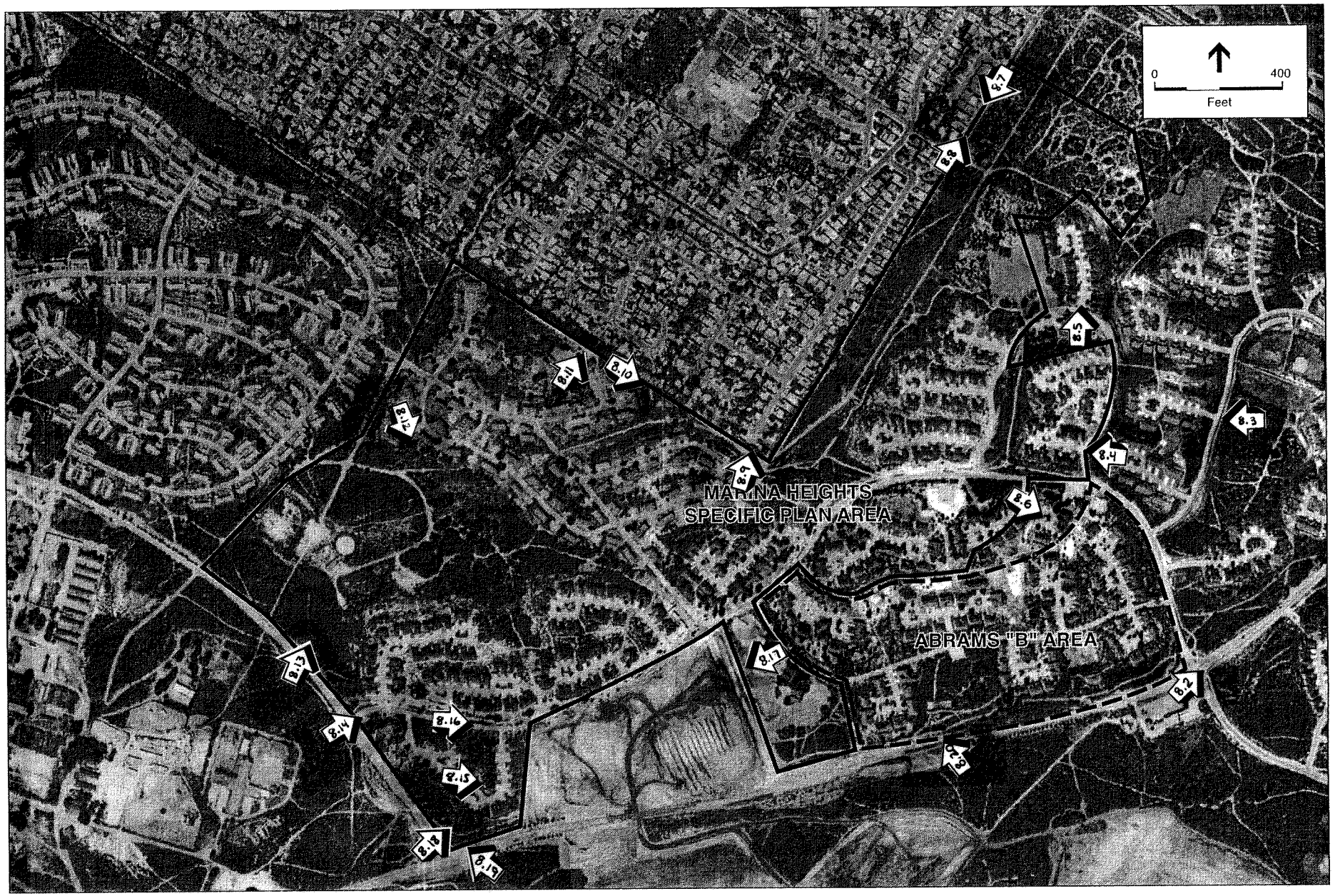
SITE RECONNAISSANCE

A site reconnaissance of the Marina Heights Specific Plan area was completed in March 2003, during which photographs of the site were taken. The photographs shown on the following pages are representative of the site's character as a whole, and are not intended to be an exhaustive pictorial survey of the Specific Plan area. The locations from which these pictures were taken are shown in **Figure 8.1**.

Figure 8.2 is a picture taken from the southeastern intersection of Imjin Road and Abrams Drive, looking to the east along Imjin Road. This intersection is one of the few points of access into the Specific Plan area. Near this entrance to the site is a neighborhood called Preston Park. Residences located near the intersection of Horn Court and Preston Drive in Preston Park are shown in **Figure 8.3**. This neighborhood contains former Fort Ord housing that is currently occupied.

Former Fort Ord housing in the Specific Plan area was abandoned upon closure of the Army base, and has not been occupied for approximately eight years. Many of these unoccupied residences and their associated landscaped areas are currently in a dilapidated state, as shown in **Figure 8.4**, a picture taken near the intersection of MacArthur Drive and 32nd Regiment.

Figure 8.1: Picture Locations



SOURCE: Aerial Photo-Pacific Aerial Surveys

Figure 8.2 **Intersection of Abrams Drive & Imjin Road**

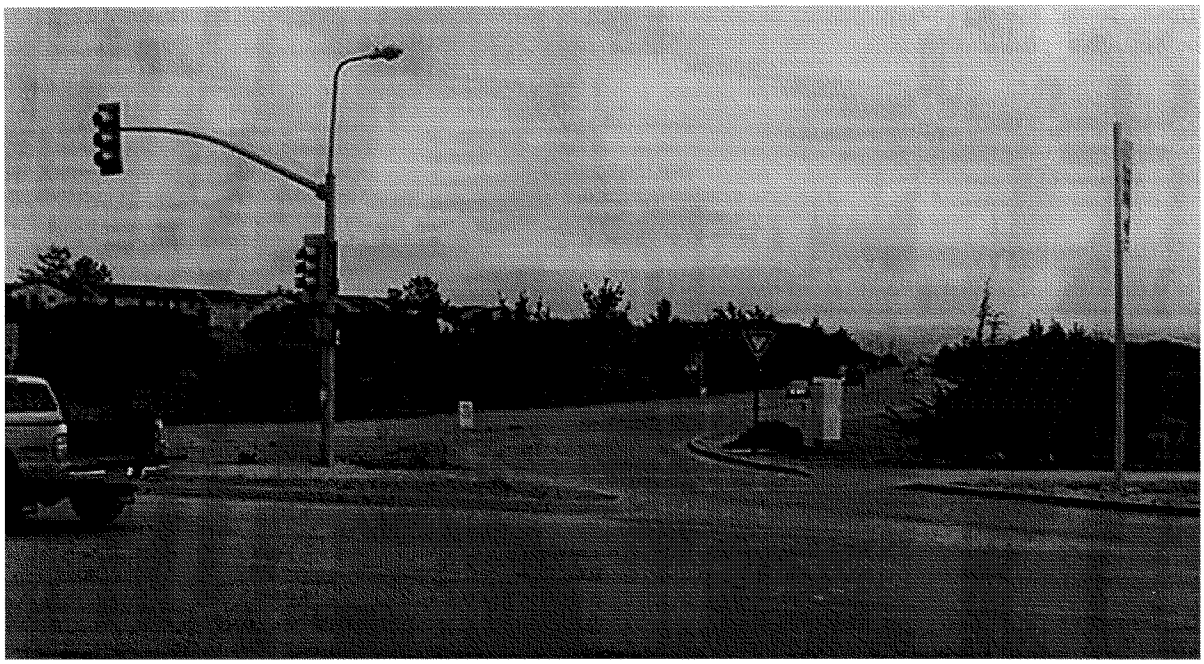


Figure 8.3 **Intersection of Preston Drive & Horn Court in Preston Park**

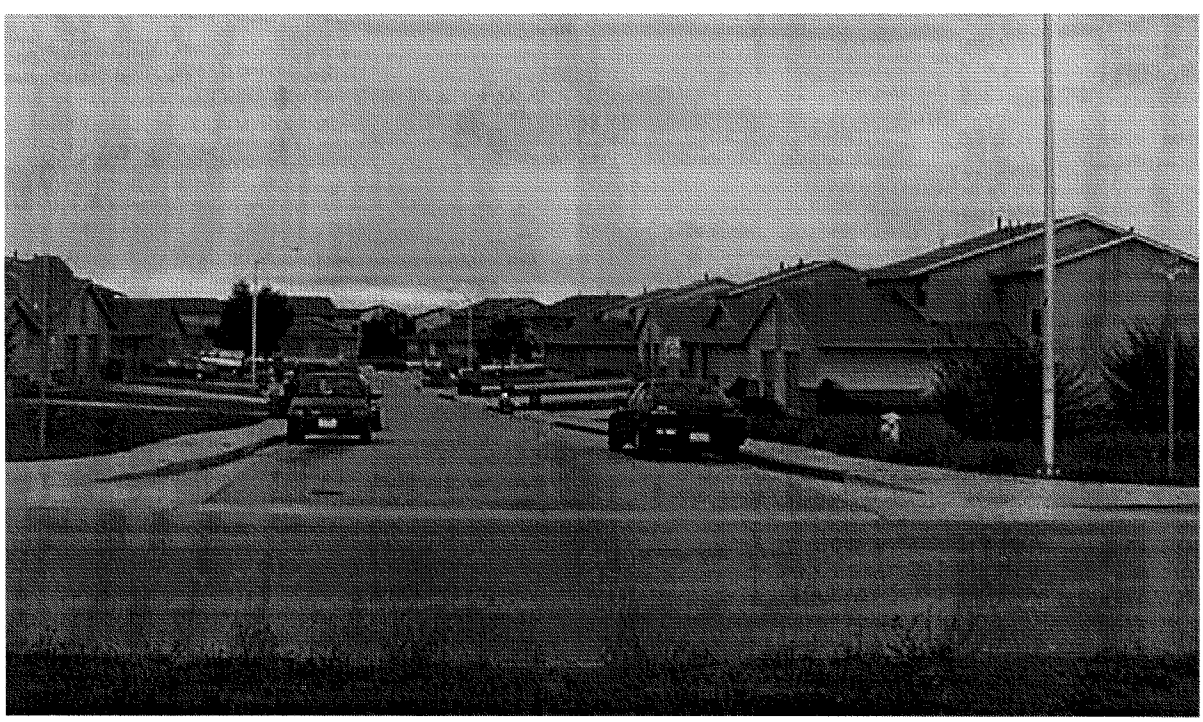


Figure 8.4 **Abandoned Residences at MacArthur Drive & 32nd Regiment**



Figure 8.5 **MacArthur Drive & 17th Regiment in Pueblo del Mar**



Figure 8.5 shows a group of occupied transitional housing units located at the intersection of MacArthur Drive and 17th Regiment that are part of the Pueblo del Mar neighborhood. Southwest of Pueblo del Mar is a group of 12 occupied homes known as "Interim Inc." housing. These well maintained homes, some of which are shown in **Figure 8.6**, are located near the intersection of Bayonet Circle and Bayonet Drive.

The northern boundary of the Specific Plan area is defined by a six-foot chain link fence that separates the site from streets such as Reservation Road, Salinas Avenue, Bayer Drive and a series of smaller streets on the northwest that run along or dead end at the fence. This fence, and residences located near it, at the intersection of Salinas Avenue and Carmel Avenue are shown in **Figure 8.7** and **Figure 8.8**. Farther south from the area shown in these figures, **Figure 8.9** shows the terminus of Bayer Drive, near an existing water tank, at the northern boundary's southernmost point. This picture was taken from the Specific Plan area side of the fence that separates the houses shown in the figure from the former Fort Ord housing units. A linear pathway, shown in **Figure 8.10**, runs along the length of the fence that marks the Project site's northern boundary. This picture, facing southeast, was taken from a point near the backyards of Fort Ord homes on Lincoln Road. As a point of reference, the water tower shown in **Figure 8.9** is visible on the left side of the picture, and the boundary fence is also shown. A typical view of well maintained houses located north of the boundary fence is shown in **Figure 8.11**.

Figure 8.12 is a picture facing southeast, taken from the backyard of an abandoned Fort Ord housing unit on Washington Court. The figure shows a part of the dense oak woodland area located in a western portion of the site. Abandoned Fort Ord housing units are visible in the background, above the tree line. Just southwest of the point from which this picture was taken, is a Marina Coast Water District facility that consists of a small one story building and a relatively small water tank. A picture of this facility, which is shown in **Figure 8.13**, was taken from Imjin Road looking northeast. **Figure 8.14** shows abandoned houses near the western intersection of Imjin Road and Abrams Drive, located a short distance from the Water District facility. A cul-de-sac named 80th Artillery Court, located just south of the Abrams Drive/Imjin Road intersection contains typically blighted abandoned Fort Ord housing, such as the house shown in **Figure 8.15**.

Moving east from 80th Artillery on Abrams Drive, **Figure 8.16** shows an area where existing groundwater monitoring wells run along Abrams Drive, just south of abandoned housing units whose back sides line Abrams Drive. One of these wells is shown on the left side of the picture, in front of several trees and to the right of a house visible on the picture's left edge.

Figure 8.6 **Interim Inc. Residences at Bayonet Court**

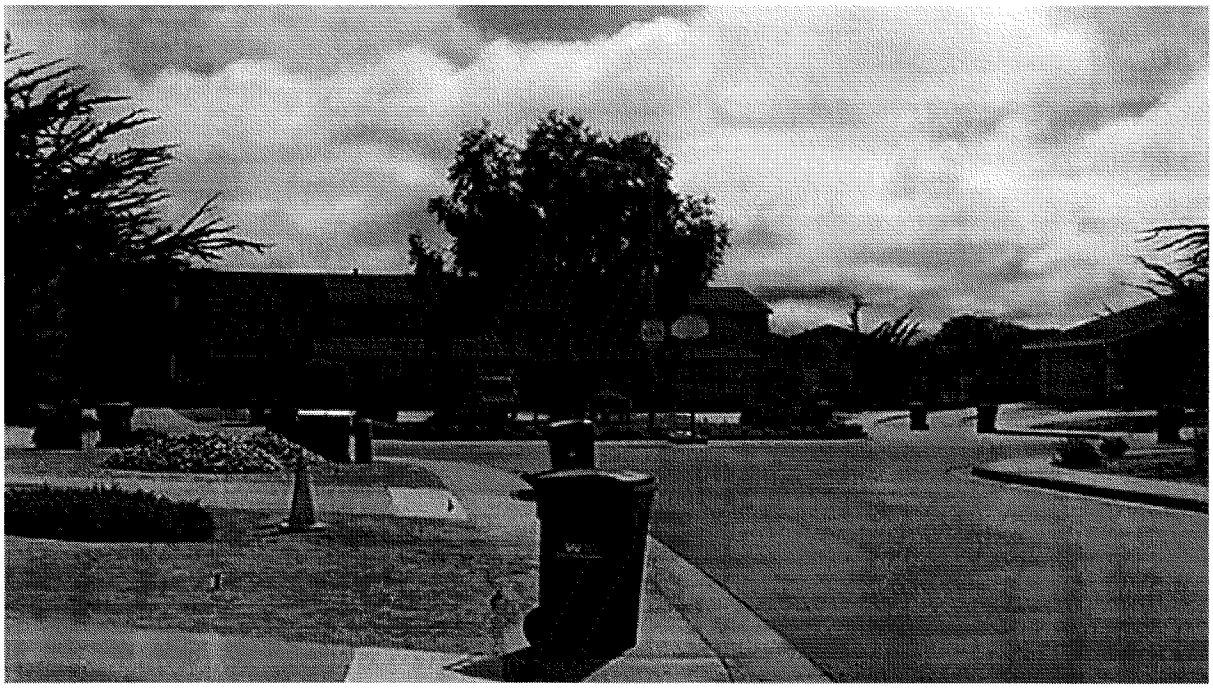


Figure 8.7 **Salinas Avenue Looking South**



Figure 8.8 **Salinas Avenue Looking Northeast**

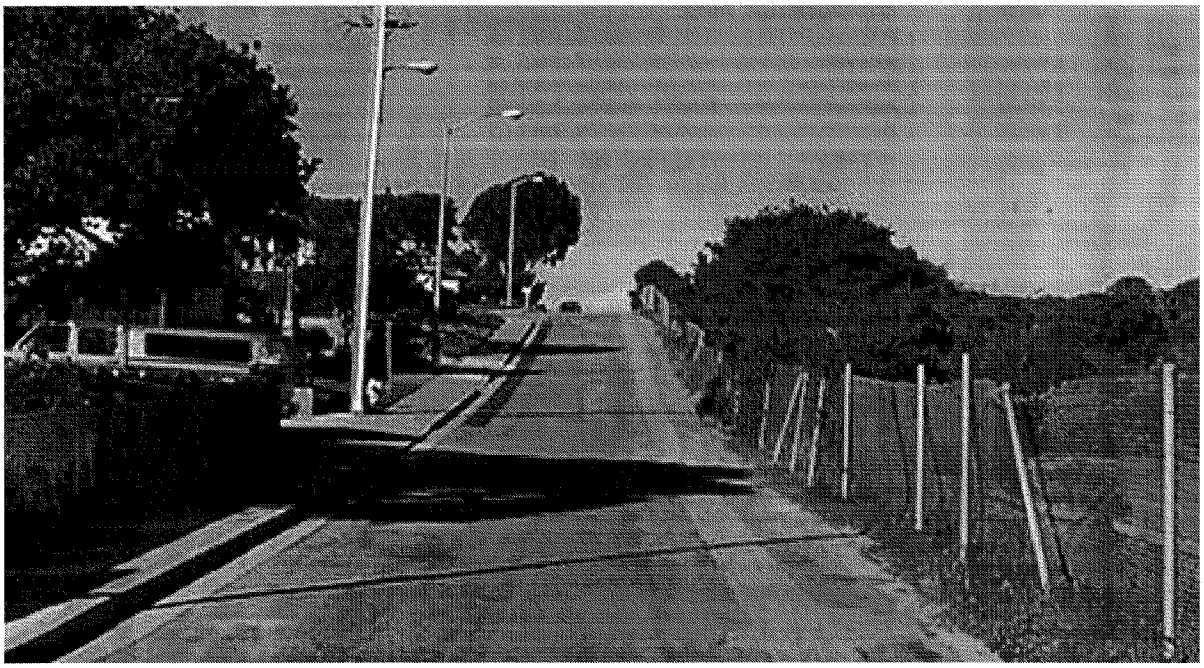


Figure 8.9 **Bayer Drive Terminus Toward West**

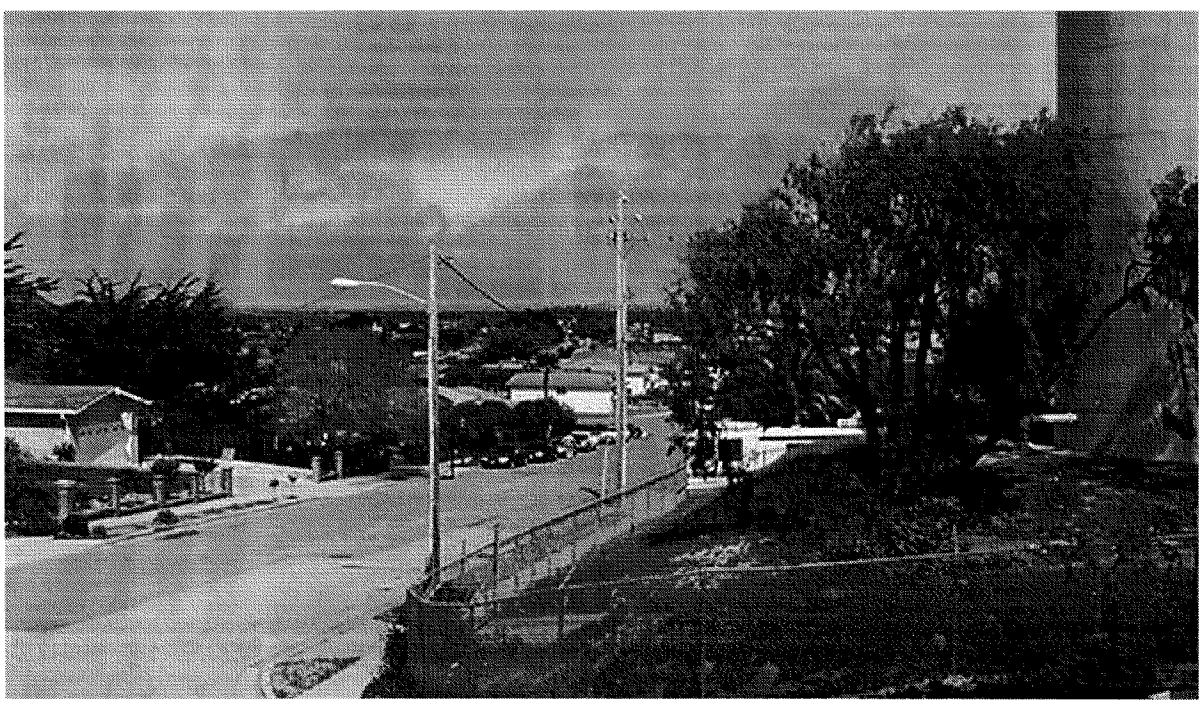


Figure 8.10 **Northern Boundary of Specific Plan Area**



Figure 8.11 **Residential Development North of Specific Plan Area**

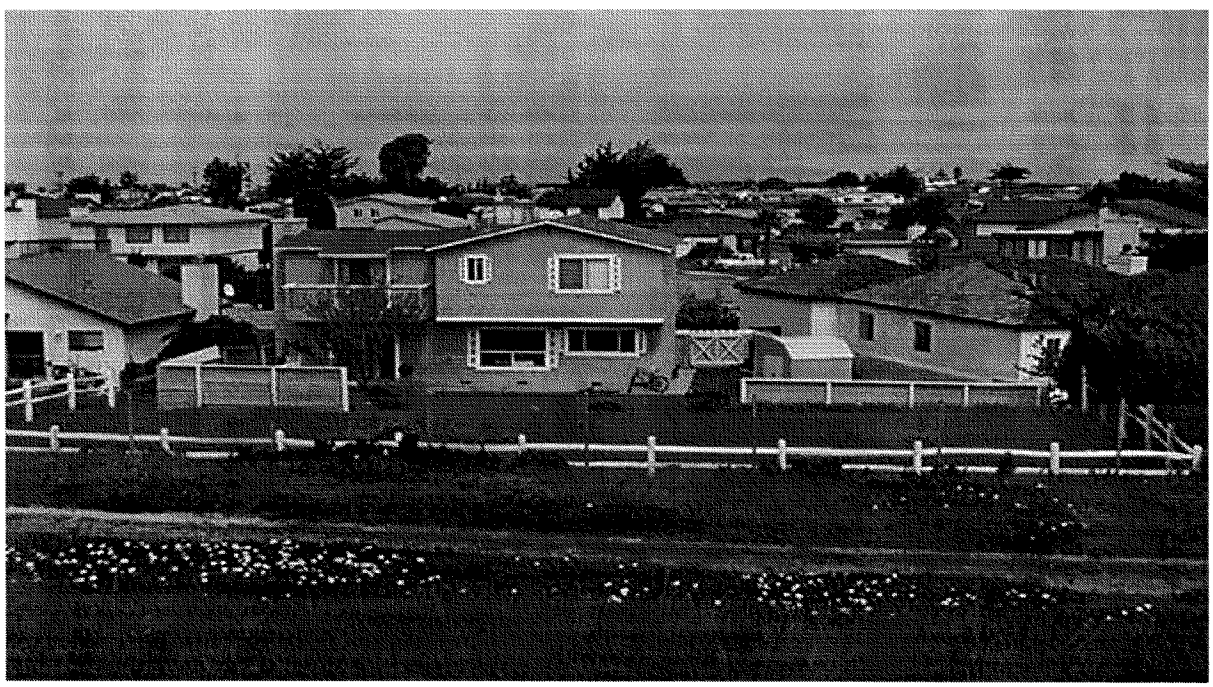


Figure 8.12 **Oak Woodland from Washington Court**



Figure 8.13 **Marina Coast Water District Facility**

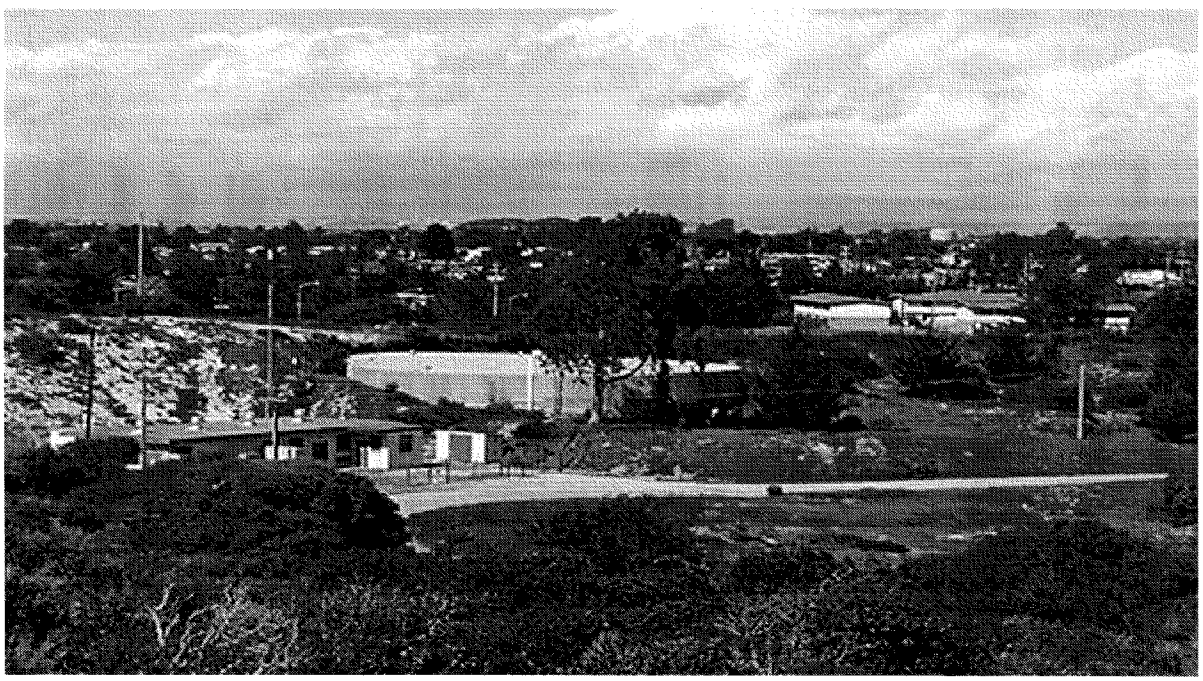


Figure 8.14 **Abrams Drive at Southwestern Intersection with Imjin Road**



Figure 8.15 **Abandoned Residence on 80th Artillery near Abrams Drive**



Figure 8.16 **Groundwater Monitoring Wells Along Abrams Drive**

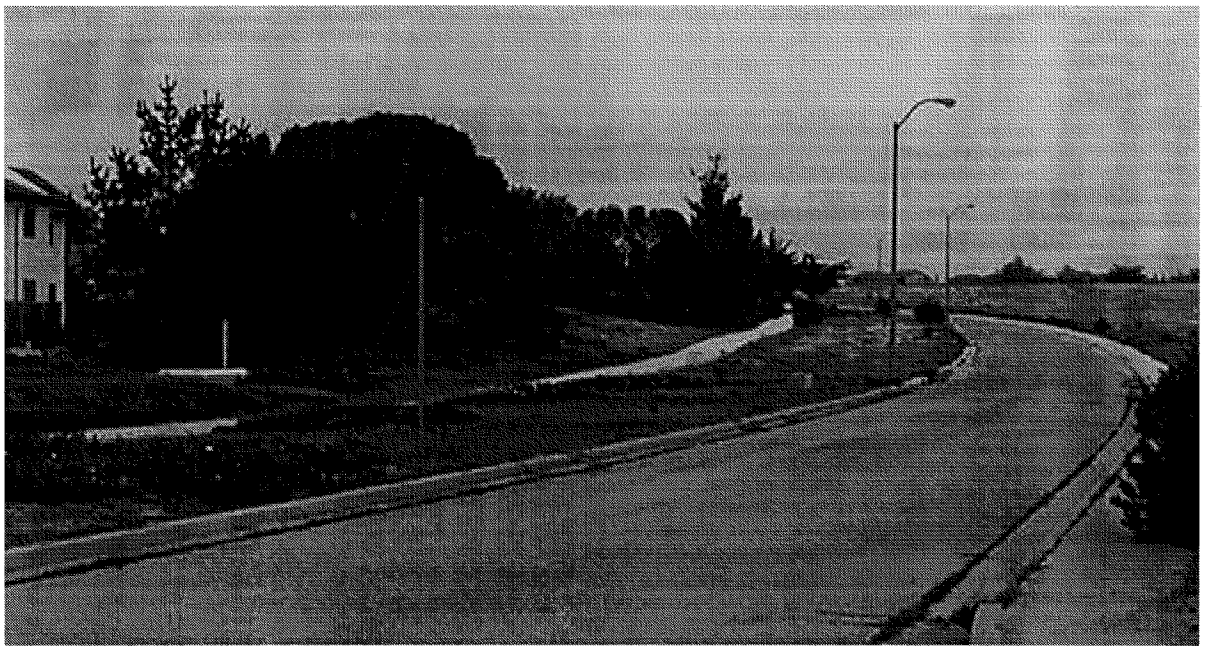
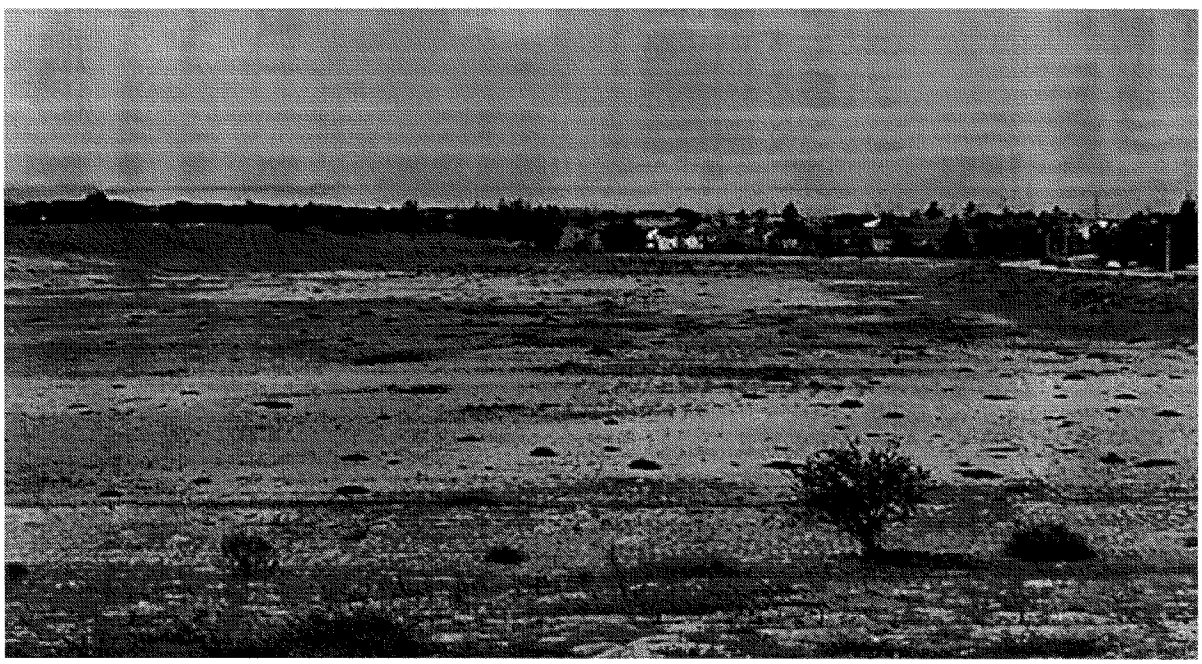


Figure 8.17 **Former Landfill Site, Looking Toward Abrams Drive**



A small part of the former landfill site located along the southern side of Abrams Drive is visible on the right side of the picture as well. A more expansive view of the former landfill site is illustrated in **Figure 8.17**. This picture, on which the right side of Abrams Drive is visible, was taken from the easternmost point of the landfill site, facing west.

Figure 8.18 shows Imjin Drive in the foreground, facing northeast over the rooftops of former Fort Ord housing located on 80th Artillery Court. As a point of reference, the water tank shown in previous figures is visible in the far background. The intersection of the former 12th Street and Imjin Road, at the southwestern-most point of the Project site, is shown in **Figure 8.19**. Farther east along Imjin Road, east of the former landfill site and east of a set of abandoned Fort Ord houses, is a neighborhood of well-maintained occupied homes called Abrams "B". A view of typical homes at Abrams "B", taken from Imjin Road facing north, is shown in **Figure 8.20**.

B. IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Implementation of the Specific Plan would have a significant impact if it were to result in:

- A substantial adverse effect on a scenic vista;
- Substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantial degradation of the existing visual character or quality of the site and its surroundings; or
- The creation of a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.

SCENIC VISTAS

There are no designated scenic vistas within the Specific Plan area, nor anywhere within the site's vicinity. The existing oak woodland area located in a western portion of the Specific Plan area is visually pleasing, and is aesthetically beneficial to the site. Under the Specific Plan, a portion of this wooded area would be preserved as open space. Therefore, implementation of the Specific Plan would have ***no impact*** on a designated scenic vista.

Figure 8.18 **Imjin Road Looking North Toward Bayer Drive Water Tank**



Figure 8.19 **New Imjin Road/12th Street Intersection**

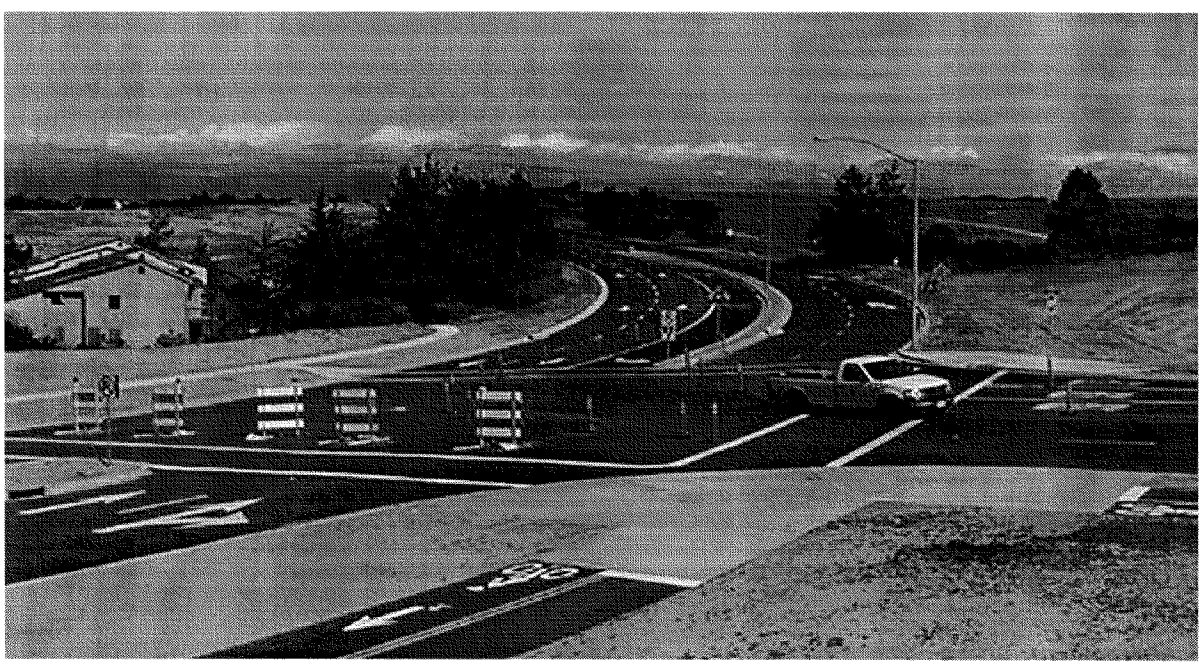


Figure 8.20 **View of Abrams B Residences, Looking North**



SCENIC RESOURCES

Highway 1, running north to south through western portions of the City of Marina, is a state designated scenic highway. The Specific Plan area is about one mile east of the highway at its closest point, but is not visible from Highway 1. Therefore, implementation of the Specific Plan would have ***no impact*** related to substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

VISUAL CHARACTER

The proposed development under the Specific Plan would involve the demolition of blighted and abandoned former Fort Ord housing, followed by construction of 1,050 new homes. The general visual character of the site would change significantly as a result of Specific Plan implementation, in that after implementation the Specific Plan area would contain a large number of new homes, as well as new landscaping associated with these homes. These new homes would significantly enhance the Specific Plan area's visual

character, and could be considered a ***beneficial impact.*** Implementation of the Specific Plan would lead to an increase in the amount of recreational and open space in the area, which generally have a tendency to visually enhance the character of an area.

Implementation of the Specific Plan would result in the elimination of a large amount of existing vegetation in the Specific Plan area's northwestern quadrant, near the Marina Coast Water District parcel, in order to enable the construction of a sizable number of the proposed housing units. Implementation of the Specific Plan would also place a significant number of homes along the Specific Plan area's northern boundary, eliminating the existing buffer area and associated vegetation north of former Fort Ord housing units and south of existing occupied civilian homes. This relatively open area currently provides a visual buffer between occupied homes north of the Specific Plan area and the former Fort Ord housing. The visual character in the northwestern quadrant and along the northern boundary of the Specific Plan area would change if the Specific Plan is implemented as proposed. However, this change in visual character, when viewed within the context of visual changes throughout the Specific Plan area, would be considered a ***less than significant impact.***

LIGHT AND GLARE

Sources of light and glare emanating from the street lights and residences within the Specific Plan area would not be substantially different in nature than light and glare that was present when the former military housing area was occupied. As indicated in the Marina Heights Specific Plan, lighting will be designed and developed in accordance with the City of Marina Design Guidelines and Standards. Therefore, new sources of light and glare from street lights and homes built under the Specific Plan would be considered ***less than significant***, provided that all outdoor lighting is designed and located to minimize ambient light levels for any given application, consistent with public safety standards. Lighting should utilize energy efficient fixtures, which provide a balance between energy efficiency and pleasing light color. High-pressure sodium fixtures should be utilized for street lighting and other large general site lighting applications, such as park land lighting. Metal halide, incandescent or color-balanced fluorescent fixtures may be used for other lighting systems.

9

RECREATION

A. SETTING

CITY OF MARINA PARKS

Marina presently supports 63 acres of improved parkland, including 27 acres of neighborhood and community parks, and approximately 35 acres of ball fields and playground areas owned by the Monterey Peninsula Unified School District. The Teen Center, Sports Center and Equestrian Complex provide an additional 34 acres of recreational facilities. Preston Park, located on about 9 acres of land at the former Fort Ord, opened in March 2003, bringing the City's total parkland area to 106 acres.[1]

The City of Marina's target standard for existing and projected outdoor recreational demand is 5.3 acres per 1,000 residents. This is further defined as 2.3 acres of neighborhood parks per 1,000 residents and 3.0 acres of community parks per 1,000 residents.[2] Based on this standard and an estimated current population of 25,101, the City of Marina requires a total of 133 acres of parkland to meet existing needs. Using this formula, existing improved parkland and facilities and the new Preston Park will satisfy 79.7% of recreation demand in Marina.

The sports fields and playgrounds of Marina's six schools help to meet the City's parkland and outdoor recreation needs. The City of Marina and the Monterey Peninsula Unified School District implement a joint use agreement that allows each agency to program recreational activities on both park and school grounds. Marina's adopted *Parks and Recreation Master Plan* states that at least half of the total school district acreage should be considered as equivalent parks and recreational acreage. Accordingly, about 35 acres of school district facilities, including the 8 acre Los Arboles Sports Complex, are considered

---

[1] Peter Le, Civil Engineer, City of Marina Public Works Department, February 26, 2003.

