



UNITED STATES MARINE CORPS  
MARINE CORPS BASE  
BOX 555010  
CAMP PENDLETON, CALIFORNIA 92055-5010

11100  
FACPWO  
JUL 8 2010

From: Commanding Officer

Subj: BASE EXTERIOR ARCHITECTURE PLAN (BEAP)

Encl: (1) Base Exterior Architecture Plan of May 2010

1. The enclosure is the updated Base Exterior Architecture Plan (BEAP) for Marine Corps Base Camp Pendleton. As a companion document to Camp Pendleton's Master Plan, the BEAP establishes specific minimum standards to govern site planning, architecture, landscaping, signage and other important features for both new facilities and the improvement of existing facilities. It is the deliberate and consistent implementation of these standards that will, over time, lead to a strong and unifying appearance for the Base while minimizing maintenance requirements and providing a longer service life for Base facilities.

2. The guidance offered in the BEAP is for use in assisting all personnel responsible for facility planning, design, construction, maintenance, and repair, as well as design firms contracted to provide planning and engineering services. In addition, the guidelines and standards are useful tools to use in planning and preparing a full range of improvement projects including Self-Help, M1/R1, M2/R2, Military Construction (MILCON) and Non Appropriated Fund (NAF) projects.

3. The proponent office of the BEAP is the Public Works Office, Architecture and Engineering Division. Accordingly, direct all questions, interpretations, and clarifications to the Architecture and Engineering Division. We encourage comments and suggestions for improvement. To facilitate this, Appendix F of the BEAP contains a pre-addressed user suggestion and comment form.

4. If you have additional questions, the assigned point of contact is the Public Works Officer at commercial: 760-725-6399 or DSN: 365-6399.

R. S. HELLMAN

By direction

Subj: BASE EXTERIOR ARCHITECTURE PLAN (BEAP)

Distribution: C

CG, I MEF (G-3/G-4)

CG, 1st MARDIV (G-3/G-4)

CG, 1st MLG (G-3/G-4)

CG, MCI West (Facilities)

AC/S, Log

AC/S, OPS&TRNG

AC/S, MCCS

AC/S, ENVSCTY

AC/S, CIS

AC/S, SES

CO, MCAS (Public Works)

CO, NAVFAC SW (Central IPT, ROICC & OICC)

# Marine Corps Base Camp Pendleton



## Base Exterior Architecture Plan

Camp Pendleton, CA



**Base Exterior Architecture Plan  
Marine Corps Base - Camp Pendleton, California  
Naval Facilities Engineering Command Southwest**

**July 2010 - Final Submittal**

**Acknowledgments:**

This study was prepared by KTU+A Planning and Landscape Architecture, in accordance with Contract #N62473-06-D-1007-0025.

These services were performed for the Department of the Navy, Naval Facilities Engineering Command Southwest, San Diego, California. The Government's Planner-in-Charge was Shelli Miller. The A/E Principal-in-Charge was Sandy Swaner, AICP and the Project Manager was John D. Taylor, LLA, LEED-AP, ASLA.

This study updates November 1995 BEAP as prepared by Estrada Land Planning in conjunction with Jack Mosher Architects.

# TABLE OF CONTENTS

## CHAPTER 1

- Executive Summary ..... 1-1**
- 1.1 Overview ..... 1-1**
  - Chapter 2 - Introduction ..... 1-2
  - Chapter 3 - Basewide Design Guidelines ..... 1-2
  - Chapter 4 - Base Cantonment Area Design Guidelines ..... 1-2
  - Chapter 5 - Recreation Area Design Guidelines ..... 1-2
  - Chapter 6 - Public Gate Design Guidelines ..... 1-2
  - Chapter 7 - Guidelines for Native Plant Use ..... 1-3
  - Chapter 8 - Basewide Standard Details ..... 1-3
  - Chapter 9 - Historic Assets ..... 1-3
  - Chapter 10 - Project Evaluation Checklist..... 1-3
  - Chapter 11 - Submittal Requirements ..... 1-3

## CHAPTER 2

- Introduction ..... 2-1**
- 2.1 Purpose and Project Objectives ..... 2-1**
- 2.2 Use of Design Guidelines ..... 2-2**
- 2.3 Scope ..... 2-2**
  - 2.3.1 Environmental Influences ..... 2-3
  - 2.3.2 Emerging Planning Issues ..... 2-4
  - 2.3.3 Sustainable Planning and Design ..... 2-5
- 2.4 Methodology ..... 2-6**

## CHAPTER 3

- Basewide Design Guidelines ..... 3-1**
- 3.1 Overview ..... 3-1**
- 3.2 Basewide Design Objectives and Concepts ..... 3-1**
- 3.3 Land Use ..... 3-2**
  - 3.3 A. Land Use and Organization ..... 3-3
  - 3.3 B. Range Compatible Use Zone Program..... 3-4
  - 3.3 C. Land Use Zoning Compatibility Matrix..... 3-4

<b>3.4 Site Planning</b> .....	<b>3-5</b>
3.4 A. Observations.....	3-5
3.4 B. Objectives .....	3-5
3.4 C. Design Process .....	3-6
3.4 D. Basewide Site Planning Guidelines.....	3-7
3.4 E. Interim Relocatable Facilities .....	3-10
<b>3.5 Architecture</b> .....	<b>3-11</b>
3.5 A. Observations.....	3-11
3.5 B. Objectives .....	3-12
3.5 C. Basewide Architectural Standards.....	3-13
<b>3.6 Landscaping</b> .....	<b>3-24</b>
3.6 A. Basewide Landscape Standards and Design Guidelines .....	3-24
3.6 B. Design Process.....	3-26
3.6 C. Design Principles.....	3-28
3.6 D. Landscape Guidelines .....	3-30
3.6 E. Irrigation.....	3-37
3.6 F. Environmental Control.....	3-39
3.6 G. Plant Selection .....	3-40
<b>Camp Pendleton Base Approved Plant List</b> .....	<b>3-41</b>
Plants Unacceptable For Landscaping Under Any Circumstances.....	3-50
3.6 H. Maintenance .....	3-53
<b>3.7 Street Design</b> .....	<b>3-58</b>
3.7 A. Observations.....	3-58
3.7 B. Objectives .....	3-58
3.7 C. Street Standards, Guidelines, and Design .....	3-59
<b>3.8 Parking</b> .....	<b>3-67</b>
3.8 A. Observation.....	3-67
3.8 B. Objectives .....	3-68
3.8 C. Design Process .....	3-68
3.8 D. Parking Standards and Design Guidelines.....	3-69
<b>3.9 Pedestrian Circulation</b> .....	<b>3-79</b>
3.9 A. Observations.....	3-79
3.9 B. Objectives .....	3-79
3.9 C. Design Process .....	3-80
3.9 D. Walkway Standards and Design Guidelines.....	3-81

<b>3.10 Signage</b> .....	<b>3-85</b>
3.10 A. Observations.....	3-85
3.10 B. Objectives.....	3-87
3.10 C. Design Process.....	3-87
3.10 D. Sign Guidelines.....	3-88
<b>3.11 Lighting</b> .....	<b>3-96</b>
3.11 A. Observations.....	3-96
3.11 B. Objectives.....	3-96
3.11 C. Design Process.....	3-97
3.11 D. Lighting Standards and Guidelines.....	3-97
<b>3.12 Site Furniture</b> .....	<b>3-101</b>
3.12 A. Observations.....	3-101
3.12 B. Objectives.....	3-102
3.12 C. Design Process.....	3-102
3.12 D. Site Furniture Guidelines.....	3-103
<b>3.13 Screens/Walls/Fences</b> .....	<b>3-107</b>
3.13 A. Observations.....	3-107
3.13 B. Objectives.....	3-107
3.13 C. Design Process.....	3-108
3.13 D. Screening Guidelines.....	3-108
<b>3.14 Utilities</b> .....	<b>3-110</b>
3.14 A. Observations.....	3-110
3.14 B. Objectives.....	3-110
3.14 C. Utility Guidelines.....	3-111
<b>3.15 Bus Shelters</b> .....	<b>3-112</b>
Overview.....	3-112
3.15 A. Observations.....	3-112
3.15 B. Objectives.....	3-113
3.15 C. Primary Bus Shelter Specification.....	3-113
<b>3.16 Trash Enclosures</b> .....	<b>3-114</b>
3.16 A. Observations.....	3-114
3.16 B. Trash Enclosure Objectives.....	3-114
3.16 C. Trash Enclosure Guidelines.....	3-114
<b>3.17 Above Ground Storage Tanks (AST)</b> .....	<b>3-117</b>
3.17 A. Observations.....	3-117
3.17 B. Objectives.....	3-117
3.17 C. Screening Guidelines.....	3-118

# CHAPTER 4

<b>Base Cantonment Area Design Guidelines .....</b>	<b>4-1</b>
4.1 Overview.....	4-1
<b>Headquarters-Mainside (11-16) Area .....</b>	<b>4-2</b>
4.2 Headquarters-Mainside (11 thru 16) Areas .....	4-2
4.2 A. Headquarters-Mainside Observations .....	4-2
4.2 B. Recommendations.....	4-5
<b>Del Mar (21) Area .....</b>	<b>4-12</b>
4.3 Del Mar (21) Area.....	4-12
4.3 A. Del Mar (21) Area Observations .....	4-12
4.3 B. Recommendations.....	4-15
<b>Chappo (22) Area.....</b>	<b>4-20</b>
4.4 Chappo (22) Area .....	4-20
4.4 A. Chappo (22) Observations.....	4-20
4.4 B. Recommendations.....	4-22
<b>Pico (24) Area.....</b>	<b>4-28</b>
4.5 Pico (24) Area .....	4-28
4.5 A. Pico (24) Area Observations .....	4-28
4.5 B. Recommendations.....	4-31
<b>Vado Del Rio (25) Area .....</b>	<b>4-36</b>
4.6 Vado Del Rio (25) Area.....	4-36
4.6 A. Vado Del Rio (25) Area Observations .....	4-36
4.6 B. Recommendations.....	4-39
<b>26 Area .....</b>	<b>4-44</b>
4.7 26 Area .....	4-44
4.7 A. 26 Area Observations .....	4-44
4.7 B. Recommendations.....	4-44
<b>Naval Hospital (27) Area .....</b>	<b>4-48</b>
4.8 Naval Hospital (27) Area.....	4-48
4.8 A. Naval Hospital (27) Area Observations.....	4-48
4.8 B. Recommendations.....	4-50



**Edson Range (31A) Area..... 4-54**

**4.9 Edson Range (31A) Area (Weapons And Field Training Battalion-WFTBN)4-54**

- 4.9 A. Edson Range (31A) Area Observations..... 4-54
- 4.9 B. Recommendations..... 4-56

**MCTSSA (31B) Area..... 4-60**

**4.10 MCTSSA (31B) Area..... 4-60**

- 4.10 A. MCTSSA (31B) Area Observations..... 4-60
- 4.10 B. Recommendations..... 4-60

**Assault Craft Unit 5 (31C) Area ..... 4-66**

**4.11 Assault Craft Unit 5 (Assault Craft Unit 5-ACU) (31C) Area ..... 4-66**

- 4.11 A. ACU-5 (31C) Area ..... 4-66
- 4.11 B. Recommendations ..... 4-69

**MASS (32) Area..... 4-74**

**4.12 MASS (32) Area ..... 4-74**

- 4.12 A. MASS (32) Area Observations..... 4-74
- 4.12 B. Recommendations..... 4-76

**Margarita (33) Area..... 4-80**

**4.13 Margarita (33) Area ..... 4-80**

- 4.13 A. Margarita (33) Area Observations..... 4-80
- 4.13 B. Recommendations..... 4-83

**Las Flores (41) Area ..... 4-88**

**4.14 Las Flores (41) Area..... 4-88**

- 4.14 A. Las Flores (41) Area Observations ..... 4-88
- 4.14 B. Recommendations..... 4-90

**Las Pulgas (43) Area ..... 4-96**

**4.15 Las Pulgas (43) Area..... 4-96**

- 4.15 A. Las Pulgas (43) Area Observations ..... 4-96
- 4.15 B. Recommendations..... 4-99

**San Onofre (52) Area..... 4-104**

**4.16 San Onofre (52) Area ..... 4-104**

- 4.16 A. San Onofre (52) Area Observations..... 4-104
- 4.16 B. Recommendations..... 4-106

**Horno (53) Area ..... 4-112**

**4.17 Horno (53) Area ..... 4-112**

- 4.17 A. Horno (53) Area Observations ..... 4-112
- 4.17 B. Recommendations..... 4-115

**San Mateo (62) Area .....4-120**

- 4.18 San Mateo (62) Area..... 4-120**
  - 4.18 A. San Mateo (62) Area Observations..... 4-120
  - 4.18 B. Recommendations..... 4-122

**Cristianitos (63) Area .....4-128**

- 4.19 Cristianitos (63) Area..... 4-128**
  - 4.19 A. Cristianitos (63) Area Observations ..... 4-128
  - 4.19 B. Recommendations..... 4-130

**Talega (64) Area.....4-134**

- 4.20 Talega (64) Area ..... 4-134**
  - 4.20 A. Talega (64) Area Observations ..... 4-134
  - 4.20 B. Recommendations..... 4-136

## **CHAPTER 5**

**Recreation Area Design Guidelines .....5-1**

- 5.1 Overview..... 5-1**

**Lake O’Neill (26-27) Area .....5-2**

- 5.2 Lake O’Neill (26-27) Area..... 5-2**
  - 5.2 A. Lake O’Neill (26-27) Area Observations ..... 5-2
  - 5.2 B. Recommendations..... 5-5

**Del Mar Beach (21) Area .....5-10**

- 5.3 Del Mar Beach (21) Area..... 5-10**
  - 5.3 A. Del Mar Beach (21) Area Observations ..... 5-10
  - 5.3 B. Recommendations..... 5-12

**San Onofre Beach (51) Area .....5-14**

- 5.4 San Onofre Beach (51) Area ..... 5-14**
  - 5.4 A. San Onofre Beach (51) Area Observations ..... 5-14
  - 5.4 B. Recommendations..... 5-14

**Golf Course (18) Area.....5-18**

- 5.5 Golf Course (18) Area..... 5-18**
  - 5.5 A. Golf Course (18) Area Observations..... 5-18
  - 5.5 B. Recommendations..... 5-20

**Stables (15) Area .....5-22**

- 5.6 Stables (15) Area..... 5-22**
  - 5.6 A. Stables (15) Area Observations ..... 5-22
  - 5.6 B. Recommendations..... 5-24

# CHAPTER 6

- Public Gate Design Guidelines .....6-1**
  - 6.1 Overview ..... 6-1
- Oceanside Main Gate .....6-2**
  - 6.2 Oceanside Main Gate ..... 6-2
    - 6.2 A. Oceanside Main Gate Observations ..... 6-2
    - 6.2 B. Recommendations ..... 6-3
- San Luis Rey Gate ..... 6-4**
  - 6.3 San Luis Rey Gate ..... 6-4
    - 6.3 A. San Luis Rey Gate Observations ..... 6-4
    - 6.3 B. Recommendations ..... 6-4
- San Onofre Gate ..... 6-6**
  - 6.4 San Onofre Gate ..... 6-6
    - 6.4 A. San Onofre Gate Observations ..... 6-6
    - 6.4 B. Recommendations ..... 6-6
- Las Pulgas Gate ..... 6-8**
  - 6.5 Las Pulgas Gate ..... 6-8
    - 6.5 A. Las Pulgas Gate Observations ..... 6-8
    - 6.5 B. Recommendations ..... 6-8
- Cristianitos Gate ..... 6-10**
  - 6.6 Cristianitos Gate ..... 6-10
    - 6.6 A. Cristianitos Gate Observations ..... 6-10
    - 6.6 B. Recommendations ..... 6-10
- Del Mar Gate ..... 6-12**
  - 6.7 Del Mar Gate ..... 6-12
    - 6.7 A. Del Mar Gate Observations ..... 6-12
    - 6.7 B. Recommendations ..... 6-12
- Fallbrook Gate ..... 6-14**
  - 6.8 Fallbrook Gate ..... 6-14
    - 6.8 A. Fallbrook Gate Observations ..... 6-14
    - 6.8 B. Recommendations ..... 6-15

## CHAPTER 7

<b>Guidelines For Native Plant Use .....</b>	<b>7-1</b>
<b>7.1 Overview .....</b>	<b>7-1</b>
7.1 A. Observations .....	7-1
7.1 B. Objectives .....	7-1
7.1 C. Guidelines for Native Plant Use .....	7-2

## CHAPTER 8

<b>Basewide Standard Details .....</b>	<b>8-1</b>
<b>8.1 Summary/Overview .....</b>	<b>8-1</b>
8.1 A. Index of Details .....	8-1
<b>8.2 Architecture Details and Standards .....</b>	<b>8-5</b>
<b>8.3 Landscape Details and Standards .....</b>	<b>8-11</b>
<b>8.4 Street Design Details and Standards .....</b>	<b>8-25</b>
<b>8.5 Parking Details and Standards .....</b>	<b>8-47</b>
<b>8.6 Pedestrian Circulation Details and Standards .....</b>	<b>8-55</b>
<b>8.7 Signage Details and Standards .....</b>	<b>8-69</b>
<b>8.8 Lighting Details and Standards .....</b>	<b>8-85</b>
<b>8.9 Site Furniture Details and Standards .....</b>	<b>8-93</b>
<b>8.10 Screening and Fencing Details and Standards .....</b>	<b>8-139</b>
<b>8.11 Utilities Details and Standards .....</b>	<b>8-153</b>

## CHAPTER 9

<b>Historic Assets and Mechanized Museum .....</b>	<b>9-1</b>
<b>9.0 Introduction .....</b>	<b>9-1</b>
<b>9.1 Regulatory Background .....</b>	<b>9-1</b>
<b>9.2 Objective .....</b>	<b>9-1</b>
<b>9.3 Approach .....</b>	<b>9-1</b>
<b>9.4 Historic Designations .....</b>	<b>9-1</b>
<b>9.5 National Register .....</b>	<b>9-4</b>
<b>9.6 California Historical Landmarks .....</b>	<b>9-4</b>

<b>9.7 California Register</b> .....	<b>9-4</b>
<b>9.8 California Points of Interest</b> .....	<b>9-4</b>
<b>9.9 Design and Replacement Guidelines for Historic Properties</b> .....	<b>9-5</b>
<b>9.10 Installation-Level Guidelines</b> .....	<b>9-5</b>
9.10.1 Site Conditions .....	9-5
9.10.2 Historic Assets and Mechanized Museum .....	9-5
<b>9.11 Exterior Building-Level Guidelines</b> .....	<b>9-6</b>
9.11.1 General Building Treatments .....	9-6
9.11.2 Concrete .....	9-6
9.11.3 Metals .....	9-6
9.11.4 Wood .....	9-6
9.11.5 Paint .....	9-7
9.11.6 Stucco .....	9-7
9.11.7 Roofs .....	9-7
9.11.8 Gutters and Downspouts .....	9-7
9.11.9 Windows .....	9-8
9.11.10 Doors .....	9-8
9.11.11 Exterior Wall Coverings .....	9-8
9.11.12 Compatible Accessibility .....	9-8
9.11.13 Penetrations Through Walls and Roofs .....	9-9
9.11.14 Utility Elements .....	9-9
<b>9.12 Interior Building-Level Guidelines</b> .....	<b>9-9</b>
9.12.1 General Interior Building Treatments .....	9-9
9.12.2 Entrances .....	9-10
9.12.3 Corridors .....	9-10
9.12.4 Stairwells .....	9-10
9.12.5 Ceremonial Rooms (Main Spaces) .....	9-10
9.12.6 Lighting .....	9-11
9.12.7 Finishes .....	9-11
<b>9.13 Camp Pendleton Marine Corps Mechanized Museum</b> .....	<b>9-11</b>
9.13.1 Overview .....	9-11
9.13.2 Recommendations .....	9-13
<b>9.14 Camp Pendleton Historic Assets</b> .....	<b>9-14</b>
<b>9.15 Talega (64) Area WWII Quonset Huts</b> .....	<b>9-14</b>
<b>9.16 Hand of Hope Artwork, Cristianitos (63) Area</b> .....	<b>9-14</b>
9.16.1 Overview .....	9-14
9.16.2 Recommendations .....	9-15

<b>9.17 Cristianitos Baptismal Site .....</b>	<b>9-16</b>
9.17.1 Overview .....	9-16
9.17.2 Recommendations .....	9-17
<b>9.18 Las Flores Resource Area.....</b>	<b>9-18</b>
9.18.1 Overview Las Flores Adobe and Site .....	9-18
9.18.2 Overview Las Flores Asistencia .....	9-19
9.18.3 Recommendations .....	9-20
<b>9.19 Santa Margarita Ranch House .....</b>	<b>9-21</b>
9.19.1 Overview .....	9-21
9.19.2 Recommendations .....	9-22
<b>9.20 El Camino Real Historical Marker (Bell) .....</b>	<b>9-23</b>
9.20.1 Overview .....	9-23
9.20.2 Recommendations .....	9-23
<b>9.21 Chapter References .....</b>	<b>9-24</b>

## **CHAPTER 10**

<b>Project Evaluation Checklist .....</b>	<b>10-1</b>
<b>10.1 Summary .....</b>	<b>10-1</b>
<b>10.2 Project Evaluation .....</b>	<b>10-1</b>
10.2 A. Project Evaluation Checklist .....	10-1

## **CHAPTER 11**

<b>Submittal Requirements .....</b>	<b>11-1</b>
<b>11.1 Summary.....</b>	<b>11-1</b>
<b>11.2 Submittal Matrix .....</b>	<b>11-2</b>
<b>11.3 Signage Requirements .....</b>	<b>11-3</b>
<b>11.4 Facilities Management System (FMS).....</b>	<b>11-3</b>
<b>11.5 Site Plan Preparation Guidelines .....</b>	<b>11-4</b>
11.5 A. Site Survey of Improvements .....	11-4
11.5 B. Traffic Circulation Study .....	11-4
<b>11.6 Color Board Title Block .....</b>	<b>11-5</b>
<b>11.7 Drawing I Sheet Title Block.....</b>	<b>11-5</b>

**APPENDIX A**

Color Board / Building Materials - Basewide & Rehabilitation . A-1

**APPENDIX B**

Color Board Layout..... B-1

**APPENDIX C**

Glossary Of Terms ..... C-1

**APPENDIX D**

References ..... D-1

**APPENDIX E**

Design Policy Letter ..... E-1

**APPENDIX F**

User Suggestion And Comment Form .....F-1

**APPENDIX G**

Exceptions Request Form..... G-1





# Chapter 1

## EXECUTIVE SUMMARY

### 1.1 Overview

This Base Exterior Architecture Plan (BEAP) is directed toward the development of a functional and visually cohesive environment for Marine Corps Base Camp Pendleton. It also provides the design link between the existing development and newly emerging facilities requirements.

MCB Camp Pendleton is the Marine Corps' leading readiness preparation facility on the West Coast. It is the Marine Corps prime amphibious warfare training base in the United States. Located 38 miles north of downtown San Diego, Camp Pendleton covers over 125,000 acres and approximately 200 square miles of terrain. The stretch of shoreline along the base 17½ miles is the largest undeveloped portion of coastal area left in Southern California.

Camp Pendleton provides training facilities for many active-duty and reserve Marines, Army and Navy units, as well as national, state and local agencies. Over 60,000 military and civilian personnel work at the base every day.

The base is the home of 1st Marine Expeditionary Force, 1st Marine Division, 1st Marine Logistics Group and many tenant units, including elements of Marine Aircraft Group 39 and Marine Corps Tactical Systems Support Activity (MCTSSA).

Together, the Base's location and physical qualities present a context that is uniquely suited to the mission of the Base, which is: "to operate a training base that promotes the combat readiness of the Operating Forces and the mission of other tenant commands by providing training opportunities, facilities, services and support responsive to the needs of Marines, Sailors and their families."

Physical development of the Base has been irregular, concurrent with a gradual shift from temporary to permanent facilities. The Base master plan docu-



Figure 1.1 - 1: MCB-Camp Pendleton, in San Diego County, California.



Figure 1.1 - 2: Welcome to Marine Corps Base Camp Pendleton.

ment addresses maximizing range and maneuvering capabilities, range conditions, airspace management, infrastructure and basic criteria for physical plant development.

Though the preceding BEAP's guidelines were generally consistent with current installation design regulations and recent building projects, it appears that unless a recommendation was actually tied to a specific building construction project, it was generally not implemented. This includes base-wide improvements, particularly streetscapes and associated pedestrian amenities. The design of new facilities has generally acknowledged applicable existing BEAP guidelines, but existing facilities and base-wide exterior concerns have not been similarly addressed.

Though BEAP guidelines addressing such exterior issues have been in place for some time, it is likely that they have been widely implemented because they were regarded as a low funding priority compared to other expenditures. These improvements are not intended just for visual enhancement but for increased safety and function of the primary mission at Camp Pendleton: Training.

This BEAP includes the following primary parts:

### **Chapter 2 - Introduction**

A brief introduction describing the planning context and how the Base Exterior Architecture Plan (BEAP) is to be used.

### **Chapter 3 - Basewide Design Guidelines**

Basewide analysis of existing conditions are described prior to specific design guidelines for different Basewide exterior components. These guidelines are aimed at resolving issues identified in the analysis and providing uniform design standards for future projects.

### **Chapter 4 - Base Cantonment Area Design Guidelines**

Individual cantonment analysis and design recommendations for improving site specific issues. The recommendations incorporate the standards outlined in Chapter 3 and demonstrate application of the Basewide guidelines into positive effects for the improvements of the Base exterior.

### **Chapter 5 - Recreation Area Design Guidelines**

Analysis and design guideline recommendations for improving the existing Recreational Facilities. The recommendations include the standards outlined in Chapter 3 and demonstrate application of the Basewide guidelines into positive effects of exterior improvements.

### **Chapter 6 - Public Gate Design Guidelines**

Analysis and design guideline recommendations for improving the existing Public Gates throughout the Base. The recommendations include the standards outlined in Chapter 3 and demonstrate the application of the Basewide guidelines into positive effects of exterior improvements.



*Figure 1.1 - 3: Marines at Edson Range.*



*Figure 1.1 - 4: Training at Edson Range.*

## Chapter 7 - Guidelines for Native Plant Use

Guidelines for use and installation of Native plants for new construction and re-vegetation projects on Base. The Base Approved Plant List in Chapter 3 includes many native plants.

## Chapter 8 - Basewide Standard Details

Provides the standard details and product types for Base improvements recommended in previous chapters.

## Chapter 9 - Historic Assets

Individual Historic Asset analysis and design recommendations for improving the preservation of site specific assets. The recommendations incorporate the standards outlined in Chapter 3 and demonstrate application of the Basewide guidelines for preservation improvements of the Base Historic Assets.

## Chapter 10 - Project Evaluation Checklist

Provides a project evaluation checklist for future projects to ensure compliance with installation design standards.

## Chapter 11 - Submittal Requirements

Outlines the submittal requirements for future projects reviewed by the Public Works Department. This document establishes specific guidelines for standardization of the Base's exterior elements. The consistent use of these standards results in a greater order in the built environment, and simplifies development, operations and maintenance procedures.

This BEAP provides the necessary guidelines to ensure future buildings present an appropriate image for the Marine Corps and are:

- Adaptable
- Compatible with one another
- Durable
- Energy efficient
- Maintainable

The BEAP is a Design Guide or Handbook to assist facility officers, facility users, Facilities Maintenance Staff, Base Staff, SWDIV staff and contracted Architectural and Engineering firms.

As these guidelines and design standards are implemented, a positive and lasting impact on the quality of life and environment at Camp Pendleton will emerge. The implementation process will be guided by this document. Any potential exceptions shall be at the authority and discretion of the Public Works Department.



Figure 1.1 - 5: Marine Corps values.



# Chapter 2

## INTRODUCTION

### 2.1 Purpose and Project Objectives

This study presents the opportunity for Camp Pendleton to promote design excellence and unity for the Base exterior environment. This Base Exterior Architecture Plan (BEAP) is the installation's official direction on facility and site development. It will be used in developing, designing, and reviewing all construction and renovation projects. The bulk of the document consists of design guidelines for improving the function and appearance of base exterior architecture at Camp Pendleton. The guidelines address all exterior physical design elements commonly addressed by facility development needed to produce a consistent design theme and coherent physical arrangement.

These guidelines establish specific design criteria for site planning, buildings, streets, parking, signs, site furnishings, landscaping and other visual environment components. The goal of the base exterior architecture plan is to promote design unity throughout Camp Pendleton as a way to strengthen its public image, improve its ability to recruit and retain skilled and motivated personnel, and nurture the pride and professionalism of its people.

These guidelines are meant to provide direction on how to make Camp Pendleton a more attractive and functionally organized installation through creative site design, planning, architecture and landscape architecture that supports the installation's design goals and objectives; they also address funding, facility life cycles, local climate and maintenance constraints in an economically responsible manner. The BEAP encourages overall designs and systems that conserve valuable resources through the principles of total life-cycle assessment.



Figure 2.1-1: Headquarters Building 1160.



Figure 2.1-2: WW II Quonset Huts found throughout the Base.

To establish this design program the authors of the BEAP gained knowledge of the unique issues inherent with the size and diversity of the Base including:

- Individual Cantonment Areas
- Recreational Facilities
- Plant Climatic Zones
- Varied Topography
- Environmental and Natural Resources
- Historic Assets

Because of the immense size and diversity of the Base, this document's value is in the consistent and deliberate application of the design recommendations and standards to achieve a unity and clarity not present today. The ultimate objective of the BEAP is to improve the visual quality, the quality of life, morale and also the effectiveness of the Base's training and readiness mission.

## 2.2 Use of Design Guidelines

The BEAP provides design guidelines for all aspects of Base improvements. For the Public Works Office, this document guides and coordinates design of new facilities as well as the replacement, rehabilitation or reuse of existing facilities. Use of the guidelines also insures that all proposed projects comply with the approved designs and standards for the Base.

The BEAP provides standards for new construction, repairs and maintenance practices. Military and civilian personnel, tenants, contractors, A/E consultants and others whose activities influence the appearance of this installation will use these guidelines for design.

The basic process for using this document for a design project is as follows:

1. Consult Chapter 3-Basewide Design Guidelines to determine the basic recommended design guidelines for an overview of Basewide design objectives and concepts.
2. Consult Chapter 4-Base Cantonment Area Design Guidelines for more detailed information on a specific cantonment area on the Base. These guidelines are arranged in sections so that specific topic information needed for a project can be copied out or downloaded in their entirety.
3. Consult Chapter 5-Recreational Area Design Guidelines for more detailed information on a specific recreation area on the Base. These guidelines are arranged in sections so that specific topic information needed for a project can be copied out or downloaded in their entirety.
4. Consult Chapter 6-Public Gate Design Guidelines for more detailed information on a specific gate onto the Base. These guidelines are arranged in sections so that specific topic information needed for a project can be copied out or downloaded in their entirety.
5. Consult Chapter 7 for guidelines for native plant use on Base.
6. Consult Chapter 8 for Basewide Standard Design Details.
7. Consult Chapter 9-Historic Assets for more detailed information on specific historic assets on Camp Pendleton.

8. Consult Chapter 10-Project Evaluation Checklist to ensure compliance with installation design standards.
9. Consult Chapter 11 for project submittal requirements.
10. Consult the Appendix for further support documents.

## 2.3 Scope

In comparison to the Camp Pendleton Master Plan, the BEAP addresses specific design criteria or guidelines associated with the implementation of physical improvements Basewide. These guidelines are directed toward site planning, architecture, landscape, street and parking standards, signage and other important features that affect the function and visual quality of the Base environment.



Figure 2.2-1: Semper Fit track.



Figure 2.2-2: Paige Fieldhouse.

### 2.3.1 Environmental Influences

The Base has several climatic zones that roughly coincide with the three geomorphic regions present: coastal plain, coastal valley, and mountain. In general, the Base has a semiarid Mediterranean climate with warm, dry summers and mild, wet winters. Daytime temperatures rarely exceed 95° F in the summer and nighttime temperatures usually remain above freezing in the winter.

Seasonal rainfall along the Base's coast averages between 10 and 14 inches per year. Average annual precipitation in the mountains on Base varies between 20 and 40 inches, depending upon slope and elevation. Approximately seventy-five percent of the Base's precipitation falls between November and March. Winds generally originate from the west or southwest, carrying in cool, moist offshore air. Night and early morning overcast is common on Base throughout the spring and summer. Low clouds frequently extend inland over the coastal foothills and valleys, but usually dissipate during the morning. Afternoons are generally clear. Coastal fog averages 29 days per year, being heaviest during the fall and winter months.

An important characteristic of local weather is its year-to-year variability. The native vegetation is adapted to periodic drought, flooding, and fire. "Fire season" occurs from May through November, with extreme fire conditions occurring when very dry, warm "Santa Ana" winds blow and when a heavy fuel load of dry vegetation is present. Camp Pendleton's geography creates up-canyon winds because its northeast-southwest trending canyons are able to pull in marine air each day as land surfaces heat up. At night, the breezes are pulled back down-canyon and seaward as land surfaces cool.

The terrain of the Base is varied and includes sandy shores, seaside cliffs, coastal plains, rolling hills, canyons, and mountains rising to elevations of nearly 2,700 feet. Two major physiographic provinces occur on Base: coastal plains, which rise steeply from the coast inland into fairly level terraces, and the rolling foothills of the Santa Margarita Mountains. The break between these two provinces occurs generally along Basilone Road.

Characteristic of the Peninsular Range, natural erosion over time has formed a series of southwest trending stream valleys across the generally north-west-trending hills and mountains. Each stream has

developed its own valley fill deposits, including an alluvial fan at its mouth near the coastline. The marine terraces, inland from the coast slope uniformly to the southwest, are at inclinations of five percent or less with the majority of the rest of the Base exceeding fifteen percent slope.

Part of the coastal area consists of steep, low hills, the San Onofre Hills, and are dissected by the major stream systems of the Base. The highest elevation of the range is 1,720 feet, atop San Onofre Mountain. Other areas contain low, wave-cut terraces that have distinct cliffs or escarpments along the seaward edge.

East of the San Onofre Hills is gently rolling topography with soils deep and level enough to support some agriculture. They give rise to the Santa Margarita Mountains, part of the Peninsular Range that extends from Orange and Riverside counties to the Mexican border. Margarita Peak, at 3,189 feet, is east of the Base and about ten miles inland from the coast.



Figure 2.2-3: Lake O'Neill Recreation Area.



Figure 2.3-1: View from Vado Del Rio (25) Area of the Santa Margarita River valley.

Soil erosion and sedimentation are common on Camp Pendleton. Soil erosion and sedimentation patterns are largely influenced by the year-to-year climatic variability, with larger soil loss events occurring perhaps once in every 20 years. Intense storms have little impact if the soil is dry enough to absorb water quickly. Soil types, slope, and the occurrence of fire also influence erosion rates. Slopes left denuded by fire are particularly susceptible to accelerated erosion. In addition, fires of a very high temperature can result in hydrophobicity of the soil surface, allowing less water to enter the soil and increasing the amount of runoff and resulting in more erosion and sedimentation.



Figure 2.3-2: Example of soil erosion on Base, due to lack of vegetation on slopes.

### 2.3.2 Emerging Planning Issues

#### Water

An adequate, dependable water supply source has been available to meet immediate needs, but water conservation is necessary. Use of non-potable water systems should be further developed to accommodate landscape needs. All landscape planting should have the capability to survive the local conditions without the need for excessive watering.

#### Growth

Energy conservation and efficient maintenance practices will be critical in controlling the cost of growth. Orienting and designing buildings to maximize the use of passive and active solar energy systems will reduce heating and cooling costs. Buildings with integral colors and finishes and landscaping that require little care will reduce facility maintenance requirements.

#### Anti-Terrorism and Force Protection

The foremost installation design regulations change since the previous BEAP was adopted has been the implementation of Anti-Terrorism and Force Protection (AT/FP) requirements. AT/FP is a paramount concern at US military installations worldwide. This includes base security, access and protection of personnel, facilities, infrastructure, equipment and real estate assets. Specific strategies dealing with these concerns involve complex issues that are appropriately addressed on a site-specific, rather than a master planning level.

Anti-Terrorism and Force Protection (AT/FP) design should be integrated into the overall design so that the protection is attractive and not obviously an AT/FP addition. Within the framework of the AT/FP planning standards, AT/FP modifications and enhancements should be designed to create solutions that maintain visual cohesion with regard to other installation improvements. Site design elements can serve dual purposes, and AT/FP guidelines should be considered a design opportunity.

For example, AT/FP requirements for consolidated parking and building setbacks allow for a variety of site design elements such as berms, trees, drainage ditches, bio-swales, seat walls, groundcover, lighting,



Figure 2.3-3: Newly constructed BEQ adhering to AT/FP design criteria.



vehicle circulation, setbacks, fences, walls, bollards, and planters. All of these elements are already routinely employed in site design and can unobtrusively perform the additional function of protecting buildings and their inhabitants.

For further information, the general AT/FP guidance document is the Unified Facilities Criteria (UFC 4-010-01) DoD Minimum Antiterrorism Standards for Buildings.

### 2.3.3 Sustainable Planning and Design

Sustainable planning and design is the practice of implementing strategies for buildings and landscapes that protect the environment, reduce life cycle costs and improve the quality of living conditions. All of these strategies are compatible with improving installation appearance.

Protection of the environment includes the use of recycled and environmentally friendly materials, managing stormwater and limiting the impact of atmospheric emissions. Operating costs can be lowered by reducing energy use through high performance building systems, employing renewable energy sources, optimizing solar orientation and reducing the amount of materials and man hours required for maintenance.

#### Leadership in Energy and Environmental Design (LEED)

The U.S. Green Building Council (USGBC) has developed a widely used rating system, LEED (Leadership in Energy and Environmental Design) for assessing building performance and attaining sustainability goals. NAVFAC has adopted its use and has been directed to plan and program to achieve at least a USGBC Silver-level rating performance, which is a minimum of 50 LEED credit points in version 3.0. A LEED for New Construction (LEED-NC) checklist is required on all new construction projects to show credits being applied to achieve this goal.

#### Energy Policy Act 2005 (EPAct 2005)

EPAct 2005 design and construction requirements direct that all new federal buildings are to have utility meters (Section 103), concrete is to use recovered mineral components (Section 108), designed energy consumption meets American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 90.1-2004, or the 2004

International Energy Conservation Code (IECC) depending on building type (Section 109), and all energy consumption products or systems are to be Energy Star or Federal Management Program (FEMP) designated products.

For all applicable projects (new buildings and major renovations) these credit strategies can be used to help meet the LEED Silver-level performance. By aligning NAVFAC's goals and measures with the LEED system, credit points can be achieved towards establishing the Silver-level rating while satisfying the requirements of EPAct 2005.

#### Storm Water Management and Low Impact Development (LID)

Low Impact Development (LID) is a storm water management approach with the primary goal of mimicking a site's pre-development hydrology. This can be accomplished through basic principles modeled after nature by managing runoff close to its source. This is accomplished through infiltration, filtration, storage, evaporation, and detention. LID features reduction of storm water runoff quantity and improvement of runoff quality by removing pollutants, therefore improving the quality of receiving streams and rivers. LID policies, strategies, and practices should be incorporated into all projects as part of an overall sustainability program. The Energy Independence and Security Act (December 2007) and the California General Construction Storm Water Permit drive specific storm water requirements for all applicable projects.



Figure 2.3-4: Example of a drainage swale in a parking lot on Base. Water is filtered through cobble before going into a storm drain or other suitable dispersion method.

## 2.4 Methodology

Prior to the development of the design guidelines, a thorough analysis was completed to establish existing conditions and potential design criteria. This analysis process was accomplished through:

- a. Field investigations of all cantonments.
- b. Recording of site conditions with photographs.
- c. Meetings with Base personnel regarding specific concerns and operational issues including the following offices:
  - Public Works.
  - Facilities Maintenance.
  - Marine Corps Community Services.
- d. Presentation of initial design objectives.
- e. Review of Military handbooks on design criteria.
- f. Review of the Camp Pendleton Master Plan.

The conclusion of the Basewide analysis is included in the beginning of each section within Chapter 3- Basewide Design Guidelines under Observations. Additionally, the analysis for the cantonments, recreational facilities, and public gates are discussed in their respective Chapters under Observations-Assets/Liabilities. This analysis process was critical in forming the guideline objectives and subsequent recommendations for all areas within Camp Pendleton.



Figure 2.4-1: Marines walking in San Onofre (52) Area.

# Chapter 3

## BASEWIDE DESIGN GUIDELINES

### 3.1 Overview

The following chapter provides a comprehensive set of guidelines to be used to achieve the design objectives for Camp Pendleton. These objectives translate into design guidelines for implementation. Topics include:

Land Use	Pedestrian Circulation
Site Planning	Signage
Architecture	Lighting
Landscaping	Site Furniture
Street Design	Screens, Walls, Fences
Parking	Utilities
Bus Shelters	Trash Enclosures
Above Ground Storage Tanks	

The use of the Basewide design guidelines apply to:

- M1/R1 facilities projects
- M2/R2 facilities projects
- NAF projects
- MILCON projects
- Self Help projects
- Bachelor Enlisted Quarters



Figure 3.2-1: Paige Fieldhouse - example of good design on Base.

### 3.2 Basewide Design Objectives and Concepts

The analysis of the Basewide assets and liabilities conclude that the most serious problem on the Base is the lack of uniform design or development standards. This is evident from the Base's varied architecture, landscapes, and site furniture.

The design objectives for Camp Pendleton provide Basewide uniform design and development standards. The intent of these standards is to allow the physical development at Camp Pendleton to occur, while maintaining and enhancing its natural setting. The coordination and orderly development of these design elements will greatly improve the visual and physical environment at Camp Pendleton. The deliberate and consistent use of these design elements will, over time, lead to a strong and unifying appearance for the Base (Figure 3.2-1).

In addition to a strong, unified appearance, design objectives include recommendations based on Crime Prevention Through Environmental Design (CPTED). These recommendations will ensure a physically safe, as well as visually enhanced, environment.

### 3.3 Land Use

Land use is one of the most important considerations for achieving a successful project. It addresses the function or activity relating to a specific site, for the purpose of conserving and promoting the health, safety, convenience and general welfare of the people, and their mission. At Camp Pendleton the primary objectives are as follows:

1. Outline the benefits of land use.
2. Clearly identify the land use compatibility of functions.
3. Good land use practice protects and promotes:
  - a. The health, safety and the general welfare of the population.
  - b. Wise, well planned economic decision making practices.
  - c. The success of the mission.
4. These practices specifically are intended to:
  - a. Provide a precise guide for the physical development of the area.
  - b. Foster convenient and workable relationships among the land uses.
  - c. Prevent excessive population densities and overcrowding of land or buildings.
  - d. Ensure provision of adequate open space.
  - e. Encourage wise use and sound management.
  - f. Preserve natural beauty of topography and ensure appropriate development in regard to these natural features.
  - g. Protect endangered species, both animal and vegetation, on the base.
  - h. Ensure service/utility demands of new developments do not exceed existing capacities.
  - i. Promote a distinct "sense of place" and community/cantonment identity and signage.
5. Adhere to AT/FP guidelines and requirements.



Figure 3.3-1: Natural beauty of Camp Pendleton setting.



Figure 3.3-2: Cantonment Entry sign - Vado Del Rio (25) Area.

### 3.3 A. Land Use and Organization

Cantonment area land use maps are included in Volume 2 of the Master Plan and recommend locations for future development. Use the BEAP in concert with the Master Plan to ensure effective and orderly growth at Camp Pendleton.

The NAVFAC P-72 Category Codes are used to define facility types and land use zones.

#### 100 Operations & Training:

171 Training buildings

179 Ranges

#### 200 Maintenance & Production:

Vehicle Maintenance Shops  
Communications Shops

#### 300 RDT&E:

Laboratories

#### 400 Supply & Storage:

Bulk Fuel and Ammunition Storage, Warehouses,  
Haz-Mat Facilities

#### 500 Medical & Dental:

Hospitals, Clinics, Dispensaries

#### 600 Command & Administration:

Office and Headquarters Buildings, Data  
Processing Centers, Courtrooms

#### 700 Housing & Personnel Support:

710 Family Housing & Community  
Centers

720 B E Q , B O Q & Dining  
Facilities

#### Recreation & Community Support:

730 Fire Stations, Brigs, Gatehouses,  
Schools, Chapels, Post Offices, Bus  
Stations, Public Toilets

740 Exchange Retail Stores, Auto Parts  
Stores, Bank, Gyms, Restaurants,  
Transient Housing, Commissaries,  
Theaters, Clubs, Child Care  
Centers

750 Outdoor Recreation Facilities, Playing  
Courts, Pools, Golf Course, Rodeo  
Grounds, Marinas

760 Museums & Memorials

#### 800 Utilities:

Electrical Power Source, Sewage & Waste, Solid  
Waste, Potable Water, Fire Protection, Roads &  
Streets, Railroad



Figure 3.3-3: Marines training at Edson Range (31A) Area.

### 3.3 B. Range Compatible Use Zone Program

When determining land use organization, give consideration to the Range Compatible Use Zone Program (RCUZ) August 1993. The RCUZ study provides guidance of compatible land uses as they relate to noise and safety hazards generated from range training activity. Use this document to assist in land use planning decisions as projects go forward in the planning stage.

### 3.3 C. Land Use Zoning Compatibility Matrix

The matrix below outlines the Base's many land uses and the compatibility of specific functions or activities to each other. Consult this matrix when determining the appropriate location for future development and its relationship to the surrounding land uses.

Category Codes:	100	200	300	400	500	600	700	710	720	730	740	750	760	800
100 Operations & Training			A											A
200 Maintenance & Production						A								A
300 RDT&E	A													A
400 Supply & Storage														A
500 Medical & Dental														
600 Command & Administration		A												
700 Housing & Personnel Support											A		A	
710 Family Housing & Community Centers														
720 BEQ, BOQ & Dining Facilities														
730 Fire Stations, Schools & Chapels														
740 Exchanges, Retail Stores, Theaters							A							A
750 Playing Courts, Pools, Golf Course, Marina														A
760 Museums & Memorials							A							A
800 Utilities, Steam Plants, Dumps	A	A	A	A							A	A	A	

Note: A - May be compatible depending upon actual siting and function.

 Compatible Land Use.

### 3.4 Site Planning

The development at Camp Pendleton has not always related to the site's existing physical conditions. Prudent and deliberate site planning is one of the key elements of improving the functional and visual aspects at Camp Pendleton. The Basewide site planning standards provide the guidelines for all Basewide projects including MCCS, and Navy Medical/Dental facilities.

#### 3.4 A. Observations

Camp Pendleton is made up of a series of cantonment areas, each with its own distinct development pattern. Expedient development methods to handle Base requirements, funding constraints, and varied building designs has left the Base's exterior environment incohesive. (Figures 3.4-1 thru 3).

#### 3.4 B. Objectives

Site planning must take into consideration the special conditions at the site and provide a thorough understanding of man-made and natural features. Site planning emphasizes the three-dimensional relationship of buildings to street, adjacent development, and open space.

Careful consideration of the building to the site, parking, access, pedestrians and landscaping allows for orderly, cohesive development that is, above all, functional. The Basewide site planning objectives are to:

- Ensure compatibility with the existing natural features.
- Ensure compatibility with existing development.
- Ensure compatibility with future development.
- Establish connections, both vehicular and pedestrian, to new and old development.
- Group similar land uses together. See Section 3.3 C. Land Use Zoning Compatibility Matrix.
- Consider the open space between buildings as usable space, not as a left over space after all buildings and parking lots are put in place.
- Consider sustainable design requirements for site design as recommended by USGBC LEED certification program.



Figure 3.4-1: Older and newer buildings at Cristianitos (63) Area.



Figure 3.4-2: Lack of permanent pedestrian path at the Las Flores (41) Area.



Figure 3.4-3: Quonset huts at San Onofre (52) Area.

- For storm water management, use the guidelines found in UFC 3-210-10, Low Impact Development (LID).

### 3.4 C. Design Process

#### 1. General Analysis

Use the following process for each project prior to site development:

##### a. Compatibility with Natural Features

When preparing the site plan for new projects, identify all natural site features (Figure 3.4-4). This includes, but is not limited to:

- Topography
- Views
- Drainage
- Wind
- Vegetation
- Solar orientation
- Wildfires

Prepare an analysis of the above items prior to site development. This analysis allows future projects to be compatible with the natural elements of the site and existing landforms.

##### b. Compatibility with Existing Development

When reviewing a site, documenting the established development is critical if the new building(s) is to become part of an existing project (Figure 3.4-5).

Place buildings or a group of buildings similar to the existing pattern of development. Building compatibility also considers the form, mass and material of existing buildings. Equally important to document is the:

- Location of parking
- Existing landscape
- Usable open space
- Type of site furniture
- Walkways or links to existing developments
- Location of utilities and storm drains
- Potential for future expansion



Figure 3.4-4: Review natural site features.

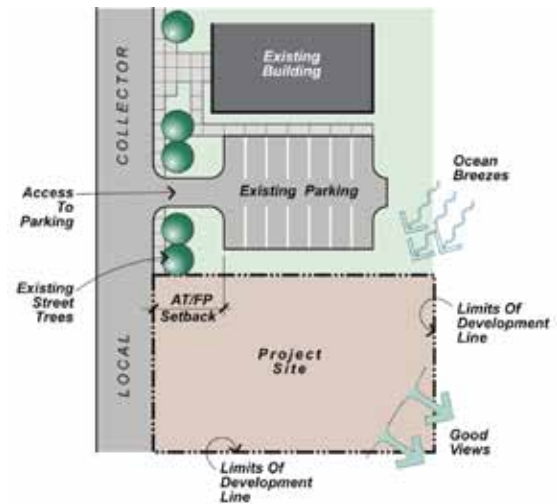


Figure 3.4-5: Review existing development patterns. All future development will meet AT/FP guidelines.

##### c. Site Analysis Preparation

The Site Analysis is the basis for preparing a site plan that minimizes the impacts and provides a desirable fit between the project and the site.

The preparation of a site analysis plan that documents the items listed in Section 3.4 C. 1b. helps to establish critical factors, or opportunities and constraints, that affect future projects.



d. Site Plan Preparation

Prepare a site plan that illustrates each component of the proposed project including (Figure 3.4-6):

- AT/FP setbacks
- Limits of development area
- Buildings
- Roads
- Parking
- Walks
- Landscaping
- Site furniture
- Trash enclosures
- Screening
- Utilities
- Any other features of the site development
- Adjacencies to areas subject to wildfires

Character sketches, elevations, and sections are also useful in depicting the proposed development. Compare these sketches to the existing character of the adjacent development to determine or evaluate compatibility. See Chapter 11-Submittal Requirements, for specific submittal project requirements.

Slope grading and drainage shall comply with San Diego County Grading, Clearing and Watercourses Ordinance (San Diego County Code Title 8, Division 7) and geotechnical report requirements. Geotechnical engineer shall address a minimum slope setback so that facilities in the vicinity will not be affected by slope settlement and creep.

3.4 D. Basewide Site Planning Guidelines

1. Access and Circulation

- Establish access points and traffic patterns that minimize impacts to adjacent streets and parcels (Figure 3.4-7).
- Line up development curb cuts or entries with existing intersections.
- Minimum distances between intersections vary depending on the size of street and volume of traffic. See Section 3.7-Street Design for specific spacing between intersections.

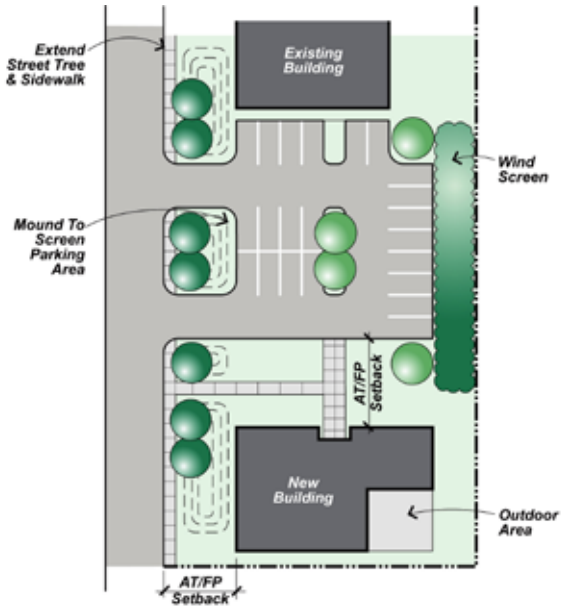


Figure 3.4-6: Site Plan preparation.



Figure 3.4-7: Note access points on local collector.

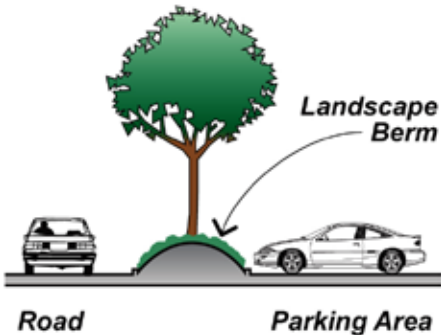


Figure 3.4-8: The use of a landscape median to separate parking area from street.

- d. Clearly define the parking areas from the street (Figure 3.4-8).
- e. Provide clear and convenient access for delivery service, trash pick-up, and emergency vehicles. All fire access lanes on Camp Pendleton shall have a minimum inside turning radius of 37 feet.
- f. Comply with all current American Disabilities Act (ADA) guidelines and California Code of Regulations - Title 24 (Title 24/California Building Standards Code) including barrier-free access and the installation of a detectable warning system (truncated domes) at all pedestrian ramps, and flush grade walkway-to-traffic transitions.
- g. Where possible, connect pedestrian walkways to Base open space trails.
- h. Provide clear and distinct walkway connections from parking lots to buildings and to adjacent parcels (Figure 3.4-9).

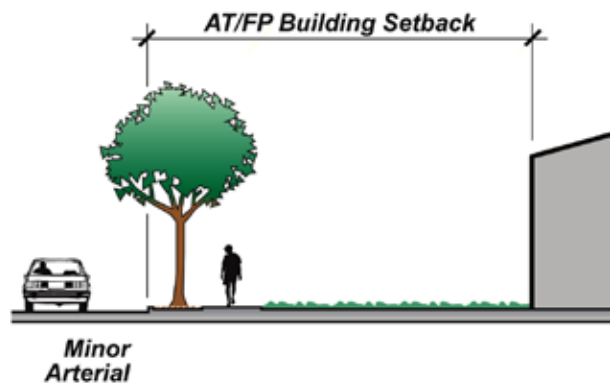


Figure 3.4-10: Typical building setback from vehicle trafficways per AT/FP UFC.

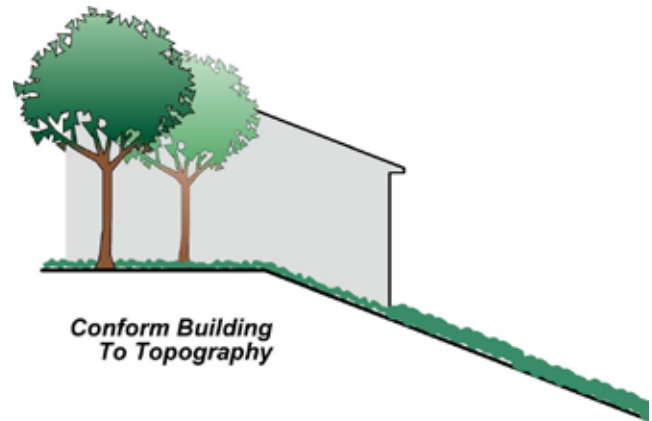


Figure 3.4-11: Building conforms to topography.

## 2. Building Location

Arrange individual buildings to provide views, define space and address grade changes. When planning a building on a site, pursue opportunities for creating larger functional spaces. Do not treat buildings as singular objects.

- a. Locate buildings on the parcel and set back from the street in accordance with AT/FP UFC 4-010-01 (Figure 3.4-10):
  - 82 feet from minor arterial.
  - 82 feet from major collector street.
  - 82 feet from local collector or residential street.

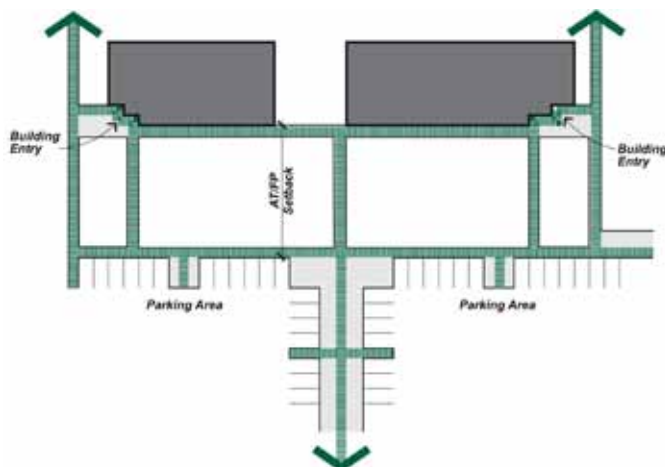


Figure 3.4-9: Typical walkway connections.

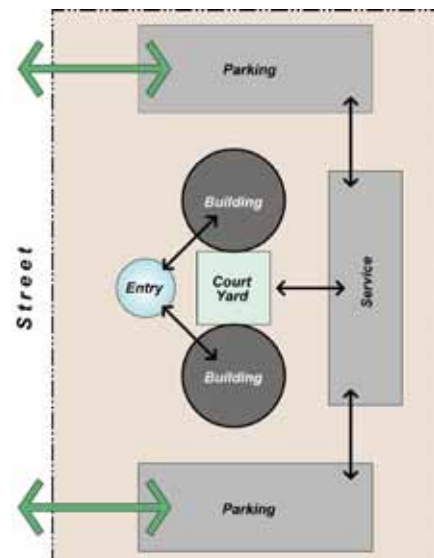


Figure 3.4-12: Site organization diagram.

- b. Conform building placement to the natural topography (Figure 3.4-11).
- c. Provide building entries that are easily visible from the street or from the project entry.
- d. Consider the composition or massing when grouping buildings together.
- e. Arrange buildings in groups to develop shared interior courtyards (Figure 3.4-12).
- f. Locate buildings to permit shared use of parking areas. Do not impact adjacent development with "spill over" parking (Figure 3.4-12).
- g. Take into consideration future building expansion needs and incorporate them into the site plan (Figure 3.4-13). Refer to AT/FP UFC.
- h. When possible, site buildings to take advantage of views and natural ventilation.

**3. General Site Organization**

Site all facility developments within existing developed areas. This retains the majority of the existing land at Camp Pendleton as relatively undeveloped. This is the condition required to support the primary mission at Camp Pendleton: Training.

- a. Provide direct and functional relationships between buildings, courtyards, entries, parking areas, and storage facilities (Figure 3.4-13).
- b. Site all facility development to consider the existing maneuver routes that connect all the maneuver areas at Camp Pendleton.
- c. Identify the limit of the development area for proposed projects.
- d. Refer to the current edition of the AT/FP UFC for parking setbacks from buildings (Figures 3.4-14 and 3.4-15).
- e. Locate parking areas at the side or rear of the parcel to minimize the visual impact of the parking to the streetscape per AT/FP UFC and Section 3.8-Parking.
- f. Screen parking areas, service yards, loading docks, storage and trash areas, and utility boxes from the street and building entry per AT/FP UFC and Section 3.13-Screens, Walls and Fences.

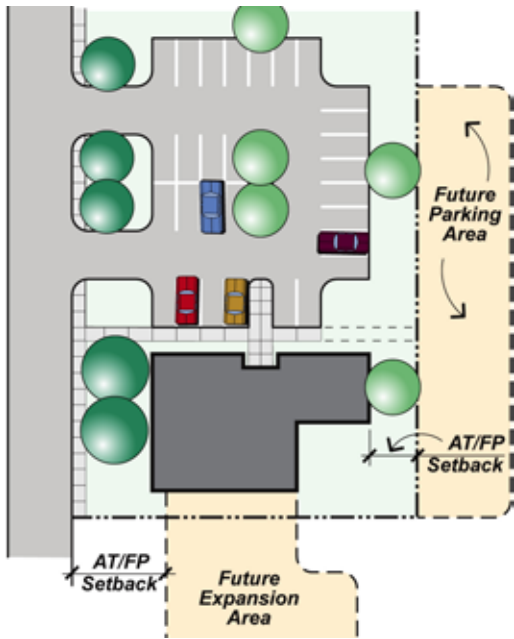


Figure 3.4-13: Note areas of opportunity for future expansion.

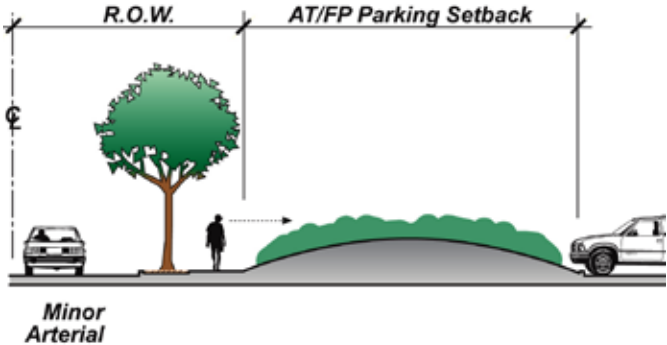


Figure 3.4-14: Typical parking setback from a minor arterial.

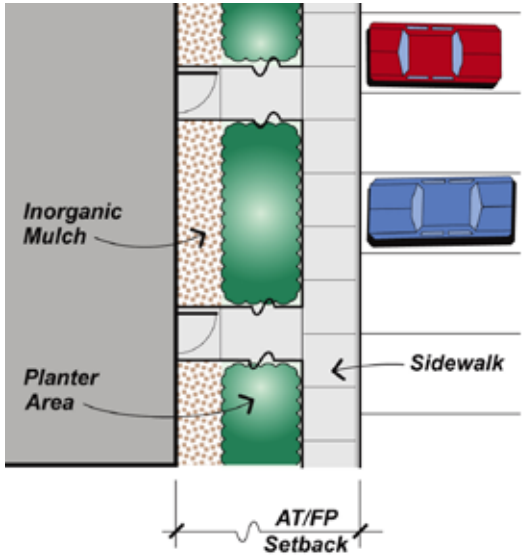


Figure 3.4-15: Typical parking and building relationship.

- g. For additional information on parking requirements see Section 3.8-Parking.
- h. Consider the four principles of Crime Prevention through Environmental Design (CPTED):
  - Natural surveillance
  - Natural access control
  - Territorial reinforcement
  - Maintenance
- i. Provide or replace site furniture with recommendation in Section 3.12-Site Furniture.

**4. Landscaping**

- a. Where feasible, save both native and non-native existing plant material and incorporate into the overall design of the site or as determined by the Government’s Landscape Architect.
- b. Provide landscaping as an integral part of every site development project.

- c. Use trees as the dominant landscape planting element (Figure 3.4-16). Shrubs, groundcover and inorganic mulch materials should augment and compliment the design.
- d. Provide an uncomplicated planting scheme that is focused on sustainable design.
- e. Use plant material for screening, shading and wind control (Figure 3.4-17).
- f. Avoid the use of turf on new projects and provide inorganic materials as a low maintenance groundcover. Conform to the planting and landscape guidelines in Section 3.6-Landscaping.

**3.4 E. Interim Relocatable Facilities**

Due to limited funding resources, interim relocatable facilities are employed throughout the Base. In certain locations these "temporary" structures have become permanent. It is important when developing these facilities that they adhere to the same site planning organization and design process as permanent structures.

It is necessary for interim relocatable facilities to provide the parking to support the intended use. Parking can be constructed as a temporary parking lot unless the facility is intended to be in place for more than one year. If the facility is in service for more than one year, the parking lot must be fully improved, including landscaping.

**1. Interim Relocatable Facilities Checklist**

Use the following check list to assure that all items are provided.

- Siting conforms to site planning standards
- Utilities
- Landscaping
- Parking
- Seismic Tie Downs
- Permanent Replacement
- Security Lighting
- Signage



Figure 3.4-16: Provide a simple and low maintenance landscape with trees as the dominant feature.

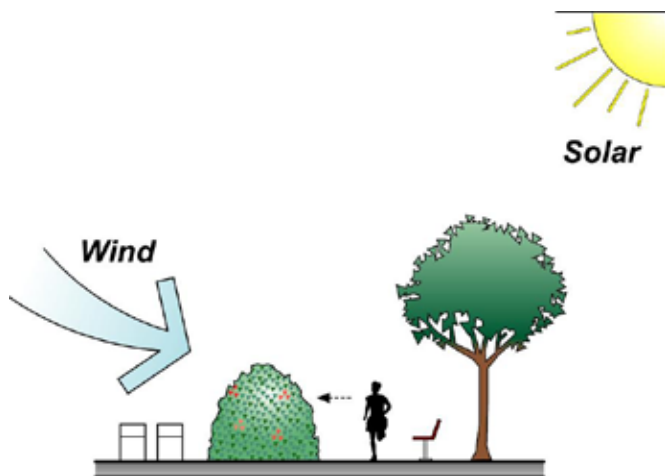


Figure 3.4-17: Typical wind control with plant material.

Planned:

MILCON Project # and FY \_\_\_\_\_

NAF Project # and FY \_\_\_\_\_

Facilities Project Number \_\_\_\_\_

### 3.5 Architecture

The Base architecture is essential in establishing an image of permanence and quality. Camp Pendleton has a long history of development that is reflected in a variety of architectural styles. These architectural styles can be seen from the simple Quonset huts located throughout the cantonment areas to the Paige Fieldhouse in the Mainside Headquarters Area (Figure 3.5-1).

Most often the final critique on architecture is based primarily on style. Future development at Camp Pendleton will be critical to style, but also appropriateness. Appropriate architecture is mindful to its immediate surrounding, is functional, and contributes to the success of the mission in a cost-effective manner.

#### 3.5 A. Observations

To establish definitive architectural guidelines for Camp Pendleton, it is necessary to review the existing buildings at the Base. These general observations pertain to the current Basewide architecture:

1. The newer structures present a positive image for the Base. This image is one of strength and durability not found in many of the older structures (Figure 3.5-2).
2. The Ranch House is well maintained and the architectural style reflects the Base's historic adobe ranch heritage.
3. The Beach Club at San Onofre Beach is a good example of Spanish architecture and is an appropriate style for the beach (Figure 3.5-3).
4. There are a variety of building types and architectural styles within the Base, adding to the Base's visual clutter.
5. The Paige Fieldhouse and Headquarters buildings are good examples of BEAP architecture.
6. Many older buildings are in a state of disrepair (Figure 3.5-4).



Figure 3.5-1: Paige Fieldhouse in the Headquarters Area.



Figure 3.5-2: Newer BEQ, Building 530642, in Horno (53) Area.



Figure 3.5-3: The Beach Club, Building 51811 at San Onofre beach.

7. The variety in roof forms, wall planes, and the rhythm of windows in certain post-war buildings provide architectural interest and serve as precedent for new designs (Figure 3.5-5).
8. Temporary structures, including phone centers are located throughout and detract from the visual quality of the Base. These temporary structures often house permanent facilities or have been abandoned in place (Figure 3.5-6).

### **3.5 B. Objectives**

The overall objective for Camp Pendleton is to achieve a higher degree of architectural unity for the Base. This is achieved by:

1. Using appropriate architecture that respects the surrounding area.
2. Providing a consistent visual image throughout each area through form, material, and color.
3. Establishing timeless design through integration of old and new.
4. Promoting functional buildings for today's requirements which support the primary mission of the Base.
5. Encouraging flexible building design to allow for tomorrow's mission.

Consistent implementation of these architectural objectives will enhance the appearance of Camp Pendleton and improve the Base's exterior environment. Buildings that are well designed, properly sited, and use similar building materials and color convey a sense of order and organization. The use of the Basewide architectural standards apply to:

- M1/R1 facilities projects
- M2/R2 facilities projects
- NAF projects
- MILCON projects
- Self Help projects
- Bachelor Enlisted Quarters



*Figure 3.5-4: Older building in state of disrepair.*



*Figure 3.5-5: Building 1244 in the HQ Area.*



*Figure 3.5-6: Abandoned phone center at Horno (53) Area.*

### 3.5 C. Basewide Architectural Standards

The Basewide Architectural Standards provides a palette of consistent building materials and colors for establishing Basewide architectural continuity. These standards allow flexibility and creativity in the design process and reinforce the image of Camp Pendleton as a model military installation.

The architectural theme for Camp Pendleton is founded in the Navy Design Policy Letter (January 1988) or DPL. See Appendix E. This letter states that the future architectural character for facilities will be "... responsive, responsible, and defensible, but will appear logical and conservative as well." It further states that the architectural design be simple, straight forward, flexible (reusable), and use compatible cost-effective materials to achieve the primary mission of the facility.

With this policy letter as a guide, the architectural standards are contemporary in design, simple in form, and especially durable and adaptable. There is an existing architectural style emerging from the Base that already reflects this direction (Figures 3.5-7 and 3.5-8).

Examples of building elements that reflect this style are metal roof, concrete block, glazed concrete block as accent panels, and precast design elements. The Building Guidelines Section of this chapter incorporates these features as the architectural direction for Camp Pendleton.

Although the Base is extremely large in size, the Basewide architectural recommendations establish a singular architectural vocabulary. This architectural vocabulary unifies the Basewide architecture, including the Marine Corps Community Services (MCCS) facilities and the Medical/Dental buildings.



*Figure 3.5-7: Building 25118 in Vado del Rio (25) Area is a good example of architecture following BEAP guidelines.*



*Figure 3.5-8: Paige Fieldhouse in the Headquarters (11-16) Area is a good example of BEAP architecture.*

## 1. Building Forms

The building forms for Basewide development convey a simple style that can be utilized throughout the Base. The direction established for these forms follows the intent outlined in the DPL and can be seen in many of the current Base facilities.

A building's primary form-giving characteristics are its roof and elevations. The following objectives apply when developing new buildings:

- a. Building forms are simple and rectangular. The envelope of the building must explain the function. Deviation from this direction is only acceptable when the function of the facility warrants it.
- b. For roof slopes see Section 3.5 - Roofs.
- c. Define entries to be recognizable to pedestrians and motorists, to minimize the confusion to users in locating the building entrance. This is accomplished by:
  - Providing a prominent architectural form that contains the entry (Figures 3.5-9 and 10).
  - Providing a deeply recessed area for the entry. Provide a recess that is a minimum of 24 inches. This depth will cast a deep shadow helping to identify the entry.
- d. Use recessed openings in wall planes for windows. This recess provides definition and interest to the building and also helps control heat gain. Provide a minimum of four inches when recessing windows from the building face (Figure 3.5-11).
- e. Use varying wall planes to break up long expanses of walls (Figure 3.5-12). Change in the building form creates visual interest and provides sun, light and landscape opportunities.
- f. The forms of post war buildings could be adapted into the new architectural theme (Figure 3.5-13).
- g. Incorporate horizontal banding or accent elements into the wall plane to provide interest and to help establish the base of the building.

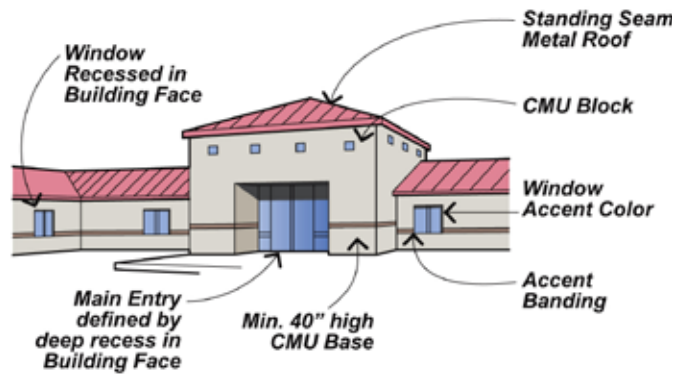


Figure 3.5-9: Architectural direction for Camp Pendleton.

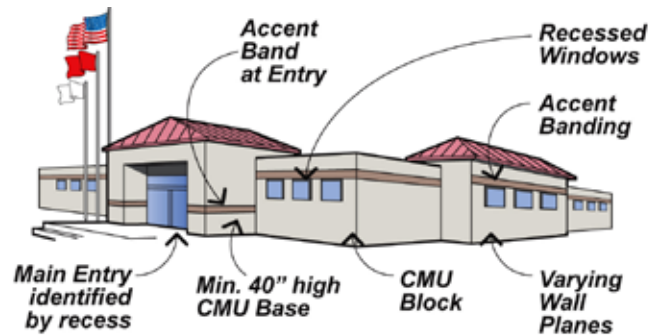


Figure 3.5-10: Architectural direction for Camp Pendleton.

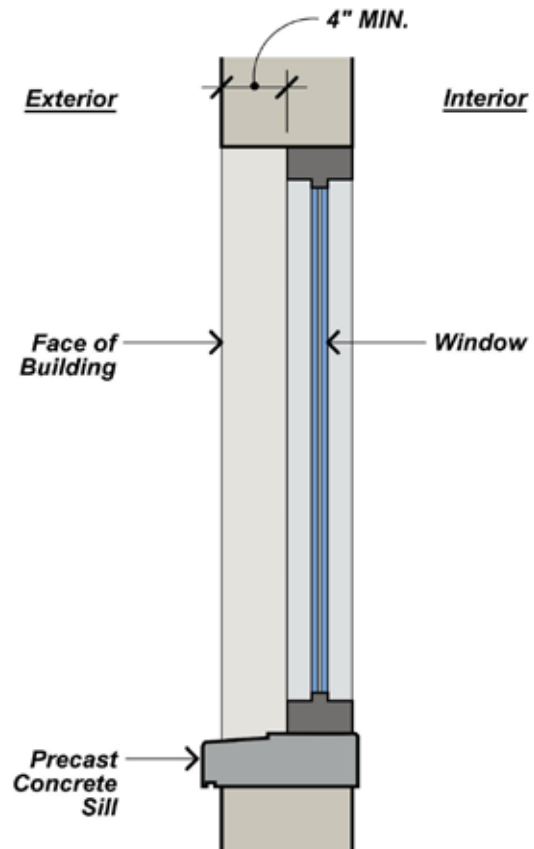


Figure 3.5-11: Typical section of window that is recessed from the building face.



### 2. Building Mass and Scale

Existing newer buildings and future buildings will not use the same materials as were used in construction of the existing older structures. One way to relate new buildings to the older structures is through similar scale and mass.

The massing of a building refers to the overall volume a building encompasses. Do not overwhelm the existing development with the new building's mass. Blend the new forms aesthetically with the existing buildings. This blending occurs when:

- The size and proportions of the new building elevations relate to the existing structure (Figure 3.5-14).
- Roof forms and pitches relate to adjacent buildings (Figure 3.5-14).
- A large building is separated into smaller building components; these components must still relate to each other to make a single statement.
- Outdoor spaces are enclosed by arranging buildings in groups (Figure 3.5-15).

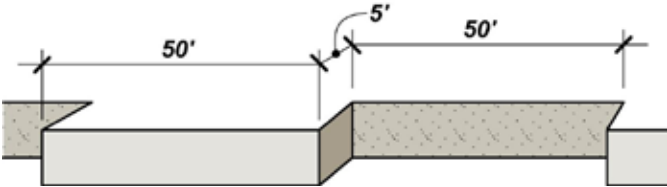


Figure 3.5-12: Diagrammatic example of a wall plane that is broken.

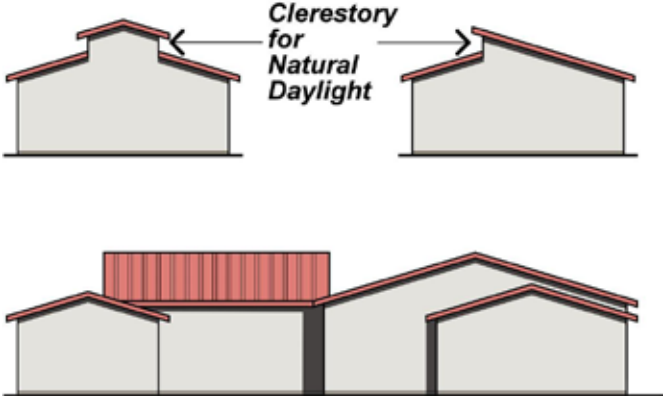


Figure 3.5-13: Emulating the simple forms of post war buildings may be appropriate, especially when new facilities are built adjacent to these types of structures.

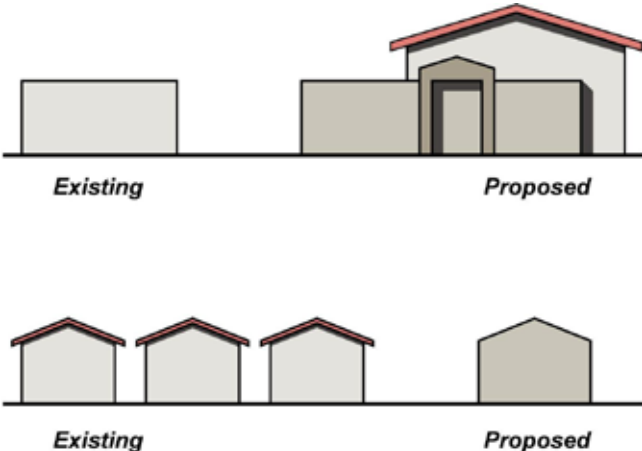


Figure 3.5-14: Typical ways of relating to existing development.

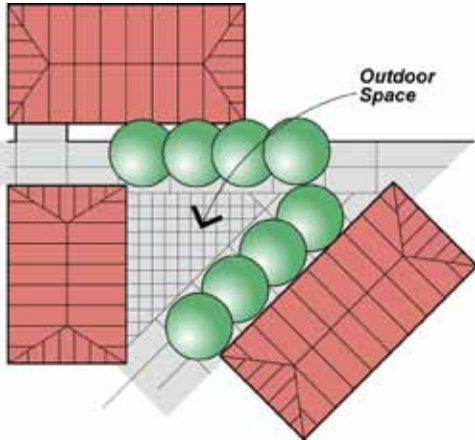


Figure 3.5-15: Outdoor spaces created by grouping buildings.

### 3. Building Guidelines

The following guidelines apply to all new building projects:

#### a. Exterior Walls

The following are permitted applications for exterior wall surfaces:

- Use precision (smooth) or splitface CMU (Figure 3.5-16) with integral color.
- Use precision block for the first course immediately adjacent to grade. This provides a smooth surface for transition to concrete hardscape and prevents litter from collecting at the base of building.
- Use splitface block for the accent band in precision CMU face, or in a color or block type transition.
- Encourage the creative use of concrete block, for the articulation of a building's base, cap, or horizontal banding (Figure 3.5-17), by using varied textured colors in a mix of approximately 40/60 splitface to precision.
- Use of traditional stick frame and stucco on metal studs is allowed for small commercial MCCS facilities, where it would be cost-effective. A project proposing to use either of these systems will require review by the Public Works Department.
- Use precast concrete cornices for building cap.
- Wall penetrations, louvers, grilles and vents must be sized and grouped to create an unobtrusive appearance on wall surfaces. Provide a galvanized metal finish to minimize maintenance.

#### b. Entries and Doors

The most important element for a building is the entry. A building's entry needs to be clear and easily recognizable for all users. This is accomplished by:

- Establishing entries with deeply recessed areas in the building facade (Figure 3.5-18).
- Changing the primary building material or using an accent element at the entry (Figure 3.5-18). Providing entries in scale with the building and appropriate for its intended use.
- Developing a vertical element that incorporates the entrance.



Figure 3.5-16: Typical precision (smooth) face and splitface concrete block.

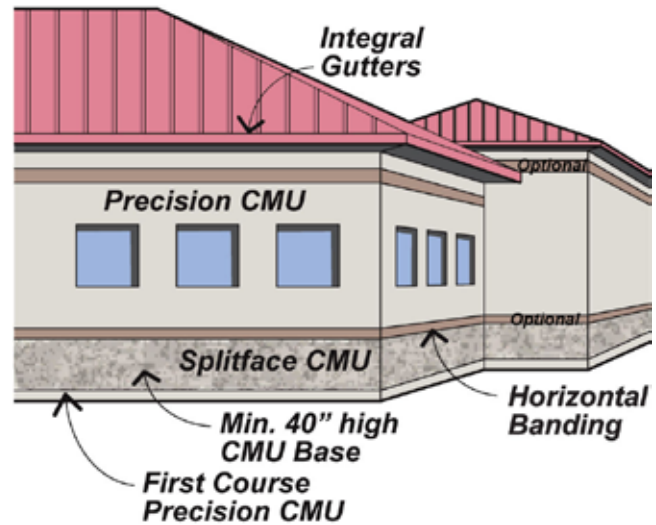


Figure 3.5-17: Example of building details.

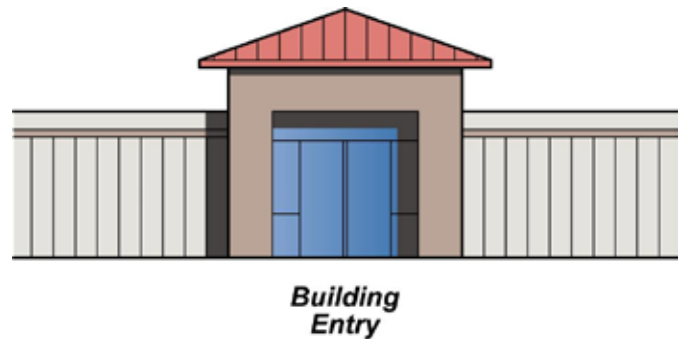


Figure 3.5-18: Example of recessed building entry.

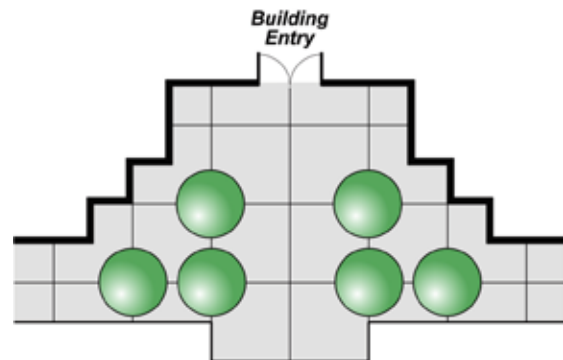


Figure 3.5-19: Building entry enhanced with tree planting.

- When facing the main entry toward the parking area, providing space on the facade that can be dedicated to signage.
- Developing an entry courtyard enhanced with trees (Figure 3.5-19).

### c. Windows and Openings

The proper placement of windows is important to add interest and definition to a building. This is accomplished by:

- Maintaining the rhythm of windows on a single building facade (Figure 3.5-20).
- Recessing windows from the building surface. This also acts as a sun control and helps compensate for heat gain when windows face south or west.
- Not placing windows flush with the facade. This adds depth to the wall surface and definition to the exterior of the building.
- Providing a concrete sill as an accent to the window.
- Using windows that will accentuate horizontal building forms.
- Setting windows in an architectural frame or element (Figure 3.5-21).
- Placing and orienting windows to capture or maximize views.
- Utilize metal “sun screen” to reduce cooling load.

### d. Exterior Stairs

Exterior stairs are to be functional, attractive and incorporated into the building as a design element. This is in part necessary due to the high maintenance required when exposed railings and steps are used. Exterior stairs can be incorporated into a building by:

- Using the materials and design features of the primary structure.
- Allowing for the stairwell to be an integral part of building facade.
- Enclosing the stairwell to enhance the overall building design (Figures 3.5-22 and 3.5-23). Do not obstruct windows or doors with the stairwell.