[2] City of Marina, *Parks and Recreation Master Plan*, 1997.

as equivalent parkland. Designated park sites within the former Fort Ord portion of the Marina Planning Area would provide about 260 acres of additional parkland and recreational facilities once fully developed. This new park acreage, once developed will enable Marina to fully meet its parkland standard for current and projected population.

REGIONAL PARKS AND BEACHES

Regional parks and beaches play a vital role in reserving large areas of land of regional or state wide significance as open space for recreational uses and scenic and natural resource protection. One of the most prominent recreation areas within Marina city limits is the 170-acre Marina State Beach, which is owned and managed by the California Department of Parks and Recreation. It presently serves an estimated 500,000 visitors per year, including Marina residents. Adjoining the state beach is a 10-acre parcel owned by the Monterey Peninsula Regional Park District, which provides public access to the beach from Dunes Drive.

Fort Ord Dunes State Park is planned west of Highway 1 on the former Fort Ord, encompassing 970 acres, 470 of which are within Marina's sphere of influence. South and east of the Marina Planning Area lie 16,000 acres of former Fort Ord that will eventually be managed for public recreational uses by the U.S. Bureau of Land Management. Nearly half of this land is already open for recreational uses.

B. IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Implementation of the Specific Plan would result in a significant impact if it were to result in:

- An increased use of neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;

- The construction/expansion, or required construction/expansion of recreational facilities which might have an adverse physical effect on the environment.

The City of Marina General Plan Parks and Recreation Section 2.16 and Table 2.3 establish the following standards for the provision of parks and recreational facilities and open space in the City:

- Sub-Neighborhood Park: 0.2 acres per approximately 40 housing units
- Playground: 1.3 acres per 360 housing units or 1,000 residents
- Neighborhood Park: 0.5 acres per 360 housing units or 1,000 residents
- Playfield: 0.5 acres per 360 housing units or 1,000 residents
- Community Park: 0.25 acres per 360 housing units or 1,000 residents
- Recreation Trails: 1,600 linear feet per 360 housing units or 1,000 residents

For the Specific Plan area, the General Plan Map, Figure 2.2 indicates two park/trail buffer areas and a park trail link to the existing Equestrian Center. Open Space Section 2.8 states: "Wherever feasible, major open space areas shall be linked to each other through the provision of wildlife/habitat corridors and/or recreational trails."

Under the provisions of Section 2.16.3, however, within the former Fort Ord "no further dedication of land for park and recreational purposes is required other than that designated for park and recreation use by former Fort Ord conveyances. Instead, all new residential, commercial and industrial development shall be required to pay in-lieu fees to finance the improvement of existing unimproved park and recreation sites and other General Plan-designated sites serving that area." As applied to the Specific Plan area, this section would still require the provision of sub-neighborhood parks to serve new housing, and the dedication of land for recreational/equestrian trails, since these are among the four exceptions related to the application of this section. Except for the requirements for the provision of sub-neighborhood parks, the Park and Recreation Standards shown in General Plan Table 2.3 would not apply to development within the Specific Plan area.

According to the Marina Heights Specific Plan, development within the Specific Plan area would include a sub-neighborhood park totaling 5.85 acres (identified as pocket parks and neighborhood parks in the Specific Plan). This acreage would exceed the sub-neighborhood park acreage required to meet the standard established in General Plan Table 2.3 (5.25 acres), although the Specific Plan would not meet the Service Area standard of having a sub-neighborhood park within 300 feet of units served (approximately 16 percent of the units proposed would not meet this requirement). A General Plan Amendment to modify the Service Area standard for sub-neighborhood parks in General Plan Table 2.3 (increasing the Service Area value from the current 300 feet to 1,300 feet) will be sought by the Project Applicant.

The Specific Plan would provide a 12.92-acre greenbelt, approximately 150 feet wide, with greenbelt linkages to adjacent neighborhoods and linear parks that total approximately 8.3 acres, which would bring the total greenbelt acreage within the Marina Heights Specific Plan area to approximately 21.22 acres.

A Class I bike path would be provided within the Arroyo area, and Class II bike lanes would be located along the entire length of Abrams Drive and along the proposed road that would link the Marina Heights entry points on California Avenue and Imjin Road.

Although not characterized as a park or recreational facility, implementation of the Specific Plan would also result in the creation of an 8.53-acre Oak Grove Preserve.

None of the parks, trails, bike paths or open space areas that would be located within the Marina Heights Specific Plan area would be dedicated to the City of Marina, and none would be managed or maintained by the City of Marina or any other public entity. For lands counted as public open space that remain in private ownership, the City shall require granting of an easement guaranteeing the public's right of access and use of such areas. On-going maintenance of these areas would be the responsibility of a landscape maintenance district or homeowner's association, to be established by the Project Applicant.

As indicated in the Specific Plan, in addition to paying the in-lieu fees of $2,224.00 per unit to finance the improvement of park and recreation sites as stated in the Marina General Plan, the Project Applicant will fund improvements to the adjacent 18-acre portion of the former Fort Ord landfill that the City of Marina has identified as a future public park. Improvements would include installation of grass for recreation fields and the construction of a 2,500 square foot general purpose/administration building on the site for the City Department of Parks and Recreation. The Project Applicant has agreed to spend up to $1,500,000.00 on improvement of the 18-acre park.

No new parks, trails or other recreational facilities are proposed within the Abrams "B" area.

- **Potential Impact 9.1: Increased Demand on Existing Parks, Open Space and Other Recreational Facilities.** The arrival of new residents to the City as a result of the development of the Marina Heights Specific Plan area would lead to an increased demand for parks, open space and other recreational facilities, which could lead to the

accelerated deterioration of existing parks and recreational facilities. This represents a potentially **significant** impact.

RECOMMENDED MITIGATION MEASURE

- **Mitigation Measure 9.1: Payment of In-Lieu Fees and/or Compliance with General Plan Requirements.** As proposed in the Specific Plan and the Option Agreement, the Project Applicant is obligated to pay $2,224 per unit in park development fees for the improvement of parks and recreational facilities to the City of Marina. Additionally, the Project Applicant has voluntarily agreed to provide funding of up to $1.5 million for the improvement of the adjacent park proposed at the former Fort Ord landfill site, and is providing sufficient sub-neighborhood parks and recreation trails within the Specific Plan area (in accordance with General Plan Section 2.16.3).

RESULTING LEVEL OF SIGNIFICANCE

Implementation of the mitigation measure identified above would reduce impacts associated with Specific Plan-related demand for parks, recreational facilities and open space to a level of *less than significant*.

- **Potential Impact 9.2: Environmental Effects Associated with the Development of New Parks, Trails and Bike Paths.** Implementation of the Specific Plan would involve the development of new parks, trails and bike paths in an area where they do not currently exist. Construction of these recreational facilities would entail environmental effects similar to those associated with the construction of residential structures within the Marina Heights Specific Plan area (i.e., construction dust, noise, etc.). These impacts are discussed within other Chapters of this EIR as appropriate. This represents a temporary potentially **significant** impact.

RECOMMENDED MITIGATION MEASURE

- **Mitigation Measure 9.2: Reduction of Construction-Related Dust and Noise.** The effective implementation of **Mitigation Measure 4.3.1**, **Mitigation Measure 4.3.2** and **Mitigation Measure 5.1.1**, **Mitigation Measure 5.1.2** and **Mitigation Measure 5.1.3**, above, would reduce temporary adverse construction-related environmental effects associated with the development of parks, trails and bike paths within the Specific Plan area.

RESULTING LEVEL OF SIGNIFICANCE

Implementation of the mitigation measure identified above would reduce impacts associated with Specific Plan-related construction of parks, trails and bike paths to a level of *less than significant*.

10

PUBLIC SERVICES AND UTILITIES

A. SETTING

POLICE PROTECTION

The City's Public Safety Department is located at the Marina Civic Center on Hillcrest Avenue. The Department's response area includes all lands within the city limits, including areas of the former Fort Ord for which conveyances have been completed. For other areas of the former Fort Ord within the city limits, law enforcement services are provided by the U.S. Army's Law Enforcement Command. Once conveyances for the remaining areas have been finalized, law enforcement responsibility will be transferred to the City of Marina.

The Public Safety Department employs 32 cross-trained public safety officers. This is equivalent to approximately one officer per 784 residents, or 1.27 officers per 1,000 residents. For comparison, the County of Monterey's current service standard is 1.7 officers for every 1,000 residents. The Department maintains at least three officers on patrol at all times. Emergency response time varies from three to five minutes.

FIRE PROTECTION

The City of Marina Public Safety Department provides both police and fire services to all areas within the city limits. The Department presently has one operating fire station located on Palm Avenue, adjoining the Marina Civic Center. The fire station currently supports five fire engines, including one four-wheel-drive "brush rig" for wildland fires and one aircraft crash truck. A second fire station at the Marina Municipal Airport was acquired following transfer of the airport to the City, but it is not presently staffed.

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.

The City Fire Chief implements the fire prevention regulations of the Uniform Fire Code, in order to ensure 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.

SCHOOLS

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 the Marina Planning Area lies within the boundaries of the North Monterey 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).

There are currently four elementary schools and one middle school within the Marina city limits, exclusive of Fort Ord. Marina Del Mar, Crumpton, Marina Vista and Olson elementary schools presently serve students in kindergarten through fifth grade with a combined 2000-2001 enrollment of 1,619.[1] Los Arboles Middle School serves the City of Marina and reported an enrollment figure of 719 for the 2000-2001 year. Marina high school students attend Central Coast High School in Marina as well as Seaside High School in the city of Seaside, with enrollments of 359 and 1,336 respectively. About half of Seaside High School students live in Marina.

In the former Fort Ord, two existing school sites are located within the Marina Planning Area. A former elementary school is now used as a continuation/alternative education high school.

---

[1] Monterey Unified School District website, http://www.mpusd.k12.ca.us/marina.htm, February 25, 2003.

WATER SERVICE

The Marina Coast Water District (MCWD) is the purveyor of water for the incorporated portion of the Marina Planning Area. However, its service area boundaries presently exclude the 368-acre Lonestar property, the 340 acres of Armstrong Ranch within the city limits and former Fort Ord. The water district currently operates and maintains both the water and sewer systems on former Fort Ord as part of a caretaker agreement with the U.S. Army, and will ultimately obtain ownership of them through a conveyance.

Three wells located in the deep aquifer of the Salinas Valley Water Basin and one in the 400-foot aquifer presently provide almost all of MCWD's potable water. This supply is augmented by an additional 300 acre-feet of potable water per year from the District's new desalinization plant. The former Fort Ord area is served by three active wells, two of which are located on land conveyed to the University of California, on the east side of Blanco Road. The former military base's potable water supply also includes 13 storage tank reservoirs having a combined capacity of 10.3 million gallons and six pump stations.

Both the Army and MCWD have agreements with the Monterey County Water Resources Agency (MCWRA) which allow the Fort Ord Reuse Authority (FORA) and the water district to participate in the regional agency's basin management planning process. Under the terms of these agreements, former Fort Ord lands and MCWD's service area were annexed into MCWRA's Zones 2 and 2A (essentially the Salinas Valley Water Basin area), and water allocations to these areas were established. Marina presently has a total water allocation of 4,440 acre-feet per year (AFY). The former Fort Ord's allocation is set at 6,600 AFY. Of this amount, 1,175 AFY has been allocated by FORA to serve new development within the portion of the former Fort Ord under City of Marina jurisdiction.

In addition to potable groundwater, Marina's available water supply is augmented by both potable water supplied by MCWD's new desalinization plant and recycled (non-potable) water. Approximately 600 AFY are presently supplied through both recycling and desalinization.

The use of recycled (non-potable) water represents an effective strategy for augmenting the City's available potable water supply. In 1994, MCWD began supplying approximately 300 AFY of recycled water from its wastewater treatment plant for irrigation purposes. Since then, the District has entered into an agreement with the Monterey Regional Water Pollution Control Agency (MRWPCA) which entitles MCWD to take a quantity of recycled water equal to the amount of wastewater the District sends to the wastewater

treatment facility (theoretically, up to about 2,240 AFY, given current capacity). MCWD has agreed to take no more than 300 AFY during the winter. Ultimately, the District plans to irrigate all City parks, ballfields and other public landscaped areas with recycled water supplied from the MRWPCA's tertiary treatment facility, thus saving potable water which would otherwise be used for irrigation or other purposes.

In the short term, MCWD will continue to utilize existing wells in the Salinas River basin as its major water supply source. In the long term, the water supply for the Marina Planning Area (including portions of the former Fort Ord) will likely rely on a combination of sources, including wells in the deep basin aquifer, surface water storage, recycling and desalinization.

Although Marina's current water supply appears sufficient to support a substantial level of new development, the long-term adequacy of this supply poses a serious concern as a result of the potential for continued salt water intrusion in the groundwater basin.

SEWER SERVICE

Wastewater generated by the City of Marina is treated at the Monterey Regional Water Pollution Control Agency's (MRWPCA) regional treatment plant located north of Marina. The regional facility has a design capacity of 29.6 million gallons per day (mgd), but is permitted to treat not more than 27 mgd, and currently receives average flows of 20 mgd. In 1997, the MRWPCA completed construction of a tertiary treatment facility. Recycled water from this facility is now distributed to farms in the Castroville area and to a limited number of recharge wells to reduce groundwater pumping and seawater intrusion. Treated water not used by the Monterey County Recycling Projects is discharged into Monterey Bay.

The City (excluding former Fort Ord) is generating close to 1.3 million gallons of wastewater per day, while the entire former Fort Ord area generates an additional 0.9 mgd of wastewater. Wastewater treatment capacity does not pose a significant constraint to anticipated new development in Marina in the short term. The treatment plant in its current configuration was designed to serve a projected population of 286,000, but it would be possible to expand the facility to serve additional growth.[2] Based upon AMBAG's 2005 population forecast of 270,000 for the MRWPCA service area, the facility

---

[2] Association of Monterey Bay Area Governments, 1997, as cited in *Marina Draft General Plan Draft EIR*, p.10.12, May 2000.

has sufficient capacity to serve proposed uses and new development in Marina, including portions of the former Fort Ord, for the next nine to ten years.[3]

However, short-term constraints to new residential development may occur as a result of a MRWPCA requirement to limit wastewater treatment for new residential development. The MRWPCA passed Ordinance 98-01 in 1998, limiting the allocation of available wastewater treatment capacity among MRWPCA member jurisdictions between 1998 and 2002. This ordinance has been extended until March 31, 2004. Under Ordinance 2002-01, the base allocation available to member jurisdictions as a whole is 6,829 housing units, but due to the requirement to make only 85 percent of the allocation initially available for distribution, the total allocation actually available on a first come first served basis would be 5,804 housing units.[4]

SOLID WASTE

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 Bay 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.

Regional landfill capacity does not pose a constraint in the near future. However, state law mandated a 25 percent waste stream diversion by 1995 and a 50 percent diversion by 2000. The City of Marina has reached a 50 percent waste diversion level. With implementation of waste reduction and diversion programs, and attainment of diversion objectives, the regional landfill should have 100 years of capacity remaining.[5]

As Marina continues to grow and expand, it will become increasingly difficult to maintain the 50 percent waste stream diversion mandated by the state. The City may need to explore additional strategies for meeting the state's waste diversion requirement. Expansion of its curbside recycling program and initiation of a composting program are options that could be considered.

---

[3] Ibid.

[4] Bob Jacques, Monterey Regional Water Pollution Control Agency, February 28, 2003.

[5] Rick Shedden, Senior Engineer, Monterey Regional Waste Management District, February 28, 2003.

STORM WATER

At present, storm water runoff generated within the Marina Planning Area is generally accommodated through the use of small, scattered retention basins. Since soils in the Marina area are characterized by mostly fine to medium grained unconsolidated materials with a high percolation rate, this localized approach to storm water drainage has generally been workable and practical.

B. IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Implementation of the Marina Heights Specific Plan would result in a significant impact if it were to result in:

- Substantial adverse physical impacts associated with the provision of (or need for) new or physically altered governmental facilities, the construction of which could cause significant environmental impacts; in order to maintain acceptable service ratios, response times or other performance objectives for police protection;

- Substantial adverse physical impacts associated with the provision of (or need for) new or physically altered governmental facilities, the construction of which could cause significant environmental impacts; in order to maintain acceptable service ratios, response times or other performance objectives for fire protection;

- Substantial adverse physical impacts associated with the provision of (or need for) new or physically altered governmental facilities, the construction of which could cause significant environmental impacts; in order to maintain acceptable service ratios or other performance objectives for schools;

- The need for new or expanded entitlements to water supply resources;

- The construction of new water or wastewater treatment facilities (or the expansion of existing facilities) which could cause significant environmental effects;

- Exceeding wastewater treatment requirements of the applicable Regional Water Quality Control Board;

- A determination by the wastewater treatment provider which serves (or may serve) the area that it would not have adequate capacity to serve the anticipated demand in addition to the provider's existing commitments;

- The construction of new storm water drainage facilities (or the expansion of existing facilities) which could cause significant environmental effects;

- Development which could not be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs;

- Non-compliance with federal, state, and local statutes and regulations related to solid waste; or

- Substantial adverse physical impacts associated with the provision of (or need for) new or physically altered governmental facilities, the construction of which could cause significant environmental impacts; in order to maintain acceptable service ratios or other performance objectives for other public facilities.

POLICE & FIRE PROTECTION

Implementation of the Marina Heights Specific Plan would bring an estimated 2,930 new residents to the City of Marina, based on the City's population of 25,101 and an estimated 2.79 persons per household.[6] The goal of the Public Safety Department is to maintain a 3 to 4 minute response time for emergency calls. The City's General Plan indicates that the existing fire station at Palm Avenue will be maintained, the fire station located at the airport will be upgraded and used as a full time facility, and a new fire/police substation would be built at one of two alternative sites in the former Fort Ord. One potential site is located near the Specific Plan area, southwest of the intersection of Abrams Drive and Imjin Road, and the other potential site is located south of 8th Street.

With the anticipated increase in the local population, the Public Safety Department would experience an increased demand for service. At any one time, the Department maintains a staff of one public safety officer at the fire station and three officers on patrol performing law enforcement duties. This staffing level, combined with the continuing growth of the City, has made it difficult to maintain desired emergency response times. The staffing model used by the Department exacerbates the problem, because if a law enforcement

---

[6] U.S. Census, *Profile of General Demographic Characteristics*, 2000.

emergency occurs simultaneously with a fire emergency, there may not be enough personnel to respond to each situation, due to the fact that law enforcement officers are cross-trained as firefighters. If a law enforcement officer responds to a law enforcement emergency, he/she cannot respond to a fire emergency that may occur at that time.

Potential Impact 10.1: Increased Demand on Public Safety Department. Average response times to the Abrams Park and Preston Park areas were eight minutes (prior to the opening of the California Avenue extension), twice as long as the Department's response time goal. Development proposed under the Specific Plan would spread Public Safety Department resources even thinner, potentially lengthening already long response times in the absence of a substation in the vicinity. This would be a potentially **significant** impact associated with implementation of the Specific Plan, until the airport station is operational, as anticipated under the current CIP.

RECOMMENDED MITIGATION MEASURE

Mitigation Measure 10.1: Payment of Impact Fees. The Project Applicant is obligated to pay the impact fees set out on Schedule E to the Option Agreement.

RESULTING LEVEL OF SIGNIFICANCE

The above mitigation measure would reduce the Specific Plan's impact to a level of *less than significant.*

SCHOOLS

Proposed New School Site

The Marina Heights Specific Plan identifies a 10-acre portion of the former Fort Ord landfill near the southern boundary of the Specific Plan area for use as a future school site. As indicated in the discussion of Hazards and Hazardous Materials in Chapter 7, above, placement of an elementary school in the proposed location could entail adverse effects associated with possible exposure to landfill gases generated from portions of the former Fort Ord landfill across Imjin Road, a potentially significant environmental impact (see discussion in **Chapter 7: Hazards and Hazardous Materials**, above).

Increased New Student Demand

Development under the Marina Heights Specific Plan would bring 1,050 new homes to the City of Marina, along with new students to the Monterey Peninsula Unified School District. The District uses the California Department of Education's student generation rates per housing unit in order to estimate the number of new students that a development such as Marina Heights would bring to the District.[7] **Table 10-1** shows how many new students the District would expect to have to accommodate as a result of development proposed within the Specific Plan area.

TABLE 10-1
MARINA HEIGHTS STUDENT GENERATION RATES PER HOUSING UNIT

SCHOOL GRADE	GENERATION RATE	NUMBER OF UNITS	TOTAL NEW STUDENTS
Kindergarten to 6th	0.4 students per unit	1,050	420
7th and 8th	0.1 students per unit	1,050	105
9th to 12th	0.2 students per unit	1,050	210
Total	**0.7 students per unit**	**---**	**735**

Source: Monterey Peninsula Unified School District

The District is currently in the process of determining how it will react to the anticipated influx of new students within the next few years. Therefore, it does not currently have an explicit plan regarding how or where it will accommodate new students. This is due in large part to the fact that in recent years the District's student population declined, as families living at the former Fort Ord left the area, and the District actually closed a few of its schools. If the District cannot accommodate all of its new students at existing schools, previously closed school sites may have to be re-opened.

- **Potential Impact 10.2: Increased Student Demand on School District.** Development under the Specific Plan would bring about 735 new school students to the District. According to Jim Burnis, the District's Chief Business Officer, the Marina Heights development on its own would probably not have a significant impact on the school district. However, in addition to Marina Heights, there are currently an estimated 3,000 to 4,000 housing units planned or under construction within areas under District's jurisdiction. The proposed development of the Marina Heights Specific Plan area, together with these other housing developments, could have a

[7] Jim Burnis, Chief Business Officer, Monterey Peninsula Unified School District, February 27, 2003.

potentially **significant cumulative** impact on the District's ability to accommodate new students, and could require the construction of additional school facilities.

RECOMMENDED MITIGATION MEASURE

Mitigation Measure 10.2: Payment of School Impact Fees. The Project Applicant should pay all current applicable school impact fees.

RESULTING LEVEL OF SIGNIFICANCE

The above mitigation measure would reduce the impacts associated with the development-related increase in the number of students coming from the Specific Plan area to a level of *less than significant*.

WATER SERVICE

The former Fort Ord area within the City of Marina's jurisdiction is allocated 1,175 AFY of water. The Marina General Plan anticipated that 231 AFY of that allocation would be sufficient to support the level of development anticipated in the portion of the former Fort Ord now identified as the Marina Heights Specific Plan area. Based on estimates related to the number of interior plumbing fixtures anticipated in each of the different types of housing units proposed within the Specific Plan area and the water fee computation formula provided by the Monterey Peninsula Water Management District, City of Marina staff have estimated a total water demand of 292.39 AFY (see **Table 10-2**). This would be approximately 26 percent more than the amount of water that was anticipated as needed to serve anticipated development within the Specific Plan area under the General Plan.

TABLE 10-2
MARINA HEIGHTS – WATER DEMAND SUMMARY

Unit Type	Units	Yearly Water Demand (Acre-Feet/Year)
AffordableTownhomes	102	17.08
Affordable Cottages	23	3.89
Bridge Cottages	85	17.09
Market Rate Cottages	80	16.08
Market "A"	337	91.53
Market "B"	338	101.91
Estates	85	33.11
Residential Demand	1,050	280.69
Park (acres)	5.85	11.70
Total Demand		**292.39**

Source: The Chadmar Group, *Marina Heights Specific Plan*, February 2003.

Implementation of the Specific Plan as proposed would create a water supply demand within the Marina Heights Specific Plan area in excess of that anticipated under the Marina General Plan. In the General Plan, the level of development anticipated in the former portion of the former Fort Ord that is under the City of Marina's jurisdiction is predicated on the amount of water available under the established water allocation for the area (1,175 AFY), with the General Plan identifying the anticipated water supply available to support the level of development anticipated in each different portion of the former Fort Ord area within that allocation. If adequate water to meet the demands of the Marina Heights development is provided from the existing water allocation (which would be approximately 61 AFY in excess of what was anticipated as necessary to support the level of development in the Specific Plan area under the Marina General Plan), then this could preclude future development in other portions of the former Fort Ord that has also been anticipated under the Marina General Plan, since a reduced supply of water would be left to support such development under the existing allocation that would otherwise receive a larger portion of the existing water allocation. Since an adequate supply of water would be available to support the implementation of the Specific Plan within the existing water supply allocation, the increased demand for water resulting from the development of the Specific Plan area as proposed would not represent a significant environmental impact. However, as indicated in the discussion of Specific Plan consistency with the Marina General Plan in Chapter 2, above, the reallocation of anticipated water supply within the former Fort Ord area to provide adequate water to support the proposed development of

the Specific Plan area could require modifications to the General Plan if it were to result in reductions in the anticipated level of future development elsewhere within that area.

Although development of the Specific Plan area as proposed would not result in a need for new or expanded entitlements to water supply resources, any reduction in anticipated water demand could result in an increase in the amount of water to support additional development within the former Fort Ord area, as anticipated under the Marina General Plan. The following measures would conserve water and mitigate water demand within the Specific Plan area:

- Plumbing fixtures that reduce water usage should be utilized (i.e., low volume toilet tanks, flow control devices for faucets and shower heads) in accordance with Title 24 of the California Administrative Code.

- Installation of ultra low flush toilets in all proposed housing units, in accordance with Health and Safety Code Section 17921.3.

- The use of drought tolerant plant species and drip irrigation systems in landscaping established for the Project.

These measures would reduce Specific Plan-related demand for water from the MCWD. However, implementation of these measures would fall significantly short of offsetting the water supply deficit estimated to occur if the Specific Plan is implemented as proposed unless the City elects to shift the anticipated distribution of the current water allocation as anticipated in the Marina General Plan and as further discussed above in Section 2, Land Use.

SEWER SYSTEM

Development under the Specific Plan would generate an estimated total of 231,150 gallons per day (gpd) of wastewater. **Table 10-3** provides a breakdown of wastewater production attributed to the Specific Plan, according to the different housing products proposed for Marina Heights.

Sewer infrastructure would be planned, designed and developed in cooperation with the MCWD, and existing infrastructure would be utilized whenever feasible. Development within the Specific Plan area would take advantage of any opportunities to upgrade or remove antiquated or malfunctioning infrastructure, in cooperation with MCWD. As

TABLE 10-3
PROJECTED AVERAGE DAILY WASTEWATER FLOW
(Gallons per Day)

HOUSING TYPE	WASTEWATER PRODUCTION	NUMBER OF UNITS	TOTAL WASTEWATER
Townhome	200 gpd / unit	102	20,400
Cottages	200 gpd / unit	188	37,600
Small Single Family	200 gpd / unit	337	67,400
Std. Single Family	250 gpd / unit	338	84,500
Estates	250 gpd / unit	85	21,250
Total	---	**1,050**	**231,150**

Source: The Chadmar Group, *Marina Heights Specific Plan*, February 2003.

Development in the Specific Plan area would utilize existing connections to the Fort Ord Sewage Collection System, and the Project Applicant would obtain verification of adequate wastewater treatment capacity from the MRWPCA as part of the discretionary approval process, in compliance with the City of Marina General Plan. A *Construction and Transfer of Water, Recycled Water, and Sewer Infrastructure Agreement* would be executed as necessary with MCWD and the City of Marina Public Works Department. Connections to MCWD systems shall comply with relevant MCWD ordinances, and applicable fees shall be provided according to applicable MCWD ordinances. Implementation of these tasks would ensure that the development of the Specific Plan area as proposed would have a *less than significant* impact on the City of Marina wastewater system.

SOLID WASTE

The Marina Heights Specific Plan area would be served by the Monterey Peninsula Landfill and Recycling Facility, with a 100 year remaining capacity. This landfill can accommodate Marina's solid waste disposal needs. Therefore, development of the Specific Plan area as proposed would have a *less than significant* impact on the Monterey Regional Waste Management District.

Solid waste would be generated by the demolition of the existing housing units on the Marina Heights portion of the Specific Plan area. Demolition of existing housing units on the Project site would produce an estimated 55,000 tons of debris that would be

transported to the Monterey Peninsula Landfill and Recycling Facility in an estimated 7,900 truck loads.[8]

STORM WATER

The Federal Water Pollution Control Act (also referred to as the Clean Water Act, or CWA) provides that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollution Discharge Elimination System (NPDES) permit. The U.S. Environmental Protection Agency (USEPA) has outlined regulations that establish storm water permit application requirements for specified categories of industries. As of March 2003, the regulations provide that discharges of storm water to waters of the United States from construction projects that encompass one (1) or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. This General Permit requires all dischargers where construction activity disturbs five acres or more to:

- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting storm water and with the intent of keeping all products of erosion from moving off site into receiving waters.

- Eliminate or reduce nonstorm water discharges to storm sewer systems and other waters of the nation.

- Perform inspections of all BMPs.

The proposed development of the Specific Plan area would meet the acreage threshold for requirement of a SWPPP, since it is a construction project larger than one (1) acre. Compliance with this requirement would ensure that the Specific Plan would have a *less than significant* impact on the City of Marina's storm drainage system.

---

[8] Dan McGregor, The Chadmar Group, March 25, 2003.

11

OVERVIEW OF PROJECT IMPACTS

A. SIGNIFICANT UNAVOIDABLE IMPACTS THAT CANNOT BE MITIGATED TO A LEVEL OF LESS THAN SIGNIFICANT

The following Specific Plan-related impact has been identified as significant and unavoidable:

- **Potential Impact 4.5: Increased Regional Emissions.** New traffic generated by the development of the Specific Plan area as proposed would increase regional emission by amounts greater than the MBUAPCD significance thresholds. This is considered a *significant unavoidable impact.*

RECOMMENDED MITIGATION MEASURES

As indicated in the MBUAPCD *CEQA Air Quality Guidelines* (page 8-8), mitigation measures implemented at residential projects can enhance the effectiveness of work-based transportation demand management (TDM) measures by addressing the "other" end of a commute trip, and represent a potentially significant source of travel reductions. While many feasible mitigation measures could be applied to residential projects, the MBUAPCD limits its guidance to two quantifiable, facility-based measures. This is due to the lack of quantified research on facility-based measures in residential projects. These two measures involve design elements that are incorporated within the Specific Plan: the provision of bicycle paths that link to the external network, and the provision of pedestrian facilities. However, as the estimated reduction in the number of trips that could be achieved through each of these measures is estimated to be on the order of 0.1 percent, these features alone would be insufficient to reduce Specific Plan-related vehicle trips to the extent necessary to bring estimated emissions below the significance thresholds set by the MBUAPCD.

RESULTING LEVEL OF SIGNIFICANCE

The incorporation of bicycle paths and pedestrian facilities within the Specific Plan area as proposed would reduce Specific Plan-related impacts on regional air quality to a limited extent. While it may be possible for such features to reduce Specific Plan-related emissions of VOC and PM_{10} by 3.3 percent and 3.2 percent, respectively, to meet the established threshold values, there is currently no practical way to reduce the Specific Plan-related emissions by the 37.8 percent increment that would be necessary to bring Specific Plan-related impacts below MBUAPCD significance thresholds for NO_x. Therefore, the Specific Plan's impacts on regional air quality are considered ***significant*** and ***unavoidable.***

Any project found to have a significant adverse impact on regional air quality would also be considered to have a significant cumulative impact. The implementation of the Specific Plan would, therefore, have a ***significant*** and ***unavoidable cumulative*** impact on regional air quality.

B. POTENTIALLY SIGNIFICANT IMPACTS THAT COULD BE REDUCED TO A LEVEL OF LESS THAN SIGNIFICANT THROUGH IMPLEMENTATION OF IDENTIFIED MITIGATION MEASURES

The following potentially significant impacts could be reduced to a level of less than significant through implementation of the mitigation measures identified in the Draft EIR:

- **Potential Impact 3.1: Unacceptable Levels of Service at California Avenue/12th Street Intersection.** (Baseline Plus Project Conditions)

- **Potential Impact 3.2: Abrams Drive/12th Street Intersection Meets Caltrans' Peak-Hour Signal Warrant.** (Baseline Plus Project Conditions)

- **Potential Impact 3.3: Unacceptable Levels of Service at "Main Street"/Imjin Road Intersection.** (Baseline Plus Project Conditions)

- **Potential Impact 3.4: Unacceptable Levels of Service on Highway 1 Segments.** (Baseline Plus Project Conditions)

- Potential Impact 3.6: Unacceptable Levels of Service at Imjin Road/"Main Street" Intersection.

- Potential Impact 3.7: Unacceptable Levels of Service at California/Main Street Intersection.

- Potential Impact 3.8: Unacceptable Levels of Service at Imjin Road/Reservation Road.

- Potential Impact 4.1: Possible Exposure to Toxic Air Contaminants During Demolition.

- Potential Impact 4.2: Possible Exposure to Toxic Air Contaminants During Transportation.

- Potential Impact 4.3: Exposure to Construction Dust and/or Diesel Exhaust.

- Potential Impact 4.4: Possible Exposure to Landfill Gas.

- Potential Impact 5.1: Demolition, Grading and Construction Noise.

- Potential Impact 6.1: Removal of Occupied and Potential Habitat of the Federally-Listed Endangered and State-Listed Threatened Sand Gilia.

- Potential Impact 6.2: Removal of Potential Habitat for the Black Legless Lizard/Loss of Individual Black Legless Lizards.

- Potential Impact 6.3: Construction Effects on Active Nests of Birds-of-Prey and Other Migratory Birds.

- Potential Impact 6.4: Disturbance of Roosting Bats.

- Potential Impact 7.1: Transportation of Hazardous Demolition Debris.

- Potential Impact 7.2: Possible Exposure to Hazardous Materials During Demolition.

- Potential Impact 7.3: Possible Exposure to Contaminated Groundwater.

- **Potential Impact 7.4: Possible Exposure to Landfill Gas..**

- **Potential Impact 7.5: Potential Hazardous Emissions within One-Quarter Mile of Crumpton Elementary School.**

- **Potential Impact 7.6: Development within a Hazardous Materials Site.**

- **Potential Impact 9.1: Increased Demand on Existing Parks, Open Space and Other Recreational Facilities.**

- **Potential Impact 9.2: Environmental Effects Associated with the Development of New Parks, Trails and Bike Paths.**

- **Potential Impact 10.1: Increased Demand on Public Safety Department.**

- **Potential Impact 10.2: Increased Student Demand on School District.**

C. IMPACTS DETERMINED NOT TO BE SIGNIFICANT

During the preparation of the Draft Environmental Impact Report, the following types of environmental impacts were determined not to be significant:

Aesthetics

- Implementation of the Specific Plan would not have a substantial adverse effect on a scenic vista (because no formally-identified scenic vistas have been identified within the Specific Plan area, and the major portion of the Specific Plan area is already characterized by earlier residential development).

- Implementation of the Specific Plan would not substantially damage scenic resources (because no scenic resources [i.e., trees, rock outcroppings, historic buildings, etc.] have been formally identified within the Specific Plan area).

- Implementation of the Specific Plan would not substantially degrade the existing visual character or quality of the site and its surroundings (because the major portion of the Specific Plan area currently supports deteriorating abandoned residential units that would be replaced with new residential units).

- Implementation of the Specific Plan would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area (because lighting associated with the proposed residential development within the Specific Plan area was already a feature of earlier residential development at the site).

Agricultural Resources

- Implementation of the Specific Plan would not result in the conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance to non-agricultural use (because no land within the Specific Plan area has been identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance under the Farmland Mapping and Monitoring Program of the California Resources Agency).

- Implementation of the Specific Plan would not conflict with existing zoning for agricultural use, or a Williamson Act contract (because no portion of the Specific Plan area is currently zoned for agricultural use, and no portion of the Specific Plan area is currently under a Williamson Act contract).

- Implementation of the Specific Plan would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use (because there are no active agricultural operations in the immediate vicinity of the Specific Plan area that could be adversely affected by the proposed residential development).

Air Quality

- Implementation of the Specific Plan would not conflict with or obstruct implementation of the 2000 Air Quality Management Plan for the Monterey Bay Region (because the level of residential development proposed within the Specific Plan area is consistent with the projected population growth for the City of Marina that was used in the development of the current Air Quality Management Plan, as determined by the Association of Monterey Bay Area Governments).

- Implementation of the Specific Plan would not be expected to create objectionable odors affecting a substantial number of people (because development within the Specific Plan area would not include any activity that would generate objectionable odors likely to be detected off-site).

Biological Resources

- Implementation of the Specific Plan would not have a substantial adverse effect on any riparian habitat (because no riparian habitat areas have been identified within the Specific Plan area).

- Implementation of the Specific Plan would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means (because no wetland areas have been identified within the Specific Plan area).

- Implementation of the Specific Plan would not 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 (because no native wildlife nursery sites have been identified within the Specific Plan area and because the corridor identified within the Specific Plan area in the General Plan Land Use Map provides a means to enhance the distribution of seeds to enhance the genetic diversity of special status plant species, and does not function as a wildlife corridor serving migratory species or special status native wildlife species).

Cultural Resources

- Implementation of the Specific Plan would not be expected to create a substantial adverse change in the significance of a historical resource as defined in §15064.5 (because no historical resources have been identified within the Specific Plan area).

- Implementation of the Specific Plan would not be expected to cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 (because no archaeological resources have been identified within the Specific Plan area). However, in the unlikely event that archaeological resources are unexpectedly uncovered during grading or other site preparation work within the Specific Plan area, all work in the vicinity should be halted until a qualified archaeologist has been consulted as to the significance of the find, and has provided direction for the appropriate protection or evaluation of any resources encountered.

- Implementation of the Specific Plan would not destroy any unique paleontological resources or site or unique geologic feature (as no such resources have been identified within the Specific Plan area).

- Implementation of the Specific Plan would not be expected to disturb any human remains (because no human remains are known to have been deposited within the Specific Plan area). However, in the unlikely event that human remains are unexpectedly uncovered during grading or other site preparation work within the Specific Plan area, all work should be halted in the vicinity, and the Monterey County Coroner should be informed to determine if an investigation of the cause of death is required, and to determine if the remains are of Native American origin. If such remains are of Native American origin, the nearest tribal relatives as determined by the state Native American Heritage Commission should be contacted to obtain recommendations for treating or removal of such remains, including grave goods, with appropriate dignity, as required under Public Resources Code Section 5097.98.

Geology and Soils

- Implementation of the Specific Plan would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death, involving rupture of a known earthquake fault (because no known earthquake faults pass through the Specific Plan area).

- Implementation of the Specific Plan would not be expected to expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death, involving strong seismic ground shaking (because all residential structures to be built within the Specific Plan area would be required to meet all current building code requirements to ensure a reasonable level of survivability in the event of strong seismic ground shaking).

- Implementation of the Specific Plan would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death, involving seismic related ground failure, including liquefaction (because the Specific Plan area has been identified as having a low susceptibility for liquefaction or other types of seismic-related ground failure).

- Implementation of the Specific Plan would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death, involving landslides (because no portion of the Specific Plan area has been identified as being subject to landslides).

- Implementation of the Specific Plan would not be expected to result in substantial soil erosion or the loss of topsoil (because all grading and other site preparation activity within the Specific Plan area would need to comply with the site-specific erosion control requirements identified in the Stormwater Pollution Prevention Plan [SWPPP], which will be developed by the Project Applicant and submitted for the approval of the Regional Water Quality Control Board).

- Implementation of the Specific Plan would not result in development on a geologic unit or soil that is unstable, potentially resulting in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse (because no geologic units or soils with these characteristics have been identified on or in the vicinity of the Specific Plan area).

- Implementation of the Specific Plan would not result in development on expansive soils (as soils within the Specific Plan area have been identified as having a low shrink-swell potential).

- Implementation of the Specific Plan area would not result in development on soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater (as all development within the Specific Plan are will be served by sewers, rather than septic tanks).

Hazards and Hazardous Materials

- The Specific Plan area is located outside of the Marina Airport Comprehensive Land Use Plan (CLUP) Planning Area Boundary. The proposed school site within the Specific Plan area is located approximately 1.7 miles from the Marina Municipal Airport runway, and this location is consistent with the Monterey County Airport Land Use Commission's April 26, 1999 policy on locating facilities in the vicinity of airports. The Specific Plan area is not located in the vicinity of a private airstrip. Implementation of the Specific Plan would not result in a safety hazard for people within the Specific Plan area.

- Implementation of the Specific Plan would not be expected to impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (because the emergency response plan for the City of Marina designates two emergency response centers: one at 211 Hillcrest Avenue and the other in Administrative Building 781 at the Marina Municipal Airport, and proposed development within the Marina Heights Specific Plan area should not impact operations at these sites). Overall implementation of the Specific Plan should not be affected as long as emergency access roads (including Reservation Road and Imjin Road) are designed to accommodate increased traffic resulting from development anticipated under the Specific Plan.

- Implementation of the Specific Plan would not expose people or structures to a significant risk of loss, injury or death involving wildland fires (because the lack of wildland corridors adjacent to the Specific Plan area and limited vegetation indicates no potential impact related to wildland fires).

Hydrology and Water Quality

- Implementation of the Specific Plan would not be expected to violate any water quality standards or waste discharge requirements (because all grading and other site preparation activity within the Specific Plan area would need to comply with the site-specific erosion control requirements identified in the Stormwater Pollution Prevention Plan [SWPPP], which will be developed by the Project Applicant and submitted for the approval of the Regional Water Quality Control Board).

- Implementation of the Specific Plan would not be expected to substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a deficit in aquifer volume or a lowering of the local groundwater table (because no new wells would be developed within the Specific Plan area, and the Marina Coast Water District has sufficient water allocated within the former Fort Ord to supply the water demand of development within the Specific Plan area without placing additional demand on local groundwater resources).

- Implementation of the Specific Plan would not substantially alter the existing drainage pattern of the site or area in a manner that would result in substantial erosion or siltation on- or off-site (because all development within the Specific Plan area would need to comply with the site-specific erosion control requirements identified in the Stormwater Pollution Prevention Plan [SWPPP], which will be developed by the

Project Applicant and submitted for the approval of the Regional Water Quality Control Board).

- Implementation of the Specific Plan would not substantially alter the existing drainage pattern of the site or area, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site (because development of the Specific Plan area would incorporate improvements to the existing storm drainage infrastructure within the Specific Plan area intended to channel runoff to prevent flooding).

- Implementation of the Specific Plan would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff (because proposed storm drainage infrastructure improvements and compliance with the provisions of the Stormwater Pollution Prevention Plan [SWPPP], which will be developed by the Project Applicant and submitted for the approval of the Regional Water Quality Control Board, would ensure adequate storm drainage capacity and the control of pollutant discharges associated with stormwater runoff within the Specific Plan area).

- Implementation of the Specific Plan would not be expected to otherwise degrade water quality (because new development within the Specific Plan area would need to comply with the provisions of the Stormwater Pollution Prevention Plan [SWPPP], which will be developed by the Project Applicant and submitted for the approval of the Regional Water Quality Control Board).

- Implementation of the Specific Plan would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map (because no portion of the Specific Plan area is located in a mapped flood hazard area).

- Implementation of the Specific Plan would not place structures within a 100-year flood hazard area that would impede or redirect flood flows (because no portion of the Specific Plan area is located within a 100-year flood hazard area, and no structures are proposed that would impede or redirect flood flows).

- Implementation of the Specific Plan would not expose people or structures to a significant loss, injury or death involving flooding (because no portion of the Specific Plan area is located within an area that would be subjected to flooding, including flooding as a result of the failure of a levee or dam).

- Implementation of the Specific Plan would not result in inundation by seiche, tsunami or mudflow (because the Specific Plan area is located on relatively flat terrain at considerable distance from any large body of water that would be susceptible to seiche or tsunami).

Land Use and Planning

- Implementation of the Specific Plan would not physically divide an established community (because the proposed development of the Marina Heights Specific Plan area would occur adjacent to existing residential neighborhoods such as the Abrams "B" area, the Interim, Inc. transitional housing area, the Pueblo del Mar transitional housing area, Preston Park, and the established residential area opposite the former Fort Ord boundary).

Mineral Resources

- Implementation of the Specific Plan would not result in the loss of availability of a known mineral resources that would be of value to the region and the residents of the state (because no such resources have been identified within the Specific Plan area).

- Implementation of the Specific Plan would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan (because no such resources have been identified within the Specific Plan area).

Noise

- Implementation of the Specific Plan would not be expected to generate excessive groundborne vibration or groundborne noise levels (because no activity proposed under the Specific Plan would be expected to generate excessive groundborne vibration or excessive groundborne noise).

- The Specific Plan area is located outside of the Marina Airport Comprehensive Land Use Plan (CLUP) Planning Area Boundary. The possible school site adjacent to the Specific Plan area is located approximately 1.7 miles from the Marina Municipal Airport runway, and this location is consistent with the Monterey County Airport Land Use Commission's April 26, 1999 policy on locating facilities in the vicinity of airports. The Specific Plan area is not located in the vicinity of a private airstrip. Implementation of the Specific Plan would not result in the exposure of people within the Specific Plan area to excessive aviation-related noise.

Population and Housing

- Implementation of the Specific Plan would not induce substantial population growth (because development is proposed in an area that has previously supported housing, where the City of Marina has planned for new residential development in the future).

- Although implementation of the Specific Plan would displace substantial numbers of existing housing, this would not necessitate the construction of replacement housing elsewhere, as the total number of residential units proposed within the Specific Plan area (1,050 units) would exceed the total number of abandoned, deteriorating residential units that would be demolished within the Specific Plan area (828 units).

- Implementation of the Specific Plan would not displace any people (because all housing units within the Specific Plan area to be demolished have been abandoned).

Transportation/Traffic

- Implementation of the Specific Plan would not be expected to result in any changes in air traffic patterns (because the Specific Plan is not located within the Marina Airport Comprehensive Land Use Plan (CLUP) Planning Area Boundary, and because the height of any structure proposed within the Specific Plan area would be limited to a maximum of 35 feet).

- Implementation of the Specific Plan would not result in a substantial increase in traffic hazards due to any design features or incompatible uses (because all roadways proposed within the Specific Plan area would be designed to City of Marina standards, and would be compatible with residential development within the Specific Plan area and vicinity).

- Implementation of the Specific Plan would not result in inadequate emergency access (because proposed roadway improvements within the Specific Plan area would result in enhanced access for emergency vehicles).

- Implementation of the Specific Plan would not result in inadequate parking capacity (because all detached single-family units proposed within the Specific Plan area would have garage space for at least two vehicles, and the attached single-family units [townhomes] would provide additional visitor parking at a ratio of one space for every five units).

Utilities and Service Systems

- Implementation of the Specific Plan would not be expected to exceed wastewater treatment requirements (because the wastewater treatment facility serving the local area has the capacity to adequately serve the proposed level of development within the Specific Plan area).

- Implementation of the Specific Plan would not require the construction of new water or wastewater treatment facilities or expansion of existing facilities (because the existing facilities currently have sufficient capacity to accommodate the water treatment and wastewater treatment demands associated with the level of development proposed within the Specific Plan area).

- Implementation of the Specific Plan would result in the construction of new storm water drainage infrastructure in portions of the Specific Plan area. However, the construction of such infrastructure would meet City of Marina design requirements, and would not be expected to result in significant adverse environmental effects, as compliance with the provisions of an SWPPP approved by the Regional Water Quality Control Board would be required.

- Implementation of the Specific Plan would not require new or expanded entitlements of existing water supplies (because the City of Marina's existing allocation of water for development within the former Fort Ord is sufficient to supply the estimated demand for water within the Specific Plan area at buildout).

- Implementation of the Specific Plan is not expected to result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the projected demand in addition to existing commitments (because the existing capacity of the

regional wastewater treatment facility is sufficient to accommodate the proposed level of development within the Specific Plan area).

- Implementation of the Specific Plan would not result in a level of development that would exceed the permitted landfill capacity of the regional facility (because the regional landfill has sufficient capacity to accommodate projected disposal requirements for an estimated 100 years).

- Implementation of the Specific Plan would be expected to comply with federal, state and local statutes and regulations related to solid waste.

D. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Although the Specific Plan area has largely been previously developed, the proposed development would result in a permanent, irreversible change in the visual appearance of the site. Development of areas within the Specific Plan area that currently provide habitat for special status plant species would represent a permanent, irreversible change in the environment. The placement of impermeable surfaces in portions of the Specific Plan area where they do not currently exist would also be regarded as a significant irreversible change in the environment associated with implementation of the Specific Plan.

E. GROWTH-INDUCING IMPACTS

A project is generally considered growth-inducing if it fosters economic or population growth. Typical growth inducements might be the extension of urban services or transportation infrastructure to a previously unserved (or under-served) area, or the removal of major barriers to development.

Implementation of the Specific Plan is intended to induce population growth in an area that has already been designated for future residential development in the Marina General Plan. Because the City has planned for the ultimate development of the Specific Plan area, and the lands within and surrounding the Specific Plan area are already largely developed and previously supported a population of military families while the former Fort Ord was in active use, implementation of the Specific Plan would not result in new growth or development that would not otherwise be anticipated. Therefore, no significant direct growth-inducing impacts will occur.

Development of the Specific Plan area as proposed would not require any major increases in the capacity of local infrastructure which might later be used to support new housing development elsewhere, and would not result in the extension of infrastructure into areas which might ultimately support new housing.

F. CUMULATIVE IMPACTS

As defined in Section 15355 of the CEQA Guidelines, a cumulative impact consist of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. "Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

The development of the Specific Plan area as proposed would contribute to the projected cumulative increase in traffic along roadways and at intersections in the vicinity.

The development of the Specific Plan area as proposed would contribute to a cumulative increase in regional emissions of air pollutants, which would represent a ***significant*** and ***unavoidable*** adverse impact on regional air quality.

The development of the Specific Plan area as proposed would contribute to the cumulative loss of maritime chaparral acreage within the region. Mitigation for the loss of maritime chaparral habitat and associated special status species as a result of development within the Marina Heights Specific Plan area was provided through establishment of habitat reserve areas elsewhere on Fort Ord.

(This page has been intentionally left blank.)

12

ALTERNATIVES

A. INTRODUCTION

The *CEQA Guidelines* require an EIR to present a reasonable range of alternatives to a project, or to the location of a project, under which most of the project's basic objectives could feasibly be attained. The considered alternatives should focus on the elimination or reduction of significant adverse impacts caused by the proposed project. The alternatives analysis benefits decision makers by providing more complete information about the impacts of land use decisions, and consequently a better understanding of the relationships among all of the environmental topics under evaluation.

This EIR focuses on four alternatives to the Marina Heights Specific Plan, which are designed to examine a range of buildout scenarios for the Specific Plan area. These are:

- The No Project alternative, with no new development occurring within the Specific Plan area;

- The General Plan Consistency alternative, which would result in the development of the Specific Plan area in a manner consistent with the provisions of the Marina General Plan;

- The Mitigated alternative, which would result in the development of the Specific Plan area incorporating measures identified in the Draft EIR to mitigate environmental impacts associated with the Specific Plan; and

- The Citizen-Initiated alternative, which would result in the development of the Specific Plan area in a manner responsive to the expressed concerns of local residents and other interested parties.

Each alternative is compared to the proposed Marina Heights Specific Plan, in terms of its effects on the environment relative to the significant impacts identified for the Specific Plan. At the conclusion of the alternatives analysis, an environmentally superior alternative is identified.

B. NO PROJECT ALTERNATIVE

In 1998, the CEQA Guidelines were amended to recognize that the definition of the no project alternative varies depending on the nature of the project that is being proposed for approval (CEQA Guidelines Section 15126.6(e)(3)). Under the amended Guidelines, the analysis of the no project alternative usually proceeds in one of two ways.

When the project involves the revision of an existing plan, policy, or ongoing operation, a decision to reject the project would leave the existing plan, policy, or operation in place. In this situation, the no project alternative should be defined as a continuation of the existing plan, policy, or operation. In this instance, the "General Plan Consistency" alternative meets these criteria.

If the project is other than a land use or regulatory plan (e.g., a development project on identifiable property), the no project alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects that would occur if the project were to be approved. If disapproval of the project under consideration would result in predictable action by others (i.e., the proposal of some other project at the site), this no project consequence should be discussed. In certain instances, the no project alternative means "no build", wherein the existing environmental setting is maintained (CEQA Guidelines Section 15126.6 (e) (3) (A). For the purposes of this evaluation, the "No Project" alternative can be characterized as a "no build" scenario.

Under the "No Project" alternative, no new construction would be undertaken within the Specific Plan area, and it would remain much as it is today (see **Figure 1.1**, above). No infrastructure improvements would be made within the Specific Plan area, or at the adjacent portion of the former Fort Ord landfill, and no roadway improvements would be made.

Land Use and Planning. Allowing the Specific Plan area to remain in its current condition indefinitely would be in conflict with the Marina General Plan, which has anticipated that this area will ultimately be developed under the Village Homes land

use designation. The General Plan also anticipates that former military multi-family housing in the Abrams Park area may be rehabilitated and retained.

Traffic and Circulation. In the absence of new development within the Specific Plan area, current traffic conditions in the vicinity would remain unchanged from the Baseline Conditions in the near-term and from the Cumulative Without Project Conditions in the long-term (see discussion of Existing Traffic Conditions in Chapter 3). No transportation system improvements directly related to future development within the Specific Plan area (i.e., the development of a new "Main Street" segment linking Abrams Drive with Imjin Road and California Avenue) would be completed under the "No Project" alternative. Existing trails and pathways within the Specific Plan area would be expected to receive limited use or maintenance.

Air Quality. Under the "No Project" alternative, there would be no demolition- or construction-related effects on air quality, as no demolition or construction would be undertaken within the Specific Plan area. In the absence of demolition or the operation of diesel construction equipment, no toxic air contaminants would be released within the Specific Plan area. There would be no increase in emissions related to vehicular traffic originating within the Specific Plan area, since there would be no new traffic generated.

Noise. Noise conditions in the vicinity of the Specific Plan area would remain unchanged under the "No Project" alternative. In the absence of demolition or construction activity, there would be no demolition- or construction-related noise generated at the Marina Heights area. Since there would be no traffic generated at the Marina Heights site in the absence of new development, there would be no new source of traffic-related noise associated with this alternative.

Biological Resources. No biological resources would be affected by any new development within the Specific Plan area under this alternative, as no new development would take place. Areas that support or could potentially support special status plant species (i.e., Monterey spineflower, sand gilia) would not be subject to disturbance such as that associated with grading and site preparation to implement the Specific Plan. On the other hand, there would be no long-term protection for the existing oak grove located within the Specific Plan area, as proposed under the Specific Plan.

Hazards and Hazardous Materials. On-going groundwater remediation efforts on and in the vicinity of the Specific Plan area would continue under the "No Project" alternative. In the absence of demolition activity, there would be no risk of exposure

to asbestos-containing material or lead paint that may be present in abandoned housing units in the Specific Plan area. However, as these units continue to deteriorate, they could represent an "attractive nuisance", and present hazards to unsupervised youngsters that may be trespassing in the Specific Plan area.

Aesthetics/Visual Quality. In the absence of new development in the Specific Plan area, the existing 828 abandoned military housing units would continue to deteriorate. This would result in negative aesthetic effects, as the structures at the site would become more and more dilapidated over time. Existing views into the Specific Plan area from homes, yards and other vantage points in the vicinity would remain unchanged.

Recreation. Under the "No Project" alternative, the City of Marina would be expected to eventually develop the portion of the former Fort Ord landfill as Abrams Park, as shown in the General Plan. However, in the absence of a development proposal for the Specific Plan area, it is uncertain when sufficient funds for Abrams Park development would become available. Existing trails that pass through the Specific Plan area would probably remain in use, although in the absence of development these trails would not be maintained by the City or any other entity (i.e., a maintenance district operated by homeowners within the Specific Plan area). This alternative would provide no additional greenbelt areas within the Specific Plan area, although vacant areas that currently provide greenbelt values would remain in their current condition.

Public Services/Utilities. In the absence of development, there would be no new demand for infrastructure or public services generated from the Specific Plan area under this alternative.

Other Environmental Considerations. Although no cultural resources have been identified at the Specific Plan area, the absence of construction activity under this alternative would mean that there would be no risk of uncovering any buried, unknown cultural resources. No agricultural or mineral resources would be affected under this alternative.

C. GENERAL PLAN CONSISTENCY ALTERNATIVE

Under the "General Plan" alternative, development of the Specific Plan area would take place at the maximum residential density envisioned in the current Marina General Plan, although the development "footprint" within the Specific Plan area would be reduced, leaving a larger portion of the Specific Plan area undeveloped.

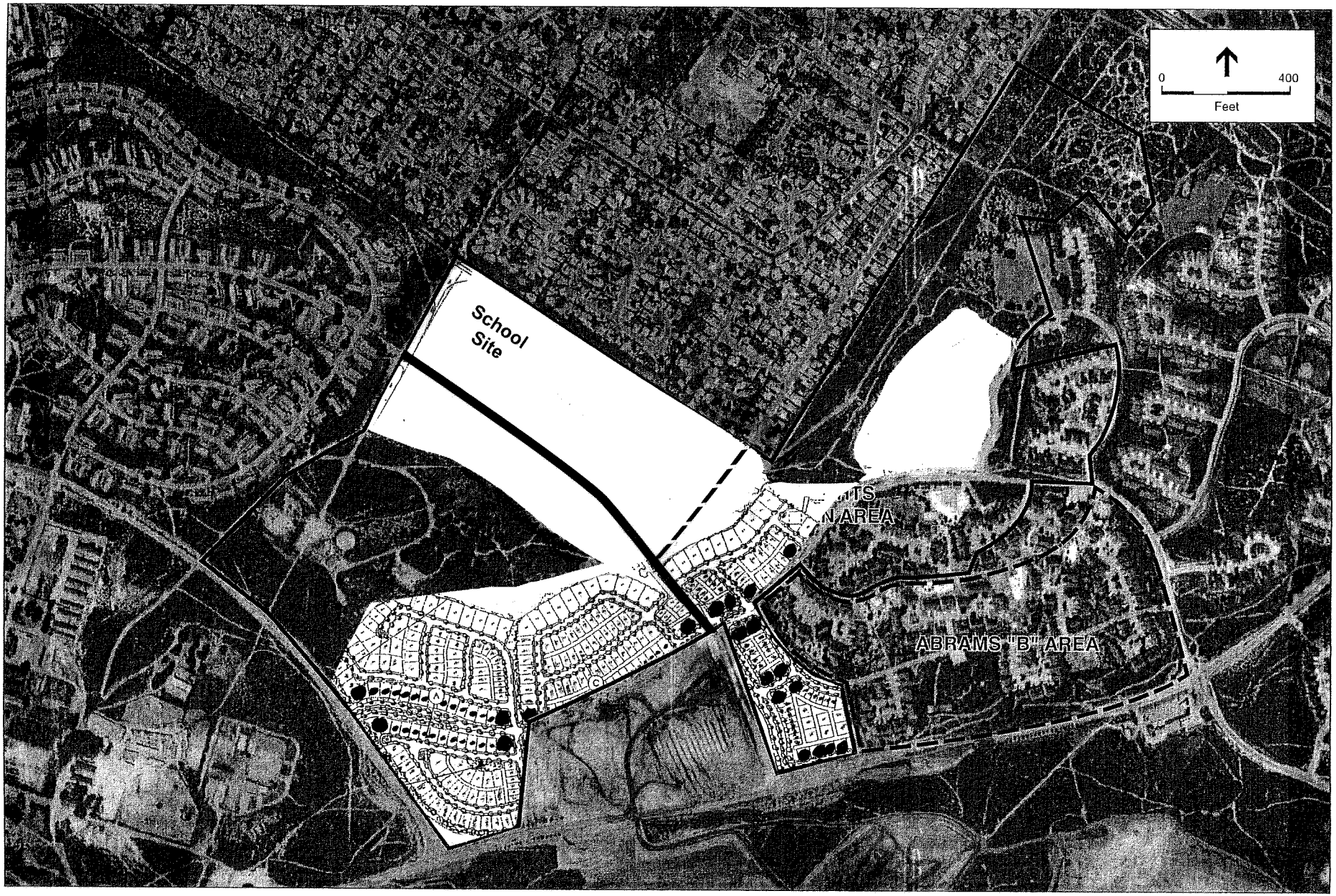
Development within the Specific Plan area would involve the construction or rehabilitation of a total of 720 residential units, 144 of which would meet the City's criteria for affordable housing. For the purposes of defining this alternative to include a rehabilitation component, units identified for rehabilitation within the Specific Plan area were those located in developed residential areas in the eastern portion of the site, adjacent to housing units that have been previously rehabilitated. (under the Marina General Plan, up to 720 of the existing 828 units within the Specific Plan area could, theoretically, be rehabilitated) A total of 98 existing housing units within the Specific Plan area would be rehabilitated under this alternative: 20 along Kumwha Court, 4 along MacArthur Drive, 16 along 32nd Regiment Court, 20 along Bayonet Drive and 38 along Williams Court and Williams Drive. Of these 98 rehabilitated housing units, 19 would need to be classified as "affordable". New development within the remainder of the Specific Plan area would require the demolition of 730 existing abandoned military housing units and the construction of 622 new residential units on approximately 78 acres, at an average density of approximately 8 units per acre. These new units would be:

160 rental apartments (including 80 affordable units) in 20 buildings
210 town homes (including 30 affordable units) in 35 buildings
215 single-family homes (including 5 affordable units)
37 estate homes

As shown in **Figure 12.1**, the apartment buildings would be located at intersections along Abrams Drive and in the vicinity of the segment of the proposed "Main Street" between Abrams Drive and Imjin Road (see large black dots on **Figure 12.1**). Townhomes would be located along Abrams Drive, along the portion of the proposed "Main Street" opposite the proposed park at the former Fort Ord landfill site, and adjacent to the Abrams "B" area (see smaller black dots on **Figure 12.1**). Detached single-family homes would be located in the southwestern corner of the Specific Plan area, adjacent to the Abrams "B" area in the vicinity of Imjin Road and the proposed "Main Street", and between the townhomes along Abrams Drive and the estate homes adjacent to the open space areas in the northern portion of the Specific Plan area.

Space for limited neighborhood-serving commercial uses (i.e., convenience grocery, newsstand, café, dry cleaners, etc.) would be located at street level within two of the apartment buildings (one located near the intersection of Abrams Drive/3rd Avenue, and one located near the intersection of Abrams Drive/12th Street).

Figure 12.1: General Plan Consistency Alternative



Under this alternative, 3rd Avenue would be realigned and provided with Class II bike lanes following demolition of existing residential units in the vicinity, although the existing intersections with Abrams Drive and California Avenue would remain intact. South of Abrams Drive, 3rd Avenue would be extended to intersect with Imjin Road. Carmel Avenue would be extended to join MacArthur Drive east of the Pueblo del Mar residential area, and a paved pedestrian/bike path (of sufficient width to provide emergency vehicle access) would be built to link Bayer Drive to the realigned 3rd Avenue.

A 10-acre site in the northwestern corner of the Marina Heights site would be retained for future use in support of an elementary school. The remaining acreage within the Specific Plan area would be available for the development of parks or recreational facilities to meet the requirements of the General Plan, or would remain generally undeveloped, either as open space or as greenbelt areas supporting trails linking the area with other portions of Marina. The large, undeveloped portions remaining in the Specific Plan area under this alternative could also function as a form of urban reserve, where additional development could take place in the future if the City determines that such development is appropriate and if sufficient water supply and other municipal services become available to support it.

Although a policy to develop a linkage between residential development and job creation has been established in the Marina General Plan, to date no implementation mechanism has been established. The level of construction activity taking place within the Specific Plan area under this alternative would be directly linked to job creation within Marina, with the number of building permits issued in a single year limited to a value that is 50 percent of the total documented net increase in full-time jobs within Marina during the previous year. For example, if the documented net increase in local full-time jobs for the year 2005 is 150, then the total number of residential units for which building permits could be issued for construction in the Specific Plan area for 2006 would not exceed 75. However, the total number of single-family residential units that could be built in any single year in the Specific Plan area could not exceed 200 in any case, in keeping with the limits established in the General Plan. At least 20 percent of all housing built within the Specific Plan in any calendar year would be required to meet the City's criteria for affordable housing. There would be no similar constraint on the phasing of the rehabilitation of existing residential units within the Specific Plan area.

The Abrams Park area adjacent to the Specific Plan area (a portion of the former Fort Ord landfill) would be developed exclusively in recreational uses as funding becomes available, as shown on the current General Plan land use map.

Land Use. For the purposes of the environmental review, the General Plan Consistency alternative is intended to be largely consistent with the City of Marina General Plan (although all decisions related to General Plan consistency are ultimately reserved for the City Council). It would comply with General Plan goals and policies related to development density; it would reserve the former landfill site for future development as a park; it would increase the linkages between the former Fort Ord and Specific Plan area. A proposed school site would be located in the northwestern portion of the Specific Plan area (as indicated in the General Plan), and much of the area's street network would essentially remain the same as it is today, given that many existing residential units would be rehabilitated and not torn down to make way for new homes and a new street network. The development pattern under this alternative illustrates the extent to which compliance with General Plan residential density requirements would result in large portions of the Specific Plan area remaining undeveloped, as at the required density, only about 31 percent of the 248-acre Specific Plan area is needed to provide for the total number of units permitted under the General Plan (720 units) within this portion of the former Fort Ord. Although these large, undeveloped areas could function as a form of "urban reserve", leaving them in an undeveloped state could be regarded as an inefficient use of land that has already been subject to previous development. In addition, identifying a mechanism to enable the removal of existing, deteriorating housing units within those portions of the Specific Plan area where development would not be anticipated under this alternative could be problematic.

Traffic and Circulation. One of the goals of the General Plan is to reduce the dependency of Marina residents on the automobile by providing them other practical and pleasant means of travel. Under the General Plan, the City intends to redevelop existing areas of Marina within the former Fort Ord in patterns and densities that make the provision of frequent regional and local transit economically feasible, and that encourages opportunities for residents to work within the community, thereby reducing the length of vehicle trips. Under this broad framework, the rehabilitation of 98 existing residential units and the construction of 622 new residential units within a portion of the Specific Plan area would increase traffic levels in Marina, though less than would be anticipated under the Specific Plan. Major portions of the Specific Plan area's street network would remain much as it exists today.

With 370 new multi-family housing units, 98 rehabilitated single-family units, and 252 new single-family detached units, trip generation within the Specific Plan area would be estimated at approximately 5,518 new vehicle trips per day, or approximately 57 percent of the total associated with the Specific Plan.

Air Quality. Air quality under this alternative would not be affected to the same extent as anticipated under the Marina Heights Specific Plan. The General Plan Consistency alternative would involve demolition of fewer existing homes in the Specific Plan area (730 vs. 828 under the Specific Plan), and the construction of 622 new residential units (vs. 1,050 under the Specific Plan). Demolition and construction activities would negatively affect air quality through the disturbance of site soils by construction equipment, construction equipment emissions, and the projection of dust particles into the air from demolished buildings. The General Plan Consistency alternative would involve a less intense use of construction equipment and would not contribute as much construction or demolition dust relative to that associated with the Specific Plan. Construction impacts could be reduced to a less than significant level through the use of standard construction dust and construction equipment emission suppression techniques. Traffic-related effects on regional air quality would also be reduced relative to those associated with the Specific Plan, as total vehicle trips per day would be approximately 57 percent of those estimated for development under the Specific Plan. This would be expected to reduce development-related VOC, NO_x and PM_{10} emissions to levels below the significance thresholds established by MBUAPCD.

Noise. Noise impacts under the General Plan Consistency alternative would not be radically different, but would be somewhat less pronounced, than those resulting from the development proposed under the Specific Plan. Construction noise would still be a factor, during demolition, rehabilitation and construction of homes in the Specific Plan area, though not as intense as anticipated under the Specific Plan, since less area would be involved and distance from some existing residential development in the vicinity would be greater. Traffic noise resulting from vehicles originating from rehabilitated and new housing units would be similar to traffic noise associated with development under the Specific Plan, although total daily trip generation rates would be reduced by approximately 43 percent under this alternative relative the Specific Plan

Biology. The General Plan Consistency alternative would reduce disturbance of maritime chaparral areas and areas that currently provide habitat for Monterey spineflower and sand gilia within the Specific Plan area, relative to the level of disturbance anticipated under the Specific Plan. The existing Oak Woodland area would remain intact under this alternative, as under the Specific Plan.

Hazards and Hazardous Materials. Under the General Plan Consistency alternative, the current operation of underground groundwater pumps and wells would continue, in order to remediate groundwater contamination resulting from previous operations

at the former Fort Ord landfill. Housing units rehabilitated under this alternative would undergo asbestos and lead-based paint cleanup processes that would comply with applicable laws and regulations.

Aesthetics. Under this alternative, some residential units within the Specific Plan area would be rehabilitated, while others would be demolished and replaced with new housing. This would produce a certain amount of aesthetic enhancement in the area, in that some existing structures that are currently in a blighted state would be rehabilitated, improving the visual character of the area. However, in areas that would not support development under this alternative, until demolition of deteriorating housing units takes place, they could be expected to continue to have a negative effect on the visual character of the area.

Recreation. Under the General Plan Consistency alternative, all of the Abrams Park portion of the former Fort Ord landfill would be set aside for future development as a park, and a greenbelt area along the Specific Plan area's northern boundaries would be established. The oak woodlands in a western portion of the Specific Plan area would be preserved, and recreational trails would be established in and around the Specific Plan area, in conformance with the General Plan.

Public Services/Utilities. Demand levels would increase for various public services and utilities provided to the Specific Plan area if the General Plan Consistency alternative were to be implemented. This is due to the increased residential population in the area resulting from rehabilitation of existing housing units and construction of new homes in the Specific Plan area. With a smaller population in the Specific Plan area, demand for police and fire protection would be reduced relative to that anticipated under the Specific Plan. Demand for water would be approximately two-thirds that estimated for development under the Specific Plan, and would be close to the estimated water demand value for the area presented for planning purposes in the General Plan. With a reduced number of homes relative to the Specific Plan, this alternative would place less demand on wastewater treatment capacity and on the regional landfill.

Other Environmental Considerations. Although no cultural resources have been identified at the Specific Plan area, grading activities and the construction of new homes within the Specific Plan area could uncover currently undiscovered resources. If such resources were to be uncovered, it would be required that the discovery be followed by a process that complies with applicable laws regarding the protection and preservation of these resources. No agricultural or mineral resources would be affected under this alternative.

D. MITIGATED ALTERNATIVE

Under the Mitigated Alternative, the Specific Plan would be modified through the incorporation of mitigation measures identified in this EIR. In most cases, these mitigation measures would reduce the potentially significant impacts associated with implementation of the Specific Plan to a level of less than significant.

Under this alternative, new development within the Specific Plan area would require the demolition of 828 existing abandoned military housing units and the construction of 1,050 new residential units on approximately 205 developed acres, at an average density of approximately 5.1 units per acre. These new units would be:

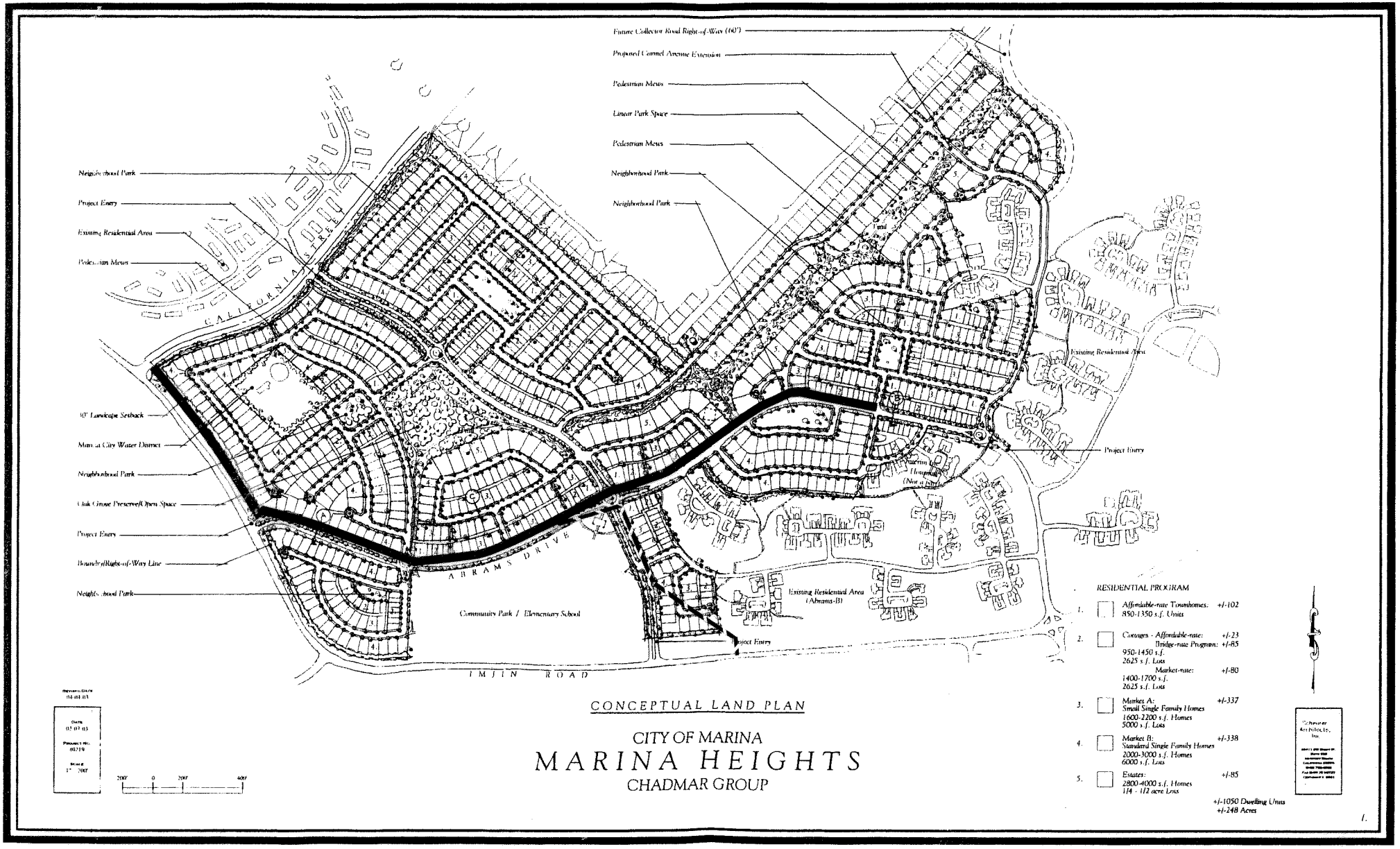
102 town homes
188 cottages
675 single-family homes
85 estate homes

As shown in **Figure 12.2**, the basic features of the Specific Plan development pattern would remain the same. However, along Abrams Drive in the western and central portions of the Specific Plan area (see solid line on **Figure 12.2**), and along the southern portion of the proposed "Main Street" between Imjin Road and Abrams Drive (see dashed line on **Figure 12.2**), realignment of the existing groundwater remediation infrastructure may be undertaken by the Project Applicant, in coordination with the U.S. Army, to retain the roadway alignments and lot patterns as shown in the Specific Plan Conceptual Land Plan.

Land Use. Unlike the General Plan Consistency alternative, implementation of the Mitigated alternative would result in the demolition of all 828 existing residential units within the Specific Plan area and the development of 1,050 new residential units, or approximately 45 percent more units than anticipated under the General Plan. Residential density would be lower than anticipated under the General Plan, and less supportive of cost-effective transit operations than development at densities in the range of 7.5 to 8 units per acre (as required under the Village Homes designation in the General Plan) would be.

Traffic and Circulation. Under the Mitigated alternative, traffic-related impacts would be generally similar to those associated with implementation of the Specific Plan.

Figure 12.2: Mitigated Alternative



CONCEPTUAL LAND PLAN

CITY OF MARINA

MARINA HEIGHTS

CHADMAR GROUP

Air Quality. Implementation of the Mitigated alternative would involve demolition of 828 existing abandoned residential units within the Specific Plan area, followed by construction of 1,050 new homes. Demolition and construction activities would negatively affect air quality through the disturbance of site soils by construction equipment, construction equipment emissions, and the projection of dust particles into the air from demolished buildings. As under the Specific Plan, the implementation of mitigation measures identified in the EIR would be expected to reduce air quality impacts associated with demolition, grading and construction activity to a level of less than significant. Traffic-related effects on regional air quality would be similar to those associated with the Specific Plan: significant and unavoidable.

Noise. Noise impacts under the Mitigated alternative would be similar to those anticipated under the Specific Plan. Construction noise would still be a factor, during demolition, grading and construction of homes on the site. The implementation of the mitigation measures identified in Chapter 5 could be expected to reduce the temporary impacts associated with demolition, grading and construction noise to a level of less than significant. Traffic noise levels would be similar to those associated with the Specific Plan: less than significant.

Biology. The Mitigated alternative would have effects on biological resources similar to those associated with the Specific Plan, as maritime chaparral areas and areas that currently provide habitat for Monterey spineflower and sand gilia within the Specific Plan area would be disturbed. If the HCP and IA are not fully executed prior to construction, the Project Applicant would be required to obtain independent authorization for incidental take for sand gilia, as under the Specific Plan. Other mitigation measures identified in Chapter 6 would reduce identified impacts associated with the Specific Plan and the Mitigated alternative to a level of less than significant. The existing Oak Woodland area would remain intact under this alternative, as under the Specific Plan.

Hazardous Materials. Under the Mitigated alternative, the current operation of underground groundwater pumps and wells would continue, in order to remediate groundwater contamination resulting from operations at the former Fort Ord landfill. In order to reduce hazards associated with possible damage to these facilities, realignment of the existing groundwater remediation infrastructure may be undertaken by the Project Applicant, in coordination with the U.S. Army, to retain the roadway alignments and lot patterns as shown in the Specific Plan Conceptual Land Plan. Other mitigation measures identified in Chapter 7 that are intended to reduce potentially significant Specific Plan-related impacts associated with hazards and hazardous

materials would also be implemented under the Mitigated alternative, reducing these impacts to a level of less than significant.

Aesthetics. Under this alternative, the aesthetic quality of the Specific Plan area would be enhanced as a result of the demolition of existing blighted residential units and construction of new homes and landscaping.

Recreation. Under the Mitigated alternative, the placement of parks and recreational trails within the Specific Plan area would remain generally as shown in the Specific Plan's Conceptual Land Use Plan, although an additional trail or path could be established within the setback area adjacent to the groundwater remediation system expansion pipeline in the south-central portion of the Specific Plan area (see dashed line on **Figure 12.2**). The oak woodlands in a western portion of the Specific Plan area would be preserved and recreational trails would be established in and around the Specific Plan area.

Public Services/Utilities. Demand would increase for various public services and utilities provided to the Specific Plan area if the Mitigated alternative were to be implemented. This is due to the increased residential population in the area resulting from the construction of 1,050 new homes within the Specific Plan area, and the increased level of demand for public services, water wastewater treatment capacity and solid waste disposal would be similar under either the Specific Plan or the Mitigated alternative.

Other Environmental Considerations. Although no cultural resources have been identified within the Specific Plan area, demolition, grading and the construction of new homes in the Specific Plan area could uncover currently undiscovered resources. Any discovery of cultural resources would need to be followed by a process that complies with applicable laws regarding the protection and preservation of these resources. No agricultural or mineral resources would be affected under this alternative.