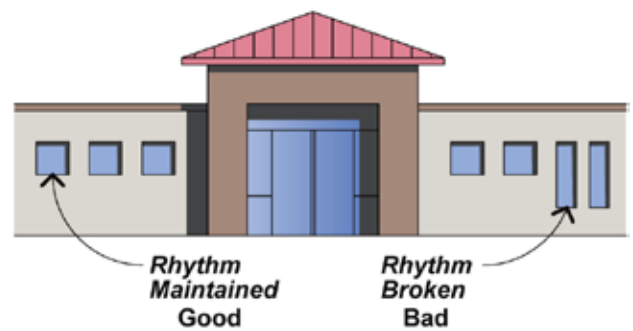


Figure 3.5-20: Window design on new buildings.

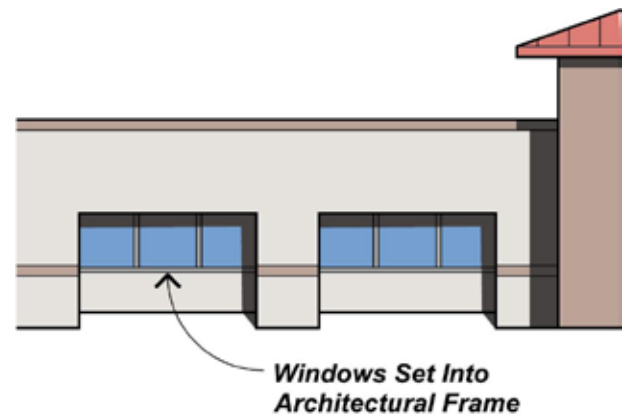


Figure 3.5-21: Window treatment on new buildings.



Figure 3.5-22: Enclosed stairwell at building 43700 in Las Pulgas (43) Area-example of preferred design.



Figure 3.5-23: Open stairwell at BEQ. Example of poor design and non-conforming BEAP design.

**e. Roofs**

Sloping roofs are the dominant roof forms. Incorporate sloping roofs into the design of all future facilities per the Commanding General field directive. As an alternative design solution, consider integrated standing-seam metal roofing and solar photovoltaic panels for LEED credits and on-site renewable energy. The use of membrane or flat roofs are prohibited. The following guidelines apply to roofs:

- Standard pitch for sloping roofs is 4:12 for buildings up to 60 feet wide. However, a pitch of 3:12 can be used when the roof span is 60 -80 feet. Maintain a roof pitch of 2.5:12 for buildings over 80 feet. (Figure 3.5-24 and 25).
- Construct sloping roofs with pre-finished standing seam metal. Provide integral gutters and overhangs.
- At this time, the use of green roofs is not acceptable on Camp Pendleton due to constructability, durability, and maintenance.

Incorporate overhangs into all sloping roofs. Review the building orientation when determining overhangs. The general rule is to:

- Maximize overhang on the west side.
- Minimize overhang on the north side.

This approach to overhangs will provide maximum protection from the extreme western exposure, while still allowing for the maximum indirect lighting from the northern exposure.

- Prohibit the use of flat roofs.
- When parapets are not feasible, screen all roof-mounted mechanical equipment from view (Figure 3.5-26). Whenever possible, ground mount mechanical equipment. See Section 3.13- Screens/Walls/Fences.
- Connect downspouts to sub-drains taking roof water directly to the street, storm drain or other suitable dispersion method (Figure 3.5-27).
- Provide round or square tube exterior rain gutters/downspouts. Fluted varieties are not permitted. Downspouts can either be integrated into the building's architecture or consist of exterior extended scuppers that add interest and create shadow lines (Figure 3.5-28).
- Minimize roof penetrations to prevent potential leakage. Where penetrations are neces-

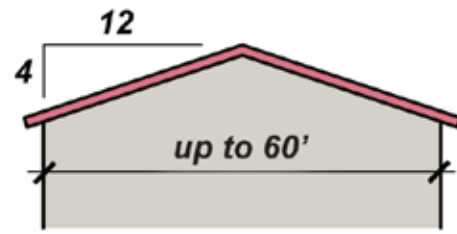


Figure 3.5-24: Standard roof pitch up to 60' wide.

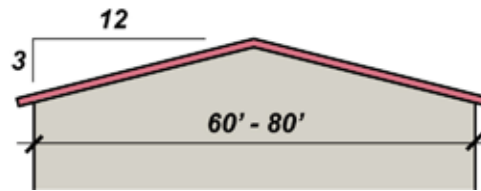


Figure 3.5-25: Standard roof pitch between 60'-80' wide.

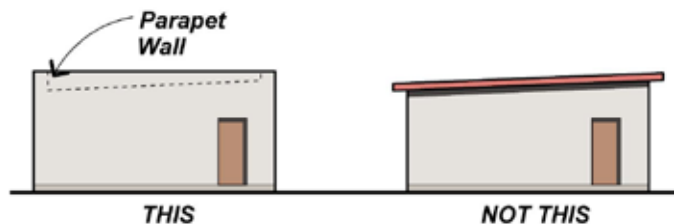


Figure 3.5-26: Parapet wall to screen roof mounted equipment .

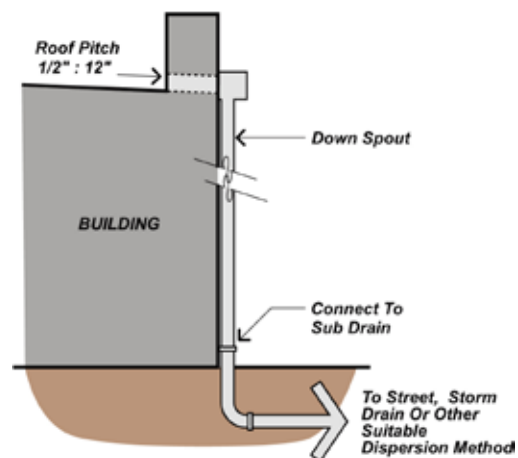


Figure 3.5-27: Example of appropriate roof drainage.

sary, curbs and equipment supports must be properly secured and flashed.

- When possible, ground mount mechanical equipment where it can be easily accessible.

#### 4. Building Materials

Building materials for new buildings are selected for their durability and low maintenance qualities. It is essential that the selected materials have little or no painted surfaces due to required continual maintenance. The creative and consistent use of the following building materials contributes greatly to the enhancement of Base architecture:

##### a. Walls

Construct new wall surfaces of colored masonry block (See Appendix A Color Board/Building Materials-Basewide and Rehabilitation). Selection of block type are limited to the following:

- Splitface Block, Precision or Smooth Block (Figure 3.5-29).
- As an extra precaution against graffiti, seal all masonry block walls with a matte finish sealant.

##### b. Roofs

Roof materials will consist of the following:

- Standing seam metal roofing (Figure 3.5-30).
- Provide a factory applied fluor polymer coating system resin finish to all metal roofing.

##### c. Windows/Doors

Provide aluminum windows and doors with a factory applied fluor polymer coating system resin finish. The fluor polymer coating system is a factory applied durable paint that resists discoloring, oxidation, and peeling. Galvanized steel doors may be field painted.

##### d. Accent Material

Accent materials are limited to the following:

- Integral colored concrete block.
- Precast concrete sill for window detailing (Figures 3.5-31 and 32).
- Precast concrete cornice for wall cap.
- Precast concrete wainscot.
- Metal surfaces with a factory applied fluor polymer coating system resin finish.



Figure 3.5-28: Lack of downspout gutters has stained Building 31613 in Edson Range (31A) Area.



Figure 3.5-29: Precision block with accent banding of splitface block.



Figure 3.5-30: Typical Standing Seam Metal Roof.

- It is historically difficult to achieve an acceptable level of application quality for field painted materials. As such, they are maintenance intensive and their use should be kept to a minimum.

**e. Building Appurtenances**

- Utilize an unpainted galvanized finish or factory applied fluor polymer coating system resin finish for all appurtenances (metal roof trim, gutters/downspouts, railings, vents, etc.).
- For durability and low maintenance, utilize #4 stainless steel hardware material for doors and windows for all buildings.

**5. Mechanical Equipment Screens**

Mechanical equipment is necessary to serve the buildings at Camp Pendleton. However, that equipment can be unsightly if viewed from public areas. Chain link fencing is prohibited from being used as a method of screening equipment in all cases. The following are accepted methods of screening ground mounted equipment.

**a. Ground Mounted Mechanical Equipment Screen:**

Ground mounted equipment is the preferred placement for mechanical equipment. To screen ground mounted mechanical equipment, use the following:

- Concrete block matching the primary building.
- Screen block matching building color.
- Wall surface pattern that allows for ventilation and air flow (Figure 3.5-33).
- Concrete block wall with perforated metal screen (see details in Section 8.10).
- Provide a wall height a minimum of 12 inches above the highest part of the equipment being screened (Figure 3.5-33).
- Chain link fence is not acceptable for screening (Figure 3.5-34).

**b. Membrane (Flat) Roofs with Roof Mounted Equipment (Existing Conditions)**

Provide screens for roof mounted equipment on membrane (flat) roofs consisting of the following:

- Incorporate the use of parapets into the building design (Figure 3.5-35).

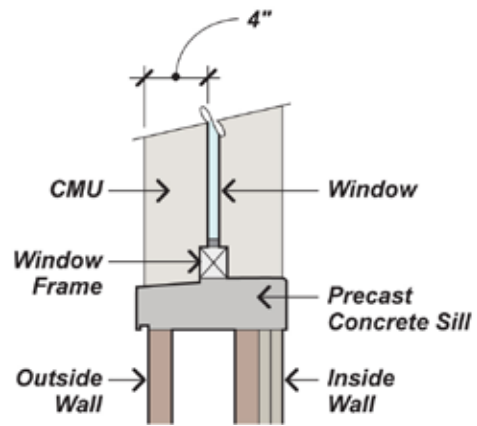


Figure 3.5-31: Section of precast concrete sill detail for window detail.



Figure 3.5-32: Precast concrete window sill in Vado del Rio (25) area.

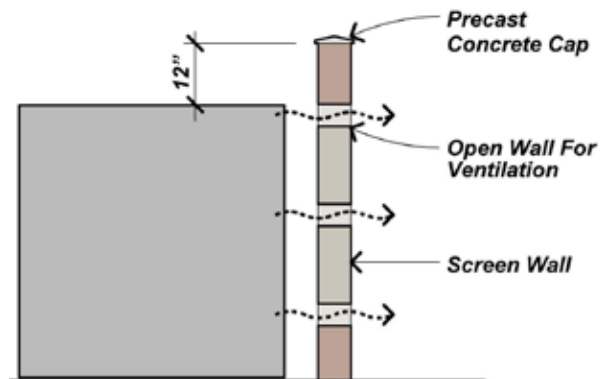


Figure 3.5-33: Example of concrete block screen wall.

- Use building material for parapets consistent with the concrete block material used for the building walls.
- Provide screens a minimum of 12 inches above the highest part of the equipment being screened.
- Use metal tube frames to screen roof mounted equipment. This is the least preferred option and only used when other options are not possible (Figure 3.5-36 and Section 8.10).
- New screen material is limited to those identified in the Appendix A: Color Board/Building Material Basewide.
- Use screen blocks that match building color.

### 6. Energy Efficiency

Designing and siting buildings to reduce energy consumption is a priority for future projects. The following elements help to minimize dependence upon mechanical and electrical systems.

#### a. Insulation

- Roof/Ceiling Spaces-Insulate directly above ceilings with minimum R-30 insulation and maximize the ventilation of the space between the roof and the ceiling insulation.

#### b. Windows

- Provide dual-glazed windows.
- Provide operable windows.

#### c. Siting of Buildings

- Maximize south-facing walls and windows to allow for winter heat gain. Provide overhang to minimize summer heat gain (Figure 3.5-37).
- Maximize north-facing windows to increase indirect lighting.
- Minimize west-facing walls and windows. For more requirements on siting of buildings see Section 3.4-Site Planning.

#### d. Venting/Overhangs

- Provide roof/attic ventilation and maximize natural cross ventilation of working spaces.
- Use roof overhangs to provide sun screening, rain and glare protection.
- Provide operable windows for ventilation.



Figure 3.5-34: Use of chainlink fence alone for screening is unacceptable.

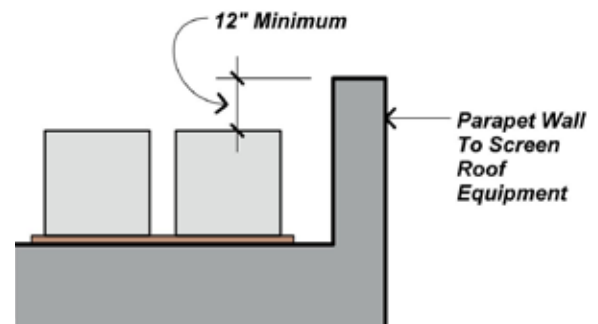


Figure 3.5-35: Example of recommended screening.

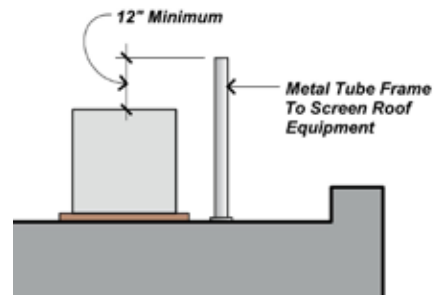


Figure 3.5-36: Existing Condition.

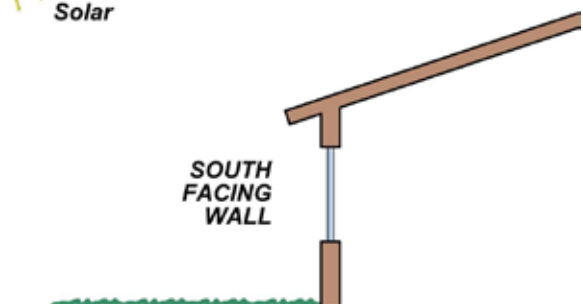


Figure 3.5-37: South facing window for winter heat gain.

**7. Basewide Color**

The Basewide Color scheme is an important element in helping unify the Base’s built exterior environment. All of the individual cantonments that make up the Base should be recognizable as a part of Camp Pendleton. No single cantonment should stand out as a separate entity. Rather, each cantonment should be viewed as a member of the larger Base. This is true for the architectural forms and is equally important when using color for architectural elements.

With this specific objective, new facilities will use a simple color palette. This palette can already be found in many of the newer structures on Base. The following table identifies the standard colors to be used consistently for all future projects as well as rehabilitation of existing buildings.

This table also provides reference to specific colors in the form of manufacturers. Note that this reference is for establishing the color and is not an endorsement for the product manufacturer. Substitutions for "like" or similar colors are acceptable. All final colors must be approved by the Camp Pendleton Public Works Department prior to installation.

<i>BASEWIDE COLOR STANDARDS - NEW AND EXISTING</i>	
<i>ARCHITECTURAL ELEMENTS</i>	<i>MATERIAL DESCRIPTION</i>
<i>Exterior Walls</i>	<i>Concrete Block-Precision/Split Face</i> - ORCO-Gray RCP-Natural ANGELUS-Warm Gray - ORCO-Cool Gray RCP-Castle Gray ANGELUS-Cool Gray - ORCO-Sourdough RCP-La Paz ANGELUS-Champagne <i>Concrete Block Accent Colors-Precision/Split Face</i> - ORCO-Red Brown RCP- Chestnut ANGELUS-Sienna Brown - ORCO-Black 250 RCP-Charcoal ANGELUS-Slate - ORCO-Wheat RCP-Pueblo ANGELUS-Shoreline
<i>Exterior Finishes for Existing Buildings</i>	<i>Concrete plaster building wall-PANTONE 7528, PANTONE 7536</i>
<i>Roofing</i>	<i>Galvanized metal standing seam roofing with a factory applied Fluor Polymer Coating System resin finish: Color - PANTONE 188</i>
<i>Exterior Doors and Door Frames</i> <i>Window Frames</i> <i>Metal Accent/Trim</i>	<i>All windows and doors-aluminum with a factory applied Fluor Polymer Coating System resin finish of:</i> - PANTONE 405 - PANTONE 188 - PANTONE 7 BLACK 7C
<i>Galvanized Downspouts</i>	<i>Color to match dominant color of building</i>
<i>Gutters and Flashings</i>	<i>Color - PANTONE 188</i>
<i>Handrails and Guardrails</i>	<i>Hot dip galvanized steel</i>
<i>Door Hardware</i>	<i>#304 Stainless Steel, #4 Finish</i>
<i>Site Wall Cap</i>	<i>Saddleback or Peaked</i>



## 8. Rehabilitation of Existing Basewide Structures

These guidelines apply to the enhancement of existing structures:

### a. Design

- When rehabilitating existing buildings, use the design guidelines for Basewide Architecture Standards as they relate to form, mass and scale.
- Assure compatibility of new materials with those of the host building.
- Generally repeat the materials, block color, and key elements of the host building when providing a major addition.
- Achieve harmony of appearance between adjacent buildings and between buildings in a group.

### b. Buildings

- Sandblast and seal unpainted concrete buildings when they become excessively stained.
- The surface of the building must be free of patching that may deteriorate under sandblasting or discolor when sealed.
- Provide a finished sandblasted surface that is smooth and even in appearance, color and texture.
- Sandblast if it proves to be less costly than paint over the lifetime of the building.
- If buildings do not meet the cost-effectiveness criteria, they should then be painted, using the approved color scheme.
- Paint, on a regular schedule, buildings that are already painted.
- Exterior Insulation Finishing System (EIFS) may be used to rehabilitate existing concrete buildings. This is a cost-effective method of rehabilitation and also provides significant energy conservation. Integral color exterior plaster may also be used to rehabilitate existing concrete buildings.

Note: To achieve the energy conservation for the EIFS system, the interior face of the concrete wall must be exposed.

### c. Windows

Retrofit all windows per current AT/FP requirements.

## 9. Exceptions to Basewide Color Standards

Exceptions to the Basewide color standards occur for those facilities with previously chosen color palettes. These facilities are as follows:

### a. Ranges

In general, colors for existing construction should follow precedent. The option is that existing construction being renovated/re-finished should follow the color palette standards in this document.

## 3.6 Landscaping

### 3.6 A. Basewide Landscape Standards and Design Guidelines

The landscape at Camp Pendleton is instrumental in forming a positive image for the Base. This image is characterized by the preservation and stewardship of the diverse and unique expanse of undeveloped native southern California landscape. Against this backdrop, a variety of historic and well-established ornamental landscapes provide aesthetically and environmentally pleasing environments within cantonment areas that should be preserved and enhanced. Together, these two components form the basis for the landscape standards and should inform all landscape plans.

#### 1. Observations

The following observations of the landscape conditions were noted Basewide:

- a. The palm trees that line Vandegrift Road create one of the strongest landscape features on the Base. These palms reinforce Vandegrift Road as a major arterial to the developed portion of the Base (Figure 3.6-1).
- b. The median on Rattlesnake Canyon Road is a mixed native landscape that provides a natural link between developed areas.
- c. The trees lining Santa Margarita River Road toward Lake O'Neill create an exceptional streetscape (Figure 3.6-2).
- d. Mature trees located in the existing camps, housing areas, hillsides, and the many stream beds and canyons enhance the visual quality and improve the physical environment of the Base (Figure 3.6-3).
- e. There are no unifying landscape elements to tie the Base together. This is especially noticeable at the Base entries.
- f. Plant material is underutilized as a screening method, especially of storage areas adjacent to primary roads.
- g. A lack of landscape maintenance is a basewide issue. A lack of functional irrigation is evident throughout the Base.



Figure 3.6-1: Palms on Vandegrift near El Camino Real Bell.



Figure 3.6-2: Trees along Santa Margarita River Road provide a shaded streetscape.



Figure 3.6-3: Mature trees flank the entrance to Talega (64) Area.

- h. The primary groundcover is turf. Lack of water and maintenance leaves these areas looking unkempt.
- i. The majority of Base parking areas have no trees or landscaping (Figure 3.6-4).

## 2. Objectives

The basic goals of the landscape standards are maintaining stewardship of Camp Pendleton's natural resources and the creation of aesthetically pleasing and comfortable populated outdoor areas. The goal of the design guidelines is to reinforce these overarching goals while creating a unified exterior image through the repetitive use of landscape materials and carefully chosen plant palettes.

These goals can be accomplished in a cost-effective manner and will provide exponential benefits. Beyond the immediate and obvious amenities and comfort provided by landscaped areas, well-designed and built landscapes can reduce Base maintenance costs, reduce energy use for heating and cooling, eliminate problems resulting from erosion, combat the spread of invasive species, help deal with storm water run-off, play an important role in fire prevention and provide natural habitat for Camp Pendleton's many native species.

The following objectives outline how these standards will contribute to the general landscape goals and enhance the overall visual character of Camp Pendleton:

- a. Provide a design development process and review for new, remodeled or retrofitted projects.
- b. Employ widely accepted landscape best management practices and principals of xeriscape design to reduce water use and provide drought-resistant landscapes.
- c. Preserve and protect well-established plant material and landscapes, giving priority to native and non-invasive species.
- d. Use a majority of native plants in all landscapes with the non-native being non-invasive and adaptive to the local climate and natural aesthetic.
- e. Employ specific techniques and plant palettes that foster native species and inhibit invasive species.
- f. Limit areas of turf, reducing its use to areas with the highest human impact. In other areas, use drought tolerant alternatives (Figure 3.6-5).
- g. Utilize a limited palette of durable, low-maintenance materials and site elements.
- h. Provide irrigation and maintenance standards.



Figure 3.6-4: Parking lot in the Headquarters Area lacks tree planting.



Figure 3.6-5: Inappropriate use of turf.

### 3.6 B. Design Process

An orderly process must be followed to insure the successful implementation of a design. In preparing a landscape design, perform the following:

#### 1. Site Analysis

Develop a survey and evaluation of existing conditions, both on and surrounding the site area that includes (Figure 3.6-6):

- Views
- Climate/ Micro-Climates
- Prevailing Wind Pattern
- Existing Vegetation And Condition
- Soils
- Drainage
- Topography
- Spatial Analysis
- Program Analysis
- Circulation Patterns
- Noise Impacts
- Security Requirements
- Maintenance Requirements
- Compliance With Current AT/FP Guidelines

#### 2. Program Requirements

Prepare a landscape requirement program including budget and limits of development area based on the following:

- Site Planning Per Section 3.4
- User Requirements
- Site Analysis Evaluation
- Design Objectives
- Maintenance Capabilities
- Degree Of Visibility From Critical Areas
- Current AT/FP Guidelines

#### 3. Conceptual Design

Prepare a conceptual design that defines plant material masses arranged to satisfy the needs and requirements established in the site analysis and program requirements. Provide a plan in sufficient detail to determine landscape development costs for budgeting purposes. Also provide a plant list, consisting of plants selected from the Base Approved Plant



Figure 3.6-6: Typical site analysis layout.

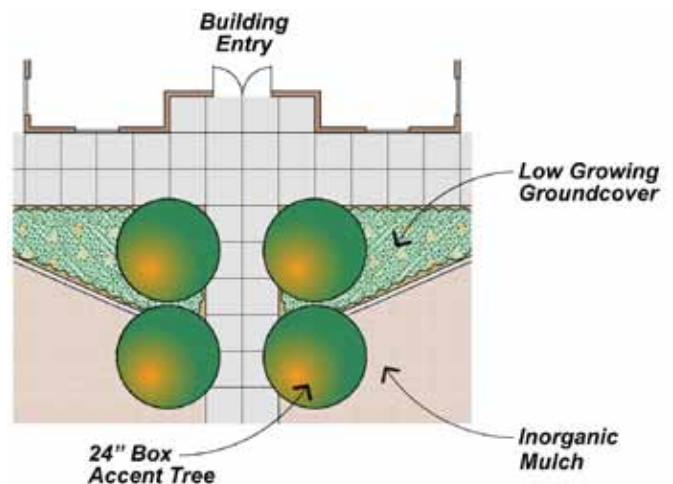


Figure 3.6-7: Typical landscape conceptual design.

List found in Section 3.6-Landscaping, for approval by the Public Works Department (Figure 3.6-7).

Provide, in text form only, the irrigation concept regarding method of irrigation and water conservation. See Chapter 11-Submittal Requirements for Concept/Design Development package.

## 4. Working Drawings

Following the approval of the conceptual design, prepare a final planting plan. The planting and irrigation plans must be suitable for bidding and construction. Working drawings are to include, but not limited to:

### a. Planting Plan

- Plant species and varieties chosen from the Base Approved Plant List.
- Quantity and size of all plant materials.
- Location of plants. Draw plant symbols at 3/4 of the plant's ultimate size to insure proper spacing.
- Definition of turf and groundcover areas and method of separation.
- Drainage flow lines and necessary site drainage.
- A minimum of one tree for every 900 square feet.
- Minimum size of trees is 24" box/two inch caliper, desirable is 36" box/three inch caliper (Figure 3.6-8).
- All trees within AT/FP unobstructed space must be 36" box/three inch caliper or larger with an understory height per the most recent version of UFC 4-010-01.
- Minimum size of shrubs is five gallon (Figure 3.6-9).
- Minimum size of groundcover is one gallon.

### b. Irrigation Plan

- Location and sizes of all irrigation lines and heads.
- Legend identifying type and spacing of all equipment.
- Definition of turf and groundcover areas.
- Division of zones based on water requirements.
- Conventional drip irrigation is not allowed.

### c. Planting and Irrigation Details and Specification

Provide a complete set of details and specifications to allow for the installation of the design. See Section 8.3 in the Basewide Standard Details for typical planting and irrigation details.

Provide photographs of all plant material proposed for the project.



Figure 3.6-8: 24" box tree.



Figure 3.6-9: 5 gallon shrub.

### 3.6 C. Design Principles

When designing the landscape for Camp Pendleton, consider its aesthetic appeal and maintenance requirements, as well as function. This translates into specific principles the landscape design must follow. These principles are:

#### 1. Unity

- a. Establish a uniform street tree program for the primary and secondary streets within the cantonment areas (Figure 3.6-10).
- b. Unify the various activities within a cantonment through the repetitive use of a limited variety of plants. This repetitive use of plant material is particularly helpful when used between varying architectural styles or building/open space configurations.

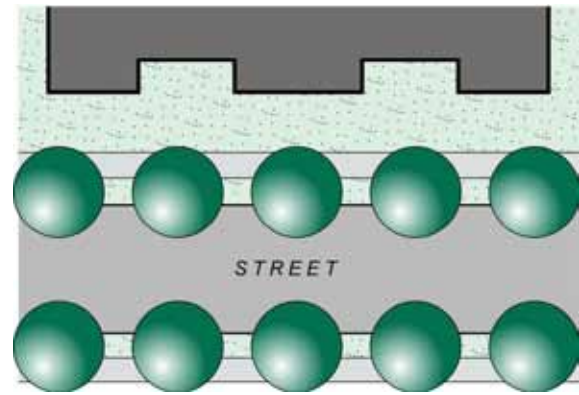


Figure 3.6-10: Unity.

#### 2. Balance

Frame and complement the architecture and open space through the balanced arrangement of plant masses (Figure 3.6-11). Consider the ultimate size of a plant in its selection for a particular design (Figure 3.6-16).



Figure 3.6-11: Balance.

#### 3. Focus

Plant specimen or accent trees at key locations such as (Figure 3.6-12):

- a. Building Entries For Command Headquarters
- b. Courtyards
- c. Entry Drives
- d. Monuments
- e. Visual Terminus



Figure 3.6-12: Focus.

#### 4. Rhythm

Use groups of trees and shrubs in regular patterns to create a continuous flow that reinforces direction or maintains continuity.

#### 5. Contrast

- a. Consider the complexity of plant forms, colors and textures in arranging plant groups (Figure 3.6-13).
- b. Contrast deciduous, dark green with grey green evergreens as backgrounds and foreground elements.

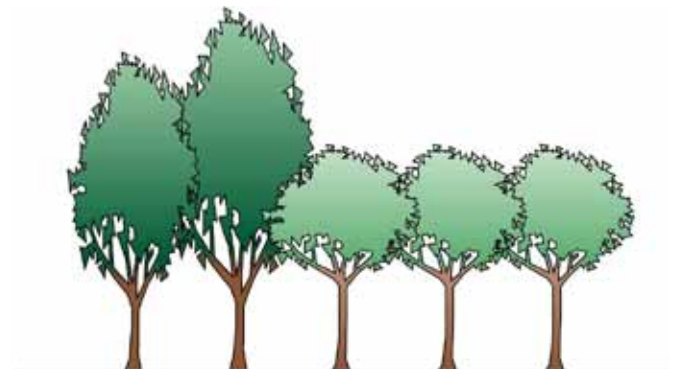


Figure 3.6-13: Contrast.

- c. Plant flowers that bloom at different times of the year together for a wider range of visual interest.

**6. Simplicity**

- a. Use large masses of a few types of plants.
- b. Use trees as the dominant landscape planting feature in areas frequented by people (Figure 3.6-14).
- c. Concentrate turf, groundcover and inorganic mulch in large separate areas with simple transitions. Turf or other areas that will receive spray irrigation should be designed in conjunction with the ultimate spray pattern to avoid overspray and receive even coverage.
- d. Provide concrete mow curb to separate all turf areas, groundcover, shrub beds, and inorganic mulch from each other. Refer to Detail 8.3 A-7.

**7. Spatial Articulation**

- a. Separate spaces, enclose spaces and define edges and pathways with plants (Figure 3.6-15).
- b. Screen visually undesirable elements, such as trash enclosures, with plants or a combination of plants and walls.
- c. Plant tall shrubs as background and smaller shrubs as foreground.
- d. Plant trees and shrubs with room to accommodate natural growth and mature size (Figure 3.6-16).

**8. Xeriscape Principles**

- a. In general, plants with the highest water usage should be concentrated closest to populated structures and places. Water and maintenance needs should decrease moving out from these nodes.
- b. Plants with similar sun/shade, soil, water and fertilizer requirements should be grouped together. This is especially important when using native plant material.
- c. All planting areas are required to be mulched to a minimum of three inches.
- d. Utilize planting patterns with loose groups of plants and inorganic mulch.

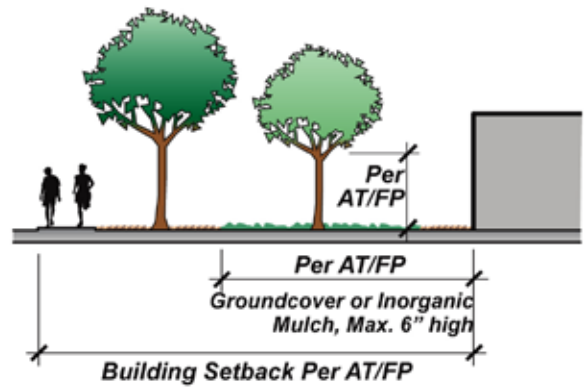
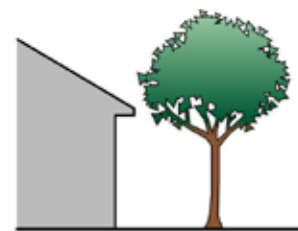


Figure 3.6-14: Trees as dominant landscape feature.



Figure 3.6-15: Delineation of camp spots with plants at San Onofre Beach.



*This*



*Not This*

Figure 3.6-16: Proper tree placement in relation to buildings.

### 3.6 D. Landscape Guidelines

#### 1. Preservation of Existing Landscape Resources

The existing native landscape and the ecosystems it fosters are one of Camp Pendleton's most important resources (Figure 3.6-17). As steward of these resources, the goal of every development project is to protect, preserve and enhance the native landscape and species. Well-established and mature plantings within developed areas are also important for the human environment, providing comfort and beauty. Effort should be made to save the best of these trees and plants as part of Camp Pendleton's natural resources.

Toward this end, the following guidelines outline the process to be followed for every development project:

- Greenfield sites - sites adjacent to riparian areas and sites adjacent to undeveloped land should be given special care during design and construction to protect native species.
- All project site plans must identify the extent of work and staging areas that least disturbs the existing landscape. The plan must outline an existing tree protection and trimming plan, a temporary fencing plan to protect areas outside the limit of work and a re-vegetation plan for disturbed native areas. Re-vegetation plans should ensure successful re-establishment of the dominant native species.
- When possible, remove topsoil from disturbed/scraped areas and stockpile on site and re-distribute in areas to be re-vegetated.

#### 2. Basewide Landscape Elements

To meet the objective of reinforcing and unifying Base identity, the following landscape types should be implemented in the corresponding populated areas:

##### a. Base Entry Gates

Provide a consistent plant palette at the entry gates to help identify all entry points to the Base. Specific landscape objectives for the entry gates are identified in Chapter 6.

##### b. Area Identification Entry Signs

To establish uniformity for the entrances of all populated areas, introduce a dominant tree species adjacent to all identification entry signs (Figure 3.6-18). This has already been implemented at a few of the area identification signs and is to be used throughout the Base.



Figure 3.6-17: The existing hillside as a backdrop to San Onofre (52) Area.



Figure 3.6-18: Example of a dominant tree species at identification entry sign.



c. Streetscape

The many benefits of streetscape planting include the pleasing visual experience, the shade provided to pedestrians, joggers and drivers and the potential to diffuse storm water run-off. In addition, well-designed streetscapes create a strong identity and can reinforce important routes and directions. Many of these benefits are illustrated by tree-lined Santa Margarita Road (Figure 3.6-19). When environmentally and contextually appropriate, street trees and parkway planting establish a strong streetscape on Base roads.

Streetscapes shall be designed and approved on a project-by-project basis. New construction, development, and renovation projects shall address streetscape on all adjacent streets in accordance with this Chapter and Section 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with on-going streetscape programs. The following are minimum streetscape guidelines for Camp Pendleton:

Vandegrift Boulevard

- The existing palms that line Vandegrift Boulevard are one of the strongest landscape features on the Base.
- Plant new palms to supplement the existing rows of palms on Vandegrift Boulevard. The existing palms are planted alternately 20 and 40 feet apart. The newly planted palms will continue the existing rhythm and will fill in the "missing" palms (Figure 3.6-20).
- Plant additional palms 40 feet (Figures 3.6 -20 and 21) on center in the proposed parkway between the curb and the pedestrian path from the Oceanside and San Luis Rey Gate to the Mainside HQ Area, only in populated areas and where appropriate for maintenance purposes.
- For ultimate impact, the new palms should be 10-15 feet in height when planted. However, if cost becomes a major constraint, smaller size palms can be planted. The results, or impact of the smaller palms, will not be seen for a number of years. It should be emphasized that once the palms are established, they require minimal maintenance, other than periodic removal of dead fronds.



Figure 3.6-19: Tree-lined Santa Margarita Road.

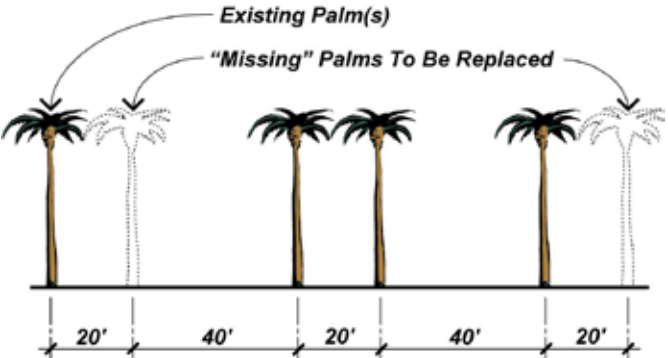


Figure 3.6-20: Replacement of "missing" palms.

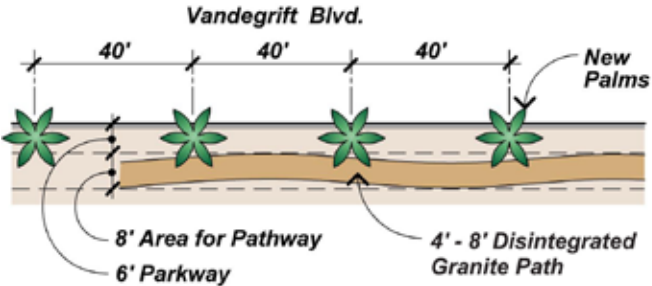


Figure 3.6-21: Spacing for new palms on Vandegrift.

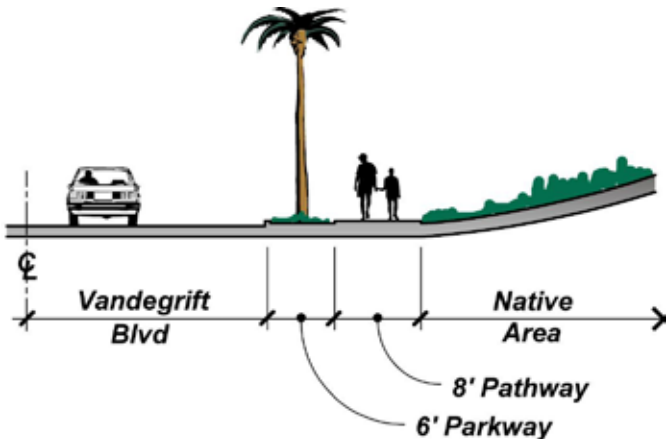


Figure 3.6-22: Cross section of Vandegrift Boulevard.

### Basilone Road

The street tree planting for Basilone Road includes:

- Species: Coast Live Oak (*Quercus agrifolia*).
- California Sycamore (*Platanus racemosa*).
- Planting: Within cantonment areas, housing areas and between housing and cantonment areas (Figure 3.6-23).
- Spacing: 40 feet on center.

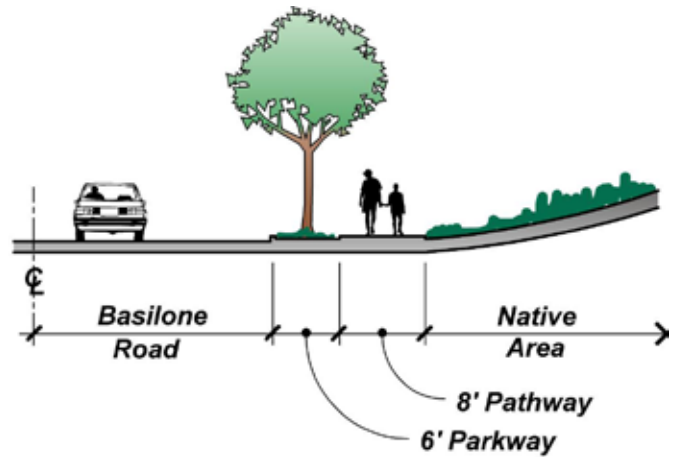


Figure 3.6-23: Cross section of Basilone Road.

### Stuart Mesa Road

The street tree planting for Stuart Mesa Road includes:

- Species: California Sycamore (*Platanus racemosa*).
- Planting: Within cantonment areas, housing areas and between housing and cantonment areas (Figure 3.6-24).
- Spacing: 40 feet on center.

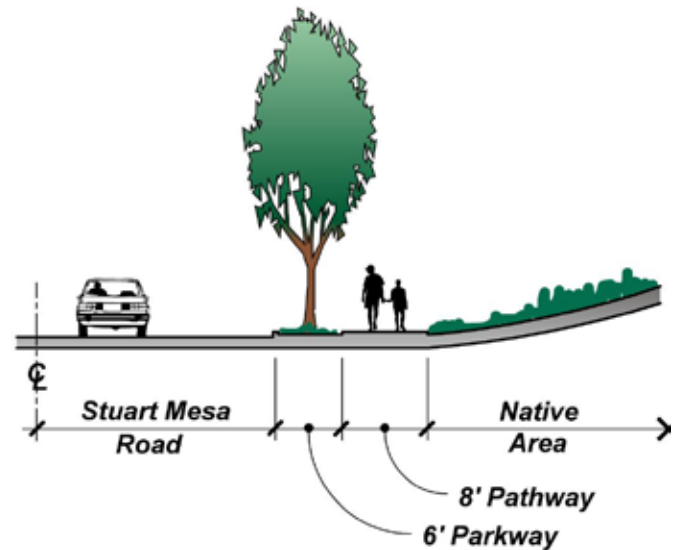


Figure 3.6-24: Cross section of Stuart Mesa Road.

### San Mateo Road

The street tree planting for San Mateo Road includes:

- Species: Coast Live Oak (*Quercus agrifolia*).
- Planting: Within cantonment areas, housing areas and between housing and cantonment areas.
- Spacing: 40 feet on center.

### Cristianitos Road

The street tree planting for Cristianitos Road includes:

- Species: Coast Live Oak (*Quercus agrifolia*).
- Planting: Within cantonment areas, housing areas and between housing and cantonment areas.
- Spacing: 40 feet on center.

**Las Pulgas Road**

The street tree for Las Pulgas Road includes:

- Species: California Sycamore (*Platanus racemosa*).
- Planting: Within cantonment areas, housing areas and between housing and cantonment areas (Figure 3.6-25).
- Spacing: 40 feet on center.

The general streetscape concept is to plant trees that are either native to the area or will adapt over time. Once established, the selected trees will require minimal maintenance. As a general note, areas adjacent to the street in a native condition, especially when providing valuable habitat, will remain undisturbed.

Implementation of street trees is not to interfere with Base training maneuvers. Final consideration for placement will have the Base Commander's approval.

**d. Parking Lots**

A consistent planting of trees in existing and future parking areas is necessary to reduce reflective heat and enhance the visual image of the Base's many parking areas.

- Provide trees along parking lot perimeter at a minimum of one tree per five stalls (Figure 3.6-26). Also provide a minimum of one tree in each end aisle planter.
- The use of berms and shrub planting is also permitted to help screen parking lots (Figure 3.6-27).
- Select trees and screening shrubs from the Base Approved Plant List in Section 3.6.
- For additional parking lot requirements see Section 3.8-Parking.

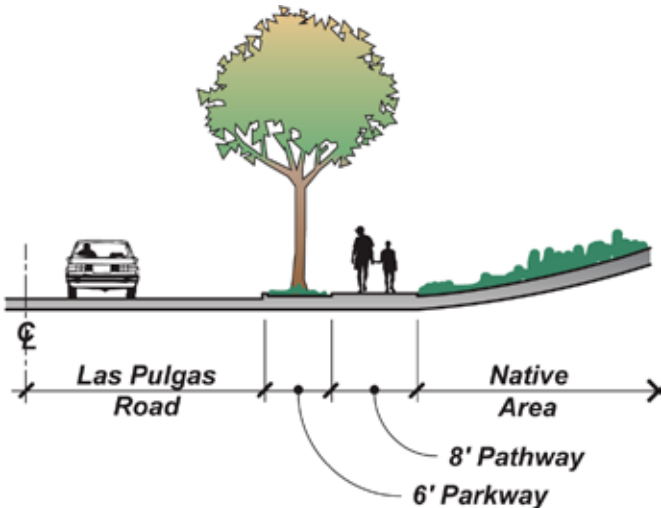


Figure 3.6-25: Cross section of Las Pulgas Road.

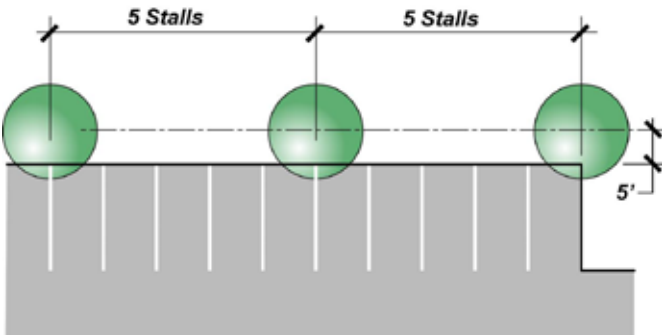


Figure 3.6-26: Typical tree planting in parking lots.

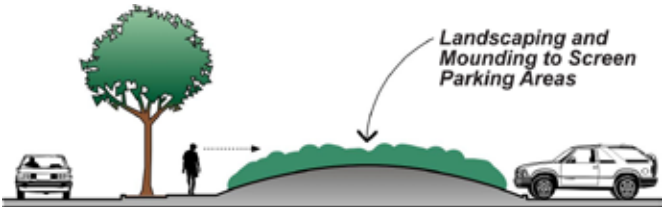


Figure 3.6-27: Landscape mounding to screen parking areas.

### e. Courtyards

Building entrance landscapes should complement the architecture and reinforce wayfinding and preferred entrances. Courtyard landscapes should provide comfortable and functional outdoor refuge for building inhabitants. Both areas require careful design of the ground plane in conjunction with vertical elements in the understory and canopy to create a sense of enclosure, direct movement and create comfortable microclimates (Figure 3.6-28). All of these items are accomplished by:

- Providing a rhythm of evergreen canopy trees.
- Providing tree planters with groundcover, inorganic mulch (Figure 3.6-29) or tree grates and guards. Incorporate seating into the design of planters and grade changes.
- Avoid plant material with leaf, flower, pod or other litter.
- Providing changes in paving texture, color and material to indicate separations between corridors, entrances and courtyard areas.
- Providing seating and lighting as an integral consideration of the courtyard design.
- Incorporate drainage systems into the design of the paving pattern.
- Comply with all current ADA and Title 24 requirements, including barrier-free access and the installation of truncated dome pavement bands (Detail 8.6 A-4) at all transitions from courtyard/sidewalk to vehicular areas.

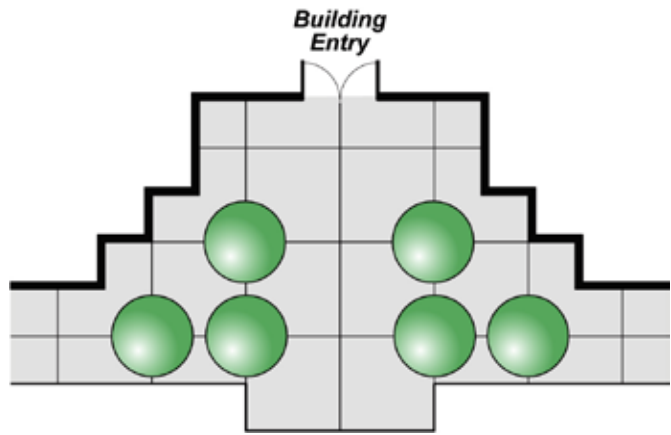


Figure 3.6-28: Typical courtyard design.



Figure 3.6-29: Courtyard tree planting.

### f. Screens/Buffers

Landscaping can be successfully used to screen unsightly views or site features or provide a buffer between various uses (Figure 3.6-30). Screening planting is achieved by the use of plants with dense, abundant foliage. Using plant material for screening requires more room than architectural elements (wall or fences) to achieve the same results. To screen unsightly areas use the following:

- In areas three feet or wider, use unclipped, informal shrubs.
- Where space permits, use plant material to screen trash enclosures and service areas from public view.



Figure 3.6-30: Plant material used as a buffer between cantonment uses.

**g. Perimeter of Buildings**

Provide a minimum five foot band of inorganic mulch around building perimeter. Outside of that, plant with foundation planting that grows to a maximum height of six inches. This treatment visually anchors the building to the ground and also minimizes the "back-splash" of soil due to irrigation or heavy rainfall. Provide a six inch concrete curb to separate inorganic mulch from plant material (Figure 3.6-31). Comply with the most recent version of AT/FP requirements.

**h. Transitional Areas**

Transition development edges to open space areas (Figure 3.6-32) with appropriate plant material. Choose plant material from the Base Approved Plant List.

**3. Plant Installations**

The following are guidelines for landscape layout and the installation of new plant material. Refer to Chapter 7 for installation of native plants.

**a. Typical Landscape Layout**

A typical landscape layout for future facilities utilizes trees as the dominant landscape planting element. Use low growing shrubs, groundcover or inorganic mulch for understory planting (Figure 3.6-33). As future projects are implemented, limit turf areas to:

- High pedestrian use areas.
- Recreational areas, playgrounds and ball fields.

Refer to the Base Approved Plant List for plant selection.

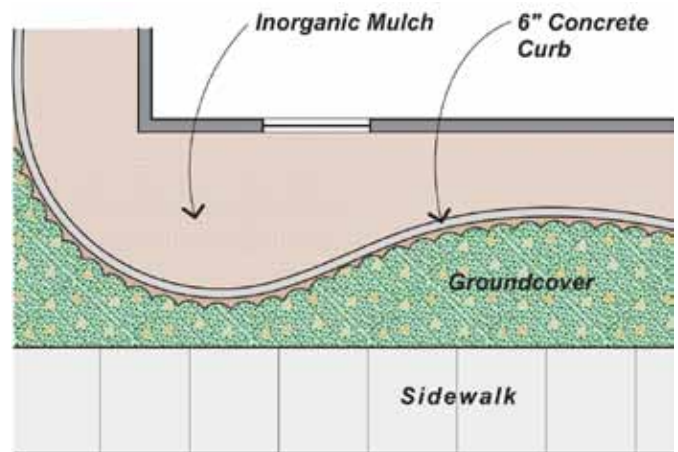


Figure 3.6-31: Typical foundation treatment. Note that the inorganic mulch is separated from the planting bed by a concrete curb.



Figure 3.6-32: Typical transitional planting area.

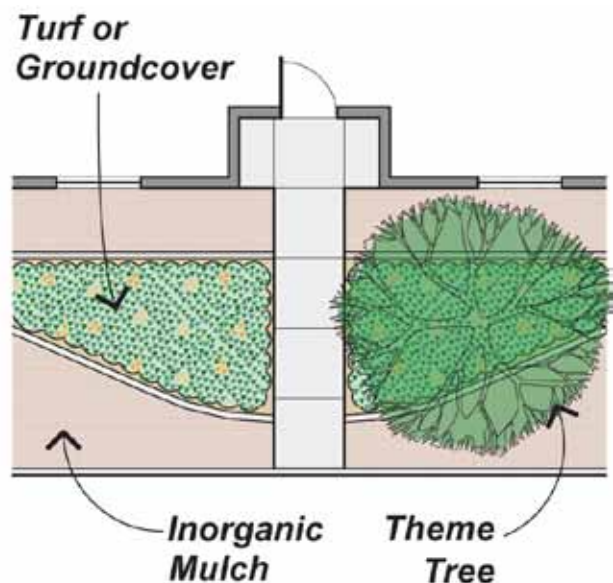


Figure 3.6-33: Landscape areas should be simple and designed for ease of maintenance.

## b. Planting Methods

Planting and establishment methods are critical for successful plant growth, especially when introducing drought-tolerant species.

Plant in the late fall or early spring when normal rainfall can help supplement irrigation.

- Eradicate weeds completely prior to planting. Discourage weed growth by irrigating the area and removing them by hand, roto-tilling or with herbicide.
- Use wide planting pits, at least twice the width of the root ball, with good drainage to promote root system growth (Figure 3.6-34). See Section 8.3 for details. Do not plant root-bound plants.
- Grade the area to create positive drainage away from the building foundation at two percent slope for a minimum of five feet. If needed, install underground drainage system to take excess water to street (Figure 3.6-35).
- Obtain horticultural soils tests to determine soil conditions and necessary amendments. Incorporate recommended material a minimum of six inches into soil.
- Allow at least four inches slack on tree ties to avoid girdling trees.

Use proper establishment techniques during installation and maintenance to develop drought tolerance.

- Plant new plants flush with the finish grade.
- Water new plants 2-3 times a week with slow application of water to the root area without rapid water run-off.
- Provide three inches of organic or inorganic mulch to prevent evaporation.
- Provide for continued maintenance for a minimum of 365 days.

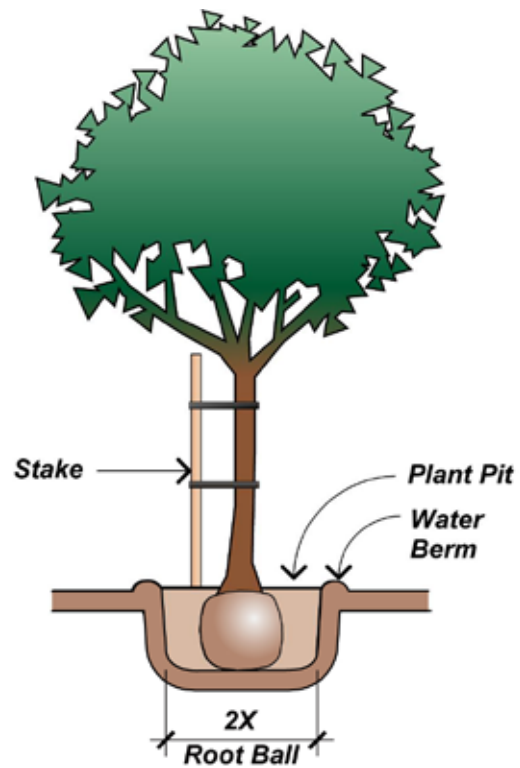


Figure 3.6-34: Illustration of planting pit for trees (not to scale). See Section 8.3 for planting details.

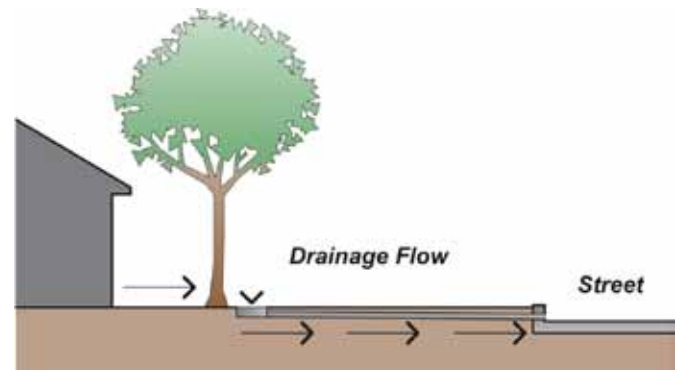


Figure 3.6-35: Drain site away from building.

### 3.6 E. Irrigation

Proper irrigation methods are essential to the healthy growth and maintenance of ornamental landscapes. Also, the controlled application of water is essential to the establishment of drought tolerance in plants.

The following irrigation guidelines encourage the wise use of water. This is accomplished by reducing the water needed to maintain existing landscapes and the proper use of water for future landscapes. Water can be saved by knowing and understanding the plant's requirements. Irrigation systems shall follow these requirements.

1. All projects must be constructed to have the potential to utilize Base reclaimed water and meet all applicable Health and Safety codes, requirements and regulations.
2. At this time, the use of grey water systems is not acceptable on Camp Pendleton due to constructability, durability and maintenance.
3. Camp Pendleton is aligning with the SW Regional Central Computerized Irrigation System to better provide for Basewide water efficiency. Projects shall provide an irrigation controller compatible with the Regional central control system. Projects can be grouped together such that combining the valve to one or two central controllers shall be considered.
4. Water all turf areas with conventional automatic irrigation systems using matched low precipitation rate pop-up heads.
5. Use pop-up spray heads (six inch minimum height) in all groundcover and shrub areas. Install low rate, matched precipitation heads that are evenly spaced. This will allow for deep watering and rooting.
6. Provide "head to head" coverage when installing or repairing an irrigation system. This allows for overlapping coverage and minimizes dry spots (Figure 3.6-36).
7. Face irrigation spray heads away from buildings and walls (Figure 3.6-37).
8. Install anti-drain valves on all head assemblies below the elevation of the valve. This eliminates low head drainage or excessive pooling at low points.

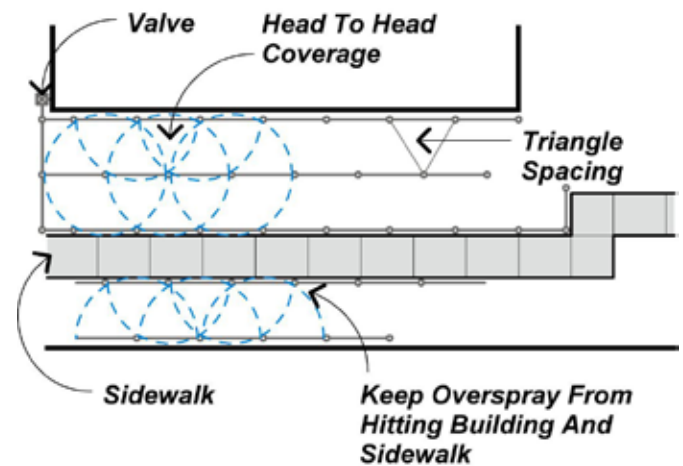


Figure 3.6-36: Typical layout for irrigation system.

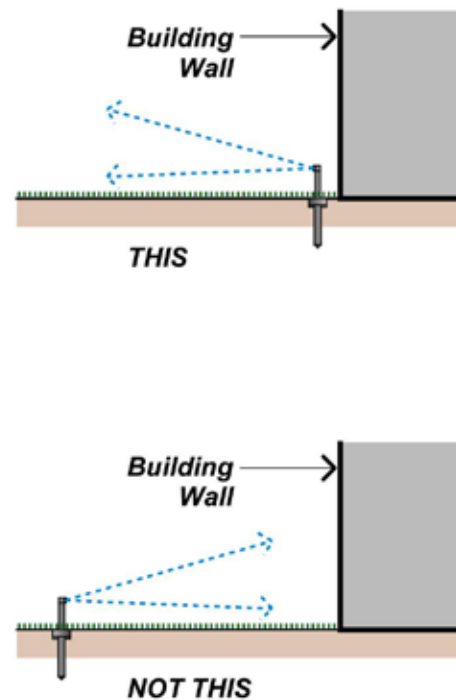


Figure 3.6-37: Always face irrigation heads away from buildings.

9. Use Schedule 40 PVC pipe for all irrigation lateral lines.
10. Install automatic control valves connected to an automatic controller (Figure 3.6-38). Do not group valves into a single underground valve box. Group valve boxes together and keep covered at all times (Figure 3.6-39).
11. Use PVC pipe sleeves (Schedule 40) for all irrigation lines that are located under paved areas such as roads, driveways, sidewalks or courtyards.
12. Use rain sensors to automatically shut off the irrigation system when rain occurs.
13. Install soil moisture sensors that automatically shut off the irrigation system when soil moisture is adequate.
14. Provide stainless steel controller cabinets and backflow prevention enclosures (no painting required).
15. Backflow preventers shall have a water meter included in its configuration.
16. Program conventional systems to operate in a series of shorter cycles rather than one longer cycle. Shorter cycles aid in water penetration and avoid runoff. Plant material water requirements depend on weather, microclimates and exposure. Adjust the irrigation system accordingly.
17. Use plants that need only infrequent deep watering once established (Figure 3.6-40).
18. Do not underwater. Do not allow soils to become dry at the root level. Once a plant shows stress, it has already been damaged. Keep precise records of water application and make adjustments as necessary to avoid underwatering.
19. Do not overwater. Observe field conditions and note how long it takes before heavy runoff occurs and how deep the water penetrated. Use this information to set the irrigation times and subsequent cycles.
20. Set automatic irrigation for early morning watering. Avoid operation of systems during the mid-day. A/E to set times per water purveyor.
21. Use controllers with 14 day calendars for optimum flexibility in scheduling.

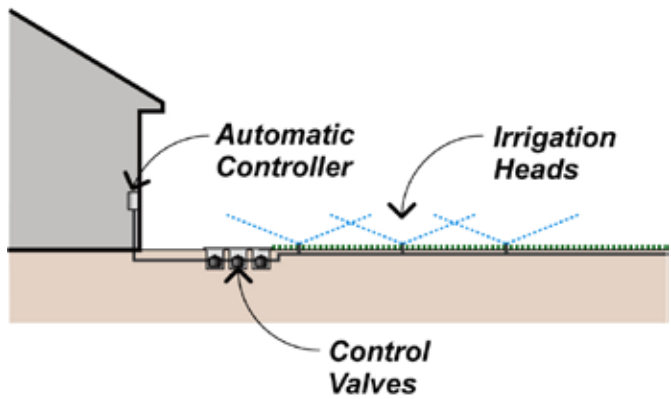


Figure 3.6-38: Connect valves to an automatic controller.

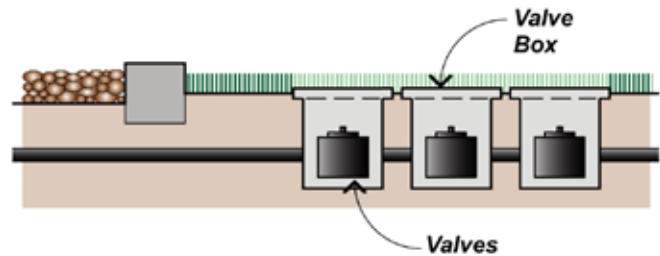


Figure 3.6-39: Each valve shall have its own box. Group boxes together.

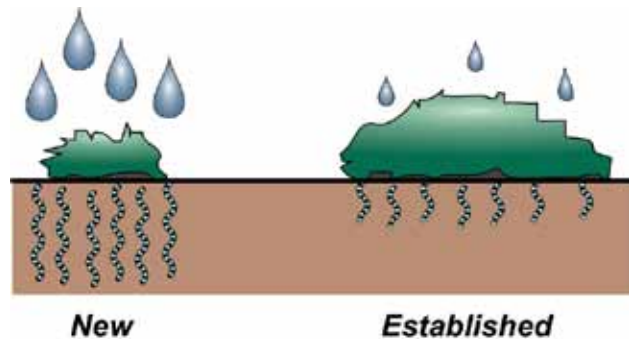


Figure 3.6-40: Established plants will require less watering than new planting.

22. Do not neglect dormant turf. If there is no rainfall, established turf requires deep watering at least once a month to keep the root system alive.
23. To determine if the soil needs to be watered again, use a soil probe to the root depth. Right after irrigating, the soil should be thoroughly wet. Allow the soil to reach a crumbly, cool and moist condition before irrigating again.
24. Temporary irrigation shall be piped underground (not above grade) and can be removed after approval by the Government's Landscape Architect.



### 3.6 F. Environmental Control

Plants in the landscape can be used in specific ways to encourage energy conservation and make the immediate environment more comfortable for its users.

#### 1. Wind Control

- Use plants to break, guide, and deflect wind and to filter out dust and dirt (Figure 3.6-41).
- Control micro-environments by planting tall shrub masses on the windward side of places where people gather, recreate or work at a minimum distance from the building per AT/FP requirements.
- Avoid breaks in the windscreen planting which can cause the wind to funnel and increase velocity.
- Use dense plants that branch all the way to the ground for windbreaks outside of AT/FP unobstructed space per UFC 4-010-01.



Figure 3.6-41: Plants used as wind control.

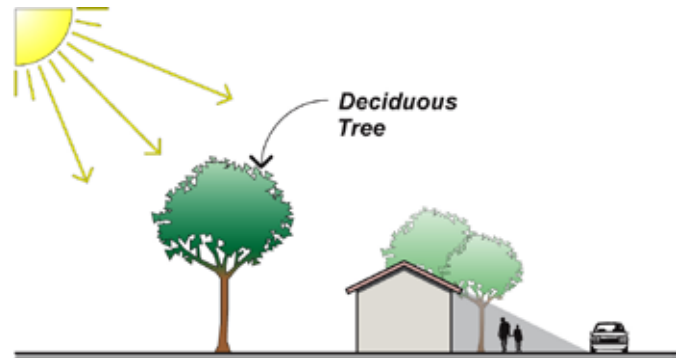


Figure 3.6-42: Typical landscape layout to protect the west and south side of buildings.

#### 2. Solar Control

- Plant deciduous trees or high crowned evergreen trees on the south and west sides of buildings and in outdoor gathering areas to provide summer shade and winter sun (Figure 3.6-42).
- Take care not to block the sun's access to solar collectors (Figure 3.6-43).
- Break up paving areas with shade trees to reduce ambient air temperature. Planting areas in paving or parking areas to be a minimum of four feet by eight feet.
- Plant shade trees next to buildings and parking lot perimeters to reduce glare and reflected heat while maintaining AT/FP requirements.
- Shade trees at parking lots also protect cars from heat and ultraviolet rays (Figure 3.6-44).

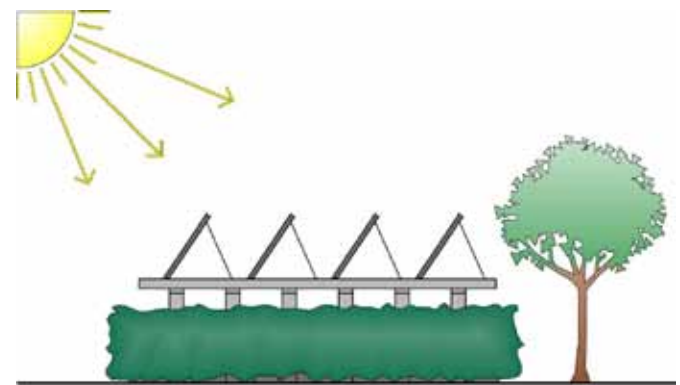


Figure 3.6-43: Screen base of solar panels but do not block solar access to panels.

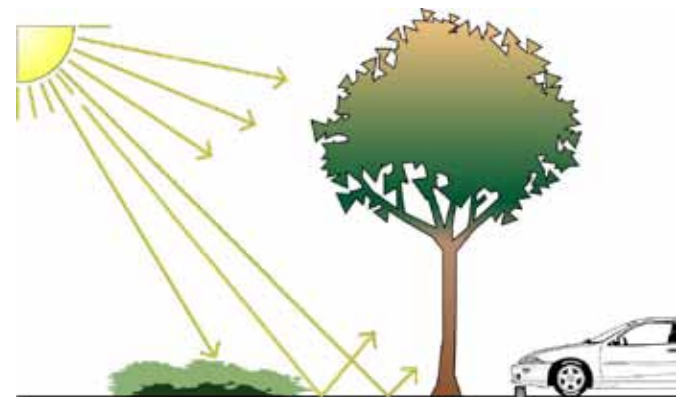


Figure 3.6-44: Provide shade for cars in parking lots.

### 3.6 G. Plant Selection

The success of future landscape designs is dependent upon the proper selection of plant material. The Base Approved Plant List was developed to clearly define acceptable plant material that is low maintenance, drought-tolerant and either native or adaptive to the climate. In addition, special attention has been devoted to avoiding species that pose any threat to native species or could lead to weed problems. Plants not included on the Base Approved Plant List are not acceptable. A “No Plant” list is also included at the end of this section. In addition, any plant listed by the California Invasive Plant Council (Cal-IPC) or the California Department of Agriculture as a threat to ecosystems or agriculture is prohibited. The following strategies shall be considered in the development of a project plant list to help in proper plant material selection for the Base:

1. Select plants for the Base that are low maintenance, drought-tolerant, native or adaptive to the area (Figure 3.6-45).
2. Identify plant types by ultimate size. This allows proper selection of plants to retain their natural form and not require extensive maintenance or pruning (Figures 3.6-46 and 47).
3. Identify the appropriate location, either Cantonment or Open Space, for the selected plant material.
4. Provide a variety of plants adaptable to specific microclimates and site conditions, such as water and shade requirements.
5. Avoid plants with leaf, flower, seed or cone litter near doorways and adjacent to hardscape.
6. Avoid planting surface rooted trees near hardscape.
7. Avoid plants with any poisonous parts in areas where children will be.
8. For guidelines on native plant use, refer to Chapter 7.
9. Project plant list must be approved by the Public Works Department.



Figure 3.6-45: Base Approved planting at newer BEQ.

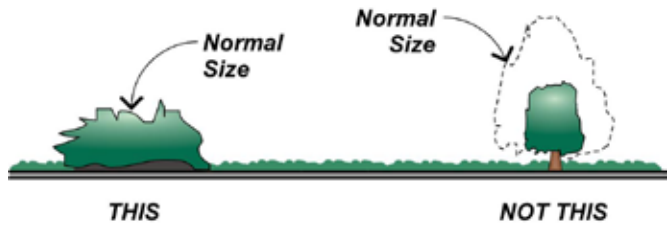


Figure 3.6-46: Select the right plant for its intended use. This will help minimize time consuming labor for pruning and maintenance.



Figure 3.6-47: Example of Base approved plant material spaced appropriately to grow to natural size.

## Camp Pendleton Base Approved Plant List

The Base Approved Plant List is the definitive list of acceptable plants for landscape use on Camp Pendleton. It provides a broad range of plant material that meets a wide range of needs. Plant material should be chosen carefully as not every plant is appropriate for every circumstance. The Public Works Department must approve project plant lists. The following are the conditions for use:

- a. For projects within cantonment and/or populated areas, California native species from the approved list shall constitute a minimum of 80 percent of the plant material within each stratum (herb, tree, shrub, etc.). Other drought-tolerant species from this list shall constitute the remainder of plant material (a maximum of 20 percent in each stratum) for each project. For the purposes of these calculations, all cultivars are considered exotics. Plant lists that clearly describe these quantities must be on every planting plan.
- b. For projects immediately adjacent to open space or in sensitive environments, California native species shall constitute 100 percent of the plant material. The intent of this requirement is to improve and maintain the health of native species and ecosystems. Each project site should be approached from this perspective and designed to best meet this intent.
- c. For projects adjacent to open space and/or meant as native habitat, plants native to San Diego County are preferred. Given the variety of habitats found on Camp Pendleton, the adjacent native plant communities should inform the project plant lists.
- d. Note that not all species on this list are appropriate for all settings. Planting design should always reflect localized microclimates, appropriate plant communities, drought tolerance, low maintenance, fire danger and maintenance expectations. At any point in the review and construction process, Camp Pendleton Public Works Department retains the right to revise a project plant list.
- e. A minimal number of medium and high water use species are included on this list. These species are ONLY to be used in circumstances where an appropriate microclimate, such as regular natural or directed storm water, justifies their use.
- f. All plants shall be verified for availability in size and quantities needed for each project prior to specifying on plans or scopes of work.
- g. Minimum plant material sizes, quantities and location are as follows:
  - Project must provide a minimum of one tree for every 900 square feet of building site.
  - Minimum size of trees is 24" box/two inch caliper, desirable is 36" box/three inch caliper (Figure 3.6-8).
  - All trees within AT/FP unobstructed space must be 36" box/three inch caliper or larger with an understory height per the most recent version of the AT/FP UFC.
  - Minimum size of shrubs is five gallon (Figure 3.6-9).
  - Minimum size of groundcover is one gallon.

Marine Corps Base Camp Pendleton

Botanical Name	Common Name	Water Use			Zone		Native	
		Low	Medium	High	Open Space	Cantonment/ Populated	San Diego County	California
<b>Large Trees (40 feet +)</b>								
<i>Acer macrophyllum</i>	Big-leaf Maple		X		X	X	X	X
<i>Acer negundo californicum</i>	Box Elder		X		X			X
<i>Acer negundo interius</i>	Box Elder		X		X			X
<i>Alnus rhombifolia</i>	White Alder			X	X	X	X	X
<i>Brachychiton acerifolius</i>	Flame Tree	X				X		
<i>Brachychiton populneus</i>	Bottle Tree	X				X		
<i>Calocedrus decurrens</i>	Incense Cedar		X		X	X		X
<i>Cupressus stephensonii</i>	Cuyamaca Cypress	X			X			X
<i>Fraxinus angustifolia</i>	Raywood Ash		X			X		
<i>Fraxinus latifolia</i>	Oregon Ash		X		X	X		X
<i>Fraxinus uhdei</i>	Evergreen Ash		X			X		
<i>Jubaea chilensis</i>	Chilean Wine Palm	X				X		
<i>Pinus canariensis</i>	Canary Island Pine	X				X		
<i>Pinus halepensis</i>	Aleppo pine	X				X		
<i>Pinus eldarica</i>	Afghan Pine	X				X		
<i>Pinus torreyana</i>	Torrey Pine		X		X	X	X	X
<i>Platanus racemosa</i>	California Sycamore		X		X	X	X	X
<i>Podocarpus macrophyllus</i>	Yew Pine		X			X		
<i>Populus fremontii</i>	Fremont's Cottonwood		X		X		X	X
<i>Pseudotsuga macrocarpa</i>	Big Cone Douglas Fir	X			X	X		X
<i>Quercus agrifolia</i>	Coast Live Oak	X			X	X	X	X
<i>Quercus chrysolepis</i>	Canyon Live Oak		X			X		
<i>Quercus engelmannii</i>	Mesa Oak	X			X	X	X	X
<i>Quercus kelloggii</i>	California Black Oak		X		X	X		X
<i>Quercus lobata</i>	California White Oak		X		X	X		X
<i>Quercus wislizeni</i>	Interior Live Oak	X			X	X	X	X
<i>Syagrus romanzoffianum</i>	Queen Palm		X			X		
<i>Umbellularia californica</i>	California Bay Laurel		X		X	X	X	X

Botanical Name	Common Name	Water Use			Zone		Native	
		Low	Medium	High	Open Space	Cantonment/ Populated	San Diego County	California
<b>Medium Trees (25 feet - 40 feet)</b>								
<i>Archontophoenix cunninghamiana</i>	King Palm		X			X		
<i>Brahea armata</i>	Blue Hesper Palm	X				X		
<i>Brahea edulis</i>	Guadalupe Palm	X				X		
<i>Butia capitata</i>	Pindo Palm		X			X		
<i>Celtis reticulata</i>	Netleaf Hackberry		X		X	X		X
<i>Cercis canadensis</i>	Eastern Redbud		X			X		
<i>Fraxinus velutina</i>	Modesto Ash, Velvet Ash		X		X	X	X	X
<i>Geijera parvifolia</i>	Australian Willow	X				X		
<i>Juglans californica</i> ssp. <i>Californica</i>	California Black Walnut	X			X		X	X
<i>Myrica californica</i>	Pacific Wax Myrtle	X			X	X		X
<i>Podocarpus gracilior</i>	Fern Pine		X			X		
<i>X Chitalpa tashkentensis</i>	Chitalpa	X				X		
<b>Small/Patio Trees (15 feet - 25 feet)</b>								
<i>Aesculus californica</i>	California Buckeye	X			X	X	X	X
<i>Agonis flexuosa</i>	Peppermint Tree	X				X		
<i>Arbutus menziesii</i>	Madrone	X			X			X
<i>Arbutus unedo</i>	Strawberry Tree	X			X	X		
<i>Arctostaphylos glauca</i>	Blue Manzanita	X			X		X	X
<i>Cercidium floridum</i>	Blue Palo Verde	X			X	X		X
<i>Cercis occidentalis</i>	Western Redbud	X			X	X		X
<i>Chamaerops humilis</i>	Mediterranean Fan Palm		X			X		
<i>Chilopsis linearis</i>	Desert Willow	X				X		X
<i>Crataegus douglasii</i>	Western Thorn Apple, Hawthorn		X			X		
<i>Fraxinus dipetala</i>	Flowering Ash		X		X	X		X
<i>Lagerstroemia indica</i> (Mildew resistant varieties)	Crape Myrtle		X			X		
<i>Lavatera assurgentiflora</i>	California Tree Mallow	X			X	X	X	X
<i>Lyonothamnus floribundus</i> ssp. <i>asplenifolius</i>	Catalina/Santa Cruz Ironwood	X			X	X		X
<i>Metrosideros excelsus</i>	New Zealand Christmas Tree		X			X		
<i>Quercus dumosa</i>	Scrub Oak	X			X		X	X
<i>Salix gooddingii</i>	Black Willow			X	X		X	X
<i>Salix lasiolepis</i>	Arroyo Willow			X	X		X	X
<i>Sambucus mexicana</i>	Mexican Elderberry	X			X	X	X	X
<i>Vitex agnus-castus</i>	Vitex	X				X		

	Botanical Name	Common Name	Water Use			Zone		Native	
			Low	Medium	High	Open Space	Cantonment/ Populated	San Diego County	California
Large Shrubs (10 feet - 18 feet)									
	<i>Adenostoma sparsifolium</i>	Red Shank	X			X		X	X
	<i>Ceanothus spp.</i>	California Lilac	X			X	X	X	X
	<i>Cercocarpus betuloides</i>	Western Mountain Mahogany	X			X	X	X	X
	<i>Cercocarpus ledifolius</i>	Curl-Leaf Mountain Mahogany	X			X	X		X
	<i>Comarostaphylos diversifolia</i>	Summer Holly	X			X	X	X	X
	<i>Fremontodendron hybrids</i>	Flannel Bush	X			X	X	X	X
	<i>Heteromeles arbutifolia</i>	Toyon	X			X	X	X	X
	<i>Juniperus spp.</i>	Juniper	X				X		
	<i>Lavatera assurgentiflora</i>	Island Mallow	X			X	X		X
	<i>Malosma (Rhus) laurina</i>	Laurel Sumac	X			X	X	X	X
	<i>Myrica californica</i>	Pacific Wax Myrtle	X			X	X		X
	<i>Phormium tenax</i>	New Zealand Flax		X			X		
	<i>Prunus ilicifolia</i>	Hollyleaf Cherry	X			X	X	X	X
	<i>Rhamnus californica</i>	California Coffeeberry	X			X	X	X	X
	<i>Rhamnus ilicifolia</i>	Hollyleaf Redberry	X			X	X	X	X
	<i>Rhus integrifolia</i>	Lemonade Berry	X			X	X	X	X
	<i>Rhus lancea</i>	African sumac	X				X		
	<i>Rhus laurina</i>	Laurel Sumac	X			X	X	X	X
	<i>Rhus ovata</i>	Sugarbush	X			X	X	X	X

	Botanical Name	Common Name	Water Use			Zone		Native	
			Low	Medium	High	Open Space	Cantonment/ Populated	San Diego County	California
Medium Shrubs (5 feet - 10 feet)									
	<i>Adenostoma fasciculatum</i>	Chamise	X			X	X	X	X
	<i>Amelanchier alnifolia</i>	Western Service Berry		X		X	X		X
	<i>Arctostaphylos spp.</i>	Manzanita	X			X	X	X	X
	<i>Atriplex canescens</i>	Fourwing Saltbush	X			X	X	X	X
	<i>Atriplex lentiformis spp. Breweri</i>	Quail Bush	X			X	X	X	X
	<i>Baccharis pilularis</i>	Coyote Brush	X			X	X	X	X
	<i>Dendromecon harfordii</i>	Island Bush Poppy	X				X		
	<i>Dendromecon rigida</i>	Bush Poppy	X			X	X	X	X
	<i>Fallugia paradoxa</i>	Apache Plume	X			X	X	X	X
	<i>Galvezia speciosa</i>	Island Bush Snapdragon	X			X	X		X
	<i>Garrya elliptica</i>	Coast Silktassel	X			X	X		X
	<i>Grevillea spp.</i>	Grevillea	X				X		
	<i>Isomeris arborea</i>	Bladderpod	X			X		X	X
	<i>Juniperus spp.</i>	Juniper	X				X		
	<i>Leucophyllum spp.</i>	Texas Ranger	X				X		
	<i>Philadelphus lewisii</i>	Mock Orange		X		X			X
	<i>Nandina domestica</i>	Heavenly Bamboo	X				X		
	<i>Rhamnus crocea</i>	Redberry	X			X		X	X
	<i>Salix exigua</i>	Sandbar Willow			X	X	X	X	X
	<i>Salix laevigata</i>	Red Willow			X	X		X	X
	<i>Simmondsia chinensis</i>	Jojoba	X			X		X	X
	<i>Viguiera laciniata</i>	San Diego Sun Flower	X			X		X	X

**Marine Corps Base Camp Pendleton**

	Botanical Name	Common Name	Water Use			Zone		Native	
			Low	Medium	High	Open Space	Cantonment/ Populated	San Diego County	California
<b>Small Shrubs (3 feet - 5 feet)</b>									
	<i>Arctostaphylos spp.</i>	Manzanita	X			X	X	X	X
	<i>Artemisia spp.</i>	Sage species	X			X	X	X	X
	<i>Baccharis 'Pigeon Point'</i>	Prostrate Coyote Brush	X			X	X	X	X
	<i>Bougainvillea Temple Fire</i>	Shrub Bougainvillea	X				X		
	<i>Calliandra eriophylla</i>	Fairy Duster		X		X	X		X
	<i>Carpenteria californica</i>	Bush Anemone	X			X	X		X
	<i>Ceanothus spp.</i>	California Lilac	X			X	X	X	X
	<i>Cistus hybridus</i>	Rockrose	X				X		
	<i>Cornus glabrata</i>	Brown Dogwood			X	X	X		X
	<i>Dietes bicolor</i>	Fortnight Lily		X			X		
	<i>Ephedra californica</i>	Mormon Tea	X			X	X		X
	<i>Ephedra nevadensis</i>	Mormon Tea	X			X	X		X
	<i>Eriogonum umbellatum</i>	Sulphur Buckwheat	X			X	X		X
	<i>Galvezia speciosa</i>	Snapdragon	X				X		
	<i>Helianthemum scoparium</i>	Sun Rose	X			X	X		X
	<i>Lantana montevidensis</i>	Trailing Lantana	X				X		
	<i>Lonicera hispidula</i>	California Honeysuckle	X			X	X		X
	<i>Penstemon spp.</i>	Penstemon species		X		X	X		X
	<i>Phormium spp.</i>	New Zealand Flax		X			X		
	<i>Pteridium aquilinum pubescens</i>	Western Bracken Fern		X		X	X		X
	<i>Ribes speciosum</i>	Fuchsia Flowering Currant	X			X	X		X
	<i>Ribes viburnifolium</i>	Evergreen Currant	X			X	X		X
	<i>Rosa californica</i>	California Wild Rose		X		X	X	X	X
	<i>Rosa minutifolia</i>	Small-Leaved Rose		X		X	X		X
	<i>Rosmarinus officinalis 'Prostratus'</i>	Prostrate Rosemary	X				X		
	<i>Salvia spp.</i>	Sage species	X	X		X	X		X
	<i>Salvia apiana</i>	White Sage		X		X	X	X	X
	<i>Salvia clevelandii</i>	Cleveland Sage	X			X	X	X	X
	<i>Salvia mellifera</i>	Black Sage	X			X	X	X	X
	<i>Salvia spathacea</i>	Hummingbird Sage		X		X	X	X	X
	<i>Symphoricarpos mollis</i>	Creeping Snowberry		X		X		X	X
	<i>Trichostema lanatum</i>	Wooly Blue-Curls	X			X	X	X	X
	<i>Zauschneria californica</i>	California Fuschia	X			X	X	X	X
<b>Succulents</b>									



Botanical Name	Common Name	Water Use			Zone		Native	
		Low	Medium	High	Open Space	Cantonment/ Populated	San Diego County	California
<i>Agave shawii</i>	Shaw's Century Plant	X			X	X	X	X
<i>Agave spp.</i>	Agave	X				X		
<i>Aloe spp.</i>	Aloe	X				X		
<i>Dudleya spp.</i>	Dudleya	X				X	X	X
<i>Echeveria sp.</i>	Hens and Chickens		X			X		X
<i>Ferocactus viridescens</i>	San Diego Barrel Cactus				X	X	X	X
<i>Hesperaloe spp.</i>	Yucca	X			X	X		
<i>Nolina bigelovii</i>	Bigelow's Bear grass	X				X		
<i>Opuntia littoralis</i>	Coast Prickly Pear	X			X	X	X	X
<i>Sedum spp.</i>	Sedum		X			X		
<i>Senecio mandraliscae</i>	Kleinia	X				X		
<i>Yucca baccata</i>	Banana Yucca	X			X	X		X
<i>Yucca shidigera</i>	Mojave Yucca	X			X	X	X	X
<i>Yucca whipplei</i>	Our Lord's Candle	X			X	X	X	X
<b>Large Perennials (5 feet - 10 feet)</b>								
<i>Lilium humboldtii</i>	Humboldt Lily		X		X		X	X
<i>Lilium pardalinum</i>	Leopard Lily		X		X			X
<i>Lupinus albifrons</i>	Silverbush Lupine	X			X	X	X	X
<i>Lupinus arboreus</i>	Evergreen Lupine	X			X	X	X	X
<i>Romneya coulteri</i>	Matilija Poppy	X			X	X	X	X
<i>Romneya trichocalyx</i>	Matilija Poppy	X			X	X	X	X
<b>Medium Perennials (3 feet - 5 feet)</b>								
<i>Delphinium cardinale</i>	Scarlet Larkspur		X		X	X	X	X
<i>Encelia californica</i>	Coast Sunflower	X			X	X	X	X
<i>Encelia farinosa</i>	Brittlebush	X			X	X	X	X
<i>Eriogonum fasciculatum</i>	California Buckwheat	X			X	X	X	X
<i>Iva hayesiana</i>	San Diego Marsh Elder	X			X		X	X
<i>Keckiella antirrhinoides</i>	Yellow Penstemon	X			X	X	X	X
<i>Limonium californicum</i>	Coastal Statice	X			X	X	X	X
<i>Mimulus aurantiacus</i>	Monkeyflower	X			X	X	X	X
<i>Penstemon spp.</i>	Penstemon	X			X	X	X	X
<i>Thalictrum fendleri var. polycarpon</i>	Meadow-Rue		X		X		X	X

**Marine Corps Base Camp Pendleton**

	Botanical Name	Common Name	Water Use			Zone		Native	
			Low	Medium	High	Open Space	Cantonment/ Populated	San Diego County	California
<b>Groundcover Perennials (Less than 3 feet)</b>									
	<i>Achillea millefolium</i>	Common Yarrow	X			X	X	X	X
	<i>Anemopsis californica</i>	Yerba mansa			X	X	X	X	X
	<i>Aquilegia formosa</i>	Western Columbine		X		X	X		X
	<i>Armeria maritima</i>	Common Thrift		X		X	X		X
	<i>Camissonia cheiranthifolia</i>	Beach Evening Primrose		X		X	X	X	X
	<i>Coreopsis maritima</i>	Sea Dahlia	X			X	X	X	X
	<i>Dichondra occidentalis</i>	Western Dichondra			X	X	X	X	X
	<i>Dodecatheon clevelandii</i>	Shooting Star	X			X	X	X	X
	<i>Epilobium canum (californica)</i>	California Fuschia	X			X	X	X	X
	<i>Eriogeron glaucus</i>	Beach Aster		X		X	X		X
	<i>Eriogonum parvifolium</i>	Coastal Buckwheat	X			X	X		X
	<i>Eriophyllum confertiflorum</i>	Golden Yarrow	X			X	X	X	X
	<i>Heuchera spp.</i>	Coral Bells		X		X	X		X
	<i>Iris douglasiana</i>	Douglas Iris		X		X	X	X	X
	<i>Iris longipetula</i>	Coast Iris		X		X	X		X
	<i>Iva hayesiana</i>	Poverty Weed	X			X	X	X	X
	<i>Lessingia filaginifolia</i>	Corethrogyne/California Aster		X		X	X		X
	<i>Lilium humboldtii</i>	Humboldt lily		X				X	
	<i>Penstemon spp</i>	Penstemon	X			X	X	X	X
	<i>Potentilla gracilis</i>	Cinquefoil		X		X	X	X	X
	<i>Salvia sonomensis 'Dara's Choice'</i>	Creeping Sage	X			X	X	X	X
	<i>Satureja douglasii</i>	Yerba Buena	X			X	X		X
	<i>Solanum xantii</i>	Purple Nightshade	X			X		X	X
	<i>Solidago californica</i>	California Goldenrod	X			X	X	X	X
	<i>Thymus praecox (Thymus serphyllum)</i>	Mother-of-thyme		X			X		
	<i>Thymus spp.</i>	Creeping Thyme		X			X		
	<i>Trichostema lanatum</i>	Woolly Bluecurls	X			X	X	X	X
	<i>Verbena lilacina</i>	Lilac Verbena	X				X		
<b>Ornamental Grasses</b>									

	Botanical Name	Common Name	Water Use			Zone		Native	
			Low	Medium	High	Open Space	Cantonment/ Populated	San Diego County	California
	<i>Achnatherum coronatum</i>	Stipa Coronata	X			X	X	X	X
	<i>Agrostis diegoensis</i>	Bentgrass		X		X	X		X
	<i>Bouteloua curtipendula</i>	Side-Oats Grama		X		X	X		X
	<i>Bouteloua gracilis</i>	Blue Gramma		X			X		X
	<i>Calamagrostis acutiflora</i> 'Karl Foerster'	Feather Reed Grass	X				X		
	<i>Elymus glaucus</i>	Blue Wild Rye	X			X	X	X	X
	<i>Festuca californica</i>	California fescue		X		X	X		X
	<i>Festuca ovina glauca</i>	Blue Fescue		X			X		
	<i>Leymus triticoides</i>	Alkali Rye	X			X	X	X	X
	<i>Melica imperfecta</i>	Oniongrass	X			X	X	X	X
	<i>Muhlenbergia emersleyi</i>	Bull Grass	X				X		
	<i>Muhlenbergia rigens</i>	Deergrass	X			X	X	X	X
	<i>Nassella cernua</i>	Nodding Needlegrass	X			X	X	X	X
	<i>Nassella lepida</i>	Foothill Needlegrass	X			X	X	X	X
	<i>Nassella pulchra</i>	Purple Needlegrass	X			X	X	X	X
	<i>Sisyrinchium bellum</i>	Blue-Eyed Grass	X			X	X	X	X
	<i>Sporobolus heterolepis</i>	Prairie Dropseed	X				X		
<b>Annuals</b>									
	<i>Clarkia amoena</i>	Farewell to Spring		X		X	X		X
	<i>Clarkia unguiculata</i>	Elegant Clarkia		X		X	X		X
	<i>Eschscholzia californica</i>	California Poppy	X			X	X	X	X
	<i>Nemophila menziesii</i>	Baby Blue-Eyes		X		X	X	X	X

**Plants Unacceptable For Landscaping Under Any Circumstances**

The following plants are not to be installed on Camp Pendleton:

Acacia species - Acacia

Ailanthus altissima - Tree of Heaven

Anthemis cotula - Mayweed, Stinking Chamomile

Aptenia cordifolia - Red Apple Ice Plant

Arctotheca calendula - Cape Weed

Arundo donax - Giant Reed Grass

Asparagus asparagoides - Florist's-smilax, Bridal creeper, Smilax, African Asparagus Fern

Asparagus densiflorus - Asparagus fern

Asphodelus fistulosus - Onionweed

Asparagus setaceus (A. plumosus) - Common Asparagus Fern

Atriplex semibaccata - Australian Saltbush

Bamboo species - Bamboo (all species and varieties of bamboo)

Carpobrotus edulus - Hottentot Fig

Carpobrotus chilensis - Hottentot Fig, Highway Iceplant, Sea Fig

Callistemon viminalis - Weeping Bottlebrush

Calycanthus occidentalis - Spicebush

Catalpa bignonioides - Common Catalpa, Indian Bean

Chasmanthe floribunda - African Cornflag, Chasmanthe

Centranthus ruber - Red Valerian, Jupiter's Beard

Chrysanthemum coronarium - Garland Chrysanthemum

Cistus creticus - Purple Rock-Rose, Pink Rock-Rose

Cistus ladanifer - Rock-Rose

Cortaderia jubata - Pampas Grass

Cortaderia selloana - Pampas Grass

Cotoneaster species - Cotoneaster

Crassula ovata (C. argentea, C. portulacea) - Jade Plant, Money Tree

Cupaniopsis anacardioides - Carrot Wood

Cynara cardunculus - Artichoke Thistle

Cynodon dactylon - Bermuda Grass

Cyperus alternifolia - Umbrella Plant

Cyperus involucratus (Cyperus alternifolius) - African Umbrella Plant

Cyperus rotundus - Nutgrass

Cytisus scoparius - Broom

Cytisus striatus - Scotch Broom

Delairea odorata (Senecio mikanioides) - German Ivy, Cape Ivy

Dimorphotheca sinuate (Dimorphotheca aurantiaca) - Blue-Eye Cape Marigold, African Daisy, Cape Marigold

Dracaena australis (Cordyline australis) - Giant Dracaena	Limonium sinuatum - Notch-Leaf Marsh-Rosemary, Statice
Drosanthemum hispidum - Rosea Ice Plant	Linaria maroccana - Baby Snapdragon, Toadflax
Echium candicans - Pride of Madeira	Lippia nodiflora - Mat Grass
Echium pininana - Pride of Madeira	Lobelia laxifolia - Loose Flowered Lobelia
Ehrharta erecta - Panic Veldt Grass	Lobularia maritime - Sweet Alyssum
Eragrostis lehmanniana - Lehmann Lovegrass	Lonicera japonica - Japanese Honeysuckle
Ehrharta calycina - Veld Grass	Lythrum salicaria - Purple Lossestrife
Ehrharta longiflora - Long-Flowered Veldt Grass	Malephora crocea (Mesembryanthemum crocea) - Red-flowered Iceplant, Croceum Iceplant
Eucalyptus species - Gum Species	Melaleuca species - Melaleuca (all species and varieties)
Foeniculum vulgare - Fennel, Anise	Melinis repens (Rhynchelytrum repens) - Natal Grass, Natal Ruby, Grass, Red Top
Gazania species - Gazania	Mentha spicata - Spearmint
Genista species - Brooms (all species and varieties of Genista or broom species)	Mesembryanthemum crystallinum - Crystalline Iceplant
Hedera canariensis - Algerian Ivy	Mirabilis jalapa - Four O'Clock, Marvel of Peru
Hedera helix - English Ivy	Myoporum laetum (Myoporum perforatum) - Ngaio tree, Myoporum, Mousehole Tree
Ipomoea purpurea - Common Morning-Glory	Nassella tenuissima - Mexican Feather Grass
Iris pseudacorus - Yellow Flag Iris, Pale Yellow Iris	Nerium oleander - Oleander
Koelreuteria paniculata - Golden Rain Tree	Oenothera speciosa (Oenothera berlandieri) - Pink Evening Primrose, Showy Evening Primrose, Mexican Evening Primrose
Lantana camara - Lantana	
Ligustrum lucidum - Glossy Privet	Olea europaea - Olive Tree
Limonium perezii - Sea Lavender	Opuntia ficus-indica - Indian Fig, Tuna Cactus, Mission Prickly Pear

Osteospermum fruticosum (Dimorphotheca fruticosa) - Shrubby Daisybush	Ricinus communis - Castor Bean
Oxalis pes-caprae - Bermuda Buttercup	Robinia pseudoacacia - Black Locust
Passiflora caerulea - Blue Crown Passion Flower, Blue Passion Flower	Rubus discolor - Himalaya Berry
Parkinsonia aculeate - Mexican Palo Verde, Jerusalem Thorn	Schinus molle - California Pepper Tree
Pelargonium x hortorum - Common Geranium, Garden Geranium	Schinus terebinthifolius - Brazilian Pepper Tree
Pennisetum clandestinum - Kikuyu Grass	Senecio linearifolius - Fireweed Groundsel, Fireweed
Pennisetum setaceum - Fountain Grass	Senecio mikanioides - German Ivy /Cape Ivy
Pennisetum villosum (Sometimes listed as genus Cenchrus) - African Feathertop, Showy Feathertop	Senna didymobotrya (Cassia didymobotrya) - Popcorn Senna
Phalaris aquatic - Garding Grass	Sorghum halepense - Johnson Grass
Phoenix canariensis - Canary Island Date Palm	Spartium junceum - Spanish Broom
Phoenix dactylifera - Date Palm	Tamarix species - Tamarisk
Pinus coulteri - Coulter Pine	Tecomaria capensis - Cape Honeysuckle
Pistacia atlantica - Mount Atlas Pistache	Tropaeolum majus - Garden Nasturtium
Pittosporum undulatum - Victorian Box, Sweet Pittosporum, Australian Daphne, Cheesewood	Ulmus parvifolia- Chinese Elm Tree
Platanus x acerifolia - London Plane Tree	Ulmus pumila - Siberian Elm Tree
Prunus ilicifolia ssp. lyonii, (P. lyonii, P. integrifolia, Cerasus lyonii) - Catalina Cherry	Washingtonia robusta - Mexican Fan Palm
Pteridium aquilinum pubescens - Braken Fern	Verbascum blattaria - Moth Mullein
Pyracantha angustifolia - Pyracantha	Vinca major - Periwinkle and other species and varieties of Vinca
Retama monosperma - Bridal Broom	Zantedeschia aethiopica - Calla Lily, Common Calla

### 3.6 H. Maintenance

The Base must establish and adhere to a strict and specific maintenance schedule to promote high quality appearance and control operating costs, (Figure 3.6-50 and 51). Nine broad areas of maintenance are:

#### 1. General

- a. Encourage the employment of a full-time, trained professional with the authority to make decisions and to implement the guidelines.
- b. Prepare and keep current an existing landscape conditions map. Identify all turf, groundcover and plant materials by name, quantity, and area in square feet.
- c. All projects shall have a 365-calendar day establishment period.

#### 2. Irrigation System Maintenance

- a. Maintain irrigation systems in good operating order at all times. Make repairs immediately. Maintain temporary watering if systems are inoperable for a period of time.
- b. Authorize two persons only to open and adjust automatic controllers.
- c. Maintain up-to-date as-built drawings of all irrigation systems locating all valves, underground lines, quick couplers, controllers, and other equipment.
- d. Unclog all heads and lines as necessary.
- e. Check backflow preventer and controller operation monthly.
- f. Eliminate overspray onto hardscape surfaces and walls.
- g. Eliminate or avoid any object that may block the complete spray of each sprinkler.



Figure 3.6-50: Simple landscape treatment of palm trees, inorganic mulch and turf.



Figure 3.6-51: Well maintained Canary Island Pines in the Chappo (22) Area.

### 3. Pruning

Only prune where necessary for public safety, maintenance of views, and the healthy growth of plants. For major pruning jobs, contract with a California licensed arborist. Maintain the natural form of the plant at all times.

- a. Maintain the natural form of the plant. Do not prune into spheres, squares, or other geometric shapes (Figure 3.6-52). Select plants that have the desired height, width, and ultimate appearance.
- b. Remove dead, diseased, or injured wood.
- c. Eliminate crossed or rubbing branches.
- d. Remove all stubs.
- e. Eliminate lesions and moisture traps.
- f. Sterilize wounds with denatured alcohol or liquid household bleach.
- g. Treat wound with commercial bordeaux powder mixed with linseed oil to the consistency of paint.
- h. When removing limbs, follow the example in Figure 3.6-53. Make clean cuts when branches are broken by the wind.
- i. Do not over-prune. Prune only when healthy growth of plant is at risk or safety hazards exist.

### 4. Fertilization

Proper fertilization is necessary to sustain healthy plant growth. Establish a regular routine that includes:

- a. Obtaining a horticultural soils reports for representative areas from a reputable soils testing laboratory once every two years and whenever new planting is installed.
- b. Following the recommendation of the soils report for type and quantity of fertilizer and establishment fertilization.
- c. Establishing a year-round fertilizing maintenance. Once drought-tolerant plants are established, eliminate fall fertilization.



Figure 3.6-52: Do not prune shrubs into small "balls"- allow to grow into natural form.

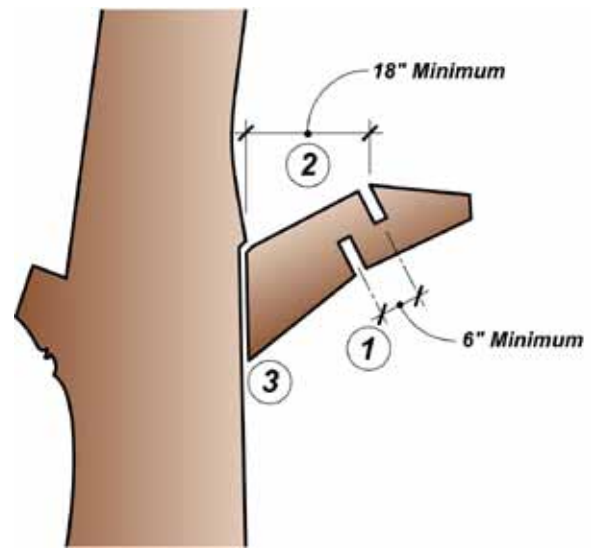


Figure 3.6-53: The proper three step method to prune a limb from a tree.

- d. Fertilizing trees by punching four, two inch diameter holes, 24 inches deep, around drip line of tree. Fill with a fertilizer as directed by the soils report (Figure 3.6-54).
- e. Do not overfertilize. Overfertilization encourages excess growth which in turn increases maintenance costs through increased pruning requirements.



## 5. Disease and Insect Control

With attentive maintenance, the general health of plants is improved and their ability to resist disease is increased. By following these simple guidelines, many disease and insect problems can be kept under control:

- Hose off the underside of foliage of trees and shrubs in May, July, and September with a stream of water strong enough to remove dust and injurious insects (Figure 3.6-55). Eliminate one irrigation cycle when this is done.
- Check plants for infestation on a weekly basis.
- Give immediate attention to pest problems.
- When chemical controls are necessary, apply only to affected area in the smallest quantity possible.
- Do not guess at cures. Obtain advice from a qualified professional and plant books.

## 6. Weed Control

Weed problems can best be controlled by:

- Allowing small leaves and twigs to remain in shrub areas as mulch.
- Hand removing weeds in each area on a monthly schedule. Do not allow weeds to build up, particularly grasses whose spread is virtually uncontrollable once seeds emerge and spread (Figure 3.6-56).
- Using filter fabric between ground and layers of inorganic mulch to control weeds.
- Using chemical weed control only to clear an area of weeds prior to new planting or if a weed problem cannot be eliminated by hand removal. When hand pulling weeds, it is important to remove the entire root system.
- Following the instructions of a qualified professional for specific chemical weed control advice.

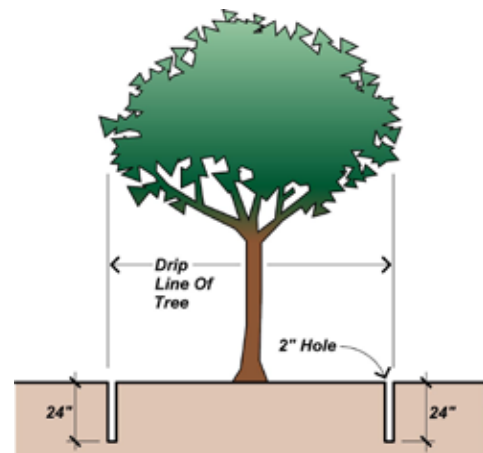


Figure 3.6-54: Note drip line of tree when fertilizing.



Figure 3.6-55: As part of a good maintenance program, spray the underside of all trees and shrubs with water.

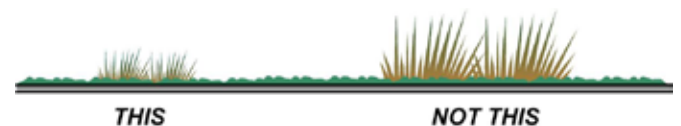


Figure 3.6-56: Remove weeds when they are young and the roots are small.

## 7. Turf

Due to high maintenance and water usage, limit turf to high pedestrian areas only. Where turf is provided, proper maintenance of turf insures healthy growth and minimal water consumption.

- a. Apply a commercial organic top dressing once per year to keep turf areas level, prevent compaction, and promote root growth.
- b. Do not mow turf too short. Maintain one to one and one-half inches height (Figure 3.6-57).
- c. Do not mow turf when it is wet.
- d. Edge all areas at the time they are mowed.
- e. Use mulching mowers to allow clipping to remain on turf area. If regular mower is used, remove clippings and dispose off-site.
- f. Loosen and aerate turf surface once per year to promote water penetration.
- g. Renovate and de-thatch turf areas every two to three years.
- h. Keep mower blade sharp at all times.
- i. Artificial turf is not to be used on Camp Pendleton except in very limited applications. All use must be approved by the Public Works Department on a case by case basis. When artificial turf is used, the chosen product shall be top grade, have an available water source adjacent to reduce heat and wash down turf and come with a manufacturer warranty.

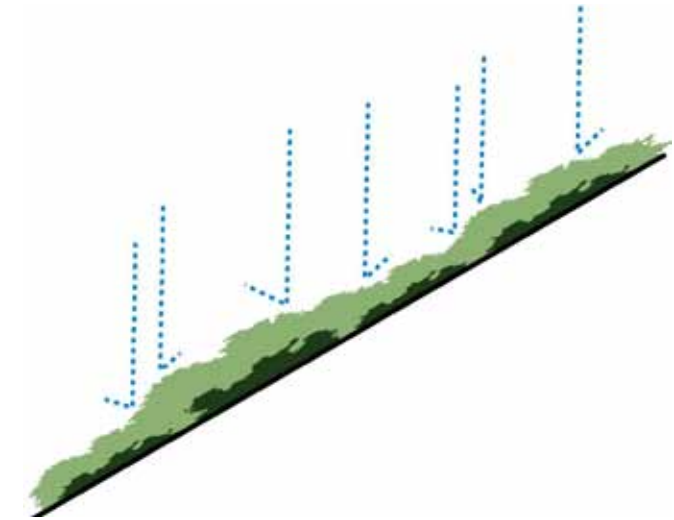


Figure 3.6-58: Plant material helps prevent splash soil erosion.

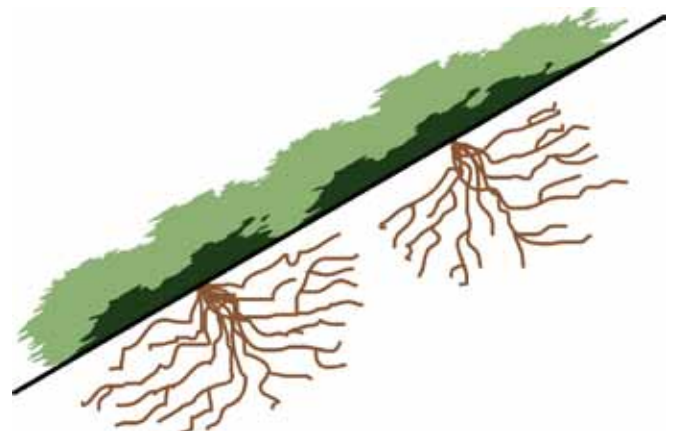


Figure 3.6-59: Plants with fibrous root systems.

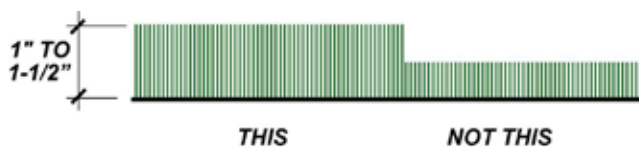


Figure 3.6-57: Be consistent when mowing turf. Maintain one to one and one-half inches in height.

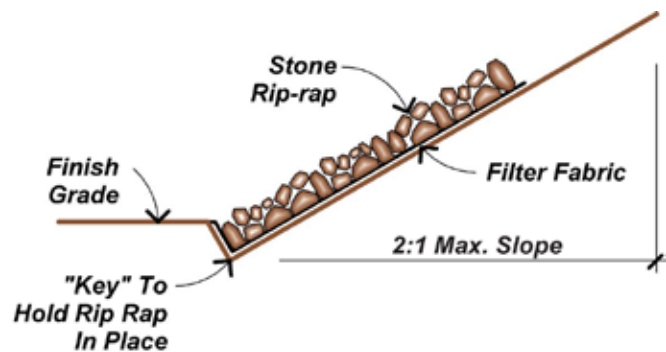


Figure 3.6-60: Typical rip rap detail. Use "key" to help hold stones in place.

## 8. Erosion Control

The effects of erosion can be reduced by the appropriate use of the following methods:

- Splash erosion is best controlled by vegetative ground covers and leafy canopies (Figure 3.6-58).
- To blend in with the surrounding area, use native materials adjacent to open space.
- Sheet erosion is kept in check by grasses and plants with fibrous root systems (Figure 3.6-59).
- A combination of stone rip rap and plant material is acceptable for erosion control. Use filter fabric under stones to control weeds (Figure 3.6-60).
- Plant groundcover for manufactured or graded slopes adjacent to open space with mixes that are compatible in growth requirement with existing plant material.
- Plant or hydroseed interior slopes between building pads with mixes that are compatible in growth requirements with surrounding plants.
- Follow the natural topography when planting on slopes. Plants are to reflect the pattern that plant materials tend to exhibit in the natural environment.
- Control ground burrowing rodents to minimize their effect in creating erosion problems.

## 9. Brush Management

Wildfire may threaten developed areas adjacent to natural open space. To minimize this threat, prepare a Brush Management plan for all new projects adjacent to natural open space areas.

- Select plants from the Base Approved Plant List list in Section 3.6-Landscaping. These plants have been chosen for their fire-retardant characteristics.
- Thin native plants adjacent to urbanized areas to reduce foliage mass as fuel for possible fires.
- Brush management areas are a minimum of 100 feet (Figure 3.6-61) and treated in the following manner:
  - Zone 1- a minimum of 30 feet in width and permanently irrigated. Do not locate trees any closer to a building than a distance equal to the width of the mature tree canopy.
  - Zone 2- is the middle zone of 40 feet in width. This area is composed of “thinned out” native plants.
  - Zone 3- is the natural zone of 30 feet in width adjacent to the existing native plant areas. Prune and thin out this area every three years.

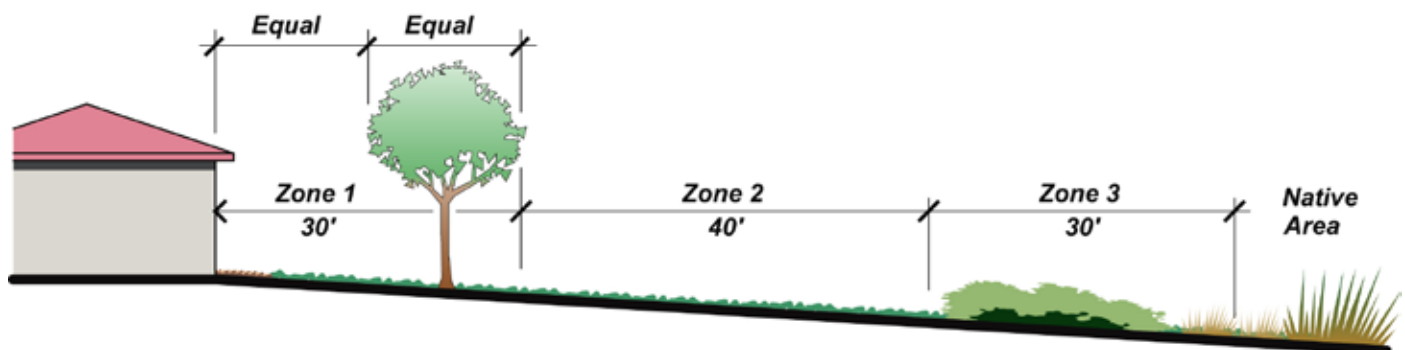


Figure 3.6-61: Typical zone for brush management areas.

### 3.7 Street Design

Vehicular traffic is the primary mode of access and circulation for Camp Pendleton. The street system is also a vantage point from which the Base is first seen and made comprehensible. While circulation hierarchy is clear, there are many safety and appearance issues that need to be corrected Basewide (See Figure 3.7-1 Basewide Road Classification Map).

#### 3.7 A. Observations

The following are deficiencies observed in the Basewide street design:

1. Road edges are unclear, especially adjacent to parking areas (Figure 3.7-2).
2. Street design standards are dissimilar. No specific right-of-way requirements are implemented.
3. Pedestrian and bicycle provisions are inadequate.
4. Safety problems have been caused by improper intersection designs (Figure 3.7-3).
5. Sight line conditions cause conflicts between vehicles, pedestrians and cyclists.
6. Planting of street trees and landscaping is inconsistent.
7. Street identification signs are inconsistent or nonexistent.

#### 3.7 B. Objectives

The overall street design goal is to improve the existing system for Basewide traffic safety, appearance and to establish standards for future street improvements to new development areas. These objectives include:

1. Uniform design standards for all street sections.
2. The use of standard details on all streets for:
  - Curbs and gutters.
  - Channelization devices.
  - Parkway widths.
  - Pedestrian and bicycle lanes.

3. Eliminate traffic hazards.
4. Minimize curb cuts and intersection conflicts.
5. Provide safe pedestrian crossings.
6. Provide safe and clear pedestrian paths and bicycle lanes.



Figure 3.7-2: Off street parking in Las Pulgas (43) Area at Building 43351.



Figure 3.7-3: Offset intersection at the corner of 13th Street & D Street.

### 3.7 C. Street Standards, Guidelines, and Design

Use the following street standards and guidelines for improving existing streets and for future projects at Camp Pendleton (See Figure 3.7-1 Basewide Road Classification Map).

#### 1. Four - Six Lane Minor Arterial

This street classification includes Vandegrift Boulevard from the Oceanside Gate and the San Luis Ray Gate to Headquarters.

- a. Provide two or three traffic lanes in each direction within a 110-86 foot right-of-way (R.O.W.) (Figure 3.7- 4). Refer to 2009 Traffic Engineering Study for the location and number of lanes (two or three) required.
- b. Control access to minimize the number of turning conflicts. Access points or median breaks on minor arterials will have a minimum distance of 1,300 feet between them (Figure 3.7-5).
- c. Provide channelization for left and right turn lanes at intersections with major collectors.
- d. Prohibit direct access to off-street parking.
- e. Provide a Class II bike lane in both directions where possible. See Section 3.7-C7, Bicycle Facilities.
- f. Provide pedestrian sidewalks contiguous with the curb in cantonment areas. See Section 3.9-Pedestrian Circulation (Figure 3.7-6).
- g. Provide pedestrian paths or trails between cantonment areas. See Section 3.9-Pedestrian Circulation (Figure 3.7-7).
- h. Provide a six foot wide parkway with street trees (Figure 3.7-7). See Section 3.6-Landscaping for street tree type.
- i. Where existing minor arterial road beds exceed the minimum width requirements, provide landscape medians to separate traffic and to control left turn movements.

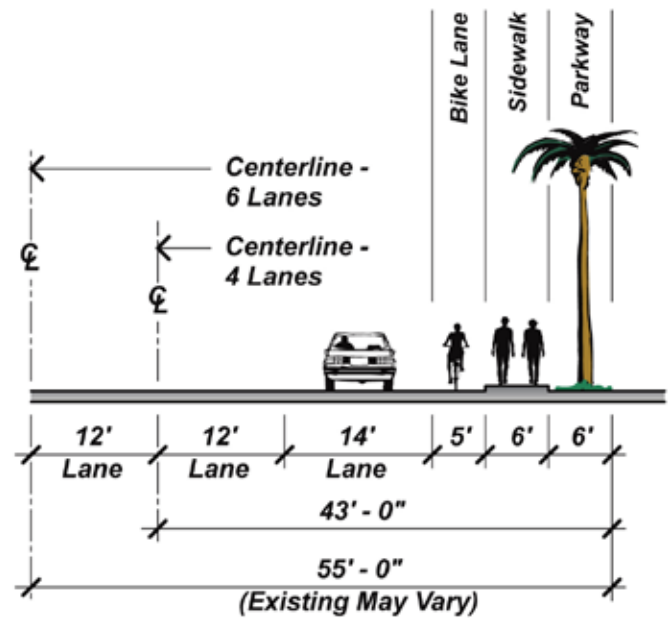


Figure 3.7-4: Typical cross section for Vandegrift Boulevard.

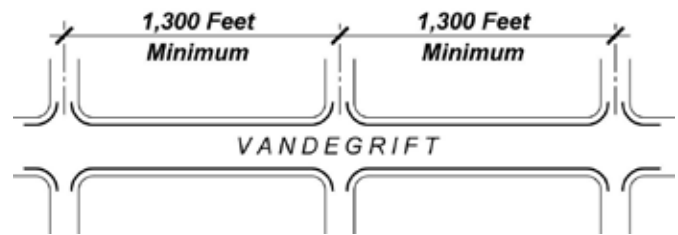
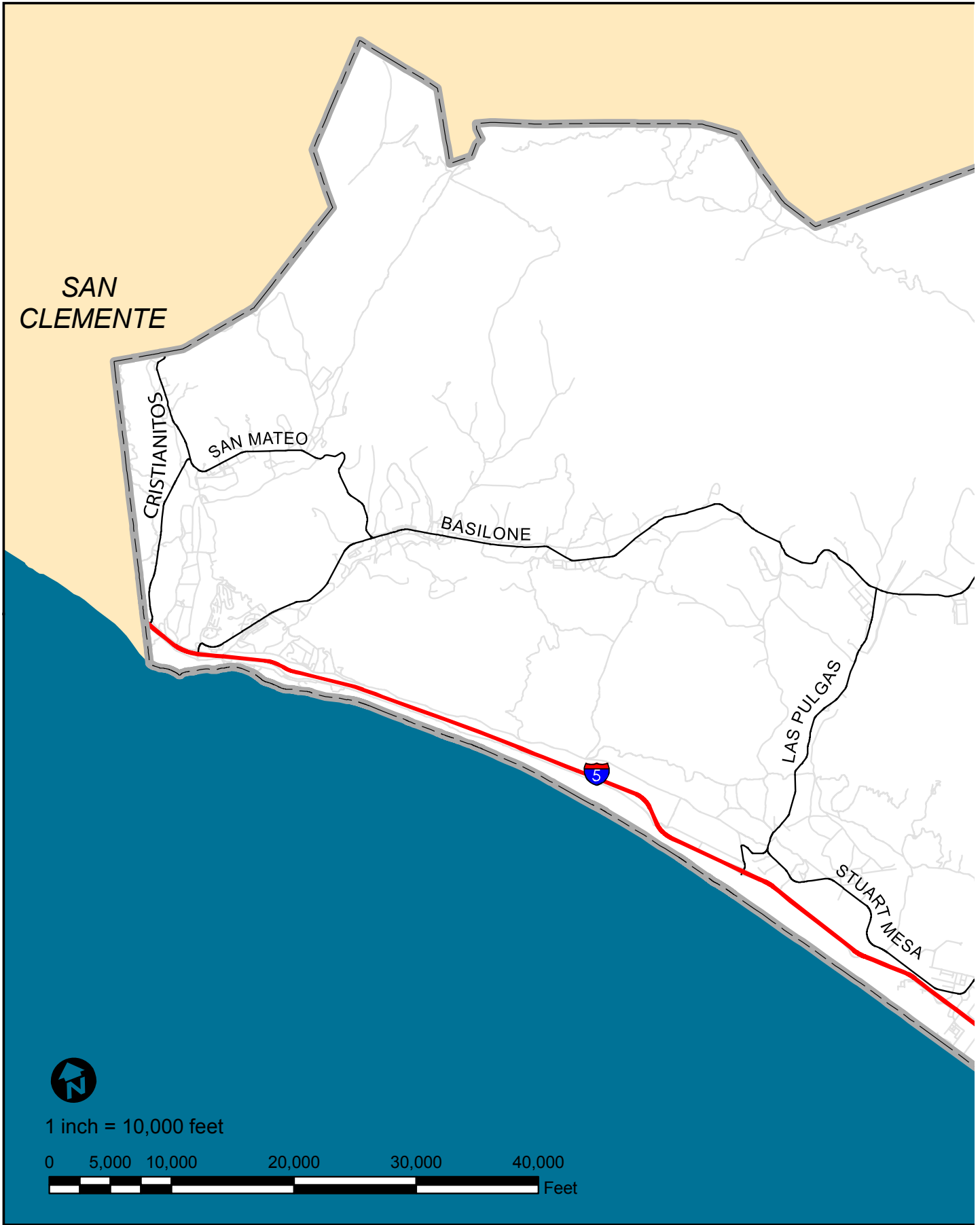
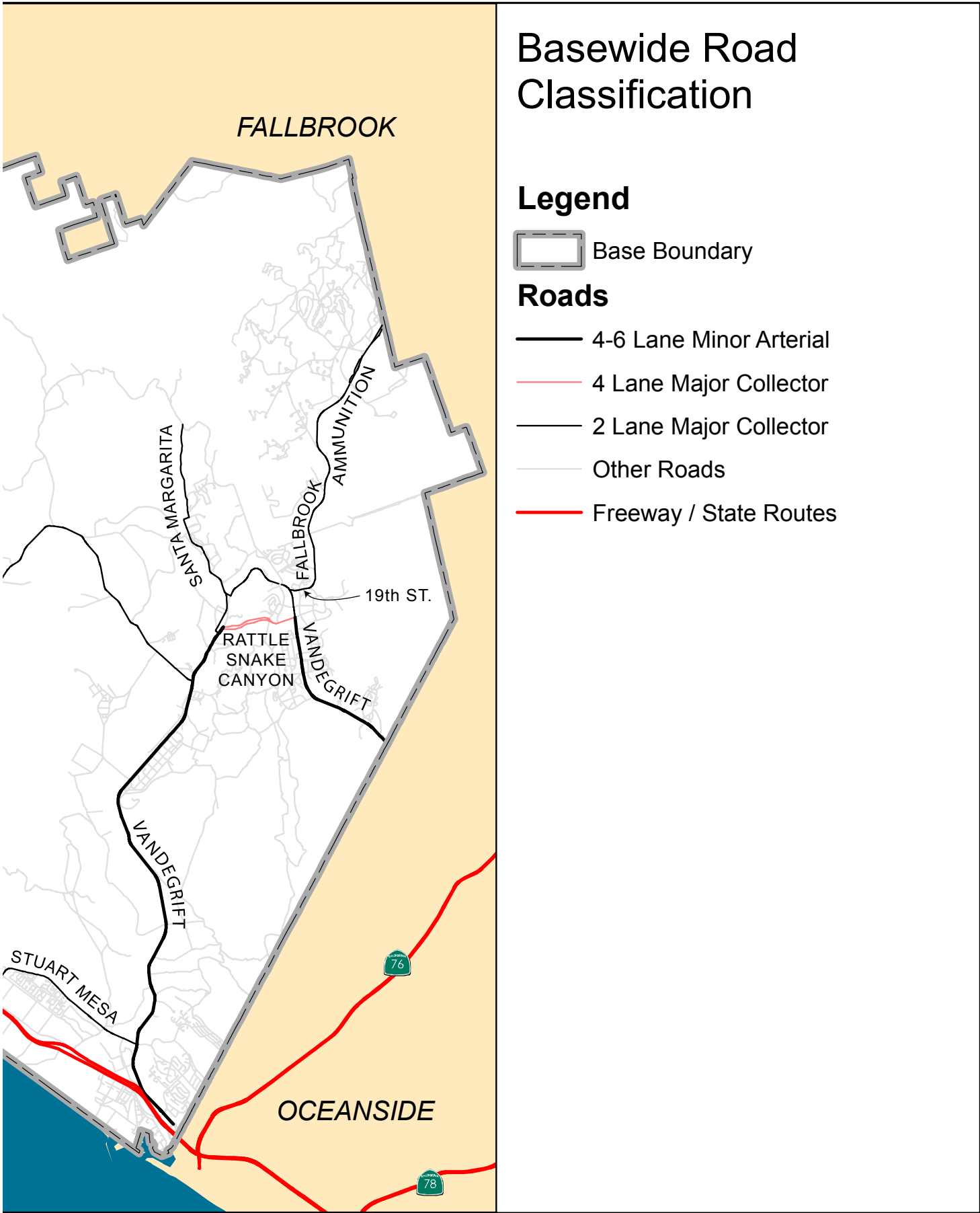


Figure 3.7- 5: Spacing of intersections on Vandegrift Boulevard.




Figure 3.7-6: Pedestrian sidewalk, contiguous with curb, in Las Flores (41) Area.





# Basewide Road Classification

## Legend

 Base Boundary

## Roads

-  4-6 Lane Minor Arterial
-  4 Lane Major Collector
-  2 Lane Major Collector
-  Other Roads
-  Freeway / State Routes

Figure 3.7-1: Basewide Road Classification Map.

## 2. Four Lane Major Collector

Rattlesnake Canyon Road is a four lane major collector that connects Vandegrift Boulevard to the HQ area. The median separates traffic lanes and varies in size from 50 feet to 250 feet.

- Provide two moving lanes in each direction within a varied right-of-way due to the existing median. One way travel way is a minimum of 45 feet (Figure 3.7-8).
- Maintain the existing median that separates the travel lanes.
- Prohibit direct access to off-street parking and minimize the number of ingress/egress turning conflicts.
- Access points on four lane major collectors will have a minimum distance of 500 feet between them.
- Provide a pedestrian path of four feet to eight feet separated from the street by a minimum of a six foot parkway in each direction. See Section 3.9-Pedestrian Circulation.
- Provide Class II bicycle lane in each direction, where possible. See Section 3.7-Bicycle Facilities.
- Maintain an area of 25 feet from the intersection free from objects (including landscaping) over 30 inches in height.
- Radii at intersections should be reconfigured per details in Chapter 8-Basewide Standard Details.

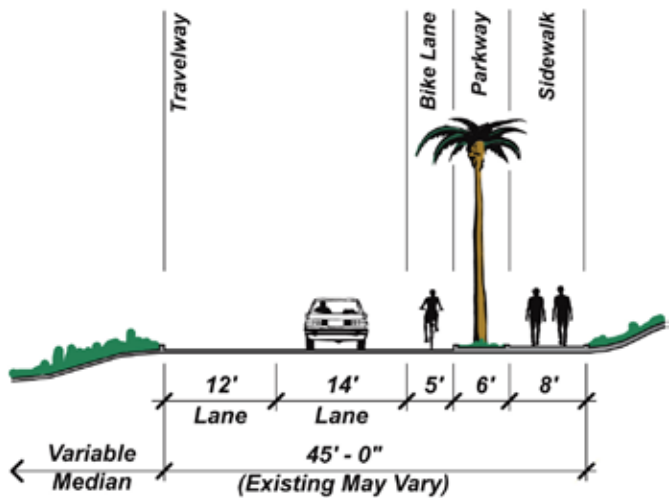


Figure 3.7-8: Typical cross section for Rattlesnake Canyon Road.

## 3. Two Lane Major Collector (through cantonment areas)

This street classification includes Basilone Road, Las Pulgas Road, San Mateo Road, and Cristianitos Road.

- Provide one traffic lane in each direction (Figure 3.7-9) with a 62 foot right-of-way.
- Control access to minimize the number of turning conflicts. Access points on primary streets will have a minimum distance of 200 feet between them.
- Prohibit on-street parking. Prohibit direct access to off-street parking areas.
- Provide pedestrian sidewalks contiguous with curb cantonment areas. See Section 3.9-Pedestrian Circulation.

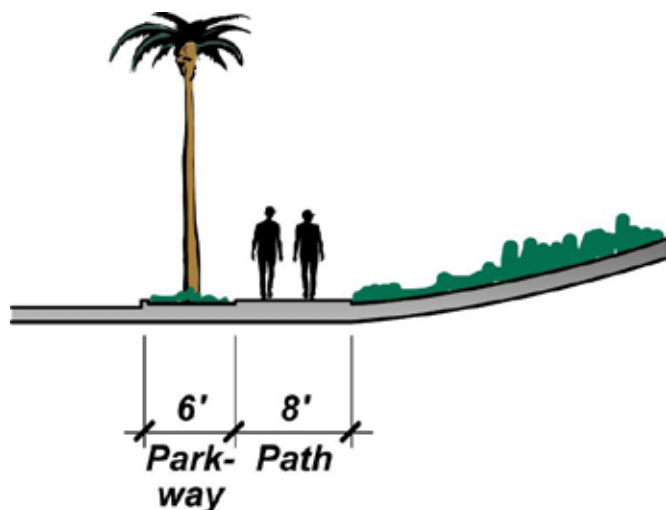


Figure 3.7-7: Typical cross section for pedestrian path.

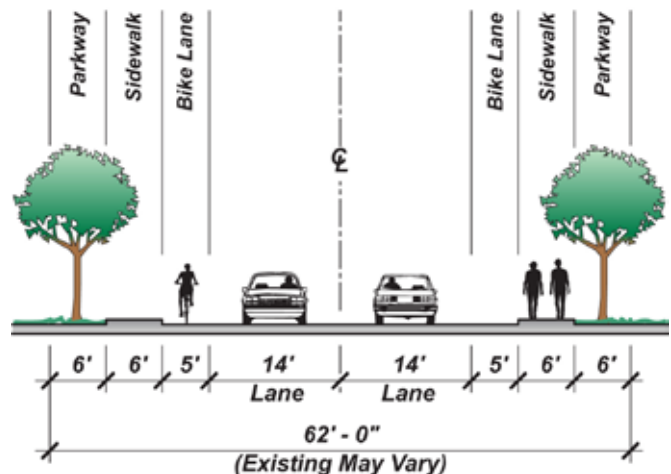


Figure 3.7-9: Typical cross section for a two lane major collector.



- e. Provide a six foot wide parkway with street trees (Figure 3.7-9). See Section 3.6- Landscaping for street tree type.
- f. At the entry of outlying cantonment areas, provide enhanced paving across the roadway to establish a "safety zone." This will help identify the cantonment entrance and also reduce traffic speed through the camp (Figure 3.7-10). See Section 8.4 for paving material details.
- g. Provide Class II bicycle lane in each direction, where possible. See Section 3.7-Bicycle Facilities.
- h. To allow for visual access, maintain an area of 25 feet from the intersection free from objects (including landscaping) over 30 inches in height (Figure 3.7-11).
- i. Radii at intersections are per details in Section 8.4 of Chapter 8 Basewide Standard Details.

**4. Two Lane Major Collector (between cantonment areas)**

This street classification includes Basilone Road, Pulgas Road, San Mateo Road, Cristianitos Road, Stuart Mesa Road/Ash Road, and Fallbrook Road.

- a. Provide one traffic lane in each direction within a 62 foot right-of-way (Figure 3.7-12).
- b. Provide direct access to off-street parking, but minimize the number of ingress/egress turning conflicts. Access points on major collector streets will have a minimum distance of 500 feet between them. The minimum dimension for on-street parallel parking shall be eight feet wide and 22 feet long minimum.
- c. Prohibit on-street parking.
- d. Provide a pedestrian path of four feet to eight feet separated from the street with a minimum six foot parkway. See Section 3.9-Pedestrian Circulation.
- e. Provide Class II bicycle lane in each direction. See Section 3.7.
- f. Maintain an area of 25 feet from the intersection free from objects (including landscaping) over 30 inches in height (Figure 3.7-14).
- g. Radii at intersections are per details in Section 8.4 of Chapter 8 Basewide Standard Details.

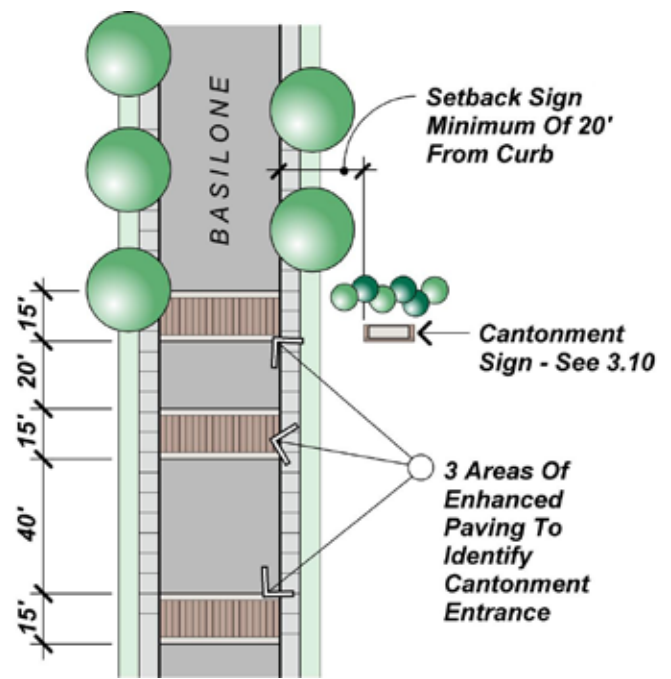


Figure 3.7-10: Plan view of typical safety zone. For cantonment sign detail see Figure 3.10-10.

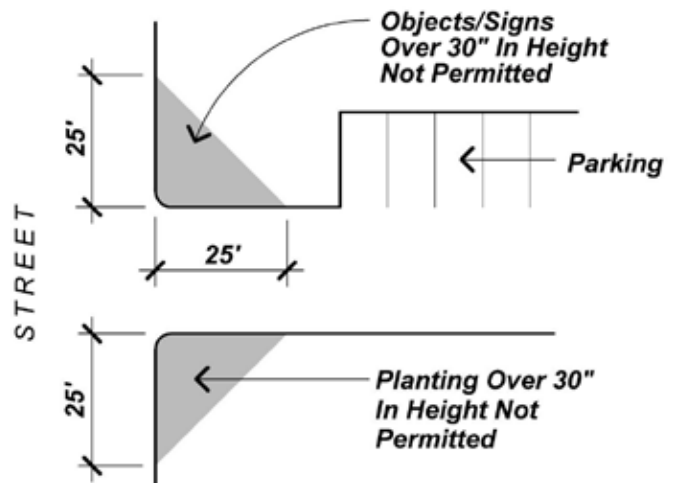


Figure 3.7-11: Typical setback for visual access.

### 5. Local Streets (within cantonment areas)

There are numerous residential and local streets within Camp Pendleton. These streets are not classified into a higher system and their primary purpose is to provide direct access to the major collectors and arterial. The standards for all residential and local streets shall:

- Provide for one traffic lane in each direction within a 52 foot right-of-way (Figure 3.7-13).
- Allow on-street parallel parking on one side of residential streets.
- Provide direct access to off-street parking, but minimize the number of ingress/egress turning conflicts.
- Have access points on local streets a minimum distance of 50 feet apart.
- Provide a five foot sidewalk contiguous to the curb on both sides of the streets.
- Provide street trees within three feet of the sidewalk in a five feet parkway.
- See Section 3.6-Landscaping for street tree types.
- Provide a Class III bicycle route in each direction, where possible.
- Maintain an area of 25 feet from the intersection free from objects (including landscaping) over 30 inches in height (Figure 3.7-14).
- Radius at intersections are per details in Section 8.4 of Chapter 8-Basewide Standard Details.

### 6. Commercial Service Drives

- Provide access to service drives from minor arterials or major collectors only. Service drives are not permitted access from residential streets.
- Provide a maximum pavement width of twenty-six feet (Figure 3.7-15).

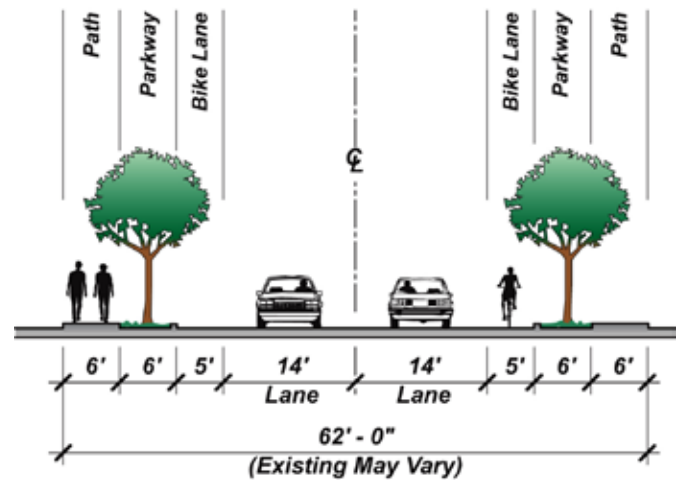


Figure 3.7-12: Typical cross section of two lane major collector between cantonments.

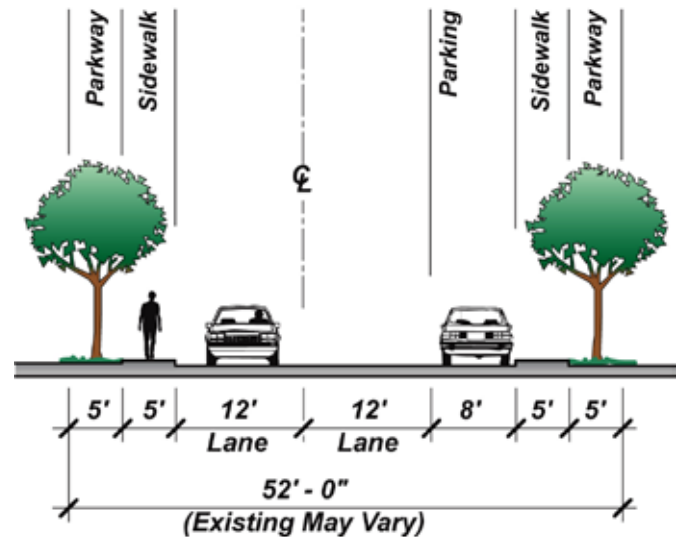


Figure 3.7-13: Typical cross section of local collector.

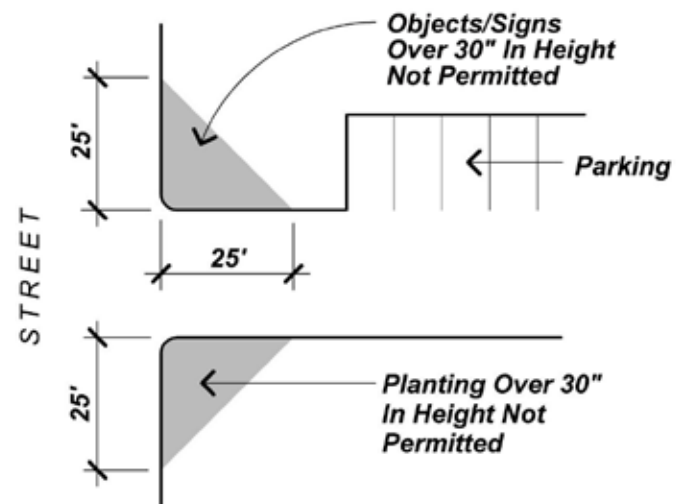


Figure 3.7-14: Typical setback for visual access.

### 7. Bicycle Facilities

- a. Provide a north/south Class I bicycle path from the Oceanside Gate to the Pulgas Gate parallel to Stuart Mesa Road, except between Edson Range to Las Flores where the road is too narrow.
- b. Establish system of Class II or III facilities to frequent destinations along primary and secondary roads.
- c. Connect a Class I off-street bicycle path from housing areas to recreation areas and schools.
- d. Bicycle facility classifications are as follows:

Class I Bikeways (bike paths) are facilities with exclusive right-of-way, with cross flows by motorists minimized.

- The minimum paved width for a two-way bike path is eight feet with a two foot minimum clear zone on each side, for a total of 12 feet (Figure 3.7-16).
- Provide asphalt or concrete surface material for Class I bike paths.

Class II Bikeways (bike lanes) are for preferential use by bicycles, one-way established within the paved area of a roadway and clearly marked with a white stripe.

- The minimum width for a bike lane is five feet (Figure 3.7-17).
- White stripe denoting bike lane is a minimum width of eight inches.

Class III Bikeways (bike routes) are intended to provide continuity to the bikeway system. Class III facilities are shared facilities with motor vehicles on the street and are established by placing bike route signs along the roadways.

- Set back bike route signs two feet from edge of sidewalk.

### 8. Pavement, Curbs and Gutters

- a. Pave all streets with asphalt concrete.
- b. Portland cement concrete pavement is required on-streets with grades greater than twelve percent.
- c. Provide concrete curbs and gutters on all streets in developed areas.
- d. No asphalt curbs are permitted. Use only concrete curbs when replacing asphalt curbs.

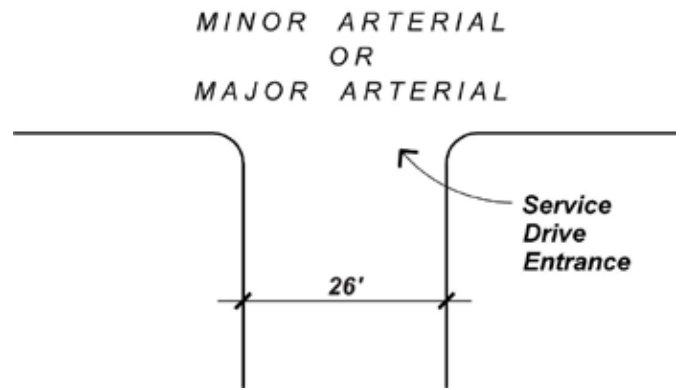


Figure 3.7-15: Typical service drive access.

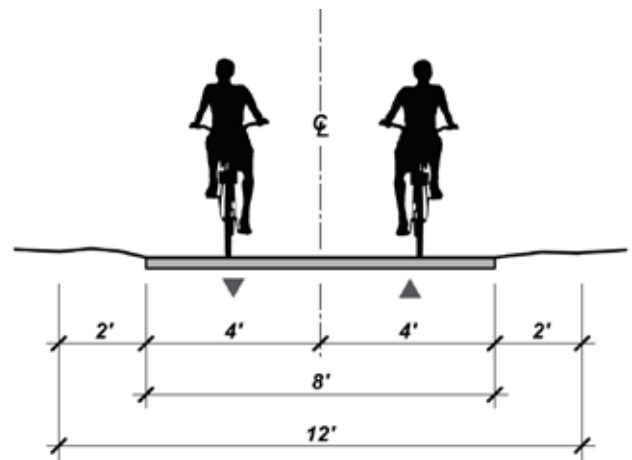


Figure 3.7-16: Cross section of Class I bike lane.

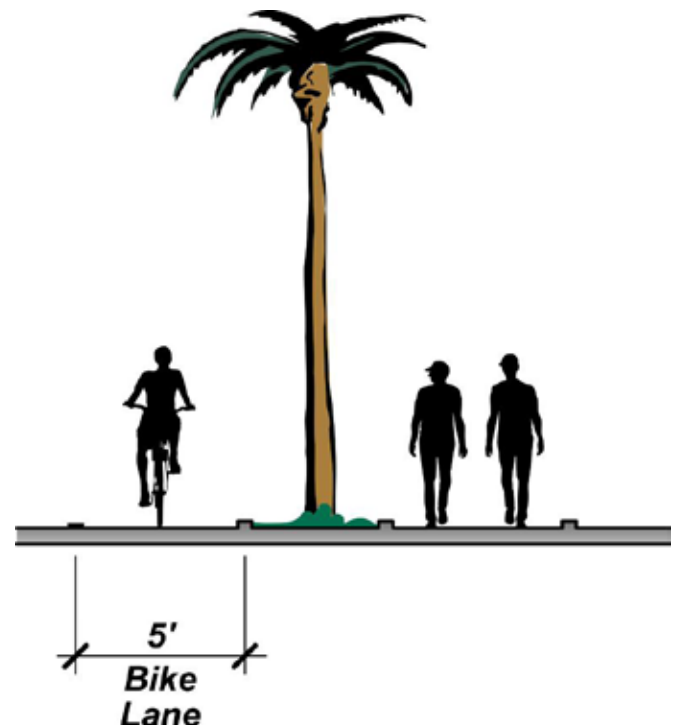


Figure 3.7-17: Typical width for Class II bikeway in street right-of-way.

- e. Match the existing street paving material when repairing or resurfacing streets.
- f. Provide all pavement, curbs, and gutters to conform per details in Section-8.4 of Chapter 8-Basewide Standards Details.

### 9. Physical Obstructions

- a. Set back signs, hydrants, poles, headwalls, fences, and similar obstructions from the face-of-curb a minimum of two feet (Figure 3.7-18).
- b. Where sidewalks are contiguous with curb, set back all "obstructions" from edge of sidewalk a minimum of two feet (Figure 3.7-19).
- c. Where there is no curb, a minimum setback of ten feet is required from right-of-way.

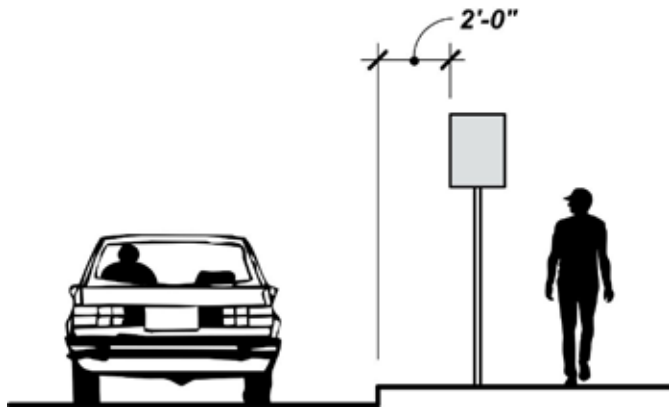


Figure 3.7-18: Setback of physical obstruction from curb.

### 10. Streetscape Appearance

In general, the design of streetscape elements are to be coordinated to minimize clutter and provide an attractive street scene.

- a. Use planting to reinforce street hierarchy and establish streetscape continuity. See Section 3.6-Landscaping.
- b. Use consistent sidewalk design to reinforce streetscape continuity. See Section 3.9-Pedestrian Circulation.
- c. Coordinate the design of signs placed in street right-of-way to optimize communication. Minimize clutter by reducing the number of signs. See Section 3.10-Signage.
- d. Be consistent in the use of street identification signs at all intersections. See Section 3.10- Signage.
- e. Use lighting to define street hierarchy and provide continuity. See Section 3.11-Lighting.
- f. Coordinate and cluster site furniture to avoid clutter. See Section 3.12-Site Furniture.
- g. Screen undesirable views that can be seen from street. See Section 3.13-Screens/Walls/Fences.
- h. Install utilities underground within the street corridor or screen from view. See Sections 3.13-Screens/Walls/Fences and 3.14-Utilities.

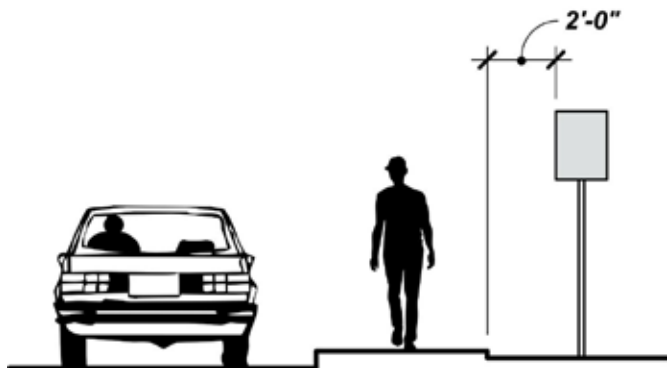


Figure 3.7-19: Setback of physical obstruction from sidewalk.

### 3.8 Parking

Because of its remote location and large number of personnel, Camp Pendleton is an automobile-oriented installation. Most personnel and dependents drive from their homes, either on or off Base, to the many dispersed cantonment areas. Also, in many cantonment areas, the re-use of buildings to a more intensive activity has required an increase in parking demand. This is noted particularly in the Headquarters area.

As a result of this Basewide demand, parking areas have become a dominant and important site feature at the Base. In the past, some parking lots have been located wherever possible with little regard to the function or appearance of the lot. This suggests that parking requirements become a more integral part of future development plans and that existing lots be improved to higher standards.

#### 3.8 A. Observation

Below are general observations of the existing parking conditions that occur Basewide:

1. Impromptu or overflow parking lots occur in areas not intended for parking (Figure 3.8-1).
2. Overflow parking lots contribute to erosion, soil contamination, vehicle wear, and do not conform to ADA requirements.
3. Parking lots are not clearly separated from streets (Figure 3.8-2).
4. Off-street parking lots vary in layout and are inefficient in their use of space.
5. Many of the commercial parking lots are not oriented toward the building entry.
6. There is a lack of landscaping, particularly trees, at the perimeter of parking areas. Curbs and gutters are not included in many parking areas. Asphalt curbs are failing and causing erosion problems (Figure 3.8-3).
7. On-street parking is permitted on high speed streets, creating hazardous conditions.
8. There is limited (Figure 3.8-4) or sometimes no separation of parking from buildings, creating a conflict between pedestrians and autos, which also conflicts with AT/FP requirements.



Figure 3.8-1: Overflow parking at Building 1331 in the HQ Area.



Figure 3.8-2: No clear division between parking and adjacent street.



Figure 3.8-3: Lack of landscape and curbs at perimeter of parking lot in Las Pulgas (43) Area.

### 3.8 B. Objectives

The primary goals for parking facilities are to establish off-street parking development standards that improve parking efficiency, safety, and appearance. The following are the objectives for Basewide parking:

1. Standardize layouts to develop orderly parking arrangements and minimize the amount of pavement. This improves parking capacities.
2. Eliminate on-street parking wherever possible and replace with more efficient, safe and attractive off-street facilities.
3. Do not allow temporary parking lots except for interim relocatable facilities in service less than one year.
4. Minimize the number of parking lot entrances and locate all entries a safe distance from intersections.
5. Provide lighting in parking areas that receive night use.
6. Reduce the visual impact of parking facilities by screening from streets and adjacent buildings through the use of landscape berms/decorative screen walls that are a minimum of 36 inches tall. Landscape berms should appear natural and part of the surrounding topography.
7. Provide landscape standards, especially for trees, at the perimeter of parking lots.
8. Provide an accurate parking demand survey based on the proposed or existing use.
9. Comply with all ADA and Title 24 requirements for parking and barrier-free access.

### 3.8 C. Design Process

Use the following process when improving existing streets and for future projects at Camp Pendleton. To implement a program for upgrading existing parking facilities and developing new ones, a parking study consistent with the current guidelines is required. It shall consist of the following elements and be updated every three years:



Figure 3.8-4: Limited separation between parking and buildings in Chappo (22) Area.

#### 1. Existing Conditions Map

Prepare a detailed map of existing designated and non-designated parking facilities depicting exact locations, dimensions, layout, and number of stalls, planting islands, lighting and utility locations, etc. Identify paving materials, curbs, wheel stops, signs, plants, and condition of repair. Note any safety problems.

#### 2. Parking Survey and Analysis

Conduct a survey to determine parking demand by each building or unit. Evaluate the adequacy of the existing facilities to meet demands. Evaluate the convenience of each parking facility location to the activity it serves. Note visual impacts. Assess conformance of each parking facility with the design guidelines and record deficiencies.

### 3.8 D. Parking Standards and Design Guidelines

The following are the parking standards and guidelines to be used for improving existing parking lots and for future projects at Camp Pendleton.

#### 1. On-street parking

- Limit parallel on-street parking to guest parking on residential streets.
- Parking is permitted on one side of residential streets where streets are a minimum of 32 feet wide (Figure 3.8-5).
- Provide parallel parking stalls eight feet in width and 22 feet in length (Figure 3.8-5).
- Perpendicular or angled on-street parking is not allowed.
- Off-street parking is the predominant method of parking.

#### 2. Off-street parking

- Group parking areas so that the layout serves several activities with a minimum amount of paving and a minimum number of exits and entrances as required for peak operation (Figure 3.8-6).
- Locate access points to parking areas from street intersections a minimum of:
  - Minor arterial: not permitted.
  - Major collector: 500 feet.
  - Residential or local collector: 100 feet.
- Locate parking at the side or rear of parcels so that buildings may be oriented to the street to assist in screening the parking from view (Figure 3.8-6).
- Locate parking areas convenient to building entrances, consistent with AT/FP criteria.
- Locate the majority of residential guest parking off-street at 90 degrees to the residential street.

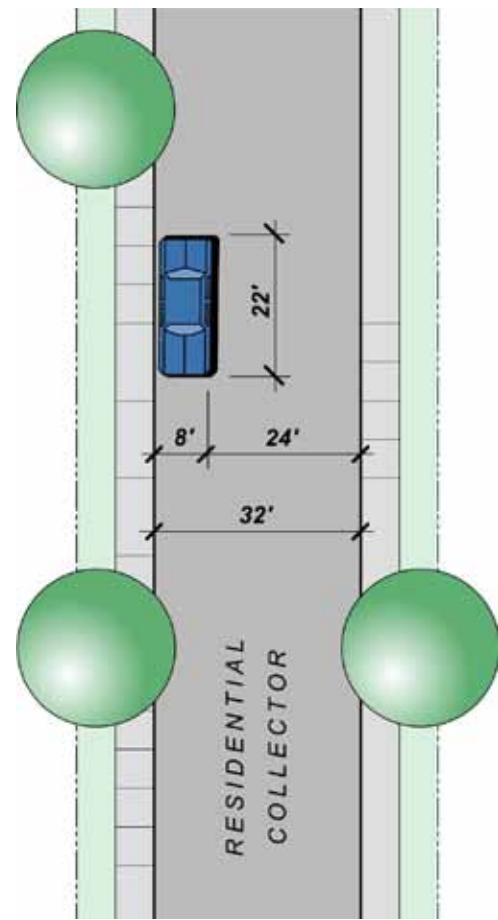


Figure 3.8-5: Typical on-street parking layout for residential street.

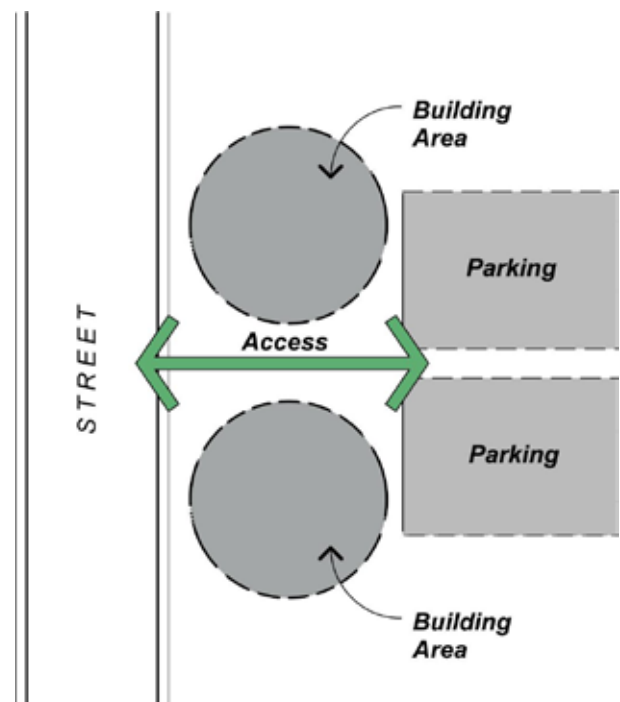


Figure 3.8-6: Diagram of building/parking relationship.

### 3. Parking design and standards

- a. Access parking areas from an internal local street rather than a primary street.
- b. Allow for proper sight distance at intersections (Figure 3.8-7).
- c. Setback requirements for parking adjacent to streets are as follows:
  - Minor arterial-30 feet.
  - Major collector-30 feet.
  - Residential or local street-20 feet.

The setback area should be landscaped and shall include any required parking lot screening. For additional setback requirements see Section 3.4 -Site Planning.

- d. Arrange stalls and aisles to facilitate direct pedestrian access to building entrances. Prohibit parking in front of doorways (Figure 3.8-8).
- e. Avoid parking directly adjacent to building walls. Provide a minimum setback according to AT/FP requirements and plan for sidewalks and buffer planting.
- f. For walkways at the head of parking stalls, provide wheel stops to prevent bumper overhang onto walkway.
- g. "Dead-end" parking is not permitted.
- h. Use 90-degree off-street parking lot layouts for optimum efficiency and ease of circulation. Stall size is 9 feet x 20 feet with 24 feet drive aisle (Figure 3.8-9). Compact car spaces are not permitted.
- i. Use 60-degree parking with two-way aisles where fast turnover (commercial uses) rate is expected. Stall size is 9 feet x 21 feet with 22 feet drive aisle (Figure 3.8 -10). Compact car spaces are not permitted.

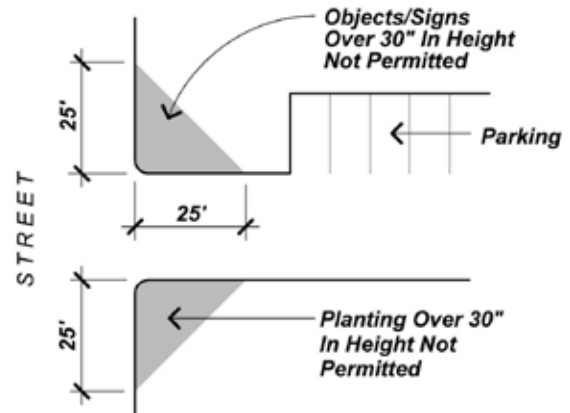


Figure 3.8-7: Typical setback for visual access.

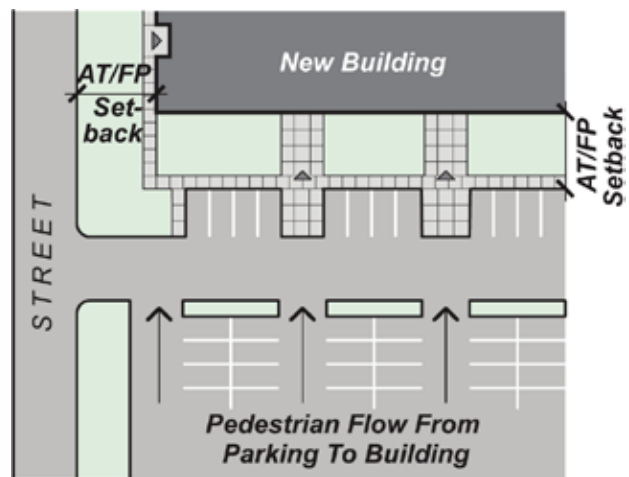


Figure 3.8-8: Orient parking aisles to building entrance.

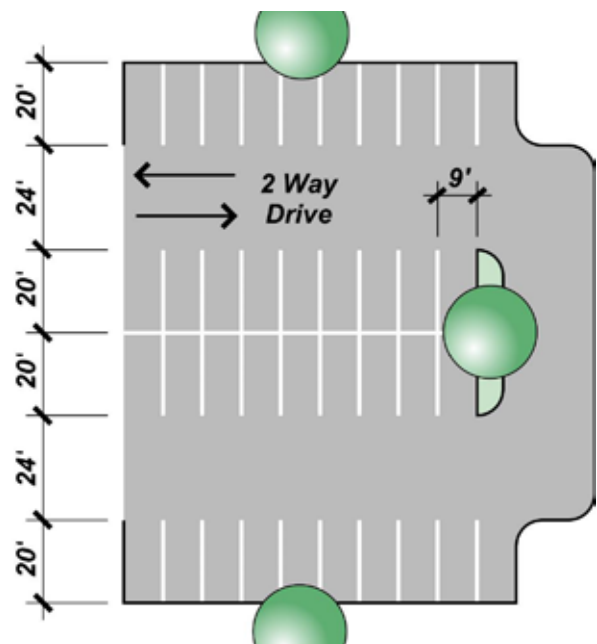


Figure 3.8-9: Typical 90 degree parking layout.



Parking Lot Standards-ADA	
Total Spaces in Parking Lot	Required # of ADA accessible spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	4
401 to 500	5
501 to 1,000	2% of total
1,001 and over	20 plus 1 for each 100 over 10,000

j. All parking facilities are to comply with all ADA standards. Provide accessible spaces and signage in conformance with the table above. In addition, accessible stalls must conform to the following:

- Nine feet wide by twenty feet long for a single space with a 60 inch aisle on the passenger side (Figure 3.8-11).
- Accessible van spaces require a wider aisle. Aisles adjacent to van accessible spaces must be eight feet minimum in width. See detail in Section 8.5.
- One out of every eight accessible stalls minimum must be designated as "Van Accessible."

Provide standard accessible signs as follows:

- Stall sign at least 70 square inches in size. Position each sign so that the bottom of the edge is seven feet above the parking surface (Figure 3.8-12).
- Provide ground painted stall markings in addition to the required signs. Stalls must be painted solid blue with a white international symbol of accessibility outlined in blue and have a three foot square international symbol of accessibility painted in a contrasting color. The symbol must be positioned toward the rear of the stall for visibility when the stall is occupied.

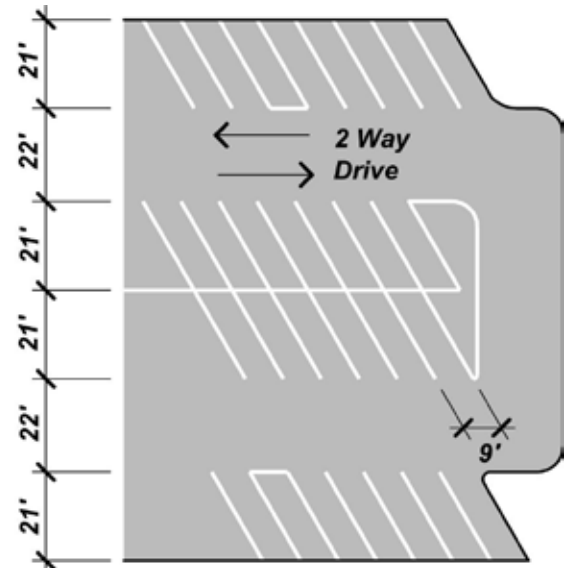


Figure 3.8-10: Typical 60 degree parking layout.

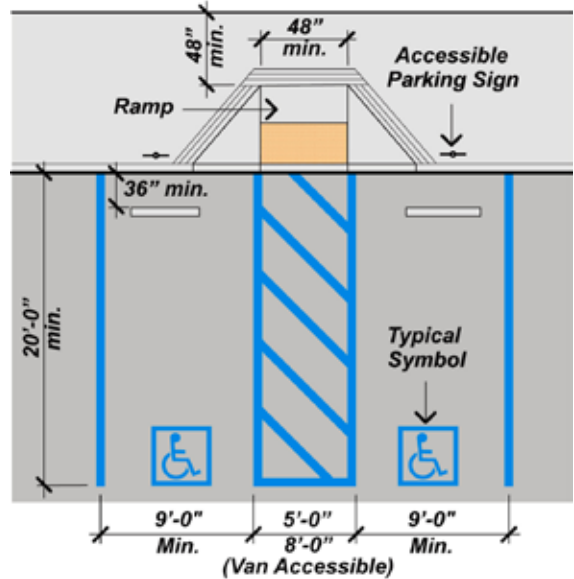


Figure 3.8-11: Handicap parking stall layout.

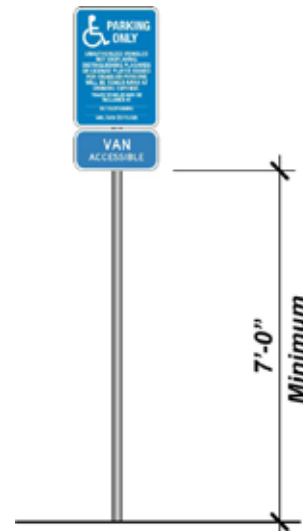


Figure 3.8-12: Standard accessible parking sign.

- k. Provide designated motorcycle parking spaces four feet wide by eight feet long in areas of demonstrated need.

#### 4. Landscaping Requirements

- a. Install planting around parking areas to mitigate the visual impacts of parking.
- b. Provide a minimum of one tree per five spaces located at the perimeter of parking lots (Figure 3.8-13). Also provide a minimum of one tree in each end aisle planter.
- c. Provide island planters a minimum nine feet wide when used for trees (Figure 3.8-14).
- d. For parking stalls adjacent to perimeter planters, provide a wheel stop to prevent irrigation heads from catching on car bumpers.
- e. Use planters to separate parallel parking bays, to accommodate existing trees or to allow for grade change (Figure 3.8-15).
- f. Refer to Base Approved Plant List in Section 3.6 for specific plant material allowed on Base.

#### 5. Lighting

Provide parking area lighting in areas with high levels of nighttime use. Refer to Section 3.11-Lighting for lighting guidelines.

#### 6. Parking Lot Construction

- a. Construct all parking lots with a hard surface of asphalt concrete.
- b. Do not allow grades for the surface parking lots to exceed three percent.
- c. Construct motorcycle parking with Portland cement concrete.
- d. Use continuous concrete curbs in parking lots to clearly delineate vehicle circulation, control and channel drainage, and to serve as wheel stops.
- e. Clearly mark each parking stall with paint or any other more durable material contrasting in color with the surface of the parking lot.
- f. Asphalt curbs are not allowed.
- g. Seal/slurry coat and re-stripe when repairing existing parking lots.

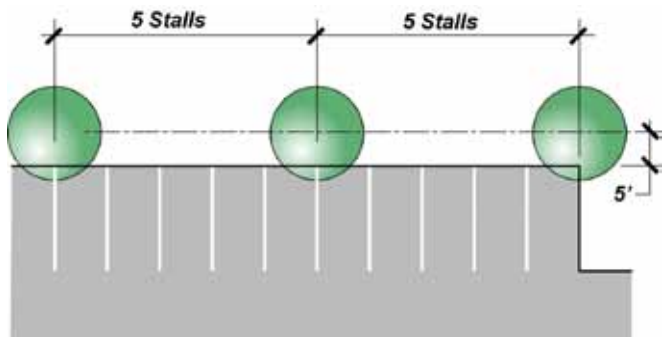


Figure 3.8-13: Typical layout for tree placement in parking lots.

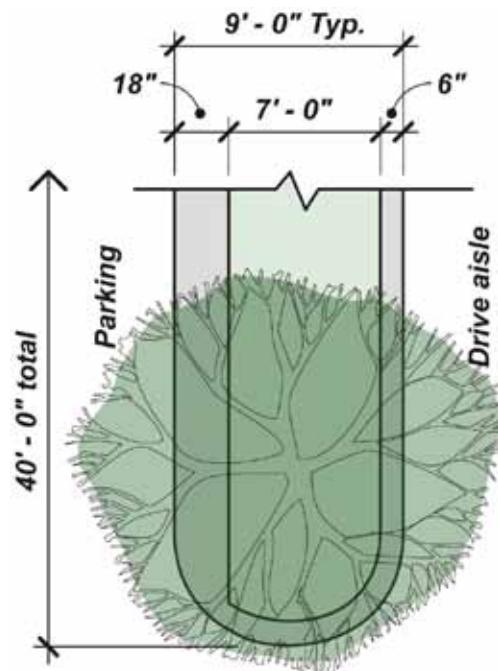


Figure 3.8-14: Island planter detail.

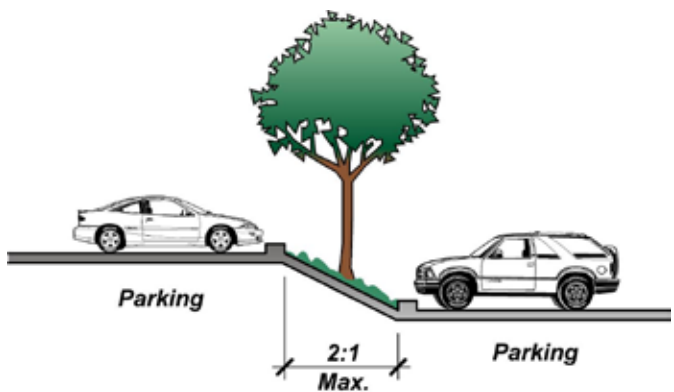


Figure 3.8-15: Planter area used to allow for grade change.

- h. Provide temporary parking lots for interim relocatable facilities that are in operation for one year or less. Construct the parking lot with a permeable hard surface and concrete curbs edges (Figure 3.8-16). Delineate stalls with the use of wheel stops. See details in Section 8.5.
- i. Paint parking space assignments on the curb or wheel-stop face. Refer to Section 3.10-Signage for parking assignment sign guidelines.

## 7. Off-Street Parking Space Requirements

These parking requirements are for Privately Owned Vehicles (POV) only, and do not apply to tactical or military vehicles. Total number of parking spaces provided for a listed facility, whether existing or planned, may be increased when justified by a special study or traffic analysis. See Table 3.8 on the following pages.

- a. Provide accessible parking stalls in accordance with the ADA guidelines.
- b. Provide parking per numbers in Table 3.8. Numeric codes on the following parking charts reference category codes from NAVFAC P-72, Department of the Navy Facility Category Codes. See Facility Specific Military Handbook for further details on any given facility type.
- c. For parking spaces for a facility not listed in the table, a specific parking study or traffic analysis should be completed. Study should take into account the following criteria:
  - Multiple utilization
  - Time
  - Space intervals
  - Available public transportation
  - Group-car riding
  - Government-furnished transportation

Where there are no related previous projects, valid projections of available data may be made.

Parking standard requirements resources were from:

- City of Oceanside Zoning Ordinance
- City of San Diego Zoning Ordinance
- Facility Specific Military Handbook
- Planning and Design of Outdoor Recreation Facilities, Department of the Army

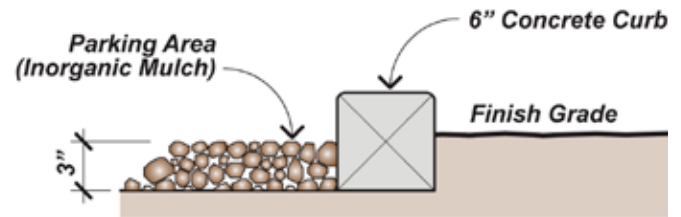


Figure 3.8-16: Typical temporary parking lot detail.