E. CITIZEN-INITIATED ALTERNATIVE

Under the Citizen-Initiated alternative, development of the Specific Plan area would be accomplished taking the concerns of those within the Marina community that have expressed them into account. Under this alternative, 828 existing residential units within the Specific Plan area would be demolished, and 1,500 new residential units would be developed on approximately 188 acres at an average density of approximately

8 units per acre within the Specific Plan area. Of these, 300 units would be "affordable". These new units would be:

240 rental apartments (all affordable units) in 30 buildings
120 town homes (including 60 affordable units) in 24 buildings
240 cottages
840 single-family homes
60 estate homes

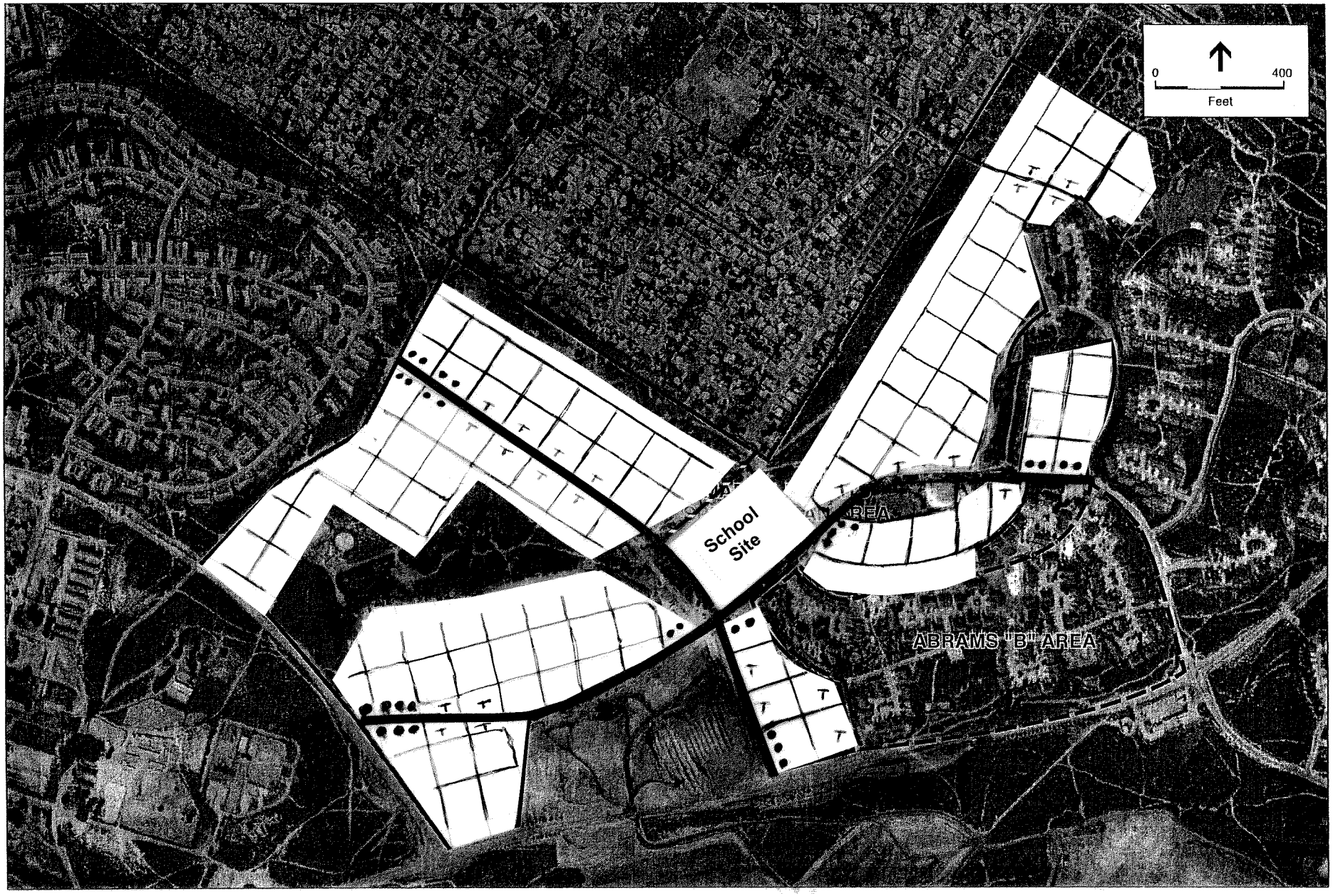
As shown in **Figure 12.3**, the Specific Plan area would be developed into three distinct neighborhoods of approximately 500 residential units each. The northwestern neighborhood would include all units west of the school site and north of the MCWD parcel and the Oak Grove Preserve. The southwestern neighborhood would include all units south and west of the school site and south of the MCWD parcel and the Oak Grove Preserve. The northeastern neighborhood would include all units east of the school site. Apartment buildings would be located near the entry points for each neighborhood, and near the central portion of the Specific Plan area in the vicinity of the school site (see black dots on **Figure 12.3**). Townhomes would be located along Abrams Drive, along the proposed "Main Street", along the proposed Carmel Avenue extension and adjacent to the Abrams "B" area (see "T" symbols on **Figure 12.3**). Cottages and detached single-family homes would generally be located back from the main collectors along a grid-based street network. Estate homes would generally be located adjacent to the open space areas.

Space for limited neighborhood-serving commercial uses (i.e., convenience grocery, newsstand, café, dry cleaners, etc.) would be located at street level within some of the apartment buildings located at neighborhood entry points and in the central portion of the Marina Heights area.

A 10-acre site in the central portion of the Marina Heights site would be retained for future use in support of an elementary school. In conjunction with the proposed community park and limited neighborhood-serving commercial uses in the immediate vicinity, this area would serve as the village center for the Marina Heights area, providing a link joining the three neighborhoods.

The Abrams Park area adjacent to the Specific Plan area (a portion of the former Fort Ord landfill) would be developed exclusively in recreational uses, as shown on the current General Plan land use map.

Figure 12.3: Citizen-Initiated Alternative



Under this alternative, 3rd Avenue would be realigned and provided with Class II bike lanes following demolition of existing residential units in the vicinity, although the existing intersections with Abrams Drive and California Avenue would remain intact. South of Abrams Drive, 3rd Avenue would be extended to intersect with Imjin Road. Carmel Avenue would be extended to join MacArthur Drive east of the Pueblo del Mar residential area, and a paved pedestrian/bike path (of sufficient width to provide emergency vehicle access) would be built to link Bayer Drive to 3rd Avenue.

This alternative emphasizes the establishment of greenbelts, good pedestrian and bicycle access throughout the site., and a traditional grid type street system throughout the Specific Plan area. In order to promote cost-effective transit service, housing would be built at relatively high densities compared to densities anticipated under the Specific Plan, with neighborhoods composed of a variety of house sizes, in order to promote the establishment of mixed-income neighborhoods.

Land Use. Under the Citizen-Initiated alternative, the Specific Plan area would be more transit-oriented, pedestrian friendly, and "traditional" in neighborhood design than development anticipated under the Marina Heights Specific Plan. Housing would consist of medium- to high-density residential units, with some cottages as small as 500 to 800 square feet in size. Units of different sizes would be clustered together, in order to facilitate a mixed income housing distribution in each neighborhood. Residents of the area would have access to limited neighborhood-serving commercial establishments at the "Village Center" area and at the neighborhood entry points, within walking distance of their homes. Residential blocks would be no longer than 350 feet, and few cul-de-sacs would be incorporated within the circulation network.

Although this alternative would be consistent with density requirements of the Marina General Plan, it would result in a level of residential development more than twice that anticipated under the current General Plan and 50 percent more than anticipated under the Specific Plan, and water demand associated with this alternative would exceed the General Plan estimate for water use within the Specific Plan area.

Traffic and Circulation. Under this alternative, the Specific Plan area would become better connected to older parts of the City via new linkages at California Avenue and Carmel Avenue, as under the Specific Plan. This would be accomplished through roadway linkages as well as pedestrian- and bicycle-friendly connections. The oak woodlands and greenbelts located within the Specific Plan area would support pathways and trails, facilitating access to transit for people traveling within the area as well as those leaving and/or entering the site. More access points from the Specific Plan area to Imjin Road would be established than currently exist.

With considerably more housing units than proposed under the Specific Plan, total vehicle trip generation under this alternative would be estimated at approximately 13,020 trips per day, or approximately 34 percent more daily trips than would be generated under the Specific Plan. This could be expected to exacerbate traffic congestion at those intersections where Specific Plan-related impacts and cumulative traffic impacts have been identified as potentially significant (see Chapter 3).

Air Quality. The Citizen-Initiated alternative would involve demolition of all existing residential units within the Specific Plan area, followed by construction of approximately 1,500 new homes. Demolition, grading and construction activities would negatively affect air quality through the disturbance of site soils by construction equipment, construction equipment emissions, and the projection of dust particles into the air from demolished buildings. Air quality impacts resulting from demolition, grading and construction activities could be reduced to a level of less than significant through the effective implementation of the mitigation measures identified in the Draft EIR. Traffic-related effects on regional air quality would also be worsened relative to those associated with the Specific Plan, as vehicle trips per day would be approximately 34 percent greater than those estimated for development under the Specific Plan. This would be expected to increase VOC, NO_x, PM_{10} and CO emissions above the significance thresholds established by MBUAPCD, and would represent a significant and unavoidable environmental impact associated with development under this alternative.

Noise. Noise impacts under the Citizen-Initiated alternative would be more pronounced than those resulting from the development anticipated under the Specific Plan, due to the increased level of construction activity involved with building 1,500 new housing units. Construction noise would be a factor during demolition, grading and construction of new homes. Traffic noise would be somewhat greater than traffic noise associated with the Specific Plan, due to an increased number of daily vehicle trips to and from the site.

Biology. The Citizen-Initiated alternative promotes the preservation of greenbelt areas that have not yet been developed, in order to protect existing flora and fauna in these areas. This alternative would reduce disturbance of maritime chaparral areas and areas that currently provide habitat for Monterey spineflower and sand gilia within the Specific Plan area, relative to the level of disturbance anticipated under the Specific Plan. The existing Oak Woodland area would remain intact under this alternative, as under the Specific Plan.

Hazardous Materials. Under the Citizen-Initiated Alternative, the current operation of underground groundwater pumps and wells would continue, in order to remediate groundwater contamination caused by the former landfill. Relocation of the proposed school site would not be expected to eliminate potential impacts associated with landfill gas, although on-going mitigation by the U.S. Army could be expected to reduce these impacts to a level of less than significant, as under the Specific Plan.

Aesthetics. Under this alternative (as with the Specific Plan), the aesthetic quality of this portion of the former Fort Ord would be enhanced, as a result of the demolition of existing blighted residential units, construction of new homes and the installation of landscaping.

Recreation. Under the Citizen-Initiated alternative, a portion of the former Fort Ord landfill would become a park, and a greenbelt area along the Specific Plan area's northern boundary would be established. Within the greenbelt areas shown in **Figure 12.3**, there would be opportunities for the development of sub-neighborhood parks and trails. The oak woodlands in the western portion of the Specific Plan area would be preserved, and recreational trails would be established in and around the woodlands, connecting them to other trails and greenbelt areas within the Specific Plan area and beyond.

Public Services/Utilities. Demand levels would increase for various public services and utilities provided to the Specific Plan area if the Citizen-Initiated alternative were to be implemented. This is due to an increased residential population in the area resulting from the construction of new homes within the Specific Plan area. This alternative would generate an estimated 1,050 new students to be served by the Monterey Peninsula Unified School District. Demand for other services would also be greater under the Citizen-Initiated alternative than under the Specific Plan, because this alternative would bring in more new residents to the area than would the Specific Plan.

Other Environmental Considerations. Although no cultural resources have been identified within the Specific Plan area, grading and the construction of new homes in the Specific Plan area could uncover currently undiscovered resources. Any discovery of cultural resources would need to be followed by a process that complies with applicable laws regarding the protection and preservation of these resources. No agricultural or mineral resources would be affected under this alternative.

F. COMPARISON OF SPECIFIC PLAN AND ALTERNATIVES

No new development would take place within the Specific Plan area under the No Project alternative. The proposed development pattern under the Specific Plan would differ substantially from development patterns under the General Plan Consistency alternative, the Mitigated alternative, or the Citizen Initiated alternative. **Table 12-1** summarizes the major differences in these development patterns:

TABLE 12-1:
COMPARISON OF SPECIFIC PLAN AND ALTERNATIVES

	Specific Plan	No Project	General Plan Consistency	Mitigated	Citizen-Initiated
Development Acreage	212	0 (178*)	78	205	188
Undeveloped Acreage	35	70	170	43	60
Total Residential Units	1,050	0	720	1,050	1,500
Affordable Units	125#	0	144	210	300
Rehabilitated Units	0	0	98	0	0
Rental Apartments	0	0	80	0	240
Townhomes	102	0	210	102	120
Detached SF Homes	863	0	220	863	1,080
Estate Homes	85	0	37	85	60
Added Population	2,930	0	2,009	2,930	4,185
New Students	735	0	504	735	1,050
Vehicle Trips/ Day	9,760	0	5,518	9.760	13,020
Water Demand (AFY)	292.3	0	170.5	292.3	408.5

* Although no new development would take place under the No Project alternative, existing housing units and infrastructure cover an estimated 178 acres within the Specific Plan area.

An additional 85 units would be developed as "bridge" units, which would be sold at below market rate, which meet the City's criteria for below-market rate housing, but do not meet California Redevelopment law criteria for affordable housing.

G. EVALUATION OF ALTERNATIVES

In evaluating alternatives, different people may assign different weights to the relative importance of specific environmental impacts. For example, some might "give more weight" to potential visual effects than to traffic impacts, while others may feel that traffic related impacts should "carry more weight" in the analysis than air quality impacts. In comparing the Project and the alternatives for this analysis, no specific type of environmental impact was given more impact than any other type of environmental impact.

However, in order to evaluate the proposed Specific Plan and its alternatives in terms of their physical impacts on the environment, each alternative was rated according to whether it would have no impact, a less than significant impact with or without mitigation, or a significant and unavoidable impact. The table below identifies the various areas of the physical environment analyzed in this document for potential impacts that would result from Specific Plan implementation. In comparing the impacts, a weight of "0" was given to an impact category that would have no impact on the environment, a "1" was given if any impact is considered less than significant, a "2" was given if impacts identified would be less than significant only after mitigation, and a "3" was given if potential impacts would be significant and unavoidable even after mitigation.

TABLE 12-2:
EVALUATION OF ALTERNATIVES

Impact Type	Specific Plan	No Project	General Plan	Mitigated	Citizen-Initiated
Aesthetics	1	0	1	1	1
Air Quality	3	0	3	3	3
Biological Resources	2	0	2	2	2
Hazardous Materials	2	0	2	2	2
Land Use (General Plan Consistency)	2	3	0	2	2
Noise	2	0	2	2	2
Public Services & Utilities	2	0	2	2	2
Recreation	2	3	2	2	2
Traffic and Circulation	2	0	2	2	2
Totals	**18**	**6**	**16**	**18**	**18**

Legend: 0 = No Impact 1 = Less Than Significant 2 = Less Than Significant with Mitigation 3 = Significant and Unavoidable

Based on this evaluation, the No Project alternative would be regarded as the "environmentally superior" alternative, **although it would not meet the objectives of the Specific Plan or the City of Marina.** Although environmental effects associated with the No Project alternative would be less than those associated with the Specific Plan or any of the other alternatives, it would be inconsistent with current General Plan land use designations, would not address current on-site problems associated with hazardous materials and visual blight, and would not enable rehabilitation/ reconstruction of abandoned housing within the Specific Plan area. This alternative would not create new active use open spaces, it would not establish new bike lanes and trails, and it would not facilitate vehicular, pedestrian and bicycle connections between the Specific Plan area and the rest of the City of Marina.

Under CEQA, when the No Project alternative has been identified as the "environmentally superior" alternative, one of the other alternatives must then be identified as the "environmentally superior" alternative in the absence of the No Project alternative. Using the scoring system for the evaluation described above, the General Plan Consistency alternative received the next lowest score (16), distinguished from the remaining alternatives in this scoring system only because it is generally consistent with the General Plan. As indicated above, leaving large portions of the Specific Plan area in an undeveloped state under the General Plan Consistency alternative could be regarded as an inefficient use of land that has already been subject to previous development. However, the General Plan Consistency alternative would require less demolition than would be carried out under any of the other development alternatives, would result in less disturbance of biological resources within the Specific Plan area than would any of the other development alternatives, would generate less traffic than the other development alternatives, and would have proportionally lower adverse air quality effects due to reduced trip generation relative to the other development alternatives. For these reasons, the General Plan Consistency alternative would be regarded as the "environmentally superior" alternative in the absence of the No Project alternative.

13

REFERENCES

A. EIR PREPARERS

This Environmental Impact Report was prepared by:

Lamphier-Gregory, Urban Planning - Environmental Analysis
- Joan Lamphier, President
- John Courtney, Senior Planner
- Rudy Calderon, Planner
- Richard Bravin, Planner

Questa Engineering Corporation
- Will Hopkins
- Joe Farrow

Keith Higgins Associates
- Keith Higgins
- Dan Takacs
- Ying Smith

Charles Salter Associates
- Jack Freytag
- Randy Waldeck

Zander Associates
- Leslie Zander, Principal

B. PERSONS AND ORGANIZATIONS CONTACTED

Jeff Dack, Planning Director, City of Marina
Haywood Norton, Senior Planner, City of Marina
John Heiser, Associate Planner, City of Marina
Susan Helinski, City of Marina
Todd Muck, Association of Monterey Bay Area Governments
Janet Brennan, Supervising Planner, Planning and Air Monitoring Division, Monterey Bay Unified Air Pollution Control District
John Ramirez, Monterey County Department of Environmental Health
Mark Reese, U.S. Army
Michael A. Houlemard Jr., Executive Director, Fort Ord Reuse Authority
Charles R. Lande, President, The Chadmar Group
Mary M. Reichel, Project Manager, Tynan Group
Steve Fort, Project Manager, Tynan Group
Michael Shaw, Shur Pacific, Inc.

C. BIBLIOGRAPHY

AHTNA Government Services Corporation, "Quality Control Summary Report OU1, OU2 and Sites 2/12 Groundwater Treatment Plants Third Quarter (July 1 Through September 30) 2002 Former Fort Ord, California", December 3, 2002.

Arthur D. Little Incorporated, "Community Environmental Response Facilitation Act (CERFA) Report, Fort Ord, California", April 8, 1994.

California Native Plant Society, Inventory of Rare and Endangered Vascular Plants of California, Sixth Edition, 2001.

Fort Ord Reuse Authority; Fiscal Year 2001-2002; FORA annual report.

Gross, David F.; U.S. Army Colonel, Garrison Commander, Response to Comments by Scott Allen on FOST Patton and Abrams Polygons, December 22, 1997.

Holtzclaw, John; Clear, Robert; Dittmar, Hank; Goldstein, David; and Haas, Peter; "Location Efficiency: Neighborhood and Socio-Economic Characteristics Determine Auto Ownership and Use - Studies in Chicago, Los Angeles and San Francisco", Transportation Planning and Technology, 2002, Vol. 25, pages 1-27.

Institute of Traffic Engineers, Highway Capacity Manual, 2000.

Institute of Traffic Engineers, Trip Generation, 6th Edition.

IT Corporation, Draft Final Interim Remedial Action Report Groundwater Remedy Operable Unit 2, Former Fort Ord, California, Revision 0, (Total Environmental Contract DACW05-95-D-0001), September 24, 2002.

IT Corporation, Remedial Action Work Plan, Operable Unit 2 Landfill Closure, 1996.

IT Corporation, Draft Final Remedial Action Confirmation Report, Area A, Operable Unit 2 Landfills, 2001.

IT Corporation, Draft Final Post-Closure Operation and Maintenance Plan, Areas B through F (Landfill O & M Plan), 2000.

Monterey Bay Unified Air Pollution Control District, CEQA Air Quality Guidelines, Revised September 2002.

Shaw Environmental and Infrastructure Incorporated, Draft Landfill Gas Ambient Air Monitoring Report September 2002 Monitoring, Operable Unit 2 Landfills, Former Fort Ord, California, Revisions C (Total Environmental Contract DACW05-95-D-0011), January 30, 2003.

TAMC, Fort Ord Transportation Study - Final Report, Transcore, July 8, 1997.

The Chadmar Group, Marina Heights Specific Plan, February 7, 2003.

U.S. Army, 2003a; Former Fort Ord Parcel Database.

U.S. Army, 2003b; Base Realignment and Closure Administrative Record http://www.fortordcleanup.com/adminrec/arsearch.asp).

U.S. Army, Finding of Suitability to Transfer (FOST) Track 0 Parcels, Former Fort Ord, California, August 22, 2002.

U.S. Army, Finding of Suitability for Early Transfer (FOSET) With a CERCLA 120 (h) (3) Covenant Deferral Housing Areas and Former Garrison Parcels, Former Fort Ord, California, December 1, 2001.

U.S. Army, Finding of Suitability To Lease (FOSL) Abrams Park Housing, Former Fort Ord, California, June 5, 2000.

U.S. Army Corps of Engineers, Sacramento District, Draft Final Five Year Review Report First Five-Year Review Report For Fort Ord Superfund Site, Monterey, California, August 23, 2002.

U.S. Army Corps of Engineers, Flora and Fauna Baseline Study of Fort Ord, California (Jones & Stokes Associates), 1992.

U.S. Army Corps of Engineers, Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord, California (Jones & Stokes Associates), 1997.

U.S. Army, Fort Ord Reuse Plan Environmental Impact Report, June 13, 1997.

U.S. Environmental Protection Agency; Soil Screening Guidance User's Guide, July 1996.

APPENDIX A

NOTICE OF PREPARATION, RESPONSES TO NOTICE OF PREPARATION AND WRITTEN COMMENTS SUBMITTED AT THE JANUARY 23, 2003 SCOPING SESSION

REVISED NOTICE OF PREPARATION

TO: Anticipated Responsible and Trustee Agencies, and Other Agencies, Organizations and Individuals

FROM: City of Marina
211 Hillcrest Avenue
Marina, CA 93933

Subject: **REVISED Notice of Preparation of a Draft Environmental Impact Report** for the Marina Heights Project/Abrams "B" Housing project in the City of Marina

---

On January 30, 2003, the City of Marina sent out a Notice of Preparation that the City of Marina will be the Lead Agency and will prepare an Environmental Impact Report for the project identified below. The Notice stated that the City of Marina needs to know the views of responsible and trustee agencies as to the scope and content of the environmental information which is germane to these agencies' statutory responsibilities in connection with the proposed project. Responsible agencies will need to use the EIR when considering permits or other approvals for the project.

Since the January 30, 2003 Notice of Preparation was sent out, the applicant has revised the project. A revised project location, description, and the probable environmental effects are contained in the attached materials (Attachment 1). Language deleted from the original project description is shaded and new language in the revised project description is underlined. No Initial Study is attached because none was prepared as allowed under the provisions of CEQA Guidelines Section 15060, and it was determined early in the process that an EIR would be prepared in accordance with CEQA guidelines.

The Proposed Site Plan that was attached to the January 30, 2003 Notice of Preparation showed 1,050 dwelling units on 248 acres. The acreage on the Proposed Site Plan was incorrect and was less than 248 acres. A Revised Proposed Site Plan for a 248 acre site is attached as Attachment B.

The Probable Environmental Impacts listed in the January 30, 2003, Notice of Preparation have not been changed by the Revised Project Description and Revised Proposed Site Plan.

Due to the 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 Haywood Norton, Senior Planner, at the address shown above. We will need the name of a contact person in your **agency**.

Project Title: Marina Heights Project/Abrams "B" Housing

Project Applicant: Cypress Marina Heights, LP, 2716 Ocean Park Blvd., Suite 3025, Santa Monica, CA 90405, (310) 314-2590.

Date: February 20, 2003 Signature _____

Title Planning Director

Telephone (831) 884-1220
FAX (831) 384-0425

Reference: California Code of Regulation, Title 14, (CEQA Guidelines) Sections 15082(a),15103,15375.

ATTACHMENT 1

MARINA HEIGHTS PROJECT/ABRAMS "B" HOUSING PROJECT

Project Location, Description, and Probable Environmental Impacts

Project Location

The location of the proposed Marina Heights Project/Abrams "B" Housing project is on a 296 324 acre portion of the former Fort Ord. Historically referred to as Abrams Park and Upper Patton Park, the 296 324 acre site is located north/west of Imjin Parkway, east of California Avenue, and south of Reservation Road (Attachment A).

Project Description

As shown on the attached site plan (Attachment B), the Marina Heights Project portion of the project would consist of 1,050 new housing units on a 248 acre site. Currently on the 248 acre site are 828 abandoned residential units, all of which are proposed to be demolished. The makeup of the 1,050 new residential units is proposed as follows:

- 102 market rate, 1and 2-story townhomes dispersed throughout the site. The townhomes would range from 1,200 to 1,500 850 to 1,350 square feet in size, would each have a two-car garage, and would be sited in a tri-plex configuration.

- 188 80 market rate cottage homes sited on 2,625 square foot lots. Each cottage unit would be 2-story, would have a two-car garage, and would range from 1,400 to 1,700 square feet in size. 85 of the proposed cottage homes would be affordable "bridge" units.

- 23 cottage homes at affordable sales prices and 85 cottage homes in an affordable price restricted bridge home program. These cottage units would be 1 or 2 stories, would range from 950 to 1,450 square feet in size, would be sited on 2,625 square foot lots, and would each have a two car garage.

- 337 single-family homes on 5,000 square foot lots. The homes would be 1 or 2 stories, would have a two-car garage, and would range from 1,600 to 2,200 square feet in size.

- 338 single-family homes on 6,000 square foot lots. The homes would be 1 or 2 stories, would have a two-car garage, and would range from 2,000 to 3,000 square feet in size.

- 85 single-family estate homes on quarter to half acre (10,890 to 21,780 square feet) sites. The homes would be 1 or 2 stories, would have a two or three-car garage, and would be

2,800 to 4,000 square feet in size.

Development on the 248 acre of the Marina Heights Project site would include improvement of a 28 acre park/school site between Abrams Drive and Imjin Parkway, establishment of other parks and open spaces, and other appurtenant public improvements. The 28 acre park/school site is in addition to the 248 acres proposed for the Marina Heights Project. All housing types are proposed to be integrated throughout the project with the goal of creating 5 distinct neighborhoods. 20% or 210 of the proposed 1,050 units would meet the City's affordable housing requirements.

The Abrams "B" Housing portion of the project is proposed on 48 acres. There are presently 192 residential units on the site plus 2 former residential units providing ancillary services to the residences. All the units are proposed to be retained by the City of Marina when they are conveyed by the federal government. It is anticipated that additional off street parking will be provided to bring the 192 units into conformance with City Of Marina parking standards.

Vehicle Access to the project is proposed from Imjin Parkway (formerly 12th Street and Imjin Road), the new California Avenue extension, and a proposed road extension to Carmel Avenue. There is an existing Class II bikeway along Imjin Parkway and Class I bikeways are proposed within the project along Abrams Drive and a proposed new street that connects California Avenue and Imjin Parkway.

The proposed average density for the overall project (Marina Heights and Abrams "B") is 4.6 units per acre. The proposed average density for Marina Heights is 4.8 units per acre. The existing General Plan residential land use designation for the site is Single Family Residential for which the average density standard is 5 dwelling units per acre. Existing General Plan policies stipulate that if the existing housing on the Marina Heights site is demolished, the Single Family Residential land use designation is to automatically change to the Village Homes designation for which the average density standard is 8 units per acre.

The Marina Heights site is presently zoned "R-4" Multiple Family Residential. The proposed single family residential units will require the site be re-zoned to R-1 Single Family Residential or to a new "V-H" Village Homes zoning designation that is presently being developed.

Development of the proposed Marina Heights project as submitted would require the initiation and approval of a series of legislative actions and permits from the City including, but not limited to, General Plan Amendments, Zoning Ordinance Amendments, possibly Subdivision Ordinance Amendments, Specific Plan, Tentative Subdivision Map, Design Review Approval and Tree Removal Permit. A Development Agreement is also anticipated. The Abrams "B" Housing proposal would involve the consideration of actions and permits to bring the 194 former Army family housing units into compliance with City regulations. Necessary permits for the Abrams "B" proposal are anticipated to include, but may not be limited to, Use Permit and Design Review Approval.

Probable Environmental Impacts

1. **Land Use and Planning:** The development of the project site as proposed would be inconsistent with the current Marina General Plan in a number of areas, including the proposed residential density at the site (which is lower than required to support transit operations under the General Plan), the lack of a non-residential

component that could be expected to create some long-term job opportunities (to address General Plan concerns related to improving the local jobs/housing balance), the number of new units proposed to be built at Marina Heights each year (which would exceed the number permitted City-wide under the General Plan), and a demand for water in excess of the amount anticipated for the site during a review of the Marina General Plan by the Fort Ord Reuse Authority (where General Plan policies limit future development overall to that which can be supported under established water allocations). Conflicts with the General Plan policies intended to avoid or mitigate adverse environmental effects would represent potentially significant impacts.

2. **Biological Resources:** It is possible that the demolition or construction activity associated with implementation of the proposed project could have substantial adverse impacts on candidate, sensitive, or special-status species on (or in the vicinity of) the project site. The proposed project could interfere substantially with the movement of native resident or migratory wildlife, and will need to be evaluated within the context of the Fort Ord Habitat Management Plan (HMP).

3. **Geology and Soils:** The project site is located in an area that may be subject to strong seismic ground shaking in the event of a major earthquake nearby, which could result in damage to project structures. Unless effectively mitigated, damage that could result from severe ground shaking in the event of a major earthquake would represent a potentially significant environmental impact associated with the proposed project.

4. **Transportation/Traffic:** The development of 1,050 new residential units in the Marina Heights area (not including Abrams "B") would result in an increase in traffic on local roadways. Traffic associated with the proposed development of the area could impact levels of service identified as part of the Monterey County Congestion Management Program network, a potentially significant impact.

5. **Air Quality:** The demolition and construction activity at the project site is expected to generate dust and equipment exhaust that could result in a localized increase in particulate matter (PM-10). In addition, project-related traffic could contribute to regional air pollution. Unless effectively mitigated, exposure of individuals to construction related air pollutants or increased regional pollutants would represent a potentially significant environmental impact associated with the proposed project.

6. **Noise:** During construction at the project site, it is possible that those living in the surrounding area could be exposed to noise levels in excess of established standards, unless effectively mitigated. During demolition and construction activity, noise levels may temporarily increase beyond ambient noise levels in the project vicinity, unless effectively mitigated.

7. **Hydrology and Water Quality.** During construction, it is possible that site preparation could result in violation of water quality standards or discharge requirements, unless effective mitigation can be implemented to prevent such contamination. The proposed project could contribute to erosion or siltation, a potentially significant impact unless effectively mitigated.

The proposed project could result in a change in existing drainage patterns, which could contribute to flooding, a potentially significant impact unless effectively mitigated. It is also possible that the project could result in violation of water quality standards, discharge requirements or otherwise degrade water quality after construction has been completed, unless effective mitigation can be implemented to prevent such contamination.

8. **Utilities and Service Systems:** New stormwater drainage infrastucture would be installed at the project site, which could entail potentially significant impacts. Development of the 1,050 new residential units in the Marina Heights area (not including Abrams "B") would exceed the number of residential units that can be supported by the current water allocation in the area, a potentially significant impact.

9. **Public Services.** The development of 1,050 new residential units in the Marina Heights area (not including Abrams "B") would place additional demands on local school facilities. The project applicant has proposed the dedication of a portion of the existing Abrams Park for use as a school site. This development would place additional demands on existing parks and recreational facilities. The project applicant has proposed the development of a number of parks at the project site and improvements at Abrams Park. These park improvements do not meet the current standards established in the Marina General Plan and represent a potentially significant impact.

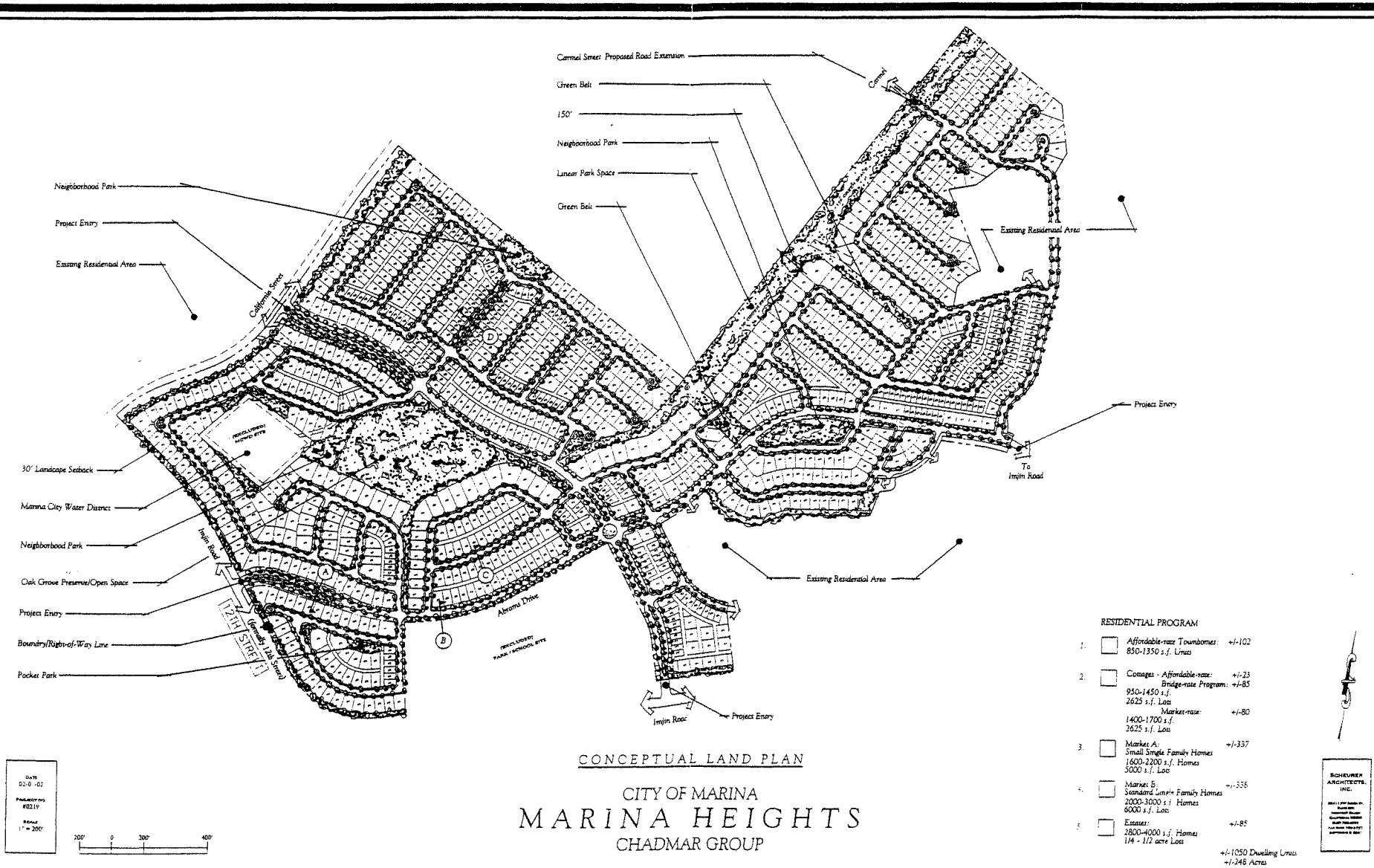
10. **Hazards and Hazardous Materials**: Asbestos and lead-based paints may be present in some of the residential units that would be demolished at the project site. In addition, portions of the project site are adjacent to the former Fort Ord landfill, where long-term groundwater remediation efforts are currently in progress. The development is proposed in and around an area where the Army's past use and possible air and water borne contaminants could represent a potentially significant impact.

11. **Population and Housing:** Development of the project site as proposed would result in the development of 1,050 new residential units in the Marina heights area (not including Abrams "B"). Although the existing residential units in the Marina Heights area once provided housing for up to 828 military households, these units have been vacant for a number of years. The development of new housing at the project site would induce population growth at a level beyond that anticipated in the Marina General Plan, which would represent a potentially significant impact.

PROJECT BOUNDARY



ATTACHMENT A – PROJECT LOCATION



CONCEPTUAL LAND PLAN

CITY OF MARINA

MARINA HEIGHTS

CHADMAR GROUP

ATTACHMENT B
(REVISED) PROPOSED SITE PLAN

NOTICE OF PREPARATION

TO: Attached List of Anticipated Responsible and Trustee Agencies, and Other Agencies, Organizations and Individuals

FROM: City of Marina
211 Hillcrest Avenue
Marina, CA 93933

Subject: **Notice of Preparation of a Draft Environmental Impact Report** for the Marina Heights Project/Abrams "B" Housing project in the City of Marina

---

The City of Marina will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of responsible and trustee agencies as to the scope and content of the environmental information which is germane to these agencies' statutory responsibilities in connection with the proposed project. Responsible agencies will need to use the EIR when considering permits or other approvals for the project.

The project location, description, and the probable environmental effects are contained in the attached materials (Attachment 1). No Initial Study is attached because none was prepared as allowed under the provisions of CEQA Guidelines Section 15060, and it was determined early in the process that an EIR would be prepared in accordance with CEQA guidelines.

Due to the 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 Haywood Norton, Senior Planner, at the address shown above. We will need the name of a contact person in your agency.

Project Title: Marina Heights Project/Abrams "B" Housing

Project Applicant: The Chadmar Group, 2716 Ocean Park Blvd., Suite 3025, Santa Monica, CA 90405, (310) 314-2590.

Date: January 30, 2003 Signature _____ P. Du

Title Planning Director

Telephone (831) 884-1220
FAX (831) 384-0425

Reference: California Code of Regulation, Title 14, (CEQA Guidelines) Sections 15082(a),15103,15375.

ATTACHMENT 1

MARINA HEIGHTS PROJECT/ABRAMS "B" HOUSING PROJECT

Project Location, Description, and Probable Environmental Impacts

Project Location

The location of the proposed Marina Heights Project/Abrams "B" Housing project is on a 296 acre portion of the former Fort Ord. Historically referred to as Abrams Park and Upper Patton Park, the 298 acre site is located north/west of Imjin Parkway, east of California Avenue, and south of Reservation Road (Attachment A).

Project Description

As shown on the attached site plan (Attachment B), the Marina Heights Project portion of the project would consist of 1,050 new housing units on a 248 acre site. Currently on the 248 acre site are 828 abandoned residential units, all of which are proposed to be demolished. The makeup of the 1,050 new residential units is proposed as follows:

- 102 market rate, 2-story townhomes dispersed throughout the site. The townhomes would range from 1,200 to 1,500 square feet in size, would each have a two-car garage, and would be sited in a tri-plex configuration.
- 188 cottage homes sited on 2,625 square foot lots. Each cottage unit would be 2-story, would have a two-car garage, and would range from 1,400 to 1,700 square feet in size. 85 of the proposed cottage homes would be affordable "bridge" units.
- 337 single-family homes on 5,000 square foot lots. The homes would be 1 or 2 stories, would have a two-car garage, and would range from 1,600 to 2,200 square feet in size.
- 338 single-family homes on 6,000 square foot lots. The homes would be 1 or 2 stories, would have a two-car garage, and would range from 2,000 to 3,000 square feet in size.
- 85 single-family estate homes on quarter to half acre (10,890 to 21,780 square feet) sites. The homes would be 1 or 2 stories, would have a two or three-car garage, and would be 2,800 to 4,000 square feet in size.

Development on the 248 acre Marina Heights Project site would include improvement of a 28 acre park/school site between Abrams Drive and Imjin Parkway, establishment of other parks and open spaces, and other appurtenant public improvements. All housing types are proposed to be integrated

throughout the project with the goal of creating 5 distinct neighborhoods. 20% or 210 of the proposed 1,050 units would meet the City's affordable housing requirements.

The Abrams "B" Housing portion of the project is proposed on 48 acres. There are presently 192 residential units on the site plus 2 former residential units providing ancillary services to the residences. All the units are proposed to be retained by the City of Marina when they are conveyed by the federal government. It is anticipated that additional off street parking will be provided to bring the 192 units into conformance with City Of Marina parking standards.

Vehicle Access to the project is proposed from Imjin Parkway (formerly 12th Street and Imjin Road), the new California Avenue extension, and a proposed road extension to Carmel Avenue. There is an existing Class II bikeway along Imjin Parkway and Class I bikeways are proposed within the project along Abrams Drive and a proposed new street that connects California Avenue and Imjin Parkway.