## 8. Parking Computation

In computing the required number of off-street parking spaces the following applies:

- a. A remaining fraction of one-half or more is deemed a whole unit.
- b. A remaining fraction of less than one-half may be disregarded.

## 9. Military Vehicles Parking and Storage Requirements

Military vehicles requirements are not provided in this document. Refer to the NAVFAC P-80 instruction, which is the criteria for determining parking ratios. For example, for Administration the P-80 requires a parking ratio of 70% of the occupants, not based on square footage.

Table 3.8: Off-street parking requirements apply to the following uses.

**100 OPERATIONAL TRAINING FACILITIES**

<b>CLASSIFICATION</b>	<b>PARKING REQUIREMENTS</b>	<b>PARKING PROVIDED</b>
<b>171 Training Buildings</b>		
Auditorium	1 per 3 seats or one space for each 21 square feet of gross floor area where there are no fixed seats.	
<b>179 Training Facilities (non-bldgs.)</b>		
Small Arms Range	1 per 2 stations	
Material Storage	1 per 1,500 SF	
Training Pools/Tanks	1 per 20% of design capacity of pool	

**200 MAINTENANCE AND PRODUCTION FACILITIES**

<b>CLASSIFICATION</b>	<b>PARKING REQUIREMENTS</b>	<b>PARKING PROVIDED</b>
<b>214 Automotive/Tank Maintenance</b>		
Combat Vehicle Shop	1 per 38% of assigned personnel during largest shift	
Auto Organizational Shop	1 per 38% of assigned personnel during largest shift	
<b>215 Weapons Maintenance</b>		
Small Arms Shop	1 per 400 SF	
Field Maintenance Shop	1 per 400 SF	
<b>217 Electronics/Communication Maintenance</b>		
Comm./Elec. Shop	1 per 400 SF	
Electronics Storage	1 per 1,500 SF	
<b>219 Installation Maintenance</b>		
Public Works Shop	1 per 1,500 SF	
Maintenance Storage	1 per 1,500 SF	

**300 RD&T FACILITIES (LIGHT INDUSTRIAL)**

<b>CLASSIFICATION</b>	<b>PARKING REQUIREMENTS</b>	<b>PARKING PROVIDED</b>
<b>310 Science Labs</b>		
Computer Lab	1 per 500 SF	
<b>317 Comm./Elec. Equipment</b>		
Comm. Lab	1 per 500 SF	

**400 SUPPLY FACILITIES (INDUSTRIAL)**

CLASSIFICATION	PARKING REQUIREMENTS	PARKING PROVIDED
<b>411 Liquid Propellants Storage</b>	1 per 1,500 SF	
<b>412 Other Liquids Storage</b>	1 per 1,500 SF	
<b>421 Ammunition Storage</b>	1 per 1,500 SF	
<b>431 Cold Storage</b>	1 per 1,500 SF	
<b>441 General Storage</b>	1 per 1,500 SF	

**500 HOSPITAL & MEDICAL FACILITIES**

CLASSIFICATION	PARKING REQUIREMENTS	PARKING PROVIDED
<b>510 Hospital</b>	1.5 per room	
<b>530 Labs</b>	1 per 300 SF	
<b>540 Dental Clinics and 550 Medical Clinics</b>	59% of medical staff during peak shift 19% of average daily outpatient load during peak month 2 parking spaces per Dental Treatment Room	

**600 ADMINISTRATION FACILITIES**

CLASSIFICATION	PARKING REQUIREMENTS	PARKING PROVIDED
<b>610 Administration Buildings</b>		
Command Offices	1 per 300 SF (This includes: Data Processing, Court Room, Division HQ, Regimental HQ, Battalion HQ, and Company Offices)	
Administration Storage	1 per 1,500 SF	

**700 HOUSING & COMMUNITY FACILITIES**

CLASSIFICATION	PARKING REQUIREMENTS	PARKING PROVIDED
<b>721 Unaccompanied Personnel Housing</b>		
Bachelor Quarters	Provide parking for 70% of personnel; provide motorcycle parking for 5% of personnel	
Student Barracks	1 per 4 persons	
Guest Parking	1 space per 100 residents with handicap accessible. If assembly or classroom space is provided, provide 1 space per 100 SF used for assembly.	
<b>722 Mess Facilities</b>		
Mess Hall/Dining	1 per 150 SF of dining area	

**700 HOUSING & COMMUNITY FACILITIES**

<b>CLASSIFICATION</b>	<b>PARKING REQUIREMENTS</b>	<b>PARKING PROVIDED</b>
<b>730 Community Facilities</b>		
Fire Station	10 total per station	
Clothing/Uniform Shop	1 per 250 SF	
Tailoring Shop	1 per 200 SF less than 5000 SF; 1 per 250 SF greater than 5000 SF	
Dependent School	2 per classroom, plus 15% if auditorium	
Public Toilet	1 per 2 stalls	
Kennel	1 per 400 SF	
Recycling Center	1 per 1000 SF of lot area	
Chapel/Rel. Education	1 per 100 SF of seating area (15% of seating capacity)	
Post Office	1 per 250 SF	
<b>740 MCCS Community Facilities (Interior)</b>		
Exchange Retail Store	1 per 250 SF	
Garden Shop	1 per 1000 SF of lot for first 10000 SF; 1 per 5000 SF thereafter; plus 1 per 250 SF gross floor area	
Location Exchange	1 per 250 SF	
Exchange Administration	1 per 300 SF	
Exchange Warehouse	1 per 1000 SF	
Service Outlets	1 per 250 SF	
Red Cross/Navy Relief	1 per 250 SF	
Bank/Credit Union	1 per 250 SF. With drive-up window(s) provide queuing for a minimum of 5 cars per window.	
Temporary Lodging	1.1 per guest room, plus 1 per 50 SF of (Motel Type) banquet/conference space.	
Visitors' Center	1 per 300 SF	
Commissary	1 per 250 SF	
Family Services Center	In small centers, staff parking for 9, plus 6 visitor cars; In large centers, staff parking for 17, plus 8 visitor cars; Access to parking at other nearby facilities to accommodate as many as 50 additional cars for occasional large meetings.	
Restaurant	1 per 60 SF free standing. 1 per 100 SF sit down. With drive-up window, provide 14 feet wide drive thru lane and queuing for a minimum of 8 cars.	

CLASSIFICATION	PARKING REQUIREMENTS	PARKING PROVIDED
Amusement Center	1 per 400 SF	
Auto Service Center	1 per 2,500 SF of lot area, plus 1 per 600 SF of service bay and storage.	
Gasoline Station	1 per 2,500 SF of lot area, plus 1 per 600 SF of service bay and storage.	
Car Wash	10 total and queuing for a minimum of 8 cars	
Thrift Shop	1 per 250 SF	
Hobby Shop (Arts/Crafts)	1 per 250 SF	
Hobby Shop (Auto)	1 per 250 SF	
Bowling Alley	3 per alley, plus 1 per 250 SF of public assembly and retail space	
Gymnasium	1 per 250 SF	
Skating Rink	1 per 35 SF of seating area, plus 1 per 250 SF floor area not used for seating.	
Skeet Building	1 per staff member	
Youth Center	1 per driving age staff	
Theater	1 per 4 fixed seats, or 1 per 35 SF of non-fixed seating area.	
Club (Bar + Restaurant)	1 per 35 SF of dining area 1 per 35 SF of dance floor	
Child Care Center Parent/Visitor (Drop-off)	1 per 12 children served 1 per 80% of max. staff on duty at any one time	
Library	1 per 500 SF of Building	
Community Storage	1 per 2000 SF	
Recreational Pavilion	1 per 3 users and 1 per staff	
Riding Stables	1 per 2 users and 1 per staff	
Recreational Lodge	1.5 per 3 users (this includes guest parking)	
Public Telephone	30% of phone capacity	
Tennis and Racquetball Courts	4 per court	
Educational Services	1 per 3 users and 1 per staff	
Bathhouse (Beach)	1 per 3.5 users and 1 per staff	
Vehicle Rentals	400 SF plus 2 storage spaces	

<b>CLASSIFICATION</b>	<b>PARKING REQUIREMENTS</b>	<b>PARKING PROVIDED</b>
<b>750 MCCS Community Facilities (Exterior)</b>		
Playing Courts	4 per court	
Playing Field	1% of cantonment population	
Swimming Pool	20% of pool design capacity	
Outdoor Theater	1 per 3 seats	
Marinas / Pier	0.8 per berth	
Skeet Range	1 per 2 users	
Recreation Grounds (baseball, basketball, football, soccer)	Multi-Sports Fields - 60 to 70 stalls if no adjacent parking is available.	
<b>760 Museums and Memorials</b>		
Museum	1 per 300 SF of gross floor area	
Outdoor Monument	A minimum of 10 per monument	



### 3.9 Pedestrian Circulation

While vehicular traffic dominates Camp Pendleton, there is a significant level of pedestrian activity at the Base. This high degree of activity requires specific recommendations and guidelines for future development and also for the redevelopment of existing facilities.

#### 3.9 A. Observations

Pedestrians currently use existing sidewalks, road edges, parking areas and even create their own foot paths. Both individual joggers and units on conditioning runs can be seen daily at Camp Pendleton. A majority of them use the shoulders of the main roads since there are few sidewalks or adjacent paths. This is not a safe or desirable condition with the high volume of vehicular traffic and high travel speeds.

Present pedestrian facilities are not continuous, safe, comfortable, convenient, or consistent. There is also a lack of design consistency in walkway locations, widths, materials and finishes.

Examples of these conditions can be seen in Figures 3.9-1 through 3.9-3.

#### 3.9 B. Objectives

The guidelines in this section provide standards that will encourage Base personnel to walk at Camp Pendleton. Increased pedestrian activity will help in relieving traffic congestion and parking requirements, conserve energy resources, and reduce automobile pollution. The objectives for the Base pedestrian circulation are to:

1. Provide a convenient and continuous pedestrian network.
2. Provide design consistency throughout the pedestrian network.
3. Provide for pedestrian amenities.
4. Provide for pedestrian safety and comfort.



Figure 3.9-1: Well worn foot path in Las Flores (41) Area.



Figure 3.9-2: No sidewalks along Nelson Road to Building 41404 in Las Flores (41) Area.

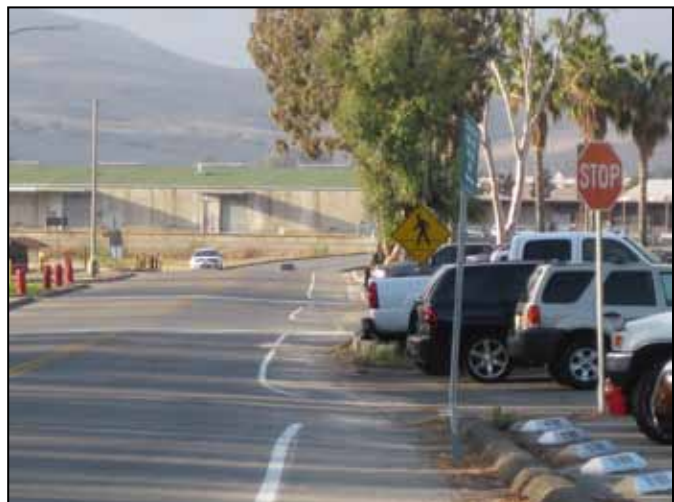


Figure 3.9-3: No separation of pedestrian and vehicles zones in Chappo (22) Area.

### 3.9 C. Design Process

To achieve the above goals and improvements to the Base walkways, a pedestrian master plan is required for each cantonment area. The plan will consist of the following:

#### 1. Existing Conditions Survey

Prepare a detailed map of existing walks depicting exact locations and widths. Identify surface materials and finishes in legend. Note conditions and areas in need of repair and areas of non-compliance with ADA.

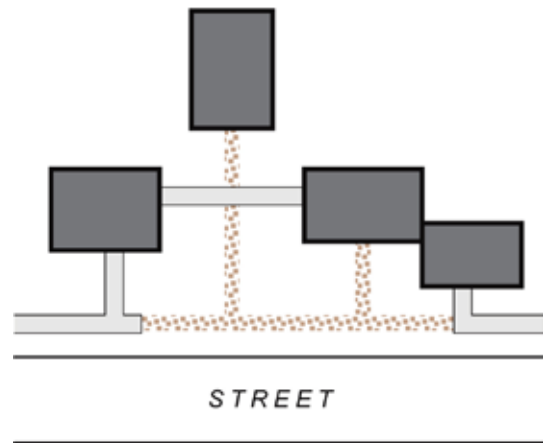
#### 2. Origin/Destination Survey and Analysis

Conduct an origin/destination survey to identify primary and secondary generators of pedestrian activity. Determine volumes of pedestrian traffic between the various points. Analyze and evaluate the capability of the existing facilities to meet needs. Identify actual and potential pedestrian/vehicular conflicts. Identify segments that do not conform with these design standards and note deficiencies (Figure 3.9-4).

#### 3. New Master Plan for Future Development

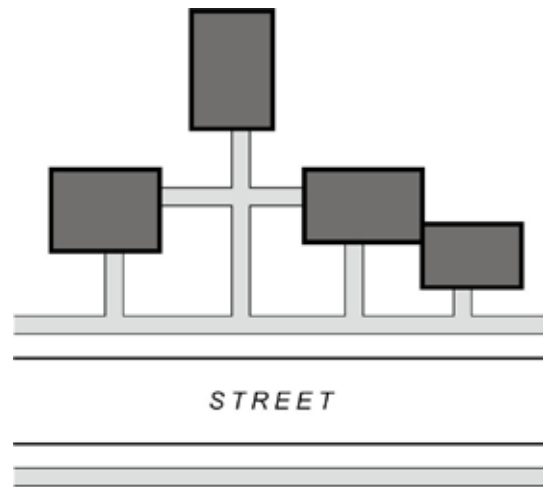
Prepare a comprehensive master plan and implementation program for improvements to each cantonment area. This will include a schedule of repairs, replacement, and additions to the existing walks. Future projects will also provide a walkway plan and will require walks to tie into existing pedestrian circulation (Figure 3.9-5).

Design the pedestrian circulation as a network based on volume of foot traffic and trip purpose. The design of each pedestrian walkway will reflect its role within the network and provide consistent design standards.



Existing

Figure 3.9-4: Analysis of existing pedestrian connections.



Proposed

Figure 3.9-5: Improvements to the pedestrian circulation after analysis.

### 3.9 D. Walkway Standards and Design Guidelines

The following are the standards for walkways and trails that apply to Camp Pendleton:

#### 1. Primary Walks

Primary walks link major activity centers and carry the highest volumes of pedestrian traffic in the cantonment areas. All primary walks are as follows:

- Parallel to four lane major arterial streets (i.e. Vandegrift Blvd.).
- Separated from vehicular traffic with a minimum six foot landscaped parkway (Figure 3.9-6). Plant all parkways per Section 3.6-Landscaping.
- Six feet wide concrete paving per details in Section 8.6-Basewide Details, furnished with pedestrian amenities such as benches and trash receptacles.
- Reinforced with tree plantings.
- Lit with either street or pedestrian lighting per Section 3.11-Lighting (Figure 3.9-7).

#### 2. Secondary Walks

Secondary walks link normal activity centers and carry moderate amounts of pedestrian traffic. The majority of the walks in this category are:

- Parallel to two lane major collectors in the cantonment areas.
- Separated from vehicular traffic with a minimum six foot landscaped parkway (Figure 3.9-8).
- Six foot wide, concrete sidewalk per detail in Section 8.6.
- Lit with either street or pedestrian lighting per Section 3.11-Lighting.
- Provided with pedestrian amenities such as benches and trash receptacles.
- Provided with tree plantings per Section 3.6-Landscaping.

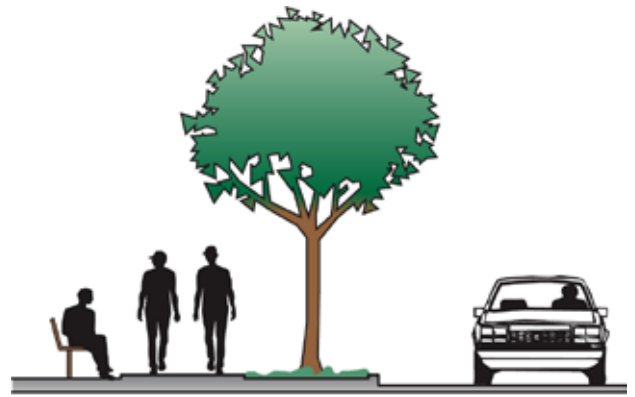


Figure 3.9-6: Typical primary walkway.

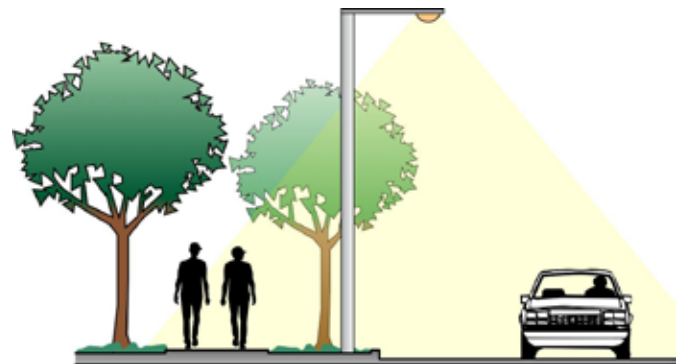


Figure 3.9-7: Provide for safe pedestrian lighting.

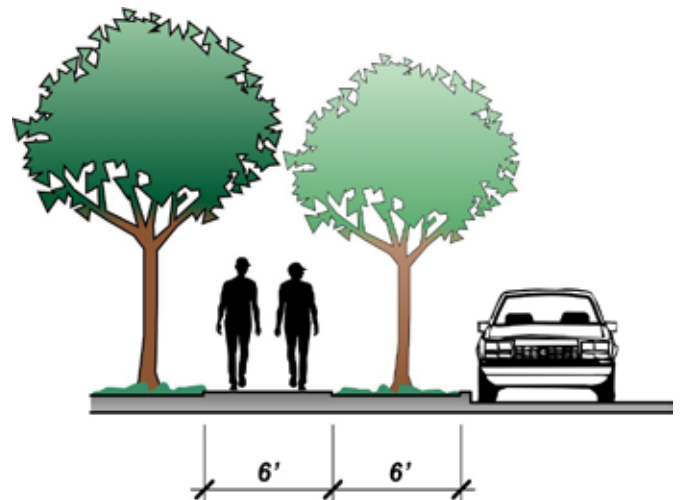


Figure 3.9-8: Typical secondary walks.

### 3. Paths

Paths provide necessary links to the pedestrian system but are infrequently used or carry low volumes of pedestrian traffic. Locate paths along two lane major collectors between the cantonment areas or in recreational areas as jogging trails and fitness courses.

- a. Where possible, separate paths from traffic by a six foot landscape parkway (Figure 3.9-9).
- b. Construct paths of compacted disintegrated granite.
- c. Vary the width of disintegrated granite trails from four feet to eight feet in width depending on the amount of pedestrian traffic and the availability of sufficient right-of-way width.
- d. Along roadways, reinforce paths with tree plantings. See Section 3.6-Landscaping (Figure 3.9-9).
- e. Construct trails in recreation areas or fitness courses with compacted disintegrated granite. Vary trail width from four feet to eight feet.

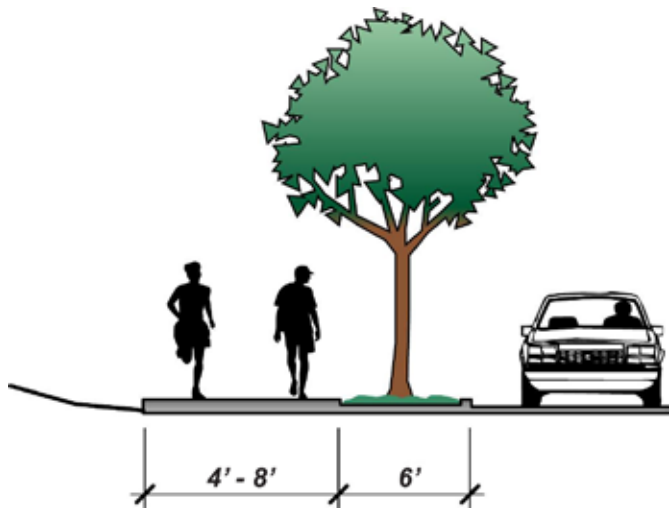


Figure 3.9-9: Typical path between cantonments.

### 4. Tertiary Walks

Tertiary walks provide necessary links to the pedestrian system but are infrequently used or carry low volumes of pedestrian traffic. One example for the location of tertiary walks is in cantonment areas between the parking areas and buildings.

- a. Separate buildings from parking areas by dimension required in the AT/FP UFC. Provide landscaped buffer and six feet for sidewalks (Figure 3.9-10 and 3.9-11).
- b. Provide wheel stops in parking areas adjacent to walkways to allow for a two foot bumper overhang.
- c. Construct all sidewalks per details in Section 8.6 of Chapter 8-Basewide Standard Details.

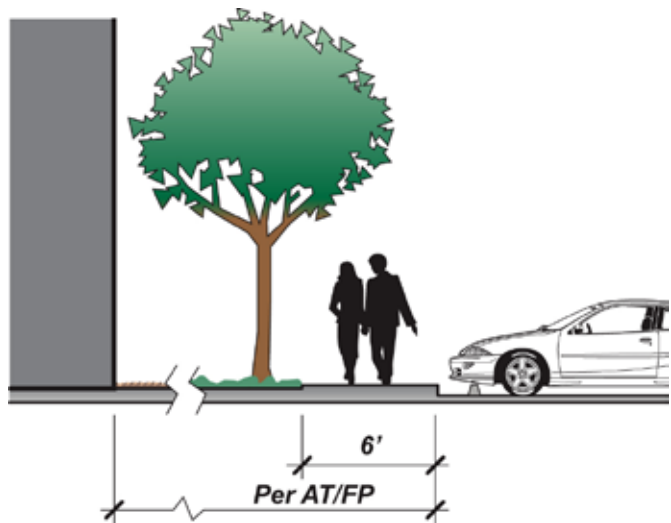


Figure 3.9-10: Typical parking setback to allow for walkway and landscaping.



Figure 3.9-11: BEQ separated from parking with landscape buffer and walkway in HQ/Mainside Area.

## 5. Materials

Pave all walking surfaces with a hard, non-skid surface pitched to shed water. The following apply to finish material for walks:

- Pave all walks in developed areas with concrete and provide finish per details in Chapter 8-Base-wide Standard Details.
- When repairs are made to existing walks, the new walk finish will match the existing walk.
- Special paving for building entries, plazas, courtyards and patios may be salt-finished concrete, broom-swept finish concrete, exposed aggregate concrete, integral or colored concrete (Figure 3.9-12). Interlocking concrete pavers, similar to the ones used for safety zones in streets, may be used per detail in Section 8.4.
- Construct jogging trails, fitness courses, and trails between cantonment areas (Figure 3.9-13) with compacted disintegrated granite and edging per detail in Section 8.3.

## 6. Crosswalks

Channel pedestrian traffic to designated crosswalks at intersections. Clearly define crosswalks at all intersections used by pedestrians to provide safe and convenient crossings. Mid-block crosswalks are not permitted. Provide crosswalks with:

- White painted lines a minimum of eight inches in width (Figure 3.9-14).
- Handicap ramps at each corner per ADA per details in Section 8.6.
- Safe lighting levels.
- Safe sight lines and distance.
- Sidewalk corner panels textured to provide a tactile warning surface per details in Section 8.6.
- Street furniture such as mail boxes, newspaper racks, or traffic control panels clustered so as not to impede pedestrian traffic (Figure 3.9-15).

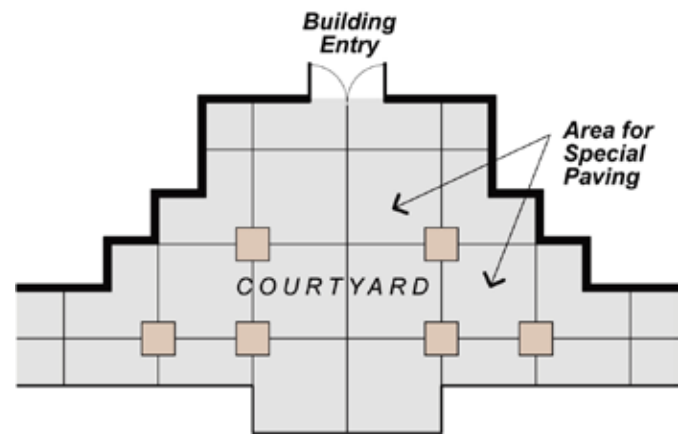


Figure 3.9-12: Typical paving treatment.

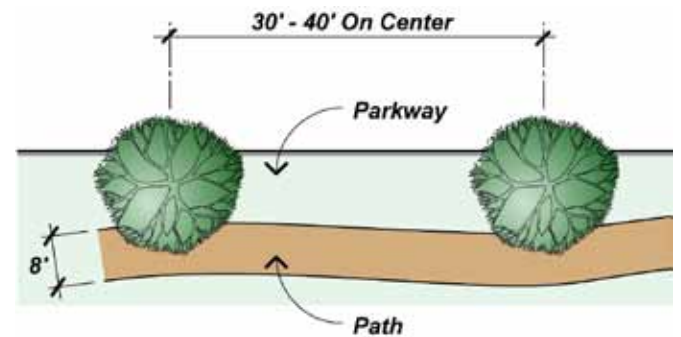


Figure 3.9-13: Typical jogging trail layout.



Figure 3.9-14: Crosswalk striping at intersection in HQ/Mainside (11-16) Area.

## 7. Walkway Stairs

Whenever possible, avoid the use of stairs. Where stairs or steps are required, always use three or more risers, to allow for the stairs to be seen and avoid accidents.

- a. Provide steps equal in width to the walkway.
- b. Construct steps with cast-in-place concrete per detail in Chapter 8-Basewide Standard Details.
- c. Provide handrails that conform to the detail in Chapter 8-Basewide Standard Details.
- d. Provide safe lighting per Section 3.11- Lighting.
- e. Replace existing non-compliant stairs throughout Base when feasible (Figure 3.9-16).

## 8. Ramps

Any walkway surface with a slope gradient in excess of five percent is considered a ramp. In recognizing the necessity of providing barrier-free access to all facilities, the use of ramps has become more prevalent. The following applies to all ramps:

- a. Do not exceed twelve percent gradients for ramps.
- b. Construct ramps with concrete and provide finished per details in Chapter 8-Basewide Standard Details.
- c. Design ramps and handrails per ADA standards.
- d. Integrate the ramp into the surrounding buildings, site development and landscape.

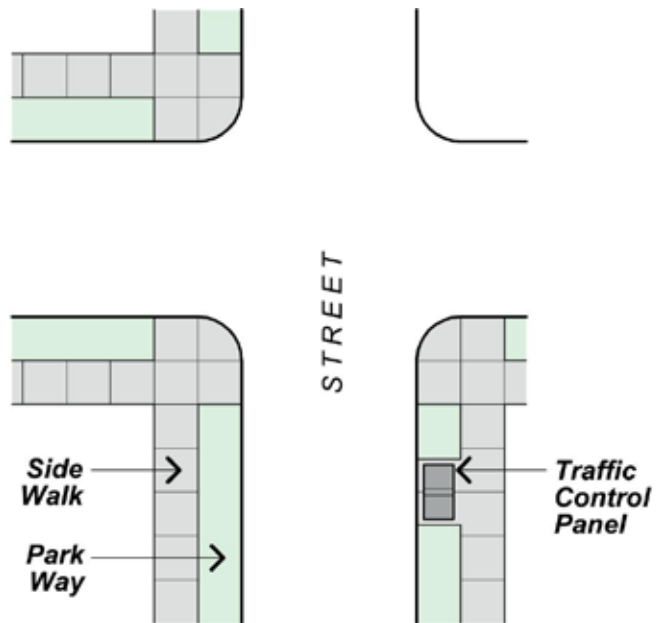


Figure 3.9-15: Typical traffic control panel location.



Figure 3.9-16: Existing stairs in Margarita (33) Area in need of replacement.

### 3.10 Signage

The primary purpose of signage is to communicate information. To do this, signs must be legible and well organized. At Camp Pendleton, the outdoor signage and graphics are sometimes confusing, unattractive, and in disrepair. Consideration must be given to the location, layout and organization of Base signage (Figure 3.10-1). Signage is a primary site element that helps unify the Base's exterior environment. This unity is accomplished by using common materials and colors when designing new or replacement signs.

#### 3.10 A. Observations

Excessive, uncoordinated signage throughout the Base is a prime contributor to the visual chaos. These general observations pertain to the entire Base signage program:

1. Most of the area identification signs use similar materials and type face (Figure 3.10-2).
2. Signs are in locations that block motorists' views, creating hazards.
3. Base signage is inconsistent in style, design, and materials used (Figure 3.10-3).
4. Multiple signs are placed at a single location causing visual clutter.
5. Building signs and addresses are not always visible from entries or parking lots.
6. Clear directional signage to the Base's primary facilities is not always provided (Figure 3.10-4).
7. Many of the Base streets do not have street name signs at intersections.
8. Regulation sign lettering is generally too small to read from a distance.
9. Signs need to be more graphic, with less text.



Figure 3.10-2: Cantonment identification sign at Edson Range.



Figure 3.10-3: Signs of various materials found in Edson Range (31A) Area.



Figure 3.10-4: Typical directional sign.

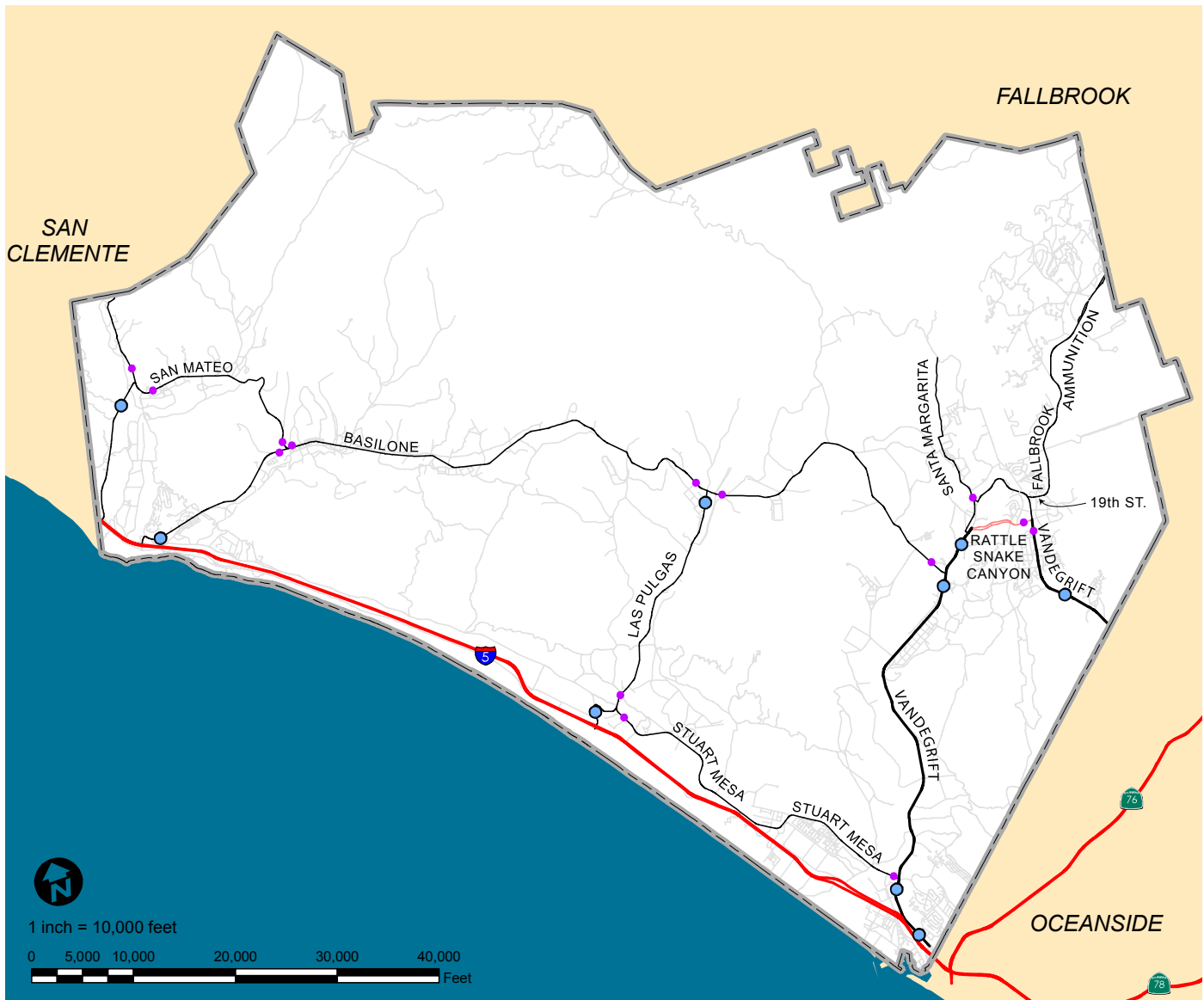


Figure 3.10-1

## Basewide Directional Signage and Street Classification

### Legend

- Primary Directional Sign
- Secondary Directional Sign
- Base Boundary

### Roads

- 4-6 Lane Minor Arterial
- 4 Lane Major Collector
- 2 Lane Major Collector
- Other Roads
- Freeway / State Routes



### 3.10 B. Objectives

A clear system for Base signage is needed. The goals and objectives are to develop a uniform signage program that can be used Basewide for numerous applications, and:

1. Carefully considers the location of each sign.
2. Provides a system for signage that is consistent in location, size, material, color and type styles.
3. Uses sign materials that are also consistent with the materials for base architecture (Figure 3.10-5).
4. Minimizes the number of signs (Figure 3.10-6).
5. Is coordinated, economical, flexible and fits into its surroundings.



Figure 3.10-5: Signage at Semper Fit-example of standard box design.

### 3.10 C. Design Process

A plan and program is required to assure the implementation of a comprehensive signage system. The following are the elements of the plan:

#### 1. Existing Conditions Map and Analysis

Prepare a record map of all existing exterior identification, directional and regulatory signs. Note the condition of each sign and whether or not it conforms to the guidelines. This is to be done for each cantonment area.

#### 2. Signage Master Plan

Prepare a plan and program for the removal, replacement, relocation, or installation of signs in the proper locations. This is done for Basewide signage and for each cantonment.

#### 3. Procedures

Submit work requests for the installation of any exterior sign to the Public Works Office for review and approval prior to installation. Include in the work requests those items outlined in Chapter 11-Submittal Requirements for Concept/Design Development.

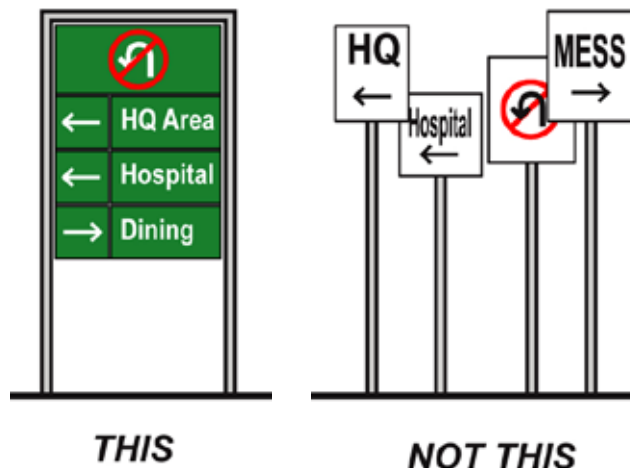


Figure 3.10-6: Minimize the number of signs and provide a single format when multiple signs are required.

### 3.10 D. Sign Guidelines

Utilize the Base signage system as a hierarchy of sizes relative to the distance from which the signs are read and the facilities being identified. The majority of the signs are designed to be provided by the Base Facilities Maintenance Department. Signs used at the Base are divided into the following categories:

#### 1. Entry Gate Signs

##### a. Primary Gates

##### a.1 Oceanside Gate

The Oceanside Gate is the primary access to the Base. It was reconstructed in 2009 and sets a precedent for future gate design (Figure 3.10-7).

##### a.2. San Luis Rey and San Onofre Gates

The San Luis Rey and San Onofre Gates are the next most widely used entries after the Oceanside Gate. Signage at these two locations helps to reinforce the Base boundaries and establish a positive first impression.

The sign is part of a larger entry design outlined in Section 6.3 and 6.4 of Chapter 6-Public Gates Design Guidelines. The San Luis Rey and San Onofre Gate sign design should include the following (Figures 3.10-8 and 9).

- Construct large entry columns with metal framing and apply a smooth EIFS or stucco finish. Select column color from Appendix A Color Board/Building Materials.
- Construct small entry columns of split and smooth face concrete block with a precast concrete cap.
- Sign face is to be poured in place concrete.
- Identify the Base and the name of the entry gate on the sign face.
- Sign letters are to be bronze anodized aluminum.
- Use Helvetica font for the sign letters with the cantonment name nine inches in height. Attach the sign with galvanized metal brackets and anchor into the small masonry entry column.
- Attach the sign with galvanized metal brackets and anchor into the large entry column. If the large column is constructed of EIFS,



Figure 3.10-7: Oceanside Gate during construction.



Figure 3.10-8: Existing gate at San Luis Rey.



Figure 3.10-9: Existing gate at San Onofre.

provide metal framing within the large column to allow attachment of metal brackets.

- Replace the existing primary gate signage with a “scaled down” version of the Oceanside Gate sign.
- Set the signs on a concrete pedestal six inches above the finish grade.
- Set ground-mounted lights into the pedestal to up-light the entry gate identification sign per Section 3.11- Lighting.

b. Secondary Entry Gate Signs

Replace the existing secondary entry gate signage with signs of similar design at the following cantonments. These signage guidelines are for the Las Pulgas, Cristianitos, Del Mar, and Fallbrook Gates (Figure 3.10-10). The secondary entry gate signs include the following characteristics:

- Split and smooth face concrete block with a precast concrete cap.
- The sign face identifying the Base and the name of the entry gate.
- Sign face is to be poured in place concrete.
- Sign letters are to be bronze anodized aluminum.
- Use Helvetica font for the sign letters.
- Use Helvetica Bold font, of nine inches in height, for the sign letters of the gate name.
- Attach the signs with galvanized metal brackets anchored into the masonry columns.
- Set sign on a concrete pedestal six inches above the finish grade.
- Set ground-mounted lights into the pedestal to up-light Secondary Entry Gate identification sign per Section 3.11-Lighting.
- For additional information on the secondary entry designs, refer to Chapter 6-Public Gates Design Guidelines.

**2. Cantonment Identification Entry Signs**

These signs replace all existing cantonment signs in the approximate location of the current sign. Signs include the following (Figure 3.10-11):

- Construct the sign with split and smooth face concrete block with a precast concrete cap.
- Identify the Base, the name of the cantonment and the name of the unit of division residing in the Area on the sign face.



Figure 3.10-10: Gate at Cristianitos.

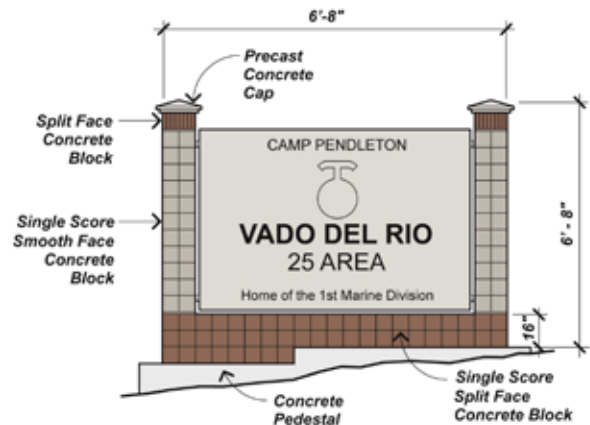
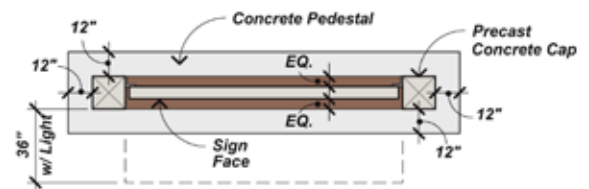


Figure 3.10-11 : Typical identification entry sign for cantonments. See above for plan view illustrating typical concrete pedestal for signs.

- Construct a 2 x 6 inch “tongue and groove” wood material sign face with a dark semi-transparent stain background and yellow letters.
- Use Helvetica font for the sign letters with the cantonment name nine inches in height.
- Attach the signs with galvanized metal brackets anchored into the masonry columns.

- f. Set sign on a concrete pedestal six inches above the finish grade.
- g. Set ground mounted lights into the pedestal to up-light the cantonment identification sign per Section 3.11-Lighting.

**3. Division or Headquarter Identification Signs**

The following are the uniform guidelines for all Division or Headquarter signs (Figure 3.10-12):

- a. The sign face is to be provided by the construction contract.
- b. The sign face is red with yellow letters.
- c. The sign face identifies the Base and the name of the Division or Headquarters.
- d. The sign base consists of split and smooth face concrete block with a precast concrete cap.
- e. Attach the signs with galvanized metal brackets anchored into the masonry columns. See detail in Chapter 8-Basewide Standard Details.
- f. Additional signs may be attached to the Division or Headquarters signs by increasing the size of

columns. The maximum height for the column to the top of the block is six feet eight inches.

- g. Set signs on a concrete pedestal six inches above the finish grade.
- h. Set ground-mounted lights into the pedestal to up-light the Division or Headquarters identification sign per Section 3.11- Lighting (Figure 3.10-13).

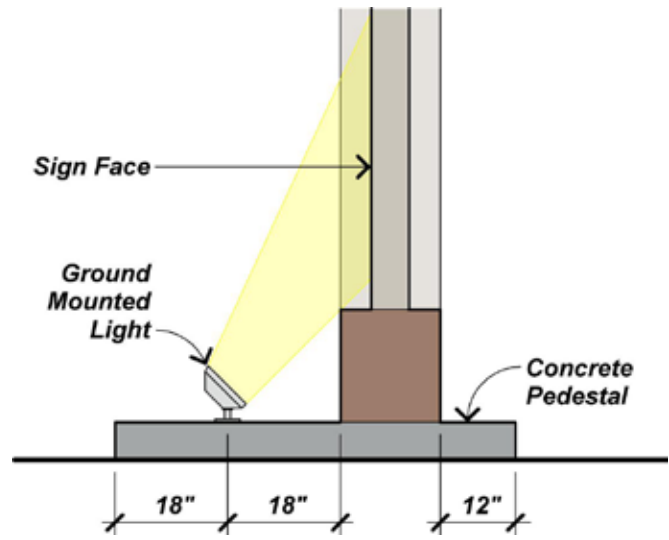


Figure 3.10-13: Typical lighting detail for signs.

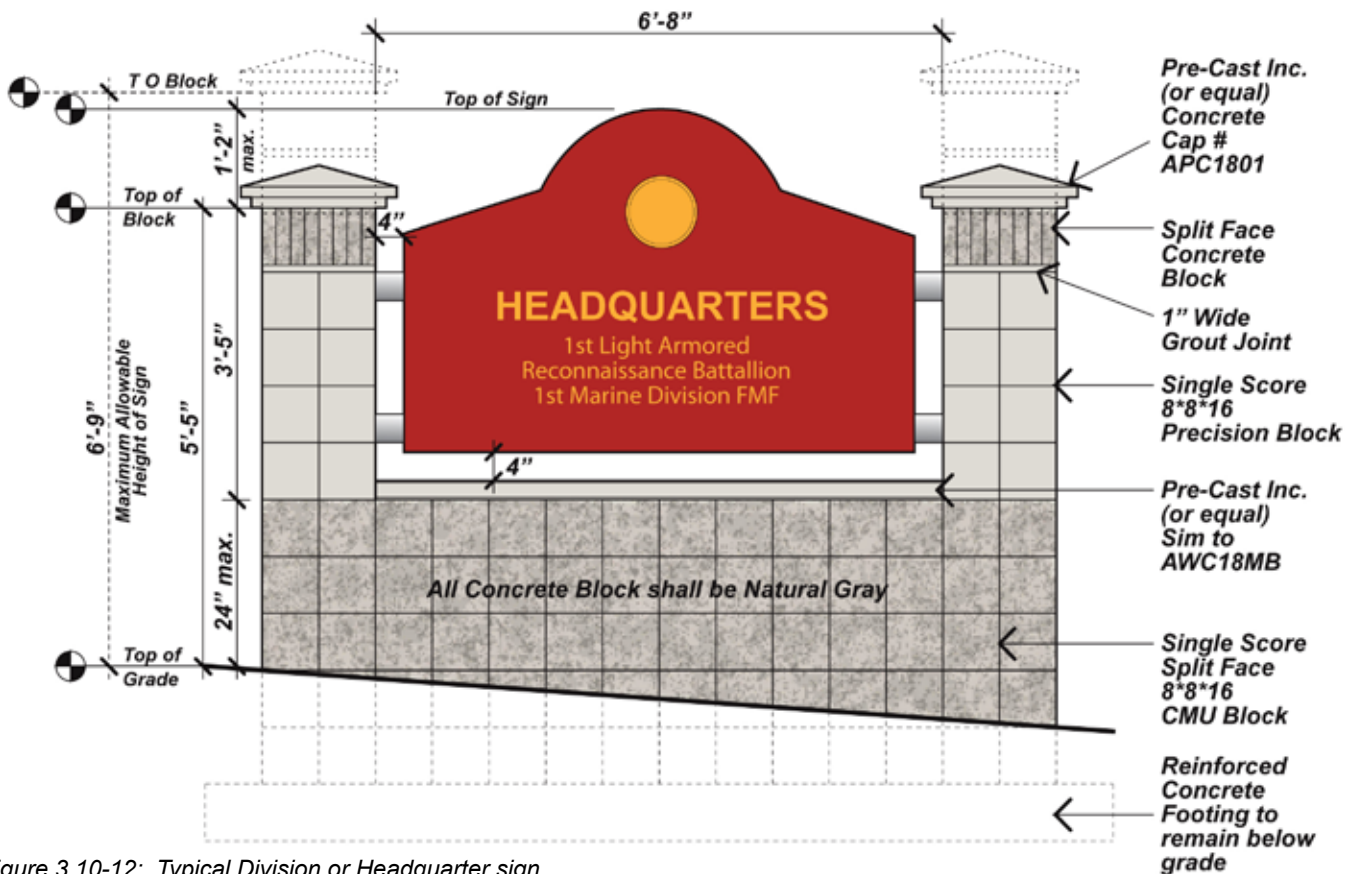


Figure 3.10-12: Typical Division or Headquarter sign.

#### 4. Medical/Dental Identification Signs

The following are the uniform guidelines for all Medical/Dental signs:

- The sign face is to be provided by the construction contract.
- The sign face is blue with white letters.
- The sign face identifies the Base and the name of the Medical/Dental Branch.
- Construct the sign with split and smooth face concrete block with a precast concrete cap.
- Attach the signs with galvanized metal brackets anchored into the masonry columns.
- Additional signs may be attached to the Medical/Dental Identification signs by increasing the size of the columns (Figure 3.10-14). The maximum height for the column to the top of the block is six feet eight inches.
- Set the signs on a concrete pedestal six inches above the finish grade.
- Set ground-mounted lights into the pedestal to up-light the identification sign per Section 3.11- Lighting.

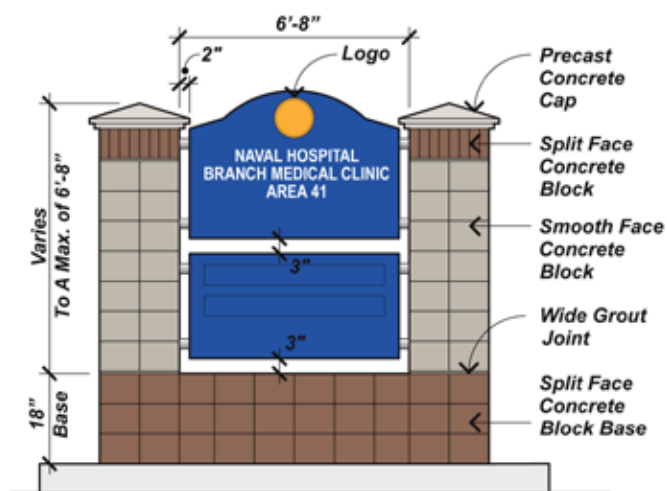


Figure 3.10-14: Typical Medical / Dental Sign.

#### 5. Facility Sign

Use facility signs whenever possible in place of building wall signs. As facilities are reused or changed, it is easier to install a new facility sign to identify the user. The facility sign incorporates many of the same elements of Basewide Signs as follows (Figures 3.10-15 and 16):

- Splitface and smooth face concrete block with a precast concrete cap.
- Base of sign is 12 inches maximum in height.
- Attach the signs with galvanized metal brackets anchored into the masonry columns. See detail in Section 8.7.
- Sign face is red with yellow letters.
- Locate facility signs near the entry of the building, but still visible to motorists from the street.



Figure 3.10-15: Facility sign in Chappo (22) Area.

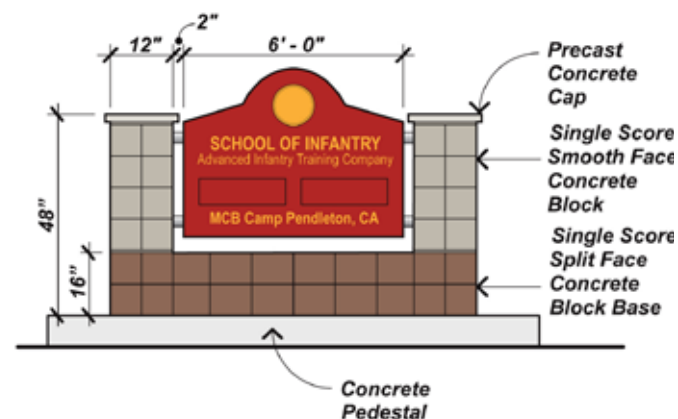


Figure 3.10-16: Typical Facility Sign.

## 6. BEQ Signage

For BEQ's with multiple buildings, it is not necessary to construct a separate BEQ sign for each building. Instead, construct a BEQ sign at each driveway entrance to the BEQ campus and list the building numbers of the respective buildings in proximity to that driveway entrance.

## 7. Directional Signage

It is important to provide clear and direct signage for all of the Base cantonments and facilities. Two types of Base directional signage are provided:

### a. Primary Directional Signs:

- Locate primary directional signs.
- Limit the use of primary directional signs to the following Areas:
  - Base Headquarters
  - Cantonment Areas
  - Family Housing Areas
  - Base Gates
  - Recreation Areas
  - Navy Hospital
  - MX Areas
- Do not identify areas or uses noted in Secondary directional signs on the primary directional signs.
- Poles are galvanized finished metal a minimum of 23 feet in height. See Section 8.8.
- Sign face is green with white upper case letters and arrows.
- Maximum sign face is 200 square feet (Figure 3.10-17).
- Letter sizes are a minimum of one inch per each 50 feet of viewing distance to a maximum of 12 inches.
- Up-light sign with lights attached to sign.

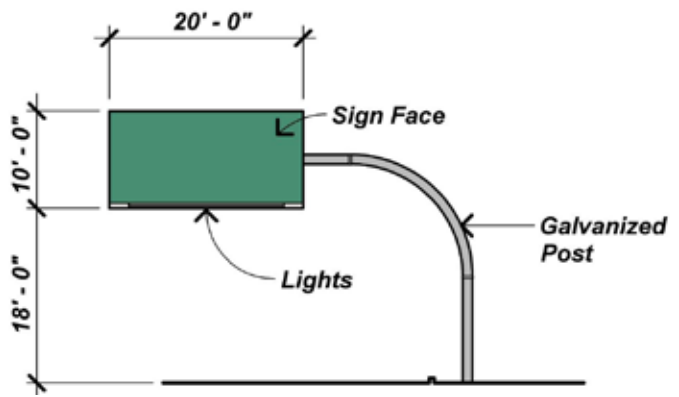


Figure 3.10-17: Typical Primary Directional Sign.

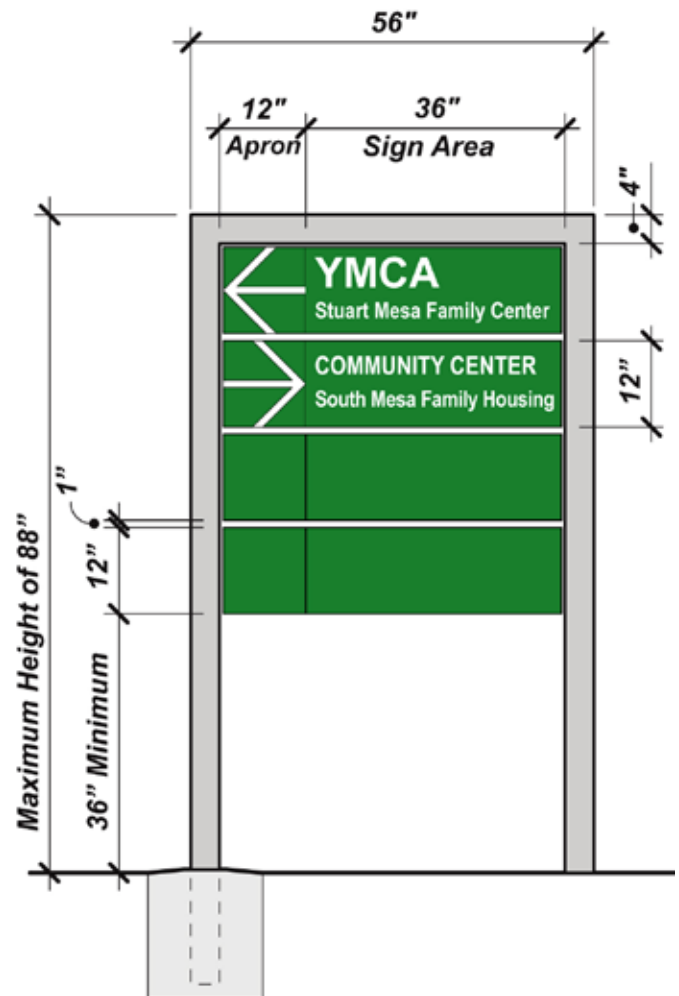


Figure 3.10-18: Typical Secondary Directional Sign.

### b. Secondary Directional Signs

- Locate signs adjacent to major collector and local roads to guide motorists to specific facilities such as (See Figure 3.10-18):
  - Community Centers, Libraries

- Recreation Facilities
- Division Headquarters
- YMCA
- Day Care Facility
- Commissaries

- Do not identify areas or uses noted in primary directional signs on the secondary directional signs.
- Construct sign frame of four inch by four inch square galvanized finished metal tubing. Small holes shall be drilled into the metal tubing just above the mounting sleeve, so that it will “break away” if struck by a vehicle. Sign sizes are modular -12 inches by 48 inches. (Figure 3.10-18 and detail in Section 8.7).
- Maximum sign height is 88 inches. Bottom of the lowest sign is a minimum of 36 inches from finish grade.
- Vary sign height depending on number of modular signs needed.
- Sign face is green with white letters and arrows.
- Medical facilities sign face is blue with white letters.
- Directional signage for MCCS facilities is brown sign face with white letters.
- Locate directional arrows on the left side of the sign.

**8. MCCS Facilities**

Provide MCCS facilities signs to identify:

- Recreational facilities that serve the Base personnel (Figures 3.10-19 3.10-20).
  - The base of the sign is 16 inches high and constructed of splitface concrete block.
  - The sign face is 58 inches high and 54 inches wide and constructed of cast-in-place concrete.
  - The sign face color is natural grey.
  - Set ground mounted lights into the pedestal to up-light sign per Section 3.11-Lighting.
- Banner holder or event sign that identifies upcoming events (Figure 3.10-21).
  - The event sign uses the same column style and material as the entry gates.
  - Construct the frame for the banner holders and the "EVENTLINE" sign of galvanized steel tube framing.
  - Construct the sign base of splitface concrete block 24 inches high.

**9. Traffic Control or Regulation Signs**

- All traffic control or regulation signs are per Section 8.7, Chapter 8-Basewide Standard Details (Figure 3.10-17).

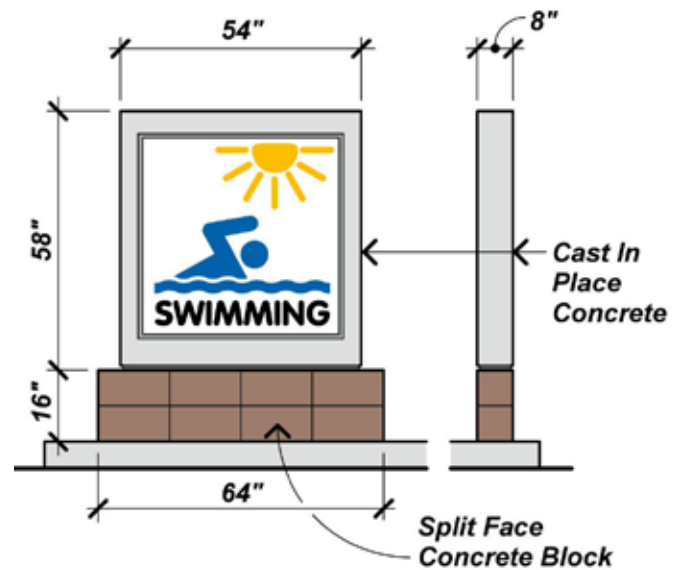


Figure 3.10-19: MCCS Facility Sign with concrete block base shown.



Figure 3.10-20: MCCS Facility Sign in the Del Mar (21) Area.

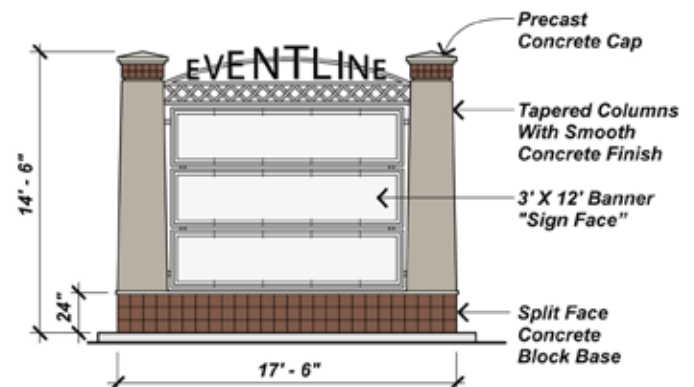


Figure 3.10-21: Typical MCCS Banner Holder sign.

- b. Mount all regulatory signs seven feet from the pavement surface to the bottom of the sign.
- c. See Section 8.7 for pole mounting details.

### 10. Street Signs

- a. Not all streets on the Base are named.
- b. Lack of street naming and signage leads to safety issues when emergencies occur.
- c. All streets shall be named and have street signs.
- d. See details in Section 8.7-Street Signs.

### 11. Building Signs

Signs attached to buildings are limited to the following:

- a. Building Identification or Number Signs
  - Sign is composed of individual letters attached to the building (Figure 3.10-22).
  - Sign letters or numbers contrast with background.
  - Street number shall be on all sides of the building so emergency crews can make an immediate identification of the facility from any approach.
  - Sign letters or numbers material shall be bronze anodized aluminum, six inches tall - Helvetica font.
  - Continue to use white background and black numbers for buildings that use painted numbers.



Figure 3.10-22: Good example of building numbers.

- Building numbers shall be illuminated with a small adjacent light fixture on a photocell sensor.
- b. Building Address/Residential
  - Address numbers are composed of individual numbers attached to the building.
  - Color of number will contrast with the background on which it is mounted.

### 12. Parking Stall Assignment Sign

- a. Paint assignment message on the face of curb or wheel stop or on pavement. Paint letters/numbers black on a white background (Figure 3.10-23).
- b. Freestanding signs or signs on building walls are not permitted.
- c. Accessible parking signs are to conform to ADA requirements. See detail in Section 8.7.

### 13. Letters and Characters

All letters on Base signage are of one type and with a consistent layout.

- a. Letter style or font is Helvetica for all signs.
  - Acronyms are all upper case.
  - Building numbers are six inches in size in Helvetica font.
- b. Spacing for words and letters are normal spacing. Avoid wide spacing or tight spacing. Do not spread word spacing to fill a line.
- c. Center the position of words in the sign unless noted otherwise.
- d. The following signs have yellow letters:
  - Cantonment signs.
  - HQ/Division signs.
  - Facility signs.

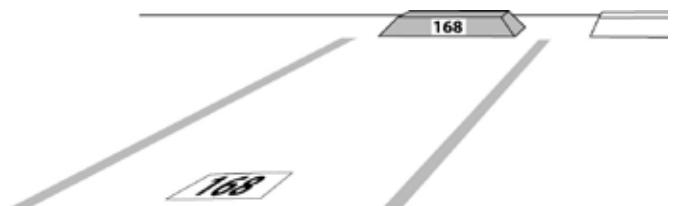


Figure 3.10-23: Parking stall with assigned number on wheel stop.



- e. The following signs have white letters:
- Gate Entry signs.
  - Medical/Dental signs.
- f. Incorporate the Camp Pendleton logo into the design of the all signs.

#### 14. Letter Size

All letters on station signs are to range from one inch to six inches in height.

- a. Letter sizes are not to exceed six inches in height unless absolutely necessary.
- b. The standard guide is to provide one inch of letter height of an upper case letter or number for each 50 feet of viewing distance desired (Figure 3.10-24).

#### 15. Installation

Install signs with consideration given to landscape and general maintenance.

- a. Install permanent pole signs per details in Section 8.7.
- b. Provide concrete pedestal for signs to minimize maintenance, especially in turf area where edging is required (Figure 3.10-25).
- c. Place temporary signs in post holes with crushed rock tamped around the posts or in sleeves.

#### 16. Placement

Determination of sign placement is by the following visibility and safety items:

- a. Place freestanding signs for optimum visibility. The line-of-sight is to be clear. Panel height will average approximately 52 inches above the pavement surface and be perpendicular to approaching traffic.
- b. Position signs consistently in relationship to the roadways, walkways or buildings they serve.
- c. Avoid placing signs where they will block a motorist's view of pedestrians, bicyclists, or obscure traffic movement. Mount regulatory signs, such as stop signs, seven feet from the pavement surface to the bottom of the sign.

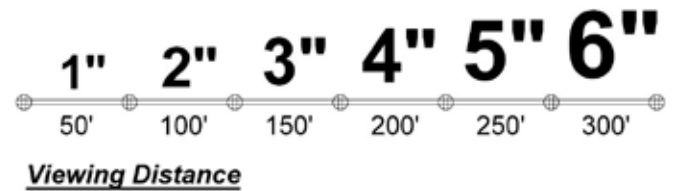


Figure 3.10-24: Typical letter size per viewing distance.

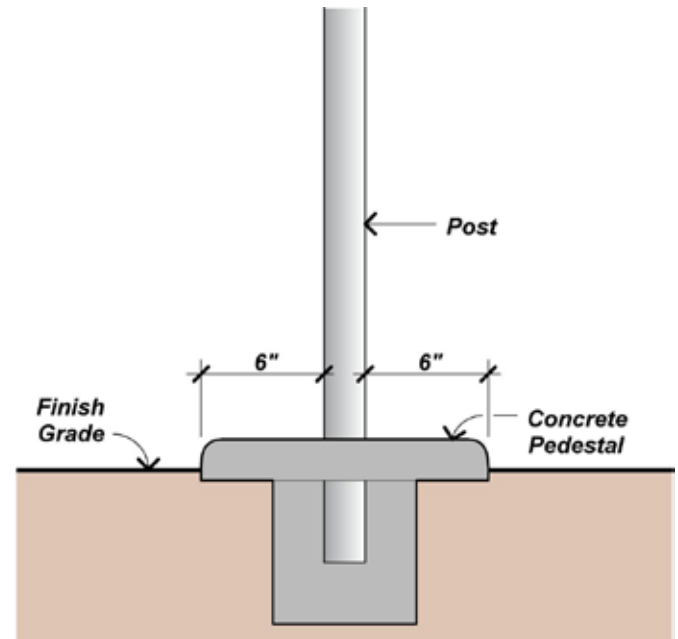


Figure 3.10-25: Concrete pedestal detail at sign base.

### 3.11 Lighting

Exterior lighting performs a number of functions related to nighttime safety, security, pathfinding, and illumination of Base landmarks or special features. The lighting section is designed as a coordinated system that is functional, attractive, efficient and easy to maintain. Since lighting is a site fixture, its design is coordinated with other exterior fixtures and furnishings.

#### 3.11 A. Observations

When viewed from a distance at night, Camp Pendleton's cantonment areas are lighted islands in a sea of darkness. Up close the cantonment areas are, in most cases, poorly lit and in some instances dark. The following observations pertain to the entire Base lighting.

1. There are a variety of lighting standards or fixtures used throughout the Base (Figure 3.11-1).
2. There is no discernible system of fixtures or standard illumination levels.
3. Lighting has not been used to reinforce pedestrian circulation, buildings, gate entries, signage or Base landmarks.
4. In general, lighting in parking and pedestrians areas has been underutilized or not provided (Figures 3.11-2 and 3.11-3).

#### 3.11 B. Objectives

The development of a standardized lighting system and coordination with other site furniture is important. This will ensure the proper illumination for safety at key areas within the Base. In addition, it will allow for easy decision-making when selecting fixtures and provide a consistent and uniform appearance for the Base. The objectives for Basewide lighting are:

1. Standardize light fixtures and poles to provide desired levels of illumination and present a uniform appearance.
2. Use street lighting and illumination levels to reinforce the circulation hierarchy and provide nighttime orientation.
3. Provide adequate lighting for safety and security.
4. Select light fixtures for economy of operation, maintenance, and repair.



Figure 3.11-1: Variety of parking lot fixtures at Margarita (33) Area.



Figure 3.11-2: Pedestrian light fixture at BEQ.



Figure 3.11-3: Single light fixture along road that serves parking lot in Chappo (22) Area.

3.11 C. Design Process

Standardization of the installation’s lighting system requires a plan and program for orderly change and for new development that includes:

1. Existing Conditions Map and Analysis

Prepare a record map of existing exterior lights. Note condition of fixtures and conformance with guidelines.

Identify areas where lighting levels are inadequate.

2. Lighting Master Plan

Prepare a plan and implementation program for removal, replacement, relocation, or installation of new light fixtures. Specify the type of fixture to be installed per the guidelines.

3. Procedures

Submit work requests for the installation of any exterior lighting to the Public Works Office for review and approval prior to installation. Include in the work request those items outlined in Chapter 11-Submittal Requirements for Concept/Design Development.

3.11 D. Lighting Standards and Guidelines

Use lighting in areas with high nighttime activity to promote safety and a sense of security among personnel (Figure 3.11-4). Use the following lighting guidelines and standards for all existing facilities, cantonment areas and future projects at Camp Pendleton. For more specific guideline information on Base lighting standards, refer to the Camp Pendleton Requirements (CPR).

1. Street Lighting

Street lighting needs to be consistent and conform to the street hierarchy on Base. Street light fixtures will apply only to cantonment and residential areas.

- a. Primary Streets (Four to Six Lane Minor Arterial, Four Lane Major Collector)
  - In cantonments, use regularly spaced, single luminaries mounted 40 feet high in an opposite arrangement (Figure 3.11-5).
  - Spacing of fixtures is dependent on the illumination level required (Figure 3.11-6).
  - Outside of cantonments, place fixtures at intersections only.

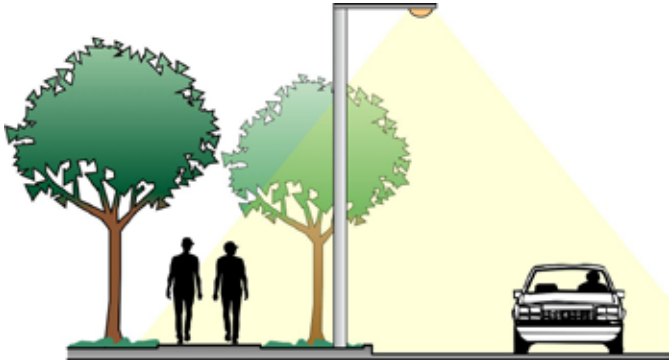


Figure 3.11-4: Lighting promotes safety and security.

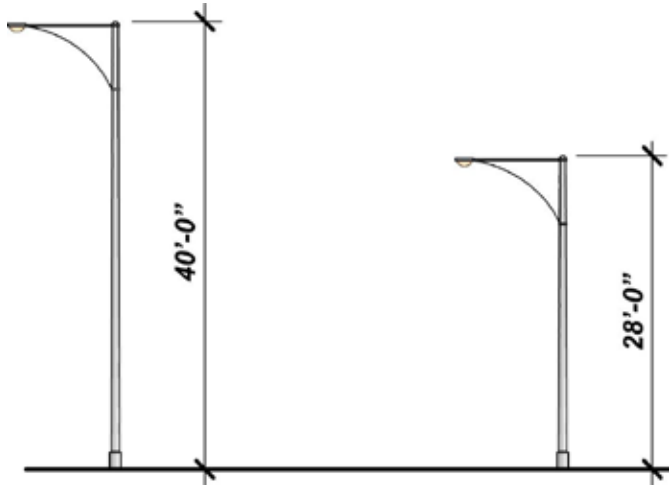


Figure 3.11-5: Standard street light fixture.

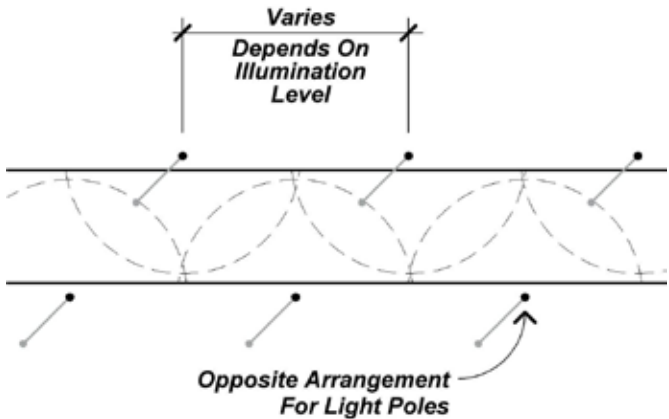


Figure 3.11-6: Typical arrangement for light poles.

- Illumination of primary streets is a minimum of 1.75 footcandles.
- Illumination of primary intersections is a minimum of 2.5 footcandles.

b. Secondary Streets (2 Lane Major Collector)

- Use regularly spaced, single luminaires mounted at 28 foot high in an opposite arrangement.
- Spacing of fixtures is dependent on the illumination level required.
- Outside of cantonments, place fixtures at intersections only.
- Illumination of secondary streets is a minimum of 1.0 footcandles.
- Illumination of primary intersections is a minimum of 2.5 footcandles.

c. Local Streets within Cantonments

- Use regularly spaced, single luminaires mounted at 28 feet high.
- Illumination of residential streets is a minimum of 0.2 footcandles.
- Use color-corrected mercury vapor lamps for all residential street lights.
- Use high pressure sodium lamps in fixtures.

Fixtures and poles are shown in Section 8.8, Chapter 8-Basewide Standard Details, for all street lights.

## 2. Parking Lot Lighting

Utilize parking lot area lighting, especially in areas of high activity (Figure 3.11-7).

- Use paired luminaires mounted 28 feet high in an opposite arrangement (Figure 3.11-8).
- Provide a 30-inch tall concrete base to protect light fixtures from vehicles.
- Single mounted luminaires are permitted when "pairs" are not feasible or necessary.
- Illumination level for parking lots is a minimum of 0.5 footcandles.
- Spacing of fixtures is determined by level of illumination required.
- Use light fixtures and poles as shown in Section 8.8 for all parking lights.

## 3. Signage Lighting

Lighting for signage is important for nighttime directions.

- Use ground level fixtures to illuminate cantonment identification entry monument and Headquarters identification signs (Figure 3.11-9) Fixtures shall be limited to those identified in Section 8.8.
- Place ground level fixtures into the sign pedestal to minimize damage and maintenance.
- Where electrical power is unavailable, solar powered spot lighting is recommended for cantonment identification entry monument signs.
- Use wall lights with photocell sensor to illuminate building number or name sign.



Figure 3.11-7: Solo luminaires in San Onofre (52) Area parking lot.

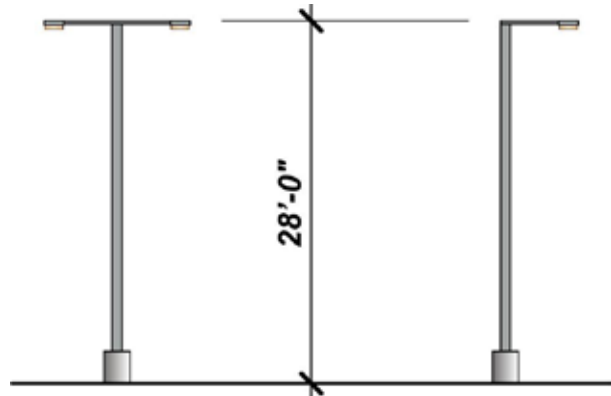


Figure 3.11-8: Standard parking lot light fixture.

4. Pedestrian lighting

Provide well lit primary pedestrian paths oriented to the building's entry. Also light potentially hazardous locations along pedestrians paths such as grade changes, stairs, and crosswalks. Low level "bollard" style lighting is to be avoided due to the potential for vandalism.

- a. Mount pedestrian lighting fixtures on 14 foot high poles (Figures 3.11-10 and 3.11-11). Limit fixtures to those identified in Section 8.8.
- b. Use metal halide lamps for all pedestrian lighting fixtures.
- c. Spacing of fixtures is determined by level of illumination required.
- d. Illumination levels for pedestrian lighting is a minimum of 0.5 foot candles.

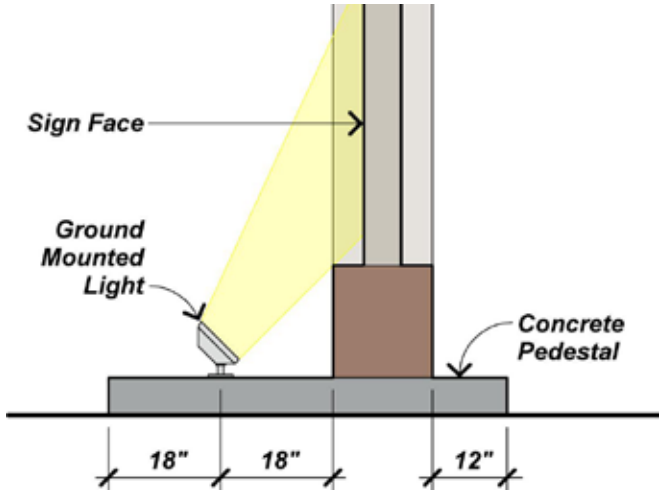


Figure 3.11-9: Typical lighting detail for signage.

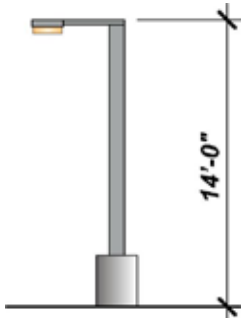


Figure 3.11-10: Typical pedestrian lighting standard.

5. Building Mounted Lights for Entries and Exits

Confine exterior building lighting to entries and exits only. Use vandal resistant light fixtures and types from those identified in Section 8.8. This allows for the following:

- a. Minimizes the visual clutter of fixtures attached to a building surface.
- b. Reinforces the use of proper lighting fixtures/levels for other uses (parking, signage, and pedestrian).
- c. Minimizes maintenance and repair by reducing the number of building-mounted fixtures.

Building-mounted wall lighting will not exceed a maximum height of 15 feet above finished grade/surface. In addition, industrial 'wall paks' are prohibited. Only decorative light fixtures that project light downward are permitted. Wall mounted lights shall not exceed 450 watts and shall be metal halide.



Figure 3.11-11: Pedestrian scale light at BEQ.

## 6. Special Purpose Lighting

Illuminate fixed-in-place "War Prizes" and other static displays with ground level fixtures (Figures 3.11-12,13 and 14).

## 7. Power Supply

Underground all power supplies to lighting.



Figure 3.11-12: Uplighting of static display in the Del Mar (21) Area.

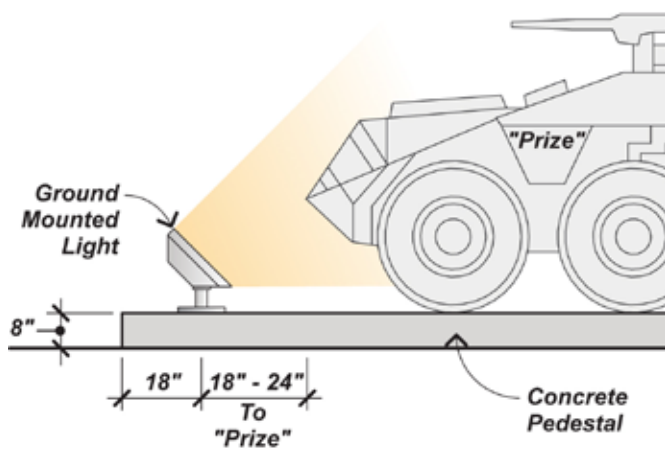


Figure 3.11-13: Typical lighting for "War Prizes."

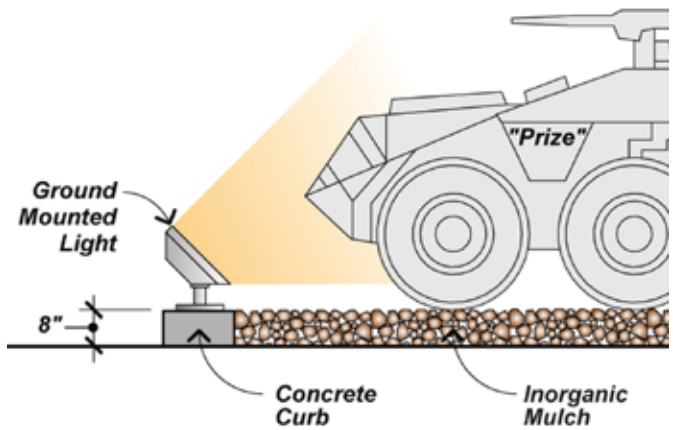


Figure 3.11-14: Alternate pedestal and lighting for "War Prizes."

### 3.12 Site Furniture

Site furnishings include such elements as benches, tables, trash receptacles, flag poles, bus shelters, bicycle racks and military equipment displays. A coordinated system of site furnishings enhances the function and appearance of the station exterior, reinforces the design theme, increases use and enjoyment of the out-of-doors and reduces maintenance requirements.

#### 3.12 A. Observations

As with other components of the Camp Pendleton exterior environment, there is great diversity in the design and detail of existing site furnishings. These general observations pertain to the entire Base:

1. There is little design coordination between existing site furnishings (Figure 3.12-1).
2. The locations of site furnishings and the character of surrounding development are not always inviting to use or supportive of the intended function.
3. Self-help projects use a variety of materials and site furniture.
4. Provisions for barrier-free access are generally lacking (Figure 3.12-2).
5. Display of military “War Prizes” is inconsistent, unconsolidated, and appears temporary (Figure 3.12-3).
6. Site furniture is in poor condition and in need of replacement at many of the recreation areas.
7. Site furniture has been improperly located such as bike racks in high pedestrian areas, benches and chairs near doorways, and bus shelters located too close to roadways.



Figure 3.12-1: Barbecue unit at Building 1244.



Figure 3.12-2: Non ADA compliant furnishings at Lake O'Neill.



Figure 3.12-3: “War Prize” vehicle display at entrance of San Onofre Area.

### 3.12 B. Objectives

The objectives when selecting site furnishings are to develop a variety of elements suited to the Base's environment, supportive of its design theme, and related to each other by compatibility of material, color, form and design detail. Also, by establishing a durable furniture specification, the cost and time spent for replacements will be kept to a minimum. Objectives are as follows:

1. Achieve unity of appearance among the various elements through repetitive use of common details (Figure 3.12-4).
2. Select site furniture that is durable, low-maintenance, and where possible, made of recycled, vandal-resistant materials.
3. Use furnishings compatible with signing, lighting and other related components (Figure 3.12 -5).
4. Keep the number of different furnishings to a minimum and their designs simple and straightforward.
5. Give careful consideration to the location of each furnishing, including military "war prize" displays, to the surrounding environment.
6. Site selection for furnishings must take into account the comfort and convenience of users, as well as the functional requirements of the elements.
7. Wherever possible, group compatible furnishings together in a mutually-supporting composition.
8. Design sitting areas, tables, drinking fountains, bus shelters and similar furnishings for barrier-free access.

### 3.12 C. Design Process

The majority of existing site furnishings do not meet the stated objectives. Rather than document existing conditions as a basis for establishing a plan and program, use the following process:

#### 1. Determine Needs:

Conduct an overview analysis of each cantonment to determine needs for site furnishing as evidenced by patterns of activity.



Figure 3.12-4: Consistent style of site furnishings at the MCX in Mainside.

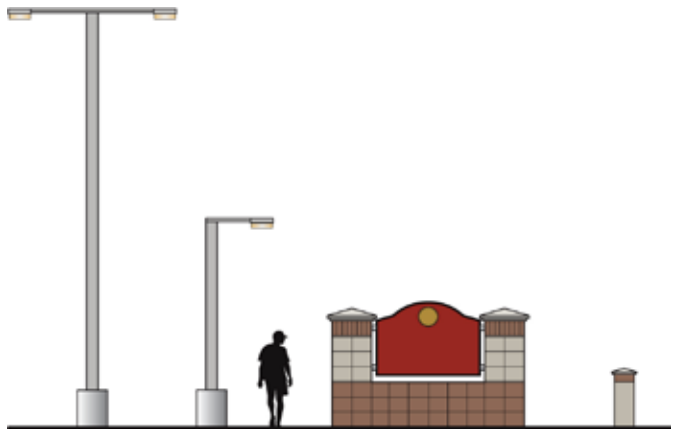


Figure 3.12-5: Consistent site furniture selection will lead to an enhanced appearance at Camp Pendleton. It will also improve the overall function by simplifying the selection of new and replacement fixtures.

#### 2. Site Furnishing Plan and Program:

Prepare a general site furnishing plan and implementation program for each cantonment area. This plan/program identifies the removal, replacement, relocation, or installation of new site furniture.

#### 3. Procedures:

Submit work requests for the installation of any site furniture to the Public Works Department for review and approval prior to installation. Include in the work request those items outlined in Chapter 11-Submittal Requirements for Concept/Design Development.



### 3.12 D. Site Furniture Guidelines

For the sake of consistency, durability, economy and proven design quality, it is desirable to use manufactured, "off-the-shelf," site furniture whenever possible. Manufactured furnishings compatible with the desired theme and with one another have been selected for use throughout the Base and are noted in Section 8.9-Basewide Standard Details. The manufacturer sheets are for reference to establish design type only. Substitutions for "like" or similar products are acceptable, as approved by Public Works Department.

#### 1. Benches and Tables

- Locate benches and tables in response to demonstrated or anticipated user needs for waiting, resting, socializing or lunch time activities.
- Select or develop settings that take best advantage of desirable views and environmental conditions (Figure 3.12-6).
- Set benches and tables with a minimum two foot clear space from adjacent sidewalk edge and provide a paved surface all around for ease of access and maintenance.
- Provide a paved space of four feet by four feet at the end of benches or tables where wheelchair access and parking is desired (Figure 3.12-7).
- Provide benches with backrests where long term sitting is anticipated.
- Refer to details in Section 8.9 for standard benches and tables.