The proposed average density for the overall project (Marina Heights and Abrams "B") is 4.6 units per acre. The proposed average density for Marina Heights is 4.8 units per acre. The existing General Plan residential land use designation for the site is Single Family Residential for which the average density standard is 5 dwelling units per acre. Existing General Plan policies stipulate that if the existing housing on the Marina Heights site is demolished, the Single Family Residential land use designation is to automatically change to the Village Homes designation for which the average density standard is 8 units per acre.

The Marina Heights site is presently zoned "R-4" Multiple Family Residential. The proposed single family residential units will require the site be re-zoned to R-1 Single Family Residential or to a new "V-H" Village Homes zoning designation that is presently being developed.

Development of the proposed Marina Heights project as submitted would require the initiation and approval of a series of legislative actions and permits from the City including, but not limited to, General Plan Amendments, Zoning Ordinance Amendments, possibly Subdivision Ordinance Amendments, Specific Plan, Tentative Subdivision Map, Design Review Approval and Tree Removal Permit. A Development Agreement is also anticipated. The Abrams "B" Housing proposal would involve the consideration of actions and permits to bring the 194 former Army family housing units into compliance with City regulations. Necessary permits for the Abrams "B" proposal are anticipated to include, but may not be limited to, Use Permit and Design Review Approval.

Probable Environmental Impacts

1. **Land Use and Planning:** The development of the project site as proposed would be inconsistent with the current Marina General Plan in a number of areas, including the proposed residential density at the site (which is lower than required to support transit operations under the General Plan), the lack of a non-residential component that could be expected to create some long-term job opportunities (to address General Plan concerns related to improving the local jobs/housing balance), the number of new units proposed to be built at Marina Heights each year (which would exceed the number permitted City-wide under the General Plan), and a demand for water in excess of the amount anticipated for the site during a review of the Marina General Plan by the Fort Ord Reuse Authority (where General Plan

policies limit future development overall to that which can be supported under established water allocations). Conflicts with the General Plan policies intended to avoid or mitigate adverse environmental effects would represent potentially significant impacts.

2. **Biological Resources:** It is possible that the demolition or construction activity associated with implementation of the proposed project could have substantial adverse impacts on candidate, sensitive, or special-status species on (or in the vicinity of) the project site. The proposed project could interfere substantially with the movement of native resident or migratory wildlife, and will need to be evaluated within the context of the Fort Ord Habitat Management Plan (HMP).

3. **Geology and Soils:** The project site is located in an area that may be subject to strong seismic ground shaking in the event of a major earthquake nearby, which could result in damage to project structures. Unless effectively mitigated, damage that could result from severe ground shaking in the event of a major earthquake would represent a potentially significant environmental impact associated with the proposed project.

4. **Transportation/Traffic:** The development of 1,050 new residential units in the Marina Heights area (not including Abrams "B") would result in an increase in traffic on local roadways. Traffic associated with the proposed development of the area could impact levels of service identified as part of the Monterey County Congestion Management Program network, a potentially significant impact.

5. **Air Quality:** The demolition and construction activity at the project site is expected to generate dust and equipment exhaust that could result in a localized increase in particulate matter (PM-10). In addition, project-related traffic could contribute to regional air pollution. Unless effectively mitigated, exposure of individuals to construction related air pollutants or increased regional pollutants would represent a potentially significant environmental impact associated with the proposed project.

6. **Noise:** During construction at the project site, it is possible that those living in the surrounding area could be exposed to noise levels in excess of established standards, unless effectively mitigated. During demolition and construction activity, noise levels may temporarily increase beyond ambient noise levels in the project vicinity, unless effectively mitigated.

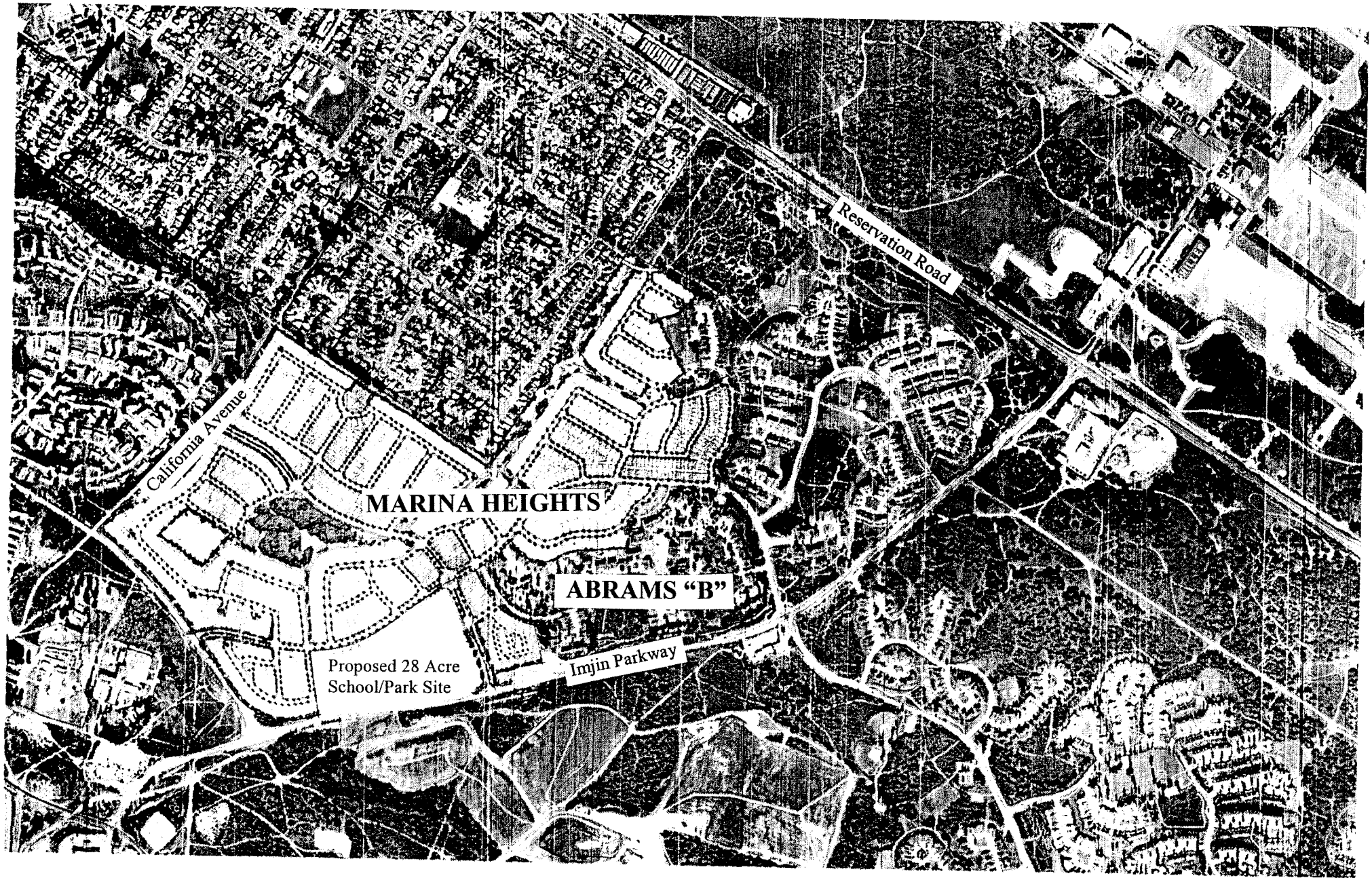
7. **Hydrology and Water Quality.** During construction, it is possible that site preparation could result in violation of water quality standards or discharge requirements, unless effective mitigation can be implemented to prevent such contamination. The proposed project could contribute to erosion or siltation, a potentially significant impact unless effectively mitigated. The proposed project could result in a change in existing drainage patterns, which could contribute to flooding, a potentially significant impact unless effectively mitigated. It is also possible that the project could result in violation of water quality standards, discharge requirements or otherwise degrade water quality after construction has been completed, unless effective mitigation can be implemented to prevent such contamination.

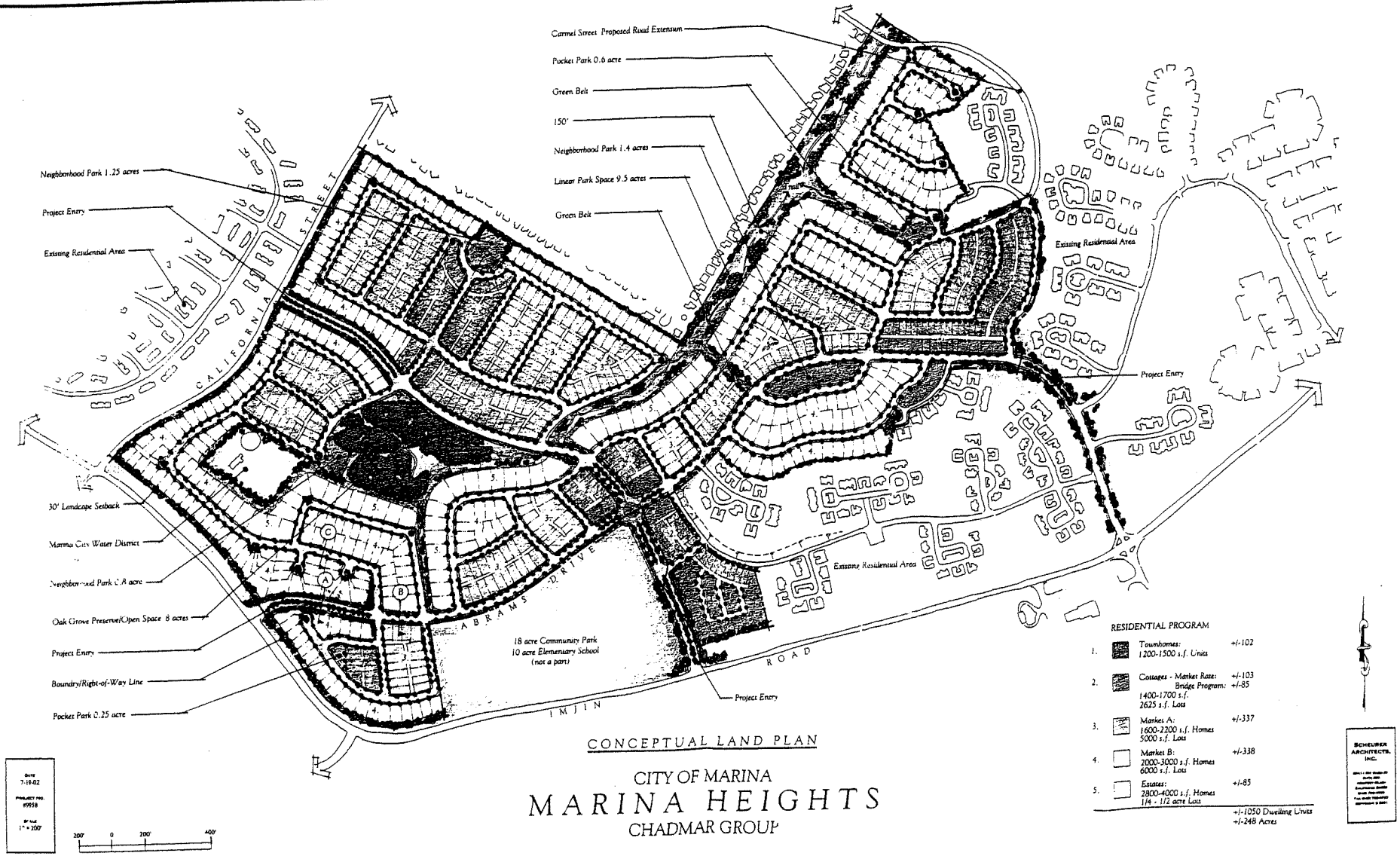
8. **Utilities and Service Systems:** New stormwater drainage infrastucture would be installed at the project site, which could entail potentially significant impacts. Development of the 1,050 new residential units in the Marina Heights area (not including Abrams "B") would exceed the number of residential units that can be supported by the current water allocation in the area, a potentially significant impact.

9. **Public Services.** The development of 1,050 new residential units in the Marina Heights area (not including Abrams "B") would place additional demands on local school facilities. The project applicant has proposed the dedication of a portion of the existing Abrams Park for use as a school site. This development would place additional demands on existing parks and recreational facilities. The project applicant has proposed the development of a number of parks at the project site and improvements at Abrams Park. These park improvements do not meet the current standards established in the Marina General Plan and represent a potentially significant impact.

10. **Hazards and Hazardous Materials:** Asbestos and lead-based paints may be present in some of the residential units that would be demolished at the project site. In addition, portions of the project site are adjacent to the former Fort Ord landfill, where long-term groundwater remediation efforts are currently in progress. The development is proposed in and around an area where the Army's past use and possible air and water borne contaminants could represent a potentially significant impact.

11. **Population and Housing:** Development of the project site as proposed would result in the development of 1,050 new residential units in the Marina heights area (not including Abrams "B"). Although the existing residential units in the Marina Heights area once provided housing for up to 828 military households, these units have been vacant for a number of years. The development of new housing at the project site would induce population growth at a level beyond that anticipated in the Marina General Plan, which would represent a potentially significant impact.


Reservation Road
California Avenue
MARINA HEIGHTS
ABRAMS "B"
Proposed 28 Acre
School/Park Site
Imjin Parkway



CONCEPTUAL LAND PLAN

CITY OF MARINA

MARINA HEIGHTS

CHADMAR GROUP

ATTACHMENT B
PROPOSED SITE PLAN

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse

Gray Davis
Governor

Tal Finney
Interim Director

Notice of Preparation

February 4, 2003

To: Reviewing Agencies

Re: Marina Heights Project/Abrams "B" Housing
SCH# 2003021012

Attached for your review and comment is the Notice of Preparation (NOP) for the Marina Heights Project/Abrams "B" Housing 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:

Haywood Norton
City of Marina
211 Hillcrest Avenue
Marina, CA 93933

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
Associate Planner, State Clearinghouse

Attachments
cc: Lead Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2003021012
Project Title Marina Heights Project/Abrams "B" Housing
Lead Agency Marina, City of

Type NOP Notice of Preparation

Description The Marina Heights project would consist of 1,050 new housing units on a 248 acre site. Currently on the 248 acre site are 828 abandoned residential units, all of which are proposed to be demolished. The makeup of the 1,050 new residential units is proposed. Development on the 248 acre project site would also include improvement of a 28 acre park/school site between Abrams Drive and Imjin Parkway, establishment of other parks and open spaces, and other appurtenant public improvements.

Lead Agency Contact

Name Haywood Norton
Agency City of Marina
Phone 310 314-2590 **Fax**
email
Address 211 Hillcrest Avenue
City Marina **State** CA **Zip** 93933

Project Location

County Monterey
City Marina
Region
Cross Streets California Avenue, Imjin Parkway, Reservation Road
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways
Waterways
Schools
Land Use R-4 Multiple Family Residential
R-1 Single Family Residential
V-H Village Homes

Project Issues Landuse; Biological Resources; Geologic/Seismic; Traffic/Circulation; Air Quality; Noise; Water Quality; Public Services; Toxic/Hazardous; Population/Housing Balance

Reviewing Agencies Resources Agency; Department of Conservation; Department of Parks and Recreation; Reclamation Board; Department of Fish and Game, Region 3; Native American Heritage Commission; State Lands Commission; Caltrans, District 5; Department of Housing and Community Development; California Highway Patrol; Air Resources Board, Major Industrial Projects; State Water Resources Control Board, Division of Water Quality; Regional Water Quality Control Board, Region 3; Department of Toxic Substances Control

Date Received 02/03/2003 **Start of Review** 02/03/2003 **End of Review** 03/04/2003

Note: Blanks in data fields result from insufficient information provided by lead agency.

Resources Agency

- [x] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  Suzi Betzler
- [ ] **California Coastal Commission**
  Elizabeth A. Fuchs
- [x] **Dept. of Conservation**
  Roseanne Taylor
- [ ] **Dept. of Forestry & Fire Protection**
  Allen Robertson
- [ ] **Office of Historic Preservation**
  Hans Kreutzberg
- [x] **Dept of Parks & Recreation**
  B. Noah Tilghman
  Environmental Stewardship Section
- [x] **Reclamation Board**
  Pam Bruner
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [ ] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou

Health & Welfare

- [ ] **Health & Welfare**
  Wayne Hubbard
  Dept. of Health/Drinking Water

Food & Agriculture

- [ ] **Food & Agriculture**
  Steve Shaffer
  Dept. of Food and Agriculture

Fish and Game

- [ ] **Dept. of Fish & Game**
  Scott Flint
  Environmental Services Division
- [ ] **Dept. of Fish & Game 1**
  Donald Koch
  Region 1
- [ ] **Dept. of Fish & Game 2**
  Banky Curtis
  Region 2
- [x] **Dept. of Fish & Game 3**
  Robert Floerke
  Region 3
- [ ] **Dept. of Fish & Game 4**
  William Laudermilk
  Region 4
- [ ] **Dept. of Fish & Game 5**
  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**
  Tom Napoli
  Marine Region

Independent Commissions

- [ ] **California Energy Commission**
  Environmental Office
- [x] **Native American Heritage Comm.**
  Debbie Treadway
- [ ] **Public Utilities Commission**
  Ken Lewis
- [x] **State Lands Commission**
  Betty Silva
- [ ] **Governor's Office of Planning & Research**
  State Clearinghouse Planner
- [ ] **Colorado River Board**
  Gerald R. Zimmerman
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Lyn Barnett
- [ ] **Office of Emergency Services**
  John Rowden, Manager
- [ ] **Delta Protection Commission**
  Debby Eddy
- [ ] **Santa Monica Mountains Conservancy**
  Paul Edelman

Dept. of Transportation

- [ ] **Dept. of Transportation 1**
  Mike Eagan
  District 1
- [ ] **Dept. of Transportation 2**
  Don Anderson
  District 2
- [ ] **Dept. of Transportation 3**
  Jeff Pulverman
  District 3
- [ ] **Dept. of Transportation 4**
  Tim Sable
  District 4
- [x] **Dept. of Transportation 5**
  David Murray
  District 5
- [ ] **Dept. of Transportation 6**
  Marc Bimbaum
  District 6
- [ ] **Dept. of Transportation 7**
  Stephen J. Buswell
  District 7
- [ ] **Dept. of Transportation 8**
  Linda Grimes,
  District 8
- [ ] **Dept. of Transportation 9**
  Gayle Rosander

  District 9
- [ ] **Dept. of Transportation 10**
  Tom Dumas
  District 10
- [ ] **Dept. of Transportation 11**
  Bill Figge
  District 11
- [ ] **Dept. of Transportation 12**
  Bob Joseph
  District 12

Business, Trans & Housing

- [x] **Housing & Community Development**
  Cathy Creswell
  Housing Policy Division
- [ ] **Caltrans - Division of Aeronautics**
  Sandy Hesnard
- [x] **California Highway Patrol**
  Lt. Julie Page
  Office of Special Projects
- [ ] **Dept. of Transportation**
  Ron Helgeson
  Caltrans - Planning
- [ ] **Dept. of General Services**
  Robert Sleppy
  Environmental Services Section

Air Resources Board

- [ ] Airport Projects
  Jim Lerner
- [ ] Transportation Projects
  Kurt Karperos
- [x] Industrial Projects
  Mike Tollstrup

- [ ] **California Integrated Waste Management Board**
  Sue O'Leary
- [ ] **State Water Resources Control Board**
  Diane Edwards
  Division of Clean Water Programs
- [x] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Mike Falkenstein
  Division of Water Rights
- [x] **Dept. of Toxic Substances Contro**
  CEQA Tracking Center

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [x] **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)

MONTEREY BAY
Unified Air Pollution Control District
serving Monterey, San Benito, and Santa Cruz counties

AIR POLLUTION CONTROL OFFICER
Douglas Quetin

24580 Silver Cloud Court • Monterey, California 93940 • 831/647-9411 • FAX 831/647-8501

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
Santa Cruz County

Bob Cruz
San Benito County

Tony Gualtieri
Capitola

Edith Johnsen
Monterey County

Butch Lindley
Monterey County

Arturo Medina
San Juan Bautista

John Myers
King City

February 7, 2003

CITY OF MARINA
FEB 11 2003
PLANNING

Jeff Dack
Planning Director
City of Marina
211 Hillcrest Avenue
Marina, CA 93933

SUBJECT: NOP OF AN EIR FOR MARINA HEIGHTS PROJECT

Dear Mr. Dack:

Staff has reviewed the referenced document and has 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 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 PM_{10} emissions should be quantified. If emissions would exceed 82 lb/day, the project would have a significant impact on air quality. However, PM_{10} 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.

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 2000 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.

The District's CEQA Air Quality Guidelines can be used to help prepare the air quality analysis. The Guidelines were recently amended, and an updated copy is available at the District's website - www.mbuapcd.org. Please do not hesitate to call if you have any questions.

Sincerely,

Janet Brennan

Janet Brennan
Supervising Planner
Planning and Air Monitoring Division

c: Nicolas Papadakis, AMBAG

HOUSING AUTHORITY
COUNTY OF MONTEREY

CENTRAL OFFICE:
123 RICO ST.
SALINAS, CA 93907
831-424-2892
831-649-1541
FAX 831-424-9153
TDD 831-754-2951

February 21, 2003

Haywood Norton
Senior Planner
City of Marina
211 Hillcrest Avenue
Marina, CA 93933

Re: Marina Heights Projects/Abrams "B" Housing
Response to Notice of Preparation of a Draft Environmental Impact Report

Dear Mr. Norton:

The Housing Authority of the County of Monterey (HACM) appreciates the opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report for the Marina Heights Project/Abrams "B" Housing project in the City of Marina.

The HACM is the owner of Pueblo del Mar, a 2.5 acre site consisting of 56 homes adjacent to the Marina Heights project. We have several major concerns about the project description and especially about the conceptual land plan for this development.

- Transportation – The proposed Road Extension for Carmel Street is a major road and would direct a significant amount of traffic directly behind the homes at Pueblo del Mar. This property has over 100 children and this major road would be a major safety issue for these families. We urge the City to require appropriate sound walls be constructed between this major road and the Pueblo del Mar community in the final design.
- There is inconsistency in the number of affordable homes in this preliminary plan. On page 1 the only affordable homes described are the 188 cottage homes. The townhomes are considered market rate. On the top of page two it mentions that 20% or 210 of the units would meet the City's affordable housing requirements. On the proposed site plan it shows only 85 cottages bridge homes.
- We agree with the Land Use and Planning impact that the development of the project as proposed has very low densities and no commercial space that supports the community. This is inconsistent with the efforts to develop livable communities.
- We like the idea of developing several distinct neighborhoods and integrating the various housing types throughout the project. However, the preliminary plan design clearly does not. It pockets the smaller and lower price homes together and the estate homes together.

We would also like to discuss with the City and the developer our idea (proposed in a separate letter to the Mayor) about developing a more socio-economic integrated

community or village around the newly constructed Nancy Dodd Community Center and park at Pueblo del Mar.

Thank you for this opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report for Marina Heights.

Sincerely,

Alan Styles
Chair
Board of Commissioners

February 21, 2003

Ila Mettee-McCutchon, Mayor
City of Marina
211 Hillcrest Avenue
Marina, CA 93933

Dear Mayor Mettee-McCutchon

Re: Proposal for Marina Heights – Pueblo del Mar Phase II

In response to the preliminary design plan for Marina Heights we have serious concerns about the impact of this design on Pueblo del Mar, the adjacent community, and we are requesting an opportunity to discuss our concerns and present possible solutions.

The Pueblo del Mar Recovery Community (PDM) opened it doors on December 4, 1998. PDM is a model partnership between Sun Street Centers, City of Marina, Department of the Army, Department of Social Services, Department of Behavioral Health, Children's Services International, Housing Authority of Monterey County and the State of California Department of Housing and Community Development. PDM has received several national recognitions: *Exemplary Program 2000* by the California State Association of Counties; *2000 National Award of Merit* by the National Association of Housing and Redevelopment Officials; and the *2000 Meritorious Achievement and Home Project Award* by the National Association of Local Housing Finance Agencies. There are 56, 2 bedroom units on a 7 acre parcel, located in the City of Marina on the former Fort Ord, which provides housing and services for up to two years for families.

PDM has served to date, 479 individuals, 181 adults and 298 children. In serving the 181 adults, 80% of the participants continue to live alcohol and drug free lives. 91 or 50% have successfully completed the program and an additional 53 adults or 29% are still in the program. Only 37 adults or 20% did not complete the program, an amazingly low statistic for this population. The graduates have gone on to take responsibility and steps toward self-sufficiency including:

- 2 families purchased a home
- 21 participants received their GED
- 20 obtained a career through trade school
- 52 participants were discharged off parole/probation
- 50 are no longer TANF participants
- 30 participants were on Junior College honor rolls
- 27 participants obtained drivers licenses
- 23 participants closed child protective services cases

The PDM program is a transitional living program for homeless families who have committed to their alcohol/drug recovery process and self-sufficiency. A sense of pride and community is developed in an alcohol/drug free environment, where residents build social networks and support systems designed to foster positive lifestyles. The program offers residents on-site case management; 12-step programs; cooperative child care during meetings; family services; affordable housing; youth programs; support groups; job training; counseling; recreational programs; child care for eligible children with Children's Services International. The program assists families to develop skills to remain alcohol/drug free and become better parents and productive community members with a hope and vision for a brighter future for themselves and their children.

Attached to this letter are copies of two previous letters (dated 1999 and 2001) that the Housing Authority of the County of Monterey sent to the City of Marina requesting the possibility of acquiring the 34 units on San Pablo Court. Both letters were never answered. The purpose of the request to purchase the units on San Pablo Court has been both to ensure a safe and secure neighborhood for the residents of Pueblo del Mar and also to create permanent housing for graduates of this successful transitional housing program.

We are very concerned that the development of the Marina Heights property directly adjacent to Pueblo del Mar will disrupt this community's success. The preliminary plan has estate homes adjacent to the Pueblo del Mar neighborhood. Because there is no cohesive transitional community design between these two neighborhoods it could create socio- economic barriers.

We would like to discuss with the City of Marina and the Chadmar Group the redevelopment of the adjacent site to Pueblo del Mar that includes the current San Pablo Court. We would like to either purchase the existing housing on San Pablo Court and/or work with the Master Developer to design a community or village around the Nancy Dodd Community Center that provides for better neighborhood and community transition. This will also maximize the use of this center that both the City of Marina and the County have invested in. The additional units developed or rehabilitated around the Nancy Dodd Community Center could contribute to the Inclusionary Housing requirement and we could assist with the financing and/or the construction or rehabilitation of these units to ensure affordability. This community or village design would meet the *New Urbanism* and *Livable Communities* ideals that have been discussed in many of the development designs for Fort Ord. The Nancy Dodd Community Center already exists and could provide a nice focal point from which to develop a larger community design.

As you know the Nancy Dodd Community Center will provide services to support families in recovery. There are also many people in the County that would like to live in a clean and drug free community that supports them. There is less crime without alcohol and drugs and the Pueblo del Mar community association has already proven itself in providing effective enforcement of appropriate social behaviors. Expanding the use of the supportive services out of the Nancy Dodd Community Center and expanding the existing community association of Pueblo del Mar makes better use of limited resources in the community. This type of planned community makes good public policy on a number of fronts.

We will be contacting you to discuss these ideas in the next week and we would like to offer you the opportunity to tour our community, Pueblo del Mar, at your earlier convenience. We appreciate your consideration of our request as you further develop the Marina Heights project.

Sincerely,

Alan Styles,
Chair
Housing Authority of the County of Monterey

Vic Collins
President
Sun Street Centers

Attached: Prior letters

cc:
C. Michael Morrison, Mayor Pro Tem
Bruce C. Delgado, Council Member
Ken Gray, Council Member
Dave McCall, Council Member
Anthony Altfeld, City Manager
Jeffrey Dack, Planning Director
Haywood Norton, Senior Planner
Chadmar Group

Marina Heights Mtg 1/22/03

DATE

Questions:

1) Could you provide in writing the requirements for affordable housing developments (affordable cottage village + ~~re~~estate housing of each proposed in Town)?
2) Where + to whom does one submit an application to purchase one of these homes? Rental?
3) Could you provide in writing, what buildings would be developed in this Marina Project + where exactly? (including square footage)
4) Could you provide residents with a map of the proposed development in this area?
5) Could you clarify exactly where the entrance of the proposed Bayer Dr. will be and how it will connect to Road?
6) Could you address where these Marina Heights residents will work? What is being done to provide local jobs for this project's residents?
7) I was told by the planning dept that 150 ft from the Bayer Dr resident homes will be kept as greenbelt. Is this still VALID or has there been a change?
8) Will Bayer Drive residents keep their chain link fence or will these fences need to be changed?
9) Who will pay for removing these chain link fences + build wooden fences?

PREPARED BY

10) What will happen to the wild life that is currently on Fort Ord? Will they be moved?

11) What Noise pollution will this new development present to Bayer Drive and all Residents?

12) What is being done to provide privacy and security to Bayer Drive Residents that do have rear yards, contiguous to the development?

13) Will Marina residents receive home priority in purchasing one of the Marina Heights homes?

14) How will you get answers to these questions and those given at the Marina Residents meeting?

High density clustered around oak woodland

~~detached single family~~ 900 sq. ft.
limit cottage size not to exceed

Additional access to site (CA. & IMJIN)

Relocation of school site or separate out 10 acres
from @ 2 acres
away from Imjin

Mixed use near Imjin Rd.

Infill in Abrahms B

Mix of income in Abrahms B

Road to wrap around oak woodland

~~back to Keili~~ Ct.

Link @ water Tower.

city retains "land trust" (ownership) to assist in cost of new affordable housing

Park by Keili Ct. ↓
Expand park to be a boulevard linking w/ oak
(extend) woodland

Additional linkage to Fiesta / Abrahms B

Mix of housing types on a block

Given success of windy Hill park min. 1.75 park size, both neighborhood parks expanded

February 27, 2003

Planning Commission
City of Marina
Marina, CA 93933

Dear Chairperson and Members of the Marina Planning Commission:

We are writing this letter to formally convey our input for consideration under the Citizen's Alternative for the Marina Heights – Abrams B project. It is our understanding that the Citizen's Alternative Plan will be included in the Environmental Impact Review that is currently being prepared for the Planning Commission.

We ask that the Citizen's Alternative contain the following points. These points are consistent with the provisions contained within the General Plan.

1. Marina Heights be designed as a mixed-use (i.e., commercial and residential) community.
2. Housing units within Marina Heights be mixed and not clustered according to price.
3. Require the developer to construct at least 30% of the homes as affordable housing.
4. Maintain the same level of affordable housing in Abrams B as is required in point 3.

Thank you for your consideration.

Cordially,

David Styer

Jane Styer

Jane and David Styer
565 Ingman Court
Marina, CA 93933

TAMC
TRANSPORTATION AGENCY
FOR MONTEREY COUNTY

Regional Transportation Planning Agency • Congestion Management Planning
Local Transportation Commission • Monterey County Service Authority for Freeways & Expressways

February 27, 2003

Haywood Norton, Senior Planner
City of Marina Planning Department
211 Hillcrest Avenue
Marina, CA 93933

SUBJECT: Marina Heights

Dear Mr. Norton:

Our agency has reviewed the Revised Notice of Preparation of a Draft Environmental Impact Report for the Marina Heights Project/ Abrams "B" Housing for the City of Marina and Cypress Marina Heights, L.P. The Transportation Agency for Monterey County (TAMC) serves as the regional transportation planning agency (RTPA) and the congestion management agency (CMA) for Monterey County. TAMC offers the following comments for your consideration:

1) TAMC agrees with the City of Marina's determination that the Marina Heights project could potentially have a significant impact on the regional transportation system. TAMC wishes to ensure that any such impact is appropriately mitigated through the collection of a transportation impact fee or fair share contribution that accounts for any improvements needed to mitigate the project's regional impacts.

2) The traffic and circulation element in the Draft EIR should address how the proposed improvements will be consistent with the traffic level of service (LOS) standards and/or goals in the Monterey County Congestion Management Program (CMP) and Regional Transportation Plan (RTP).

3) The traffic analysis in the Draft EIR should include information on existing traffic volumes within the study area, including U.S. Highway 1 and Reservation Road. This information should be based upon recent traffic counts.

4) The traffic and circulation element in the Draft EIR should include a Level of Service (LOS) analysis for "existing conditions" and "cumulative conditions". The cumulative analysis should include a LOS analysis for long-range conditions, such as General Plan build-out conditions.

[OVER]

55-B Plaza Circle, Salinas, CA 93901-2902 • Tel: (831) 775-0903 • Fax: (831) 775-0897 • Website: www.tamcmonterey.org

5) The methodology used to calculate the LOS should be consistent with the methods in the current version of the Highway Capacity Manual (HCM). All LOS calculations should be included in the Draft EIR as an appendix and made available for public review.

6) The traffic and circulation element should include a discussion of the methodology that was used to develop the future traffic projections. The land use and circulation system assumptions used in the future traffic projections should also be clearly explained.

7) The traffic mitigations for each phase should be clearly identified in the Draft EIR.

8) The Draft EIR should include a discussion of any alternative transportation measures to be implemented as part of the proposed project (refer to the attached list).

9) The traffic and circulation element in the Draft EIR should discuss the project's consistency with the TAMC General Bikeways Plan as well as the County's bikeway plan. Pedestrian access should be provided to and through the development. Any bicycle and pedestrian facilities to be implemented as part of the proposed project should be identified in the Draft EIR.

10) TAMC staff recommends the incorporation of bicycle and pedestrian paths of travel through and to the development and to transit stops. Please see the attached list of suggested mitigation measures and consider using some or all of these measures to mitigate the transportation impacts of this project. TAMC staff would particularly like to encourage Americans with Disabilities Act (ADA)-compliant pedestrian paths of travel to and through the development and bicycle storage facilities in the development.

11) TAMC staff would like to echo Alan Forrest, Planning Manager at Monterey-Salinas Transit (MST) in his letter of October 29, 2002 by emphasizing the importance of traditional neighborhood design. These developments should be designed to be transit-oriented, walkable and bikable, consistent with the goals and policies of the 2001 City of Marina General Plan. TAMC staff would like to commend the Marina Planning department for incorporating these goals and policies into the Marina Heights Specific Plan. To ensure these principles are met, long street blocks and cul-de-sacs should either be avoided, or be connected by pedestrian and bicycle paths of travel.

We appreciate the opportunity to review this document. We would like to request that any subsequent documentation on this project be forwarded to us for review. If you have any questions, please contact Christina Watson of my staff at (831) 775-4406.

Sincerely,

Lee Yarborough
Executive Director

cc: City of Marina City Council
A. Charles E. Johnson, City of Marina Public Works Department
Dave Murray, California Department of Transportation (Caltrans), District 5
Nicolas Papadakis, Association of Monterey Bay Area Governments
Douglas Quetin, Monterey Bay Unified Air Pollution Control District (MBUAPCD)
Frank Lichtanski, Monterey-Salinas Transit (MST)
Michael Houlemard, Fort Ord Reuse Authority (FORA)
Kathy Paul, County Counsel
TAMC Board of Directors, via enclosure to Board agenda

Attachments:

- Samples Of Alternative Measures
- Samples Of Street And Road Improvements

SAMPLES OF ALTERNATIVE MEASURES

1. Provide ridesharing, public transportation and nearby licensed child care facility information to tenants/buyers as part of move-in materials.

2. Print transit information on promotional materials.

3. Install bicycle amenities, such as bicycle racks and bicycle lanes.

4. Provide bus pullouts, pedestrian access, transit stops, shelters and amenities as part of the site plan.

5. Provide locked and secure transportation information centers or kiosks with bus route/schedule information, in common areas.

6. Provide pedestrian facilities linking transit stops and common areas.

7. Provide resources for site amenities that reduce vehicular trip making.

8. Park-and-ride facilities.

9. On-site childcare facilities.

10. Shuttle bus service, bus pools or improved transit service as part of the development.

11. Facilities to encourage telecommuting.

12. Pedestrian and bicycle system improvements.

13. Transit oriented design and/or pedestrian oriented design.

14. Provide preferential carpool/vanpool parking spaces.

15. Implement a parking surcharge for single occupant vehicles.

16. Provide shower/locker facilities.

17. Employ or appoint a transportation/rideshare coordinator.

18. Implement a rideshare program.

19. Provide incentives for employees to rideshare or take public transportation.

20. Implement compressed work schedules.

SAMPLES OF STREET AND ROAD IMPROVEMENTS

1. Safety improvements
2. Traffic signal improvements.
3. Traffic signals.
4. Turning or auxiliary lanes.
5. Add travel lanes.
6. Improve highway interchange.
7. Construct interchange.
8. Construct new street or road.

COUNTY OF MONTEREY

Airport Land Use Commission

February 28, 2003

Mr. Haywood Norton, Senior Planner
City of Marina
211 Hillcrest Avenue
Marina, CA 93933

Dear Mr. Norton:

On February 24, 2003 the Monterey County Airport Land Use Commission (ALUC) reviewed the Notice of Preparation (NOP) of a Draft Environmental Impact Report for the project titled "Marina Heights Project/Abrams "B" Housing" in the City of Marina.

The project is outside of the Marina Airport Comprehensive Land Use Plan (CLUP) Planning Area Boundary. The extremely low density of the proposed project creates no conditions that would trigger review based on the Marina Airport CLUP policies.

An elementary school is proposed as part of the project. The school site specified in the NOP is approximately 1.7 miles from the Marina Municipal Airport runway. The proposed project is approximately parallel and to the south of the runway. It is not under common flight tracks for Marina Municipal Airport. The location of the proposed school site is consistent with the Monterey County Airport Land Use Commission's April 26, 1999 policy on locating educational facilities in the vicinity of airports.

The ALUC requested that when a final school site is determined, airport related noise considerations be included in the project's environmental review.

The Commission appreciates the opportunity to review the project. If you have any questions please call me at (831) 883-3750.

Sincerely,

Todd Muck, AICP
Senior Transportation Planner

REGIONAL ANALYSIS & PLANNING SERVICES, INC.
A non-profit corporation chartered by the Association of Monterey Bay Area Governments
445 Reservation Road, Suite G
P.O. Box 809, Marina, CA 93933-0809
(831) 883-3750
FAX (831) 883-3755

February 28, 2003

Haywood Norton, Senior Planner
City of Marina Planning Department
211 Hillcrest Avenue
Marina, CA 93933

RE: Marina Heights Project – Revised Notice of Preparation

Dear Mr. Norton:

Thank you for sending LandWatch a copy of the Revised Notice of Preparation (NOP) for the proposed Marina Heights Project. We received the NOP on February 25, 2003. I have the following comments at this time:

1. The Revised NOP indicates that an original Notice of Preparation was sent out for comment on January 30, 2003, and that the Revised Notice of Preparation was prepared and sent out for comment because "the applicant" has revised the project.

   LandWatch does not disagree that the developer proposing to construct a new residential development on the "Marina Heights" property can properly be called an "applicant." However, LandWatch urges the City of Marina to be especially careful to differentiate the Marina Heights project from the "usual" projects considered by the city. In most cases, the city reviews projects proposed by private applicants, on their own property, and the city either approves or denies those projects based on the exercise of the city's regulatory powers. In this case, the property involved is actually owned by the City of Marina, and thus the city can exercise certain "ownership" powers, as well as "regulatory" powers, as it considers whether or not to approve the proposed project. In our opinion, changes in the project should not be seen as the sole responsibility or prerogative of "the applicant." We make this comment simply to reinforce the city's awareness of its greater scope of authority in this case.

2. We believe that the EIR must include an analysis and review of alternatives to the project described under "Project Description." Specifically, we believe that the city should include an analysis of the following alternatives:

   - An alternative that fully conforms to the current Marina General Plan.
   - An alternative that constructs the same number of units proposed (1050), but at a higher density. In order to provide more open space, and to achieve the other benefits of compact urban design, the EIR should include an alternative with an average density of 10 units per net residential developable acre, exclusive of open space, parks, schools, streets and other non-developable areas.
   - An alternative that includes mixed use commercial uses within the project.
   - An alternative that includes greater integration of varied housing types in the District 4 ("Arroyos") portion of the project.