#### 2. Drinking Fountains

- Locate drinking fountains only where justified by the level of activity such as at recreation areas, classrooms, or heavily used outdoor eating areas.
- Situate drinking fountains to be easily accessible from adjacent paved areas and provide a paved fountain pad four feet by four feet to accommodate wheelchairs (Figure 3.12-8).
- Refer to detail Sections 8.9 for standard drinking fountains.

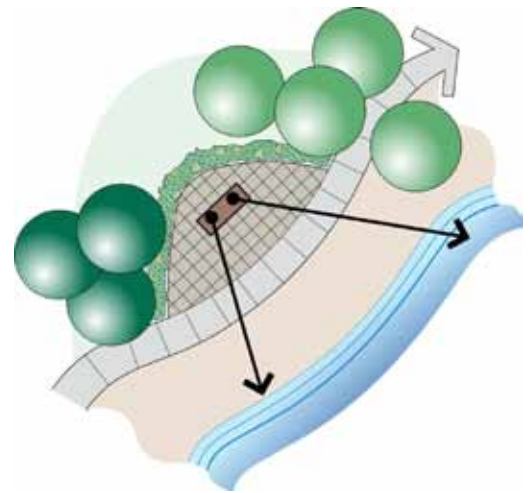


Figure 3.12-6: Camp Pendleton has many development opportunities that can take advantage of the views.

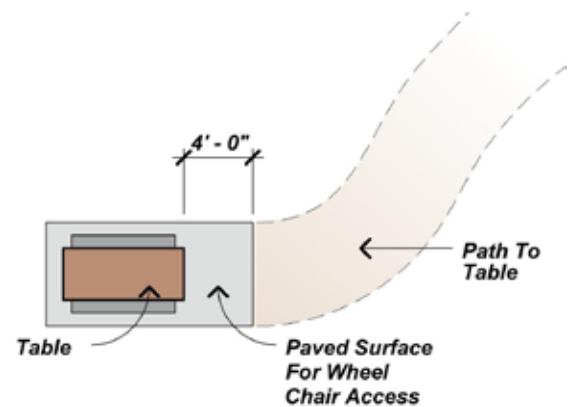


Figure 3.12-7: Picnic layout for wheelchair access.

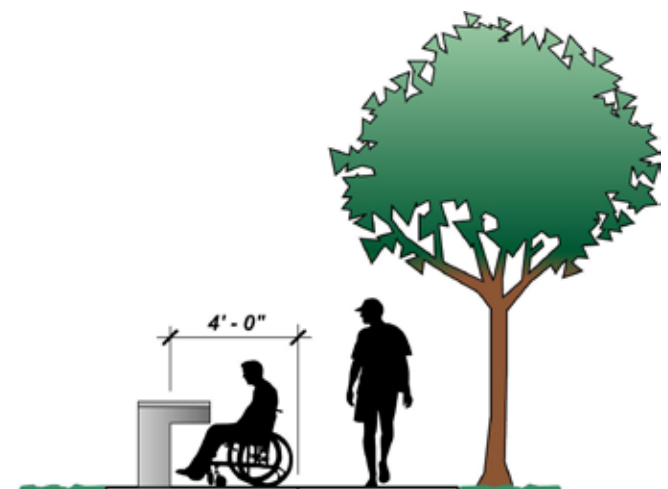


Figure 3.12-8: Provide drinking fountains that accommodate wheelchairs.

### 3. Vendor Telephone Booths

First choice for telephone vendor locations are inside an existing facility or building.

- a. Locate outdoor telephone vendors in area where heavy use is anticipated. The site must be easily accessible to pedestrians and provide sufficient customer and staff parking (Figure 3.12-9).
- b. Provide paved paths to the facility from parking area and or adjacent buildings.
- c. Provide temporary or permanent parking per Section 3.8-Parking.
- d. Temporary structures of any kind are not permitted.
- e. Construct new vendor structures from materials outlined in Section 3.5- Architecture (Figure 3.12-9). Remove structures when no longer necessary.



Figure 3.12-9: Typical telephone Vendor shelter no longer in use

### 4. Bus Shelters

Refer to Section 3.15 for Bus Shelter information.

### 5. Trash Receptacles and Recycling Containers

- a. Locate trash receptacles with benches, tables and other appropriate site furnishings at accessible locations that will encourage use and facilitate trash pick-up (Figure 3.12-10).
- b. Locate receptacles so as not to obstruct the flow of pedestrian traffic (Figure 3.12-11).
- c. For standard trash receptacles, see Section 8.9.
- d. Locate recycling containers in response to demonstrated or anticipated user needs.
- e. Select recycling containers per Section 8.9.
- f. For large scale trash bins and enclosures, see Sections 3.16 and 8.9.



Figure 3.12-10: Typical arrangement for site furniture.

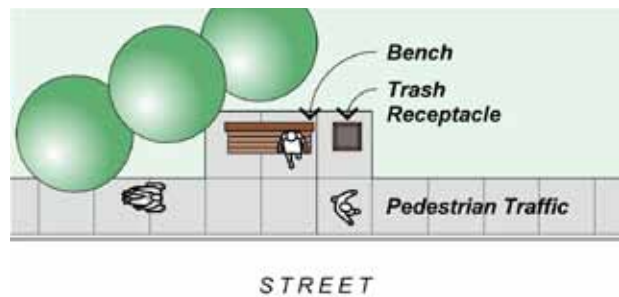


Figure 3.12-11: Locate benches and trash receptacles out of pedestrian traffic.

### 6. Monuments, Memorials and Military Equipment Displays

- a. All memorial or plaques are bronze set into a concrete block monument. See Section 8.7.
- b. Locate all military equipment displays at the entrance to the cantonment with final placement approved by the AC/S Facilities.

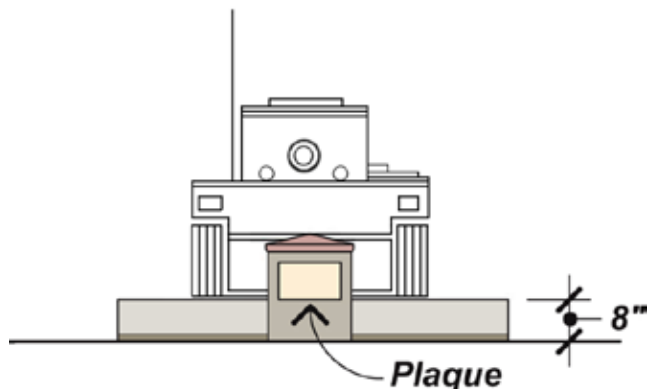


Figure 3.12-12: "War Prize" display with proper signage.

- c. For traffic safety, do not hinder vehicle visibility at intersections with the placement of military static displays.
- d. Set military displays on a concrete pedestal, disintegrated granite, or inorganic mulch a minimum of eight inches above the finish grade (Figures 3.12-12 and 13).
- e. Light military displays with ground-mounted fixtures attached to the concrete pedestal (Figure 3.12-13). See detail in Section 8.8.

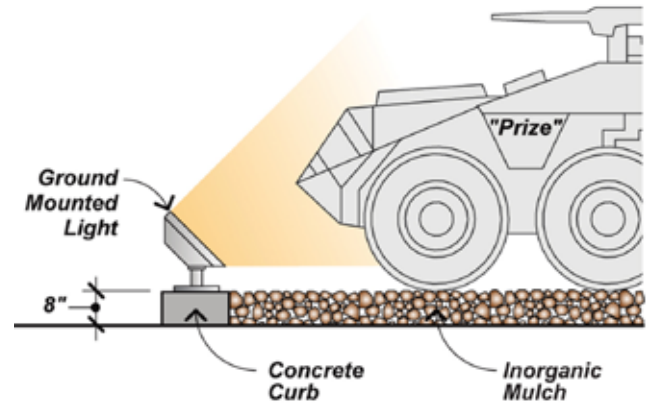


Figure 3.12-13: Alternate pedestal for "War Prizes."

**7. Above Ground Storage Tank**

See section 3.17 for design, screening and information on Above Ground Storage Tanks.

**8. Flagpoles**

- a. Provide flagpoles that are round, tapered, anodized aluminum 25 feet high with a hinged base for ease of maintenance. See Section 8.9.
- b. Provide flagpoles with a concrete base a minimum of 18 inches by 18 inches and raised six inches from the finish grade.
- c. Avoid a proliferation of flagpoles by confining them to landmark, gates or entry locations.

**9. Bicycle Racks and Storage**

- a. Use standard bicycle racks throughout the Base.
- b. Place bicycle racks at conveniently accessible locations in conjunction with building entrances. Locate so as not to impede pedestrian traffic or detract from the quality of the entry environment (Figure 3.12-14).
- c. Place bicycle racks in publicly visible areas to ensure security.
- d. Refer to detail in Section 8.9 for standard bicycle racks and storage containers.

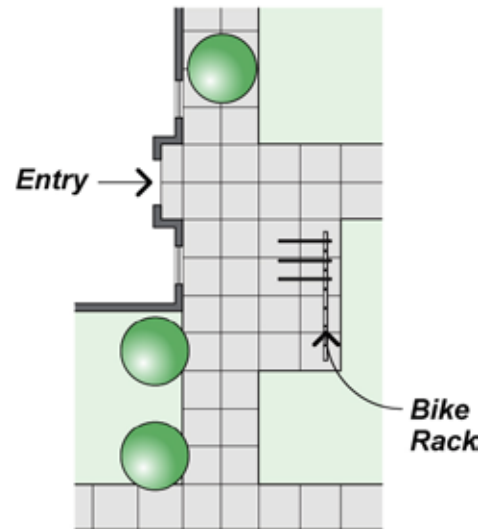


Figure 3.12-14 : Typical location for the placement of bike racks.

**10. Bollards**

- a. Use bollards in selected locations to control traffic movements and separate vehicular from pedestrian traffic (Figure 3.12-15).
- b. Provide removable bollards to permit occasional service and emergency vehicle access where necessary. If access is not necessary, bollards may be permanently fixed. See Section 8.9.

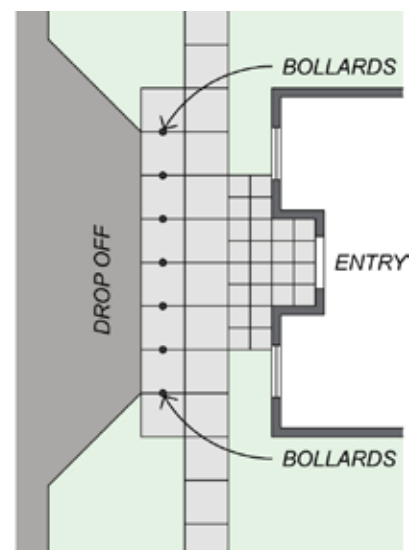


Figure 3.12-15: Bollards at vehicle drop off.

- c. Use bollards at Basewide gates for added security, lighting and safety, as needed.
- d. Bollards may also be used in conjunction with metal chains to outline an area for special consideration.
- e. Use standard bollards per detail in Section 8.9.
- f. Bollards may also be used to identify accessible parking per detail in Section 8.9.

### 11. Tree Grates and Planters

- a. Use tree grates and planters in selected plazas, building entries, and walkways where an urban feeling is desired and large paved areas are necessary. Use standard details in Section 8.9.

### 12. Tree Guards

- a. Use tree guards in selected plazas, courtyards, and building entries where an urban setting is desired (Figure 3.12-16).
- b. Use standing tree guards per details in Section 8.9.

### 13. Self Help Shelters

- a. Do not construct self help shelters as temporary structures.
- b. Construct shelters with material outlined in Section 3.5- Architecture.
- c. Select site furniture for self help shelters from this section.

### 14. Barbecue Units and Barbecues with Overhead Structures

- a. Locate barbecue units in response to demonstrated or anticipated user needs.
- b. Locate barbecue units in conjunction with benches, tables, trash receptacles, and other appropriate site furnishings (Figure 3.12-17).
- c. Barbecue units can be located at BEQs, at recreational facilities, and in residential open space areas.
- d. Select barbecue units per detail in Section 8.9.

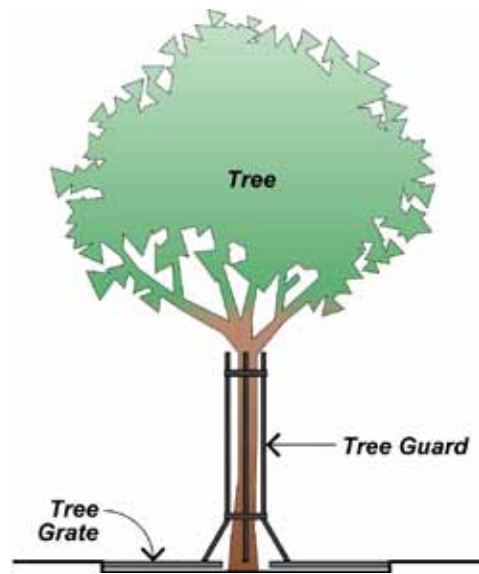


Figure 3.12-16: Typical tree guard detail.

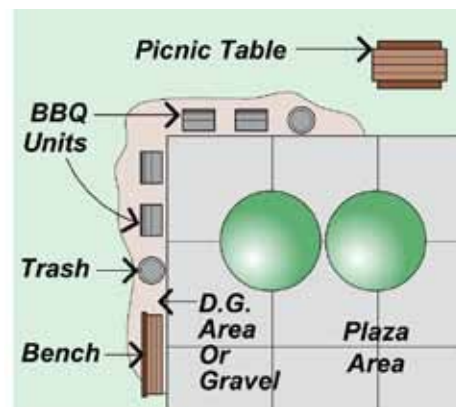


Figure 3.12-17: Typical layout for barbecue areas.

### 3.13 Screens/Walls/Fences

Many unsightly aspects of the Base exterior could be made more acceptable through the use of consistent and uniform screening. Parking lots, storage areas, commercial service areas, trash containers, substations, roof-mounted equipment, and similar functional elements could benefit from screening by fences, walls, and planting.

#### 3.13 A. Observations

The following are general issues identified within Camp Pendleton:

1. Many areas at Camp Pendleton are visually impacted by unsightly objects located within view of major roads and entries (Figure 3.13-1).
2. Roof equipment is exposed on many older buildings (Figure 3.12-2).
3. A variety of screening materials are used and many are in a state of disrepair.
4. Trash enclosures are not provided for dumpsters (Figure 3.12-3).

#### 3.13 B. Objectives

The primary objective for screening guidelines is to minimize unsightly areas' impact on operations and appearance.

1. Screen unsightly areas and objects from view.
2. Screen parking from primary and secondary vehicular and pedestrian paths.
3. Screen undesirable views from building entries, primary work places, and residential areas.
4. Standardize screening elements and details.
5. Use screen materials that are consistently durable and easily maintained.
6. Use high-quality temporary screening capable of being easily removed and relocated.
7. Screen roof-mounted equipment.



Figure 3.13-1: Above ground storage tanks at MASS (32) Area.



Figure 3.13-2: Exposed roof equipment at Naval Hospital (27) Area.



Figure 3.13-3: Exposed trash bins at Edson Range (31A) Area.

### 3.13 C. Design Process

Standardization of Camp Pendleton screens, walls and fences will require a plan and program for orderly change and for new development that includes:

#### 1. Existing Conditions Map and Analysis

Prepare a map showing the location of existing screening. Note type of screen, condition, and guideline conformance or non-conformance. Identify locations where screening is needed, and describe conditions and requirements.

#### 2. Screening Master Plan

Prepare a plan and implementation program for screening removal, replacement relocation, and new installation (Figure 3.13-4).

#### 3. Procedures

Submit work requests for the installation of any screening to the Public Works Office for review and approval prior to installation. Include in the work request those items outlined in Chapter 11-Submittal Requirements for Concept/Design Development.

### 3.13 D. Screening Guidelines

#### 1. Walls

- a. Use screen walls at highly visible locations and where total view blockage is desired.
- b. Construct walls from concrete masonry blocks. Match color to nearby buildings. Height may vary according to need, but construct the wall a minimum of two feet higher than the object being screened (see Figure 3.13-5).

#### 2. Fences

- a. Use fences where safety and security are needed, such as around electrical substations, and where partial view blockage is desirable, such as at service courts and materials storage areas.
- b. Augment fences with landscaping where security is not required and screening is desired. Maintain a minimum distance of four feet between fencing and landscaping (Figure 3.13-6).
- c. Construct screen fencing. See Section 8.10.
- d. Construct security fencing. See Section 8.10.



Figure 3.13-4: Lack of screening of materials yard in San Mateo (62) Area.

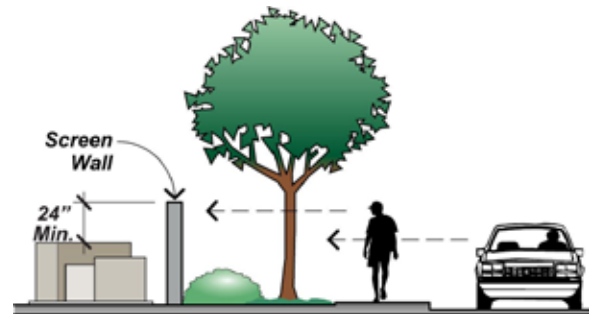


Figure 3.13-5: Typical detail for screen wall.

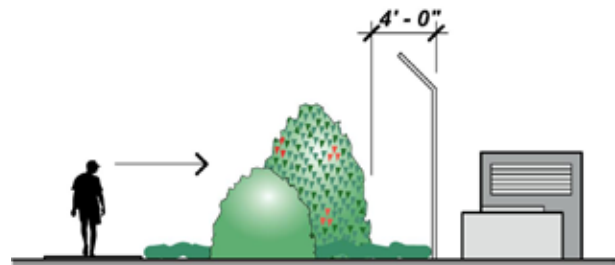


Figure 3.13-6: Where security is not an issue, use landscaping to help screen storage areas, utility equipment, and other unsightly areas.

### 3. Parking Areas

Set back parking areas adjacent to major arterial and collector streets 30 feet from the edge of the parkway and screened with one of the following:

- Four foot high wall (three foot minimum) and plant material higher than two feet.
- Planted berm higher than four feet and should have a natural appearance (Figure 3.13-7).
- Planted material higher than three feet.

### 4. Trash Enclosures

- Construct trash enclosures with the same material as screen walls.
- Provide enclosure sized to fit three dumpsters, two solid waste and one recycling.
- Place trash enclosures to facilitate front loading by trash vehicles (Figure 3.13-8).
- Refer to Section 3.16-Trash Enclosures, for more information.

### 5. Utilities

- Screen propane tank areas with plant material (Figure 3.13-9).
- Screen utility substations with fencing and landscaping material per detail in Section 8.10 and Section 3.6-Landscaping.

### 6. Roof-Mounted Equipment

- Screen roof-mounted equipment from view or make an integral part of the building design. See Section 3.5-Architecture.
- Use ribbed or perforated metal siding material for roof-mounted screens per detail in Section 8.10 (Figure 3.13-10).

### 7. Plant Material for Screening

Use plant materials for screening where space permits and safety and security are not required. Refer to the Base Approved Plant List in Section 3.6 for plant material suitable for screening.

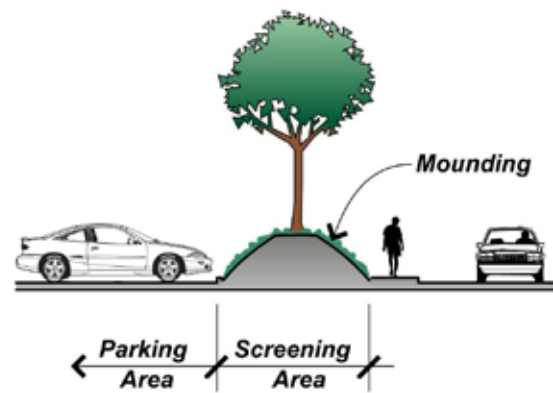


Figure 3.13-7: Parking lot screened with mounding and plant material.

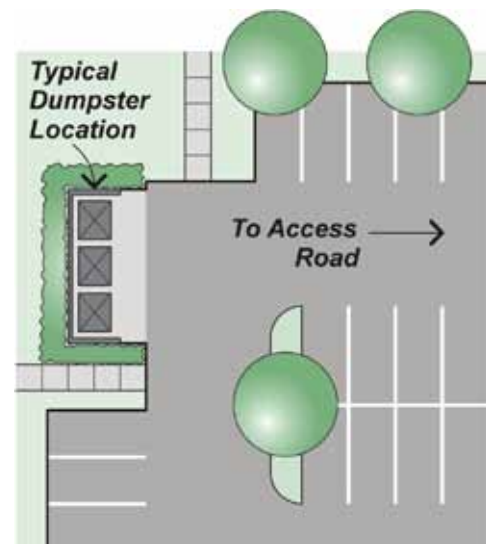


Figure 3.13-8: Typical layout for dumpster.

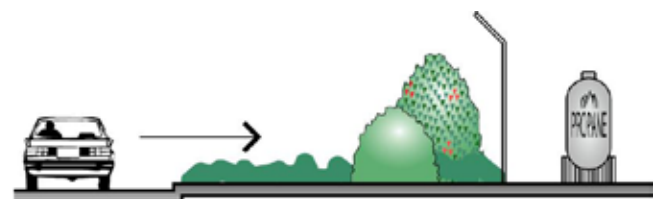


Figure 3.13-9: Screen utility areas from major roadways.

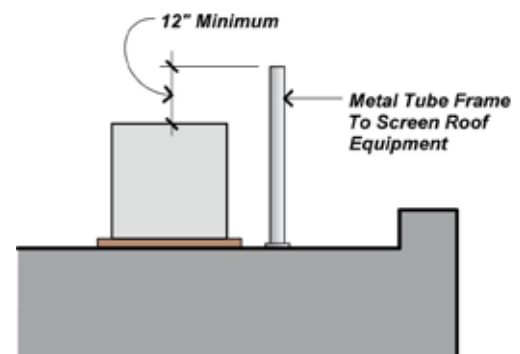


Figure 3.13-10: Example of non-compliant roof mounted equipment screen.

### 3.14 Utilities

The Base utility systems carry electrical power, gas, water, high temperature hot water, storm drainage, and communication services. Most often, utilities are located in conjunction with street rights-of-way. There are many examples where the Base utility systems have a negative impact on the function and appearance of the streetscape corridor. Use of these guidelines will minimize utility impacts.

#### 3.14 A. Observations

Camp Pendleton has a number of utility appearance problems that have a negative impact on the exterior environment.

1. In many locations, the electrical distribution system is above ground, and there is a clutter of wires and poles.
2. No specific storm drain system is present at Camp Pendleton. Most runoff is collected in streets and flows to the lowest point in the area. Storm water also runs in open ditches (Figure 3.14-1).
3. Evaporation ponds are used to store excess treated wastewater. This water emits odors and could instead be useful for Base irrigation purposes.
4. Utility boxes are sited in hazardous locations and create visual clutter.
5. Propane tanks and other similar facilities are visible from the main roads that serve the Base (Figure 3.14-2).

#### 3.14 B. Objectives

The primary goal for the utility guidelines is to minimize the impact of utilities on operations and appearance.

Objectives are to:

1. Place electrical utilities underground wherever possible.
2. Screen imposing utilities such as electrical substations, transformers, propane tanks, and other highly visible utilities (Figures 3.14-3).
3. Improve and provide storm drain system.
4. Provide substantial screening for waste water treatment plants that face public areas, including roads. This screening may require the use of walls and tall plant material.
5. Make use of treated water for landscape irrigation purposes. This will reduce the burden on Camp Pendleton's potable water supply.



Figure 3.14-1: Open drainage swale in Pico (24) Area.



Figure 3.14-2: Exposed propane tank at Naval Hospital (27) Area.



Figure 3.14-3: Appropriate screening method in Chappo (22) Area.



### 3.14 C. Utility Guidelines

The guidelines to obtain the objectives outlined are as follows:

#### 1. Power and Telephone

- Locate all power and telephone distribution lines underground where possible (Figure 3.14-4).
- Screen existing substations and transformers with solid walls and planting. See Section 3.6 for the Base Approved Plant List.
- Locate future substations in low visibility areas.
- Locate all power and telephone lines within current or future easement areas.

#### 2. Sewer and Water

- Continue to locate all sewer and water lines underground.
- Make plans and provisions for future use of treated water for irrigation of landscape, recreation, and turf areas.
- Strengthen the screening and fencing of the sewage treatment facilities, especially along major roads like Vandegrift Boulevard and Stuart Mesa Road.

#### 3. Storm Drainage

- Use curbs and gutters to channel and direct surface run-off from streets and parking areas to storm drain system.
- Provide gutters and downspouts on all buildings and direct flow into a four inch diameter drain pipe pitched to drain out to the curbside opening at the street gutter.
- Use stone rip-rap and vegetation for small storm drainage channels to capture local run-off (Figure 3.14-5). Refer to Section 8.11.
- Provide concrete swales for unimproved storm drains located in open space areas. Refer to Section 8.11.



Figure 3.14-4: Overhead power lines cause visual clutter throughout the Base.

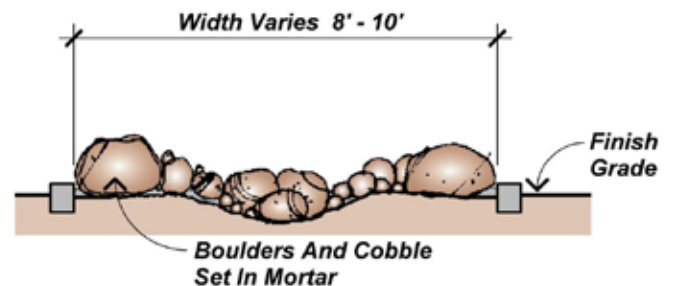


Figure 3.14-5: Typical rip-rap storm drainage detail.

#### 4. Utility Boxes

- a. Group and locate all telephone transfer meters in an unobtrusive area.
- b. Group and locate meters on a wall not facing the street.

#### 5. Irrigation Valves

Group individual irrigation valves in separate boxes together and place below grade.

#### 6. Water Tanks

Follow the example of the existing Base water tanks for future water tanks.

- a. Locate tanks at a high point and place below grade into the hillside.
- b. Make tanks less visible from a distance.
- c. Provide landscaping to minimize the "up-close" views.
- d. Provide plant material for screening per Section 3.6-Landscaping.

#### 7. Utility Easements

- a. Establish a Utility Easement Master Plan.
- b. Reserve in street right-of-way or alleys a location for utility easements. Avoid providing easements in open space or development areas.
- c. Minimize location of Basewide serving utilities easements in residential areas.
- d. Standard requirements for underground utilities in streets can be found in detail in Section 8.11 in Chapter 8 Basewide Standard Details.

### 3.15 Bus Shelters

#### Overview

Bus shelters throughout the Base are inconsistent in design, many are in need of repair and do not best serve the needs of the Base. The coordinated use of bus shelters will enhance the function and appearance of the base exterior, reinforce the design theme and reduce maintenance requirements.

#### 3.15 A. Observations

There are several types of bus shelters in use at Camp Pendleton. The general observations include:

- a. There is no overall uniformity in the design and layout of bus shelters (Figure 3.15-1).
- b. Bus shelters should meet AT/FP criteria, display similar materials as approved for on-base use, be durable, and require minimal maintenance (Figure 3.15-2 and 3).



Figure 3.15-1: Existing bus shelter to be replaced.



Figure 3.15-2: Approved Primary Bus Shelter on Base.

### 3.15 B. Objectives

The goal for bus shelter selection is to implement use of a uniform design supportive of the overall base design theme and related to each other by compatibility of material, color, form and design detail. Objectives are as follows:

- a. Bus shelters will be provided to give protection from wind, rain, and sun with a roof and enclosure on three sides. Side enclosures should be a transparent, unbreakable material to allow for adequate visibility. Bus shelters should not screen any sight lines to pre-existing signs or other key identifiers.
- b. The design of all bus shelters should achieve unity of appearance through repetitive use of color, materials and common details.
- c. The overall theme should be based on consistent use of the selected model. The selected model should be made of durable, low maintenance and vandal-resistant materials.
- d. Carefully consider the location of bus shelters as related to AT/FP criteria, the design of its surrounding environment, and existing conditions.
- e. Bus shelters will not conflict with any sight-visibility triangles, existing utilities, or other improvements.
- f. Locate bus shelters adjacent to walks and set back from the curb a minimum of four feet. Do not obstruct the flow of pedestrian traffic or intersection sight-visibility triangles (Figure 3.15-4).
- g. Bus shelter locations will relate to major pedestrian walkways, and be placed on concrete pads.
- h. Provide barrier-free access to bus shelters (Figure 3.15-5).



Figure 3.15-3: Rear view of Approved Primary Bus Shelter.

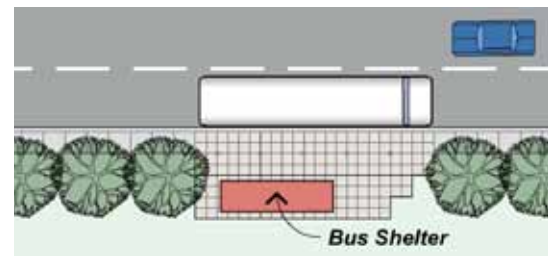


Figure 3.15-4: Bus stop / shelter layout.

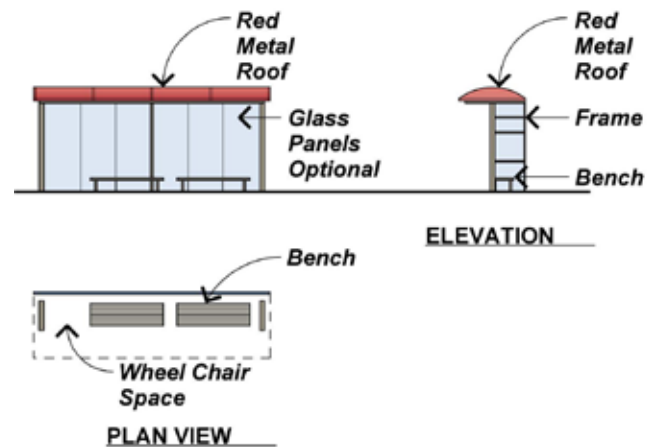


Figure 3.15-5: Primary Bus Shelter.

### 3.15 C. Primary Bus Shelter Specification

For pre-fabricated bus shelter system with solar powered lighting, refer to Chapter 8 – Basewide Standard Details Section 8.9.

### 3.16 Trash Enclosures

These standards provide information and resources for designing solid waste (non-hazardous) and recycling enclosures that will be used by building occupants.

The coordinated design of trash enclosures will enhance the function and appearances of the base exterior, reinforce the design theme, reduce maintenance requirements, and support solid waste and recycling regulations and directives at Camp Pendleton.

#### 3.16 A. Observations

There is variation in the design, layout, detail and recycling capabilities of trash enclosures at Camp Pendleton. The general observations include:

- a. There is little or no design coordination between existing trash enclosures and no overall uniformity in the design and layout of trash enclosures.
- b. Trash enclosures must meet AT/FP requirements, display similar materials as approved for on-base use, be durable, and require minimal maintenance (Figure 3.16-1).

#### 3.16 B. Trash Enclosure Objectives

The goal for trash enclosure design is to create a uniform design supportive of the overall base design theme and related to each other by compatibility of material, color, form and design detail. The location of trash enclosures has a significant visual impact and must be addressed as part of an overall building design and incorporated in site planning.

#### 3.16 C. Trash Enclosure Guidelines

##### 1. Location and Materials

- a. Locate trash enclosures to be inconspicuous such that their presence does not detract from the overall design focus and layout of the surrounding area (Figures 3.16-2 and 3.16-3).
- b. Avoid locating trash enclosures along major circulation or use areas (Figure 3.16-3). Trash enclosures are to be directly accessible by way of a paved service drive or parking lot with adequate overhead clearance for collection vehicles (Figure 3.16-4).



Figure 3.16-1: Trash enclosure in the Del Mar (21) Area.



Figure 3.16-2: Unenclosed dumpsters located in the parking lot at Chappo (22) Area.



Figure 3.16-3: Unenclosed dumpsters in Edson Range located along main road through cantonment.

- c. Driveways or aisles shall provide unobstructed access for collection vehicles and personnel and provide at least the minimum clearance required by the collection methods and vehicles utilized by the designated collector.
- d. Provide vertical clearance above trash enclosures free of overhead obstructions as required by the collection methods and vehicles utilized by the designated collector.
- e. Consider the location and orientation of trash enclosures as related to AT/FP requirements and the design of its surrounding environment. AT/FP requirements restrict the location of dumpsters to outside the designated unobstructed space from inhabited buildings, billeting and primary gathering areas. In addition, they should face away from structures.
- f. Refer to current UFC 4-010-01, Design: DoD Minimum Antiterrorism Standards for Buildings, for Standoff Distances.

## 2. Access

All enclosures are required to have direct access for collection trucks. Direct access means the collection truck can drive directly up to the bin, and insert the forks into the sides of the bin without the driver having to get out of the truck to move the bin (Figure 3.16-4).

- a. Vehicular path of travel shall have minimal conflict with on-site vehicle and pedestrian circulation patterns.
- b. Driveways and drive aisles leading to enclosures shall be minimum 18 feet wide.
- c. Provide sufficient area for front-end loader collection truck turning radius.
- d. Provide a minimum 50 foot straight approach for access to stationary (no wheels) bins.
- e. Design trash enclosure so each bin can be removed and replaced without having to take out other bins, to avoid stacking, and to maximize access.
- f. For each trash enclosure containing three bins, two bins shall be designated for solid waste (non-hazardous), and one bin shall be for recycling (Figure 3.16-5). At the enclosure opening, the solid waste bins shall be on the left side, and the recycling bin shall be on the right side.



Figure 3.16-4: Enclosure wall around dumpsters along a service road.



Figure 3.16-5: Solid waste and recycling bins shall be placed within an enclosure.

- g. If wheeling (i.e., manually pushing) bins from enclosure to a truck collection area is anticipated, provide minimum ten foot wide concrete pathway with slope less than two percent.

### 3. Trash Enclosure Design

- a. Enclosures shall be built to accommodate three trash bins. See Detail 8.9 L-2.
- b. Incorporate plantings to buffer the visual impact of screen walls. Provide a minimum three foot clearance on each side between screen walls and dumpsters to allow adequate pedestrian and truck access.
- c. Storm water shall be prevented from running into the enclosure. There shall be no storm drain or wastewater connections within the enclosure.
- d. Trash storage areas shall be paved with an impervious concrete surface.
- e. All dumpsters are to be placed on concrete pads with aprons large enough to encompass the bearing points of the service vehicle.
- f. Construct enclosure walls from concrete masonry units. Color should match nearby buildings and screen walls.
- g. Construct a concrete apron extending 10 feet from the enclosure pad the width of the enclosure opening. The enclosure base shall be six inches of concrete over two inches of aggregate base rock. The builder shall provide evidence that construction specs are engineered to withstand up to 20,000 pounds of direct force from a single truck axle.
- h. Wooden rails (Figure 3.16-6) or bollards are not permitted within the enclosure. Instead, an eight inch wide by six inch high concrete curb (at inside perimeter of walls) shall be installed to prevent bins from touching the back and side walls.



Figure 3.16-6: Wooden rails are not allowed within enclosure.

### 3.17 Above Ground Storage Tanks (AST)

Above Ground Storage Tanks (AST's) are commonly used to store gasoline, diesel fuel, oils, lubricants, and other liquids. AST's refer to both permanent, fixed tanks, as well as portable containers 55 gallons or greater in size.

Above Ground Storage Tanks (AST) often have a blighting impact on Base appearance. AST's will benefit from more complete screening than is offered by chain link fence. The coordinated design of AST screened enclosures will enhance the function, appearance of the base exterior, and reinforce the design theme.

#### 3.17 A. Observations

There is a great diversity in the size, configuration, detail, and screening methods of AST's at Camp Pendleton. The general observations include:

- There is no overall uniformity in the design of screening AST enclosures (Figures 3.17-1 to 3).
- AST screening should display similar materials as approved for on-base use, be durable, and require minimal maintenance.

#### 3.17 B. Objectives

The goal for AST screening enclosure design is to create a uniform design supportive of the overall base design theme and related to each other by compatibility of material, color, form and design detail. Objectives are as follows:

- Screen unsightly AST's from view.
- Standardize screening elements. The design of all AST screened enclosures should achieve unity of appearance through repetitive use of colors, materials and common details.
- Visual disorder will be further alleviated by the use of standard screening elements and details.
- All screen material should be durable and low maintenance. High quality temporary screens should also be capable of being easily removed and relocated.



Figure 3.17-1: Typical AST.



Figure 3.17-2: Bollards surrounding AST in Talega (64) Area.



Figure 3.17-3: AST at the Naval Hospital (27) Area, unscreened from view.

- e. Carefully consider the location of AST's as related to AT/FP criteria and the appearance and design of its surrounding environment. AST's shall not be located within required AT/FP stand-off distances.
- f. In new project areas, identify locations where screening is needed and describe conditions and requirements. Prepare a map showing the location of all existing screening. Note type of screen, condition and guideline conformance or nonconformance.
- g. Storage of liquids in AST's requires containment controls that can hold the contents of the AST plus a safety factor (usually 110 percent of the tank capacity).

These secondary containment areas may collect storm water from rain events. Do not disrupt containment areas with planting. Remove dirt, leaves, trash, and weeds from the containment area.

- h. Barrier posts or other means shall be provided to protect tanks from vehicular damage. The tank shall be labeled with the product name and 'no smoking' signs shall be affixed. Tanks shall be adequately grounded or bonded to prevent the accumulation of static electricity.
- i. Locate tanks so as not to restrict circulation, or reduce the number of required parking spaces or vehicle back up space. Adequate space should be available to allow for access to the dispensing mechanism by users without interfering with other circulation needs (Figure 3.17-4).

### 3.17 C. Screening Guidelines

#### 1. Fences

- a. Use fences where safety and security are needed, such as around electrical substations and where partial view blockage is desirable, such as at service courts and materials storage areas.
- b. Construct screen fences (Figure 3.17-5).
- c. Augment fences with landscaping where screening is desired and irrigation is feasible (see Section 3.6–Landscaping). Landscape planting includes trees only. Shrub planting and hedges are not allowed. Do not use fence slats.

#### 2. Plant Material Screens

- a. Do not use plant material only as a screen.
- b. Provide durable steel gates painted to match the district metal trim color in highly visible areas.



Figure 3.17-4: Unobstructed access to AST.



Figure 3.17-5: Chain link fence at AST, still lacks screening.



# Chapter 4

## BASE CANTONMENT AREA DESIGN GUIDELINES

### 4.1 Overview

The Base Cantonment Area guidelines provide the necessary design recommendations for implementing future projects or improvements. A field survey was conducted to review the existing conditions of each Base cantonment area. A description of the area analysis is provided. This analysis outlines the site's unique assets and liabilities.

Recommendations for each cantonment address general solutions with development standards and guidelines identified in Chapter 3. Recommendations may also identify the need for subsequent survey and analysis to provide more specific treatments, as required.



Figure 4.1-2: Graduation ceremony.

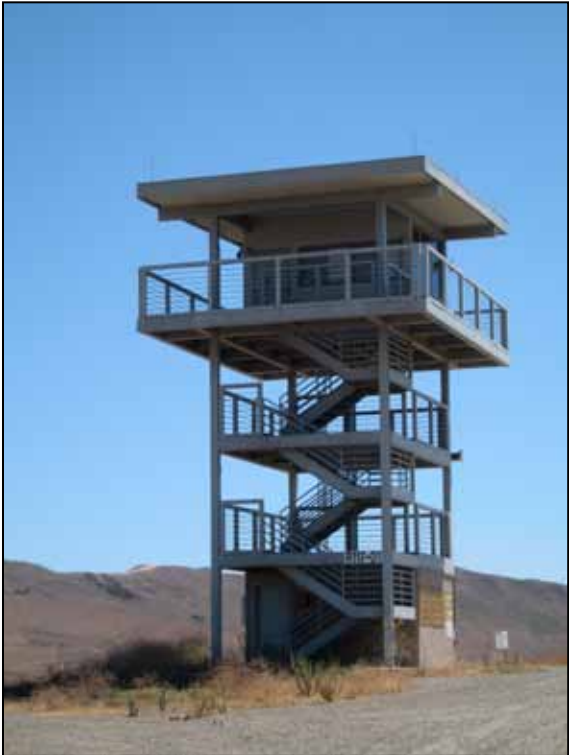


Figure 4.1-1: Observation tower.



Figure 4.1-3: "War Prize."

# HEADQUARTERS- MAINSIDE (11-16) AREA

## 4.2 Headquarters-Mainside (11 thru 16) Areas

Headquarters Mainside Area is the Command Point for the Base and is the most urbanized of all cantonments. The Headquarters Area is located inland approximately 11 miles from Interstate 5, and is centrally located between the San Luis Rey and Fallbrook Gates, the Air Station and the Naval Hospital (Figure 4.2-1). Several sub-areas with noticeably older buildings are slated for redevelopment with more compatible administrative uses, community support, and housing (Figure 4.2-2).

### 4.2 A. Headquarters-Mainside Observations

The following is a summary of the assets and liabilities observed at the Headquarters-Mainside Area that are the basis for specific design recommendations.

#### 1. Assets

- a. Newer buildings establish an architectural direction that can be incorporated into future buildings (Figure 4.2-3).
- b. Many previously developed areas within the Headquarters Area are being retained for future development. This minimizes the need to encroach into undisturbed open space areas and allows existing infrastructure to be reutilized for future projects.
- c. The Headquarters Area has a high concentration of development that includes command, housing, recreation, and commercial activities.
- d. The variety of topography, common to the Headquarters Area, allows for good distant views.
- e. A good example of parking lots that are separated from streets can be seen between the Joint Reception Center and the MCX Complex (Figure 4.2-4).
- f. The Data Processing Center Building 1164 is a good example of site planning, parking, and the



Figure 4.2-2: Headquarters Building 1160



Figure 4.2-3: Paige Fieldhouse in Headquarters Area.

# HEADQUARTERS-MAINSIDE (11-16) AREA-CANTONMENT MAP

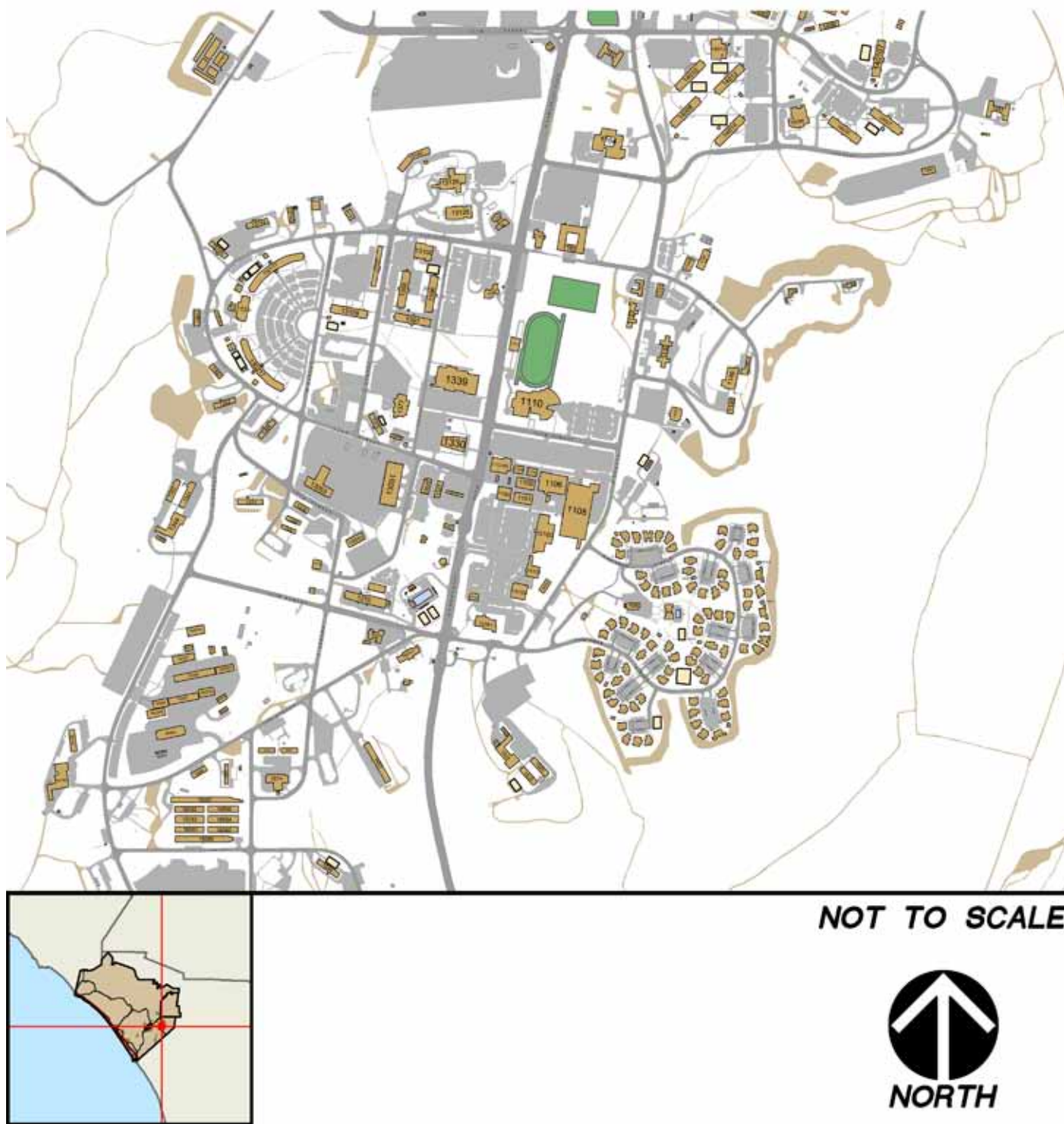


Figure 4.2-1

use of trees as the dominant plant material in the landscape.

- g. The deep setbacks for buildings and parking areas provide opportunities for future streetscape improvements.
- h. Mature landscaping (pines) in the hillside development, above 'A' Street, is attractive and should be retained (Figure 4.2-5).
- i. Pedestrian access is provided along Vandegrift Boulevard, although intermittent.

**2. Liabilities**

- a. There are a variety of older building types, materials and colors, creating a non-cohesive style to the Base architecture.
- b. There is an insufficient sense of architectural hierarchy and landmarks to identify this area as the Base "Headquarters" Area.
- c. Many of the older buildings are showing signs of disrepair and neglect (Figure 4.2-6).
- d. Many buildings are not sited to allow for shared or group parking areas.
- e. Unimproved parking areas are not clearly defined, contribute to erosion and damage vehicle suspension. An example can be seen at Building 1331 (Figure 4.2-7).
- f. Pedestrian circulation is either non-existent or ends abruptly at parking areas, buildings and along streets.



*Figure 4.2-5: Pines trees along 'A' Street.*



*Figure 4.2-6: Older building in need of repair or replacement.*



*Figure 4.2-4: Landscape buffers are used to separate parking areas from streets.*



*Figure 4.2-7: Parking and street without separation.*

- g. Vehicle circulation is not separated from parking areas. Examples of this condition can be seen at Buildings 1323, 1339, 1330 and parking on 17th Street between Buildings 1252 and 1224.
- h. There are many hazardous intersections. An example of this condition can be seen on 13th Street at 'D' Street at Building 13131 (Figure 4.2-8).
- i. Landscaping in most areas is poorly maintained, or does not exist.
- j. Parking areas are poorly landscaped (Figure 4.2-9).
- k. There is no consistent signage program.
- l. Although most sign sizes and materials are the same, the sign bases or posts are varied.
- m. Site furniture is not consistent including parking and street light fixtures (Figure 4.2-10).
- n. Storage, trash, and utility areas are not properly screened.
- o. Security fencing or fencing around storage areas is in disrepair in many areas.
- p. Much of the Headquarters Area is still serviced by above grade utilities, which adds to visual clutter.

**4.2 B. Recommendations**

The following is a summary of recommendations for improvements based on the existing assets and liabilities at the Headquarters Area.

**1. Land Use**

- a. To assist in the development of future projects or the reuse of existing facilities, refer to the Land Use Compatibility Matrix in Section 3.3- Land Use.
- b. For the appropriate location of future developments, refer to the Basewide Master Plan.



Figure 4.2-8: Offset intersection at 13th Street and 'D' Street.



Figure 4.2-9: Limited landscape at a Headquarters parking lot.



Figure 4.2-10: Example of cohesive site furniture in front of the MCX.

## 2. Site Planning

- a. For new developments, refer to the guidelines established in Section 3.4-Site Planning.
- b. Review existing development areas and determine where it would be possible to consolidate parking, establish pedestrian connections, and improve the overall efficiency and economy of the Area.

## 3. Architecture

- a. Future developments are to follow the guidelines established in Section 3.5-Architecture.
- b. Establish an aggressive program to eliminate buildings that are beyond economical repair.
- c. For buildings that remain, establish a program for rehabilitation. See Section 3.5.
- d. Use approved colors for existing facilities that require painting. See Appendix A Color Board/ Building Materials.
- e. Do not paint new concrete or masonry block structures.

## 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6- Landscaping.
- b. Refer to Section 3.6 when upgrading the Headquarters Area landscape or when establishing a maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9-Walkway Standards. Streetscape designs are subject to approval by the Public Works department and may be required to align with ongoing streetscape programs.
- d. Use Base Approved Plant List (Section 3.6) when selecting replacement plants or new planting for Headquarters Area.
- e. When preparing landscape plans for new development, use the guidelines outlined in Section 3.6-Landscaping (Figure 4.2-11).
- f. Use trees as the dominant landscape planting element in all developed areas.



Figure 4.2-11: Good example of BEAP landscape at the Paige Fieldhouse.

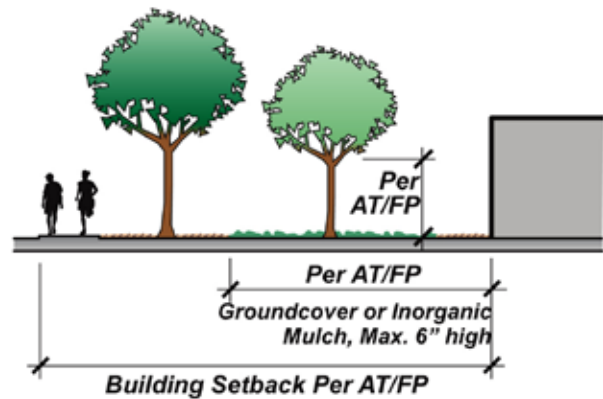


Figure 4.2-12: Typical landscape treatment per AT/FP guidelines.

- g. Minimize the use of turf wherever possible and introduce groundcover with low water requirements (Figure 4.2-12).
- h. Inorganic mulch can also be used as groundcover. Use only one color and size. See detail in Section 8.3 A-7 (Figure 4.2-12).
- i. Install erosion control planting for areas that show signs of erosion and on slopes that exceed 3:1.
- j. Establish a streetscape planting of palms in the rights-of-way on the:
  - West side of Vandegrift Blvd.
  - South side of 16th Street.
  - Plant palms 40 feet on center. Use palms an average of 12-15 feet in height. See planting Detail 8.3 A-4.
- k. Surround the parking lot (Figure 4.2-13) at the MCB Headquarters building with palms:
  - Provide a terminus to the palms lining Vandegrift Boulevard from the Oceanside and San Luis Rey Gates.
  - Establish a focal point for the Headquarters Area.
  - Use palms an average of 12-15 feet in height.
  - Plant palms 40 feet on center.
- l. Provide streetscape planting for the other collector streets. Plant with:
  - Pines - 13th and 14th Streets.
  - Pines - 'A' Street and 4th Street.
  - Plant trees 40 feet on center.
- m. Provide palms at cantonment entry identification signs (Figure 4.2-14):
  - Plant palms in an informal group of 5-7 palms (Figure 4.2-14).
  - Use palms 10-12 feet in height and plant 8 to 10 feet apart.

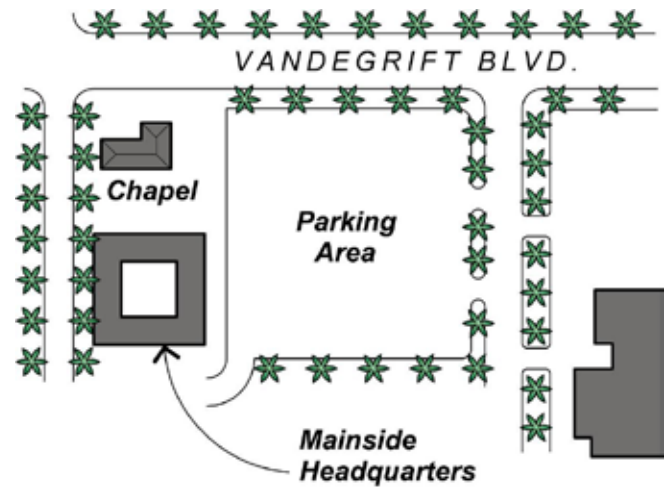


Figure 4.2-13: Install palms to help denote the location of the Mainside Headquarters building.

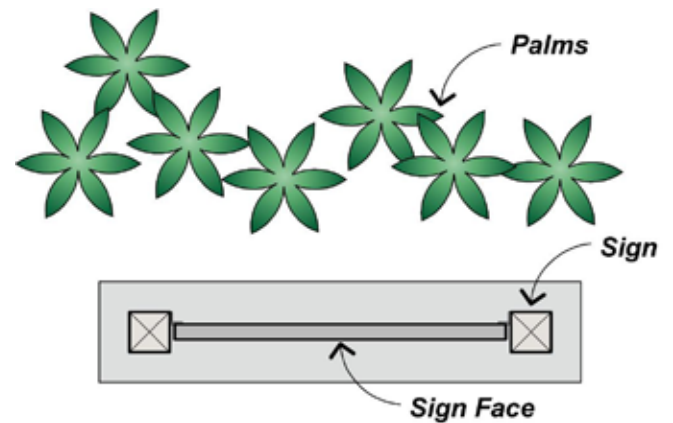


Figure 4.2-14: Informal arrangement of palms at entry sign.

## 5. Street Design

- a. Develop a survey and evaluation of the existing street conditions as outlined in Section 3.7-Street Design.
- b. Resolve all offset intersections by lining up to 90 degrees or separating intersections per the guidelines outlined in Section 3.7 (Figure 4.2-15).
- c. Clearly define streets from parking areas at locations such as (Figure 4.2-16):
  - Building 1323
  - Building 1330
  - Southeast of Building 1361
  - Buildings 1224 and 1271
- d. Provide standard street right-of-way for all major streets. See Section 3.7 - Street Design.
- e. On-street parking is not permitted.
- f. Eliminate direct access to parking areas from Vandegrift Boulevard.
- g. Establish parking access requirements per Section 3.7 - Street Design.

## 6. Parking

- a. For future developments prepare a survey and analysis of the existing parking conditions as outlined in Section 3.8-Parking.
- b. Provide an accurate parking demand based on the existing uses (Refer to Section 3.8). Particular attention should be paid where overflow parking is occurring such as:
  - Building 1331
  - Building 13171
- c. Seal/slurry coat and re-stripe when repairing parking lots. Re-stripe all parking areas to the stall size outlined in Section 3.8-Parking (Figure 4.2 -17).
- d. Provide for accessible parking stalls per ADA requirements.
- e. Improve all temporary parking lots. No temporary parking lots are permitted in the Headquarters Area.

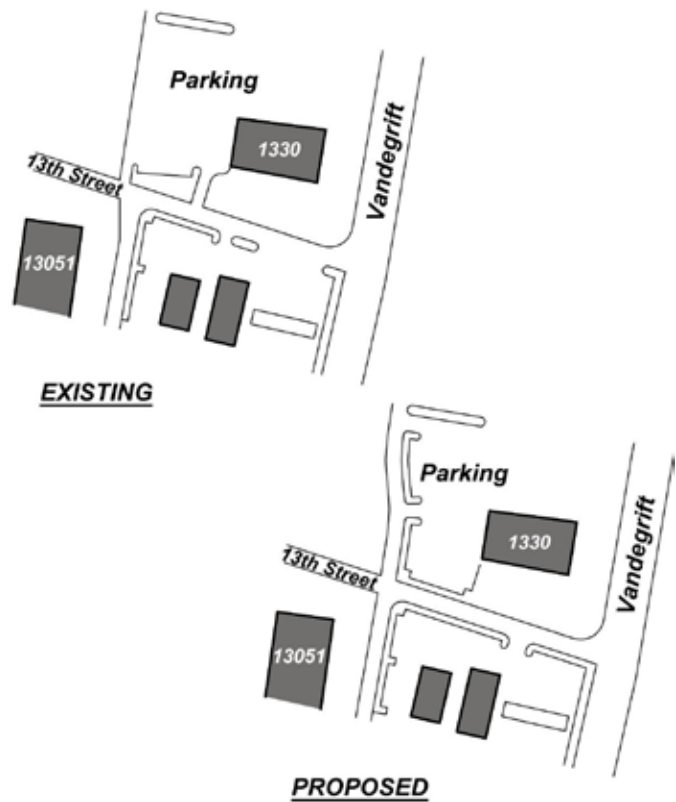


Figure 4.2-15: Redesign of intersection at 13th Street.

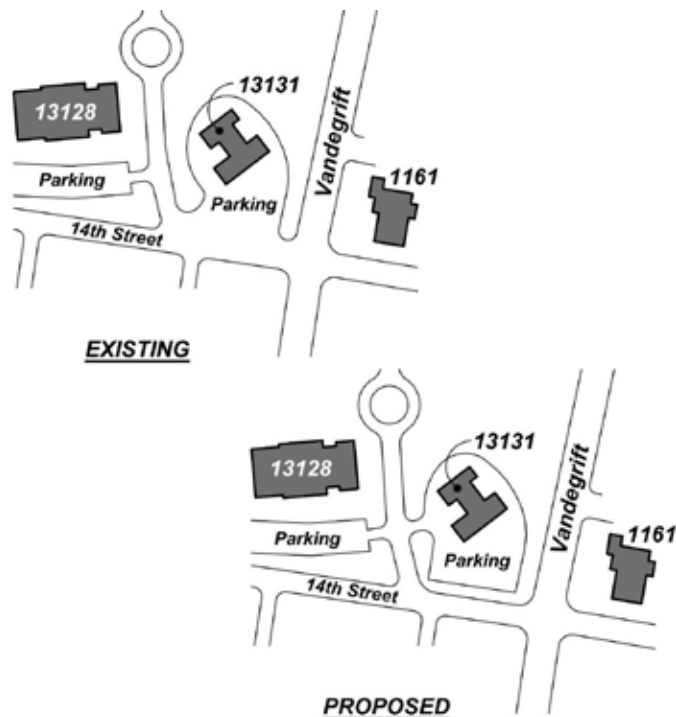


Figure 4.2-16: Redesign of parking lot at Building 13131.



- f. Provide landscape improvements in all parking lot areas per Section 3.6-Landscaping.
- g. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- h. For repair, and when economically feasible, replace asphalt curbs with concrete. See detail in Section 8.4.
- i. The use of asphalt curbs is strictly prohibited.
- j. Provide lighting fixtures in all parking areas that are used at night, per Section 3.11-Lighting.

**7. Pedestrian Circulation**

- a. Develop a survey and analysis of the existing sidewalk and pedestrian conditions as outlined in Section 3.9-Pedestrian Circulation.
- b. Provide sidewalk connections to major facilities from surrounding uses that have heavy pedestrian traffic (Figure 4.2-18).
- c. Provide concrete sidewalks along minor arterial (Vandegrift Blvd.) and local collector streets per Section 3.9 (Figure 4.2-19).
- d. Provide sidewalk connections from residential areas (such as Serra Mesa) to commercial uses (such as Exchange Building 1108).

**8. Signage**

- a. Prepare a long range plan to replace all signs to conform to the Section 3.10-Signage and details in this document.
- b. Establish two Headquarters cantonment identification entry signs on:
  - East side Vandegrift Boulevard south of 4th Street.
  - West side of Vandegrift Boulevard south of 16th Street.
- c. For safety and functional purposes, name all streets.
- d. Provide street signs at all intersections.

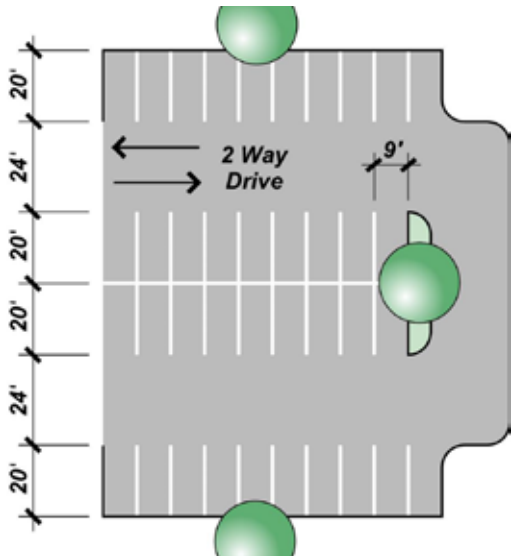


Figure 4.2-17: Standard dimensions for parking stalls.

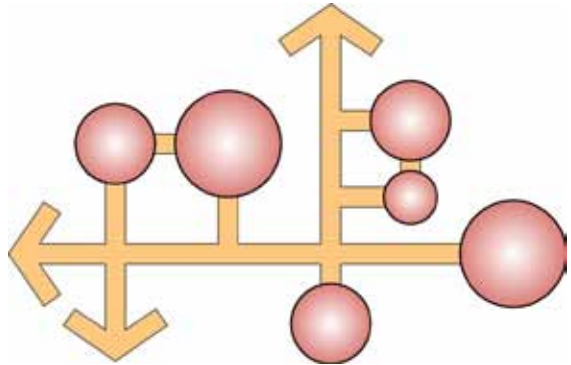


Figure 4.2-18: Identify major facilities and provide pedestrian connections.

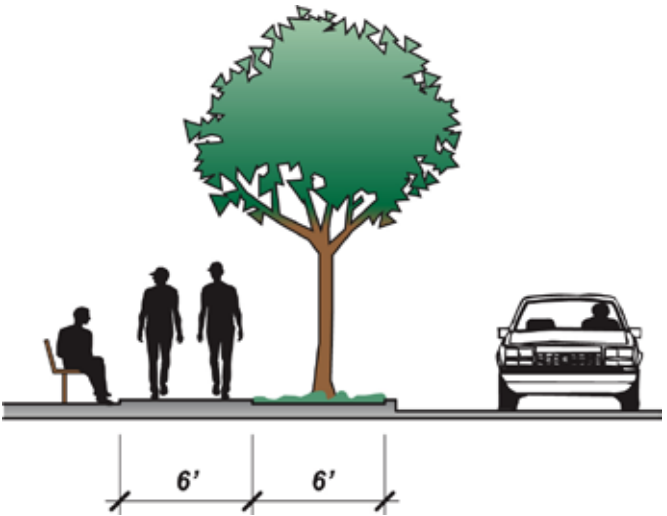


Figure 4.2-19: Typical sidewalk improvements for Vandegrift Blvd.

## 9. Lighting

- a. Provide consistent lighting levels for:
  - Pedestrian walkways that are used at night.
  - All community and recreational use facilities.
  - Parking areas (Figure 4.2-20).
  - Streets.
- b. Light entry identification signs with ground level lights. See detail in Section 8.8- Basewide Standard Details.

## 10. Site Furniture

- a. Develop a survey and analysis of the existing site furniture conditions as outlined in Section 3.12-Site Furniture.
- b. Prepare a long-term program to replace all worn out or broken site furniture with furniture selected in Section 8.9.

## 11. Screens, Walls and Fences

- a. Prepare a long-term program to replace all screen fences in disrepair and identify locations where screening and fencing is required.
- b. When replacing fences, use those standards and details in Section 8.10.
- c. Screen all utility boxes, equipment and substations.

## 12. Utilities

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities (Figure 4.2-21).
- b. Provide right-of-way easements for above grade utilities in streets or alleys.
- c. Place utilities underground per the Utility Details and Standards in Section 8.11.
- d. Minimize utility easements through development or open space areas.



Figure 4.2-20: Example of appropriate light fixture at MCX parking lot.



Figure 4.2-21: Above ground utilities cause visual clutter and should be avoided.



# DEL MAR (21) AREA

## 4.3 Del Mar (21) Area

Del Mar (21) Area is located on the coast, west of and viewed from Interstate 5 (Figure 4.3-1). Activities in this area focus on amphibious operations, logistical and combat support, training, schools, testing, research and recreation. The bulk of development is adjacent to a man-made Boat Basin (mostly industrial) and on a higher plateau just inland (mostly administrative, support personnel and housing). A unique characteristic of the Del Mar (21) Area is that during a mobilization, the Boat Basin (Figure 4.3-2) will become a major departure point for Marines and equipment on the West Coast.

### 4.3 A. Del Mar (21) Area Observations

The following is a summary of the assets and liabilities observed at the Del Mar (21) Area which were the basis for specific design recommendations.

#### 1. Assets

- a. Land uses are clearly separated in the 21 Area.
- b. BEQ Buildings 210714 and 210710, facing 'A' Street, are well designed and maintained.
- c. The architectural character of the formal Chapel Building 21704 is attractive, but out of character with the rest of the Area architecture.
- d. The U.S. Army Reserve Center is well designed, but does not use the building materials recommended for future facilities.
- e. Parking lot landscaping in the newer BEQ's is well designed and maintained.
- f. Palm trees surrounding the BEQ's and parade grounds provide a skyline landmark and help reinforce the location of the grounds (Figure 4.3-3).
- g. Mature landscaping at BEQ Buildings 210824 and 210825 is attractive and adds to the quality of the area.
- h. The use of shrubs along 'A' Street helps screen the BEQ parking areas.



Figure 4.3-2: Boat basin at Del Mar (21) Area.



Figure 4.3-3: Mature, skyline palm planting in BEQ parking lot.



Figure 4.3-4: Effective screen fencing near the boat basin.

# DEL MAR (21) AREA-CANTONMENT MAP

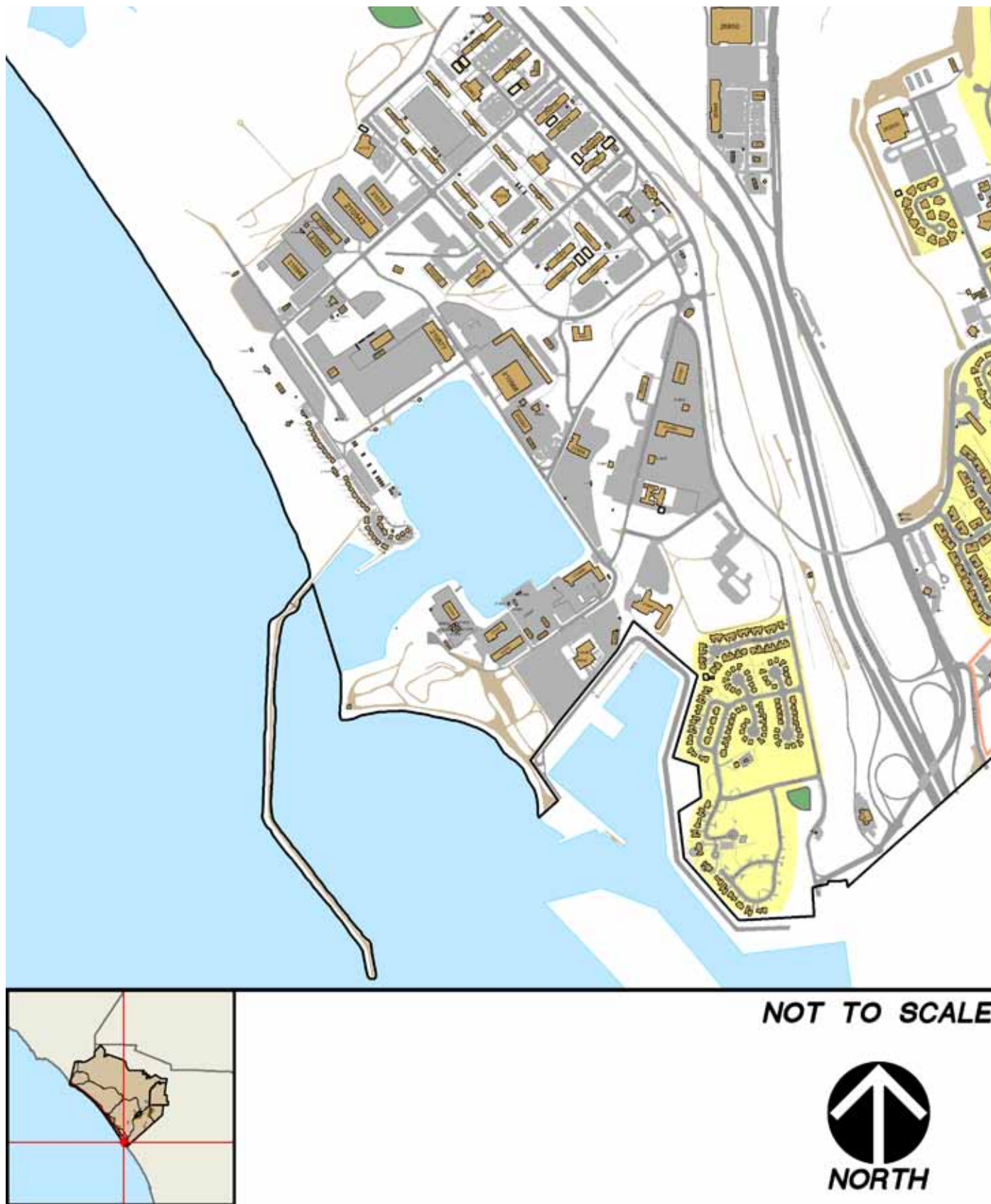


Figure 4.3-1

- i. A good example of screen fencing is located at the storage yard at the north end of Boat Basin Road (Figure 4.3-4).
- j. Recreational facilities provided at the beach area add to the quality of the Base and Del Mar (21) Area environment.
- k. There are distant views to the ocean from a number of locations within Del Mar (21) Area, and cooling marine influence.
- l. There is a strong organization of industrial, warehouse and amphibious activities at the Boat Basin.
- m. Historic assets are located in the World War II-Korean War LVT Museum.



*Figure 4.3-5: Older BEQ in need of upgrading.*

## **2. Liabilities**

- a. The close proximity of BEQs to Interstate 5 creates a noise conflict.
- b. Inadequate overflow parking is evident by temporary parking lots located throughout Del Mar (21) Area.
- c. The older BEQs need upgrading (Figure 4.3 -5).
- d. The area entry sign and “War Prize” need improvement if they are to be the primary entry statement (Figure 4.3-6).
- e. There are many hazardous and confusing traffic intersections.
- f. Pedestrian circulation, particularly the case in the older BEQs, is either non-existent, in poor repair, or unclear.
- g. A variety of fencing and screening methods are used in the storage areas. Not all fencing and screening is in good condition.
- h. Many trash dumpsters are not in enclosures.
- i. A variety of sign types were noted.
- j. Street signs are absent in many locations.
- k. No consistent landscape treatment or maintenance is apparent in Del Mar (21) Area.
- l. Major erosion problems are occurring in the challenge course adjacent to Harbor Drive (Figure 4.3-7).



*Figure 4.3-6: Main entry to Del Mar (21) Area.*



*Figure 4.3-7: Eroded slopes on the north side of Harbor Road. Also note the above grade utility lines.*

- m. The electrical substation on Harbor Road is not properly screened (Figure 4.3-8).
- n. Recreational buildings on the beach need better maintenance or need to be completely replaced.
- o. Recreation marina is located within operational areas.
- p. Vehicular circulation to the Boat Basin is circuitous and could inhibit the smooth function or operations of the Base.
- q. Many of the parking areas lack adequate lighting.
- r. No significant pedestrian lighting was observed.
- s. Above grade utility lines throughout the Area add to the visual clutter (Figure 4.3-9).

### 4.3 B. Recommendations

The following is a summary of recommendations for improvements to the Del Mar (21) Area. These recommendations are based on the existing assets and liabilities at the Del Mar (21) Area.

#### 1. Land Use

- a. To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3-Land Use.
- b. The upper plateaus of Del Mar (21) Area should retain the current land use consistency of housing, schools and personnel support facilities.
- c. The lower plateau areas surrounding the Boat Basin should be retained for industrial, warehouse, and amphibious use.

#### 2. Site Planning

- a. New developments are to follow the guidelines established in Chapter 3 under Section 3.4-Site Planning.
- b. Review and analyze existing development areas and determine where it would be possible to consolidate parking, establish pedestrian connections, and improve the overall function of the Del Mar (21) Area.



Figure 4.3-8: Substation on the south side of Harbor Road.



Figure 4.3-9: Above ground utilities create visual clutter.

### 3. Architecture

- a. New developments are to follow the guidelines established in Section 3.5-Architecture.
- b. Establish a program for the rehabilitation of existing structures and use the guidelines in Section 3.5 as the basis for improvements.
- c. Standardize colors for existing facilities that require painting. See Appendix A Color Board/ Building Materials.
- d. Do not paint new concrete or masonry block structures.

### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6 when upgrading the Del Mar (21) Area landscape or establishing maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use Base Approved Plant List (Section 3.6) when selecting replacement plants or new planting for Del Mar Area.
- e. Use trees as the dominant landscape planting element in the populated areas.
- f. Minimize the use of turf wherever possible and introduce groundcover with low water requirements.
- g. Inorganic mulch can also be used as groundcover. Use only one color and size. See Detail 8.3 A-7.
- h. Prepare a long range landscape development program for future improvements and maintenance.
- i. Infill with palms as an accent tree around the parade ground to establish a uniform planting and a formal treatment to this ceremonial area (Figure 4.3-10).
  - 30' on center.
  - 12'-15' in height, see Details 8.3 A-4.

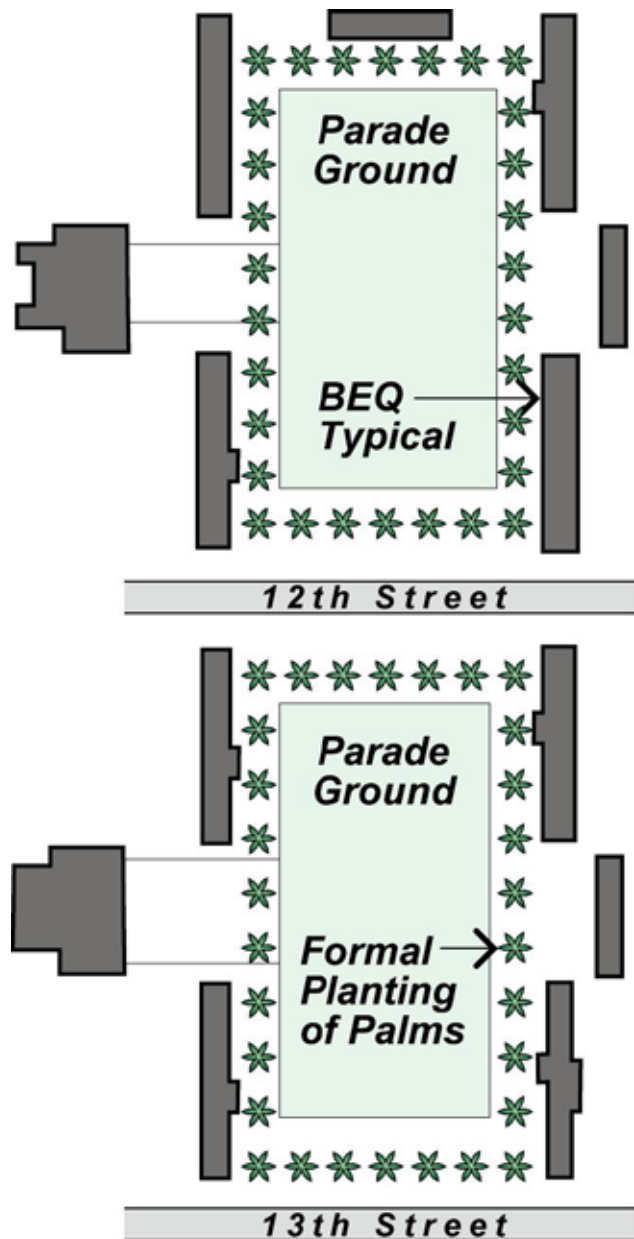


Figure 4.3-10: Formal planting of palms to reinforce the formal qualities of the parade grounds.

- j. Provide streetscape planting for the other collector streets such as:
  - 'A' Street
  - Santa Fe Avenue
  - Harbor Drive
  - Boat Basin Road
- k. Provide screen/buffer planting to control wind and dust in the storage area.
- l. Install erosion control planting along areas of Harbor Road that show signs of erosion and on all slopes that exceed 3:1.



5. Street Design

- a. Resolve all offset intersections by lining up to 90 degrees or separating intersections per the guidelines outlined in Section 3.7- Street Design.
- b. Realign the intersection at Harbor Road and Basin Road (Figure 4.3-11).
- c. Resolve the intersection alignment at 'A' Street/ Santa Fe Avenue/Harbor Drive. This will require resolving access to fire station Building 21401 as well.
- d. All intersection realignments require a traffic analysis and Base functional analysis to determine final design.
- e. Clearly define all streets from parking areas.
- f. Provide standard street right-of-way for all major streets. See Section 3.7-Street Design.
- g. The use of asphalt curbs is strictly prohibited.
- h. No direct on-street parking is permitted.
- i. Establish parking access requirements per Section 3.8-Parking.

6. Parking

- a. Develop a survey and analysis of the existing parking conditions as outlined in Section 3.8- Parking.
- b. Provide an accurate parking demand based on the existing uses, particularly in areas where overflow parking occurs west of Building 21571.
- c. Provide ADA compliant parking stalls.
- d. Re-stripe all parking area stalls to the sizes outlined in Section 3.8 (Figure 4.3-12).
- e. Improve all temporary parking lots, including the one for Officers Club Building 21713. No temporary parking lots are permitted in the Del Mar (21) Area.
- f. Provide landscape improvements in all parking lot areas per Section 3.6-Landscaping.
- g. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.

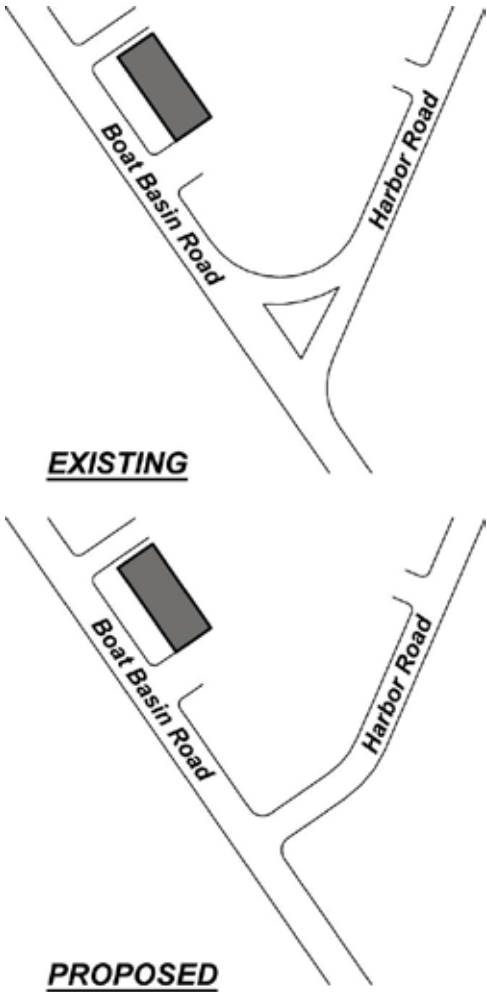


Figure 4.3-11: Redesign of intersection at Harbor and Basin Road.

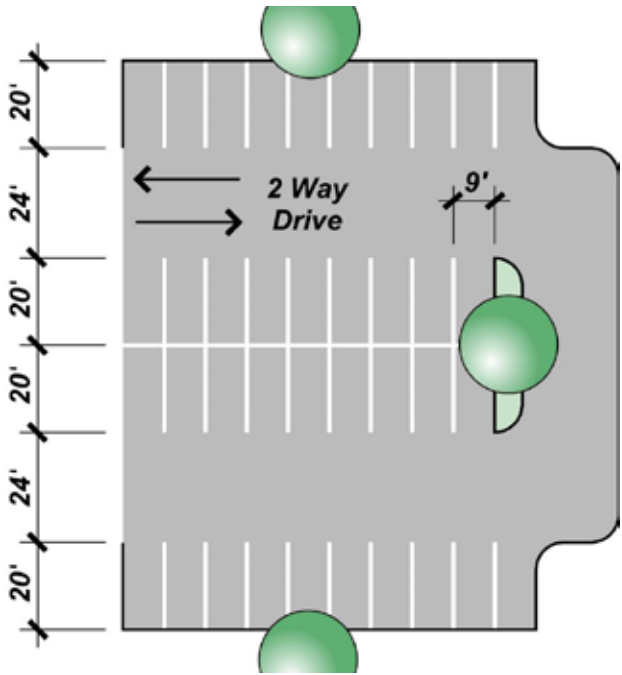


Figure 4.3-12: Typical dimensions for parking.

- h. For repair and when economically feasible, replace asphalt curbs with concrete curbs. See detail in Section 8.4.
- i. Provide lighting fixtures in all parking areas that are used at night, per Section 3.11-Lighting.

## 7. Pedestrian Circulation

- a. Provide sidewalks along all major collector streets per Section 3.9-Pedestrian Circulation (Figure 4.3-13):
  - Wire Mountain Road
  - Harbor Road
  - Santa Fe Avenue (toward residential area)
- b. Provide sidewalks along all local streets including (Per Section 3.9):
  - C Street
  - 11th Street
  - 12th Street
- c. Provide sidewalk connections to major facilities from surrounding uses that have heavy pedestrian traffic.
- d. Develop a survey and analysis of the existing sidewalk and pedestrian conditions as outlined in Section 3.9-Pedestrian Circulation.

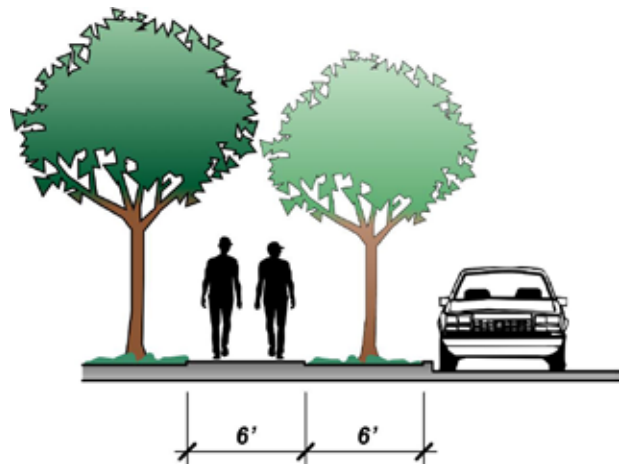


Figure 4.3-13: Typical sidewalk treatment for major collectors.

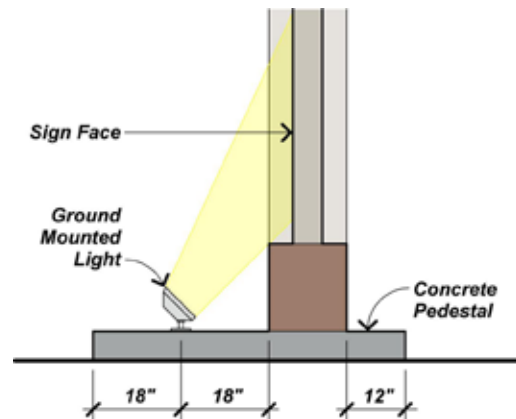


Figure 4.3-14: Typical signage light fixture and pedestal.

## 8. Signage

- a. Establish one Del Mar (21) Area entry sign on:
  - The east side of Wire Mountain Road to replace existing sign with amphibious tanks south of the Harbor Road intersection.
- b. Prepare a street naming program as part of the vehicular circulation improvements.
- c. Provide street signs at all intersections.
- d. Prepare a long-term signage replacement plan. See Section 3.10-Signage and details in Chapter 8.
- e. Provide a pedestal platform for "War Prize" and static displays.
- f. Provide directional signage leading visitors to WWII-Korean War LVT Museum.

## 9. Lighting

- a. Provide consistent lighting levels for:
  - Pedestrian walkways that are used at night.
  - Parking areas.
  - Streets.
- b. Identification entry signs will be lit with ground level lights. See Section 8.8 (Figure 4.3-14).
- c. Provide accent lighting for “War Prize” and static displays with ground lighting (Figures 4.3-15 and 4.3-16).

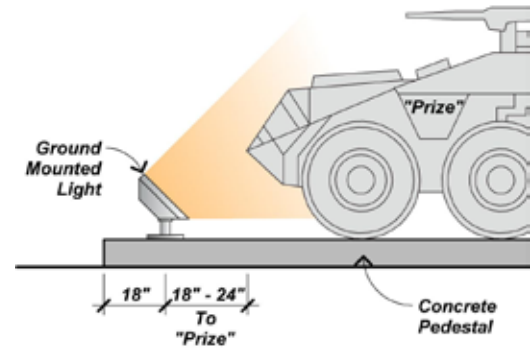


Figure 4.3-15: Typical “War Prize” light fixture and pedestal.

## 10. Site Furniture

Prepare a long-term program to replace all worn out or broken site furniture with furniture selected in Section 8.9.

## 11. Screens, Walls and Fences

- a. Provide screening of undesirable views presented in the storage areas along all roads (Figure 4.3-17).
- b. Provide trash enclosures as detailed in Chapter 8.
- c. When replacing fences use those standards in section 3.13-Screens, Walls and Fences and details in Chapter 8.
- d. Prepare a long-term program to replace all screen fences in disrepair and identify locations where screening and fencing is required.



Figure 4.3-16: Amphibious vehicle with uplighting.

## 12. Utilities

- a. Provide right-of-way easements for above grade utilities in streets or alleys.
- b. Minimize utility easements through development or open space areas.
- c. Place utilities underground per details in Section 8.11.
- d. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities.

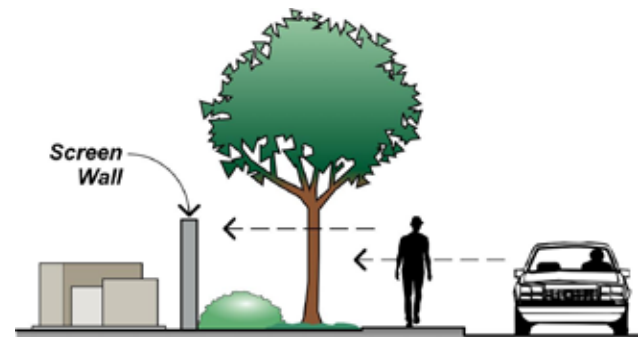


Figure 4.3-17: Typical use of screen wall and planting to screen undesirable areas.

# CHAPPO (22) AREA

## 4.4 Chappo (22) Area

Chappo presents the first strong image of primary military activity on the Base after entering from Oceanside Gate. It is approximately six miles inland, situated within the Santa Margarita flood plain, and adjacent to the airfield. Primary uses include warehousing, storage, loading, logistics, and housing (Figure 4.4-1).

### 4.4 A. Chappo (22) Observations

The following is a summary of the assets and liabilities that are the basis for specific design recommendations.

#### 1. Assets

- a. There is a pleasant plaza environment at BEQ, Building 22212.
- b. The layout for the BEQ is generally efficient. There is good separation from other land uses, particularly between the BEQ and warehouse facilities.
- c. The landscape in and around Buildings 22206 -22207 is mature and provides a pleasant setting (Figure 4.4-2).
- d. Palms and pines set a good precedent for theme planting throughout the cantonment (Figure 4.4-3).
- e. California peppers form an attractive landscape background and transition to native areas.
- f. There is good visibility to the warehouse storage area from Vandegrift Boulevard.
- g. Newer BEQs are a good example of appropriate landscaping (Figure 4.4-4).
- h. Vehicular circulation in the warehouse area is excellent for large transport vehicles (Figure 4.4-5).
- i. The extra wide median on Vandegrift Boulevard allows for enhanced landscape opportunities and the ability to control traffic movement.



Figure 4.4-2: Mature trees at Buildings 22206 and 22207.

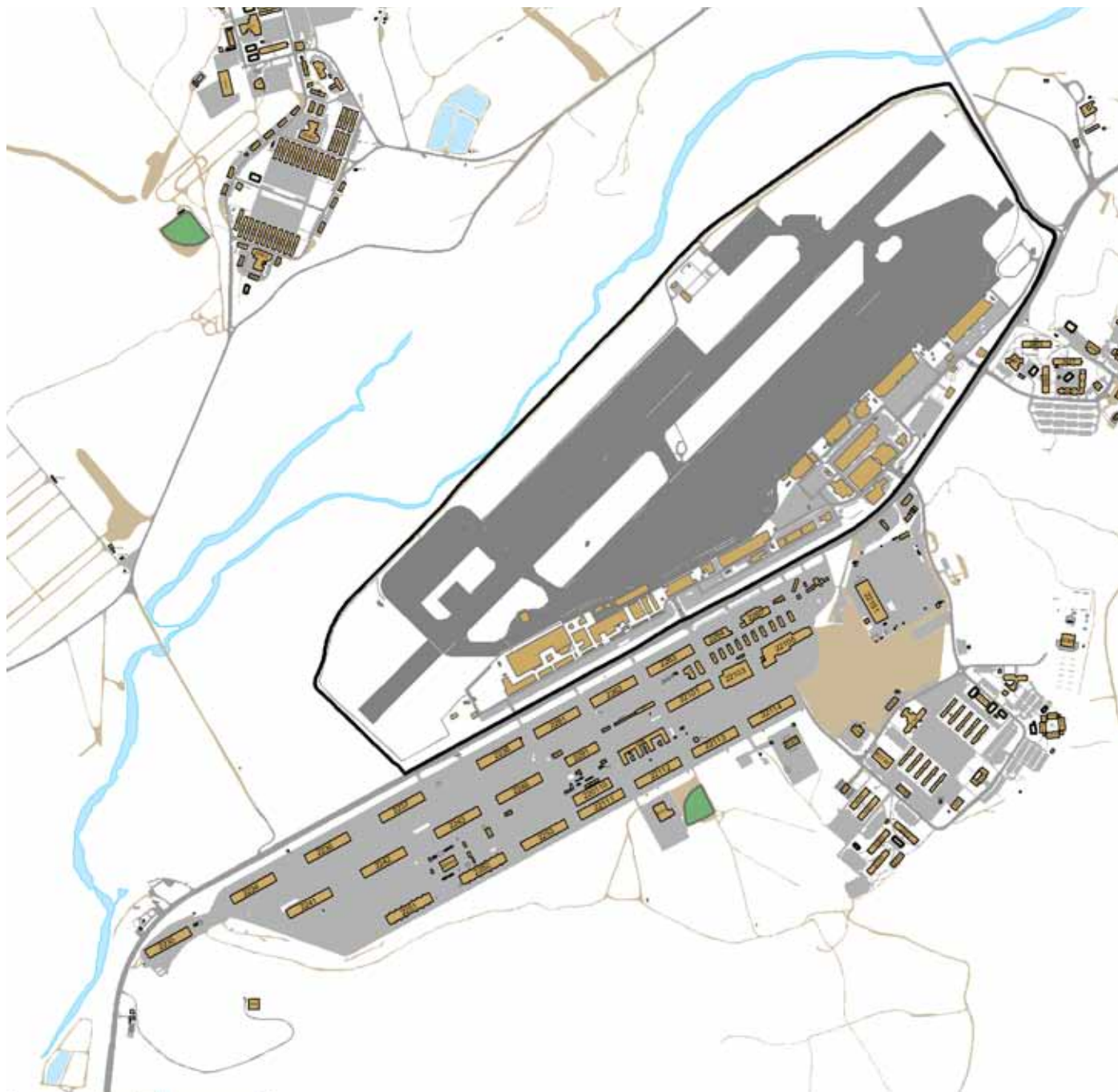


Figure 4.4-3: Planting throughout the cantonment



Figure 4.4-4: Good example of landscape at newer BEQ.

# CHAPPO (22) AREA-CANTONMENT MAP



NOT TO SCALE



Figure 4.4-1

## 2. Liabilities

- a. Too many access points are allowed to the warehouse area from Vandegrift Boulevard.
- b. The site layout at the McDonald's restaurant and gas station is confusing and inefficient. There is poor queuing distance for the drive-through.
- c. The areas between warehouse parking and Vandegrift Boulevard need screening.
- d. The 11th Street entrance to BEQ housing area is confusing and needs better signage.
- e. The chain link fencing at the storage facility needs additional opaque screening. Above ground utilities create visual clutter (Figure 4.4-6).
- f. Area signage is not comprehensive, especially for streets.
- g. Parking areas are in need of better delineation and landscape enhancement in the BEQ areas.
- h. Lighting in BEQ areas is concentrated a long-streets only.
- i. The warehouse area has numerous non-harmonious colors.
- j. Unimproved overflow parking areas are located south of classroom Building 22165 and at the rear of gym Building 22160.
- k. There is an overall lack of contiguous pedestrian access throughout the cantonment (Figure 4.4-7).
- l. There is a major drainage problem at BEQ Building 22209.
- m. There is no separation between warehouse administration buildings and parking.

### 4.4 B. Recommendations

The following is a summary of recommendations for improvements to the Chappo (22) Area. These recommendations are based on the existing assets and liabilities of the area.



Figure 4.4-5: Functional space for large vehicles at warehouses.



Figure 4.4-6: Example of opaque screening with chain link fence

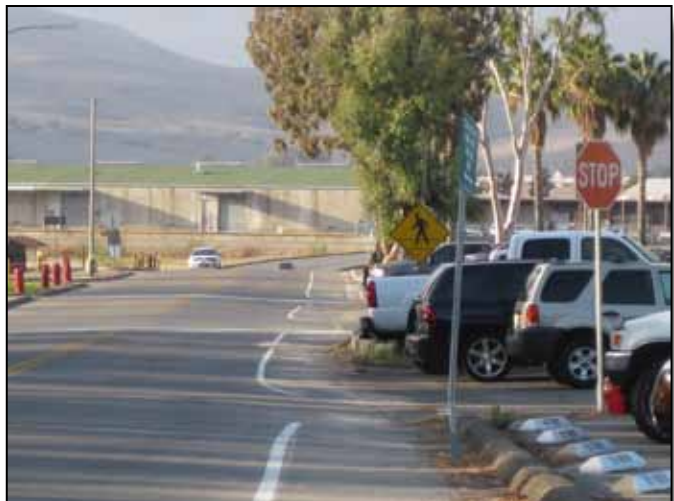


Figure 4.4-7: Lack of pedestrian separation from vehicles.

## 1. Land Use

- a. To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3 Land Use. This will determine if the proposed uses are compatible with adjacent facilities (Figure 4.4-8).
- b. Maintain the existing land use pattern which supports the clear separation of housing, personnel support and recreation from warehouse activities.
- c. Minimize the encroachment into warehouse areas and paved outside storage areas.

## 2. Site Planning

- a. Future developments are to follow the guidelines established in Section 3.4-Site Planning.
- b. Consider airfield constraints when planning future development or facilities in this Area.
- c. Review flood constraints for future facilities.
- d. Review and analyze all existing development areas to rationalize the generous parking, establish pedestrian linkages, and generate a program for overall lighting and signage functions. A general upgrade of existing facilities and site features is recommended for the Chappo (22) Area (Figure 4.4-9).
- e. Maintain the current high degree of separation between land uses.
- f. Improve bus shelter facilities.

## 3. Architecture

- a. Establish a program for the rehabilitation of existing structures and use the guidelines in Section 3.5-Architecture as the basis for improvements (Figure 4.4-10).
- b. Standardize colors for existing warehouse facilities that require painting. See Appendix A Color Board/Building Materials.
- c. Do not paint concrete or masonry block structures.
- d. Future developments are to follow the guidelines established in Section 3.5-Architecture.



Figure 4.4-8: Vehicular circulation serves as separation between warehouses and BEQs.



Figure 4.4-9: Expanse of parking and hardscape near Building 2281.



Figure 4.4-10: Rehabilitate existing buildings.

#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. When preparing landscape plans for future developments, upgrading the area or establishing a maintenance plan, use the guidelines outlined in Section 3.6-Landscaping.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use Base Approved Plant List (Section 3.6) when selecting replacement plants or new planting for Chappo Area.
- e. Use trees as the dominant landscape planting element in all developed areas.
- f. Minimize the use of turf in areas of low pedestrian use and introduce groundcover with low water requirements or inorganic mulch.
- g. Inorganic mulch can also be used as groundcover. Use only one color and size. See Detail 8.3 A-7.
- h. Initiate a streetscape planting program for Vandegrift Boulevard that includes (Figure 4.4-11).
  - South side and median areas: Palms
  - North side: Aleppo Pine



Figure 4.4-12: Mature palms line the perimeter of parade ground at the administration building.

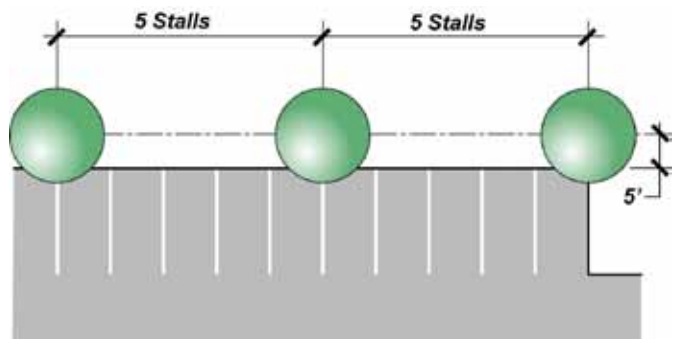


Figure 4.4-13: Typical layout for trees in parking areas.

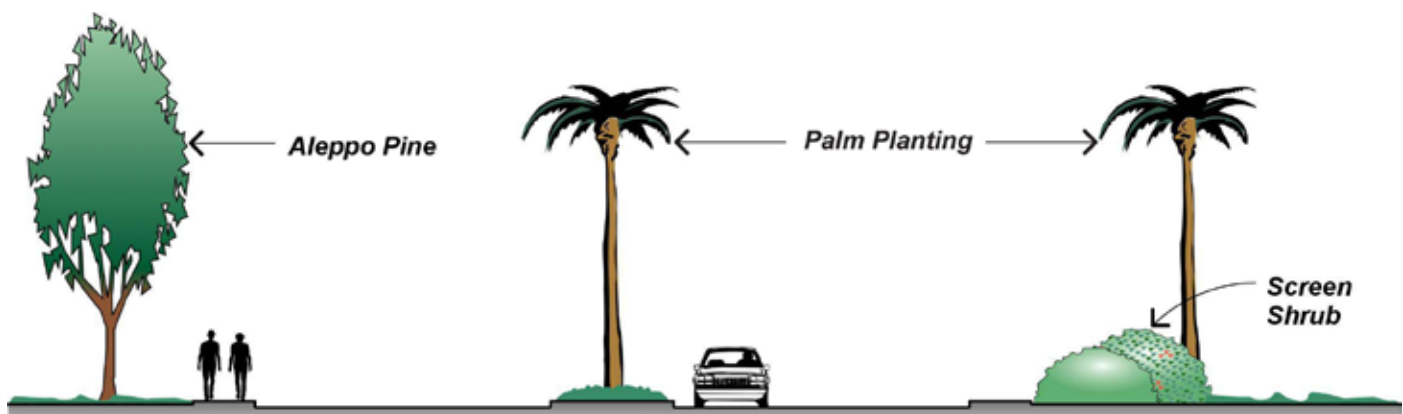


Figure 4.4-11: Section of Vandegrift Boulevard in the Chappo (22) Area.



- i. Continue streetscape planting in the BEQ area to reinforce the cantonment circulation with:
  - Canary Island Pines.
- j. Infill with palms as an accent tree around the parade ground to establish a uniform planting and formal treatment to this ceremonial area (Figure 4.14-12).
- k. Provide landscaping around the perimeter of parking lots per Section 3.6-Landscaping (Figures 4.4-13 and 4.4-14):
  - West of Buildings 22206-07
  - West of Building 22181
  - West of Buildings 22190
  - East of Buildings 22212
- l. Provide palms at the cantonment entry identification sign.
  - Plant palms in an informal group of 5-7 palms.
  - Use palms 10-12 feet in height and plant 10 to 15 feet apart.
- m. Introduce a transitional planting program adjacent to native vegetation areas.
- n. Prepare a long range landscape implementation program for future improvements and maintenance.

**5. Street Design**

- a. Resolve all offset intersections by lining up to 90 degrees or separating intersections per the guidelines outlined in Section 3.7-Street Design.
  - b. Provide a clear intersection and main entry off of Vandegrift Boulevard to the warehouse area at the following three areas.
    - West side of Building 2238.
    - West side of Building 2262.
    - West side of Building 2264-align with main entry to air station.
- Close all other median breaks to eliminate left-turn access. Prepare a traffic analysis and Base requirements to validate the proposed access changes.

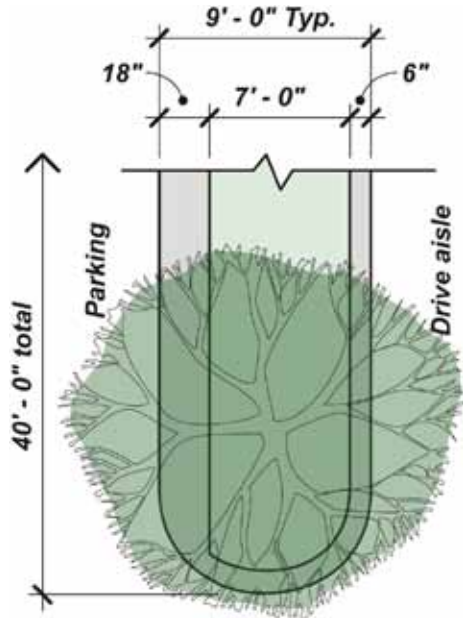


Figure 4.4-14: Typical detail for an end island planter.

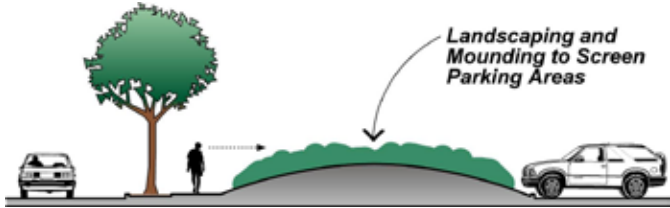


Figure 4.4-15: Use of berm or planter to separate and define parking from the streets.

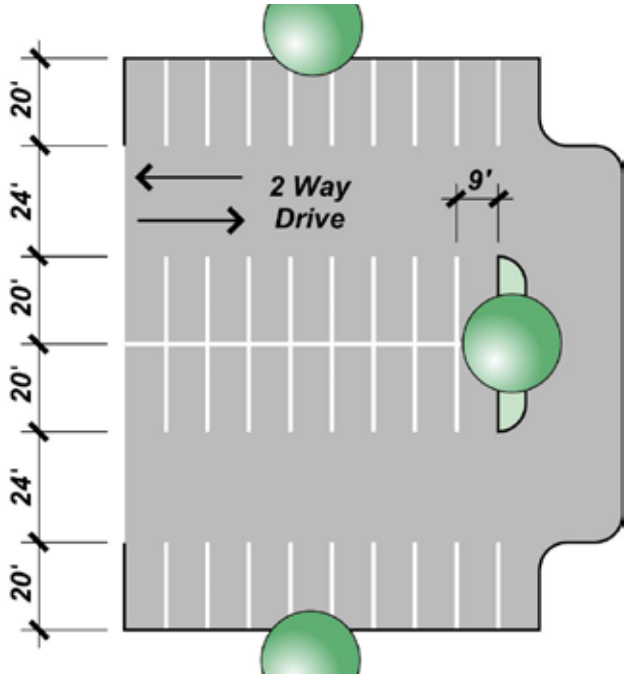


Figure 4.4-16: Typical dimensions for parking stalls.

- c. Clearly define streets from parking areas (Figure 4.4-15).
  - West of Building 22181.
  - Warehouse area Building 22105.
- d. Provide standard street right-of-way improvements for all major streets. See Section 3.7-Street Design.
- e. No on-street parking is permitted.
- f. Establish parking access requirements for all existing parking per Section 3.7-Street Design.

## 6. Parking

- a. Do not encroach upon warehouse circulation or parking with storage of equipment, vehicles and supplies.
- b. Provide an accurate parking demand analysis based on the existing uses. If demand requires, improve all overflow or temporary parking lots to a permanent condition.
- c. Re-stripe all parking areas to the stall sizes outlined in Section 3.8-Parking (Figure 4.4-16).
- d. Provide for accessible parking stalls per ADA requirements (Figure 4.4-17).
- e. Provide lighting fixtures in all parking areas that are used at night per Section 3.11-Lighting.
- f. Provide landscape improvements in all parking lot areas (Figure 4.4-18).
- g. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- h. For repair and when economically feasible, replace asphalt curbs with concrete curbs. See detail in Section 8.4.

## 7. Pedestrian Circulation

- a. Provide planters and sidewalks in front of the administration areas. See Section 3.9-Pedestrian Circulation.
- b. Provide sidewalks along Vandegrift Boulevard.

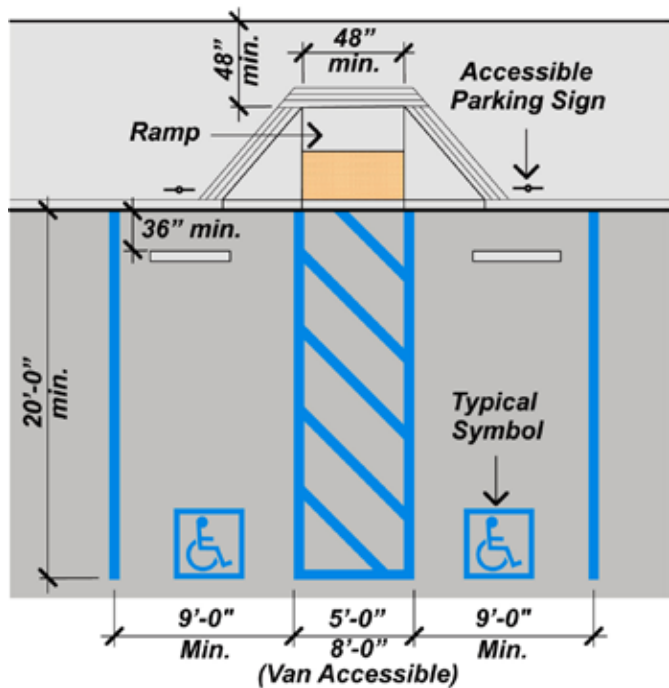


Figure 4.4-17: Typical layout for accessible parking.



Figure 4.4-18: Parking lot without curbs or landscaping.

## 8. Signage

- a. Prepare a long-term plan to replace all signs to conform to Section 3.10-Signage and details.
- b. Establish two Chappo (22) Area entry identification signs on:
  - North side Vandegrift Boulevard east of 11th Street.
  - South side of Vandegrift Boulevard before Building 2230.

- c. Establish a street naming program for all streets, for safety and functional purposes.
- d. Provide street signs at all intersections.

## 9. Lighting

- a. Provide consistent lighting levels for:
  - Pedestrian walkways that are used at night.
  - Parking areas.
  - Streets (Figure 4.4-19).
- b. Light cantonment identification entry signs with ground level lights. See detail in Section 8.8.

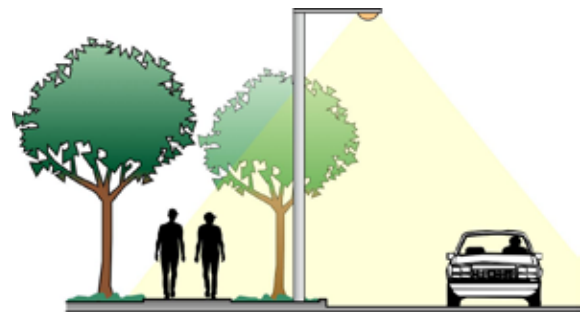


Figure 4.4-19: Lighting provides for a safe and secure environment.

## 10. Site Furniture

- a. Develop a survey and analysis of the existing site furniture conditions. See Section 3.12-Site Furniture.
- b. Prepare a long-term program to replace all worn out and broken furniture with site furniture selected from Section 8.9.

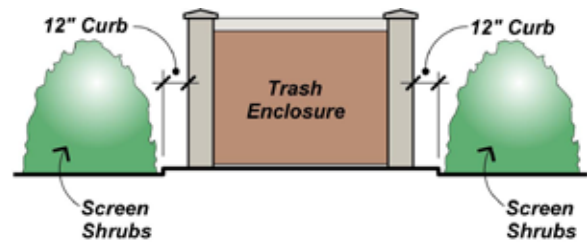


Figure 4.4-20: Typical trash enclosure includes a wall and screening shrubs.

## 11. Screens, Walls and Fences

- a. Prepare a long-term program to replace all screen fences in disrepair. Identify additional locations where screening and fencing is required. When replacing fences, use those standards in Section in section 3.13 and details in Section 8.10.
- b. Screening of trash dumpsters is required in all areas of the BEQs and storage facilities (Figures 4.4-20 and 4.4-21).

## 12. Utilities

- a. Develop a survey and analysis of the existing above grade utilities. Prepare a long range plan to underground these facilities.
- b. Provide right-of-way easements for above grade utilities in streets or alleys.
- c. Place utilities underground per the Utility Details and Standards in Section 8.11.
- d. Minimize utility easements through development or open space areas.

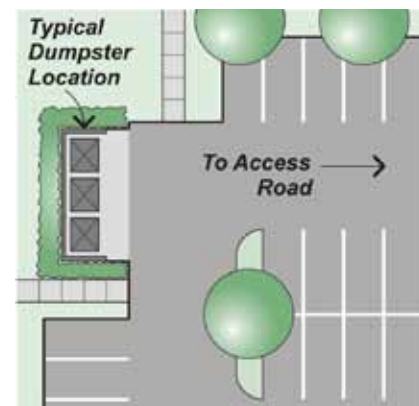


Figure 4.4-21: Typical trash enclosure orientation and placement.

# PICO (24) AREA

## 4.5 Pico (24) Area

The Pico (24) Area was the original Base Headquarters from 1943-46. The Area is now home to the MCB Corrections Battalion, MCB Communications/Electronics, and Marine Aircraft Group (MAG) barracks. The Area experienced major redevelopment in the 1970's, including construction of the Base Brig and several BEQs (Figure 4.5-1).

### 4.5 A. Pico (24) Area Observations

The following is a summary of the assets and liabilities observed at the Pico (24) Area that were the basis for specific design recommendations.

#### 1. Assets

- a. Mature trees, such as Pines, Tipu, Jacarandas and Palms are assets for the future landscape (Figure 4.5-2 and 4.5-3).
- b. The BEQ setting is well integrated with the site and has a substantial setback from Vandegrift Boulevard.
- c. Good development area pads northwest of Building 2482 exist for future uses.
- d. Existing vegetation on the east side of the Base Brig provides a good transition to the hillside and native area.
- e. There is good street tree planting on Powder Magazine Road leading to Rehabilitation Center.
- f. The historic asset of the Ranch House is a part of this area.



Figure 4.5-2: Mature trees at the newer BEQs.



Figure 4.5-3: Mature trees on Powder Magazine Road.

# PICO (24) AREA-CANTONMENT MAP

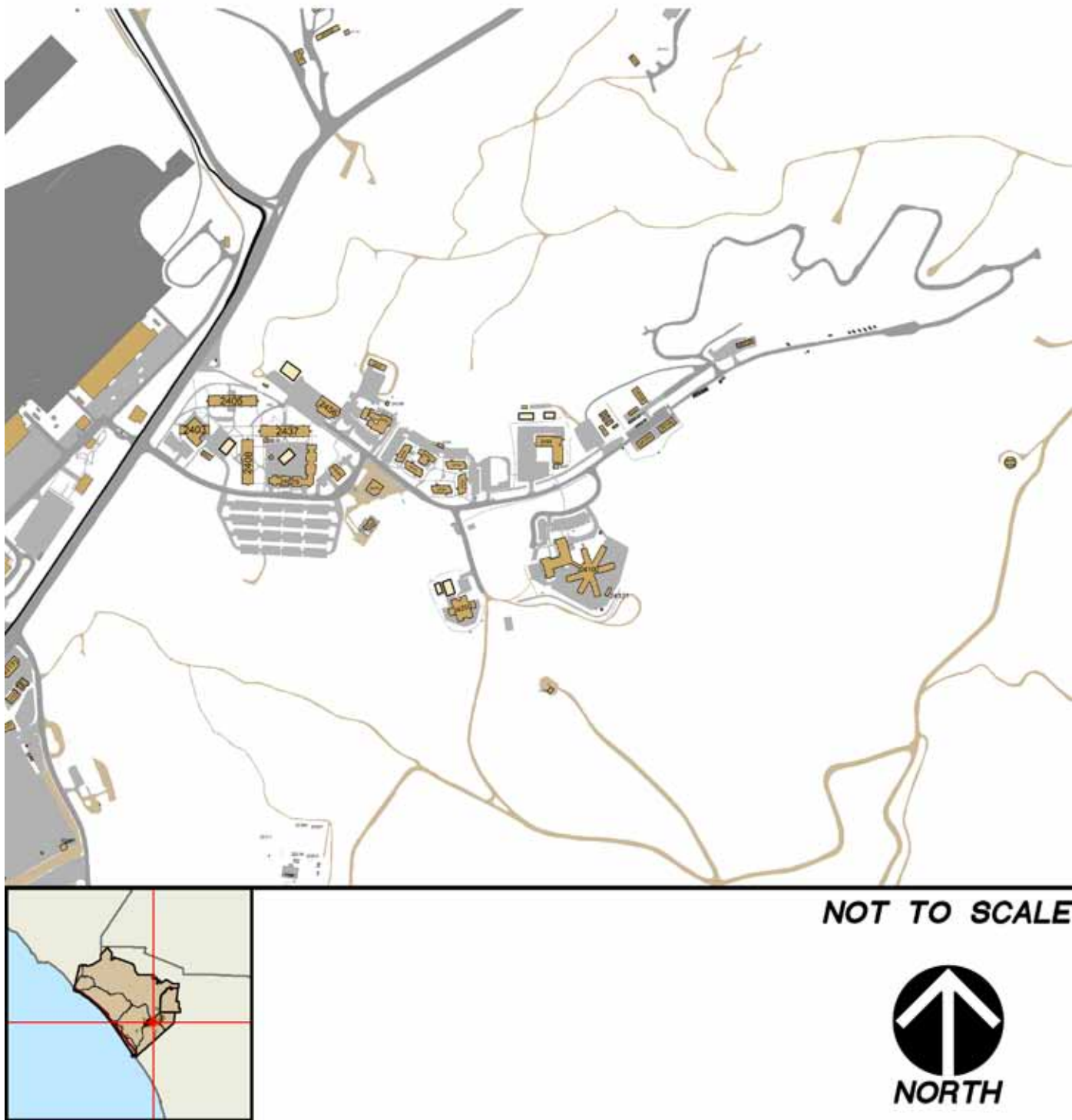


Figure 4.5-1

## 2. Liabilities

- a. Significant noise impacts exist due to its proximity to the air station.
- b. Traffic noise is generated from the large volumes on Vandegrift Boulevard.
- c. The Mess Hall storage and loading area is a negative visual impact as seen from Vandegrift Boulevard (Figure 4.5-4).
- d. Vehicular circulation to parking areas is confusing and indirect.
- e. There is no consistent signage program. The main entry on Administration Road is relatively anonymous.
- f. Lighting is generally limited to parking areas.
- g. The slope north of Building 24100 is planted with turf and requires high maintenance and excessive water.
- h. Much of the Pico (24) Area is still serviced by above grade utilities, adding to visual clutter.
- i. Many trash dumpsters are not properly enclosed.
- j. Pedestrian circulation is inadequate. There are no walks along roads and no connection from the BEQ to the Exchange (Figure 4.5-5).
- k. Severe erosion is occurring on the cut slope south of Administration Road.
- l. Interface of Brig operations and unrelated personnel is not enclosed at minimum security area.
- m. Base Brig Quonset huts 24111, 24110, 24105, and 24106 are in disrepair and should be replaced.
- n. Concrete flood channel is silting up and collecting debris (Figure 4.5-6).
- o. Tree planting along frontage road has been removed.



Figure 4.5-4: Building 2403 loading facility facing Vandegrift Boulevard.



Figure 4.5-5: No pedestrian sidewalks provided on the south side of Administration Road.



Figure 4.5-6: Concrete flood channels near Building 24111.

## 4.5 B. Recommendations

The following is a summary of recommendations for improvements to the Pico (24) Area. These recommendations are based on the existing assets and liabilities previously identified.

### 1. Land Use

- a. To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3-Land Use.
- b. Establish the separation of Brig disciplinary activities from housing, personnel support and recreation uses.

### 2. Site Planning

- a. For future developments, refer to the guidelines established in Section 3.4-Site Planning and the Base Master Plan.
- b. Refer to the Base Master Plan for potential location of future projects.
- c. Review existing development areas and determine improvement areas for circulation, parking, pedestrian connections and to increase overall efficiency and economy of the Area.
- d. Improve the bus stop facility on Vandegrift Blvd.

### 3. Architecture

- a. New developments are to follow the guidelines established Section 3.5-Architecture (Figure 4.5-7).
- b. Establish an aggressive program to eliminate the buildings that are beyond economical repair.
- c. For those buildings that are to be retained, establish a program for rehabilitation using the guidelines in Section 3.5-Architecture as the basis for improvements.
- d. Use approved colors for existing facilities that require painting. See Appendix A Color Board/ Building Materials.
- e. Do not paint new concrete or masonry block structures.
- f. Replace Brig Quonset huts with new, appropriate structures.



Figure 4.5-7: Newer building in the Pico (24) Area.

- g. The Ranch House complex includes the Santa Margarita Ranch House National Historic Site and is also listed as a California State Historical Landmark. All conditions related to landmark status should be followed.

### 4. Landscape

- a. For new development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6 when upgrading the Pico (24) Area landscape or establishing a maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.

- d. Use Base Approved Plant List (Section 3.6) when selecting replacement plants or new planting for Pico (24) Area.
- e. Use trees as the dominant landscape planting element in all developed areas (Figure 4.5-8).
- f. Minimize the use of turf in low pedestrian use areas and introduce groundcover with low water requirements (Figure 4.5-9).
- g. Inorganic mulch can also be used as groundcover. Use only one color and size (Figure 4.5-10).
- h. Install erosion control in areas where needed and on all slopes that exceed 3:1.
- i. Continue the Vandegrift Boulevard streetscape enhancement program of Palms identified in Section 3.6.
- j. Provide supplemental streetscape planting for the following:
  - Powder Magazine Road: Pines on north side-Plant 40 feet on center.
  - Vandegrift Frontage: Provide Palm planting to replace removed Eucalyptus.
- k. Provide palms at area entry identification sign.
  - Plant Palms in a group of 5-7 with heights between 8-10 feet.
- l. Screen/buffer parking areas from BEQs.
- m. Screen/buffer storage and delivery areas of Building 2403.

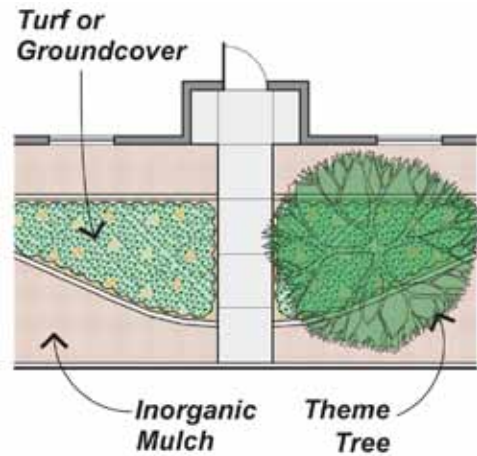


Figure 4.5-8: Simple landscape palette with trees as the dominant landscape planting feature.



Figure 4.5-9: Cobble and gravel used as permeable ground cover.

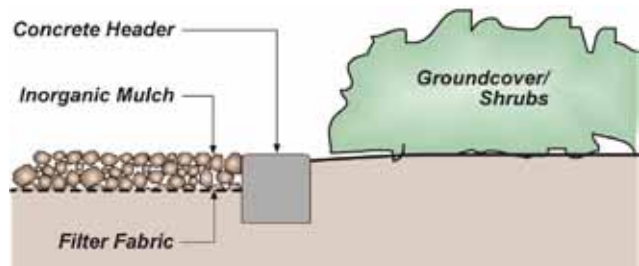


Figure 4.5-10: Use of inorganic mulch in place of turf.

**5. Street Design**

- a. Clearly define streets from parking areas. Screen with berms and plant material (Figure 4.5-11).
- b. Align all intersections to 90 degrees.
- c. Provide standard street right-of-way for all local streets. See Section 3.7- Street Design.
- d. No on-street parking is permitted.
- e. Establish parking access requirements per Section 3.8-Parking.

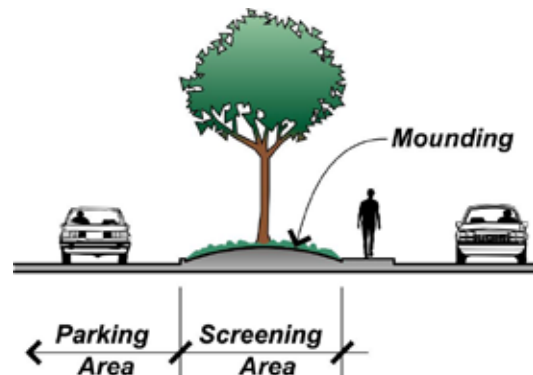


Figure 4.5-11: Typical method of separating and screening parking area from streets.



## 6. Parking

- For future developments, prepare a survey and analysis of the existing parking conditions as outlined in Section 3.8-Parking.
- Provide an accurate parking demand based on the existing uses. Refer to Basewide Parking Capacity in Chapter 3.
- Re-stripe all parking areas to the stall size outlined in Section 3.8-Parking (Figure 4.5-12).
- Provide for accessible parking stalls per ADA requirements.
- Provide landscape improvements in all parking lot areas per Section 3.6-Landscaping (Figure 4.5-13).
- Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- For repair, and when economically feasible, replace asphalt curbs with concrete. See detail in Section 8.5.
- The use of asphalt curbs is strictly prohibited.
- Provide light fixtures in all parking areas that are used at night, per Section 3.11-Lighting.

## 7. Pedestrian Circulation

- Develop a survey and analysis of the existing sidewalk and pedestrian conditions as outlined in Section 3.9-Pedestrian Circulation.
- Provide concrete sidewalks along all minor arterial (such as Vandegrift Boulevard) and local collector streets (such as Administration Road and Powder Magazine Road) per Section 3.9-Pedestrian Circulation.

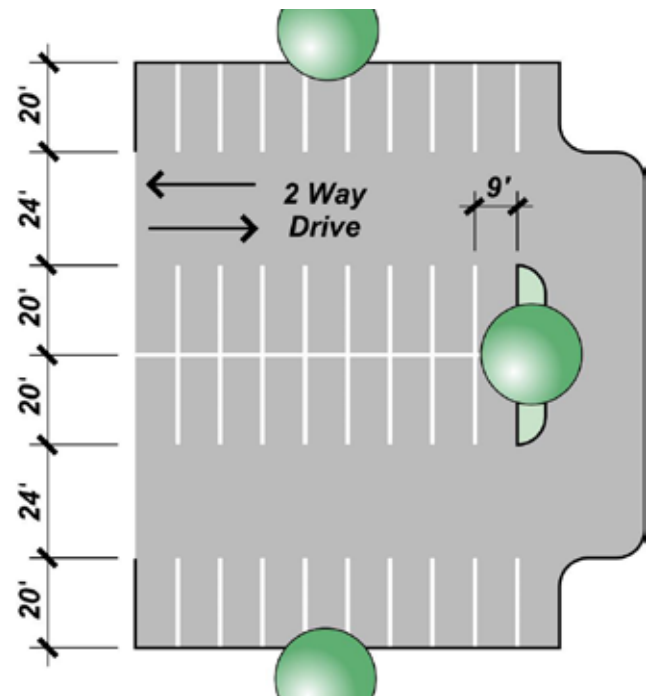


Figure 4.5-12: Typical dimensions for parking stalls.

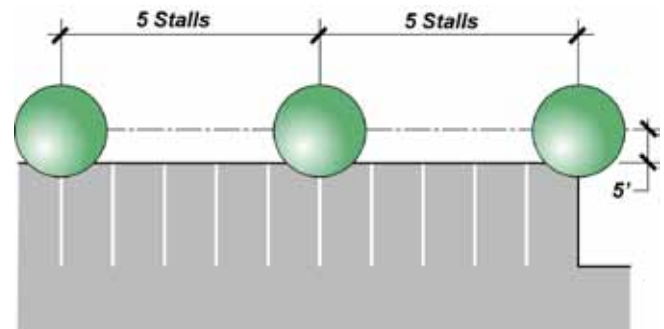


Figure 4.5-13: Typical parking layout to allow for trees.

## 8. Signage

- a. Prepare a long range plan to replace all signs to conform to Section 3.10-Signage (Figures 4.5-14 and 4.5-15).
- b. For safety and functional purposes, name all streets.
- c. Provide street signs at all intersections.
- d. Establish one area identification entry sign on.
  - North side of Administration Road just east of Vandegrift Boulevard.

## 9. Lighting

- a. Provide consistent lighting levels per Section 3.11-Lighting, for:
  - Pedestrian walkways that are used at night.
  - All community and recreational use facilities.
  - Parking areas.
  - Streets.
- b. Light cantonment identification entry signs with ground level lights. See detail in Section 8.8.

## 10. Site Furniture

- a. Develop a survey and analysis of the existing site furniture conditions as outlined in Section 3.12-Site Furniture.
- b. Prepare a long-term program to replace all worn out or broken site furniture with furniture identified in Section 8.9.

## 11. Screens, Walls and Fences

- a. Develop a survey and analysis of the existing areas that are screened and that need to be screened as outlined in Section 3.13-Screens, Walls and Fences.
- b. Prepare a long-term program to replace all screen fences in disrepair and identify locations where screening and fencing is required.
- c. When replacing fences use those standards in section 3.13 and details in Section 8.10.
- d. Screen all utility boxes, equipment and substations.
- e. Provide trash dumpster enclosures as detailed in Section 8.9.



Figure 4.5-14: Replace outdated sign like this.



Figure 4.5-15: Example of existing non-conforming sign in the Pico (24) Area.

## 12. Utilities

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities.
- b. Provide right-of-way easements for above grade utilities in streets or alleys.
- c. Place utilities underground per the Utility Details and Standards in Section 8.11.
- d. Minimize utility easements through development or open space areas.
- e. Clean existing drainage channels of debris.



# VADO DEL RIO (25) AREA

## 4.6 Vado Del Rio (25) Area

Vado Del Rio (25) is located east of Interstate 5, atop a knoll overlooking the Air Station on the north edge of the Santa Margarita River Valley (Figure 4.6-1). Development is visible from below and affords sweeping views from its prominent location. Multiple activities occur in this area, including development relating to heavy equipment and motor transport maintenance (mainly supporting the Air Station). The entire area is impacted by aircraft noise (Figure 4.6-1).

### 4.6 A. Vado Del Rio (25) Area Observations

The following is a summary of the assets and liabilities observed at the Vado Del Rio (25) Area that were the basis for specific design recommendations.

#### 1. Assets

- a. There are excellent views from the site to the surrounding open space, Santa Margarita River and the Air Station (Figure 4.6-2).
- b. Opportunities for new storage and operational facilities are possible due to the removal of a significant number of existing deteriorated structures.
- c. More recently constructed facilities incorporate architectural materials identified in Section 3.5-Architecture.
- d. There are mature Ficus and Peppers trees on site.
- e. Proximity to the Air Station affords opportunity for support services in future development.
- f. The main entry off Basilone Road is pleasant and understated, in keeping with the rural nature of this site (Figure 4.6-3).



Figure 4.6-2: Views of the Santa Margarita River Valley.



Figure 4.6-3: Vado Del Rio (25) Area identification signs.



Figure 4.6-4: Example of inappropriate color for exterior building equipment.

# VADO DEL RIO (25) AREA- CANTONMENT MAP



NOT TO SCALE



Figure 4.6-1

## 2. Liabilities

- a. Present vehicular circulation is not adequate to tolerate significant increases in traffic volume.
- b. Concrete block color appears too dark on Building 25266 and the color of exterior hardware (blue) is too much of a contrast (Figure 4.6-4).
- c. Undefined and unimproved parking areas are found throughout the site (Figure 4.6-5).
- d. Storage areas are inappropriately located and unsightly and may require screening.
- e. The entire site suffers from random successional development.
- f. There are dirt lots in some areas with no curbs or gutter improvements and erosion problems have resulted.
- g. Lighting is concentrated on streets only.
- h. Pedestrian circulation is trail-like, reflecting desired paths of pedestrians.
- i. Landscaping is inconsistent and lacking in most areas.
- j. There is no consistent signage program.
- k. In many areas security fencing or fencing around storage areas is in disrepair and needs replacing.
- l. Much of the Vado Del Rio (25) Area is still serviced by above grade utilities, adding to visual clutter.
- m. Storage, trash, and utility areas are not properly screened.
- n. There are Quonset Huts and other older wooden structures that are in disrepair (Figures 4.6-6 and 4.6-7).
- o. The entire area is impacted by aircraft noise.



Figure 4.6-5: Dirt parking area adjacent to existing parking lot.



Figure 4.6-6: Abandoned kennels in various states of disrepair atop the knoll.



Figure 4.6-7: Abandoned Quonset Hut and wooden building.

## 4.6 B. Recommendations

The following is a summary of recommendations for improvements to the Vado Del Rio (25) Area. These recommendations are based on the existing assets and liabilities previously identified.

### 1. Land Use

To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3-Land Use.

### 2. Site Planning

- a. For future developments refer to the guidelines established in Section 3.4 – Site Planning and the Base Master Plan.
- b. Review existing development areas and determine where it would be possible to consolidate parking, establish pedestrian connections, and improve the overall efficiency and economy of the Area.
- c. Through the demolition of Quonset huts and other wood structures per the Basewide Master Plan, opportunities become available for the development of storage and operational facilities.
- d. General improvement to Area vehicular circulation is needed.

### 3. Architecture

- a. Future developments are to follow the guidelines established in Chapter 3, Section 3.5-Architecture (Figure 4.6-8).
- b. Establish an aggressive program to eliminate buildings that are beyond economical repair.
- c. For those buildings that are to be retained, establish a program for the rehabilitation using the guidelines in Chapter 3, Section 3.5-Architecture (Figures 4.6-9 and 4.6-10).
- d. Use approved colors for existing facilities that require painting. See Appendix A Color Board/ Building Materials.
- e. Do not paint new concrete or masonry block structures.



Figure 4.6-8: Building 25118 is a good example of architecture following BEAP guidelines.



Figure 4.6-9: Building 25152, Quonset huts, at Vado Del Rio (25) Area.



Figure 4.6-10: Skeet range.

#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6-Landscaping when upgrading the Vado Del Rio (25) Area landscape or when establishing a maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use of Base Approved Plant List in Section 3.6 is mandatory when selecting replacement plants or new planting.
- e. Use trees as the dominant landscape planting element in all developed areas.
- f. Incorporate mature trees and landscape in new developments (Figure 4.6-11).
- g. Minimize the use of turf and introduce groundcover with low water requirements (Figure 4.6-12).
- h. Inorganic mulch can also be used as groundcover. Use only one color and size (Figure 4.6-13).
- i. When preparing landscape plans for future development, use the guidelines outlined in Section 3.6-Landscaping.
- j. Install erosion control for areas that show signs of erosion at the following locations:
  - Around new structures.
  - Temporary parking areas.



Figure 4.6-11: Mature palm trees at Vado Del Rio (25) Area entrance.

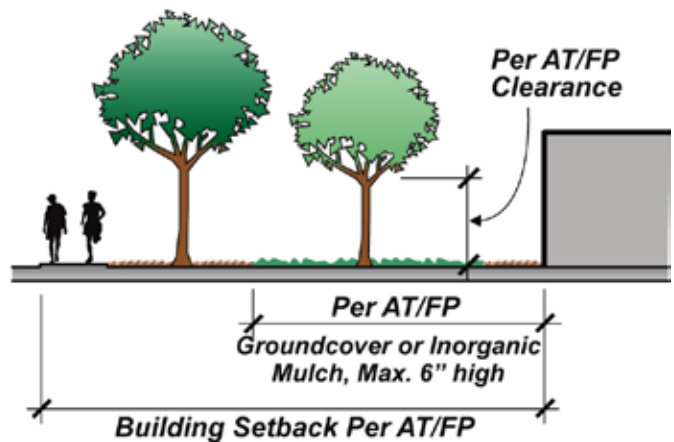


Figure 4.6-12: Typical landscape treatment for low maintenance and adhering to AT/FP requirements.

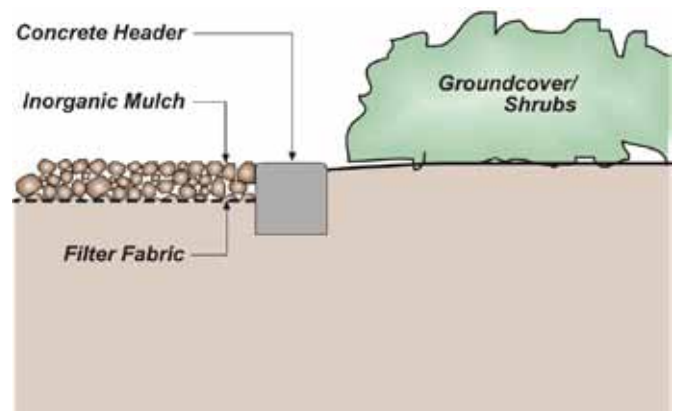


Figure 4.6-13: Typical cobble and header detail for landscape areas.



## 5. Street Design

- a. Clearly separate streets from parking areas (Figure 4.6-14).
- b. Provide standard local collector street right-of-way improvements for Vado Del Rio Road. See Section 3.7-Street Design.
- c. No on-street parking is permitted.

## 6. Parking

- a. Provide an accurate parking demand based on the existing uses. Refer to Basewide Parking Requirement in Section 3.8-Parking.
- b. Re-stripe all parking areas to the stall size outlined in Section 3.8-Parking.
- c. Provide for accessible parking stalls per current ADA requirements.
- d. Improve all temporary parking lots per Section 3.8-Parking.
- e. Provide landscape improvements in all parking lot areas per Section 3.6-Landscaping (Figure 4.6-15).
- f. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- g. For repair, and when economically feasible, replace asphalt curbs with concrete. See detail in Section 8.4.
- h. The use of asphalt curbs is strictly prohibited for water control and drainage.
- i. Provide lighting fixtures in all parking areas that are used at night and are not currently lit per Section 3.11-Lighting.
- j. For future developments, prepare a survey and analysis of the existing parking conditions as outlined in Section 3.7-Street Design.

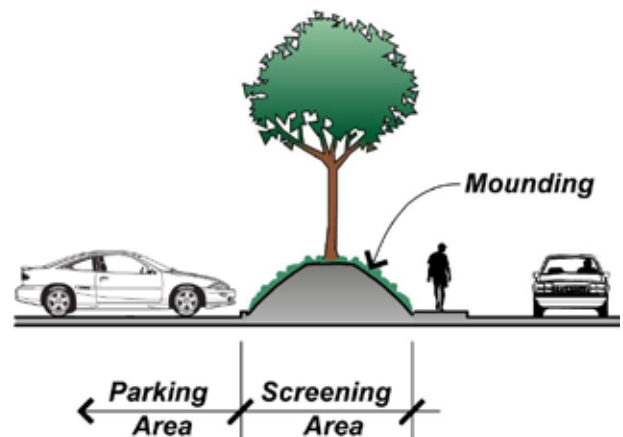


Figure 4.6-14: Typical detail to separate parking from streets.

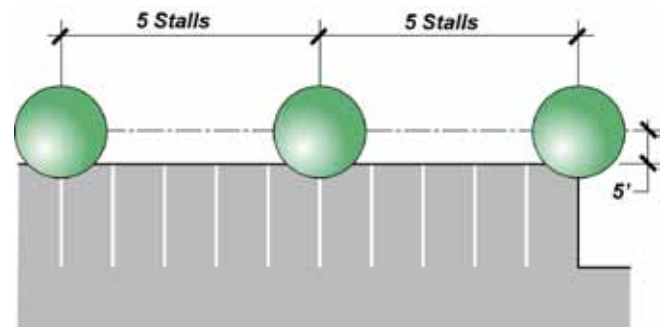


Figure 4.6-15: Provide trees at the perimeter of parking lots.

## 7. Pedestrian Circulation

- a. Provide concrete sidewalks along Vado Del Rio Road and local collector streets per Section 3.9-Pedestrian Circulation.
- b. Provide sidewalk connections to major facilities from surrounding uses that have heavy pedestrian traffic.

## 8. Signage

- a. For safety and functional purposes, name all streets.
- b. Provide street signs at all intersections.
- c. Provide cantonment identification entry sign per Section 3.10-Signage to replace existing sign at Basilone Road and Vado Del Rio Road (Figures 4.6-16 and 4.6-17).
- d. Prepare a long range plan to replace all signs to conform to Section 3.10-Signage and details in this document.

## 9. Lighting

- a. Provide consistent lighting levels for:
  - Pedestrian walkways that are used at night.
  - Parking areas.
  - Streets.
- b. Light cantonment identification entry signs with ground level lights. See detail in Section 8.8.

## 10. Site Furniture

Prepare a long-term program to replace all worn out or broken site furniture with furniture selected in Chapter 8, including barbecue units.

## 11. Screens, Walls and Fences

- a. Replace fencing on the north side of Vado Del Rio Road at Building 25253.
- b. Prepare a long-term program to replace all screen fences in disrepair and identify locations where screening and fencing is required.
- c. When replacing fences use those standards and details outlined in Section 8.10.



Figure 4.6-16: Current signage at Vado Del Rio Road, near Building 25265.

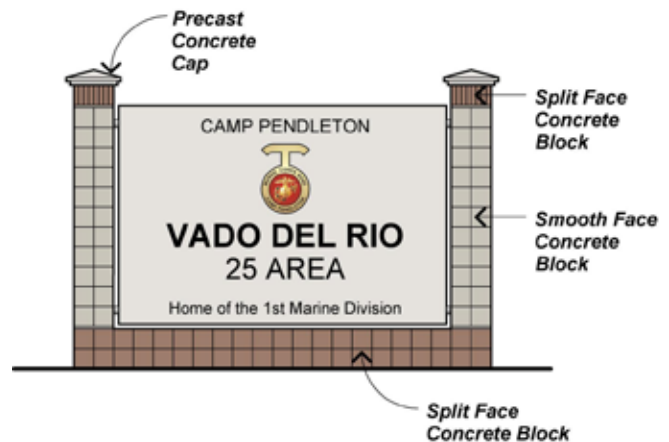


Figure 4.6-17: Cantonment identification entry sign for Vado Del Rio (25) Area.

## 12. Utilities

- a. Provide right-of-way easements for above grade utilities in streets or alleys.
- b. Place utilities underground per the Utility Details and Standards in Section 8.11.
- c. Minimize utility easements through development or open space areas.
- d. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities.



# 26 AREA

## 4.7 26 Area

The 26 Area is in the upper Santa Margarita River Valley, northeast of the Chappo (22) Area and the Air Station. Most existing buildings are of wood construction, generally date to 1942-44, and are currently rated inadequate. The 26 Area is located on the Santa Margarita floodplain and is characterized as generally flat (Figure 4.7-1).

### 4.7 A. 26 Area Observations

The following is a summary of the assets and liabilities observed at the 26 Area that were the basis for specific design recommendations.

#### 1. Assets

- a. Eucalyptus groves provide a visual backdrop for Santa Margarita River Road.
- b. Existing Building 2662 on the northwest corner of Santa Margarita River Road and Vandegrift Boulevard is in good condition.
- c. Marine Corps Mechanized Command Museum is an historical asset. See Chapter 9 for more information on the historical significance of this area.
- d. Older period buildings have a strong association with historic assets of the Mechanized Museum.

#### 2. Liabilities

- a. Older buildings require more intense maintenance and are in the primary view shed for westbound Rattlesnake Canyon Road.
- b. Entry to Building 2662 is close to the intersection of Santa Margarita River Road and Vandegrift Boulevard, which creates a vehicular safety issue.
- c. Collection of Korean, Vietnam and Desert Storm Vehicles housed outside the museum are exposed to the elements.

## 4.7 B. Recommendations

The following is a summary of recommendations for improvements to the 26 Area. These recommendations are based on the existing assets and liabilities previously identified.

### 1. Land Use

To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3-Land Use.

### 2. Site Planning

- a. For future developments, refer to the guidelines established in Section 3.4-Site Planning and the Base Master Plan.
- b. In developing the western portion of 26 Area, consider sight lines from Rattlesnake Canyon Road, Vandegrift Boulevard and Santa Margarita River Road.

### 3. Architecture

- a. Future developments are to follow the guidelines established in Section 3.5-Architecture.
- b. Establish a program for the demolition of existing, non-functional structures.
- c. Do not paint new concrete or masonry block structures.
- d. Maintain historic color schemes of World War II era buildings (Figure 4.7-2).



Figure 4.7-2: World War II era buildings in 26 Area.

# 26 AREA-CANTONMENT MAP

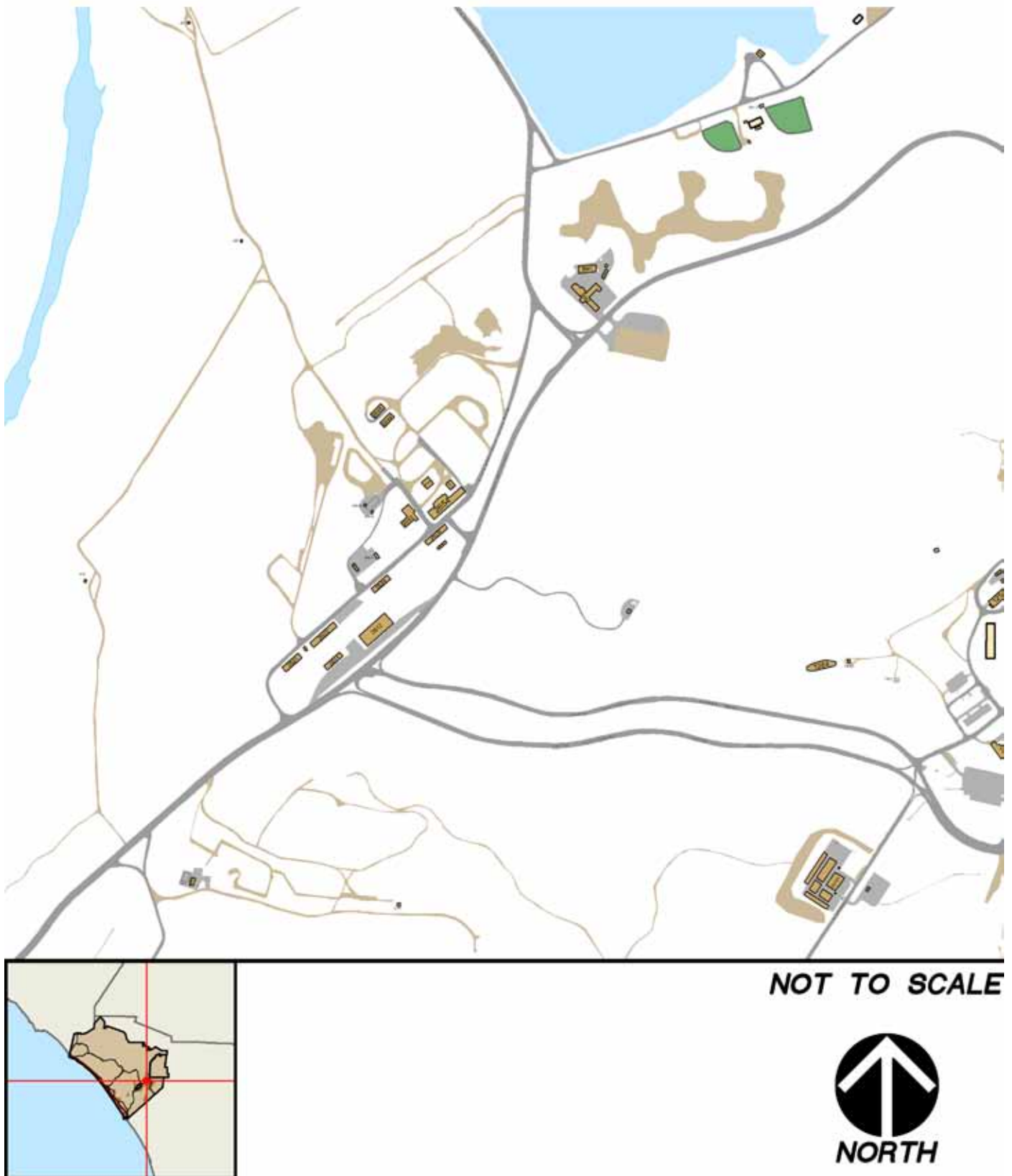


Figure 4.7-1

#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping (Figures 4.7-3 and 4.7-4).
- b. Refer to Section 3.6 when upgrading the 26 Area landscape or establishing maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use Base Approved Plant List (Section 3.6) when selecting replacement plants or new planting for 26 Area.
- e. Use trees as the dominant landscape planting element in all developed areas.
- f. Introduce groundcover with low water requirements.
- g. Inorganic mulch can also be used as groundcover. Use only one color and size.

#### 5. Street Design

- a. Provide improvements along Vandegrift Boulevard as outlined in Section 3.7-Street Design.
- b. Determine if the access to Building 2662 creates a conflict with the intersection of Vandegrift Boulevard and Santa Margarita River Road.

#### 6. Parking

- a. Provide an accurate parking demand for Building 2662. Refer to Section 3.8-Parking.
- b. Re-stripe all parking areas to the stall size outlined in Section 3.8-Parking.
- c. Provide for accessible parking stalls per ADA.
- d. Provide landscape improvements in all parking lot areas per Section 3.6-Landscaping.
- e. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.



Figure 4.7-3: Existing landscape conditions in 26 Area.



Figure 4.7-4: Mature palms along Vandegrift in 26 Area.

- f. For repair, and when economically feasible, replace asphalt curbs with concrete. See Section 8.4.
- g. The use of asphalt curbs is strictly prohibited.
- h. Provide lighting fixtures in all parking areas that are used at night, per Section 3.11- Lighting.

#### 7. Pedestrian Circulation

- a. Provide concrete sidewalks along Vandegrift Boulevard. See Section 3.9-Pedestrian Circulation.
- b. Provide sidewalk connections to major facilities from surrounding uses that have heavy pedestrian traffic.

## 8. Signage

- a. Prepare a plan to replace all signs near Building 2662. See Section 3.10-Signage.

## 9. Lighting

- a. Provide consistent lighting levels for:
  - Pedestrian walkways that are used at night.
  - All functional use facilities.
  - Parking areas.
  - Streets.
- b. Light cantonment identification entry signs with ground level lights (Figure 4.7-5).

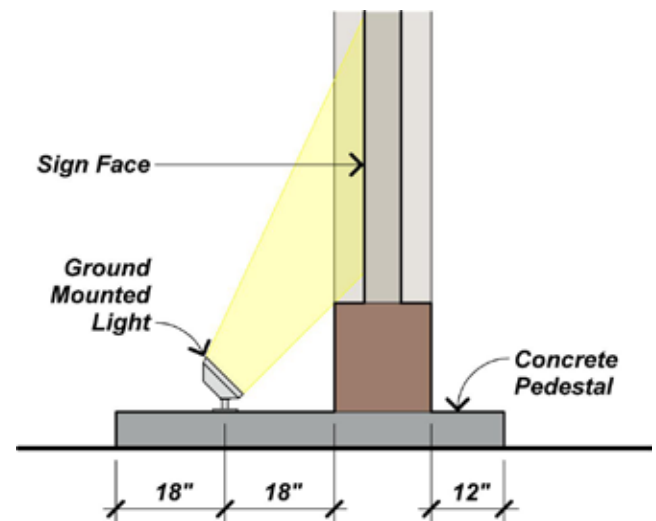


Figure 4.7-5: Typical signage light fixture and pedestal.

## 10. Site Furniture

- a. Develop a survey and analysis of the existing site furniture conditions at Building 2662. See Section 3.12-Site Furniture.
- b. Prepare a program to replace all worn out site furniture at Building 2662. See Section 8.9.

## 11. Screens, Walls and Fences

- a. Prepare a program to replace all screen fences in disrepair near the development area of Building 2662. See Section 8.10 for standards and details.
- b. Screen all utility boxes, storage areas, equipment and substations (Figure 4.7-6).



Figure 4.7-6: Unscreened storage of broken bleachers.

## 12. Utilities

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities.
- b. Place utilities underground per the Utility Design and Standards in Section 8.11.
- c. Provide right-of-way easements for these utilities in streets or alleys.
- d. Minimize utility easements through development or open space areas.

# NAVAL HOSPITAL (27) AREA

## 4.8 Naval Hospital (27) Area

The Naval Hospital is the largest health facility on Base, located on a terrace east of the Santa Margarita River valley, overlooking Lake O'Neill (Figure 4.8-1). It is an independent command, supporting general clinical and hospital services for the Base, and branch medical and dental clinics in the major cantonment areas.

### 4.8 A. Naval Hospital (27) Area Observations

The following is a summary of the assets and liabilities observed at the Naval Hospital (27) Area that were the basis for specific design recommendations.

#### 1. Assets

- a. There are mature trees and a vintage anchor at the entry.
- b. Parking areas are well defined and make good use of landscape plantings (Figure 4.8-2).
- c. The existing landscape is excellent, consisting of a simple plant palette with generous stands of single species trees.
- d. There is a well maintained complex of structures.
- e. The entry to the hospital conveys a simple park-like atmosphere with trees and lawn.
- f. The BEQs south facing plaza incorporates a stand of mature Sycamores providing an excellent setting for the entry (Figure 4.8-3).
- g. The BEQ parking area is well landscaped and lit.

#### 2. Liabilities

- a. The Main Hospital identification sign is visually obstructive to good vehicular sight lines, creating a potential traffic hazard (Figure 4.8-4).
- b. Extensive on-street parking on Santa Margarita River Road indicates inadequate parking facilities.
- c. Hospital signage is unclear, particularly for emergency situations.
- d. Turf area at Hospital entry is not properly irrigated.



Figure 4.8-2: Landscaped parking lot at the Naval Hospital.



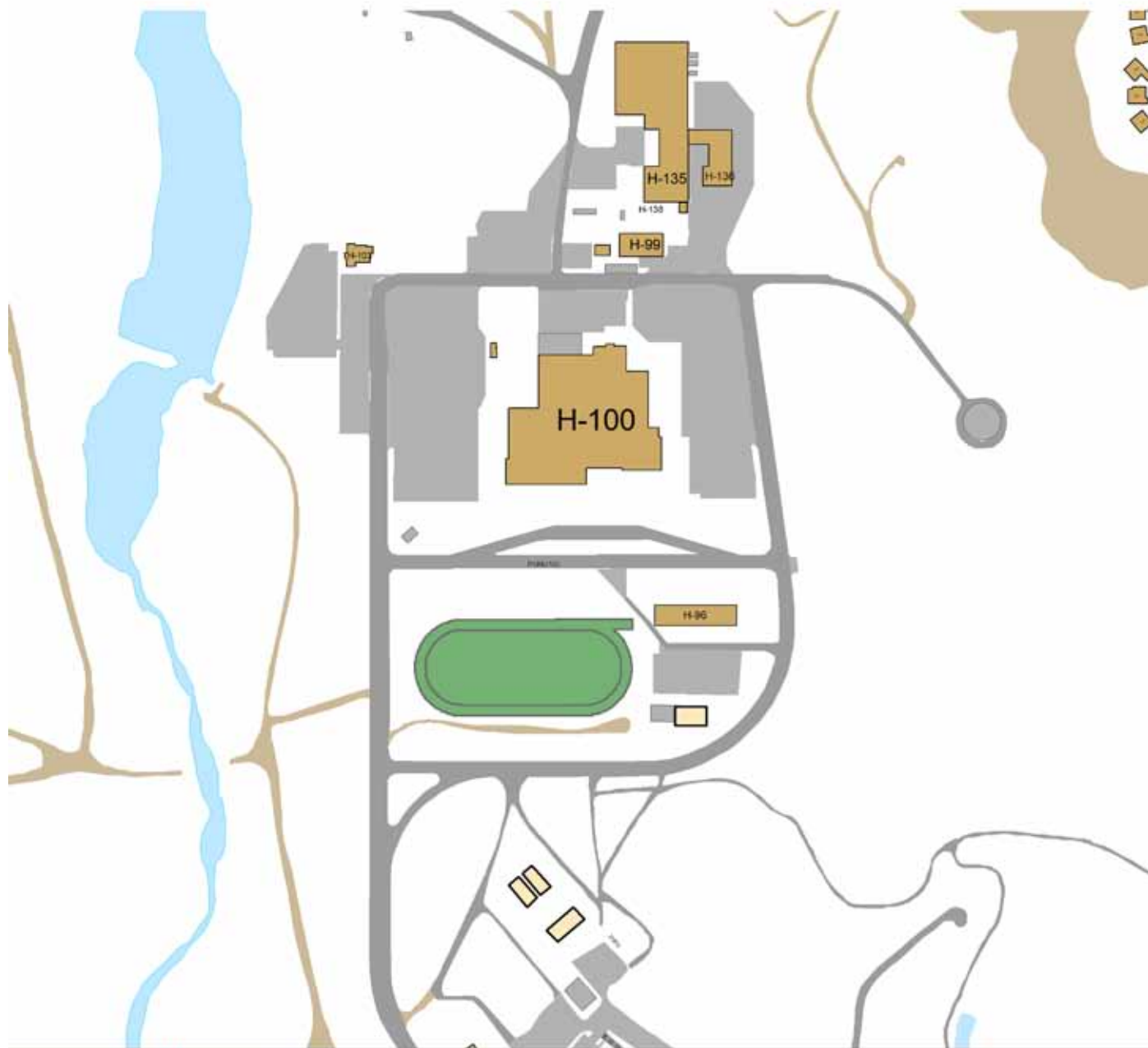
Figure 4.8-3: Mature trees at BEQ M-96.



Figure 4.8-4: Naval Hospital signage on Santa Margarita River Road.



# NAVAL HOSPITAL (27) AREA- CANTONMENT MAP



NOT TO SCALE



Figure 4.8-1

## 4.8 B. Recommendations

The following is a summary of recommendations for improvements to the Naval Hospital (27) Area. These recommendations are based on the existing assets and liabilities previously identified.

### 1. Land Use

Maintain existing land use.

### 2. Site Planning

For future developments refer to the guidelines established in Section 3.4-Site Planning.

### 3. Architecture

- a. New developments are to follow the guidelines established in Section 3.5-Architecture.
- b. No improvements required at this time.

### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6-Landscaping when upgrading the Naval Hospital (27) Area landscape or when establishing a maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use of Base Approved Plant List in Section 3.6 is mandatory when selecting replacement plants or new planting.
- e. Minimize the use of turf and introduce ground-cover with low water requirements (Figure 4.8-5).
- f. Inorganic mulch can also be used as ground-cover where feasible. Use only one color and size. See detail in Section 8.3 A-7.
- g. When preparing landscape plans for new development, use the guidelines outlined in Section 3.6-Landscaping.

- h. Monitor irrigation system to insure plant health and avoid runoff (Figure 4.8-6).

## 5. Street Design

- a. No improvements required at this time.
- b. No parking is permitted on Santa Margarita River Road.



Figure 4.8-5: Extensive areas of unusable turf can be found at the Naval Hospital with signs posted to “Stay off the grass”.



Figure 4.8-6: Irrigation runoff caused by poor monitoring of irrigation systems.

## 6. Parking

- a. For future developments, prepare a survey and analysis of the existing parking conditions as outlined in Section 3.8-Parking (Figure 4.8-7).
- b. Provide an accurate parking demand based on the existing uses to determine if the hospital has sufficient parking. Refer to Basewide Parking Requirement in Section 3.8.
- c. Provide for accessible parking stalls per ADA requirements.
- d. No temporary parking lots are permitted in the Naval Hospital (27) Area.
- e. Provide landscape improvements in all parking lot areas if they do not currently meet the Base-wide design criteria in Section 3.6-Landscaping.
- f. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- g. For repair, and when economically feasible, replace asphalt curbs with concrete. See details in Section 8.4.
- h. The use of asphalt curbs is strictly prohibited.
- i. Provide light fixtures in all parking areas that are used at night and are not currently lit, per Section 3.11-Lighting.

## 7. Pedestrian Circulation

- a. Develop a survey and analysis of the existing sidewalk and pedestrian conditions as outlined in Section 3.9-Pedestrian Circulation.
- b. Provide concrete sidewalks along Santa Margarita River Road. See Section 3.9.

## 8. Signage

- a. Replace the existing sign and provide a cantonment identification entry sign per Section 3.10-Signage. Mitigate vehicular sight distance problems.
- b. Retain the existing mature trees and signature anchor element (Figure 4.8-8).
- c. Improve emergency access directional signage.
- d. For safety and functional purposes, name all streets.



Figure 4.8-7: Overflow parking along entry road.

- e. Provide street signs at all intersections.
- f. Prepare a long range plan to replace all signs to conform to the Section 3.10-Signage.

## 9. Lighting

- a. Provide consistent lighting levels for:
  - Pedestrian walkways that are used at night.
  - Hospital facilities.
  - Parking areas.
  - Streets.
- b. Light cantonment identification entry signs with ground level lights. See detail in Section 8.8.



Figure 4.8-8: Existing mature trees and anchor element.

## 10. Site Furniture

- a. Develop a survey and analysis of the existing site furniture conditions as outlined in Section 3.12-Site Furniture.
- b. Prepare a long-term program to replace all worn out or broken site furniture. See Section 8.9.

## 11. Screens, Walls and Fences

- a. Roof mounted equipment and hospital utilities are generally well screened (Figure 4.8-9).
- b. Screen propane tanks (Figure 4.8-10).

## 12. Utilities

- a. Chain link fencing is not enough to screen propane tanks from view (Figure 4.8-10).



Figure 4.8-9: Example of appropriate screening.



Figure 4.8-10: Visually exposed above ground tank with chain link fence.



# EDSON RANGE (31A) AREA

## 4.9 Edson Range (31A) Area (Weapons And Field Training Battalion-WFTBN)

The Edson Range (31A ) Area consists of Marine Corps Recruit Depot (MCRD), Weapons and Field Training and the Marine Corps Tactical Systems. Basic warrior training is conducted at Edson Range, with virtually the entire facility being visible from Interstate 5 (Figure 4.9-1). Original construction started in 1963, and almost all construction is permanent.

### 4.9 A. Edson Range (31A) Area Observations

The following is a summary of the assets and liabilities observed at the Edson Range (31A) Area (WFTBN) that were the basis for specific design recommendations.

#### 1. Assets

- a. The layout of the entire site is well planned.
- b. Existing mature trees are well maintained and provide a recognizable identity for this site.
- c. The entire Area is visible from the adjacent freeway.
- d. The main entry and secondary entry are distinct and well maintained (Figure 4.9-2).
- e. This is one of the few cantonments that has street names and signs. Vehicular circulation is simple and clear.
- f. Existing Palms provide excellent 'skyline' effect (Figure 4.9-3).
- g. The architecture for Chapel Building 31516 exhibits bold form (Figure 4.9-4).
- h. Broad expanses of space serve as recruit training area.



Figure 4.9-2: Edson Range (31A) Area entry sign.



Figure 4.9-3: Skyline effect of palms.



Figure 4.9-4: Chapel Building 31516.

# **EDSON RANGE (31A) AREA (WEAPONS AND FIELD TRAINING BATTALION-WFTBN)-CANTONMENT MAP**



**NOT TO SCALE**



Figure 4.9-1

## 2. Liabilities

- a. Noise from the freeway and the Landing Craft Air Cushion facility noticeably impact the Area.
- b. When funds permit, the entry guard house should be replaced (Figure 4.9-5).
- c. The general landscape is relatively limited and is not provided in the parking areas.
- d. Large expanses of bare dirt areas create dusty conditions (Figure 4.9-6).
- e. Large areas of turf are costly to maintain.
- f. Existing architectural color palette is darker than most other Base structures.
- g. Pedestrian circulation and lighting is deficient.
- h. Too many vehicular access opportunities exist at Stuart Mesa Road and Hammond Road.
- i. Parking areas are in need of delineation and landscaping.
- j. There is a disorganized array of signs at the range area (Figure 4.9-7).
- k. Temporary structures should be replaced, including:
  - Facilities buildings at the range
- l. Dust conditions are reinforced by proximity to ocean and lack of vegetation.



Figure 4.9-5: Entry guard house for Edson Range (31A) Area.



Figure 4.9-6: Extensive areas of dirt at BEQs.

## 4.9 B. Recommendations

The following is a summary of recommendations for improvements to the Edson Range (31A) Area. These recommendations are based on the existing assets and liabilities previously identified.

### 1. Land Use

To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3-Land Use.



Figure 4.9-7: Regulation signs at the range.



## 2. Site Planning

- a. For new developments, refer to the guidelines established in Section 3.4-Site Planning and the Base Master Plan.
- b. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.
- c. Review existing development areas and determine where it would be possible to consolidate parking, establish pedestrian connections, and improve the overall efficiency and economy of the area.

## 3. Architecture

- a. Construct a new entry guard house using the materials outlined in Section 3.5-Architecture.
- b. Replace the temporary structures in the Edson Range (31A) Area with permanent facilities using the guidelines in Section 3.5-Architecture.
- c. Establish a program for the rehabilitation of existing structures. Use the guidelines in Section 3.5- Architecture as the basis for improvements.
- d. Do not paint new concrete or masonry block structures.
- e. Use approved colors for existing facilities that requiring painting (Figure 4.9-9). See Appendix A Color Board/Building Materials.

## 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6-Landscaping when upgrading the Edson Range (31A) Area landscape or when establishing a maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.



Figure 4.9-8: Typical stair railing with peeling paint.



Figure 4.9-9: Existing concrete buildings at Edson Range (31A) Area.

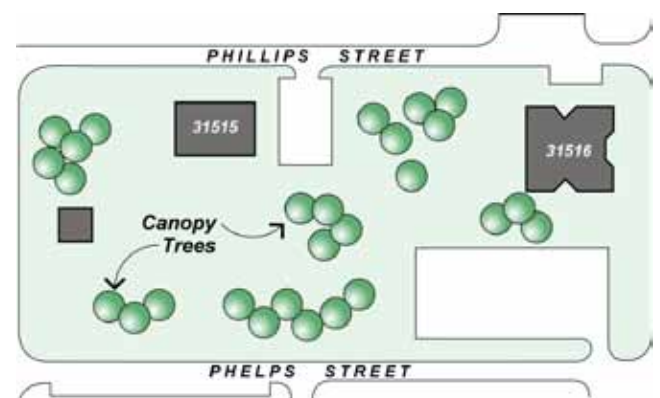


Figure 4.9-10: Add canopy trees to the large open space areas in Edson Range (31A) Area.

- d. Use of Base Approved Plant List in Section 3.6 is mandatory when selecting replacement plants or new planting.
- e. Minimize the use of and introduce groundcover with low water requirements.
- f. Inorganic mulch can also be used as groundcover. Use only one color. See Detail 8.3 A-7.
- g. When preparing landscape plans for future development, use the guidelines outlined in Section 3.6-Landscaping.
- h. Introduce broad-headed canopy trees in informal groups at the BEQ area to offset the sparseness of the existing design (Figure 4.9-10).
- i. Install Palms as accent trees to outline the parade ground (Figure 4.9-11).
  - Plant palms 40 feet on center, 10-12 feet in height.

### 5. Street Design

Redesign the entry road at the intersection of Stuart Mesa and Hammond Roads (Figure 4.9-12).

### 6. Parking

- a. For future developments prepare a survey and analysis of the existing parking conditions as outlined in Section 3.8-Parking.
- b. Provide an accurate parking demand based on the existing uses. Refer to Basewide Parking Requirements in Section 3.8.
- c. Re-stripe all parking areas to the stall size outlined in Section 3.8-Parking.
- d. Provide for accessible parking stalls per ADA requirements.
- e. Provide landscape improvements in all parking lot areas per Section 3.6-Landscaping.
- f. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- g. For repair, and when economically feasible, replace asphalt curbs with concrete. See detail in Section 8.4.
- h. The use of asphalt curbs is strictly prohibited.

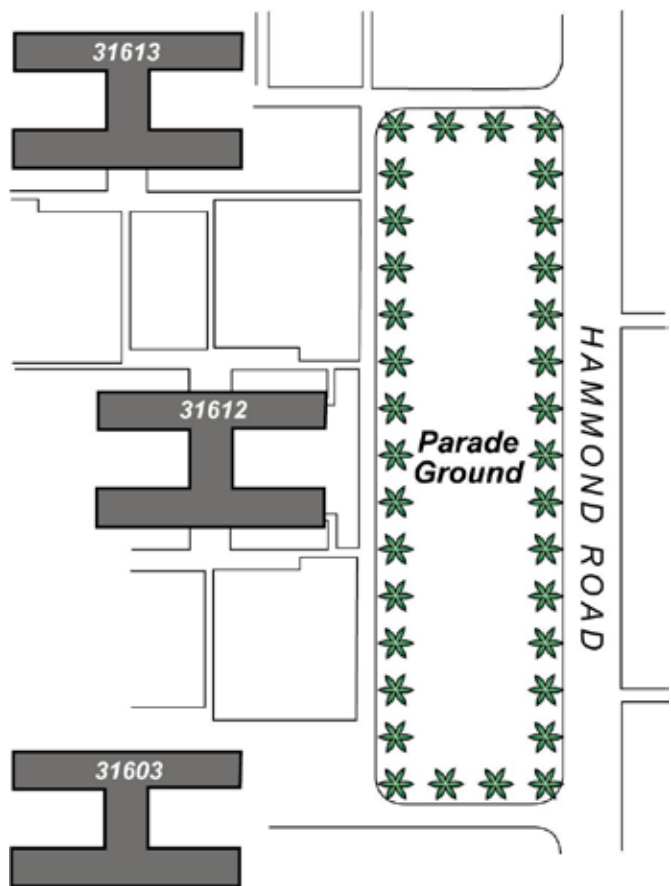


Figure 4.9-11: Typical layout of palms outlining the parade grounds.