- An alternative with a larger park in the District 4 ("Arroyos") portion of the project.

3. The Revised Notice of Preparation says that development of the Marina Heights Project would include improvement of a 28 acre park/school site between Abrams Drive and Imjin Parkway. However, the map included shows that this area is "excluded." The EIR must consider the environmental impacts associated with this part of the proposal.

4. Paragraph 9 of the Revised Notice of Preparation notes the need for school facilities not really addressed in the project as presently proposed. The EIR should analyze a site design that can accommodate the necessary school site within the project, so that all public facilities are consistent with the standards set out in the Marina General Plan. By increasing overall density, as noted earlier, more land can be released for other uses, this can include increased greenbelts and open space, more affordable housing, and/or more parks and school sites.

5. The proposed street configurations should be specifically reviewed in the EIR, to see whether they maximize the ability to allow pedestrians to access all the features of the site, without relying on use of a motorized vehicle. Designing for pedestrian uses reduces environmental impacts, and will make the new project more livable and desirable. Upon a brief examination, the proposed street design does not seem to maximize the "connectivity" that facilitates pedestrian movement.

6. Similarly, the EIR should specifically review the kind of connections that are proposed between the project and the already-existing, adjacent residential areas. Ensuring that there is "connectivity" between the proposed new development, and existing development, will reduce environmental impacts and result in a more livable and desirable community. Specifically, the area identified as the District 4 ("Arroyos") portion of the project, as presently proposed, is not adequately connected to the existing neighborhood of Preston Park.

Thank you for taking these comments into consideration, as you proceed with environmental review of the proposed Marina Heights project.

Very truly yours,

/s/ *Gary A. Patton*

Gary A. Patton, Executive Director
LandWatch Monterey County

cc: City Council
Planning Commission
Interested Persons

STATE OF CALIFORNIA — BUSINESS, TRANSPORTATION AND HOUSING AGENCY GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION
50 HIGUERA STREET
SAN LUIS OBISPO, CA 93403-8114
TELEPHONE: (805) 549-3111
TDD (805) 549-3259

March 3, 2003

MON-001-84.48
SCH# 2003021012

Haywood Norton
Senior Planner
City of Marina
211 Hillcrest Avenue
Marina, CA 93933

SUBJECT: Marina Heights/Abrams "B" Housing Project NOP Comments

Dear Mr. Norton:

The California Department of Transportation (Department) District 5 has reviewed the Notice of Preparation (NOP) on the Draft Environmental Impact Report (EIR) for the proposed Marina Heights/Abrams "B" Housing Project. The 324-acre project site is located northwesterly of Imjin Road and easterly of California Avenue within the former Fort Ord military base. The Marina Heights portion of the project would consist of the construction of 1,050 new residential units and improvements to a 28-acre community park/elementary school site. The Abrams "B" portion of the project would involve upgrades to the existing 194-unit former Army residential area to comply with current City regulations. District 5 staff offers the following comments for your consideration:

1) To ensure that 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 Draft EIR be prepared in accordance with the Department's recently updated "Guide for the Preparation of Traffic Impact Studies" (attached).

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, it is our position that any project traffic trips added to this facility should be considered a significant cumulative traffic impact and should be mitigated accordingly.

3) 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). Since regional access to the project site is provided from Route 1, we recommend that the traffic analysis include updated LOS analyses for the Route 1 segments and interchanges/ramps between Route 218 and Reservation Road under existing and cumulative conditions with and without the proposed project.

4) 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. The traffic analysis should include a discussion of the land use and roadway network assumptions used in the traffic forecasts. A description of other proposed developments that may contribute traffic to the study area should also be provided.

5) 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.

6) It should be clarified in the Draft EIR if the project proponent will participate in the Fort Ord Reuse Authority (FORA) traffic mitigation program.

We would like to request a copy of the Draft EIR for review when it becomes available. If you have any questions, you may call me at (805) 542-4751.

Sincerely,

M. Galizio

Mike Galizio
District 5
Development Review Branch

Attachment

cc: Jeffrey Dack, City Planning; Charles Johnson, City Public Works; Steven Endsley, FORA; Niraj Dangoria, CSUMB; Alan Forrest, MST; Andy Cook, TAMC; Todd Muck, AMBAG; David Murray, District 5; Mark McCumsey, District 5; Roger Barnes, District 5



GUIDE FOR THE PREPARATION

OF

TRAFFIC IMPACT STUDIES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

December 2002

PREFACE

The California Department of Transportation (Caltrans) has developed this "Guide for the Preparation of Traffic Impact Studies" in response to a survey of cities and counties in California. The purpose of that survey was to improve the Caltrans local development review process (also known as the Intergovernmental Review/California Environmental Quality Act or IGR/CEQA process). The survey indicated that approximately 30 percent of the respondents were not aware of what Caltrans required in a traffic impact study (TIS).

In the early 1990s, the Caltrans District 6 office located in Fresno identified a need to provide better quality and consistency in the analysis of traffic impacts generated by local development and land use change proposals that effect State highway facilities. At that time, District 6 brought together both public and private sector expertise to develop a traffic impact study guide. The District 6 guide has proven to be successful at promoting consistency and uniformity in the identification and analysis of traffic impacts generated by local development and land use changes.

The guide developed in Fresno was adapted for statewide use by a team of Headquarters and district staff. The guide will provide consistent guidance for Caltrans staff who review local development and land use change proposals as well as inform local agencies of the information needed for Caltrans to analyze the traffic impacts to State highway facilities. The guide will also benefit local agencies and the development community by providing more expeditious review of local development proposals.

Even though sound planning and engineering practices were used to adapt the Fresno TIS guide, it is anticipated that changes will occur over time as new technologies and more efficient practices become available. To facilitate these changes, Caltrans encourages all those who use this guide to contact their nearest district office (i.e., IGR/CEQA Coordinator) to coordinate any changes with the development team.

ACKNOWLEDGEMENTS

The District 6 traffic impact study guide provided the impetus and a starting point for developing the statewide guide. Special thanks is given to Marc Birnbaum for recognizing the need for a TIS guide and for his valued experience and vast knowledge of land use planning to significantly enhance the effort to adapt the District 6 guide for statewide use. Randy Treece from District 6 provided many hours of coordination, research and development of the original guide and should be commended for his diligent efforts. Sharri Bender Ehlert of District 6 provided much of the technical expertise in the adaptation of the District 6 guide and her efforts are greatly appreciated.

A special thanks is also given to all those Cities, Counties, Regional Agencies, Congestion Management Agencies, Consultants, and Caltrans Employees who reviewed the guide and provided input during the development of this Guide for the Preparation of Traffic Impact Studies.

TABLE OF CONTENTS

Contents		Page Number
PREFACE and ACKNOWLEDGEMENTS		ii
I.	INTRODUCTION	1
II.	WHEN A TRAFFIC IMPACT STUDY IS NEEDED	1
A.	Trip Generation Thresholds	2
B.	Exceptions	
C.	Updating An Existing Traffic Impact Study	2
III.	SCOPE OF TRAFFIC IMPACT STUDY	2
A.	Boundaries of the Traffic Impact Study	2
B.	Traffic Analysis Scenarios	2
IV.	TRAFFIC DATA	4
A.	Trip Generation	4
B.	Traffic Counts	4
C.	Peak Hours	4
D.	Travel Forecasting (Transportation Modeling)	5
V.	TRAFFIC IMPACT ANALYSIS METHODOLOGIES	5
A.	Freeway Sections	5
B.	Weaving Areas	5
C.	Ramps and Ramp Junctions	5
D.	Multi-lane Rural and Urban Highways	5
E.	Two-lane Highways	5
F.	Signalized Intersections	5
G.	Unsignalized Intersections	5
H.	Transit Capacity	5
I.	Pedestrians	5
J.	Bicycles	5
K.	Caltrans Criteria/Warrants	5
L.	Channelization	5
VI.	MITIGATION MEASURES	6

Appendix "A" Minimum Contents of Traffic Impact Study
Appendix "B" Methodology for Calculating Equitable Mitigation Measures
Appendix "C" Measures of Effectiveness by Facility Type

I. INTRODUCTION

Caltrans desires to provide a safe and efficient State transportation system for the citizens of California pursuant to various Sections of the California Streets and Highway Code. This is done in partnership with local and regional agencies through procedures established by the California Environmental Quality Act (CEQA) and other land use planning processes. The intent of this guide is to provide a starting point and a consistent basis in which Caltrans evaluates traffic impacts to State highway facilities. The applicability of this guide for local streets and roads (non-State highways) is at the discretion of the effected jurisdiction.

Caltrans reviews federal, State, and local agency development projects[1], and land use change proposals for their potential impact to State highway facilities. The primary objectives of this guide is to provide:

- guidance in determining if and when a traffic impact study (TIS) is needed,
- consistency and uniformity in the identification of traffic impacts generated by local land use proposals,
- consistency and equity in the identification of measures to mitigate the traffic impacts generated by land use proposals,
- lead agency[2] officials with the information necessary to make informed decisions regarding the existing and proposed transportation infrastructure (see Appendix A, Minimum Contents of a TIS)
- TIS requirements early in the planning phase of a project (i.e., initial study, notice of preparation, or earlier) to eliminate potential delays later,
- a quality TIS by agreeing to the assumptions, data requirements, study scenarios, and analysis methodologies prior to beginning the TIS, and
- early coordination during the planning phases of a project to reduce the time and cost of preparing a TIS.

II. WHEN A TRAFFIC IMPACT STUDY IS NEEDED

The level of service[3] (LOS) for operating State highway facilities is based upon measures of effectiveness (MOEs). These MOEs (see Appendix "C-2") describe the measures best suited for analyzing State highway facilities (i.e., freeway segments, signalized intersections, on- or off-ramps, etc.). Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" (see Appendix "C-3") on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained.

---

[1] "Project" refers to activities directly undertaken by government, financed by government, or requiring a permit or other approval from government as defined in Section 21065 of the Public Resources Code and Section 15378 of the California Code of Regulations.

[2] "Lead Agency" refers to the public agency that has the principal responsibility for carrying out or approving a project. Defined in Section 21165 of the Public Resources Code, the "California Environmental Quality Act, and Section 15367 of the California Code of Regulations.

[3] "Level of service" as defined in the latest edition of the Highway Capacity Manual, Transportation Research Board, National Research Council.

A. Trip Generation Thresholds

The following criterion is a starting point in determining when a TIS is needed. When a project:

1. Generates over 100 peak hour trips assigned to a State highway facility
2. Generates 50 to 100 peak hour trips assigned to a State highway facility – and, affected State highway facilities are experiencing noticeable delay; approaching unstable traffic flow conditions (LOS "C" or "D").
3. Generates 1 to 49 peak hour trips assigned to a State highway facility – the following are examples that may require a full TIS or some lesser analysis[4]:
   a. Affected State highway facilities experiencing significant delay; unstable or forced traffic flow conditions (LOS "E" or "F").
   b. The potential risk for a traffic incident is significantly increased (i.e., congestion related collisions, non-standard sight distance considerations, increase in traffic conflict points, etc.).
   c. Change in local circulation networks that impact a State highway facility (i.e., direct access to State highway facility, a non-standard highway geometric design, etc.).

Note: A traffic study may be as simple as providing a traffic count to as complex as a microscopic simulation. The appropriate level of study is determined by the particulars of a project, the prevailing highway conditions, and the forecasted traffic.

B. Exceptions

Exceptions require consultation between the lead agency, Caltrans, and those preparing the TIS. When a project's traffic impact to a State highway facility can clearly be anticipated without a study and all the parties involved (lead agency, developer, and the Caltrans district office) are able to negotiate appropriate mitigation, a TIS may not be necessary.

C. Updating An Existing Traffic Impact Study

A TIS requires updating when the amount or character of traffic is significantly different from an earlier study. Generally a TIS requires updating every two years. A TIS may require updating sooner in rapidly developing areas and not as often in slower developing areas. In these cases, consultation with Caltrans is strongly recommended.

III. SCOPE OF TRAFFIC IMPACT STUDY

Consultation between the lead agency, Caltrans, and those preparing the TIS is recommended before commencing work on the study to establish the appropriate scope. At a minimum, the TIS should include the following:

A. Boundaries of the Traffic Impact Study

All State highway facilities impacted in accordance with the criteria in Section II should be studied. Traffic impacts to local streets and roads can impact intersections with State highway facilities. In these cases, the TIS should include an analysis of adjacent local facilities, upstream and downstream, of the intersection (i.e., driveways, intersections, and interchanges) with the State highway.

[4] A "lesser analysis" may include obtaining traffic counts, preparing signal warrants, or a focused TIS, etc.

B. Traffic Analysis Scenarios

Caltrans is interested in the effects of general plan updates and amendments as well as the effects of specific project entitlements (i.e., site plans, conditional use permits, sub-divisions, rezoning, etc.) that have the potential to impact a State highway facility. The complexity or magnitude of the impacts of a project will normally dictate the scenarios necessary to analyze the project. Consultation between the lead agency, Caltrans, and those preparing the TIS is recommended to determine the appropriate scenarios for the analysis. The following scenarios should be addressed in the TIS when appropriate:

1. When only a general plan amendment or update is being sought, the following scenarios are required:
   a) Existing Conditions - Current year traffic volumes and peak hour LOS analysis of effected State highway facilities.
   b) Proposed Project Only with Select Zone[5] Analysis - Trip generation and assignment for build-out of general plan.
   c) General Plan Build-out Only - Trip assignment and peak hour LOS analysis. Include current land uses and other pending general plan amendments.
   d) General Plan Build-out Plus Proposed Project - Trip assignment and peak hour LOS analysis. Include proposed project and other pending general plan amendments.

2. When a general plan amendment is not proposed and a proposed project is seeking specific entitlements (i.e., site plans, conditional use permits, sub-division, rezoning, etc.), the following scenarios must be analyzed in the TIS:
   a) Existing Conditions - Current year traffic volumes and peak hour LOS analysis of effected State highway facilities.
   b) Proposed Project Only - Trip generation, distribution, and assignment in the year the project is anticipated to complete construction.
   c) Cumulative Conditions (Existing Conditions Plus Other Approved and Pending Projects Without Proposed Project) - Trip assignment and peak hour LOS analysis in the year the project is anticipated to complete construction.
   d) Cumulative Conditions Plus Proposed Project (Existing Conditions Plus Other Approved and Pending Projects Plus Proposed Project) - Trip assignment and peak hour LOS analysis in the year the project is anticipated to complete construction.
   e) Cumulative Conditions Plus Proposed Phases (Interim Years) - Trip assignment and peak hour LOS analysis in the years the project phases are anticipated to complete construction.
3. In cases where the circulation element of the general plan is not consistent with the land use element or the general plan is outdated and not representative of current or future forecasted conditions, all scenarios from Sections III. B. 1. and 2. should be utilized with the exception of duplicating of item 2.a.

[5] "Select zone" analysis represents a project only traffic model run, where the project's trips are distributed and assigned along a loaded highway network. This procedure isolates the specific impact on the State highway network.

IV. TRAFFIC DATA

Prior to any fieldwork, consultation between the lead agency, Caltrans, and those preparing the TIS is recommended to reach consensus on the data and assumptions necessary for the study. The following elements are a starting point in that consideration.

A. Trip Generation

The latest edition of the Institute of Transportation Engineers' (ITE) TRIP GENERATION report should be used for trip generation forecasts. Local trip generation rates are also acceptable if appropriate validation is provided to support them.

1. Trip Generation Rates – When the land use has a limited number of studies to support the trip generation rates or when the Coefficient of Determination (R^2) is below 0.75, consultation between the lead agency, Caltrans and those preparing the TIS is recommended.
2. Pass-by Trips[6] – Pass-by trips are only considered for retail oriented development. Reductions greater than 15% requires consultation and acceptance by Caltrans. The justification for exceeding a 15% reduction should be discussed in the TIS.
3. Captured Trips[7] – Captured trip reductions greater than 5% requires consultation and acceptance by Caltrans. The justification for exceeding a 5% reduction should be discussed in the TIS.
4. Transportation Demand Management (TDM) – Consultation between the lead agency and Caltrans is essential before applying trip reduction for TDM strategies.

NOTE: Reasonable reductions to trip generation rates are considered when adjacent State highway volumes are sufficient (at least 5000 ADT) to support reductions for the land use.

B. Traffic Counts

Prior to field traffic counts, consultation between the lead agency, Caltrans and those preparing the TIS is recommended to determine the level of detail (e.g., location, signal timing, travel speeds, turning movements, etc.) required at each traffic count site. All State highway facilities within the boundaries of the TIS should be considered. Common rules for counting vehicular traffic include but are not limited to:

1. Vehicle counts should be conducted on Tuesdays, Wednesdays, or Thursdays during weeks not containing a holiday and conducted in favorable weather conditions.
2. Vehicle counts should be conducted during the appropriate peak hours (see peak hour discussion below).
3. Seasonal and weekend variations in traffic should also be considered where appropriate (i.e., recreational routes, tourist attractions, harvest season, etc.).

C. Peak Hours

To eliminate unnecessary analysis, consultation between the lead agency, Caltrans and those preparing the TIS is recommended during the early planning stages of a project. In general, the TIS should include a morning (a.m.) and an evening (p.m.) peak hour analyses. Other peak hours (e.g., 11:30 a.m. to 1:30 p.m., weekend, holidays, etc.) may also be required to determine the significance of the traffic impacts generated by a project.

---

[6] "Pass-by" trips are made as intermediate stops between an origin and a primary trip destination (i.e., home to work, home to shopping, etc.).

[7] "Captured Trips" are trips that do not enter or leave the driveways of a project's boundary within a mixed-use development.

D. Travel Forecasting (Transportation Modeling)

The local or regional traffic model should reflect the most current land use and planned improvements (i.e., where programming or funding is secured). When a general plan build-out model is not available, the closest forecast model year to build-out should be used. If a traffic model is not available, historical growth rates and current trends can be used to project future traffic volumes. The TIS should clearly describe any changes made in the model to accommodate the analysis of a proposed project.

V. TRAFFIC IMPACT ANALYSIS METHODOLOGIES

Typically, the traffic analysis methodologies for the facility types indicated below are used by Caltrans and will be accepted without prior consultation. When a State highway has saturated flows, the use of a micro-simulation model is encouraged for the analysis (please note however, the micro-simulation model must be calibrated and validated for reliable results). Other analysis methods may be accepted, however, consultation between the lead agency, Caltrans and those preparing the TIS is recommended to agree on the data necessary for the analysis.

A. Freeway Segments – Highway Capacity Manual (HCM)*, operational analysis
B. Weaving Areas – Caltrans Highway Design Manual (HDM)
C. Ramps and Ramp Junctions – HCM*, operational analysis or Caltrans HDM, Caltrans Ramp Metering Guidelines (most recent edition)
D. Multi-Lane Highways – HCM*, operational analysis
E. Two-lane Highways – HCM*, operational analysis
F. Signalized Intersections[8] – HCM*, Highway Capacity Software**, operational analysis, TRAFFIX™**, Synchro**, see footnote 8
G. Unsignalized Intersections – HCM*, operational analysis, Caltrans Traffic Manual for signal warrants if a signal is being considered
H. Transit – HCM*, operational analysis
I. Pedestrians – HCM*
J. Bicycles – HCM*
K. Caltrans Criteria/Warrants – Caltrans Traffic Manual (stop signs, traffic signals, freeway lighting, conventional highway lighting, school crossings)
L. Channelization – Caltrans guidelines for Reconstruction of Intersections, August 1985, Ichiro Fukutome

*The most current edition of the Highway Capacity Manual, Transportation Research Board, National Research Council, should be used.

**NOTE: Caltrans does not officially advocate the use of any special software. However, consistency with the HCM is advocated in most but not all cases. The Caltrans local development review units utilize the software mentioned above. If different software or analytical techniques are used for the TIS then consultation between the lead agency, Caltrans and those preparing the TIS is recommended. Results that are significantly different than those produced with the analytical techniques above should be challenged.

[8] The procedures in the Highway Capacity Manual "do not explicitly address operations of closely spaced signalized intersections. Under such conditions, several unique characteristics must be considered, including spill-back potential from the downstream intersection to the upstream intersection, effects of downstream queues on upstream saturation flow rate, and unusual platoon dispersion or compression between intersections. An example of such closely spaced operations is signalized ramp terminals at urban interchanges. Queue interactions between closely spaced intersections may seriously distort the procedures in" the HCM.

VI. MITIGATION MEASURES

The TIS should provide the nexus [Nollan v. California Coastal Commission, 1987, 483 U.S. 825 (108 S.Ct. 314)] between a project and the traffic impacts to State highway facilities. The TIS should also establish the rough proportionality [Dolan v. City of Tigard, 1994, 512 U.S. 374 (114 S. Ct. 2309)] between the mitigation measures and the traffic impacts. One method for establishing the rough proportionality or a project proponent's equitable responsibility for a project's impacts is provided in Appendix "B." Consultation between the lead agency, Caltrans and those preparing the TIS is recommended to reach consensus on the mitigation measures and who will be responsible.

Mitigation measures must be included in the traffic impact analysis. This determines if a project's impacts can be eliminated or reduced to a level of insignificance. Eliminating or reducing impacts to a level of insignificance is the standard pursuant to CEQA and the National Environmental Policy Act (NEPA). The lead agency is responsible for administering the CEQA review process and has the principal authority for approving a local development proposal or land use change. Caltrans, as a responsible agency, is responsible for reviewing the TIS for errors and omissions that pertain to State highway facilities. However, the authority vested in the lead agency under CEQA does not take precedence over other authorities in law.

If the mitigation measures require work in the State highway right-of-way an encroachment permit from Caltrans will be required. This work will also be subject to Caltrans standards and specifications. Consultation between the lead agency, Caltrans and those preparing the TIS early in the planning process is strongly recommended to expedite the review of local development proposals and to reduce conflicts and misunderstandings in both the local agency CEQA review process as well as the Caltrans encroachment permit process.

APPENDIX "A"

MINIMUM CONTENTS

OF A

TRAFFIC IMPACT STUDY

MINIMUM CONTENTS OF TRAFFIC IMPACT STUDY REPORT

I. EXECUTIVE SUMMARY

II. TABLE OF CONTENTS

A. List of Figures (Maps)
B. List of Tables

III. INTRODUCTION

A. Description of the proposed project
B. Location of project
C. Site plan including all access to State highways (site plan, map)
D. Circulation network including all access to State highways (vicinity map)
E. Land use and zoning
F. Phasing plan including proposed dates of project (phase) completion
G. Project sponsor and contact person(s)
H. References to other traffic impact studies

IV. TRAFFIC ANALYSIS

A. Clearly stated assumptions
B. Existing and projected traffic volumes (including turning movements), facility geometry (including storage lengths), and traffic controls (including signal phasing and multi-signal progression where appropriate) (figure)
C. Project trip generation including references (table)
D. Project generated trip distribution and assignment (figure)
E. LOS and warrant analyses - existing conditions, cumulative conditions, and full build of general plan conditions with and without project

V. CONCLUSIONS AND RECOMMENDATIONS

A. LOS and appropriate MOE quantities of impacted facilities with and without mitigation measures
B. Mitigation phasing plan including dates of proposed mitigation measures
C. Define responsibilities for implementing mitigation measures
D. Cost estimates for mitigation measures and financing plan

VI. APPENDICES

A. Description of traffic data and how data was collected
B. Description of methodologies and assumptions used in analyses
C. Worksheets used in analyses (i.e., signal warrant, LOS, traffic count information, etc.)

APPENDIX "B"

METHODOLOGY FOR

CALCULATING EQUITABLE

MITIGATION MEASURES

METHOD FOR CALCULATING EQUITABLE MITIGATION MEASURES

The methodology below is neither intended as, nor does it establish, a legal standard for determining equitable responsibility and cost of a project's traffic impact, the intent is to provide:

1. A starting point for early discussions to address traffic mitigation equitably.
2. A means for calculating the equitable share for mitigating traffic impacts.
3. A means for establishing rough proportionality [Dolan v. City of Tigard, 1994, 512 U.S. 374 (114 S. Ct. 2309)].

The formulas should be used when:

- A project has impacts that do not immediately warrant mitigation, but their cumulative effects are significant and will require mitigating in the future.
- A project has an immediate impact and the lead agency has assumed responsibility for addressing operational improvements

NOTE: This formula is not intended for circumstances where a project proponent will be receiving a substantial benefit from the identified mitigation measures. In these cases, (e.g., mid-block access and signalization to a shopping center) the project should take full responsibility to toward providing the necessary infrastructure.

EQUITABLE SHARE RESPONSIBILITY: Equation C-1

NOTE: $T_E < T_B$, see explanation for T_B below.

$$P = \frac{T}{T_B - T_E}$$

Where:

P = The equitable share for the proposed project's traffic impact.

T = The vehicle trips generated by the project during the peak hour of adjacent State highway facility in vehicles per hour, vph.

T_B = The forecasted traffic volume on an impacted State highway facility at the time of general plan build-out (e.g., 20 year model or the furthest future model date feasible), vph.

T_E = The traffic volume existing on the impacted State highway facility plus other approved projects that will generate traffic that has yet to be constructed/opened, vph.

EQUITABLE COST: Equation C-2

$$C = P\ (C_T)$$

Where:

C = The equitable cost of traffic mitigation for the proposed project, ($). (Rounded to nearest one thousand dollars)

P = The equitable share for the project being considered.

C_T = The total cost estimate for improvements necessary to mitigate the forecasted traffic demand on the impacted State highway facility in question at general plan build-out, ($).

NOTES

1. Once the equitable share responsibility and equitable cost has been established on a per trip basis, these values can be utilized for all projects on that State highway facility until the forecasted general plan build-out model is revised.
2. Truck traffic should be converted to passenger car equivalents before utilizing these equations (see the Highway Capacity Manual for converting to passenger car equivalents).

3. If the per trip cost is not used for all subsequent projects, then the equation below will be necessary to determine the costs for individual project impact and will require some additional accounting.

Equation C-2.A

$$C = P\,(C_T - C_C)$$

Where:

C = Same as equation C-2.

P = Same as equation C-2.

C_T = Same as equation C-2.

C_C = The combined dollar contributions paid and committed prior to current project's contribution. This is necessary to provide the appropriate cost proportionality. Example: For the first project to impact the State highway facility in question since the total cost (C_T) estimate for improvements necessary to mitigate the forecasted traffic demand, C_C would be equal to zero. For the second project however, C would equal $P_2(C_T - C_1)$ and for the third project to come along C would equal $P_3[C_T - (C_1 + C_2)]$ and so on until build-out or the general plan build-out was recalculated.

Jeffery P. Dack

From: Jeffery P. Dack
Sent: Monday, March 03, 2003 9:39 AM
To: Ken Gray (Home)
Cc: Anthony Altfeld
Subject: RE: Marina Heights EIR

Ken,

I understand that is what the consultants will be putting in the administrative draft EIR.

Jeff Dack

-----Original Message-----
From: Ken Gray [mailto:gray@redshift.com]
Sent: Friday, February 28, 2003 9:26 PM
To: Jeffery P. Dack
Cc: Altfeld, Anthony
Subject: Marina Heights EIR

Jeff,
The Marina General Plan calls for rehabilitation of existing housing in the Abrams Park area or new construction if it will be of similar or better quality and affordability. Since meeting the affordability standard is not feasible with new construction I am expecting that the General Plan alternative in the Marina Heights EIR will be involve rehab and reuse of many of the existing abandoned Abrams Park units. The success of the rehabilitated Abrams B area and the recent proposal from the housing authority seems to demonstrate that rehab of the existing units is feasible. Will the General Plan alternative in the the EIR include use of the existing homes? Thank you.
Ken

AMBAG
ASSOCIATION OF MONTEREY BAY AREA GOVERNMENTS

CITY OF MARINA
MAR 2 5 2003
PLANNING

March 14, 2003

Mr. Haywood Norton
City of Marina
211 Hillcrest Avenue
Marina, CA 93933

Re: MCH # 030305 – Notice of Preparation of a Draft Environmental Impact Report for Marina Heights Project/ Abrams "B" Housing Project

Dear Mr. Norton:

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 12, 2003,** and has no comments at this time. However, we are forwarding the enclosed comments on this project that we received from other agencies or interested parties.

Thank you for complying with the Clearinghouse process.

Sincerely,

Nicolas Papadakis
Executive Director

Enclosure

Haywood Norton

From: Jeffery P. Dack
Sent: Monday, March 24, 2003 9:45 AM
To: Haywood Norton; Joan Lamphier (jlamphier@lamphier-gregory.com); John Courtney (jcourtney@lamphier-gregory.com)
Subject: FW: Marina Heights Citizen Input EIR

-----Original Message-----
From: Joy P. Junsay
Sent: Monday, March 24, 2003 9:42 AM
To: Jeffery P. Dack
Subject: Marina Heights Citizen Input EIR

FYI
-----Original Message-----
From: Cynthiaduvall01@aol.com [mailto:Cynthiaduvall01@aol.com]
Sent: Friday, March 21, 2003 2:11 PM
To: jjunsay@ci.marina.ca.us
Subject: Citizen Input EIR

Dear Ms. Junsay:

Would you please pass this on to the staff writing the Citizens input alternative to Marina Heights?

I have some areas that concern me and my neighbors.
They are as follows:

*** Maximize open space.**

*** Preserve the natural open space as much as possible.**

*** I prefer the use of alternative energy such as use of gray water for landscaping.**

*** Build small homes on small lots**

*** Protect our beautiful views from adjacent homes.**

*** Be sure to have large greenbelt areas behind existing homes!**

***Small amount of commercial space built where it does not impact the existing homes. Make it a walkable area that we don't have to all drive to. Make it look beautiful and quaint like Carmel.**

Thank you,

Cynthia Duvall
Bob McGinnis Travel
831 384-6122
831 624-2726
561 Carmel Rancho Center
Carmel, CA 93923
home office
3002 Liberty Court
Marina, CA 93933

MONTEREY COUNTY

ENVIRONMENTAL RESOURCE POLICY
(831) 755-5065 P.O. BOX 180, SALINAS, CALIFORNIA 93902

FEB 26 2003

February 24, 2003

Dan Ward, Chief, Base Closure Unit
Department of Toxic Substances Control
Site Mitigation/Office of Military Facilities
8800 Cal Center Drive
Sacramento, CA 95826

Re: Fort Ord Landfill Remediation Validation

Dear Mr. Ward:

As we briefly discussed on your last visit to the former Fort Ord on February 13, 2003, the County of Monterey and several other agencies have a series of concerns about the remediation of the former Fort Ord landfill. We are writing to request your assistance in validating the work performed by the US Army in remediating this property and the safety considerations for future uses in this area of the former installation.

Over the course of the past six to eight months there has been an increasing concern among community residents and California State University Monterey Bay students/faculty about the remediation of the former Fort Ord landfill. In addition, the County of Monterey, University of California, Monterey Peninsula Unified School District, and City of Marina are underway planning for varying developments in the area of the landfill site. We are aware that the US Army has undertaken extensive efforts to comply with the regulatory requirements for abating the subsurface contamination and currently has several programs in place to "cap" the landfill, engineer the release of remnant gases, and treat contaminated underground aquifers. We are also aware of your responsibility to review and approve elements of that remediation effort and have been copied on communications that the California Department of Toxic Substances Control has offered to the US Army in this regard.

In particular, we have several questions that are included in the attached scope of work. We are seeking validation of the Army cleanup by an independent third party and request that the attached scope be undertaken to answer perceived uncertainties and form a basis to fully inform the Monterey County public of the status of the landfill cleanup, safety for existing neighboring uses and future development restrictions for this area of the former Fort Ord. In this way we are hopeful that we can avoid further confusion and clarify any uncertainties which may exist.

SCOPE OF WORK FOR FORT ORD LANDFILL EVALUATION

1. Validate the investigative and analytical work conducted by US Army contractors in the comprehensive gas, water, and soil remediation of the Fort Ord Landfill site.
2. Review and evaluate the effectiveness of the landfill gas extraction system and the ground water extraction system in removing contaminants and containing contaminants on the site of the Fort Ord Landfill.
3. Review and evaluate the adequacy of the Landfill Gas Risk Assessment conducted by US Army contractors.
4. Opine on the risk posed by the Fort Ord Landfill to the adjacent/nearby existing residential and student housing complexes.
5. Recommend an appropriate Buffer Zone and remedial engineering actions to permit future development (residential and/or commercial) in the vicinity of the landfill parcel and to protect/provide safety for existing housing areas.
6. Opine on the need for further investigation and /or testing that maybe necessary to determine the ongoing risk the Fort Ord Landfill site poses to adjacent/nearby existing residential and student housing complexes and to future development (residential and/or commercial) in the vicinity of the landfill parcel.

Haywood Norton

From: Mark Morgan
Sent: Thursday, March 27, 2003 6:16 PM
To: Haywood Norton
Subject: RE: Marina Heights Pre-ADEIR

Good Evening,

Chief Harald Kelley and I have both reviewed the Public Services and Utilities Draft EIR and have found the information to be accurate and most acceptable.

Proposed design elements discussed by the Planning Commission, i.e. narrow streets (significantly less than the 32'-34' minimum identified in our current general plan) would generate an extensive and potentially expensive need to alter our tactics and strategy with respect to police and fire responses in the development. Information only. We don't know if they are intent on pursuing this formally.

Thank you again.

Mark S. Morgan, Cmdr
Marina Dept. of Public Safety

-----Original Message-----
From: Haywood Norton
Sent: Thursday, March 27, 2003 12:16 PM
To: Mark Morgan; Harald Kelley
Subject: FW: Marina Heights Pre-ADEIR

Attached is an e-mail from the Marina Heights EIR consultant that contains as an attachment the administrative draft of the Public Services and Utilities section of the EIR. Police Protection is on page 10-1 and Fire Protection is on page 10-1 and page 10-2. Impacts and Mitigation Measures are on pages 10-5 to 10-8. Comments are needed by Thursday, 4/3 and let me know if there are any concerns you would like to discuss. Thanks.
-----Original Message-----
From: John Courtney [mailto:jcourtney@lamphier-gregory.com]
Sent: Tuesday, March 25, 2003 5:36 PM
To: Haywood Norton
Cc: casafina@aol.com; crlchadmar@aol.com
Subject: Marina Heights Pre-ADEIR

Haywood:

As per our telephone conversation this afternoon, here is our "in-work" section on Public Services and Utilities (as per your earlier request, I am also forwarding it to Mary and Chuck). Although we are still working on this, it will give you a sense of how I have addressed the water supply issues. After you have looked this over, we may need to discuss this further.

John Courtney
Lamphier-Gregory

John Heiser

From: Vienna Merritt Moore [vs3trees@sbcglobal.net]
Sent: Thursday, January 23, 2003 5:20 PM
To: jheiser@ci.marina.ca.us
Subject: For the Public Record 1/23/03 Meeting Marina Heights

Dear Mr. Heiser:

Please add my comments to the record for the public meeting on the Marina Heights

AIR. Please read these comments aloud at the meeting for I am unable to attend.

January 23, 2003

To Whom It May Concern:

My name is Vienna Merritt Moore. My family and I have lived in Marina for almost five years now. We own and operate a business in Marina. We moved here to escape the endless development and freeways of the San Jose area. We came here to find a safe and quiet place to raise our kids. We came to get away from the pollution.

Twelve years ago I was diagnosed with cancer and will never forget how there was no real way of knowing how it happened. There were so many chemicals around us in San Jose that could have contributed to it or caused it. I will never forget the feeling of not knowing whether I would see my children grow up, or whether they would be angry at me for leaving them to grow up alone. Cancer and illness will make one very clear about what is important. Being careful about exposure is important. If just one person is exposed to a chemical and losses their life their circle of loved ones is damaged and many will suffer. If just one person gets cancer because of an oversight it is truly a tragedy and a crime. It doesn't have to happen; we have requirements that call for Environmental Impact Reviews to protect people from getting ill. We have to make sure that these reviews are done and study what is important.

I request that the Environmental Impact Review that is being done for the Marina Heights project be a review that is effective in protecting human health and not just a required document needed by the developer that looks good but does not contain health assessment information.

There are several concerns I have about the project. The most looming would be the water situation. I have long known about the toxic contamination of the water. Many people have known and have not let it be made public and worse have not done much to remedy the situation. My children are bathing in that water. Children are drinking it. The water fountains at Marina's public schools dispense that water. If a development the size that Marina Hieghts is is built and the multitudes of people start drawing more water; than that creates a change in our already contaminated aquifer. The contamination has been said to be in the shallowest aquifers. The pumping of the water in the deepest levels will cause a migration of the poisoned water towards the pumped water, poisoning it further. Some of the contaminants are TCA, TCE, PERC, and Carbon tetrachloride. These are cancer causing chemicals. The City of Marina in my opinion should have already requested that a study be done long ago. Shame on you; for I find it difficult to believe that you have not heard of the concerns. Secondly, on my concerns about Marina is the fact that there is a relocation plan in the event that toxic military waste along with Chappal is burned openly. These have been called Agricultural burns but that is a misnomer. Agricultural burns cannot contain heavy metals, solvents and other toxic chemicals that will enter the air and travel offsite.This should be studied in the plan. Lastly. on my list for now is the problems with the emissions coming off of the land fills on Fort Ord. This air is many times the allowable amount for dangerous gasses. Students at CSUMB are living less than 100 feet from the toxic landfill. The legacy for that university could be illness, birth defects and death. The homes planned for

Marina Heights will be very close also.

Marina residents are at least ten times more likely to be diagniosed with cancer than the rest of the country. This is because of their increased exposure through air, and water.

Please do a real report that can protect our lives and our future, the future of Marina.

Thankyou,

Vienna Merritt Moore

389 Hillcrest Ave

Marina, Ca 93933

831-384-7658

John Heiser

From: Colin Gallagher [pcvcolin@yahoo.com]
Sent: Friday, January 24, 2003 9:05 AM
To: jpaterson@ci.marina.ca.us; jheiser@ci.marina.ca.us
Cc: jdack@ci.marina.ca.us; jjunsay@ci.marina.ca.us; pcvcolin@yahoo.com
Subject: Public Notice / Marina Heights - Abrams "B"

Mr. Colin G. Gallagher, B.S., N.R.P.I, RPCV
973 Heather Circle #48E
Salinas CA 93906-3950

To: Judy Paterson
J. Heiser
Cc: Jeff Dack, Planning Director
Planning Commission (via e-mail c/o jjunsay@ci.marina.ca.us)
Colin G. Gallagher

Re.: Public Notice / Marina Heights - Abrams "B"

This message is to notify all interested persons that I had requested to be noticed of all hearings and decision dates related to the Marina Heights - Abrams "B," by communicating by telephone with Mr. Heiser (who diligently took my address). My communication with Mr. Heiser occurred with adequate advance time to be noticed for the Jan. 23 Planning Commission meeting. However, I was not mailed a notice (as required by the Ralph M. Brown Act -- See Section 54954.1, Gov't Code). I was informed by Mr. Heiser that I was on the public notice mailing list for this project (and I am certain Mr. Heiser was convinced that I was), but did not receive any notice. Additionally, I was told at the Planning Commission hearing by the Chair, no less, that I would need to give pre-addressed stamped envelopes to the City in order to be noticed. I respectfully disagree, because the Brown Act requires notice be provided, regardless of whether or not someone requesting notice has provided stamps. Also, if the city does have some local ordinance which would require that a person requesting notice provide stamps, I am sure Mr. Heiser would have informed me. But in any case it is extremely unlikely such an ordinance or rule exists, because the Brown Act is very clear on the subject.

That said, by this message I will try again.

I request that Judy Paterson place my name and address on the list of persons who are to be noticed by Postal Mail for the Marina Heights / Abrams "B" project. Please also copy these notices to me by e-mail at: pcvcolin@yahoo.com

Additionally, I request that Mr. Dack and / or Mr. Heiser place my name on the distribution list for any and all such notices (Notices of Exemption, Notices of Intent to Adopt (ND/MND/EIR), Notices of Recirculation, etc.) related to CEQA/NEPA aspects of the project, and I would like to be noticed by Postal mail and by e-mail at: pcvcolin@yahoo.com.