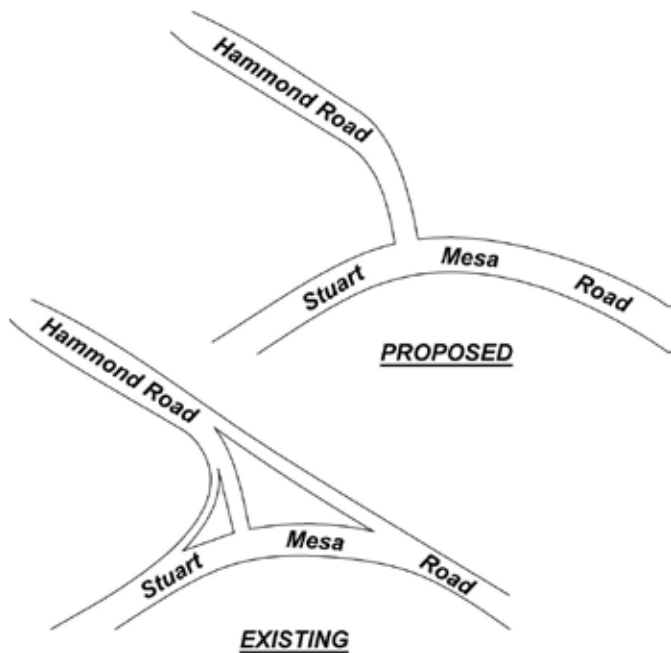


Figure 4.9-12: Proposed redesign of the entry at Edson Range (31A) Area.

- i. Provide lighting fixtures in all parking areas that are used at night, per Section 3.11- Lighting.

## 7. Pedestrian Circulation

- a. Provide concrete sidewalks along Stuart Mesa Road and major collector streets as outlined in Section 3.9-Pedestrian Circulation.
- b. Provide sidewalk connections to major facilities from surrounding uses that have heavy pedestrian traffic.

## 8. Signage

- a. Replace cantonment identification entry signs with those identified in Section 3.10-Signage.
- b. Install Headquarters identification signs per Section 3.10.
- c. Prepare a long range plan to replace all signs to conform to Section 3.10.

## 9. Lighting

- a. Provide consistent lighting levels for (Figure 4.9-13):
  - Pedestrian walkways that are used at night.
  - All community and recreational use facilities.
  - Parking areas.
  - Streets.
- b. Light cantonment identification entry signs with ground level lights. See detail in Section 8.8.
- c. Utilize ground level lights for headquarters sign.

## 10. Site Furniture

- a. Develop a survey and analysis of the existing site furniture conditions as outlined in Section 3.12-Site Furniture.
- b. Prepare a long-term program to replace all worn out or broken site furniture with furniture identified in Section 8.9.

## 11. Screens, Walls and Fences

- a. Prepare a long-term program to replace all screen fences in disrepair.
- b. When replacing fences, use those standards and details outlined in Section 8.10.
- c. Screen all utility boxes, equipment and substations.

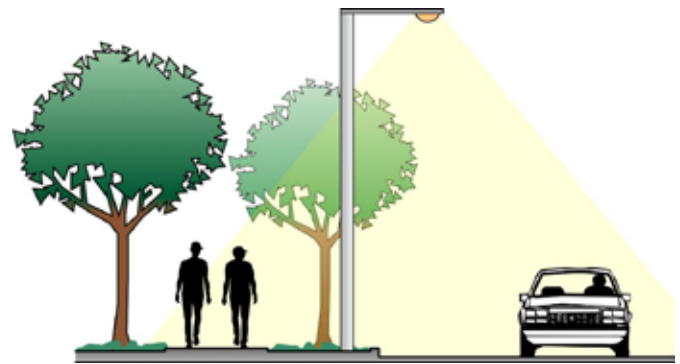


Figure 4.9-13: Consistent lighting levels provides for a safe and secure environment.



Figure 4.9-14: Above ground utilities create visual clutter.

## 12. Utilities

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities (Figure 4.9-14).
- b. Provide right-of-way easements for above grade utilities in streets or alleys.
- c. Undergrounding of utilities shall conform to the Utility Placement standards per Section 8.11.
- d. Minimize utility easements through development or open space area.

# MCTSSA (31B) AREA

## 4.10 MCTSSA (31B) Area

The Marine Corps Tactical Systems Support Activity (31B) Area (MCTSSA) was developed in 1971 and consists of developmental testing and evaluation organizations. The area provides systems engineering support for tactical data systems and administrative and supply support for the amphibious testing facility in the Del Mar (21) Area (Figure 4.10-1).

### 4.10 A. MCTSSA (31B) Area Observations

The following is a summary of the assets and liabilities observed at MCTSSA (31B) Area that were the basis for specific design recommendations.

#### 1. Assets

- a. This Area is located in the coastal area with good views to the ocean.
- b. The quadrangle in the central area is one of the few formal treatments in Camp Pendleton.
- c. The site layout is simple and easy to understand.

#### 2. Liabilities

- a. There are a number of older temporary structures, including trailers.
- b. Parking north of the security building is in poor condition with no landscaping.
- c. There is limited landscaping in general.
- d. Entry roads are in poor condition and are shared with tenant farmers.
- e. The area is in close proximity to the 'Cocklebur Sensitive Area' which will constrain expansion to the north.
- f. There is too much water intensive turf.

### 4.10 B. Recommendations

The following is a summary of recommendations for improvements to MCTSSA (31B) Area. These recommendations are based on the existing assets and liabilities previously identified.

#### 1. Land Use

- a. To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3-Land Use.
- b. MCTSSA (31B) Area continues to provide systems engineering support for tactical data systems and related equipment.

#### 2. Site Planning

- a. Consolidate and remove inadequate temporary facilities with permanent structures.
- b. Maintain quadrangle and develop a pedestrian core that is centered around the quadrangle.
- c. For future development, site buildings on the quadrangle with parking behind the buildings.
- d. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.
- e. For future developments refer to the guidelines established in Section 3.4-Site Planning.

#### 3. Architecture

- a. Future developments, are to follow the guidelines established in Section 3.5-Architecture.
- b. Replace sentry station Building 31325 using the guidelines established in Section 3.5-Architecture.
- c. Establish an aggressive program to eliminate the buildings that are beyond economical repair. Replace trailers with permanent buildings.
- d. Establish a program for the rehabilitation of existing structures. Use the guidelines in Section 3.5- Architecture as the basis for improvements.
- e. Use approved colors for existing facilities that require painting. See Appendix A Color Board/ Building Materials.
- f. Do not paint new concrete or masonry block structures.

# MCTSSA (31B) AREA-CANTONMENT MAP

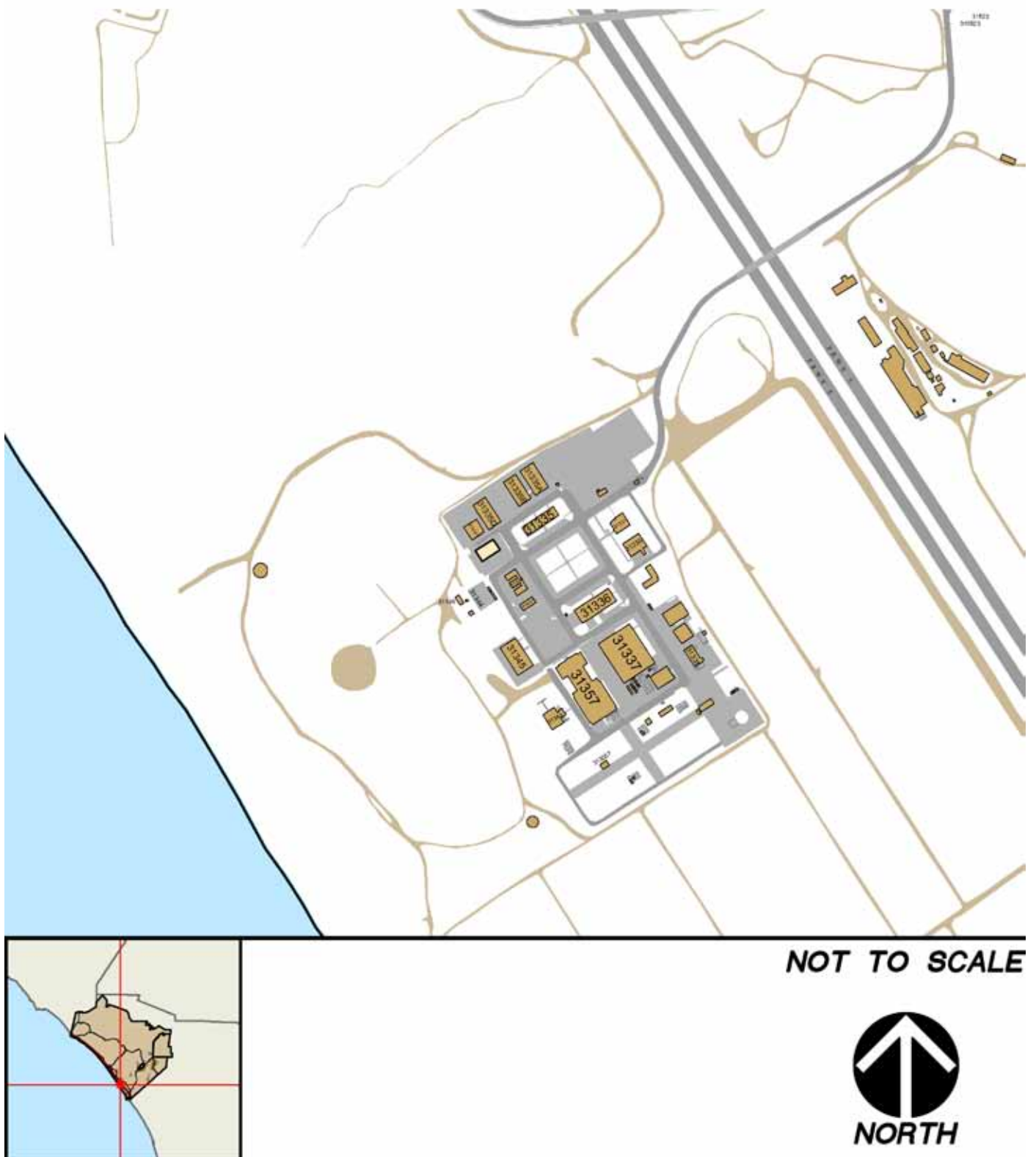


Figure 4.10-1

#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions as outlined in Section 3.6- Landscaping.
- b. Refer to Section 3.6-Landscaping when upgrading MCTSSA (31B) Area landscape or when establishing a maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use of Base Approved Plant List in Section 3.6 is mandatory when selecting replacement plants or new planting.
- e. Use trees as a dominant landscape planting feature in the quadrangle.
- f. Introduce groundcover with low water requirements and/or inorganic mulch in areas around administration and other buildings. Discontinue use of water intensive turf.
- g. When preparing landscape plans for new development, use the guidelines outlined in Section 3.6-Landscaping.
- h. Provide a streetscape program along Cockleburr Road from Stuart Mesa Road leading to MCTSSA (31B) Area (Figure 4.10-2):
  - Plant California Sycamores 40 feet on center.
- i. Provide palms at the cantonment entry identification sign at Stuart Mesa Road:
  - Plant palms in an informal group of 8 or 10. Use palms with a minimum size of 10-15 feet in height (Figure 4.10-3).
- j. All recommendations for landscape are only to be installed if they do not interfere with the operations of MCTSSA (31B) Area.
- k. Review existing site drainage and revise if drainage is damaging existing landscape.



Figure 4.10-2: Typical streetscape planting on Cockleburr Road leading to MCTSSA (31B) Area.

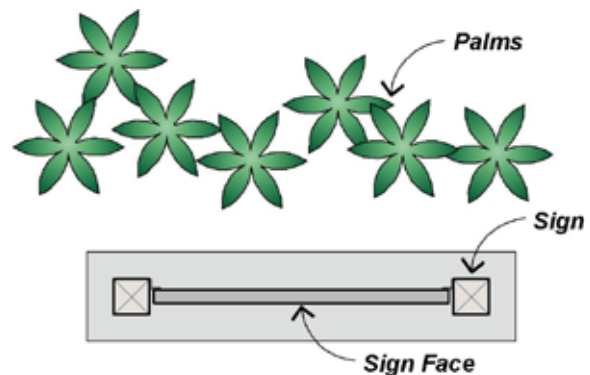


Figure 4.10-3: Informal grouping of palms at cantonment identification entry sign.

#### 5. Street Design

- a. Clearly define streets from parking areas at security Building 31331
- b. Improve the entry road to design standards of a local collector as outlined in Section 3.7-Street Design.

**6. Parking**

- a. Provide an accurate parking demand based on the existing uses. Additional parking may be required at Building 31335 A/B. Refer to Basewide Parking Requirements in Section 3.8.
- b. Re-stripe all parking areas to the stall size outlined in Section 3.8- Parking (Figure 4.10-4).
- c. Provide for accessible parking stalls per ADA requirements (Figure 4.10-5).
- d. No temporary parking lots are permitted in MCTSSA (31B) Area.
- e. Provide landscape improvements at perimeter in all parking lot areas per Section 3.6-Landscaping.
- f. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- g. For repair, and when economically feasible, replace asphalt curbs with concrete. See detail in Section 8.4.
- h. The use of asphalt curbs is strictly prohibited for water control and drainage.
- i. For all future developments, prepare a survey and analysis of the existing parking conditions as outlined in Section 3.8-Parking.

**7. Pedestrian Circulation**

- a. Provide sidewalk connections to major facilities from surrounding uses that have heavy pedestrian traffic per Section 3.9-Pedestrian Circulation.
- b. Provide a pedestrian path to Stuart Mesa Road on the north side of Cockleburrr Road. Currently no path is provided.

**8. Signage**

- a. Replace cantonment area identification entry sign at Stuart Mesa Road per Section 3.10.
- b. Prepare a long range plan to replace all signs to conform to Section 3.10-Signage.

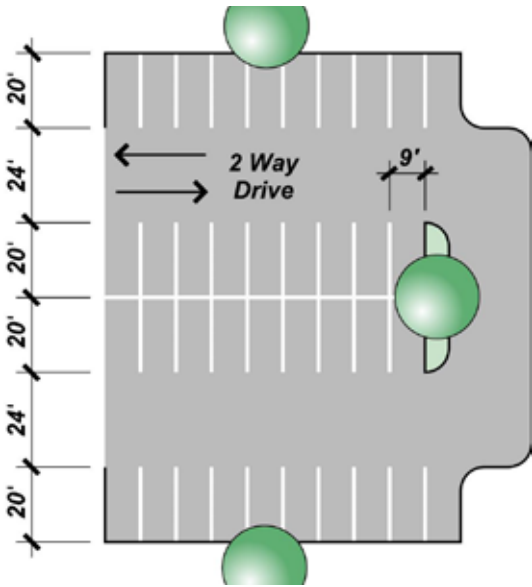


Figure 4.10-4: Standard dimensions for parking stalls.

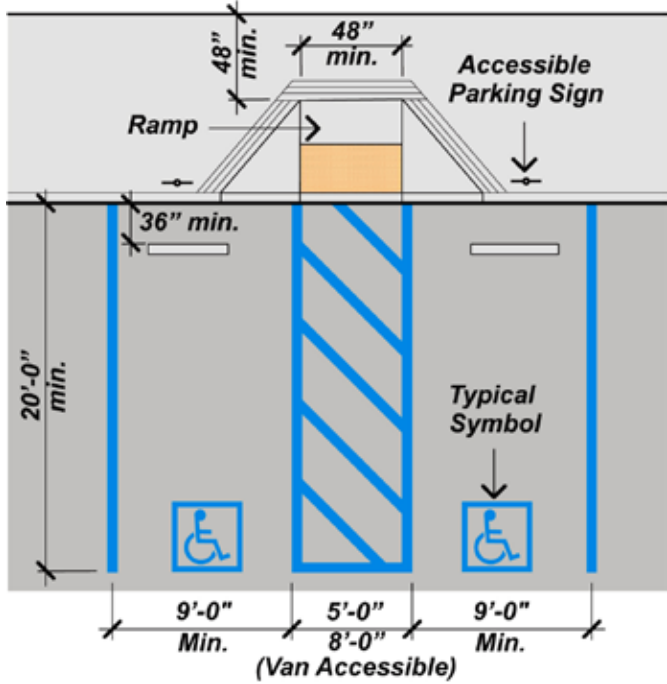


Figure 4.10-5: Standard dimensions for accessible parking stalls.

## 9. Lighting

- a. Provide consistent lighting levels per Section 3.11-Lighting for:
  - Pedestrian walkways that are used at night.
  - All functional use facilities.
  - Parking areas.
  - Streets.
- b. Light cantonment identification entry signs with ground level lights (Figure 4.10-6).
- c. Provide permanent security lighting at gated entrance.

## 10. Site Furniture

- a. Develop a survey and analysis of the existing site furniture conditions as outlined in Section 3.12-Site Furniture.
- b. Prepare a long-term program to replace all worn out or broken site furniture with furniture selected in Section 8.9.

## 11. Screens, Walls and Fences

- a. Provide screening of Utility Tank 31523 at the intersection of Stuart Mesa and Cockleburr Roads.
- b. Prepare a long-term program to replace all screens and fences in disrepair and identify locations where screening and fencing is required.
- c. When replacing fences, use those standards and details outlined in Section 8.10.

## 12. Utilities

- a. Develop a survey and analysis of any existing above grade utilities and prepare a long range plan to underground these facilities.
- b. Provide right-of-way easements for above grade utilities in street right-of-way.
- c. Review the need to provide a drainage system within the Area to eliminate excessive water damage to existing landscape.
- d. Place utilities underground per the Utility Details and Standards in Section 8.11.

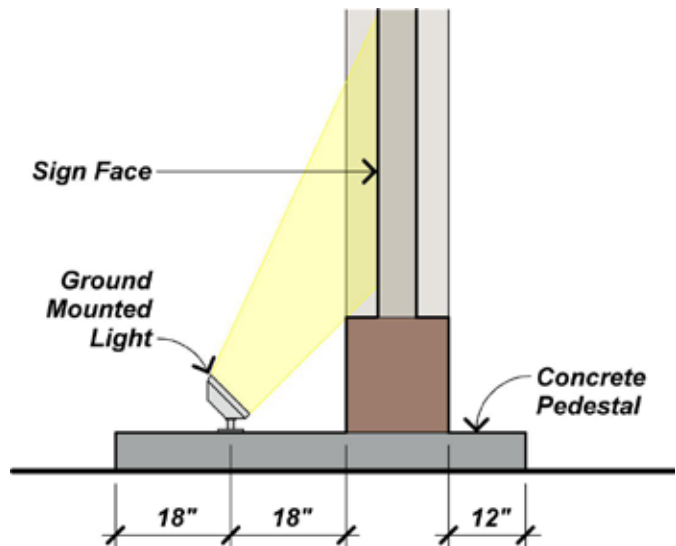


Figure 4.10-6: Uplighting at cantonment sign.





# ASSAULT CRAFT UNIT 5 (31C) AREA

## 4.11 Assault Craft Unit 5 (Assault Craft Unit 5-ACU) (31C) Area

The Assault Craft Unit 5 (ACU-5) (31C) Area facility is visible from Interstate 5 and encompasses 48 acres with 225,000 square feet of office and work-space to support 40 craft and over 700 personnel (Figures 4.11-1 and 4.11-2). Construction of the current facilities commenced in 1985 and the final phase was completed in the summer of 1996. The Area is primarily used by the United States Navy, which is reflected in the building types, signage, and use of color.

The primary purpose of the area is to support LCAC operations. The Landing Craft Air Cushion (LCAC) is a high-speed, over-the-beach, fully amphibious landing craft capable of carrying a 60-75 ton payload.



Figure 4.11-2: ACU-5 (31C) Area entry guard house and gate.

### 4.11 A. ACU-5 (31C) Area

#### Observations

The following is a summary of the assets and liabilities observed at the ACU-5 (31C) Area that was the basis for specific design recommendations.

#### 1. Assets

- a. The layout of the entire site is well planned and maintained.
- b. Existing mature trees in parking lots, courtyards and outdoor dining are well maintained and reflect an aesthetic commitment to this particular site (Figure 4.11-3, 4.11-4).
- c. The presence of ACU-5 (31C) Area is recognizable from the freeway, but privacy is maintained by use of berms and wall screening (Figure 4.11-5).
- d. The main entry is distinct, well maintained, and features a gated and manned guardhouse.
- e. This is one of the few cantonments that have street names and signs. Vehicular circulation is simple and clear.
- f. Significant berming provides spatial form to the ACU-5 (31C) Area and mitigates freeway noise.
- g. The architecture is simple, consistent, utilitarian, and in good condition.



Figure 4.11-3: Appropriate example of landscaping in parking lot.



Figure 4.11-4: Shared public area with BBQs and picnic tables.

# **ASSAULT CRAFT UNIT 5 (31C) AREA-CANTONMENT MAP**

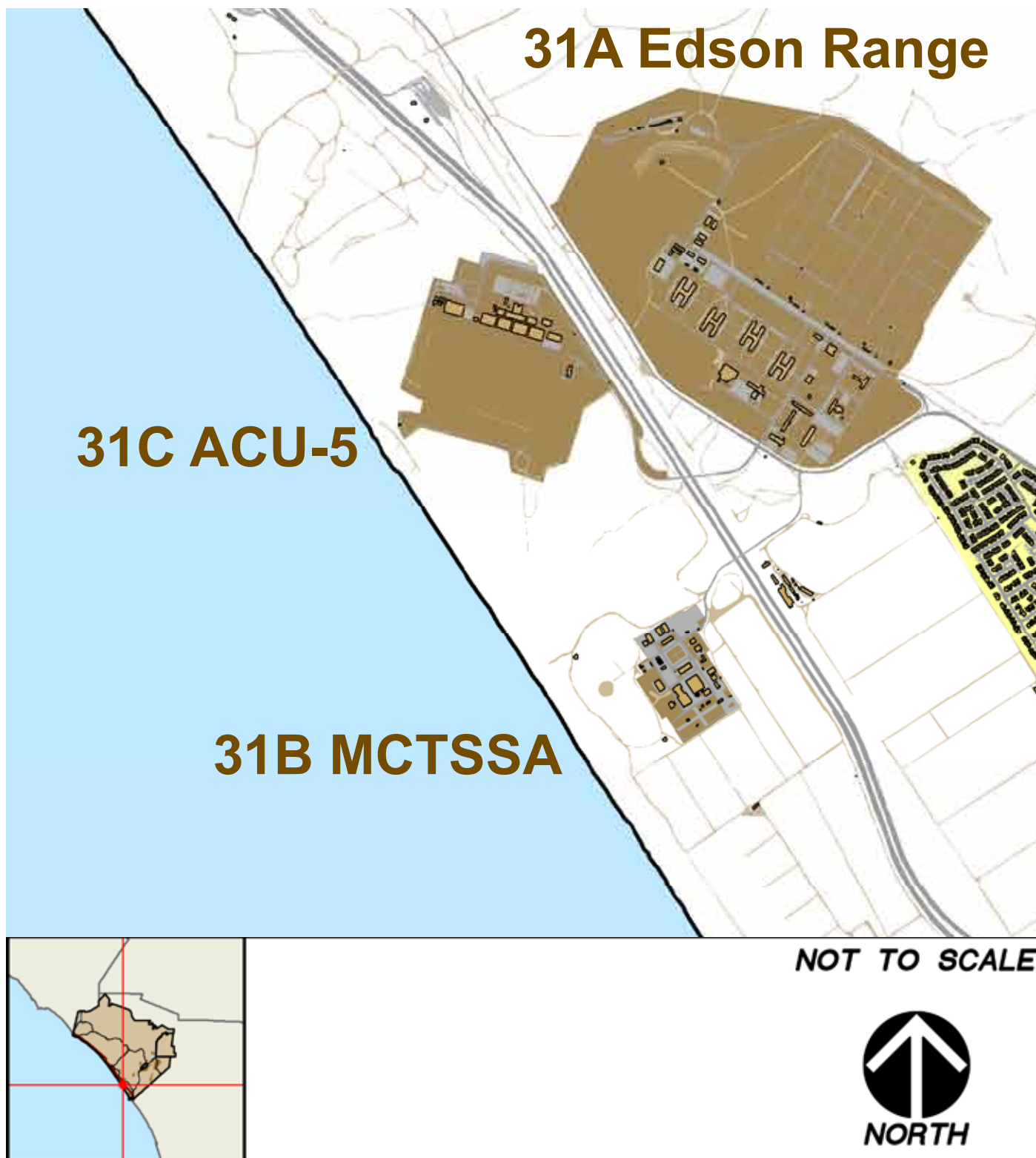


Figure 4.11-1

- h. Broad expanses of paved concrete serve as a staging area for LCAC operations (Figure 4.11-6).
- i. Perimeter security fencing is in good condition (Figure 4.11-7).
- j. The main entry to Administration is easily recognizable by it's mast and flags (Figure 4.11-8).

**2. Liabilities**

- a. Large expanses of turf are water-intensive and costly to maintain.
- b. The large berms are subject to erosion (Figure 4.11-9).
- c. The general landscape is relatively limited and is not provided in the outlying parking areas.
- d. Expanses of unpaved bare dirt areas are unsightly (Figure 4.11-10).
- e. Existing architectural color palette is oriented to Navy use and different than most other Base structures (Figure 4.11-11).
- f. The ACU-5 (31C) Area guardhouse is deficient in features per UFC 4-022-01, Security Engineering: Entry Control Facilities/Access Control Points. Requirements should be reviewed (Figure 4.11-12).
- g. Pedestrian circulation from outlying parking lots is deficient, resulting in dirt footpaths.



Figure 4.11-6: LCAC operations.



Figure 4.11-7: Area is surrounded by a secure perimeter chainlink fence.



Figure 4.11-5: Berms shield area from visual access.



Figure 4.11-8: Mast and flags at Administration entry.

4.11 B. Recommendations

The following is a summary of recommendations for improvements to the ACU-5 (31C) Area. These recommendations are based on the existing assets and liabilities previously identified.

1. Land Use

To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3-Land Use.

2. Site Planning

- a. For new developments, refer to the guidelines in Section 3.4-Site Planning and the Base Master Plan.
- b. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.
- c. Review existing development areas and determine where it would be possible to establish pedestrian connections.



Figure 4.11-10: Large expanses of dirt are unsightly.

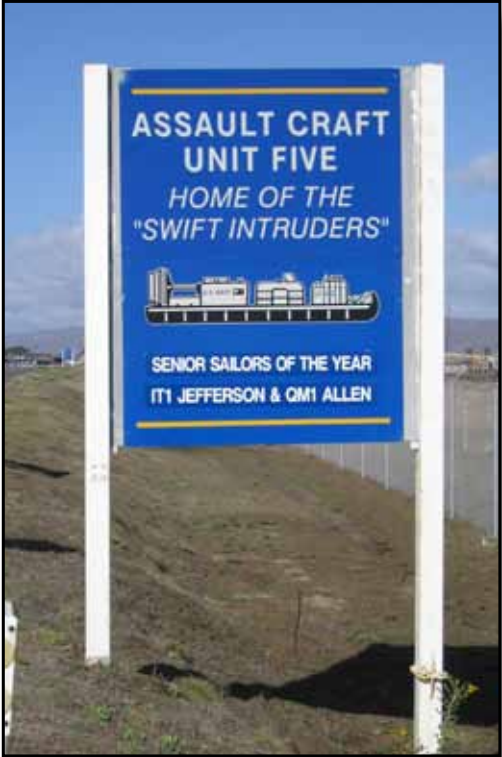


Figure 4.11-11: Area signage.



Figure 4.11-9: Large berms are subject to erosion.



Figure 4.11-12: Area entry lacks vehicle deterrent features.

### 3. Architecture

- a. Most of the facilities are pre-engineered metal building structures. To insure that future developments are compatible, construct new buildings with similar metal components (Figure 4.11-13).
- b. Do not paint new concrete or masonry block structures.

### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6 when upgrading the ACU-5 (31C) Area landscape or when establishing a maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use of Base Approved Plant List in Section 3.6 is mandatory when selecting replacement plants or new planting for ACU-5 (31C) Area.
- e. When preparing landscape plans for future development, use the guidelines outlined in Section 3.6-Landscaping.
- f. Minimize the use of turf in low pedestrian use areas and introduce groundcover with low water requirements (Figure 4.11-14).
- g. Inorganic mulch can also be used as groundcover. Use only one color and size. See detail 8.3 A-7.
- h. Introduce canopy trees at outlying parking areas to reduce heat and dust (Figure 4.11-15).
- i. Plant berms with appropriate groundcover to prevent erosion.

### 5. Street Design

- a. No recommendations at this time.



Figure 4.11-13: Existing pre-engineered metal building structures.



Figure 4.11-14: Minimize turf to conserve water.



Figure 4.11-15: Introduce canopy trees at parking lots to reduce heat and dust.

## 6. Parking

- a. For future developments prepare a survey and analysis of the existing parking conditions as outlined in Section 3.8-Parking.
- b. Provide an accurate parking demand based on the existing uses. Refer to Basewide Parking Requirement in Section 3.8.
- c. Re-stripe all parking areas to the stall size outlined in Section 3.8-Parking.
- d. Provide for accessible parking stalls per ADA requirements.
- e. Provide landscape improvements in outlying parking lot areas per Section 3.6-Landscaping (Figure 4.11-16).
- f. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- g. For repair, and when economically feasible, replace asphalt curbs with concrete. See detail in Section 8.4.
- h. The use of asphalt curbs is strictly prohibited.
- i. Provide light fixtures in all parking areas that are used at night, per Section 3.11-Lighting.

## 7. Pedestrian Circulation

- a. Provide concrete sidewalks along major collector streets as outlined in Section 3.9-Pedestrian Circulation (Figure 4.11-17).
- b. Provide sidewalk connections to major facilities from surrounding uses that have heavy pedestrian traffic.

## 8. Signage

- a. No recommendations at this time.

## 9. Lighting

- a. Provide consistent lighting levels for:
  - Pedestrian walkways that are used at night.
  - All community and recreational use facilities.
  - Parking areas.
  - Streets.



Figure 4.11-16: Parking lots lack landscaping and lighting.



Figure 4.11-17: Example of an area that needs a sidewalk.

- b. Light ACU-5 (31C) Area identification entry signs with ground level lights. See detail in Section 8.8.

**10. Site Furniture**

- a. Develop a survey and analysis of the existing site furniture conditions as outlined in Section 3.12-Site Furniture.
- b. Prepare a long-range development program to replace all worn out or broken site furniture with furniture identified in Section 8.9.

**11. Screens, Walls and Fences**

- a. Screen all utility boxes, equipment and substations (Figure 4.11-18).

**12. Utilities**

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long-range plan to underground these facilities.
- b. Provide right-of-way easements for above grade utilities in streets or alleys.
- c. Undergrounding of utilities shall conform to the Utility Placement details per Section 8.11.
- d. Minimize utility easements through development or open space area.



*Figure 4.11-18: Screen utility areas.*





# MASS (32) AREA

## 4.12 MASS (32) Area

Located on a small mesa, MASS (32) Area consists of MASS (Marine Air Support Squadron), LADD (Low Altitude Air Defense), and MACS (Marine Air Control Squadron). MASS (32) Area controls all aircraft, coordinates air support requests and aircraft deployment (Figure 4.12-1).

### 4.12 A. MASS (32) Area Observations

The following is a summary of the assets and liabilities observed at the MASS (32) Area that were the basis for specific design recommendations.

#### 1. Assets

- a. Due to the siting of the MASS (32) Area on an isolated mesa, the views range from good to exceptional (Figures 4.12-2 and 4.12-3).
- b. The MASS (32) Area is one of the newer developments on Base and reflects a well planned layout and general order.
- c. Vehicular circulation is efficient and clear.
- d. A pedestrian walk is provided on the main entry road (one side only).
- e. The wide parkway provides street planting opportunities.
- f. The sentry station and cantonment identification entry signs are well located (Figure 4.12-4).



Figure 4.12-3: View of Air Base from MASS (32) Area.

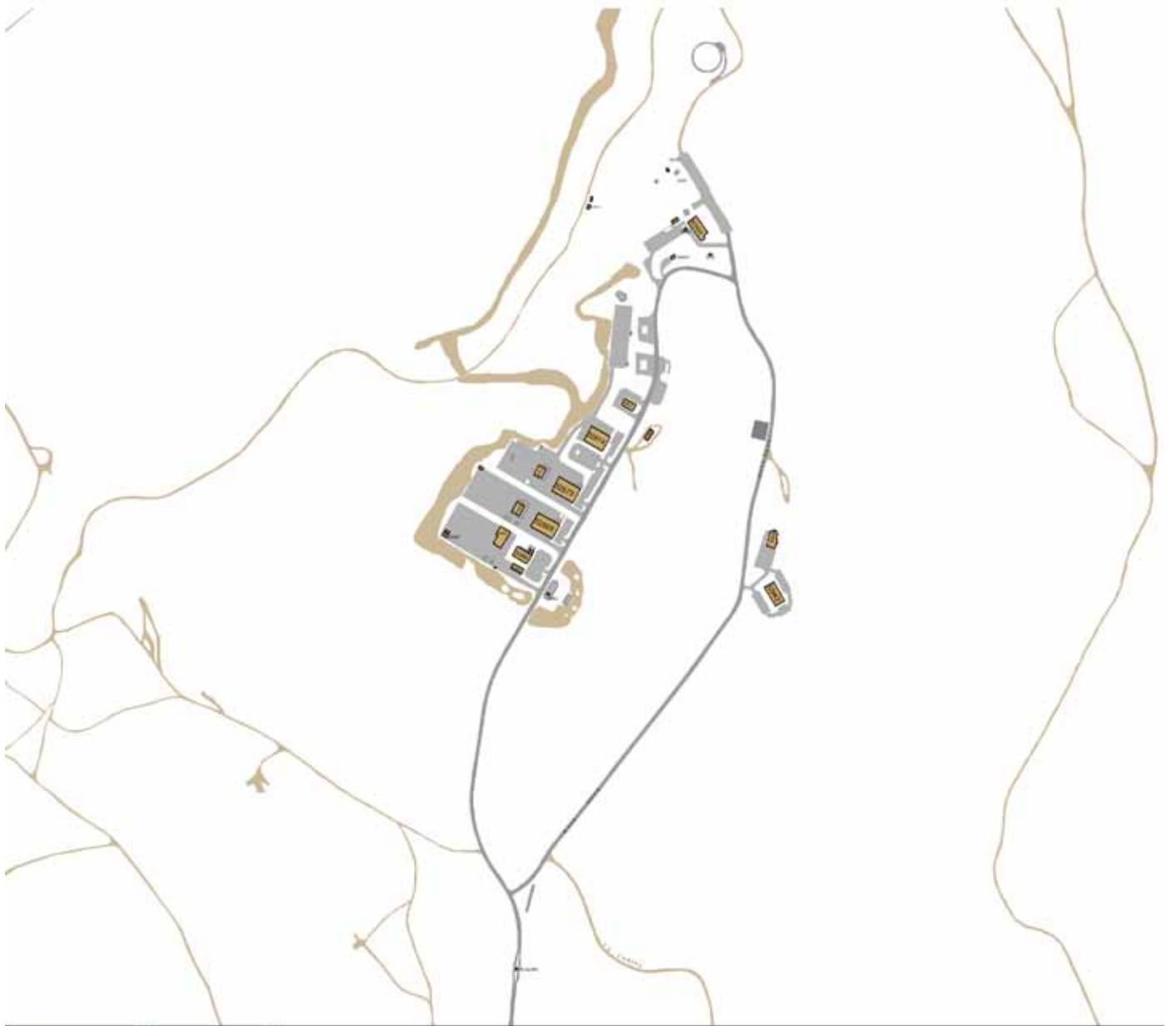


Figure 4.12-4: Sentry station and entry sign.



Figure 4.12-2: Panoramic view of the Base.

# MASS (32) AREA-CANTONMENT MAP



NOT TO SCALE



Figure 4.12-1

## 2. Liabilities

- a. Limited older structures are deteriorating and abandoned.
- b. There is an overall lack of landscaping throughout the Area (Figure 4.12-5).
- c. There is no consistent signage program.
- d. Above grade utilities on the east side of the main entry road are unsightly.
- e. Roof equipment on newer buildings needs screening.
- f. There is an unimproved road section on the east side main entry road.
- g. The parking area on the east side of the entry road is unimproved.
- h. Screening is needed at the storage area.
- i. There is a lack of landscape in the parking area adjacent to Administration building.

### 4.12 B. Recommendations

The following is a summary of recommendations for improvements to the MASS (32) Area. These recommendations are based on the existing assets and liabilities previously identified.

#### 1. Land Use

- a. To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3 Land Use.
- b. The MASS (32) Area is to continue to provide operational activities of training, maintenance/production, supply/storage and command/ administration.

#### 2. Site Planning

- a. For future developments, refer to the guidelines established in Chapter 3 under Section 3.4-Site Planning.
- b. For the appropriate location of future development, refer to the sites selected in the Basewide Master Plan.
- c. Review existing development areas and determine where it would be possible to consolidate



Figure 4.12-5: Structure west of Building 32900, lacking landscape.



Figure 4.12-6: Existing building in Mass (32) Area.

parking, establish pedestrian connections, and improve the overall efficiency and economy of the Area (Figure 4.12-6).

#### 3. Architecture

- a. New developments are to follow the guidelines in Section 3.5-Architecture.
- b. Establish an aggressive program to eliminate the buildings that are beyond their service life.
- c. Establish a program for the rehabilitation of existing structures. Use the guidelines in Section 3.5- Architecture as the basis for improvements.
- d. Use approved colors for existing facilities that require painting. See Appendix A Color Board/ Building Materials.
- e. Do not paint new concrete or masonry block structures.

#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6-Landscaping when upgrading the Mass (32) Area landscape or when establishing a maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use of Base Approved Plant List in Section 3.6 is mandatory when selecting replacement plants or new planting for MASS (32) Area.
- e. When preparing landscape plans for new development, use the guidelines outlined in Section 3.6-Landscaping.
- f. Use trees as the dominant landscape planting element in all developed areas.
- g. Introduce groundcover with low water requirements in areas around administration and other buildings (Figure 4.12-7).
- h. Inorganic mulch can also be used as groundcover. Use only one color and size. See Detail 8.3 A-7.
- i. Where allowable, develop a Streetscape planting for main entry road from Building 32869 to administration building. Plant with:
  - Aleppo Pine-plant 30 feet on center (Figure 4.12-8).
- j. Provide screen/buffer planting at outdoor personnel areas.
- k. Provide screen/buffer planting along the main entry road to screen parking area and to screen storage areas (Figure 4.12-9).
- l. Install erosion control at slopes in the Administration area.

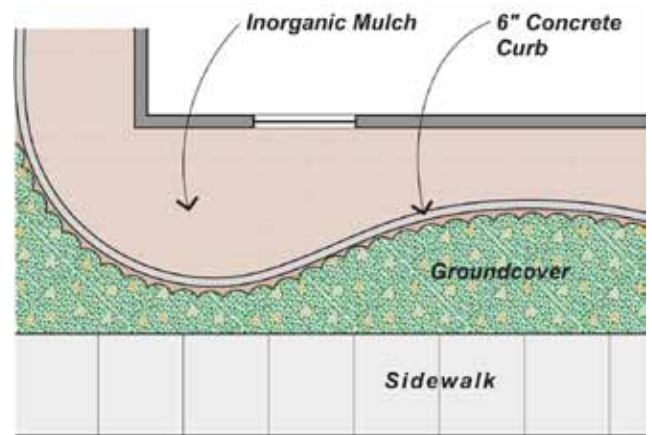


Figure 4.12-7: Typical landscape application after removal of turf areas.



Figure 4.12-8: Aleppo Pines lining the main road.

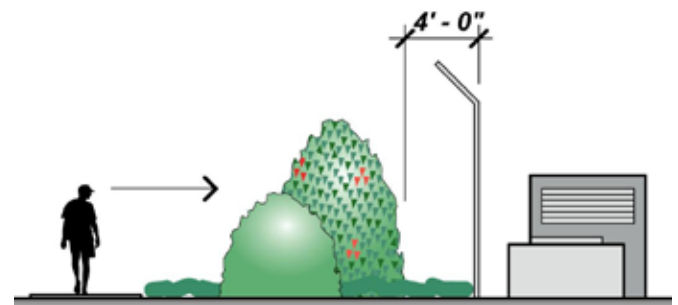


Figure 4.12-9: Typical screening methods of utilities.

## 5. Street Design

- a. Improve the east side of the main entry drive with curb, gutters and sidewalks.
- b. No on-street parking is permitted.
- c. Establish parking access requirements for local collectors per Section 3.7-Street Design.

## 6. Parking

- a. Since “overflow” parking is occurring adjacent to the storehouse Building 32865, an accurate parking demand based on the existing uses may be required. See Section 3.8-Parking.
- b. Re-stripe all parking areas to the stall size outlined in Section 3.8-Parking (Figure 4.12-10).
- c. Provide for accessible parking stalls per ADA requirements.
- d. No temporary parking lots are permitted in the MASS (32) Area.
- e. Improve the overflow parking adjacent to the storehouse Building 32865 to a permanent parking lot per Section 3.8-Parking.
- f. Provide landscape improvements at perimeter of all parking lot areas per Section 3.6-Landscaping (Figure 4.12-11).
- g. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- h. For repair, and when economically feasible, replace asphalt curbs with concrete. See detail in Section 8.4.
- i. The use of asphalt curbs is strictly prohibited.
- j. Provide lighting fixtures in all parking areas that are used at night, per Section 3.11-Lighting.
- k. For future developments, prepare a survey and analysis of the existing parking conditions as outlined in Section 3.8-Parking (figure 4.12-12).

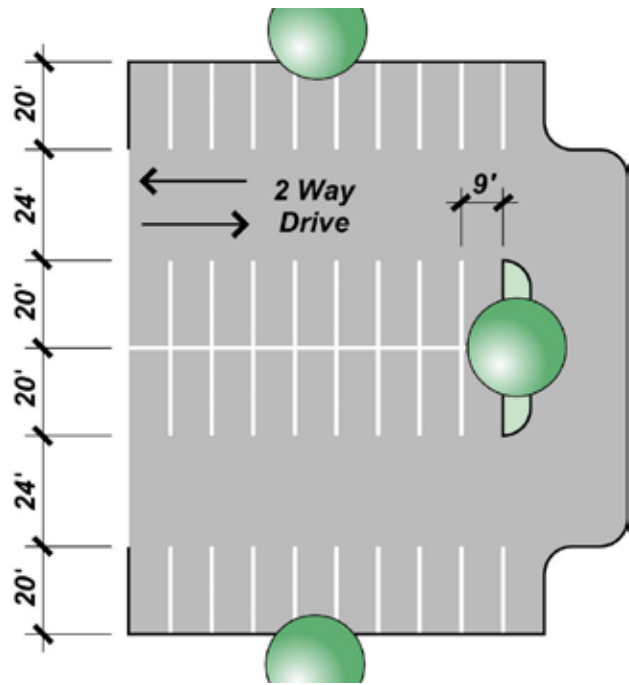


Figure 4.12-10: Standard dimensions for parking stalls.

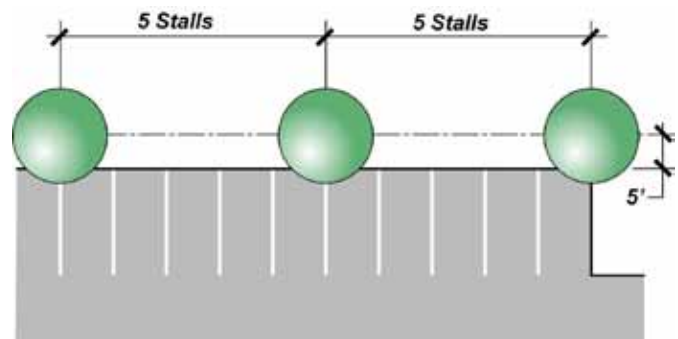


Figure 4.12-11: Standard improvements for parking areas.



Figure 4.12-12: Administration Building 32900 parking lot.

## 7. Pedestrian Circulation

- a. Provide a sidewalk on the east side of the main entry road per Section 3.9-Pedestrian Circulation.
- b. Improve the sidewalk connections to the Administration Building from the parking area and from surrounding uses that have heavy pedestrian traffic.

## 8. Signage

- a. Provide a cantonment identification entry sign at the sentry station per Section 3.10-Signage.
- b. Provide Headquarters entry identification at Administration Building 32900 per Section 3.10.
- c. For safety and functional purposes, name all streets.
- d. Provide street signs at all intersections.
- e. Prepare a long range plan to replace all signs to conform to Section 3.10-Signage.

## 9. Lighting

- a. Provide consistent lighting levels per Section 3.11-Lighting for:
  - Pedestrian walkways that are used at night.
  - All functional use facilities.
  - Parking areas.
  - Streets.
- b. Light cantonment identification entry signs with ground level lights. See Section 8.8.
- c. Provide security lighting at sentry station.

## 10. Site Furniture

- a. Develop a survey and analysis of the existing site furniture conditions as outlined in Section 3.12-Site Furniture.
- b. Prepare a long-term program to replace all worn out or broken site furniture with furniture identified in Section 8.9.

## 11. Screens, Walls and Fences

- a. The fencing in this area is in good condition and only requires the addition of landscaping for screening purposes.
- b. When replacing fences use those standards and details outlined in Section 8.10.
- c. Screen all utility boxes, equipment and substations (Figure 4.12-13).
- d. Prepare a long-term program to replace all screen fences in disrepair and identify locations where screening and fencing is required.

## 12. Utilities

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities.
- b. Provide right-of-way easements for above grade utilities in street right-of-way.
- c. Place utilities underground per the Utility Details and Standards in Section 8.11.
- d. Minimize utility easements through development or open space areas.



Figure 4.12-13: Screen above ground storage tanks.

# MARGARITA (33) AREA

## 4.13 Margarita (33) Area

Margarita (33) Area is located on a knoll above the Santa Margarita River and was originally developed in 1953 (Figure 4.13-1). The Area is used for administrative, training and supply oriented functions. The development consists of three units, each with a centralized billeting area surrounded by support facilities. Architecture includes several pre-engineered buildings. Major recreational facilities are centrally located and include a football field, tennis and handball courts. The Base Chaplain and Base Surgeon are located in this area as well.

### 4.13 A. Margarita (33) Area Observations

The following is a summary of the assets and liabilities observed at the Margarita (33) Area that were the basis for specific design recommendations.

#### 1. Assets

- a. Entry signage and flagpole create a successful focal point.
- b. Being sited on a mesa top, good views are available from many parts of the Area.
- c. Various development areas contain mature trees in good condition, including:
  - Ficus
  - Pines
  - Palms
  - Sycamores
- d. The sports field is well sited in a lower elevation.
- e. Newer developments (BEQ facilities) are better planned and maintained than older (Figure 4.13-2).
- f. The exchange complex provides a pleasant outdoor environment (Figure 4.13-3).
- g. There are many previously developed areas that have been cleared and are available for future developments.
- h. Vehicular circulation is orderly and clear.
- i. Pedestrian circulation is well designed in the newer development areas.



Figure 4.13-2: BEQ Building 33610.



Figure 4.13-3: Exchange Building 330360.



# MARGARITA (33) AREA- CANTONMENT MAP



NOT TO SCALE



Figure 4.13-1

## 2. Liabilities

- a. The entire area suffers from visually unrelated successional development. There is no sense of architectural hierarchy or visual continuity.
- b. There are a variety of older building types, materials and colors, creating a non-cohesive style to the Margarita (33) Area architecture.
- c. Vehicle maintenance Building 33543 is in close proximity to BEQs (Figure 4.13-4).
- d. Many of the older structures, such as Buildings 33321-3331 and 33421-33431, are showing signs of disrepair and neglect.
- e. Many buildings are not sited to allow for shared or group parking areas.
- f. Old structures and trash are concentrated behind Building 33385.
- g. Pedestrian circulation is good in newer areas but weak and in disrepair in the older areas (Figure 4.13-5).
- h. There is no consistent signage program.
- i. The site furniture is not consistent including parking and street light fixtures. The inconsistency is evident even in the Exchange Building 330360 parking area (Figure 4.13-6).
- j. Storage, trash, and utility areas are not properly screened.
- k. Erosion problems were noted along the entry road north of BEQ Buildings 33346-33348 and on the slopes around the Fitness Center.
- l. Much of the Margarita (33) Area is still serviced by above grade utilities, adding to visual clutter.
- m. Landscaping in most areas is sparse and poorly maintained.
- n. Most streets do not have signs.



Figure 4.13-4: Looking south to vehicle storage yard for Building 33543.



Figure 4.13-5: Pedestrian walk and stairs in need of upgrading at Building 33326.



Figure 4.13-6: Inconsistent light fixtures at Building 330360.

### 4.13 B. Recommendations

The following is a summary of recommendations for improvements to the Margarita (33) Area. These recommendations are based on the existing assets and liabilities previously identified.

#### 1. Land Use

- a. To assist in the development of new projects or reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3-Land Use.
- b. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.
- c. In the future, review the possibility of separating the maintenance area 33543 and heavy vehicle activity from the BEQ area (Figure 4.13-7).
- d. Continue the grouping of administration and operational activities in the southern portion of the site.
- e. Buildings found to be inadequate and beyond economic repair should be removed.

#### 2. Site Planning

- a. For future developments, refer to the guidelines established in Section 3.4-Site Planning.
- b. Review existing development areas and determine where it would be possible to consolidate parking, establish pedestrian connections, and improve the overall efficiency and economy of the Area.

#### 3. Architecture

- a. Future developments are to follow the guidelines established Section 3.5-Architecture.
- b. Establish an aggressive program to eliminate the concentration of old structures and trash behind Building 33385 and other buildings that are beyond economical repair.
- c. Establish a program for the rehabilitation of existing structures in the southern portion of the site. These include the classroom, administration and headquarters buildings. See Section 3.5 (Figure 4.13-8).
- d. Repair and repaint the Chapel per Section 3.5-Architecture.
- e. Use approved colors for existing facilities that require painting. See Appendix A Color Board/ Building Materials.
- f. Do not paint new concrete or masonry block structures.



Figure 4.13-7: Parking lot adjacent to BEQs.



Figure 4.13-8: Rehabilitate or demolish older BEQs.

#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping
- b. Refer to Section 3.6-Landscaping when upgrading the Margarita (33) Area landscape, for new developments or when establishing a maintenance plan (Figure 4.13-9).
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use of Base Approved Plant List, Section 3.6 is mandatory when selecting replacement plants or new planting for Margarita (33) Area.
- e. When preparing landscape plans for future development, use the guidelines outlined in Section 3.6-Landscaping.
- f. Use trees as the dominant landscape planting element in all developed areas.
- g. Minimize the use of turf in low use pedestrian areas and introduce groundcover with low water requirements or inorganic mulch. Use only one color and size. See Detail 8.3 A-7.
- h. Eliminate large shrubs that require heavy pruning (Figure 4.13-10). Replace with low growing, low water use shrubs, groundcover or inorganic mulch.
- i. Provide streetscape planting for the unnamed central north/south collector street.
- j. Clean up vegetation around area identification sign at entry of Basilone Road and Stagecoach Road (Figure 4.13-11).
- k. Install ground cover with low water requirements as erosion control for areas:
  - North of BEQs 33348-33346.
  - At entry triangle.
- l. Provide a screen/buffer planting south of BEQ 33612 parking lot to screen vehicle maintenance 33543 storage yard.



Figure 4.13-9: Example of BEAP approved landscaping at the fitness center.



Figure 4.13-10: Replace plants that require heavy pruning with plants that have a smaller natural growth habit.



Figure 4.13-11: Cantonment identification sign at Basilone Road and Stagecoach Road.

## 5. Street Design

- a. Resolve all offset intersections by lining up to 90 degrees or separating intersections per the guidelines outlined in Section 3.7-Street Design.
- b. Clearly define streets from parking areas in the southern portion of the site in the following areas:
  - In the rear of the Division schools.
  - Regimental headquarters (Figure 4.13-12).
  - Classrooms.

## 6. Parking

- a. A parking demand analysis may be required due to the overflow parking near the classrooms. Refer to Section 3.8-Parking.
- b. Seal, slurry coat and re-stripe when repairing parking lots. Re-stripe all parking areas to the stall size outlined in Section 3.8-Parking.
- c. Provide for accessible parking stalls per ADA requirements.
- d. No temporary parking lots are permitted in the Margarita (33) Area.
- e. Provide landscape improvements in all parking lot areas except where a parade ground does not allow. Use those trees identified in Base Approved Plant List, Section 3.6 and the guidelines in Section 3.6-Landscaping.
- f. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- g. For repair, and when economically feasible, replace asphalt curbs with concrete. See detail in Section 8.4.
- h. The use of asphalt curbs is strictly prohibited.
- i. Provide light fixtures in all parking areas that are used at night, per Section 3.11-Lighting.
- j. For future developments, prepare a survey and analysis of the existing parking conditions as outlined in Section 3.7-Street Design.



Figure 4.13-12: No separation between the street and parking at the Headquarters building.



Figure 4.13-13: Typical pedestrian path on Stagecoach Road.

## 7. Pedestrian Circulation

- a. Provide concrete sidewalks along all local collector streets per Section 3.9- Pedestrian Circulation (Figure 4.13-13).
- b. Replace or provide sidewalk connections to major facilities from surrounding uses that have heavy pedestrian traffic.
- c. Provide new sidewalks in the classroom, administration and headquarters areas.

## 8. Signage

- a. For safety and functional purposes, name all streets.
- b. Provide street signs at all intersections.
- c. Provide cantonment identification entry signs to replace the ones at Basilone and Stagecoach Roads and at the entry triangle at Stagecoach Road (Figure 4.13-11) per Section 3.10-Signage.
- d. Provide new headquarters signs at regimental headquarters and administration headquarters per Section 3.10-Signage.
- e. Prepare a long range plan to replace all signs to conform to the Section 3.10.

## 9. Lighting

- a. Provide consistent lighting levels for:
  - Pedestrian walkways that are used at night.
  - All recreational use facilities.
  - Parking areas (not parade grounds).
  - Streets.
- b. Light cantonment identification entry signs with ground level lights. See detail in Section 8.8.

## 10. Site Furniture

- a. Develop a survey and analysis of the existing site furniture conditions as outlined in Section 3.12- Site Furniture.
- b. Prepare a long-term program to replace all worn out or broken site furniture with furniture selected in Section 8.9 (Figure 4.13-14).

## 11. Screens, Walls and Fences

- a. When replacing fences, use those standards and details outlined in Section 8.10.
- b. Screen all utility boxes, equipment and substations.
- c. Screen the vehicle maintenance yard and Building 33543 with landscaping.
- d. Prepare a long-term program to replace all screen fences in disrepair and identify locations where screening and fencing is required (Figure 4.13-15).



Figure 4.13-14: Newer site furniture at Pico (24) Area fitness center.

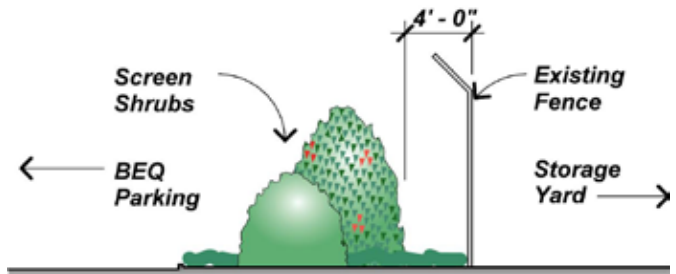


Figure 4.13-15: Typical screening detail at storage yard.

## 12. Utilities

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities.
- b. Provide right-of-way easements for above grade utilities in streets or alleys.
- c. Place utilities underground per the Utility Details and Standards in Section 8.11.
- d. Minimize utility easements through development or open space areas.



# LAS FLORES (41) AREA

## 4.14 Las Flores (41) Area

Located on a coastal plateau, Las Flores (41) Area consists of the 1st Marine Division and 1st Marine Expeditionary Force. Las Flores (41) Area lies adjacent to Stuart Mesa Road which connects to Las Pulgas Canyon Road to the north and Vandegriff Boulevard to the south Figure 4.14-1). Both roads provide access to the interior of Camp Pendleton. Most of the plateau on which Las Flores (41) Area is located is near Light Armored Vehicle (LAV) ranges and courses. Therefore, most of the immediate surrounding land outside the Las Flores (41) Area can be classified as open training.



Figure 4.14-2: Entry to Las Flores (41) Area.

### 4.14 A. Las Flores (41) Area Observations

The following is a summary of the assets and liabilities observed at the Las Flores (41) Area that were the basis for specific design recommendations.

#### 1. Assets

- a. The entrance to the Area is well defined (Figure 4.14-2).
- b. The site is generally flat providing opportunities for future development.
- c. There are views to ocean from most of the site.
- d. Newer buildings and Headquarters are well planned and designed (Figure 4.14-3).
- e. The land uses are well separated and easily identifiable.

#### 2. Liabilities

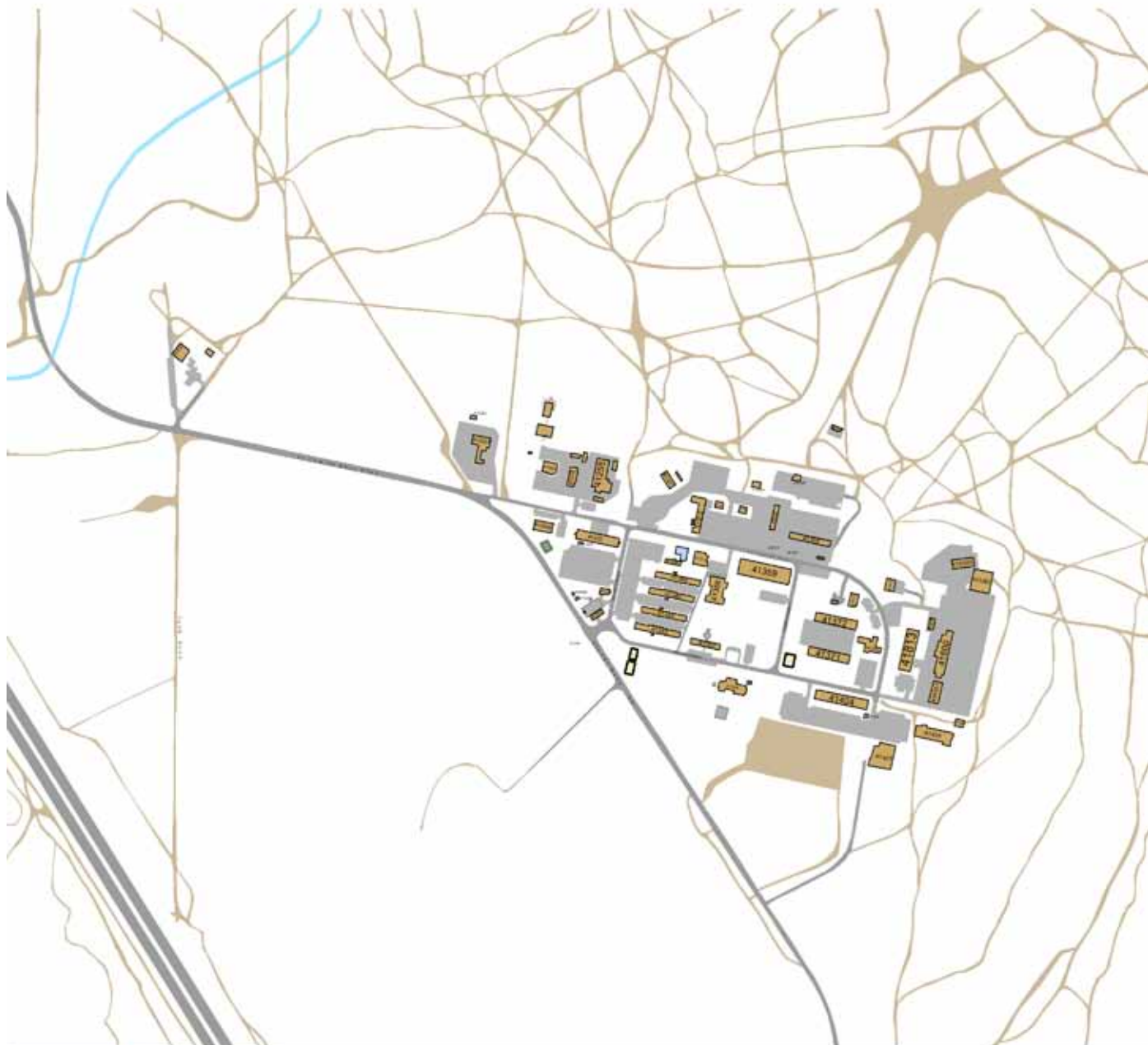
- a. Trees are needed within the older BEQ areas.
- b. There are no major landscape features of note.
- c. Most of Buildings 41342-41348 are not the correct color scheme per the BEAP standards.
- d. There are areas of visual discontinuity throughout the site.
- e. There is a lack of screening to offset southwesterly wind, dust and noise.
- f. Pedestrian circulation needs general improvement in all areas including along Nelson Road.



Figure 4.14-3: Headquarters Building 41375.



# **LAS FLORES (41) AREA- CANTONMENT MAP**



**NOT TO SCALE**



Figure 4.14-1

- g. There is an extensive use of turf (Figure 4.14-4).
- h. Signage is mixed and inconsistent.
- i. Much of the Las Flores (41) Area is serviced by above grade utilities, adding to visual clutter.
- j. Fencing on the north and south side of El Camino Real enclosing Buildings 41366, 41362, and 41359 is in need of replacing.
- k. Screening of utility tanks on Nelson Street is needed.
- l. Trash dumpsters lack enclosures throughout site.
- m. Parking lots near Buildings 41342, 41344, 41346 and 41348 do not adhere to AT/FP requirements (Figure 4.14-5).



*Figure 4.14-4: Views west toward Buildings 41344 and 41346 encompass extensive use of turf.*

### **4.14 B. Recommendations**

The following is a summary of recommendations for improvements to the Las Flores (41) Area. These recommendations are based on the existing assets and liabilities previously identified.

#### **1. Land Use**

- a. To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3-Land Use.
- b. Locate community support facilities centrally near the majority of BEQs.
- c. Maintain the existing separation of personnel housing and recreation from warehouse and storage areas.

#### **2. Site Planning**

- a. For future developments refer to the guidelines established in Section 3.4–Site Planning.
- b. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.



*Figure 4.14-5: Example of non-conforming parking adjacent to building in the Las Flores (41) Area.*

### 3. Architecture

- a. Establish a program for the rehabilitation of existing BEQs 41352, 41344, 41346, 41348 and other structures in need of repair. Use the guidelines in Section 3.5-Architecture as the basis for improvements.
- b. Use approved colors for existing facilities that require painting. See Appendix A Color Board / Building Materials.
- c. Do not paint new concrete or masonry block structures.
- d. Future developments are to follow the guidelines established in Section 3.5-Architecture.

### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6- Landscaping.
- b. Refer to Section 3.6-Landscaping when upgrading the Las Flores (41) Area landscape, preparing plans for future development, and for the establishment of a maintenance program.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use of the Base Approved Plant List in Section 3.6 is mandatory when selecting replacement plants or new planting (Figure 4.14-6).
- e. When preparing landscape plans for future development, use the guidelines outlined in Section 3.6-Landscaping.
- f. Minimize the use of turf in low pedestrian use areas and introduce groundcover with low water requirements or inorganic mulch. Use only one color and size (Figures 4.14-7 and 4.14-8). See Detail 8.3 A-7.



Figure 4.14-6: Example of inappropriate tree choice (roots heaving sidewalk) in the Las Flores (41) Area.

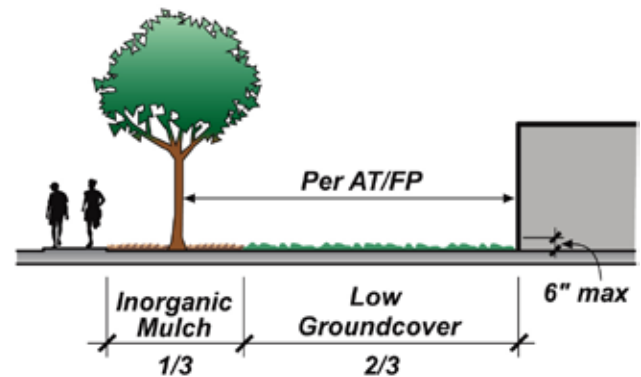


Figure 4.14-7: Typical landscape replacement for turf areas.



Figure 4.14-8: Example of appropriate tree planting in the Las Flores (41) Area.

- g. Provide trees as the dominant landscape element in all areas between and around BEQs in accordance with AT/FP requirements. Plant with:
  - Broad headed canopy trees.
  - Plant in informal groups of 3 to 4 spaced 30-40 feet on center.
- h. Provide streetscape planting for Stuart Mesa Road and Nelson Street (Figure 4.14-9). Plant with:
  - Sycamore trees-40 feet on center.
- i. Plant palms as accent trees at the parade ground to establish a uniform planting and a formal treatment for this ceremonial area.
  - Use Palms 10-12 feet in height. Plant Palms in an informal group of 5-7.
- j. Provide palms at the area identification entry.
- k. Install erosion control in all slope areas 3:1 or greater that are not currently planted.
- l. Add screen/buffer planting of Catalina Ironwood trees at the southern edge of Las Flores (41) Area to mitigate negative environmental impacts such as strong winds, dust and noise that affect BEQs 41342, 41350 and 41404.



Figure 4.14-9: Example of appropriate streetscape and tree planting in the Las Flores (41) Area.

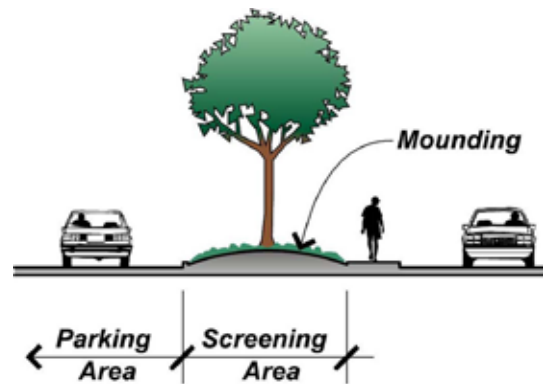


Figure 4.14-10: Use landscape median to separate streets from parking areas.

## 5. Street Design

- a. Clearly define streets from parking areas (Figure 4.14-10).
- b. No on-street parking is permitted.
- c. No other street improvements are needed at this time.

## 6. Parking

- a. A parking demand analysis may be required due to the overflow parking south of Nelson Street. See Section 3.8-Parking.
- b. Re-stripe all parking areas to the stall size outlined in Section 3.8-Parking (Figure 4.14-11).
- c. Provide for accessible parking stalls per current ADA requirements.
- d. No temporary parking lots are permitted in the Las Flores (41) Area.

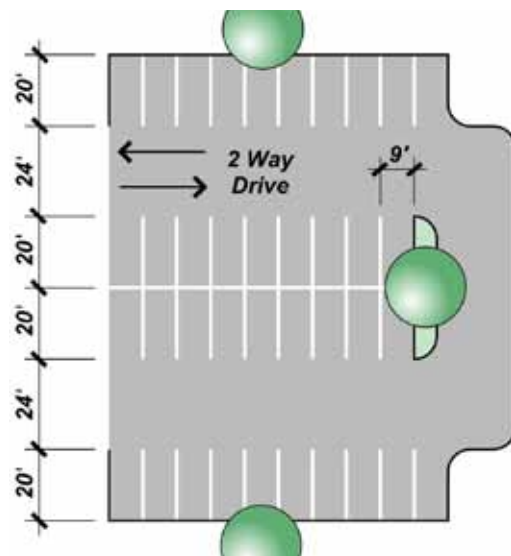


Figure 4.14-11: Standard dimensions to be used for parking stalls.

- e. Provide landscape improvements in all parking lot areas per Section 3.6-Landscaping (Figure 4.14-12).
- f. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- g. When in need of repair and economically feasible, replace asphalt curbs with concrete. See Section 8.4. Further use of asphalt curbs is strictly prohibited.
- h. Provide light fixtures in all parking areas that are used at night, per Section 3.11-Lighting.
- i. For future developments, prepare an analysis of the existing parking conditions. See Section 3.8-Parking.

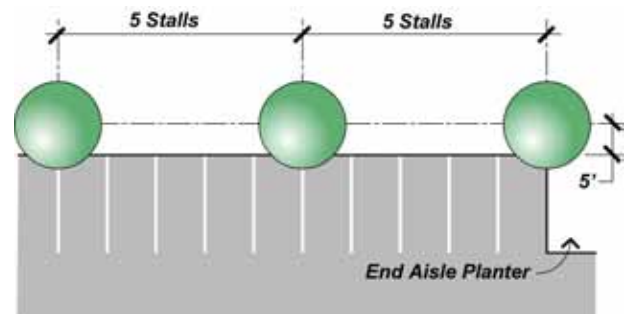


Figure 4.14-12: Provide trees at the perimeter of parking lots.

**7. Pedestrian Circulation**

- a. Continue to extend concrete sidewalks along Nelson Road and El Camino Real per Section 3.9-Pedestrian Circulation (Figure 4.14-13).
- b. Provide improved sidewalk connections from the BEQs to the support facilities that have heavy pedestrian traffic. (Figure 4.14-14).

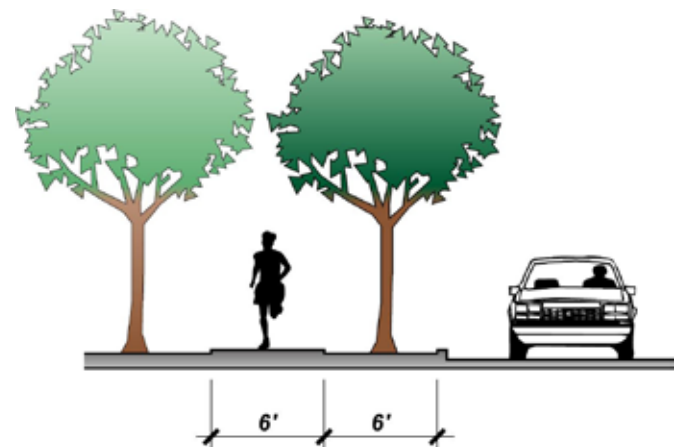


Figure 4.14-13: Sidewalk provided along the south side of Nelson Road.

**8. Signage**

- a. Replace the cantonment identification and Headquarters entry sign per Section 3.10 – Signage.
- b. Prepare a long range plan to replace all signs to conform to the Section 3.10-Signage.
- c. For safety and functional purposes, name all streets.
- d. Provide street signs at all intersections.

**9. Lighting**

- a. Provide consistent lighting levels per Section 3.11-Lighting for:
  - Pedestrian walkways that are used at night.
  - All support and recreational use facilities.
  - Parking areas.
  - Streets.
- b. Light cantonment and Headquarter entry identification signs with ground level lights.



Figure 4.14-14: Substandard path to Building 41303.

## 10. Site Furniture

- a. Develop a survey and analysis of the existing site furniture conditions as outlined in Section 3.12-Site Furniture.
- b. Prepare a long-term program to replace all worn out or broken furniture. See site furniture identified in Section 8.9.

## 11. Screens, Walls and Fences

- a. Replace all screen fences along El Camino Real.
- b. When replacing fences use those standards and details outlined in Section 8.10.
- c. Screen all utility facilities (Figure 4.14-15), trash and storage areas.
- d. Develop a survey and analysis of the existing areas that are screened and areas that need to be screened. See Section 3.13-Screens, Walls and Fences.



Figure 4.14-15: Unscreened utilities in Las Flores (41) Area.

## 12. Utilities

- a. Provide right-of-way easements for above grade utilities in streets or alleys.
- b. Place utilities underground per Section 8.11- Utility Details and Standards.
- c. Minimize utility easements through development or open space areas.
- d. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities (Figure 4.14-16).



Figure 4.14-16: Overhead utilities in Las Flores (41) Area create visual clutter.



# LAS PULGAS (43) AREA

## 4.15 Las Pulgas (43) Area

Las Pulgas (43) Area is located on the edge of Las Pulgas Canyon (Figure 4.15-1). Units assigned to the Area include the 11th Marine Regiment (artillery), 1st Marine Maintenance Battalion and the Range Control Office. Ammunition supply guard personnel are also assigned to the Las Pulgas (43) Area. The Maintenance Battalion performs organizational and intermediate level maintenance for tactical motor transport, communication and electronic equipment.

### 4.15 A. Las Pulgas (43) Area Observations

The following is a summary of the assets and liabilities observed at the Las Pulgas (43) Area that were the basis for specific design recommendations.

#### 1. Assets

- a. The 11th Marine Regiment sign and flagpoles with landscaped backdrop present an effective entry.
- b. Open storage of artillery vehicles along Basilone Road creates an interesting “show of force”.
- c. A good example of parking lot landscaping can be found at BEQ 43700.
- d. The Headquarters building is a good example of appropriate architectural material and form (Figure 4.15-2).
- e. The intersection of Las Pulgas and Basilone Roads is a good location for the cantonment identification sign.
- f. There are generally favorable conditions for future development with ample open flat land adjacent to existing development.
- g. Sports fields provide open area along Las Pulgas Road and are well maintained (Figure 4.15-3).
- h. Field maintenance facilities 43544/42/40 to the north are good examples of recent architecture.
- i. Las Pulgas (43) Area is close to the training area.



Figure 4.15-2: Headquarters Building 43566.



Figure 4.15-3: Sports field at Las Pulgas (43) Area.



# **LAS PULGAS (43) AREA- CANTONMENT MAP**



**NOT TO SCALE**



Figure 4.15-1

## **2. Liabilities**

- a. There are a variety of older building types, materials and colors, creating a non-cohesive style to the Las Pulgas (43) Area architecture.
- b. Older buildings are showing signs of disrepair and neglect (Figure 4.15-4).
- c. Development of future BEQs will reduce most of the parade grounds (Figure 4.15-5).
- d. Buildings 43351 and 43291 with storage facilities need to be screened from BEQs.
- e. Considerable chain link fencing in the Las Pulgas (43) Area should be replaced and the storage area screened.
- f. Some traffic problems occur where angled intersections join other roads in the internal Las Pulgas (43) Area circulation system.
- g. The bus shelters off of Las Pulgas Road are in poor condition.
- h. Pedestrian circulation is very inconsistent.
- i. There is no clear separation between parking areas and streets.
- j. Landscaping in most areas is sparse and poorly maintained.
- k. Erosion is occurring near the BEQ on Las Pulgas Road and at the northwest corner of Basilone and Las Pulgas Roads.
- l. The Las Pulgas (43) Area directional and informational signage is inconsistent.
- m. The site furniture is not consistent including parking and street light fixtures.
- n. Storage, trash, and utility areas are not properly screened.
- o. Much of the Las Pulgas (43) Area is still serviced by above grade utilities, adding to visual clutter.



*Figure 4.15-4: Building 43524 and 43433.*



*Figure 4.15-5: Parade grounds and parking lot at Las Pulgas (43) Area.*

## 4.15 B. Recommendations

The following is a summary of recommendations for improvements to the Las Pulgas (43) Area. These recommendations are based on the existing assets and liabilities previously identified.

### 1. Land Use

- a. To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3-Land Use.
- b. Inventory parking lot use patterns to either justify existing parking areas, to consolidate or eliminate them.
- c. Provide additional modern four story BEQs to improve billeting in the Las Pulgas (43) Area.

### 2. Site Planning

- a. For future developments, refer to the guidelines established in Section 3.4-Site Planning.
- b. Review existing development areas and determine where it would be possible to consolidate parking, establish pedestrian connections, and improve the overall efficiency and economy of the Area.
- c. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.

### 3. Architecture

- a. Future developments are to follow the guidelines established in Section 3.5-Architecture (Figure 4.15-6).
- b. Establish a program to determine if the Quonset huts, one story concrete BEQs and “Butler” buildings are beyond economical repair.
- c. For the buildings that are retained, establish a program for the rehabilitation of these structures. See Section 3.5 (Figure 4.15-7).
- d. Use approved colors for existing facilities that require painting. See Appendix A Color Board/ Building Materials.
- e. Do not paint new concrete or masonry block structures.



Figure 4.15-6: Newer BEQ using Base approved building colors and materials.



Figure 4.15-7: Older one story buildings throughout the Las Pulgas (43) Area.

#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6- Landscaping.
- b. Refer to Section 3.6 when upgrading the Las Pulgas (43) Area landscape or establishing a maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use of Base Approved Plant List in Section 3.6 is mandatory when selecting replacement plants or new planting for Las Pulgas (43) Area.
- e. Use trees as the dominant landscape planting element in all developed areas.
- f. Minimize the use of turf in low pedestrian use areas and introduce groundcover with low water requirements and inorganic mulch. Use only one color and size. See Detail 8.3 A-7.
- g. Establish the planting of palms in the following areas:
  - Parade ground area-40 feet on center, 15-20 feet minimum height.
  - Cantonment identification entry sign at the intersection of Basilone and Las Pulgas Roads-15 feet on center, 12-15 feet minimum height (Figure 4.15-8).
  - Secondary entry street off Basilone Road fuel station leading to Headquarters Building-Plant 40 feet on center, 12-15 feet minimum height.
- h. Per the Basewide Design Guidelines, provide a Streetscape planting for the major collectors as follows (Figure 4.15-9 and 4.15-10):
  - Basilone Road-Coast Live Oak.
  - Las Pulgas Road-California Sycamore.
- i. Install erosion control planting for the area on the northwest corner of Basilone and Las Pulgas Roads.

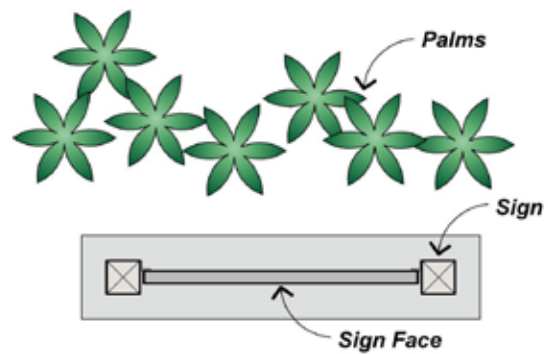


Figure 4.15-8: Informal grouping of palms at entry sign.

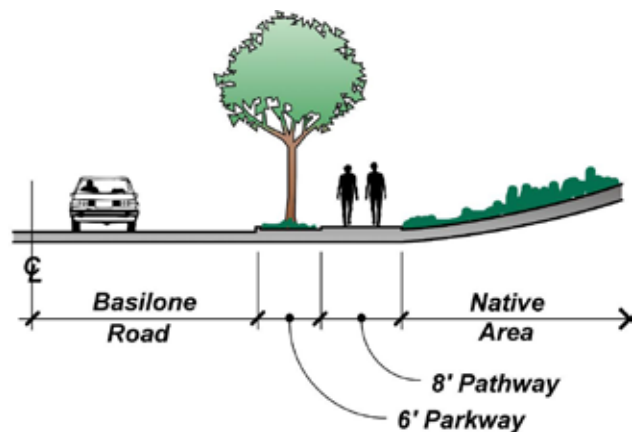


Figure 4.15-9: Streetscape planting along Basilone Road.

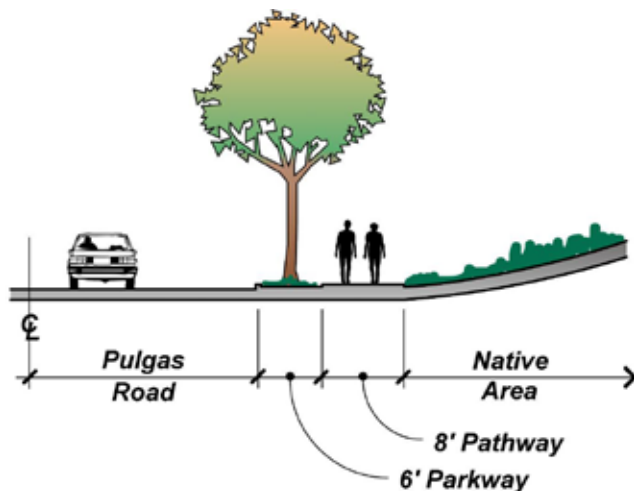


Figure 4.15-10: Streetscape planting along Las Pulgas Road.

## 5. Street Design

- Resolve all offset intersections by lining up to 90 degrees or separating intersections per the guidelines outlined in Section 3.7- Street Design.
- Clearly define streets from parking areas (Figures 4.15-11 and 4.15-12).
- No on-street parking is permitted.
- Establish parking access requirements. See Section 3.7.

## 6. Parking

- For future developments, prepare a survey and analysis of the existing parking conditions as outlined in Section 3.8-Parking.
- Provide an accurate parking demand based on the existing uses. Refer to Basewide Parking Requirement in Section 3.8.
- Re-stripe all parking areas to the stall size outlined in Section 3.8-Parking.
- Provide for accessible parking stalls per ADA requirements.
- Provide landscape improvements at perimeter in all parking lot areas per Section 3.6-Landscaping (Figure 4.15-13).
- Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- For repair, and when economically feasible, replace asphalt curbs with concrete. See detail in Section 8.4.
- The use of asphalt curbs is strictly prohibited.
- Provide light fixtures in all parking areas that are used at night, per Section 3.11-Lighting.



Figure 4.15-11: Lack of separation between streets and parking.

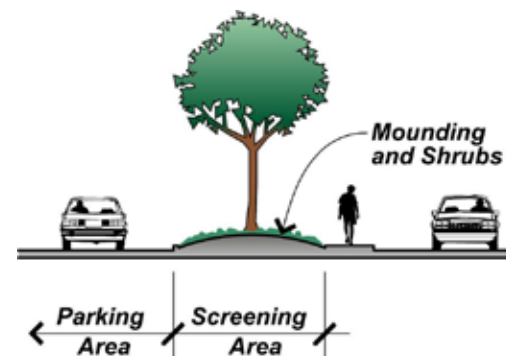


Figure 4.15-12: Use landscape median or planter to separate parking areas from streets.



Figure 4.15-13: Parking lots lack general improvements, such as landscaping.

## 7. Pedestrian Circulation

- a. Provide sidewalk connections to major facilities.

## 8. Signage

- a. Prepare a long range plan to replace all signs to conform to the Section 3.10-Signage and details in this document.
- b. Establish a cantonment identification entry sign on the northwest side of the intersection of Basillone and Las Pulgas Roads per Section 3.10.
- c. For safety and functional purposes, name all streets and provide street signs at all intersections.

## 9. Lighting

- a. Provide consistent lighting levels per Section 3.11-Lighting for:
  - Pedestrian walkways that are used at night.
  - All functional use facilities.
  - Parking areas.
  - Streets.
- b. Light cantonment identification entry signs and headquarters signs with ground level lights. See detail in Section 8.8.

## 10. Site Furniture

- a. Develop a survey and analysis of the existing site furniture conditions. See Section 3.12-Site Furniture.
- b. Prepare a long-term program to replace all worn out or broken furniture with site furniture selected in Section 8.9.
- c. Replace bus stops on Las Pulgas Road with Base approved shelters (Figures 4.15-14 and 15).

## 11. Screens, Walls and Fences

- a. Prepare a long-term program to replace all screen fences in disrepair.
- b. When replacing fences, use those standards and details outlined in Section 8.10.
- c. Screen all utility boxes, equipment substations, storage areas and maintenance yards. Provide trash enclosures for all dumpster locations.

## 12. Utilities

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities.
- b. Provide right-of-way easements for above grade utilities in streets or alleys.
- c. Place utilities underground per the Utility Details and Standards in Section 8.11.
- d. Minimize utility easements through development or open space areas.

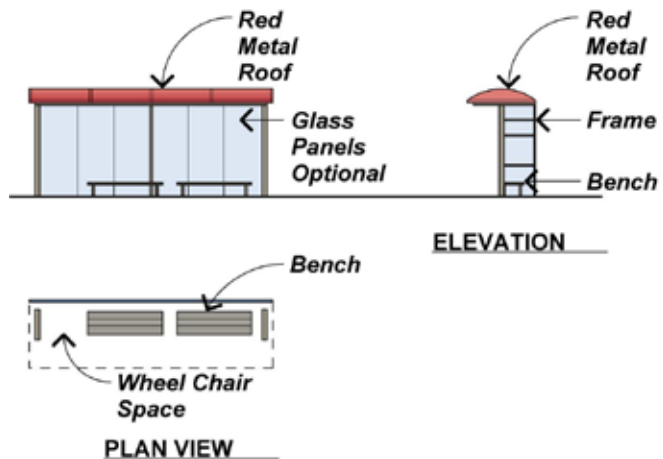


Figure 4.15-14: Bus Shelter.