Finally, I formally request by this message (to Mr.

Dack and Mr. Heiser) to be placed on the distribution list for the environmental document (when the draft is produced). To facilitate the distribution the document may be sent to me by e-mail at: pcvcolin@yahoo.com

I would also like a written response to my "Comments on Staff Report for Marina Heights / Abrams "B" -- January 23, 2003." My comment was submitted yesterday mid-day to Mr. Heiser by e-mail and was distributed at the hearing to all members of the Planning Commission, and to Mr. Dack. Copies of my comment were also provided to the developer and to the director of LandWatch - Monterey County.

(For the record, my interest in the project is personal -- I work on Fort Ord and one day I may be a homeowner there. My comment is my own and not part of any organizational effort.)

This message has been copied to my e-mail for my records.

Thank you for your time and effort in this regard.

Sincerely,

Mr. Colin G. Gallagher, B.S., N.R.P.I., RPCV
973 Heather Circle #48E
Salinas CA 93906-3950

Do you Yahoo!?
New DSL Internet Access from SBC & Yahoo!
http://sbc.yahoo.com

John Heiser

From: Colin Gallagher [pcvcolin@yahoo.com]
Sent: Thursday, January 23, 2003 12:07 PM
To: jheiser@ci.marina.ca.us
Subject: Comments on Staff Report for Marina Heights / Abrams "B" - for January 23, 2003 meeting

(Please scroll down to view these comments, which I would like to submit to you for incorporation into the record for the Jan. 23, 2003 meeting on Marina Heights / Abrams "B" staff report, environmental determination, etc. This e-mailed version is absent the footnotes which will be in the document that I will submit tonight.)

Comments on Staff Report for Marina Heights / Abrams "B" - January 23, 2003

By:

Mr. Colin G. Gallagher, B.S., N.R.P.I., RPCV
973 Heather Circle #48E
Salinas CA 93906-3950

Comments on Staff Report / Meeting of January 23, 2003

Marina Heights Project / Abrams "B" Housing - Environmental Review Determination and scoping meeting for possible EIR

The staff report before you presents a request by city staff for the Planning Commission to make a determination as to whether an Environmental Impact Report shall be the means of accomplishing the required environmental review for the proposed Marina Heights project / Abrams "B" housing. It is important that a visual representation of the project be made readily available and I respectfully request by this letter that an 8 & ½ by 11" representation of the site plan be attached to future reports, and that alternative site plans or configurations also be attached. This will enable the public to visualize the proposals and understand fully what the project proposes before arriving at a public meeting where reports are to be discussed or decisions are to be made.

Formal evaluation under CEQA begins after an application is accepted as complete and after the project is determined to be subject to CEQA. According to CEQA, if the need for an EIR is unclear, the lead agency must prepare an initial study. If the lead agency can determine that an EIR will be clearly required for a project, the agency may begin work directly on the EIR process without conducting an initial study (§15060(d), CEQA Guidelines). If there is substantial evidence, in light of the whole record before the lead agency, that the project may have a significant effect on the environment, an environmental impact report shall be prepared (CEQA, §21080(d)). Additionally, under NEPA, closure of a military base usually requires an environmental impact

statement. It is possible that a joint EIR / EIS might be required in order to satisfy both NEPA and CEQA, in which case a Memorandum of Understanding must be prepared between federal, state, and local agencies. In the interest of streamlining environmental review, SB 1180, as codified in Section 21083.8.1, enables the lead agency to identify the specific physical conditions which existed when the federal decision to close or realign the base became final that will form the context for environmental review

The NEPA question notwithstanding, it is apparent that an EIR must be required pursuant to CEQA, because there is substantial evidence that the project may have a significant effect on the environment. I cite page 6 of the staff report, which states that "the proposed project could have substantial adverse effects on candidate, sensitive, or special status species on (or in the vicinity of) the Project site." Page 7 of the staff report states that the project would "induce population growth (…) which would represent a potentially significant impact." Additionally, on page 8, we find that overall, the future projection of "1,050 new residential units in the Marina Heights area (not including Abrams B) would exceed the number of residential units that can be supported by the current water allocation in the area, a potentially significant impact."

Other Important Items to Consider related to CEQA
The argument is presented that for this project that the provisions of Section 21167.2, which presents a circumstance in which an environmental impact report would be conclusively presumed to comply with CEQA, would not apply to this project regardless of future circumstances, due to that the presentation of alternatives by the public and the developer will constitute both substantial changes and new information under Section 21166. Changes and alternatives are required for an EIR and it is advisable that alternatives be presented before the EIR process begins, so as to avoid unnecessary costs and recirculations of the environmental document. Under Section 15105(d)(1) of the CEQA Guidelines, a shortened review shall not be granted for any proposed project of statewide, areawide, or regional environmental significance. This is certainly a project which will have areawide significance. However, it is apparent that there is a general consensus that the city should move into the environmental review phase of the project.

Saving Cost to the Developer and the City by using CEQA Scoping Opportunities - While Simultaneously Satisfying Public Need for Input on Alternative Proposals for Community Configurations

It is important to note that pursuant to Section 21150 of CEQA, an environmental impact report must be prepared before allocation of state or federal funds other than funds solely for projects involving only feasibility or planning studies. Additionally, according to Section 21153 of CEQA, "the local lead agency shall, upon the request of the project applicant, provide for early consultation to identify

the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in depth in the environmental impact report. The local lead agency may consult with persons identified by the project applicant that the applicant believes will be concerned with the environmental effects of the project and may consult with members of the public who have made written request to be consulted on the project." There is a consensus that early comment is needed.

For the reasons mentioned, it is highly recommended that a series of meetings be conducted which would allow the public to propose alternate site plan configurations, housing styles and affordable housing types, pursuant to Section 15083 of the CEQA Guidelines. This would save cost to the developer because it would allow members of the public who take issue with the proposed site plan or housing types to resolve their concerns directly through a collaborative scoping effort involving the developer, the city staff, and the public. If public issues or concerns have to be resolved during the EIR, the developer would likely have to go back and do substantial revisions to the project - revisions that could be avoided if alternatives are informally agreed upon early in the process. Clearly, this would also save the city time and money, because it would be much less likely that recirculation of the environmental document would be needed, and would reduce the probability that the document would be legally challenged.

A Question

Section 15180 of the CEQA Guidelines states that: "All public and private activities or undertakings pursuant to or in furtherance of a redevelopment plan constitute a single project, which shall be deemed approved at the time of adoption of the redevelopment plan by the legislative body. The EIR in connection with the redevelopment plan shall be submitted in accordance with Section 33352 of the Health and Safety Code."

A question I have related to this section of CEQA is: Does this project constitutes some kind of undertaking in furtherance of a redevelopment plan? Quite honestly, I do not know. If staff would provide an answer to this question I would be most grateful.

Final Points to Consider
Per §15131(b) and (c) of the CEQA Guidelines, "economic or social effects of a project may be used to determine the significance of physical changes caused by the project," and "economic, social, and particularly housing factors shall be considered by public agencies together with technological and environmental factors in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment identified in the EIR." Finally, Section 21083 of CEQA requires an agency to determine that a project may have a significant effect on the environment if it will cause substantial adverse effects on human beings, either directly or indirectly.

What this means for the Marina Heights - Abrams "B" project is that the economic effects of the affordability of structures, or the lack of affordability, must be considered and documented as the significance of physical changes proposed by the project are progressively assessed, because economic and housing factors, if not carefully and properly integrated into the overall design of the project, may indirectly and directly cause substantial adverse effects on human beings. Some of these effects would be related to inability of significant sectors of the population to purchase a home - other effects would be less easily identified, such as the psychological or systemic health impact of traffic patterns on human beings in developments patterned after standard development configurations and types. While these effects may be remedied by public involvement, serious affordability analysis, and consideration of recent community design alternatives, it is nonetheless very clear that economic, social, and housing factors must and will play a direct role in determination of effects.

Conclusion

The Environmental Determination Findings of the Staff Report for Jan. 23, 2003, Marina Heights - Abrams "B," should have contemplated the economic, social, and housing factors as analyzed above. A series of scoping meetings should be established forthwith involving the developer, key city staff, and the public, so as to quickly develop a consensus using ideas and concepts submitted by the public for development of alternatives. After these meetings, an EIR should be prepared.

Respectfully Submitted,

Mr. Colin G. Gallagher, B.S., N.R.P.I., RPCV
973 Heather Circle #48E
Salinas CA 93906-3950

Tel.: (831) 753-0631
E-mail: pcvcolin@yahoo.com

Do you Yahoo!?
New DSL Internet Access from SBC & Yahoo!
http://sbc.yahoo.com

Comments on Staff Report for Marina Heights / Abrams "B" – January 23, 2003

By:

Mr. Colin G. Gallagher, B.S., N.R.P.I., RPCV
973 Heather Circle #48E
Salinas CA 93906-3950

Comments on Staff Report / Meeting of January 23, 2003

Marina Heights Project / Abrams "B" Housing – Environmental Review Determination and scoping meeting for possible EIR

The staff report before you presents a request by city staff for the Planning Commission to make a determination as to whether an Environmental Impact Report shall be the means of accomplishing the required environmental review for the proposed Marina Heights project / Abrams "B" housing. It is important that a visual representation of the project be made readily available and I respectfully request by this letter that an 8 & ½ by 11" representation of the site plan be attached to future reports, and that alternative site plans or configurations also be attached. This will enable the public to visualize the proposals and understand fully what the project proposes before arriving at a public meeting where reports are to be discussed or decisions are to be made.

Formal evaluation under CEQA begins after an application is accepted as complete and after the project is determined to be subject to CEQA. According to CEQA, if the need for an EIR is unclear, the lead agency must prepare an initial study. If the lead agency can determine that an EIR will be clearly required for a project, the agency may begin work directly on the EIR process[1] without conducting an initial study (§15060(d), CEQA Guidelines). If there is substantial evidence, in light of the whole record before the lead agency, that the project may have a significant effect on the environment, an environmental impact report shall be prepared (CEQA, §21080(d)). Additionally, under NEPA, closure of a military base usually requires an environmental impact statement. It is possible that a joint EIR / EIS might be required in order to satisfy both NEPA and CEQA, in which case a Memorandum of Understanding must be prepared between federal, state, and local agencies. In the interest of streamlining environmental review, SB 1180, as codified in Section 21083.8.1, enables the lead agency to identify the specific physical conditions which existed when the federal decision to close or realign the base became final that will form the context for environmental review[2]

The NEPA question notwithstanding, it is apparent that an EIR must be required pursuant to CEQA, because there is substantial evidence that the project may have a significant effect on the environment. I cite page 6 of the staff report, which states that "the proposed project could have substantial adverse effects on candidate, sensitive, or special status species on (or in the vicinity of) the Project site." Page 7 of the staff report states that the project would "induce population growth (…) which would represent a potentially significant impact." Additionally, on page 8, we find that overall, the future projection of "1,050 new residential units in the Marina Heights area (not including Abrams B) would exceed the number of residential units that can be supported by the current water allocation in the area, a potentially significant impact."

---

[1] Authority: Sections 21083 and 21087, Public Resources Code; Reference: Sections 21080(b), 21080.2 and 21160, Public Resources Code.

[2] http://www.ceres.ca.gov/topic/env_law/ceqa/more/tas/ceqa_nepa/section6.html#section6

Other Important Items to Consider related to CEQA

The argument is presented that for this project that the provisions of Section 21167.2, which presents a circumstance in which an environmental impact report would be conclusively presumed to comply with CEQA, would not apply to this project regardless of future circumstances, due to that the presentation of alternatives by the public and the developer will constitute both substantial changes and new information under Section 21166. Changes and alternatives are required for an EIR and it is advisable that alternatives be presented before the EIR process begins, so as to avoid unnecessary costs and recirculations of the environmental document. Under Section 15105(d)(1) of the CEQA Guidelines, a shortened review shall not be granted[3] for any proposed project of statewide, areawide, or regional environmental significance. This is certainly a project which will have areawide significance. However, it is apparent that there is a general consensus that the city should move into the environmental review phase of the project.

Saving Cost to the Developer and the City by using CEQA Scoping Opportunities – While Simultaneously Satisfying Public Need for Input on Alternative Proposals for Community Configurations

It is important to note that pursuant to Section 21150 of CEQA, an environmental impact report must be prepared before allocation of state or federal funds other than funds solely for projects involving only feasibility or planning studies. Additionally, according to Section 21153 of CEQA, "the local lead agency shall, upon the request of the project applicant, provide for early consultation to identify the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in depth in the environmental impact report. The local lead agency may consult with persons identified by the project applicant that the applicant believes will be concerned with the environmental effects of the project and may consult with members of the public who have made written request to be consulted on the project." There is a consensus that early comment is needed.

For the reasons mentioned, it is highly recommended that a series of meetings be conducted which would allow the public to propose alternate site plan configurations, housing styles and affordable housing types, pursuant to Section 15083 of the CEQA Guidelines. This would save cost to the developer because it would allow members of the public who take issue with the proposed site plan or housing types to resolve their concerns directly through a collaborative scoping effort[4] involving the developer, the city staff, and the public. If public issues or concerns have to be resolved during the EIR, the developer would likely have to go back and do substantial revisions to the project – revisions that could be avoided if alternatives are informally agreed upon early in the process. Clearly, this would also save the city time and money, because it would be much less likely that recirculation of the environmental document would be needed, and would reduce the probability that the document would be legally challenged.

---

[3] Authority cited: Sections 21083 and 21087, Public Resources Code; Reference: Sections 21091 and 21092, Public Resources Code; *People v. County of Kern* 39 Cal.App.3d 830.

[4] Authority cited: Sections 21083 and 21087, Public Resources Code; Reference: Section 21082.1, Public Resources Code; Section 4, Chapter 480 of the Statutes of 1981; 40 Code of Federal Regulations, Part 1501.7.

A Question

Section 15180 of the CEQA Guidelines states that:
"All public and private activities or undertakings pursuant to or in furtherance of a redevelopment plan constitute a single project, which shall be deemed approved at the time of adoption of the redevelopment plan by the legislative body. The EIR in connection with the redevelopment plan shall be submitted in accordance with Section 33352 of the Health and Safety Code."

A question I have related to this section of CEQA is: Does this project constitutes some kind of undertaking in furtherance of a redevelopment plan? Quite honestly, I do not know. If staff would provide an answer to this question I would be most grateful.

Final Points to Consider

Per §15131(b) and (c) of the CEQA Guidelines, "economic or social effects of a project may be used to determine the significance of physical changes caused by the project," and "economic, social, and particularly housing factors shall be considered by public agencies together with technological and environmental factors in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment identified in the EIR." Finally, Section 21083 of CEQA requires an agency to determine that a project may have a significant effect on the environment if it will cause substantial adverse effects on human beings, either directly or indirectly.

What this means for the Marina Heights – Abrams "B" project is that the economic effects of the affordability of structures, or the lack of affordability, must be considered and documented as the significance of physical changes proposed by the project are progressively assessed, because economic and housing factors, if not carefully and properly integrated into the overall design of the project, may indirectly and directly cause substantial adverse effects on human beings. Some of these effects would be related to inability of significant sectors of the population to purchase a home – other effects would be less easily identified, such as the psychological or systemic health impact of traffic patterns on human beings in developments patterned after standard development configurations and types. While these effects may be remedied by public involvement, serious affordability analysis, and consideration of recent community design alternatives, it is nonetheless very clear that economic, social, and housing factors must and will play a direct role in determination of effects.

Conclusion

The Environmental Determination Findings of the Staff Report for Jan. 23, 2003, Marina Heights – Abrams "B," should have contemplated the economic, social, and housing factors as analyzed above. A series of scoping meetings should be established forthwith involving the developer, key city staff, and the public, so as to quickly develop a consensus using ideas and concepts submitted by the public for development of alternatives. After these meetings, an EIR should be prepared.

Respectfully Submitted,



Mr. Colin G. Gallagher, B.S., N.R.P.I., RPCV
973 Heather Circle #48E
Salinas CA 93906-3950

Tel.: (831) 753-0631
E-mail: pcvcolin@yahoo.com

Robert D. "Dan" O'Brien
171 Aaron Way
Marina CA 93933
831-384-8966

Thursday, January 23, 2003

Planning Director
City of Marina
Marina City Hall
211 Hillcrest Ave.
Marina, CA 93933

Dear Mr. Dack,

Proposed Marina Heights Project Environmental Review Determination and scooping Meeting

I would like to request that a thorough EIR be conducted to include the status of known air and water borne contaminants present on or around this site as the result of the Army's past use and ongoing clean up efforts.

The Army at a Community Involvement Workshop January 14, 2003 reported that the area where the development is to occur has currently and will in the future30 years have potential causing adverse health risks from the following chemicals:

Butadiene, Dioxane, Benzene, Carbon Tetrachloride, Chloroform, Chloromethane and Tetrahydrofuran.

These chemicals present extreme hazards to human health for all sorts of reasons not the least of which is cancer.

For the City of Marina to proceed with this project without complete assurance that these chemicals will not present a health hazard, to any of the occupants of the project would be negligent to the extreme.

The Army itself has concluded " Considerable uncertainty remains regarding the source of detected chemicals" and recommends: "Conduct more ambient air sampling to better understand site-related emissions"

If the Army feels more testing is required to better understand the risk, it would be prudent for the City and the Developer to assume the creator of the problem (The Army) is likely correct.

As a citizen of Marina I would prefer to see suffering avoided, and for the City not to be faced with any resulting litigation.

Sincerely,

Dan O'Brien

Judy Paterson

From: Joy P. Junsay
Sent: Thursday, January 23, 2003 5:28 PM
To: Jeffery P. Dack; Judy Paterson; BethAnn Skamser
Subject: FW: Planning Commission 1/23 meeting

FYI - JOY

-----Original Message-----
From: Paula Pelot [mailto:pfpelot@hotmail.com]
Sent: Thursday, January 23, 2003 4:58 PM
To: jjunsay@ci.marina.ca.us
Subject: Planning Commission 1/23 meeting

January 23, 2003
To: Marina Planning Commission
Re: Marina Heights EIR:Cumulative Impacts Assessments and Proposed Alternatives

As a resident living in the Preston Park development on the former Fort Ord, I, along with my neighbors, will be directly impacted by the proposed Marina Heights development both immediately during its construction and over the long term by its environmental and economic impacts. I therefore urge you to require an EIR for the proposed project and for proposed alternatives that would align the project with the Urban Growth Boundary General Plan.

In any alternative to the proposed project, I am most interested in alternatives that provide additional affordable workforce housing, increased greenbelts, increased allowances in the design for pedestrian and bicycling traffic and on-going monitoring of air/water quality.
The impacts addressed by the EIR should include vehicular/pedestrian traffic, plant and animal life, geology and hydrology, air quality (particularly in light of the recent questions raised over emissions from the nearby OU-2 landfill), noise levels, housing density and mixed-uses, affordable workforce housing and jobs/housing balance.

Because there have been, and will continue to be, nearby developments, a cumulative impacts assessment should be a key component of the EIR. Such an assessment should include a scoping process to identify the issues of concern, the stakeholders (both local and regional), the ecosystems components, the spatial and temporal boundaries and the past, present and future activities.

The analysis component of the cumulative impacts assessment should compile reliable baseline data for the issues identified in the scoping process and assess the additive effects and their relevant pathways. Ideally it will also offer a plan to mitigate and minimize the cumulative impacts and outline methods for monitoring throughout the construction and well after the completion of the project.

I am unable to attend this evening's meeting but ask that you give this consideration in any action that you may take this evening. This will be, I sure, a "long and winding road" and I thank you in advance for your efforts.

Paula F. Pelot
728 Landrum Court
Marina, CA 93933
(831) 582-0522
pfpelot@hotmail.com

23 January 2003

Grace Silva-Santella
3230 Susan Avenue
Marina, CA 93933
831.883.1861
ssgardens@redshift.com

To: Marina Planning Commission

Re: Marina Heights Project/Abrahms "B" Housing Environmental Review Determination

Dear Chairperson Bradshaw and Commissioners,

The purpose of this correspondence is two fold. First, to encourage the Planning Commission to make a formal determination that an environmental impact report will be required for the proposed Marina Heights housing development. Second, CEQA requires that EIRs must discuss reasonable alternatives to the proposed project. I wish to submit parameters for a project alternative and ask that you include it in the alternatives analysis section of the EIR. Further, I request that this alternative be evaluated at the same level of analysis as the proposed project.

The proposed project has a number of inconsistencies with the city's Urban Growth Boundary General Plan (UGB GP). I suggest that the alternatives analysis be consistent with the UGB GP. Specifically, the project alternative should include the following;

- The project is located in the UGB GP land use of Village Homes, which allows for 5% mixed use. Recent writings on New Urbanism suggest that a commercial node could be located within every 80 acres of housing development. The proposed project area is approximately 300 scres (248 acres for Abrahms A and 52 acres (apprx.) for Abrahms B). This would allow for the development of 3 - 4 mixed-use commercial nodes.

- As shown in the UGB GP the 10-acre elementary school site should be located in the NW corner of the property adjacent to California Avenue. The school site location as proposed by the applicant is undesirable due to its proximity to a planned four-lane expressway. The UGB GP calls for Abrahms Park, 32 acres, and the elementary school site, 10 acres, for a combined area of 42 acres that could be used by the surrounding area for

park use. The proposed project has reduced that combined number to 28 acres, a loss of 14 acres, and placed both uses in one location.

- As shown in the UGB GP and consistent with City Council action (8/3/02 City Council Minutes) the green-belt should be extended to run east - west with the property boundary. In addition, pedestrian and bike access need to be considered adjacent to the water tower at Bayer and an additional access considered at the Kelli Court cul-de-sac. The proposed project has a number of homes located in the green belt.

- The alternative should be considered with neighborhood block lengths that do not exceed 400 feet. This encourages residential communities that are pedestrian oriented.

- The alternative should have additional access points from the collector streets and consider additional ingress/egress for the Abrams B area.

- The project area is located in the UGB GP land use designation of Village Homes and should have a higher housing density then proposed. The alternative should be analyzed based on Village Home density. Higher density is transit friendly and links into sustainability by supporting local bus service, preserving open space, encouraging less reliance on the automobile and creating fewer impacts on infrastructure.

- The alternative should have the housing types in small clusters rather than large areas developed with only one kind of home style. Though this may be considered a design and social issue it could be argued it is an aesthetics/visual quality element that the public notice for this EIR identifies as a possible topic.

- The alternative should consider the impacts of small square footage detached single-family homes to meet density requirements and provide home ownership opportunities through design. The smallest housing unit referenced in the proposed project is a 1200 square foot Town home. The alternative should look at any potential impacts housing units of 650 - 700 square feet might have.

- The UGB GP calls for a Jobs/Housing Balance Ordinance. Absent of that ordinance in place both the proposed project and the alternative need to be evaluated how proceeding with a housing development with no job linkage will impact the community. In addition defining the term 'job' needs to be addressed; does job mean short term construction related job (as suggested by the Marina Heights development team) or does job relate

to Marina based businesses/organizations primarily doing business in Marina. Lack of a Job/Housing Balance Ordinance and its applicability to this development will establish a precedent to be applied to other future developments and could perpetuate the Marina bedroom community.

- The alternative should evaluate a mix of income levels living in the 194-unit Abrahms B housing area and the possibility of some infill in this area for additional housing mixes.

Cumulative impacts for both the proposed project and the alternative need to be evaluated relative to other former Fort Ord land developments. Specifically, adjacent Marina Airport MBEST Center, Cypress Knolls Retirement community and West/North University Village.

Thank you for hearing my requests. Having served on the Marina Planning Commission for seven years I have great respect for the work you do and appreciate the commitment of time you are giving to our city. I look forward to reviewing the Draft EIR for the proposed Marina Heights/Abrahms "B" Housing project.

Respectfully,

Grace Silva-Santella

John Heiser

From: Grace Silva-Santella [ssgardens@redshift.com]
Sent: Wednesday, January 15, 2003 8:07 AM
To: Delgado, Bruce; Gray, Ken; McCall, David; Mette-McCutchon, Illa; Morrison, Michael
Cc: Altfeld, Anthony; Dack, Jeff; Hilinski, Susan; Heiser, John; Jansay, Joy
Subject: Jan. 21 City Council meeting and Marina Heights development

To: Mayor Mette-McCutchon and City Council

From: Grace Silva-Santella

Re: Jan. 21 City Council meeting regarding Marina Heights housing development

Dear Mayor Mette-McCutchon and City Council Members,

I was very heartened at your January 7 City Council meeting to hear from the Mayor that it will be incumbent on the developers of the proposed Marina Heights project to respond to the issues raised in the Planning Commission November 7 Study Session. It was also reassuring to hear Council Member Ken Gray ask that your January 21 City Council meeting have an agenda item that will assist with the Marina Heights project description. As Council Member Gray stated, such an agenda item will develop a wide consensus of support for the project and assist in development of the EIR.

(As a note: at the January 19 Planning Commission meeting, responding to questions from the audience, Planning staff informed the commission that all reference to "supplemental" in regards to the EIR work for Marina Heights has been dropped and staff has not been contacted by the development team to arrange a meeting with the commission to respond to issues raised in their November study session. The Planning Commission did decide to send a formal offer to the developer to use their upcoming meeting on the Marina Heights EIR as an opportunity to respond to the study session issues.)

Affordable housing has been the dominant issue of discussion regarding the project as currently proposed. I have always been a proponent of affordable housing by design. I will be leaving at city hall a copy of an excerpt from a book by Sarah Susanka, Creating The Not So Big House. The write up describes a development on Whidbey Island, Washington, that has eight detached single family homes located on two-thirds of an acre. I first heard of this project while attending a workshop last year in Salinas that Dan Burden, from Walkable Communities, Inc., was the key note speaker. The intent of this housing is to meet the needs of a population too often ignored when communities plan for housing.

- "These eight houses were designed on spec for singles and couples, a market that is currently largely ignored by mass-market developers. Although more then half of all households in the country consist of only one or two people, almost all new single-family construction is based on a model that's best suited to a much larger family. Despite the fears of lenders, the cottages were sold almost immediately..."

Though affordable housing in the Marina Heights development has been the issue receiving the most coverage there are a myriad of land planning elements that needs attention; inclusion of some commercial mixed use, possible establishment of city policy for water allocation in regards to job creation versus housing development on the former Fort Ord, traffic circulation and connectivity to existing Marina, alternative transportation components, school site acreage and location, mix of housing types to meet varying income levels and life styles, permanent greenbelt set asides consistent with existing city policy, etc..

If we can address the concerns and issues raised by Planning Staff, commissioners, City Council Members and residents at this early stage of the project proposal we can expedite the ceremonious day of ground breaking.

I look forward to your upcoming January 21 meeting.

Respectfully,

Grace Silva-Santella

ATTACHMENT TO 10 9
PAGE ____ OF ____ PAGES

RECEIVED
JAN 15 2003
MARINA CITY CLERK

Subject: Jan. 21 City Council meeting and Marina Heights development
Date: Wed, 15 Jan 2003 08:07:04 -0800
From: Grace Silva-Santella <ssgardens@redshift.com>
To: "Delgado, Bruce" <bdelgado@mbay.net>, "Gray, Ken" <gray@redshift.com>, "McCall, David" <doctordave54@juno.com>, "Mette-McCutchon, Illa" <ilamm1@aol.com>, "Morrison, Michael" <michael@fleetvan.com>
CC: "Altfeld, Anthony" <AAltfeld@ci.marina.ca.us>, "Dack, Jeff" <jdack@ci.marina.ca.us>, "Hilinski, Susan" <shilinski@ci.marina.ca.us>, "Heiser, John" <jheiser@ci.marina.ca.us>, "Junsay, Joy" <jjunsay@ci.marina.ca.us>

To: Mayor Mette-McCutchon and City Council

From: Grace Silva-Santella

Re: Jan. 21 City Council meeting regarding Marina Heights housing development

Dear Mayor Mette-McCutchon and City Council Members,

I was very heartened at your January 7 City Council meeting to hear from the Mayor that it will be incumbent on the developers of the proposed Marina Heights project to respond to the issues raised in the Planning Commission November 7 Study Session. It was also reassuring to hear Council Member Ken Gray ask that your January 21 City Council meeting have an agenda item that will assist with the Marina Heights project description. As Council Member Gray stated, such an agenda item will develop a wide consensus of support for the project and assist in development of the EIR.

(As a note: at the January 19 Planning Commission meeting, responding to questions from the audience, Planning staff informed the commission that all reference to "supplemental" in regards to the EIR work for Marina Heights has been dropped and staff has not been contacted by the development team to arrange a meeting with the commission to respond to issues raised in their November study session. The Planning Commission did decide to send a formal offer to the developer to use their upcoming meeting on the Marina Heights EIR as an opportunity to respond to the study session issues.)

Affordable housing has been the dominant issue of discussion regarding the project as currently proposed. I have always been a proponent of affordable housing by design. I will be leaving at city hall a copy of an excerpt from a book by Sarah Susanka, Creating The Not So Big House. The write up describes a development on Whidbey Island, Washington, that has eight detached single family homes located on two-thirds of an acre. I first heard of this project while attending a workshop last year in Salinas that Dan Burden, from Walkable Communities, Inc., was the key note speaker. The intent of this housing is to meet the needs of a population too often ignored when communities plan for housing.

- "These eight houses were designed on spec for singles and couples, a market that is currently largely ignored by mass-market developers. Although more then half of all households in the country consist of only one or two people, almost all new single-family construction is based on a model that's best suited to a much larger family. Despite the fears of lenders, the cottages were sold almost immediately..."

Though affordable housing in the Marina Heights development has been the issue receiving the most coverage there are a myriad of land planning elements that needs attention; inclusion of some commercial

mixed use, possible establishment of city policy for water allocation in regards to job creation versus housing development on the former Fort Ord, traffic circulation and connectivity to existing Marina, alternative transportation components, school site acreage and location, mix of housing types to meet varying income levels and life styles, permanent greenbelt set asides consistent with existing city policy, etc..

If we can address the concerns and issues raised by Planning Staff, commissioners, City Council Members and residents at this early stage of the project proposal we can expedite the ceremonious day of ground breaking.

I look forward to your upcoming January 21 meeting.

Respectfully,

Grace Silva-Santella

A Cottage Community



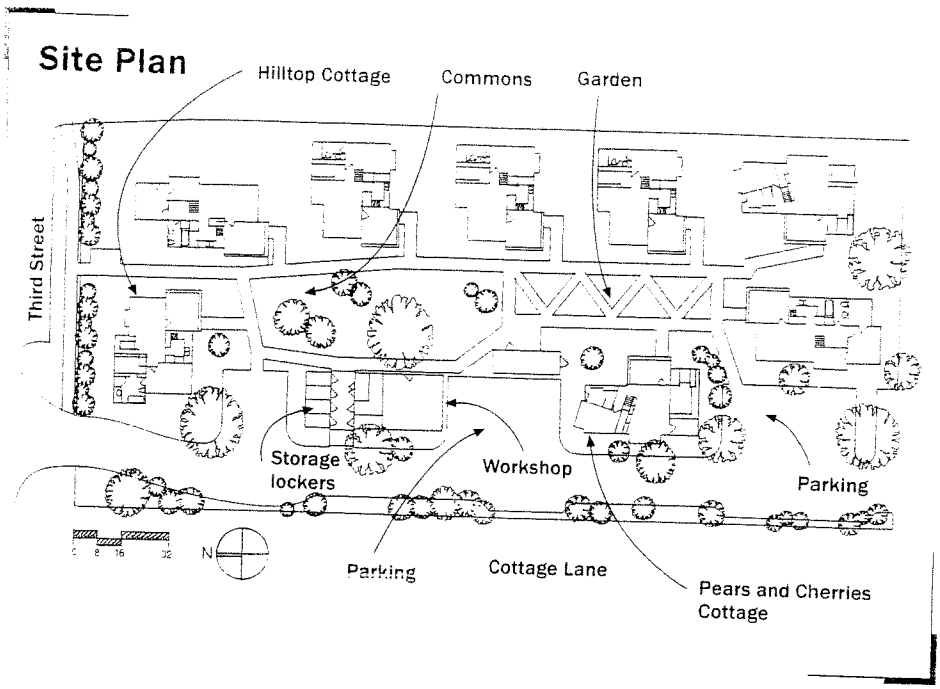
ABOVE The owner of the cottage at right named it Pears and Cherries, honoring the heirloom fruit trees preserved in the yard. Proportioning is a critical aspect in the design of such tiny cottages. Everything is in scale, so it looks and feels right. The cottage is sided with painted fiber-cement boards, and all the porch details are made with stock-sized lumber.

OPPOSITE There's a sense of security and protection when neighbors can easily see one another's comings and goings, and this has proven to be a key selling point for the Third Street Cottages community.

FINDING GOOD EXAMPLES OF SMALL houses with the kind of detailing and tailoring that building Not So Big entails was harder than I'd imagined. Finding an entire community of Not So Big houses was an unexpected bonus. Third Street Cottages on Whidbey Island in Washington State is a community of eight tiny houses, located on just two-thirds of an acre. The houses themselves have a main-floor square footage of 600 sq. ft. to 650 sq. ft., with a loft above. They are clustered around a central commons, which includes a lawn and "pea patch" garden. Parking is located in small pockets of three to five cars along the west edge of the property. To enter the neighborhood, you park, come into the commons through an implied gateway, and arrive at each house via its front gate and porch.

By spending less on the overall square footage, there's more money available to make a place that's comfortable, well crafted, and personal.

The two cottages illustrated here—Hilltop, and Pears and Cherries—give a sense of the overall community and a glimpse of the charm of each individual home. Filled with simple but beautifully designed details reminiscent of the bungalows of the Arts



and Crafts movement, these homes ex what building Not So Big is all about. spending less on the overall square foo there's more money available to make that's comfortable, well crafted, and pe Architect Ross Chapin and developer Jim Soules built with this philosophy i mind. As Ross says, "We placed a high on craftsmanship and design because w wanted to build in character. Yet we di want to get too fussy or precious with details." So they used simple, off-the-sh items that allowed them to keep costs c while keeping quality and craft up.

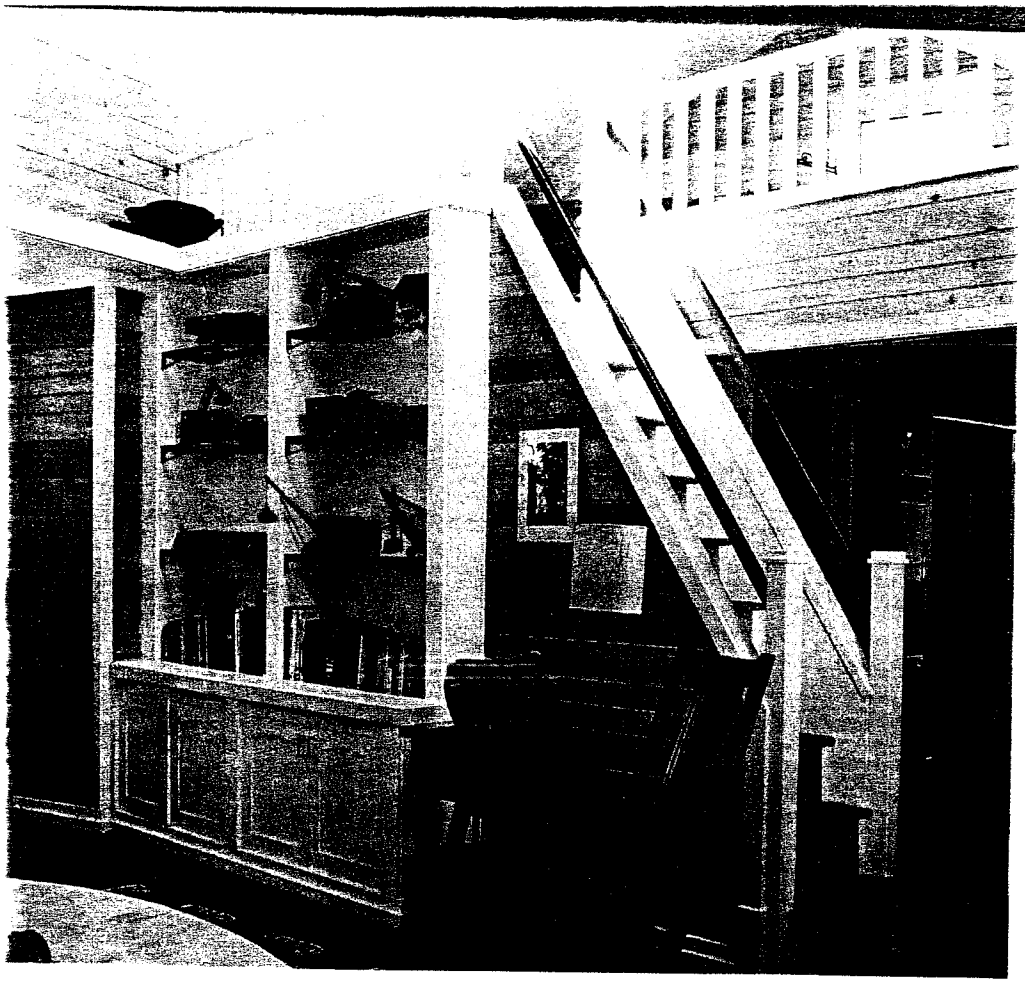
Architect:
Ross Chapin Architects
Developer/builder:
The Cottage Company
Size: 710–930 sq. ft.
Location:
Whidbey Island, Wash.

Filled with simple but beautifully designed details, these homes exemplify what building Not So Big is all about.

Nooks and Crannies

The diminutive size of these cottages means that every squa foot must be put to use. Rather than making one large, und ferentiated room for the main living area, Ross created alcov window bays, and other pockets of space to make a small a seem much larger and to accommodate more activities. For example, Pears and Cherries has a 2-ft. by 10-ft. alcove that i creases the usable living-room space by far more than its squ footage would suggest. It creates a cozy corner with a lower ceiling, set off from the vaulted main space.

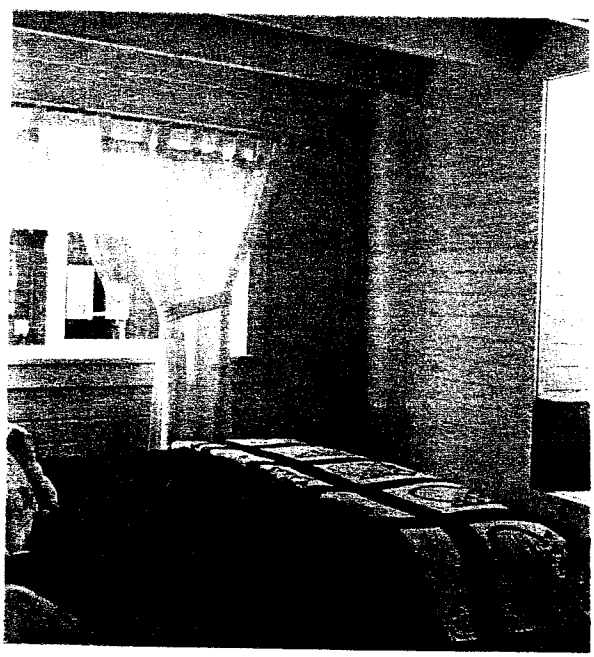
Other alcoves are smaller still. In Hilltop, there are two ti bays, each only 16 in. deep. The shallow window bay in the ing room brings in more light than if it were flush with the cent wall, because the surrounding surfaces reflect the light a bounce it into the room. The window's height from the floo also increases the sense of privacy. The bay in the bedroom



LEFT In the Pears and Cherries Cottage, access to the loft above is via a steep stairway. The bedroom and bathroom are nestled under the loft. The living-room alcove to the left has a lowered ceiling, to distinguish it from the main living area, and the top of the adjacent built-in bookshelves creates a shelf for displaying treasures, which continues around the room.

BELOW Using exposed joists with pine decking instead of drywall gives the ceiling between the bedroom and the loft a lot more character. The window seat shown here is actually more like a skylight seat: The windows are located above ceiling height, bringing in an abundance of light while maintaining privacy from neighboring cottages.

encloses a high window that brings light into the space from above, giving it a warm glow. There's something inspiring about light from above, especially when the source of the light is not visible, as here. It's no accident that this technique was used in churches and cathedrals of the past. But it doesn't take a huge space to create the same uplifting spirit.

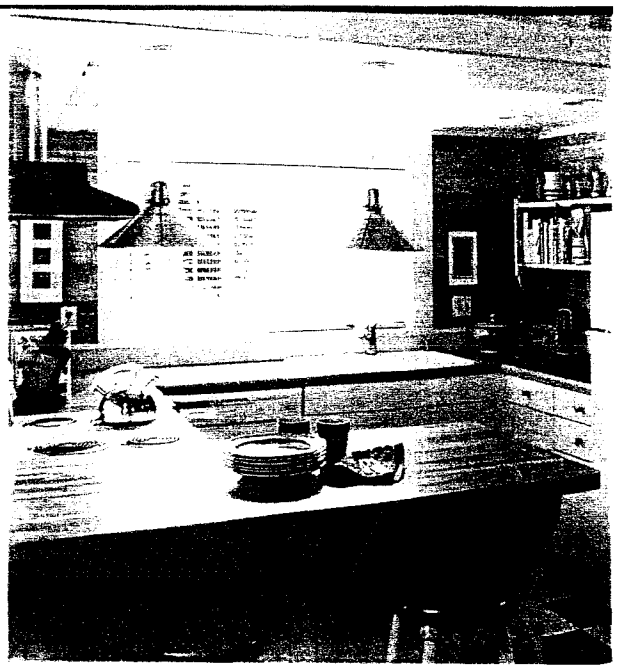


A Sense of Entry

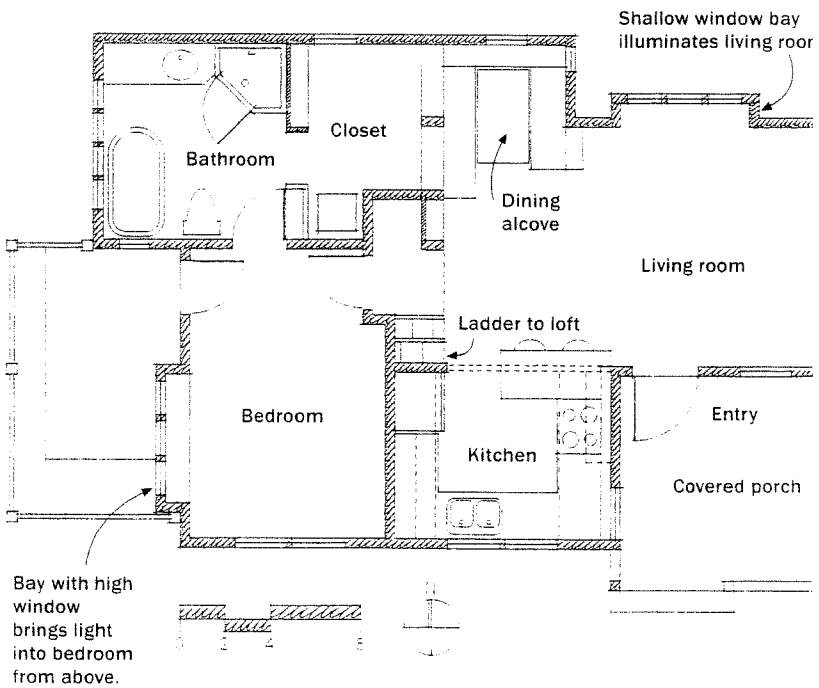
This subtle sense of the way spatial experience affects us is evident throughout the cottages. The framed openings for the kitchens in both cottages act as wide doorways, indicating that you are entering a new activity area without obstructing views from one place to another. When space is limited, using this

technique to identify a transition can make a space feel much larger.

An obvious example of this principle is Hilltop's kitchen, seen at right. In the plan, you can see that the room is simply an extension of the living room. Its ceiling height and finish are the same as that of the adjacent space. What distinguishes it as a separate room is the surrounding trimwork and lowered header as you enter. Picture the room without these elements and you can see that the result would look more like a makeshift trailer than a house. It's the detailing, the wing wall adjacent to the refrigerator, and the change in ceiling height that make it work. It doesn't require a dividing wall, just a psychological gateway.



Hilltop: Main Floor



Loft Living

Each cottage has at least one full-height loft, accessed by a steep or alternating-step stair. The lofts provide some bonus space that can be used in a variety of ways—anything from storage space to meditation retreat to home

ABOVE The walls of the Hilltop Cottage kitchen are paneled with reclaimed Sitka spruce. Although the room is small, everything is beautifully detailed. Notice the cabinetry support bracket below the countertop's bar overhang. It's details like this that give a home a personal quality.

OPPOSITE The kitchen in the Pears and Cherries Cottage is designed to be welcoming. Aligning the framed entryway with the window beyond invites you in, and the eating alcove tucked away to the left intrigues you with a glimpse of what's there, making you want to see more.

Up Close



Although Hilltop Cottage has only 650 sq. ft. on the main level, there's an additional 200 sq. ft. of loft space, room enough for a cozy in-home office. The ship's ladder (a design purportedly invented by Thomas Jefferson) takes up much less space than a standard staircase.

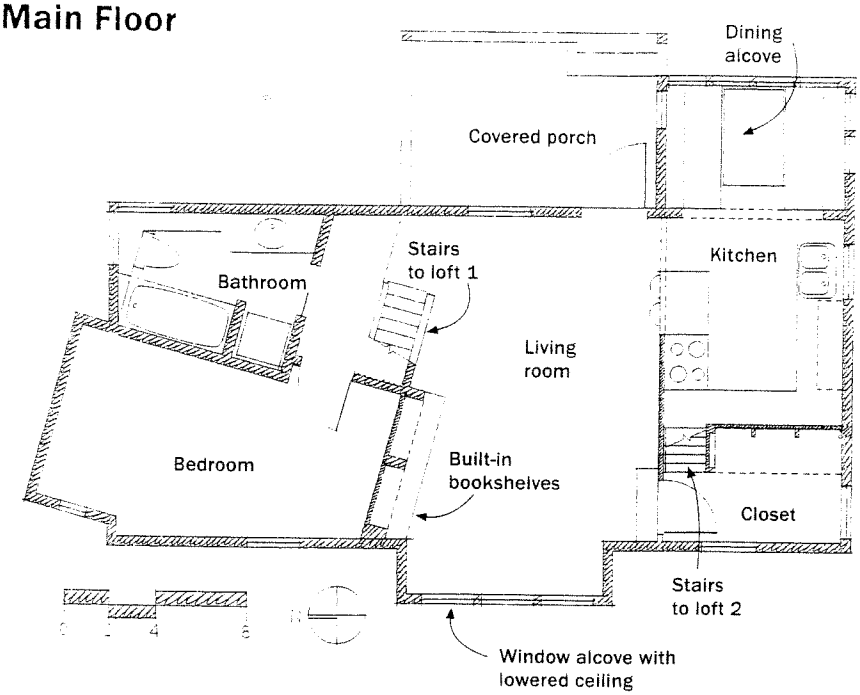
office. The lofts also serve to increase the apparent scale of the main living areas in each cottage by extending the sight lines. When you can see that there's additional living area above and just out of view, it makes the whole main floor seem larger—especially when it's bathed in sunlight.

Building Smaller, Building Smarter

Ross and Jim pared the cottages down to a reasonable minimum in terms of square footage. To give each home its own unique charm, they spent time on design and used materials that had inherent beauty. The houses were also sustainably made, by using fewer resources in their construction than most similar houses built today and materials that are themselves sustainable. The interior walls, which add such warmth to the rooms, are paneled with Sitka spruce that was rejected by a local piano factory and was on its way to a paper mill. The flooring is Medite, a formaldehyde-free particleboard, which has been cut into 24-in. by 32-in. tiles, stained to look like aged leather, and then finished with linseed oil. The exteriors are sided with Hardiplank fiber-cement boards.

These eight houses were designed on spec for singles and couples, a market that is currently largely ignored by mass-market developers. Although more than half of all households in the country consist of only one or two people, almost all new single-family construction is based on a model that's best suited to a much larger family. Despite the fears of lenders, the cottages sold almost immediately, and they have generated enormous interest, both locally and nationally.

Pears and Cherries: Main Floor



The diminutive size of these cottages means that every square foot must be put to use.



The Cottage-Community Concept

When we imagine the towns and villa of the pre-automobile era, a promi feature is the strong sense of community was created by the proximity of homes—a people—to one another. Neighbors went a their daily business on foot, greeting one another or stopping for a brief conversatic People looked out for each other, and a se of safety prevailed. The Third Street Cotta project taps into this time-honored metho creating community, for those interested i ing simply but beautifully.

The project was developed to form a ne borhood with a true sense of home for all its residents. In order to do this, priority wa given to "place making"—creating spots to gather, to work together in the garden, or t greet a neighbor in passing—rather than d signing around automobiles, as is invariab the case today.

The emblem of our longing for this sort community is the front porch—such a pre- dominant feature of homes of the past. A porch provides the opp tunity to chat with the neighbors or just watcl the world go by. Add to this a low split-cedar fence, perennial hedge and common area, anc there's just the right balance between publi and private space to al a community to flourisl through the chance in- teractions of daily life.

RIGHT The cabinetry throughout each house has a personal touch, with simple details added to the door panels and well-chosen hardware, which distinguishes it from run-of-the-mill cabinetry. The painted-wood walls and exposed ceiling joists add far more interest and texture than the standard drywall finishes we're used to.

BELOW When a house is small, you can have light on three sides of a room, an experience you don't get in a larger house, where there is more distance between exterior walls and usually more than one living area in a space. In fact the bigger the house, the darker the middle tends to be.





The days when a single person would never think of buying a home are long past, yet few houses are designed for this large and growing market. And too often, when small houses are built today, they are built cheaply, with little thought to character. But these cottages prove that there are many people out there who want to surround themselves with beauty, comfort, and practicality. And they want their dwellings to reflect their values. A drywalled shoe box just won't do.



ABOVE In the Pears and Cherries Cottage, an alcove surrounded by windows and wide sills provides the perfect ambiance for eating, reading the morning paper, or simply hanging out. It's the cozy size that makes this space work. If it were larger, it would lose the intimacy that makes you want to settle in and relax.



10 January 2003

Grace Silva-Santella
3230 Susan Avenue
Marina, CA 93933

Steven Speno
142-A South Santa Cruz Avenue
Los Gatos, CA 95030

Re: Armstrong Ranch proposal for Marina, CA

Dear Mr. Speno,

I was happy to have attended the January 9 meeting of the Marina Planning Commission and hear your presentation on the recent conceptual plan for the Armstrong Ranch.

I spoke to you that evening asking if you would allow me to mail you a write up on a housing project using minimum square footage for detached single family homes. I am sending you a copy of a section from the book, Creating The Not So Big House, by Sarah Susanka. The project described is eight houses on two-thirds of an acre.

The houses were "designed on spec for singles and couples, a market that is currently largely ignored by mass-market developers. Although more then half of all households in the country consist of only one or two people, almost all new single-family construction is based on a model that's best suited to a much larger family. Despite the fear of lenders, the cottages sold almost immediately..." (Pg. 228)

I sincerely hope you will give this idea of smaller homes serious consideration as you further develop your plans for Armstrong Ranch. I think this is a viable option to provide affordable housing through design.

Respectfully,

Grace Silva-Santella

cc: Marina Planning Commission

A Cottage Community



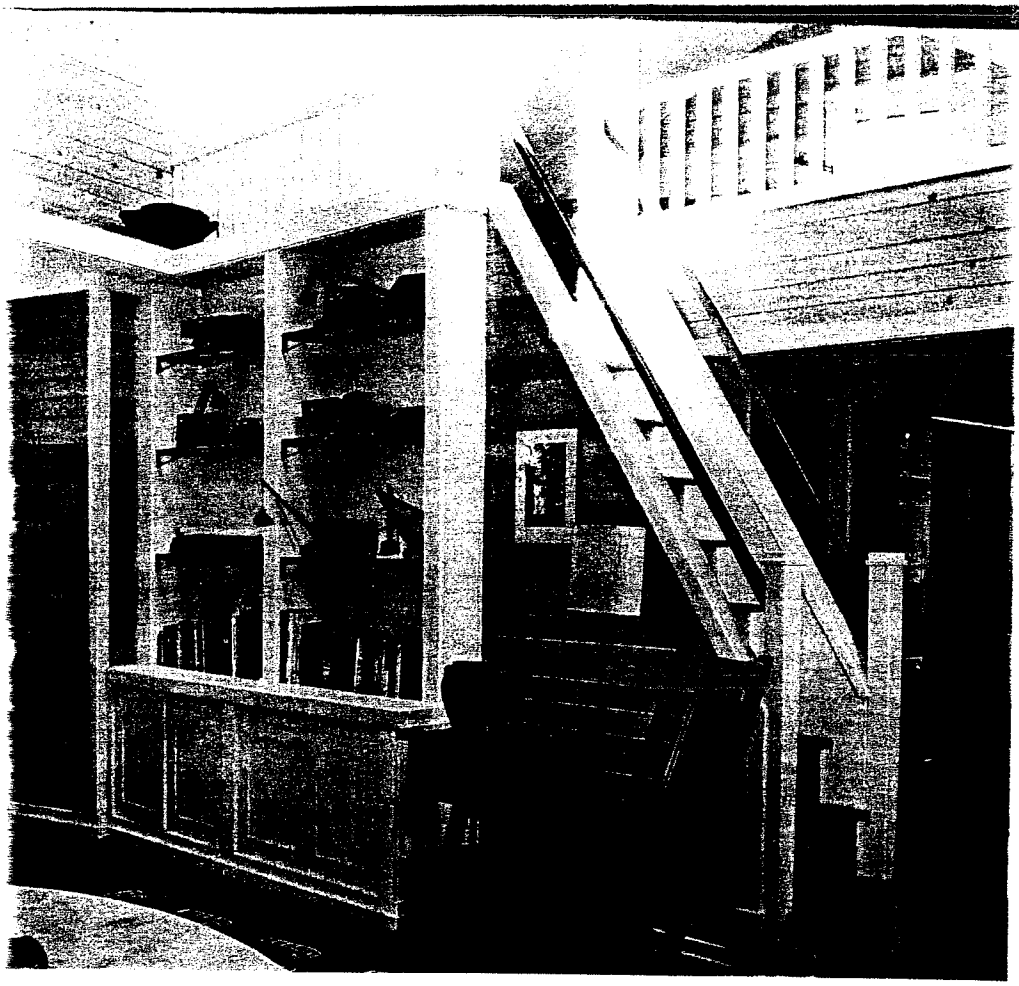
ABOVE The owner of the cottage at right named it Pears and Cherries, honoring the heirloom fruit trees preserved in the yard. Proportioning is a critical aspect in the design of such tiny cottages. Everything is in scale, so it looks and feels right. The cottage is sided with painted fiber-cement boards, and all the porch details are made with stock-sized lumber.

OPPOSITE There's a sense of security and protection when neighbors can easily see one another's comings and goings, and this has proven to be a key selling point for the Third Street Cottages community.

FINDING GOOD EXAMPLES OF SMALL houses with the kind of detailing and tailoring that building Not So Big entails was harder than I'd imagined. Finding an entire community of Not So Big houses was an unexpected bonus. Third Street Cottages on Whidbey Island in Washington State is a community of eight tiny houses, located on just two-thirds of an acre. The houses themselves have a main-floor square footage of 600 sq. ft. to 650 sq. ft., with a loft above. They are clustered around a central commons, which includes a lawn and "pea patch" garden. Parking is located in small pockets of three to five cars along the west edge of the property. To enter the neighborhood, you park, come into the commons through an implied gateway, and arrive at each house via its front gate and porch.

By spending less on the overall square footage, there's more money available to make a place that's comfortable, well crafted, and personal.

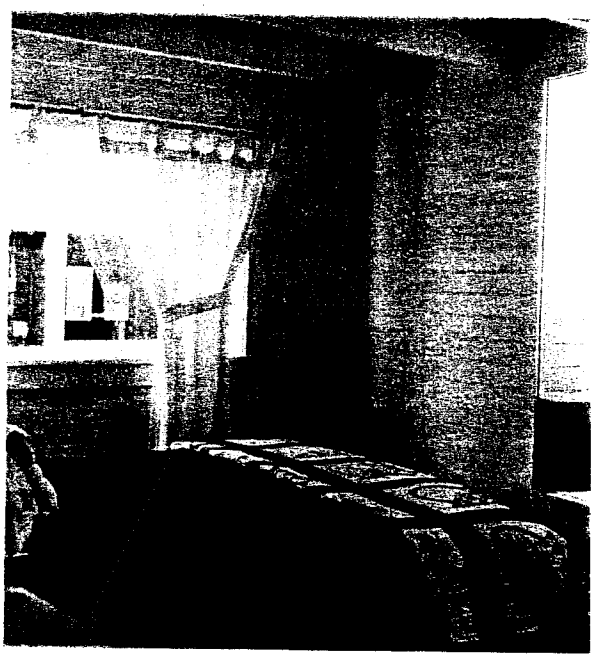
The two cottages illustrated here—Hilltop, and Pears and Cherries—give a sense of the overall community and a glimpse of the charm of each individual home. Filled with simple but beautifully designed details reminiscent of the bungalows of the Arts



LEFT In the Pears and Cherries Cottage, access to the loft above is via a steep stairway. The bedroom and bathroom are nestled under the loft. The living-room alcove to the left has a lowered ceiling, to distinguish it from the main living area, and the top of the adjacent built-in bookshelves creates a shelf for displaying treasures, which continues around the room.

BELOW Using exposed joists with pine decking instead of drywall gives the ceiling between the bedroom and the loft a lot more character. The window seat shown here is actually more like a skylight seat: The windows are located above ceiling height, bringing in an abundance of light while maintaining privacy from neighboring cottages.

encloses a high window that brings light into the space from above, giving it a warm glow. There's something inspiring about light from above, especially when the source of the light is not visible, as here. It's no accident that this technique was used in churches and cathedrals of the past. But it doesn't take a huge space to create the same uplifting spirit.



A Sense of Entry

This subtle sense of the way spatial experience affects us is evident throughout the cottages. The framed openings for the kitchens in both cottages act as wide doorways, indicating that you are entering a new activity area without obstructing views from one place to another. When space is limited, using this

Up Close



Although Hilltop Cottage has only 650 sq. ft. on the main level, there's an additional 200 sq. ft. of loft space, room enough for a cozy in-home office. The ship's ladder (a design purportedly invented by Thomas Jefferson) takes up much less space than a standard staircase.

office. The lofts also serve to increase the apparent scale of the main living areas in each cottage by extending the sight lines. When you can see that there's additional living area above and just out of view, it makes the whole main floor seem larger—especially when it's bathed in sunlight.

Building Smaller, Building Smarter

Ross and Jim pared the cottages down to a reasonable minimum in terms of square footage. To give each home its own unique charm, they spent time on design and used materials that had inherent beauty. The houses were also sustainably made, by using fewer resources in their construction than most similar houses built today and materials that are themselves sustainable. The interior walls, which add such warmth to the rooms, are paneled with Sitka spruce that was rejected by a local piano factory and was on its way to a paper mill. The flooring is Medite, a formaldehyde-free particleboard, which has been cut into 24-in. by 32-in. tiles, stained to look like aged leather, and then finished with linseed oil. The exteriors are sided with Hardiplank fiber-cement boards.

These eight houses were designed on spec for singles and couples, a market that is currently largely ignored by mass-market developers. Although more than half of all households in the country consist of only one or two people, almost all new single-family construction is based on a model that's best suited to a much larger family. Despite the fears of lenders, the cottages sold almost immediately, and they have generated enormous interest, both locally and nationally.

The cabinetry throughout each house has a personal touch, with simple details added to the door panels and well-chosen hardware, which distinguishes it from run-of-the-mill cabinetry. The painted-wood walls and exposed ceiling joists add far more interest and texture than the standard drywall finishes we're used to.

BELOW When a house is small, you can have light on three sides of a room, an experience you don't get in a larger house, where there is more distance between exterior walls and usually more than one living area in a space. In fact the bigger the house, the darker the middle tends to be.





The days when a single person would never think of buying a home are long past, yet few houses are designed for this large and growing market. And too often, when small houses are built today, they are built cheaply, with little thought to character. But these cottages prove that there are many people out there who want to surround themselves with beauty, comfort, and practicality. And they want their dwellings to reflect their values. A drywalled shoe box just won't do.



TAMC
TRANSPORTATION AGENCY
FOR MONTEREY COUNTY

Regional Transportation Planning Agency • Congestion Management Planning
Local Transportation Commission Monterey County Service Authority for Freeways & Expressways

January 23, 2003

Jeff Dack, Planning Director
City of Marina Planning Department
211 Hillcrest Avenue
Marina, CA 93933

SUBJECT: Marina Heights

Dear Mr. Dack:

Our agency has reviewed the Public Notice for an Environmental Review Determination And Scoping Meeting For Possible EIR for the Marina Heights Project/ Abrams "B" Housing for the City of Marina and Cypress Marina Heights, L.P. The Transportation Agency for Monterey County (TAMC) serves as the regional transportation planning agency (RTPA) and the congestion management agency (CMA) for Monterey County. TAMC staff has reviewed the documents and offers the following comments for your consideration:

1) TAMC agrees with City of Marina planning staff that an Environmental Impact Report (EIR) should be prepared for the combined project.

2) The traffic and circulation element in the Draft EIR should address how the proposed improvements will be consistent with the traffic level of service (LOS) standards and/or goals in the Monterey County Congestion Management Program (CMP) and Regional Transportation Plan (RTP).

3) The traffic analysis in the Draft EIR should include information on existing traffic volumes within the study area, including U.S. Highway 1 and Reservation Road. This information should be based upon recent traffic counts.

4) The traffic and circulation element in the Draft EIR should include a Level of Service (LOS) analysis for "existing conditions" and "cumulative conditions". The cumulative analysis should include a LOS analysis for long-range conditions, such as General Plan build-out conditions.

5) The methodology used to calculate the LOS should be consistent with the methods in the current version of the Highway Capacity Manual (HCM). All LOS calculations

We appreciate the opportunity to review this document. We would like to request that any subsequent documentation on this project be forwarded to us for review. If you have any questions, please contact Christina Watson of my staff at (831) 775-4406.

Sincerely,

Lee Yarborough
Executive Director

cc: City of Marina City Council
A. Charles E. Johnson, City of Marina Public Works Department
Dave Murray, California Department of Transportation (Caltrans), District 5
Nicolas Papadakis, Association of Monterey Bay Area Governments
Douglas Quetin, Monterey Bay Unified Air Pollution Control District (MBUAPCD)
Frank Lichtanski, Monterey-Salinas Transit (MST)
Michael Houlemard, Fort Ord Reuse Authority (FORA)
Kathy Paul, County Counsel
TAMC Board of Directors, via enclosure to Board agenda

Attachments:

- Samples Of Alternative Measures
- Samples Of Street And Road Improvements

Jennifer Lagier
143 Cypress Grove Ct.
Marina, CA 93933
(831) 883-9640
pcmc@igc.org

January 23, 2003

Members of the Marina Planning Commission
211 Hillcrest Avenue
Marina, CA 93933

Re: Marina Heights Project/Abrahms "B" Housing Environmental Review Determination

Dear Chairperson Bradshaw and Commissioners,

Because I am unable to attend tonight's meeting, I am submitting this letter to express concerns related to the environmental review determination to be made tonight in regards to the proposed Marina Heights project.

The public has been repeatedly assured by members of the Marina City Council that the "project" described as part of the option agreement is not the final project description to be used to prepare the actual EIR or determine the actual scope and design of the project. For this reason, it would seem the logical first step in this process would be to define a project based on public input, resolution of inconsistencies between the Urban Growth Boundary General Plan and preliminary project description, as well as a response to staff comments and concerns.

Once this necessary step has been achieved, the EIR should focus on addressing impacts of the community-defined project. It should also address issues such as potential impacts upon neighboring residential housing and any potential hazards to future Marina Heights residents posed by identified toxic waste remaining on existing Fort Ord lands.

What about construction noise? What protections will existing neighbors have to shield them from noise before 7 a.m., after 7 p.m. and on weekends? How will this be enforced?

As others have already stated, CEQA requires that EIRs must discuss reasonable alternatives to the proposed project. I respectfully request that project alternatives developed after community input gathered during public workshops be evaluated at the same level of analysis as the proposed project.

Thank you for your consideration.

Sincerely,

Jennifer Lagier

AMBAG
ASSOCIATION OF MONTEREY BAY AREA GOVERNMENTS

April 25, 2003

Mr. John Courtney
Lamphier Gregory
1944 Embarcadero
Oakland, CA 94606

Dear Mr. Courtney:

This letter is in response to your request for a determination of consistency of the Marina Heights project with the *2000 Air Quality Management Plan for the Monterey Bay Region* (AQMP).

Consistency of residential projects to the AQMP is determined by adding population growth due to the proposed project to growth from existing permitted units and comparing the total to the applicable jurisdiction's current estimated population plus growth forecasted in the *AMBAG 1997 Regional Population and Employment Forecast* (adjusted by AMBAG Board on 11/14/01).

The current population of Marina is 20,994 (January 1, 2002, State Department of Finance *Official State Estimates* of May 2002). The forecasted population for Marina in the year 2005, the next forecasted year, is 27,941.

The Marina Heights project as described in the project's revised Notice of Preparation includes 1,050 new residential units. To estimate population impacts, AMBAG assumes average household size in Marina to be 2.78 persons per dwelling unit (January 1, 2002, State Department of Finance *Official State Estimates* of May 2002). However, actual resident population will be less due to vacancies. The latest applicable vacancy rate of 7.95 % for Marina is used for this project, from the same source. Based on the above assumptions, AMBAG staff estimates that the project's 1,050 units could add 2,687 residents to the City.

Cumulative impacts are determined by adding the 2,687 new residents expected from the proposed project to other growth approved in the jurisdiction during the 2000 - 2005 period. The cumulative population growth in Marina is estimated from data supplied by City staff. The assumption is made that these approved units will be constructed in the 2000-2005 period. Applying the same average household size and vacancy rate as was assumed for the project's dwelling units, 40 permitted new units could add 102 residents to the City of Marina.

Project consistency is determined by comparing the cumulative estimate of future residents to the growth between the current DOF population estimate and Marina's population forecasted in the

applicable forecast period. The difference between Marina's estimated current population and its forecasted population for 2005 is 6,947 persons.

The cumulative population growth added to the growth associated to the Marina Heights project (2,789 by year 2005) is less that the difference between the current population estimate for Marina and the population growth forecasted for 2005 (6,947 by year 2005). Therefore, the project is **consistent** with the AQMP.

Please feel free to contact Todd Muck of our staff if you have any questions about this determination.

Sincerely,

Todd Muck

Nicolas Papadakis for
Executive Director

cc: Janet Brennan, MBUAPCD

APPENDIX B

AIR QUALITY
METHODOLOGY AND ASSUMPTIONS

AIR QUALITY METHODOLOGY AND ASSUMPTIONS

A. URBEMIS2001

Estimates of regional emissions generated by project-related traffic were made using the URBEMIS2001 computer model, prepared by the California Air Resources Board. URBEMIS2001 contains default values for much of the information needed to calculate emissions, although project-specific information provided by the user can also be applied, when available.

Inputs to the URBEMIS2001 program include number of units and trip generation rates. Trip generation rates for Specific Plan land uses were taken from the traffic analysis presented in the Draft EIR.

The URBEMIS2001 runs assumed summer conditions for VOC, NO_x and PM_{10}, and winter conditions for CO.

B. CALINE-4 MODELING

The CALINE-4 model is a fourth-generation line source air quality model based on the Gaussian diffusion equation. It employs a mixing zone concept in characterizing pollutant dispersion over roadways and intersections. Given source strength, meteorology, site geometry and site characteristics, this model predicts pollutant concentrations for receptors located within 150 meters of the intersection of concern.

A hot spot screening-level form of the CALINE-4 program provided in the Monterey Bay Unified Air Pollution Control District's CEQA Air Quality Guidelines (September 2002) was used to predict carbon monoxide concentrations associated Specific Plan--related traffic. Normalized concentrations for the busiest intersection were adjusted for two-way traffic volume and emission factor. Calculations were made for a receptor at a corner of the intersection, 25 feet equidistant from the two roadways.

An average vehicle speed of 10 miles per hour was used to represent conditions at the intersection evaluated.

The screening form of the CALINE-4 model calculates the local contribution of nearby roads to total concentration. The other contribution is the background level attributed to more distant traffic. For 2003, the 1-hour background level was taken as 4.00 PPM, while the 8-hour background concentration was taken as 1.90 PPM. For 2010, the 1-hour background level was taken as 3.70 PPM, while the 8-hour background concentration was taken as 1.70 PPM.

Eight-hour concentrations were obtained from the 1-hour output of the CALINE-4 model using a persistence factor of 0.7.

APPENDIX C

FUNDAMENTAL CONCEPTS OF COMMUNITY NOISE

FUNDAMENTAL CONCEPTS OF COMMUNITY NOISE

Background

Three aspects of community noise are important in determining subjective response:

- Level (i.e., magnitude or loudness) of the sound.
- The frequency composition or spectrum of the sound.
- The variation in sound level with time.

Airborne sound is a rapid fluctuation of air pressure and local air velocity. Sound levels are measured and expressed in decibels (dB) with 0 dB roughly equal to the threshold of hearing.

The frequency of a sound is a measure of the pressure fluctuations per second measured in units of hertz (Hz). Most sounds do not consist of a single frequency, but are comprised of a broad band of frequencies differing in level. The characterization of sound level magnitude with respect to frequency is the sound spectrum. A sound spectrum is often segmented into octave bands that divide the audible human frequency range (i.e., from 20 to 20,000 Hz) into ten segments.

Frequency Weighting

Many rating methods exist to analyze sound of different spectra. The simplest method is generally used so that measurements may be made and noise impacts readily assessed using basic acoustical instrumentation. This method evaluates audible frequencies by using a single weighting filter that progressively de-emphasizes frequency components below 1000 Hz and above 5000 Hz. This frequency weighting reflects the relative decreased human sensitivity to low frequencies and to extreme high frequencies. This weighting is called A-weighting and is applied by an electrical filter in all U.S. and international standard sound level meters. Some typical A-weighted sound levels are presented in Figure A1.

Noise Exposure

Noise exposure is a measure of noise over a period of time, whereas noise level is a single value at an instant in time. Although a single sound level may adequately describe community noise at any instant in time, community noise levels vary continuously. Most community noise is produced by many distant noise sources that produce a relatively steady background noise having no identifiable source. These distant sources change gradually throughout the day and include traffic, wind through foliage, and distant industrial activities. Superimposed on this slowly varying background is a succession of identifiable noise events of brief duration. These include nearby activities such as single vehicle passbys or aircraft flyovers that cause the community noise level to vary from instant to instant.

A single number called the equivalent sound level, typically referenced by its symbol L_{eq}, is a U.S. and international standard used to describe noise varying over a period of time. The L_{eq} is the average noise exposure level over a period of time (i.e., the total sound energy divided by the duration). It is the constant sound level that would contain the same acoustic energy as the varying sound level, during the same time period. The L_{eq} is useful in describing noise over a period of time with a single numerical value.

Discrete short duration transient noise events, such as aircraft flyovers, may be described by their maximum A-weighted noise level or by their sound exposure level (SEL). The SEL value is preferred over maximum noise levels in defining individual events because measured results may be more reliably repeated and because the duration of the transient event is incorporated into the measure (thereby better relating to subjective response). Maximum levels of transient events vary with instantaneous propagation conditions while a total energy measure, like SEL, is more stable. The SEL of a transient event is a measure of the acoustic energy normalized to a constant duration of one second. The SEL differs from the L_{eq} in that it is the constant sound level containing the same acoustic energy as a one-second event, whereas the L_{eq} is the constant sound level containing the same acoustic energy over the entire measurement period. The SEL may be considered identical to the California standard Single Event Noise Exposure Level (i.e., SENEL).

SEL values may be summed on an energy basis to compute L_{eq} values over any period of time. This is useful for modeling noise in areas exposed to numerous transient noise events, such as communities around airports. Hourly L_{eq} values are called Hourly Noise Levels (HNL values).

In determining the daily measure of community noise, it is important to account for the difference in human response to daytime and nighttime noise. During the nighttime 1) exterior background noise levels are generally lower than in the daytime, 2) background noise also decreases causing exterior noise intrusions become more noticeable, and 3) people are more often at home. For these reasons, people are more sensitive to noise at night than during other periods of the day.

To account for human sensitivity to nighttime noise, the day-night average sound level (DNL, symbol L_{dn}) descriptor is an international standard adopted by the Environmental Protection Agency in 1974 to describe community noise exposure from all sources. The DNL represents the 24-hour, A-weighted equivalent sound level with a 10 dB penalty added for the nighttime noise, between 10:00 pm and 7:00 am. The Federal Aviation Administration has officially employed DNL as its standard since 1981.

In California, the Community Noise Equivalent Level (CNEL) has been the adopted standard since 1972. DNL and CNEL are typically computed by energy summation of HNL values with the proper adjustment applied for the period of evening or night. The CNEL is computed identically to the DNL but with the addition of a 5 dB penalty for evening (i.e., 7:00 pm to 10:00 pm) noise. The CNEL value is typically less than 1 dB above the DNL value. Noise exposure measures such as L_{eq}, SEL, HNL, DNL, and CNEL are all A-weighted with units expressed in decibels (i.e., dB).

Subjective Response to Noise

The effects of noise on people can be classified into three general categories:

- Subjective effects of annoyance, nuisance, dissatisfaction.
- Interference with activities such as speech, sleep, and learning.
- Physiological effects such as anxiety or hearing loss.

The sound levels associated with community noise usually produce effects only in the first two categories. No universal measure for the subjective effects of noise has been developed, nor does a measure exist for the corresponding human reactions from noise annoyance. This is primarily due to the wide variation of individual attitude regarding the noise source(s).

An important factor in assessing a person's subjective reaction is to compare the new noise environment to the existing noise environment. In general, the more a new noise exceeds the existing, the less acceptable it is. Therefore, a new noise source will be judged more annoying in a quiet area than it would be in a noisier location.

Knowledge of the following relationships is helpful in understanding how changes in noise and noise exposure are perceived.

- Except under special conditions, a change in sound level of 1 dB cannot be perceived.
- Outside of the laboratory, a 3-dB change is considered a just-noticeable difference.
- A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
- A 10-dB change is subjectively heard as an approximate doubling in loudness and almost always causes an adverse community response.

Combination of Sound Levels

Because we perceive both the level and frequency of sound in a non-linear way, the decibel scale is used to describe sound levels. The frequency scale is also measured in logarithmic increments.

Decibels, measuring sound energy, combine logarithmically. A doubling of sound energy (for instance, from two identical automobiles passing simultaneously) creates a 3-dB increase; the resultant sound level is the sound level from a single passing automobile plus 3 dB. The rules for decibel addition used in community noise prediction are:

- If two sound levels are within 1 dB of each other, their sum is the highest value plus 3 dB.
- If two sound levels are within 2 to 4 dB of each other, their sum is the highest value plus 2 dB.
- If two sound levels are within 5 to 9 dB of each other, their sum is the highest value plus 1 dB.
- If two sound levels are greater than 9 dB apart, the contribution of the lower value is negligible and the sum is simply the higher value.

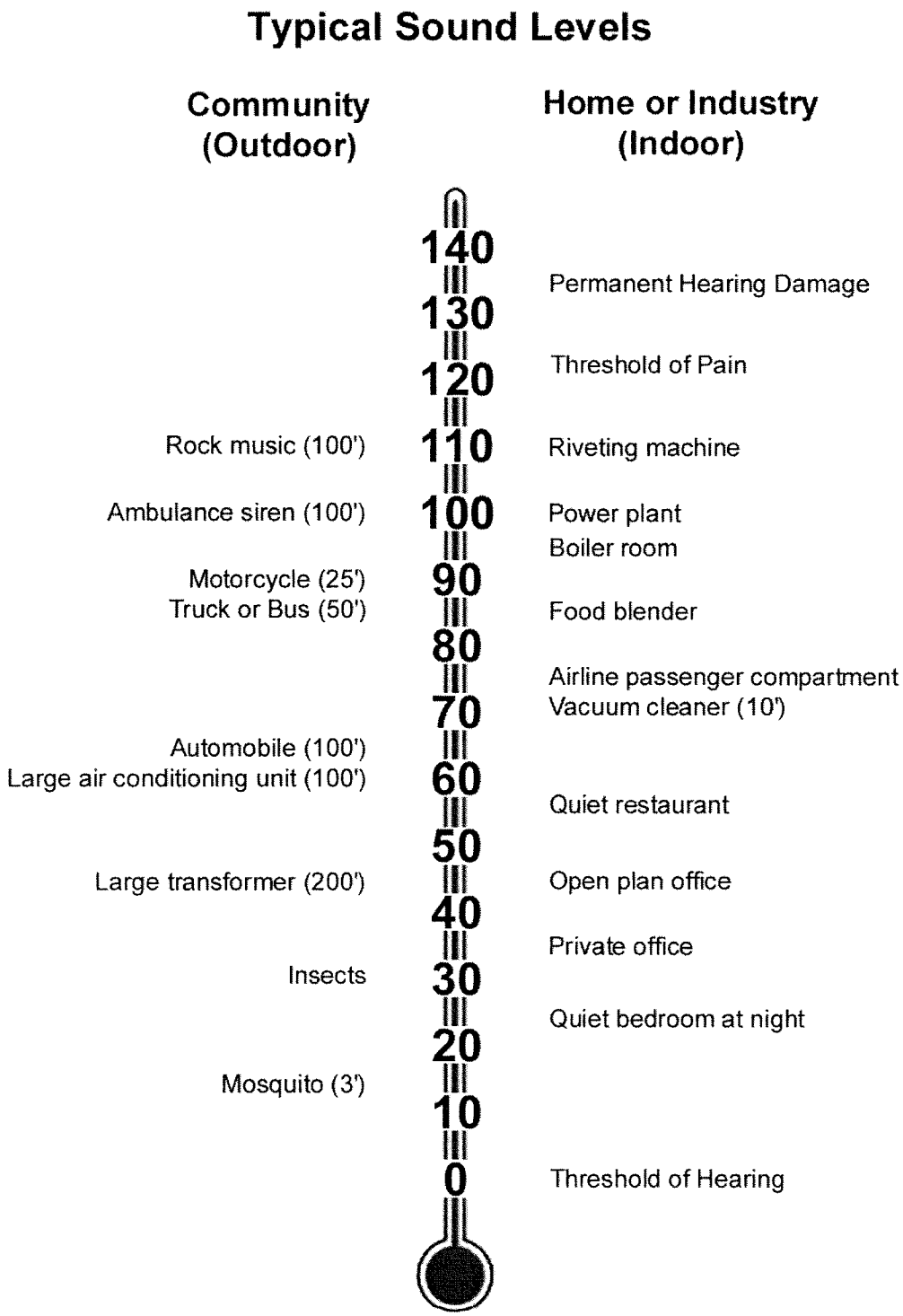

Typical Sound Levels
Community (Outdoor)
Home or Industry (Indoor)
140
Permanent Hearing Damage
130
120
Threshold of Pain
Rock music (100')
110
Riveting machine
Ambulance siren (100')
100
Power plant
Boiler room
Motorcycle (25')
Truck or Bus (50')
90
Food blender
80
Airline passenger compartment
Vacuum cleaner (10')
70
Automobile (100')
Large air conditioning unit (100')
60
Quiet restaurant
50
Large transformer (200')
Open plan office
40
Private office
Insects
30
Quiet bedroom at night
20
Mosquito (3')
10
0
Threshold of Hearing
A-Weighted Sound Pressure Level, decibels (dB)

Figure A1