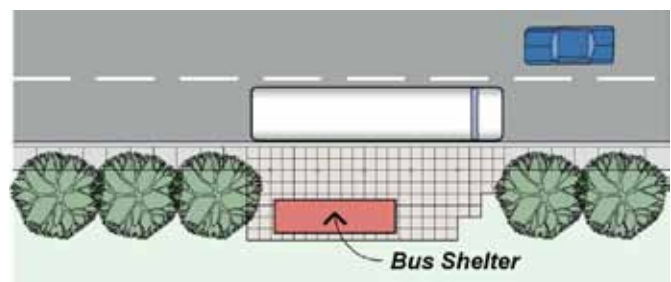


Figure 4.15-15: Typical layout for bus stop with shelter.



# SAN ONOFRE (52) AREA

## 4.16 San Onofre (52) Area

San Onofre is located on the eastern slope of the coastal range parallel to Interstate 5, roughly 25 miles northwest of the Oceanside Gate (Figure 4.16-1). The School of Infantry (SOI) is the major occupant, with a significant population of entry level training for recruit graduates. To fulfill the School of Infantry's mission, every marine is first and foremost a rifleman.

### 4.16 A. San Onofre (52) Area Observations

The following is a summary of the assets and liabilities observed at the San Onofre (52) Area that were the basis for specific design recommendations.

#### 1. Assets

- a. A large percentage of the site is newly developed, compact and well planned.
- b. The School of Infantry Headquarters and adjacent Parade Grounds are a focal piece (Figure 4.16-2).
- c. The Area is in close proximity to the training grounds.
- d. The area adjacent to the recreation area and near BEQ Building 52609 provides a pleasant open space setting.
- e. There is good example of crushed rock as an alternative ground cover in medians and at the entry to Marine Combat Training Battalion (MCTB).
- f. The hills in the background (Figure 4.16-3) and the site's proximity to the river with mature California Sycamores provide a significant native riparian setting.
- g. Mature trees add to the landscape.
- h. The use of crushed rock on the north of Basilone Road is a good example of low maintenance, no water groundcover.



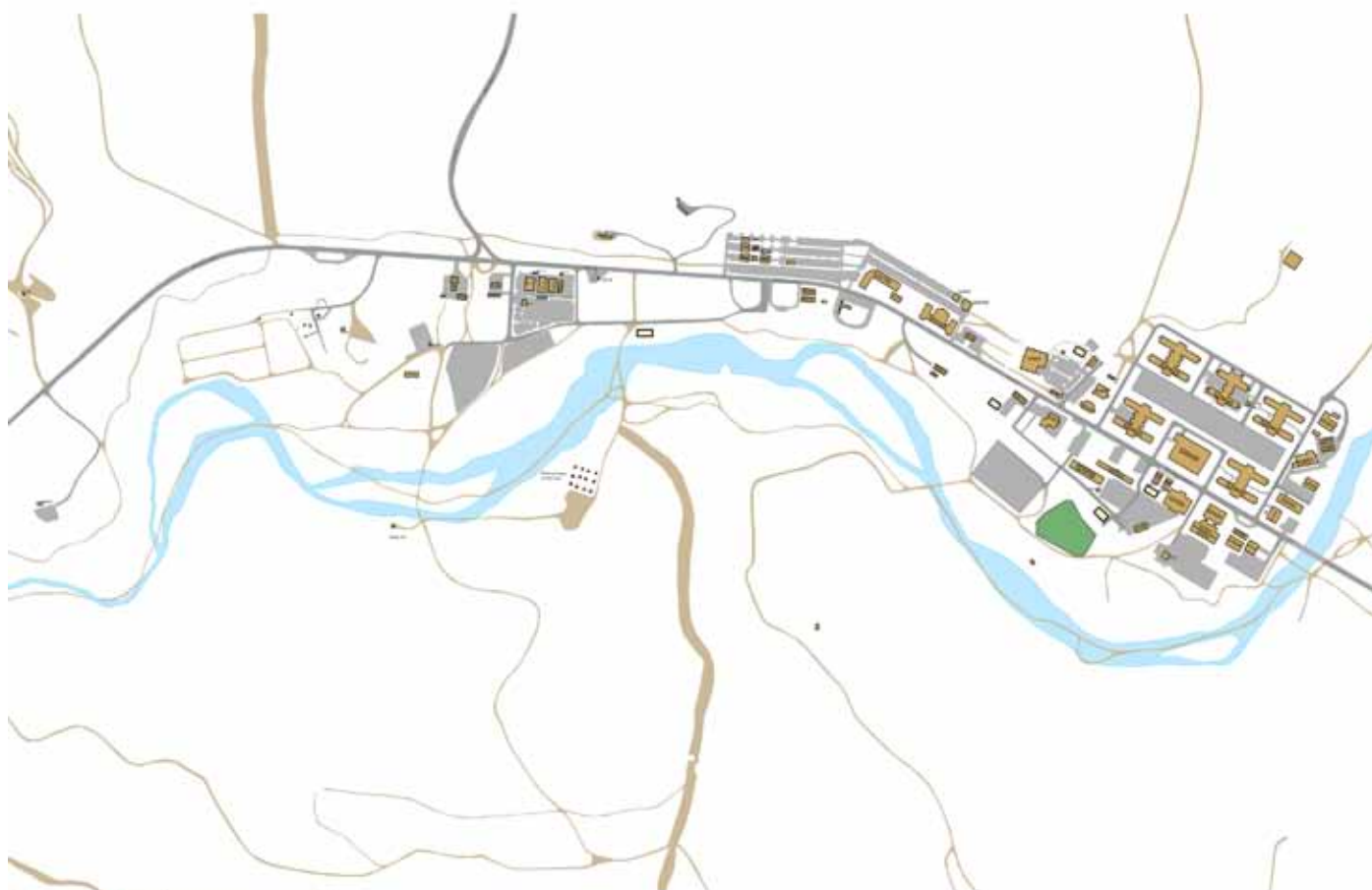
Figure 4.16-2: Parade ground.



Figure 4.16-3: Building 520442 with hills in the background.



# **SAN ONOFRE (52) AREA- CANTONMENT MAP**



**NOT TO SCALE**



Figure 4.16-1

## 2. Liabilities

- a. Generally, there is a contrast between the up-graded newer development and older development (Figure 4.16-4).
- b. Pedestrian circulation is poor in the older sections and along the south side of Basilone Road.
- c. There is an absence of primary entry identification signage on Basilone Road on both the east and west approaches.
- d. A number of Quonset huts on the west end of the Area are in poor condition (Figure 4.16-5).
- e. The display of “War Prizes” needs improvement at Basilone Road (Figure 4.16-6).
- f. There is no consistent directional or informational signage.
- g. A potential safety issue occurs in the staging area of new recruits to the east of Administration Buildings 52595 and 52597 as they cross Basilone Road.
- h. The older sections of the San Onofre (52) Area and along Basilone Road are still serviced by above grade utilities, adding to visual clutter.
- i. Many trash dumpsters are not properly screened.
- j. Many painted metal surfaces on the buildings are peeling and showing signs of disrepair.
- k. Use of water-intensive turf is extensive in the newer developed areas on the south side of Basilone Road.

### 4.16 B. Recommendations

The following is a summary of recommendations for improvements to the San Onofre (52) Area. These recommendations are based on the existing assets and liabilities previously identified.

#### 1. Land Use

- a. To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3-Land Use.



Figure 4.16-4: Older style of Base architecture can be seen at Building 520422



Figure 4.16-5: Quonset huts may need to be replaced with new facilities.



Figure 4.16-6: “War Prize” display.

- b. Continue the separation of administration, operational and billeting functions from maintenance and heavy vehicle activities.
- c. The current arrangement of administration and operational activities maintains the unit integrity.

## 2. Site Planning

- a. For future developments, refer to the guidelines established in Section 3.4-Site Planning.
- b. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.
- c. Review existing development areas and determine where it would be possible to consolidate parking, establish pedestrian connections, and improve the overall efficiency and economy of the San Onofre (52) Area.
- d. Emphasize street design improvements to reduce vehicle speed as they approach the cantonment.
- e. Future facility siting should continue to conform to the existing land use patterns.

## 3. Architecture

- a. Future developments are to follow the guidelines established in Section 3.5-Architecture.
- b. Establish an aggressive program to eliminate the buildings that are beyond economical repair.
- c. For those buildings that remain, establish a program for rehabilitation. Use the guidelines in Section 3.5-Architecture as the basis for improvements.
- d. Use approved colors for existing facilities that require painting. See Appendix A Color Board/ Building Materials.
- e. Do not paint new concrete or masonry block structures.

## 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6- Landscaping.
- b. When preparing landscape plans, upgrading areas or for new development, use the guidelines outlined in Section 3.6-Landscaping.

- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use of Base Approved Plant List, Section 3.6 is mandatory when selecting replacement plants or new planting.
- e. Use trees as the dominant landscape planting element in all developed areas.
- f. Minimize the use of turf in low pedestrian use areas and introduce groundcover with low water requirements or inorganic mulch (Figure 4.16-7). Use only one color and size. See Detail 8.3 A-7.
- g. Provide Streetscape planting of California Sycamore along Basilone Road (Figure 4.16-8).
- h. Establish palms as an accent tree to outline the parade ground areas:
  - 40 feet on center.
  - 12-15 feet in height. See Detail 8.3 A-4.
- i. Provide palms adjacent to the cantonment identification sign (Figure 4.16-9):
  - Informal groups of 5-7.
  - 10-12 feet in height and planted 10-15 feet apart.
- j. Install erosion control for the area across from Building 52597.



Figure 4.16-7: Non-recreational turf areas, like in front of Building 520590, should be replaced with low maintenance, low water use plant material and inorganic mulch.

## 5. Street Design

- Establish a safety zone of textured paving at both the east and west approaches on Basilone Road. This discourages drivers from speeding when passing through the cantonment (Figure 4.16-11).
- Establish an additional safety crossing at Basilone Road east of Administration Buildings 52595 and 52597. This allows for the safe crossing of the trainees, and staging at the Administration Buildings north to the parade grounds.
- Resolve all offset intersections by lining up to 90 degrees or separating intersections per the guidelines outlined in Section 3.7- Street Design.
- Clearly define streets from parking areas.
- Provide standard street right-of-way for all major streets. See Section 3.7-Street Design.
- No on-street parking is permitted on Basilone Road or within the cantonment.

## 6. Parking

- An accurate parking demand based on the existing uses may be required to remedy overflow parking. Refer to Basewide Parking Requirements for capacity calculations.
- Re-stripe all parking areas to the stall size outlined in Section 3.8-Parking and adhere to AT/FP requirements (Figure 4.16-12).
- Provide for accessible parking stalls per ADA requirements.
- Provide landscape improvements at the perimeter in all parking lot areas.
- Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- For repair, and when economically feasible, replace asphalt curbs with concrete. See detail in Section 8.4.
- The use of asphalt curbs is strictly prohibited.
- Provide light fixtures in all parking areas that are used at night, per Section 3.11-Lighting.

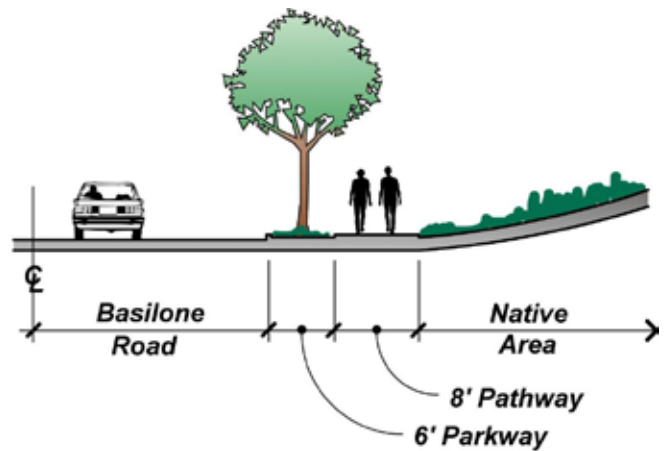


Figure 4.16-8: Typical streetscape treatment along Basilone Road.

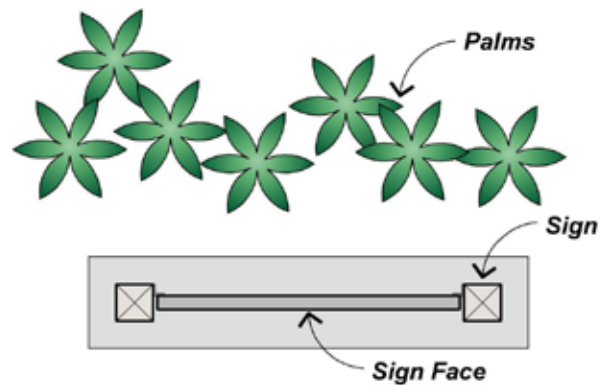


Figure 4.16-9: Informal grouping of palms at the entry sign.

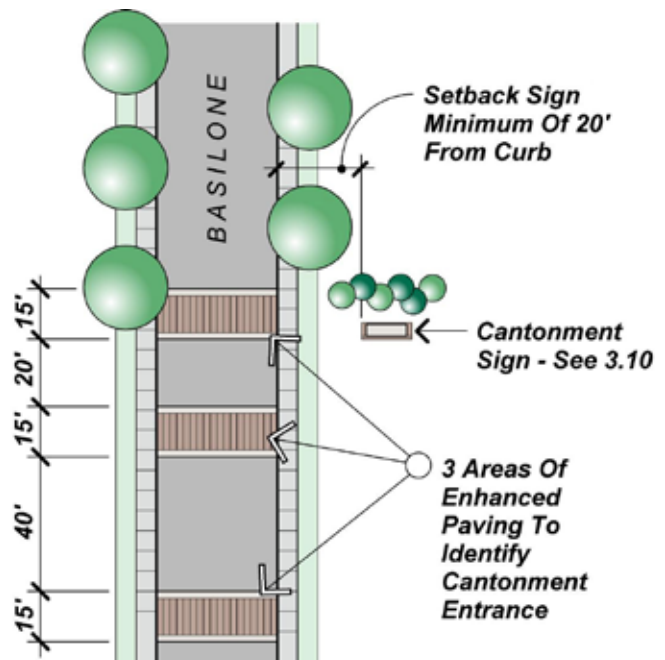


Figure 4.16-11: Typical paving treatment prior to cantonment entrance.

- i. For new developments, prepare a survey and analysis of the existing parking conditions as outlined in Section 3.8-Parking.

**7. Pedestrian Circulation**

- a. Complete concrete sidewalks along the north and south side of Basilone Road per Section 3.9-Pedestrian Circulation.
- b. Provide sidewalk connections to major facilities from surrounding uses that have heavy pedestrian traffic. This is particularly important in the connection from Building 52597 and buildings immediately east to the parade grounds (Figure 4.16-13).

**8. Signage**

- a. For safety and functional purposes, name all streets.
- b. Provide street signs at all intersections.
- c. Replace the existing cantonment identification sign with one that conforms to Section 3.10-Signage.
- d. Replace the existing Headquarters identification sign with one that conforms to Section 3.10.
- e. Prepare a long range plan to replace all signs to conform to Section 3.10-Signage.

**9. Lighting**

- a. Provide consistent lighting levels for:
  - Pedestrian walkways that are used at night.
  - All functional use facilities.
  - Specialty items such as “War Prizes” (Figure 4.16-14).
  - Parking areas (Figure 4.16-15).
  - Street.
- b. Light entry identification signs with ground level lights. See detail in Section 8.8.



Figure 4.16-12: Existing parking lot that does not meet AT/FP guidelines.

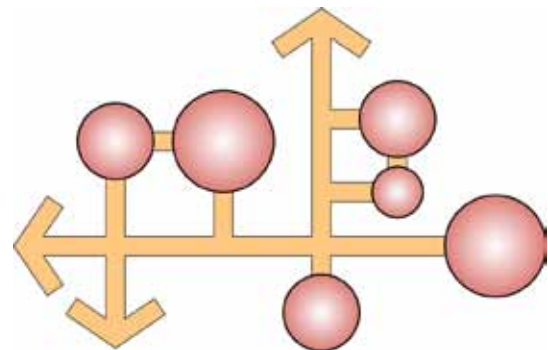


Figure 4.16-13: Diagram of pedestrian connections to major facilities.

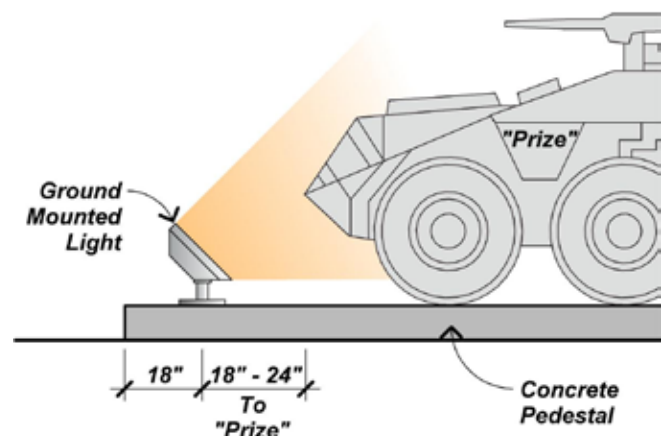


Figure 4.16-14: Lighting for “War Prizes.”

## 10. Site Furniture

- a. Develop a survey and analysis of the existing site furniture conditions as outlined in Section 3.12-Site Furniture (Figure 4.16-16).
- b. Prepare a long-term program to replace all worn out or broken site furniture with furniture selected in Section 8.9.
- c. Display of “War Prizes” needs improvement. Construct concrete pedestal as foundation for equipment per Section 3.12 (Figure 4.16-17).

## 11. Screens, Walls and Fences

- a. Prepare a long-term program to replace all screen fences in disrepair.
- b. When replacing fences use those standards and details outlined in Section 8.10.
- c. Screen all utility boxes, equipment and substations (Figure 4.16-18).
- d. Provide trash enclosures for all dumpsters, including those at Building 52597.

## 12. Utilities

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities.
- b. Provide right-of-way easements for above grade utilities in streets or alleys.
- c. Place utilities underground per the Utility Details and Standards in Section 8.11.



Figure 4.16-16: Existing newer site furniture in San Onofre (52) Area.

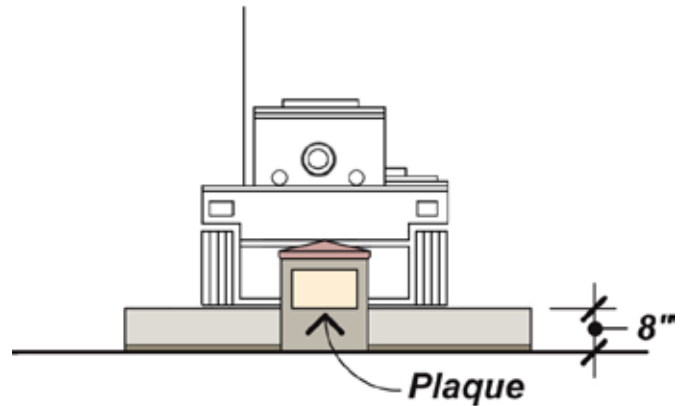


Figure 4.16-17: “War Prize” on concrete pedestal.



Figure 4.16-15: Existing lighting at stairway leading to parking lot.



Figure 4.16-18: Existing screening of utilities.



# HORNO (53) AREA

## 4.17 Horno (53) Area

Horno (53) Area is located east of Interstate 5 within the interior of the Base, adjacent to Basilone Road, in a valley between the San Onofre Hills and Santa Margarita Mountains. (Figure 4.17-1) This area supports comprehensive infantry training and is dominated by barracks and personnel support facilities, with relatively few recreation areas. Located on a mostly level site, steeply sloping adjacent hills, a flood plain and firing ranges dominate the physical locale.

### 4.17 A. Horno (53) Area Observations

The following is a summary of the assets and liabilities observed at the Horno (53) Area that were the basis for specific design recommendations.

#### 1. Assets

- a. Most of the developed areas are concentrated into clearly definable areas.
- b. A backdrop of the surrounding hills and native area defines the character of this site and provides views (Figure 4.17-2).
- c. The Horno (53) Area setting is remote and lies generally adjacent to an intact riparian environment.
- d. Barracks (classrooms) are separated from Basilone Road by a substantial tree line of native California Sycamores.
- e. Newer BEQs, maintenance and production facilities are well sited and visually appealing (Figure 4.17-3).
- f. Recreational facilities have a good appearance and provide separation between housing and native areas.
- g. Existing mature trees, such as Eucalyptus, Ash, Sycamores, and Fan Palms, are a visual asset (Figure 4. 17-4).
- h. Parking lot and parking area lighting in the newer developments is efficient and well constructed.
- i. Base police presence reinforces slow speeds when passing through the cantonment.



Figure 4.17-2: Entry to Horno (53) Area.



Figure 4.17-3: Newer BEQ Building 53574.



Figure 4.17-4: Mature Sycamores line the riparian corridor.



# ***HORNO (53) AREA-CANTONMENT MAP***

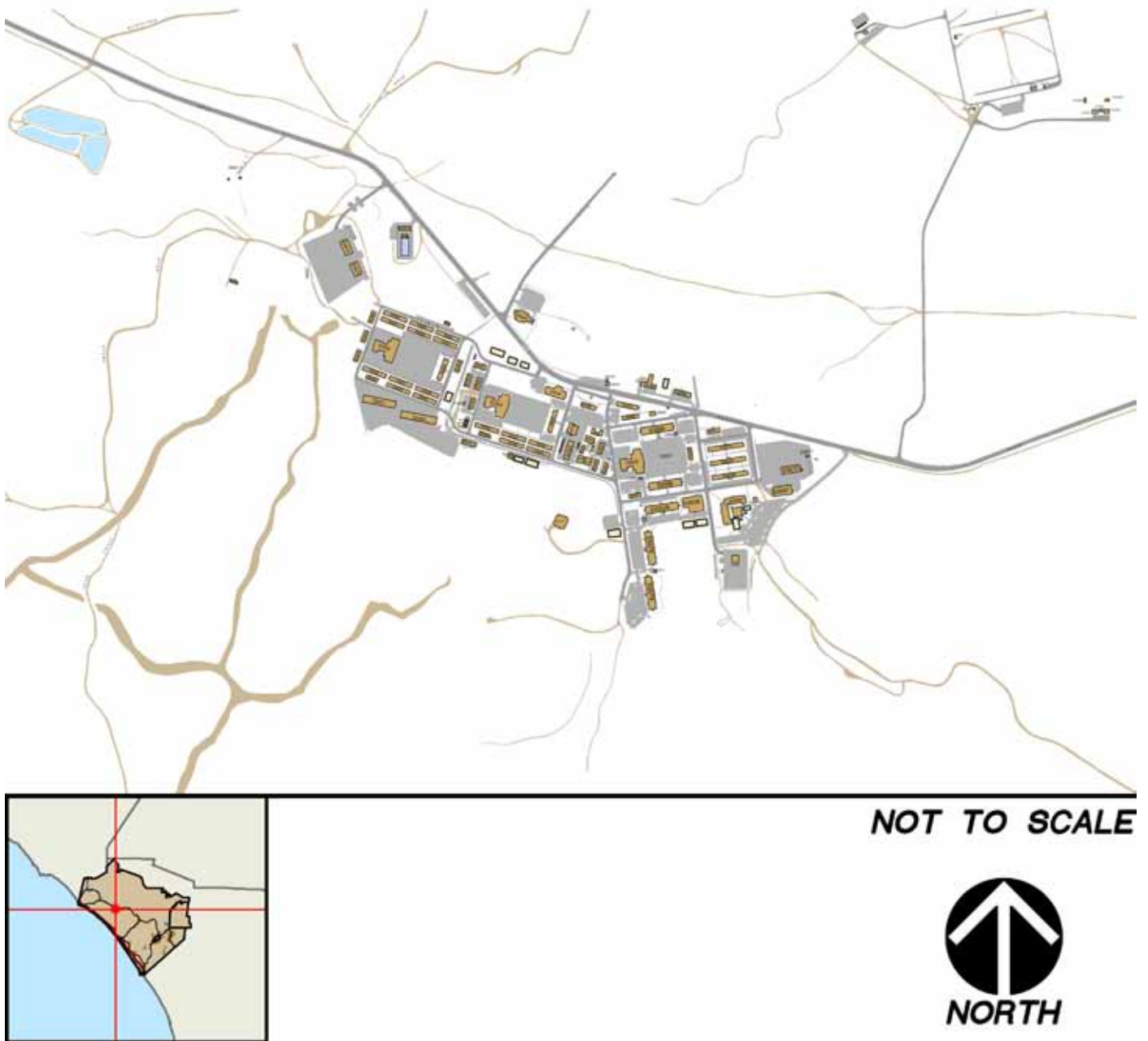


Figure 4.17-1

## 2. Liabilities

- a. Buildings are inconsistent in style, color and repair which visually does not support Area continuity.
- b. The layout of the Horno (53) Area is a result of two grid patterns converging to create a pie shaped central area from Building 53512 to Building 53555. The circulation layout has resulted in intersections that are not perpendicular.
- c. The vehicular circulation and parking areas around Building 53508 are particularly confusing.
- d. The small loop road in front of Building 53346 seems redundant.
- e. Pedestrian circulation is inconsistent and in poor condition throughout the entire site (Figure 4.17-5).
- f. The older classroom areas are in a general need of rehabilitation.
- g. The AT&T Phone Center building is another example of architectural inconsistency. The location for the phone center is poor since it is separated from the BEQs by Basilone Road and its service life is at an end (Figure 4.17-6).
- h. Above ground utilities add considerably to the visual clutter.
- i. The “War Prizes” are poorly displayed and appear temporary. Individual pieces are scattered along Basilone Road and are not organized or arranged to make a meaningful exhibit (Figure 4.17-7).
- j. Landscaping is generally lacking, particularly in the parking areas.
- k. Area identification signage and internal directional signage is weak.



Figure 4.17-5: Sidewalk between parade grounds and Building 53323.



Figure 4.17-6: AT&T Phone Center.



Figure 4.17-7: “War Prizes” at the entrance to Horno (53) Area.

## 4.17 B. Recommendations

The following is a summary of recommendations for improvements to the Horno (53) Area. These recommendations are based on the existing assets and liabilities previously identified.

### 1. Land Use

- To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3 Land Use.
- Maintain the existing character of separation of uses.

### 2. Site Planning

- For new developments, refer to the guidelines established in Section 3.4-Site Planning.
- For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.
- Review existing development areas and determine where it would be possible to consolidate parking, establish pedestrian connections, and improve the overall efficiency and economy of the Horno (53) Area.
- Resolve extreme angle intersections onto Basilone Road (Figure 4.17-8).
- Provide a program within the street design to reduce the speed of vehicles as they approach the cantonment.

### 3. Architecture

- Establish an aggressive program to eliminate buildings that are beyond economical repair.
- Establish a program for rehabilitation of remaining buildings. Special emphasis is needed in the classroom areas:
  - West block of Buildings 53420-21, 53424-27, 53429-30 and 53433-36.
  - East block of Buildings 53320-21, 53324-27, 53329-30 and 53333-36.
- Use the guidelines in Section 3.5- Architecture as the basis for improvements.
- Provide roof drainage and downspouts to minimize facade damage.
- Upgrade the laundry facility north of Building 53420 to a permanent structure.
- Use approved colors for existing facilities that require painting. See Appendix A Color Board/ Building Materials.
- Do not paint new concrete or masonry block structures.
- Future developments shall follow the guidelines established in Section 3.5-Architecture.

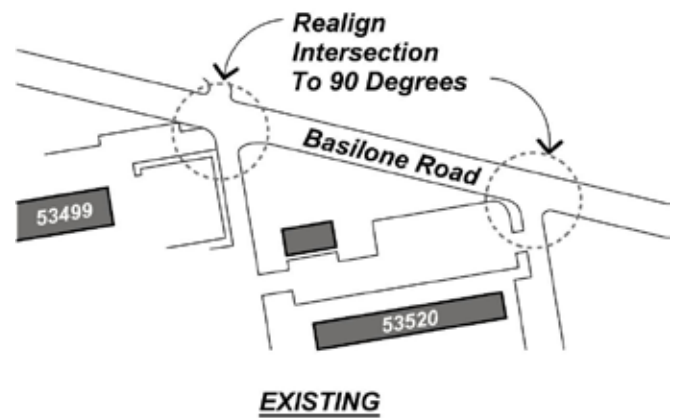


Figure 4.17-8: Typical example of realignment to intersections at Basilone Road.

#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site. See Section 3.6-Landscaping.
- b. When upgrading the landscape or establishing a maintenance plan, see Section 3.6.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use of Base Approved Plant List, Section 3.6 is mandatory when selecting replacement plants or new planting.
- e. When preparing landscape plans for future development, use the guidelines outlined in Section 3.6-Landscaping.
- f. Use trees as the dominant landscape planting element in all developed areas.
- g. Minimize the use of turf in low pedestrian use areas and introduce low water use groundcover or inorganic mulch. The inorganic mulch shall be only one color and size. See Detail 8.3 A-7 (Figure 4.17-9).
- h. Install erosion control planting on all slopes that exceed 3:1.
- i. Continue streetscape planting of California Sycamore along Basilone Road (Figure 4.17-10):
  - 40 feet on center.
- j. Establish accent planting of palms at the parade ground areas.
  - 40 feet on center.
  - 12 to 15 feet in height.
- k. Provide palms at the cantonment identification sign at entry (Figure 4.17-11):
  - Informal groups of 5-7.
  - 10-12 feet in height and plant 10-15 feet apart.

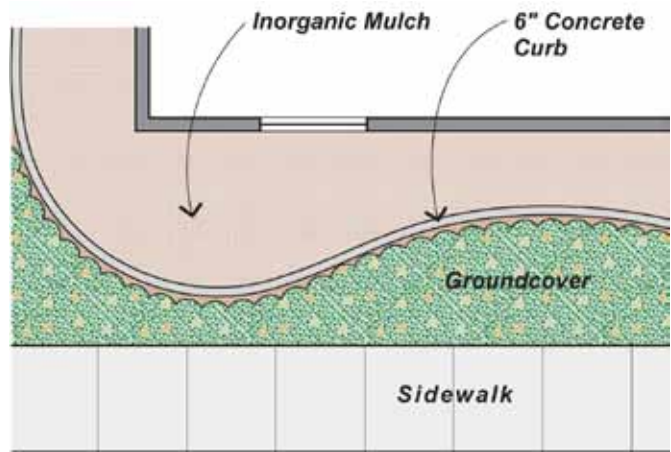


Figure 4.17-9: Typical landscape concept to replace turf areas. Detail is used between planting and inorganic mulch areas.

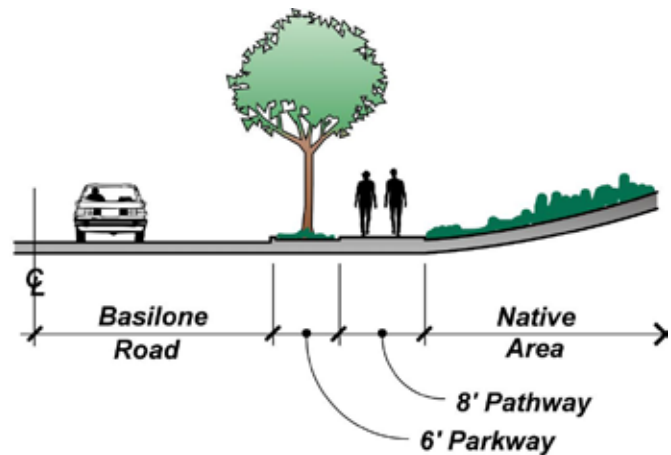


Figure 4.17-10: Typical streetscape planting along Basilone Road.

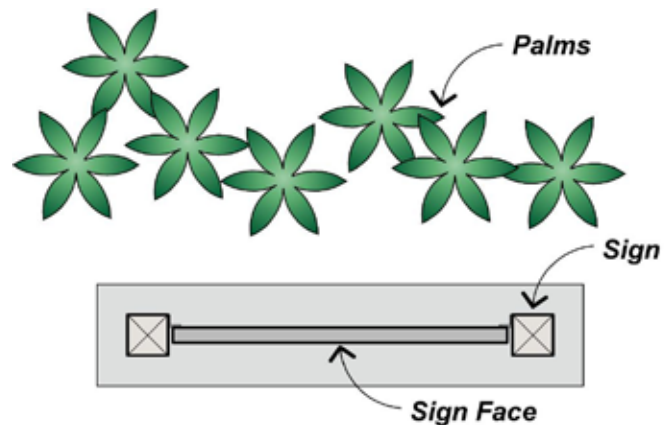


Figure 4.17-11: Informal grouping of palms at entry sign.

- l. Install erosion control planting on the southwest edge of Building 53570 and in areas that show signs of erosion.
- m. Screen foundation of the solar panel facility with planting (Figure 4.17-12).

## 5. Street Design

- Establish a safety zone of textured paving at both the east and west approaches on Basilone Road to discourage drivers from speeding when passing through the cantonment (Figure 4.17-13).
- Resolve all offset intersections by lining up to 90 degrees or separating intersections per the guidelines outlined in Section 3.7- Street Design.
- Review the function of the loop road north of Building 53346. If determined to be inefficient, provide a design that services the building but does not detract from safe access to Basilone Road.
- Clearly define streets from parking in the following areas:
  - North of Buildings 53451 and 53450.
  - North of Buildings 53435 and 53420.
- Eliminate direct access to parking areas from Basilone Road, east of Building 53499 (Figure 4.17-14).
- Provide standard street right-of-way for all major streets. See Section 3.7-Street Design.
- No on-street parking is permitted.
- Establish parking access requirements per Section 3.7-Street Design.

## 6. Parking

- Provide an accurate parking demand based on the existing uses. Refer to Basewide Parking Requirements in Section 3.8.
- Re-stripe all parking areas to the stall size outlined in Section 3.8-Parking (Figure 4.17-15).
- Provide for accessible parking stalls per ADA requirements (Figure 4.17-16).
- No temporary parking lots are permitted in the Horno (53) Area.
- Provide landscape improvements in all parking lot areas, in particular at Buildings 53450-51.
- Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- For repair, and when economically feasible, replace asphalt curbs with concrete. See detail in Section 8.4.

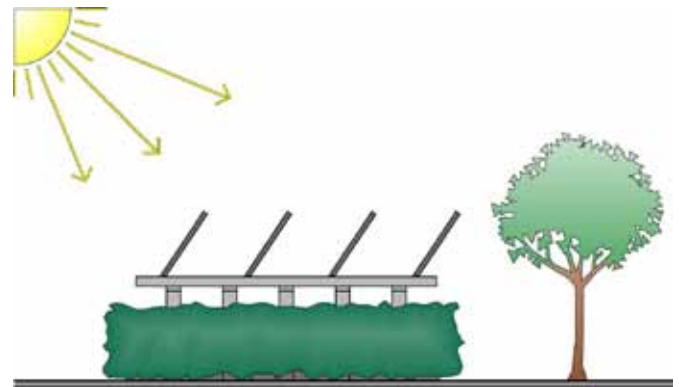


Figure 4.17-12: Screen base of solar panels.

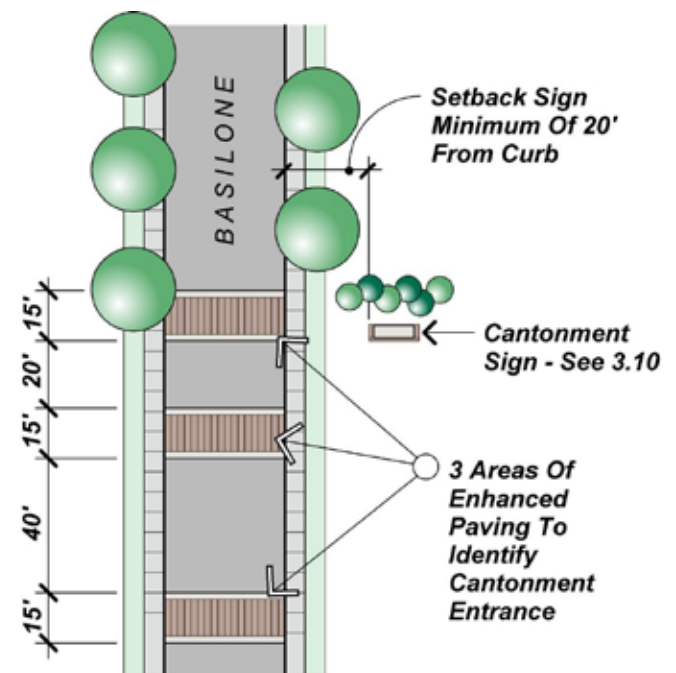


Figure 4.17-13: Example of enhanced paving to identify the cantonment entry at Basilone Road.



Figure 4.17-14: Redesign so parking areas no longer have direct access from Basilone Road.

- h. The use of asphalt curbs is strictly prohibited.
- i. Provide light fixtures in all parking areas that are used at night, per Section 3.11-Lighting.
- j. For new developments prepare a survey and analysis of the existing parking conditions as outlined in Section 3.8-Parking.

**7. Pedestrian Circulation**

- a. Provide sidewalk connections to major facilities from surrounding uses that have heavy pedestrian traffic. This is particularly important at BEQ Buildings 53596-53555.
- b. Remove wooden stairs at Building 53574 and replace. See Section 8.6 (Figure 4.17-17).
- c. Provide concrete sidewalks along major collector (Basilone Road) per Section 3.9-Pedestrian Circulation.

**8. Signage**

- a. Prepare a long range plan to replace all signs to conform to the Section 3.10-Signage and details in this document.
- b. Establish cantonment identification entry signs per Section 3.10 at:
  - Eastern approach on Basilone Road.
  - Western approach on Basilone Road.
- c. For safety and functional purposes, name all streets.
- d. Provide street signs at all intersections.

**9. Lighting**

- a. Develop a survey and analysis of the existing lighting conditions as outlined in Section 3.11-Lighting.
- b. Provide consistent lighting levels for:
  - Pedestrian walkways that are used at night.
  - All functional use facilities.
  - Parking areas.
  - Streets.
- c. Light cantonment identification entry signs and headquarters signs with ground level lights. See detail in Section 8.8.

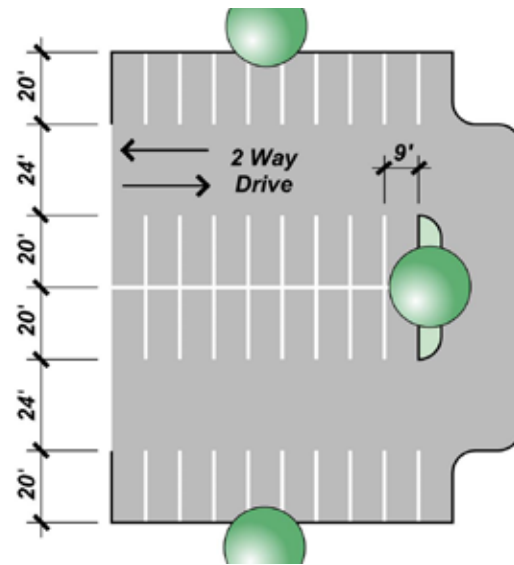


Figure 4.17-15: Standard dimensions for parking stalls.

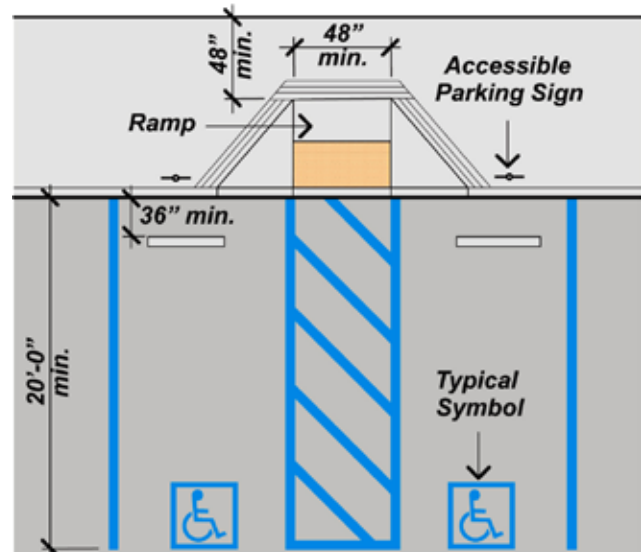


Figure 4.17-16: Standard dimensions for accessible parking stalls.

**10. Site Furniture**

- a. Develop a survey and analysis of the existing site furniture conditions as outlined in Section 3.12-Site Furniture.
- b. Prepare a long-term program to replace all worn out or broken site furniture with furniture identified in 8.9 (Figure 4.17-18).
- c. The Horno (53) Area AT&T Telephone Center is an example of poor construction and is at the end of its service life.

**11. Screens, Walls and Fences**

- a. Prepare a long-term program to replace all screen fences in disrepair.
- b. When replacing fences, use those standards and details outlined in Section 8.10 (Figures 4.17-19 and 4.17-20).
- c. Screen all utility boxes, equipment and substations (Figure 4.17-19).
- d. Screen all dumpsters per detail in Section 8.9 (Figure 4.17-20).

**12. Utilities**

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities.
- b. Provide right-of-way easements for above grade utilities in streets or alleys.
- c. Place utilities underground per the Utility Details and Standards in Section 8.11.
- d. Minimize utility easements through development or open space areas.



Figure 4.17-18: Newer site furniture at BEQ sets precedent for future furniture replacement.



Figure 4.17-19: Good use of plant material for screening utilities.



Figure 4.17-17: Existing stairs are unsafe and need replacement.



Figure 4.17-20: Trash enclosure for dumpsters.

# SAN MATEO (62) AREA

## 4.18 San Mateo (62) Area

San Mateo is located within the coastal range parallel to Interstate 5 at the northern end of the base, roughly 27 miles from the Oceanside Gate (Figure 4.18.1). Major occupants are the 5th Marine Regiment, and the 1st Combat Engineer Battalion.

### 4.18 A. San Mateo (62) Area Observations

The following is a summary of the assets and liabilities observed at the San Mateo (62) Area that were the basis for specific design recommendations.

#### 1. Assets

- a. The BEQ quadrangle at Buildings 62430-62433 provides protected common open space recreation area (Figure 4.18-2).
- b. The cantonment layout is generally clear and direct.
- c. The area is in close proximity to the training grounds and open space.
- d. Mature trees are a visual amenity (Figure 4.18-3).
- e. Newer areas are well planned with simple architectural standards and set a good precedent for future development (Figure 4.18-4).
- f. There is significant lighting in BEQs recreation area for night uses.
- g. Base police presence reinforces slow speeds when passing through the cantonment.



Figure 4.18-2: Looking north to BEQ Building 62430.



Figure 4.18-3: Mature trees at San Mateo.



Figure 4.18-4: Newer building sets design precedent for future development.



# SAN MATEO (62) AREA-CANTONMENT MAP

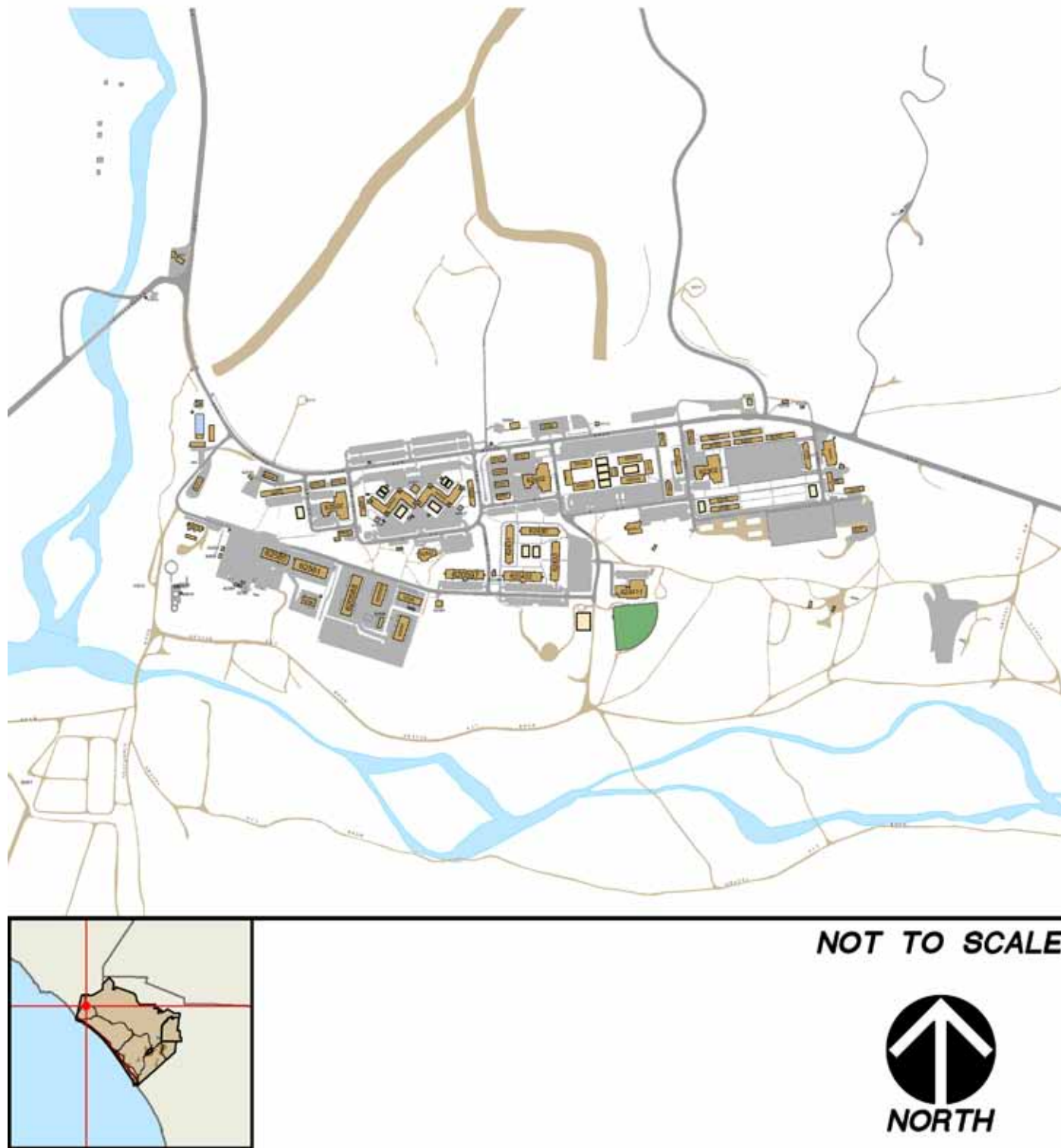


Figure 4.18-1

## 2. Liabilities

- a. There is a lack of definition between parking areas and street at Buildings 62524-25 and 62528.
- b. New 22,000 SF armory is two streets over from San Mateo Road.
- c. Armory buildings are not screened from San Mateo Road (Figure 4.18-5).
- d. Storage area at Buildings 62453-56 are unsightly and in need of screening.
- e. Sidewalks are in need of repair and replacement in older areas (Figure 4.18-5).
- f. Pedestrian circulation between BEQ Building 62431 to parade ground and Headquarters is very weak, with steep stairs, narrow walkway and erosion problems on the adjacent slopes (Figure 4.18-6).
- g. Pedestrian circulation in general is undefined and unimproved.
- h. Drainage problems exist at the eastern entrance to the cantonment, and to the west of Building 62433.
- i. Trash enclosures and storage areas are generally exposed and unsightly (Figure 4.18-7).
- j. Above grade utilities add to the visual clutter.

### 4.18 B. Recommendations

The following is a summary of recommendations for improvements to the San Mateo (62) Area. These recommendations are based on the existing assets and liabilities previously identified.

#### 1. Land Use

- a. To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3-Land Use.
- b. The San Mateo (62) Area has growing concerns of land use compatibility with surrounding properties and environmental issues. All future development must be sensitive to these off site constraints.



Figure 4.18-5: Broken sidewalk is in need of replacement.



Figure 4.18-6: Narrow stairs and eroded slopes leading to BEQ Building 62431.



Figure 4.18-7: Exposed storage area behind Building 62502.

## 2. Site Planning

- a. For new developments, refer to the guidelines established in Section 3.4-Site Planning.
- b. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.
- c. Review existing development areas and determine where it would be possible to consolidate parking, establish pedestrian connections, and improve the overall efficiency and economy of the San Mateo (62) Area.
- d. Future facility siting should conform to existing land use patterns.

## 3. Architecture

- a. Future developments are to follow the guidelines established in Section 3.5-Architecture (Figure 4.18-8).
- b. Establish an aggressive program to eliminate the buildings that are beyond economical repair.
- c. For those buildings that remain, establish a program for rehabilitation. For improvements use the guidelines in Section 3.5-Architecture (Figure 4.18-9).
- d. For facilities that require painting, use approved colors per Appendix A Color Board/Building Materials.
- e. Do not paint new concrete or masonry structures.

## 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site. See Section 3.6-Landscaping.
- b. When preparing landscape plans for new development, upgrading the San Mateo (62) Area landscape, or when creating a maintenance plan, use the guidelines outlined in Section 3.6-Landscaping.



Figure 4.18-8: Newer BEQ is a good example of BEAP approved architecture and enclosed stairways.



Figure 4.18-9: Older building which conforms to Basewide color scheme.

- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use of Base Approved Plant List, Section 3.6 is mandatory when selecting replacement plants or new planting.
- e. Use trees as the dominant landscape planting element in all developed areas (Figure 4.18-10).
- f. Minimize the use of turf wherever possible and introduce groundcover with low water requirements and/or inorganic mulch. Inorganic mulch is to be only one color and size. See Detail 8.3 A-7.
- g. Install erosion control for all areas that show signs of erosion and specifically at the east entrance of San Mateo (62) Area, and at Building 62433.
- h. Provide a Streetscape planting of Coast Live Oaks along San Mateo Road:
  - 30-40 feet on center.
- i. Establish an accent planting of Palms to outline the parade ground areas (Figure 4.18-11).
  - 40 feet on center.
  - 12-15 feet in height.
- j. Provide Palms at the cantonment identification sign at entry.
  - Informal groups of 5-7.
  - 10 to 12 feet in height and 10-15 feet apart.
- k. Provide screen/buffer planting on San Mateo Road to screen (Figure 4.18-12):
  - Buildings 62456-62458
  - Buildings 62553-62586
- l. The current use of bark mulch is to be discontinued due to its obstruction of the drainage collection area at Building 62433. Replace with groundcover or inorganic mulch.

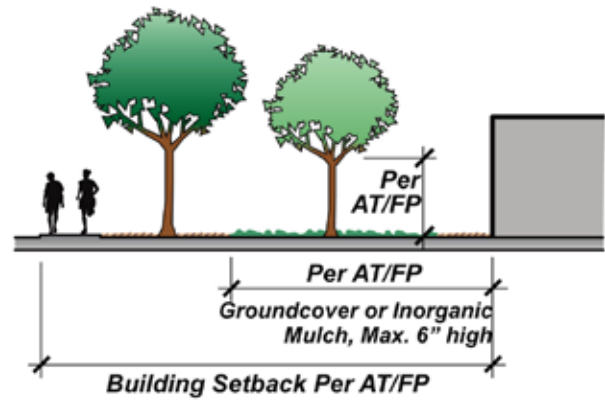


Figure 4.18-10: Use trees as the main landscape feature.

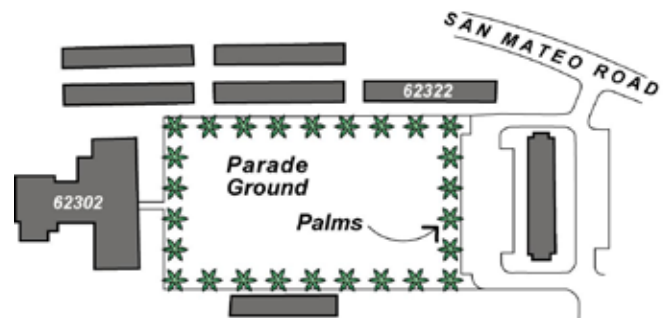


Figure 4.18-11: Palms outlining the parade grounds east of Building 52302.

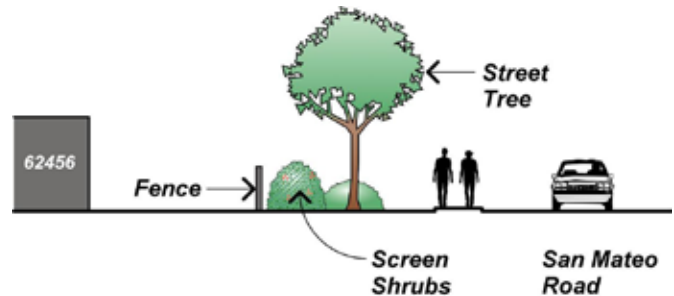


Figure 4.18-12: Typical detail for screening buildings along San Mateo Road.

5. Street Design

- a. Establish a safety zone of textured paving at both the east and west approaches on San Mateo Road to discourage drivers from speeding when passing through the cantonment (Figure 4.18-13).
- b. Resolve all offset intersections by lining up to 90 degrees or separating intersections.
- c. Provide standard street right-of-way for all major streets. See Section 3.7-Street Design.
- d. No on-street parking is permitted.

6. Parking

- a. Provide an accurate parking demand based on the existing uses. Refer to Basewide Parking Requirements.
- b. Re-stripe all parking areas to the stall size outlined in Section 3.8-Parking.
- c. Provide for accessible parking stalls per ADA requirements.
- d. No temporary parking lots are permitted in the San Mateo (62) Area.
- e. Provide landscape improvements at perimeter in all parking areas per Section 3.6-Landscaping (Figures 4.18-14 and 4.18-15).
- f. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- g. For repair, and when economically feasible, replace asphalt curbs with concrete. See detail in Section 8.4.
- h. The use of asphalt curbs is strictly prohibited.
- i. Provide light fixtures in all parking areas that are used at night, per Section 3.11-Lighting.
- j. For future developments, prepare a survey and analysis of the existing parking conditions as outlined in Section 3.8-Parking.

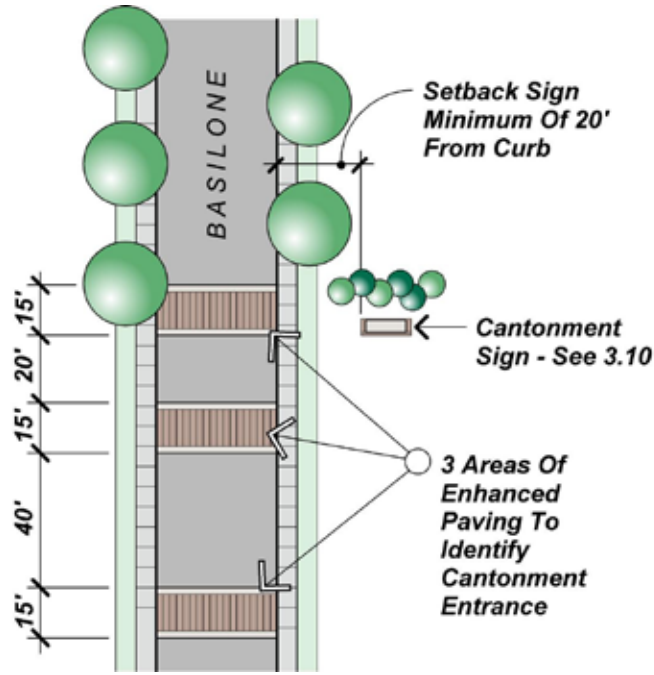


Figure 4.18-13: Typical paving treatment prior to cantonment entrance.

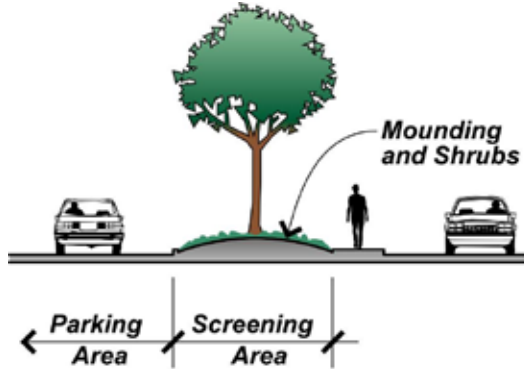


Figure 4.18-14: Use landscape median to clearly define streets from parking areas.

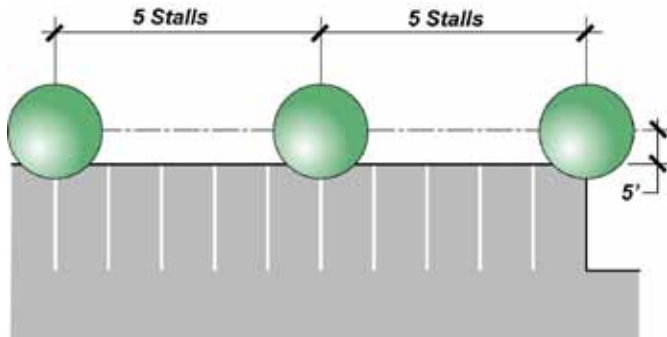


Figure 4.18-15: Typical spacing for trees in parking areas.

## 7. Pedestrian Circulation

- a. Resolve pedestrian walk east of Buildings 62428-29. It is undefined and non-conforming.
- b. Provide concrete sidewalks along San Mateo Road per Section 3.9-Pedestrian Circulation.
- c. Provide sidewalk connections to major facilities from surrounding uses that have heavy pedestrian traffic (Figure 4.18-16).

## 8. Signage

- a. Establish new cantonment entry identification signs, per Section 3.10-Signage, at both approaches on San Mateo Road (Figure 4.18-17).
- b. Establish new Headquarters signs, per Section 3.10 in front of Buildings 62423, 62500 and 62522.
- c. For safety and functional purposes, name all streets.
- d. Provide street signs at all intersections.
- e. Prepare a long range plan to replace all signs to conform to the Section 3.10-Signage.
- f. Clean up vegetation around cantonment signs (Figure 4.18-18).

## 9. Lighting

- a. Provide consistent lighting levels for:
  - Pedestrian walkways that are used at night.
  - All functional use facilities.
  - Parking areas.
  - Streets.
- b. Light entry identification signs with ground level lights. See detail in Section 8.8.

## 10. Site Furniture

- a. Develop a survey and analysis of the existing site furniture conditions as outlined in Section 3.12- Site Furniture.
- b. Prepare a long-term program to replace all worn out or broken site furniture with furniture selected in Section 8.9.



Figure 4.18-16: Steep, well-worn dirt paths to BEQ.



Figure 4.18-17: Existing cantonment entry sign.



Figure 4.18-18: BEQ sign obscured by overgrown vegetation.

**11. Screens, Walls and Fences**

- a. Screen storage areas at Buildings 62453-56.
- b. Screen all utility boxes, equipment and substations south of Building 62428 (Figure 4.18-19).
- c. When replacing fences, use those standards and details outlined in Section 8.10.
- d. Prepare a long-term program to replace all screen fences in disrepair and identify locations where screening and fencing is required.

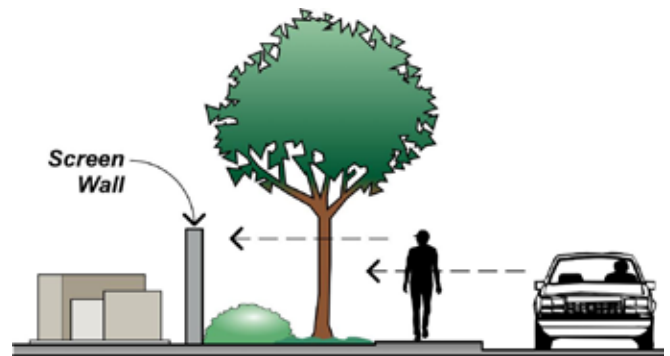


Figure 4.18-19: Typical screening method for utility areas.

**12. Utilities**

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities (Figure 4.18-20).
- b. Place utilities underground per the Utility Details and Standards in Section 8.11.
- c. Provide right-of-way easements for above grade utilities in streets or alleys.
- d. Minimize utility easements through development or open space areas.



Figure 4.18-20: Above ground utilities cause visual clutter.

# CRISTIANITOS (63) AREA

## 4.19 Cristianitos (63) Area

The Cristianitos (63) Area is located near the north boundary of the Base, roughly 28 miles from the Oceanside Gate (Figure 4.19-1). The major occupant is the Fleet Hospital Operations and Training Command. This cantonment is a separate command and reports to the Naval Health Services and Training Command in Bethesda, MD. Students training in layout, assembly, operations and disassembly of the Navy's Fleet Hospital is the primary function of this facility.

### 4.19 A. Cristianitos (63) Area Observations

The following is a summary of the assets and liabilities observed at the Cristianitos (63) Area that were the basis for specific design recommendations.

#### 1. Assets

- a. The shoulder of Cristianitos Road is wide enough to allow for a bicycle/pedestrian path (Figure 4. 19-2).
- b. There are clear level areas for training and staging activities.
- c. There are good views of the surrounding area from Cristianitos Road.
- d. The cantonment has a direct and orderly layout.
- e. The Cristianitos (63) Area is well identified with signage on Cristianitos Road.
- f. The administration buildings are located on the highest part of the site. This allows personnel to view the entire operations area.
- g. Vintage field artillery piece evokes military heritage.
- h. "Hand of Hope," an historic asset within the Cristianitos (63) Area, memorializes Marine assistance to the Vietnamese (Figure 4.19-3).



Figure 4.19-2: Cristianitos Road is wide enough for a bicycle and/or pedestrian path.



Figure 4.19-3: "Hand of Hope" Memorial.



# CRISTIANITOS (63) AREA- CANTONMENT MAP

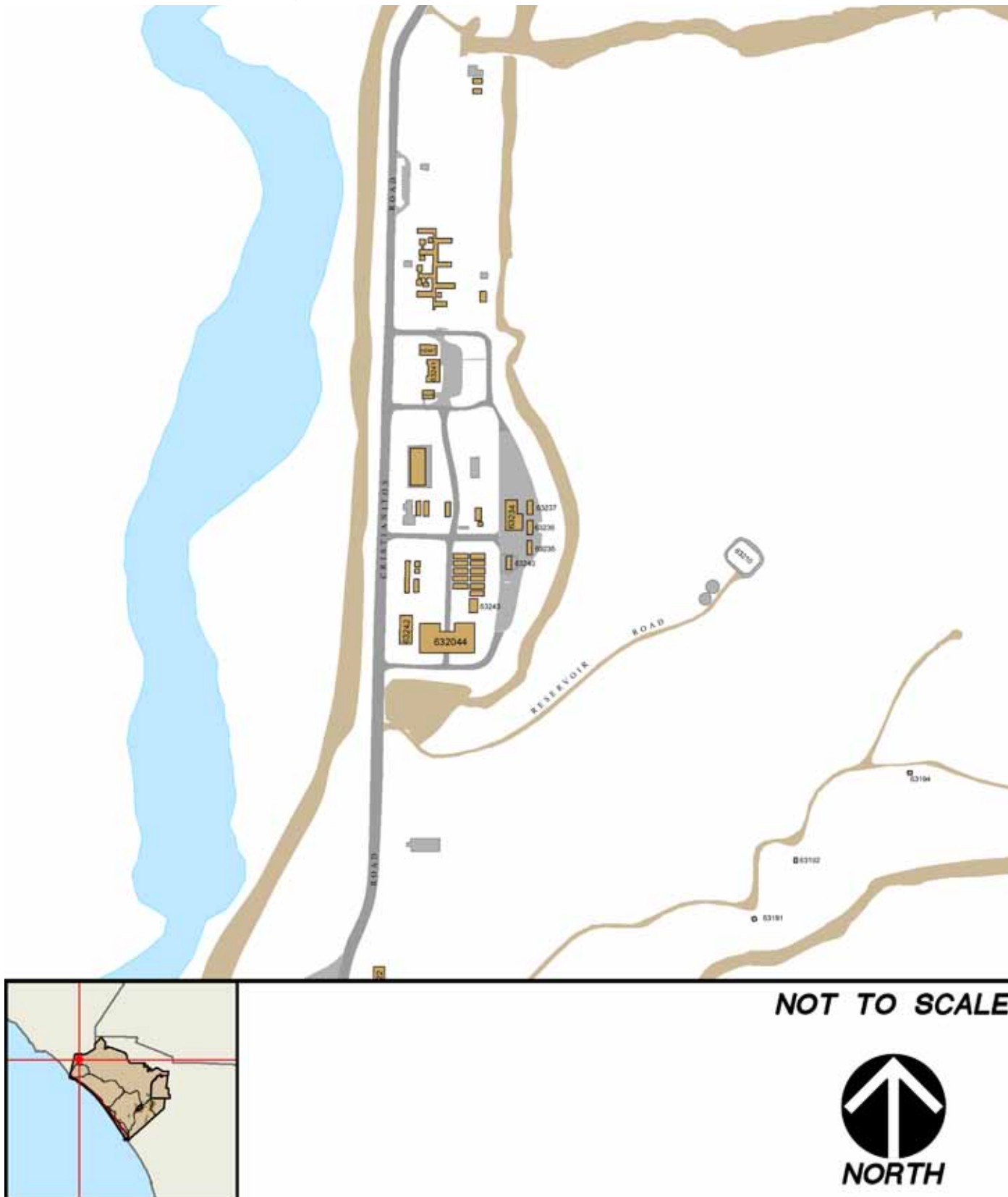


Figure 4.19-1

## 2. Liabilities

- a. Both the directional and cantonment identification entry signage are not standard (Figure 4.19-4).
- b. There is no streetscape along Cristianitos Road.
- c. The administration area appears to have inadequate parking.
- d. Landscape erosion exists in various areas along Cristianitos Road.
- e. The use of railroad ties as street curbs is not cost effective and requires future replacement.
- f. Above ground utilities add to the visual clutter.
- g. Several of the administration buildings are temporary (Figure 4.19-5).

### 4.19 B. Recommendations

The following is a summary of recommendations for improvements to the Cristianitos (63) Area. These recommendations are based on the existing assets and liabilities previously identified.

#### 1. Land Use

- a. To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3-Land Use.
- b. Develop a program that converts the temporary structures into a permanent complex (Figure 4.19-6).

#### 2. Site Planning

- a. For new developments, refer to the guidelines established in Section 3.4-Site Planning.
- b. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.



Figure 4.19-4: Cantonment identification sign.



Figure 4.19-5: Temporary building in the administration area.



Figure 4.19-6: Existing temporary buildings at Cristianitos.

### 3. Architecture

- a. Future developments are to follow the guidelines established in Section 3.5-Architecture (Figure 4.19-7).
- b. Establish a program for the rehabilitation or replacement of existing structures. Use the guidelines in Section 3.5- Architecture as the basis for improvements.
- c. Use approved colors for existing facilities that require painting. See Appendix A Color Board-Building Materials.
- d. Do not paint new concrete or masonry block structures.

### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site. See Section 3.6-Landscaping.
- b. When preparing landscape plans for future development, upgrading the Cristianitos (63) Area landscape, or establishing a maintenance plan, use the guidelines outlined in Section 3.6-Landscaping.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.

- d. Use of Base Approved Plant List, Section 3.6 is mandatory when selecting replacement plants or new planting for Cristianitos (63) Area.
- e. Use trees as the dominant landscape planting element in all developed areas within the limits of the cantonment area.
- f. Wherever possible, minimize the use of turf and introduce low growing shrubs with low water requirements or inorganic mulch as groundcover. Use one color and size.
- g. Install Erosion Control for areas identified along Cristianitos Road.
- h. Establish the Streetscape planting of Coast Live Oaks along Cristianitos Road:
  - 40 feet on center.

### 5. Street Design

- a. Remove and replace railroad ties as street curbs and conform to guidelines Section 3.7-Street Design.
- b. Provide standard street right-of-way for all major collector streets (Cristianitos Road). See Section 3.7-Street Design.
- c. No on-street parking is permitted.



Figure 4.19-7: Newer building sets precedent for future development.

## 6. Parking

- a. Provide an accurate parking demand based on existing uses. Refer to Basewide Parking Requirement in Section 3.8.
- b. Provide for accessible parking stalls per ADA requirements.
- c. No temporary parking lots are permitted in the Cristianitos (63) Area.
- d. Provide landscape improvements at perimeter of in all parking lot areas (Figure 4.19-8).
- e. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- f. For repair, and when economically feasible, replace asphalt curbs with concrete. See detail in Section 8.4.
- g. The use of asphalt curbs or railroad ties are strictly prohibited.
- h. Provide light fixtures in all parking areas that are used at night, per Section 3.11-Lighting.



Figure 4.19-8: Existing parking lot lacking curbs and landscape improvements.

## 7. Pedestrian Circulation

- a. Provide concrete sidewalks on major collector streets (Cristianitos Road) per Section 3.9-Pedestrian Circulation.
- b. Provide sidewalk connections to major facilities from surrounding uses that have heavy pedestrian traffic (Figure 4.19-9).



Figure 4.19-9: No distinct pedestrian circulation separate from vehicular areas.

## 8. Signage

- a. Prepare a long range plan to replace all signs to conform to the Section 3.10-Signage and details in this document.
- b. Establish new cantonment identification entry signs, per Section 3.10, on Cristianitos Road at both approaches (Figure 4.19-10).
- c. For safety and functional purposes, name all streets.
- d. Provide street signs at all intersections.



Figure 4.19-10: Existing identification signage.

## 9. Lighting

- a. Provide consistent lighting levels for:
  - Pedestrian walkways that are used at night.
  - All functional use facilities.
  - Parking areas.
  - Street.
- b. Light cantonment identification entry signs with ground level lights. See detail in Section 8.4.

## 10. Site Furniture

- a. Prepare a long-term program to replace all worn out or broken site furniture with furniture selected in Section 8.9.
- b. Historical military displays need improvement. Construct concrete pedestal as foundation for display per Section 3.12 (Figure 4.19-11).

## 11. Screens, Walls and Fences

- a. Prepare a long-term program to replace all screen fences in disrepair and identify locations where screening and fencing is required.
- b. When replacing fences, use those standards and details outlined in Section 8.10 (Figure 4.19-12).

## 12. Utilities

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities.
- b. Place utilities underground per the Utility Details and Standards in Section 8.11 (Figure 4.19-13).
- c. Provide right-of-way easements for above grade utilities in streets or alleys.
- d. Minimize utility easements through development or open space areas.



Figure 4.19-12: Unscreened above ground storage tank.



Figure 4.19-11: Historical canon on display lacks lighting or pedestal.



Figure 4.19-13: Above ground utilities cause visual clutter.

# TALEGA (64) AREA

## 4.20 Talega (64) Area

Talega (64) Area is the most northern encampment on the Base, roughly 29 miles from the Oceanside Gate (Figure 4.20-1). The cantonment is currently used as a reserve training center primarily during spring and summer months (Figure 4.20-1).

### 4.20 A. Talega (64) Area Observations

The following is a summary of the assets and liabilities observed at the Talega (64) Area that were the basis for specific design recommendations.

#### 1. Assets

- a. This cantonment has a very pleasant riparian Sycamore setting (Figure 4.20-2).
- b. The remoteness of the site separates the Reserve activities from the Basewide uses.
- c. The picnic and recreational facilities are well sited and functional.
- d. Vehicular circulation is clear and efficient.
- e. There is good use of inorganic mulch as an alternative groundcover (Figure 4.20-3).
- f. The large quantity of WWII Quonset Huts have historic character.

#### 2. Liabilities

- a. There is a lack of definition between parking and streets.
- b. Quonset huts are near the end of their service life (Figure 4.20-4).
- c. Trash dumpsters are exposed and unsightly.
- d. Site furniture is in need of replacement.
- e. Above ground utilities add to the visual clutter, including unscreened propane tank.



Figure 4.20-2: Picnic shelter in a grove of mature Sycamores.



Figure 4.20-3: Use of cobble and low water use plants at Quonset Huts.



Figure 4.20-4: Quonset huts are the primary structure in the Talega (64) Area.

# TALEGA (64) AREA-CANTONMENT MAP

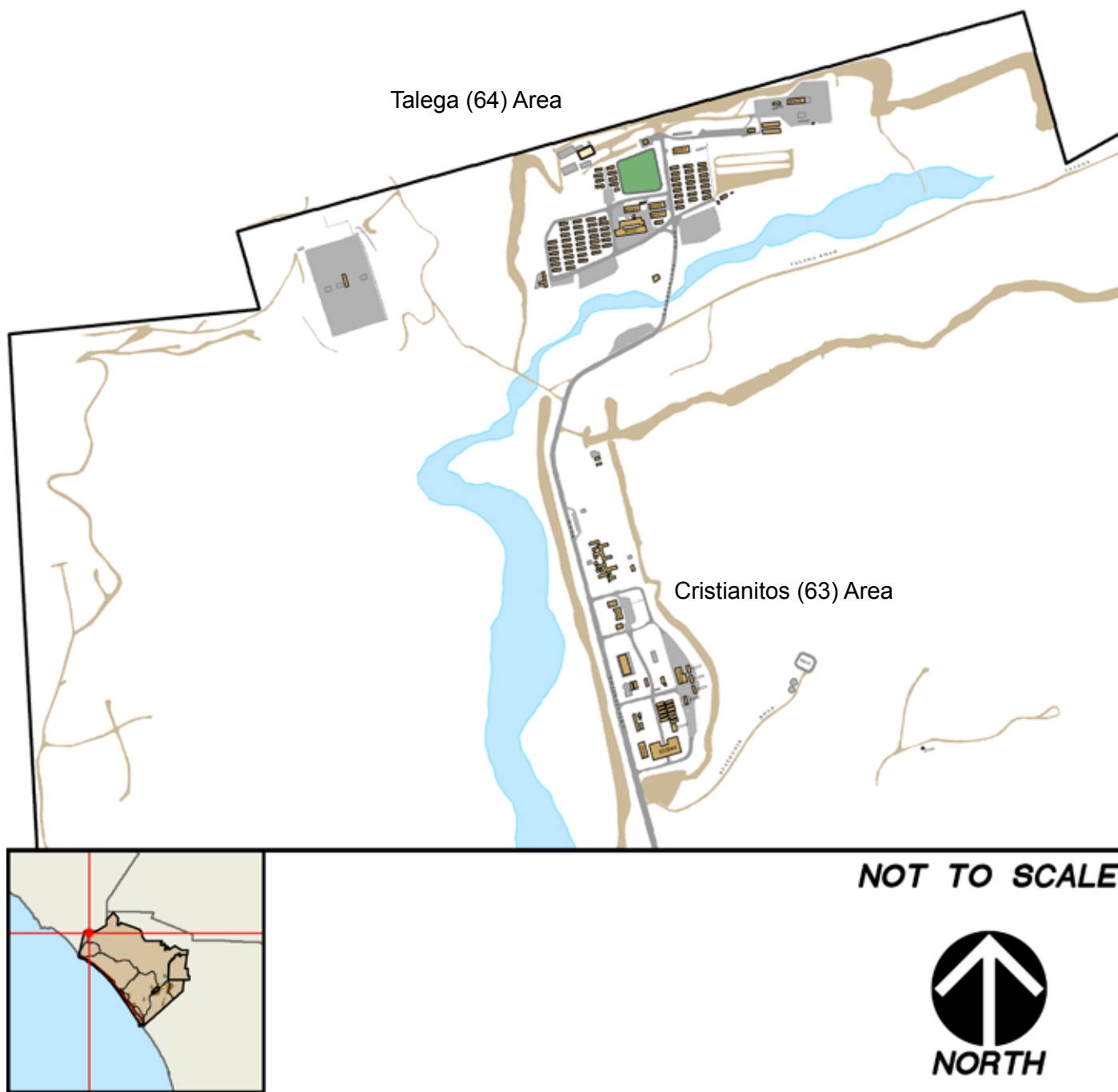


Figure 4.20-1

## 4.20 B. Recommendations

The following is a summary of recommendations for improvements to the Talega (64) Area. These recommendations are based on the existing assets and liabilities previously identified.

### 1. Land Use

To assist in the development of new projects or the reuse of existing facilities, refer to the Base Master Plan and the Land Use Compatibility Matrix in Section 3.3-Land Use.

### 2. Site Planning

- a. For new developments refer to the guidelines established in Section 3.4-Site Planning.
- b. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.

### 3. Architecture

- a. New developments are to follow the guidelines established in Section 3.5-Architecture.
- b. Establish an aggressive program to eliminate buildings that are beyond economical repair (Figure 4.20-5).
- c. For the buildings that are to remain, establish a program for rehabilitation. Use the guidelines in Section 3.5-Architecture as the basis for improvements (Figure 4.20-6).
- d. Use approved colors for existing facilities that require painting. See Appendix A Color Board/ Building Materials.
- e. Do not paint new concrete or masonry block structures.

### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site. See Section 3.6-Landscaping.
- b. When preparing landscape plans for new development, upgrading the Talega (64) Area, or establishing a maintenance plan use the guidelines outlined in Section 3.6-Landscaping.



Figure 4.20-5: WWII Quonset huts beyond their service life.



Figure 4.20-6: World War II Quonset huts used to house Reserves.

- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works Department and may be required to align with ongoing streetscape programs.
- d. Use of Base Approved Plant List, Section 3.6 is mandatory when selecting replacement plants or new planting.
- e. Use trees as the dominant landscape planting element in all developed areas within the limits of the cantonment area.



**5. Street Design**

- a. Clearly define streets from parking areas.
- b. Provide standard street right-of-way for Cristianitos Road. See Section 3.7-Street Design
- c. No on-street parking is permitted.

**6. Parking**

- a. Provide an accurate parking demand based on the existing uses. Refer to Basewide Parking Requirements in Section 3.8.
- b. Provide for accessible parking stalls per ADA requirements.
- c. No temporary parking lots are permitted in the Talega (64) Area.
- d. Provide landscape improvements in all parking lot areas (Figure 4.20-7).
- e. Due to their low life cycle and maintenance costs, the use of concrete curbs for new construction is mandatory.
- f. For repair, and when economically feasible, replace asphalt curbs with concrete.
- g. The use of asphalt curbs is strictly prohibited.
- h. Provide light fixtures in all parking areas that are used at night, per Section 3.11-Lighting.

**7. Pedestrian Circulation**

Provide a concrete walk along Cristianitos Road (Figure 4.20-8).

**8. Signage**

- a. Prepare a long range plan to replace all signs to conform to Section 3.10-Signage and details in this document.
- b. Establish new cantonment identification entry sign, per Section 3.10, at entry off of Talega Road.



Figure 4.20-7: Provide landscape and general improvements to parking lots throughout Talega (64) Area.



Figure 4.20-8: Provide sidewalk along Cristianitos Road, especially at entrance to Talega (64) Area.

## 9. Lighting

- a. Provide consistent lighting levels for:
  - Pedestrian walkways that are used at night.
  - All functional use facilities.
  - Parking areas.
  - Streets.
- b. Light cantonment identification entry signs with ground level lights (Figure 4.20-9).

## 10. Site Furniture

- a. Develop a survey and analysis of the existing site furniture conditions as outlined in Section 3.12-Site Furniture (figure 4.20-10).
- b. Prepare a long-term program to replace all worn out or broken site furniture with furniture selected in Section 8.9.

## 11. Screens, Walls and Fences

- a. Prepare a long-term program to replace all screen fences in disrepair.
- b. When replacing fences, use those standards and details outlined in Section 8.10.
- c. Screen all utility boxes, equipment and substations (Figure 4.20-11).

## 12. Utilities

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long range plan to underground these facilities.
- b. Place utilities underground per the Utility Details and Standards in Section 8.11.
- c. Provide right-of-way easements for these utilities in streets or alleys.
- d. Minimize utility easements through development or open space areas.

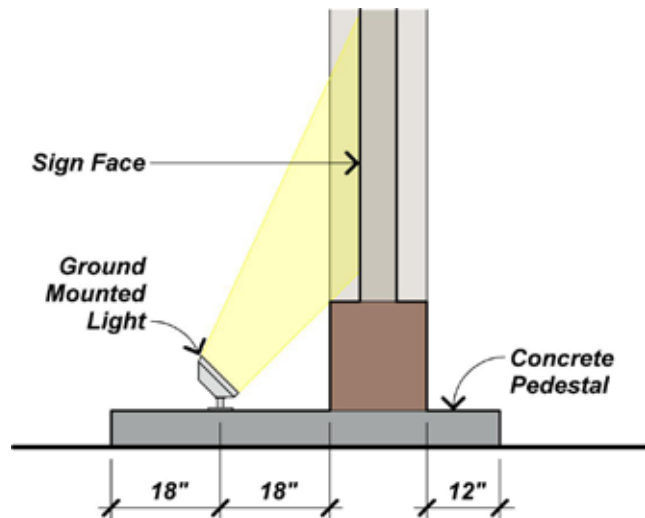


Figure 4.20-9: Uplighting for cantonment sign.



Figure 4.20-10: Existing site furniture in Talega (64) Area.



Figure 4.20-11: Above ground storage tanks lack screening.

# Chapter 5

## RECREATION AREA DESIGN GUIDELINES

### 5.1 Overview

Camp Pendleton offers a wide variety of recreational facilities for Base personnel. Facilities range from beaches, golf course, stables to varied uses at Lake O’Neill. Beach facilities are located on the western edge of the Base along the Pacific Ocean, while other facilities are in close proximity to the Headquarters (HQ) Area (See Figure 5.2-1).

The Recreation Area Guidelines, in conjunction with the Chapter 3-Basewide Design Guidelines, provide the necessary design recommendations for implementing future projects or improvements. A description and analysis of existing conditions is provided, outlining each site’s assets and liabilities.

Proposed recommendations for each recreational area address general solutions with development standards and guidelines. In the future, it is recommended to prepare a separate Master Plan/Long Range Development Plan for all recreation uses and facilities on Camp Pendleton.



Figure 5.2-2: Entry sign at Lake O’Neill.



Figure 5.2-3: View of day-use facilities at Lake O’Neill.



Figure 5.2-4: View of the lake from the campground site.

# LAKE O'NEILL (26-27) AREA

## 5.2 Lake O'Neill (26-27) Area

The Lake O'Neill (26-27) Recreation Area is located north of the main HQ Area, east of the Santa Margarita River Valley and southeast of the Navy Hospital facility (Figure 5.2-1). Lake O'Neill is a regional facility that serves the entire Base and is comprised of two distinct uses: the campgrounds and the day use area (Figure 5.2-2).

### 5.2 A. Lake O'Neill (26-27) Area Observations

The following is a summary of the assets and liabilities observed at the Lake O'Neill (26-27) Recreation Area that are the basis for specific design recommendations.

#### 1. Assets

- a. The area is a large regional natural open space park that serves the entire Base.
- b. Excellent views exist in a non-urban open space setting (Figure 5.2-3 & 4).
- c. A wide variety of active and passive recreational uses are available:
  - Fishing
  - Boating
  - Ballfields
  - Picnicking
  - Miniature golf
  - Hiking and jogging
  - Recreational vehicle camping
  - Playground facilities
- d. A large open space camping area with good views exists east of Lakeside Drive.
- e. Nice stands of mature pepper trees line Lakeside Drive (Figure 5.2- 5).
- f. There is adequate parking for large recreational vehicles (Figure 5.2-6).
- g. Mature landscaping exists throughout the camping area.



Figure 5.2-5: Lakeside Drive lined with California Peppers.



Figure 5.2-6: RV Camp/Parking Area.



Figure 5.2-7: Unimproved parking adjacent to picnic shelters and lake at the day use center.

# LAKE O'NEILL (26-27) AREA- RECREATION AREA MAP

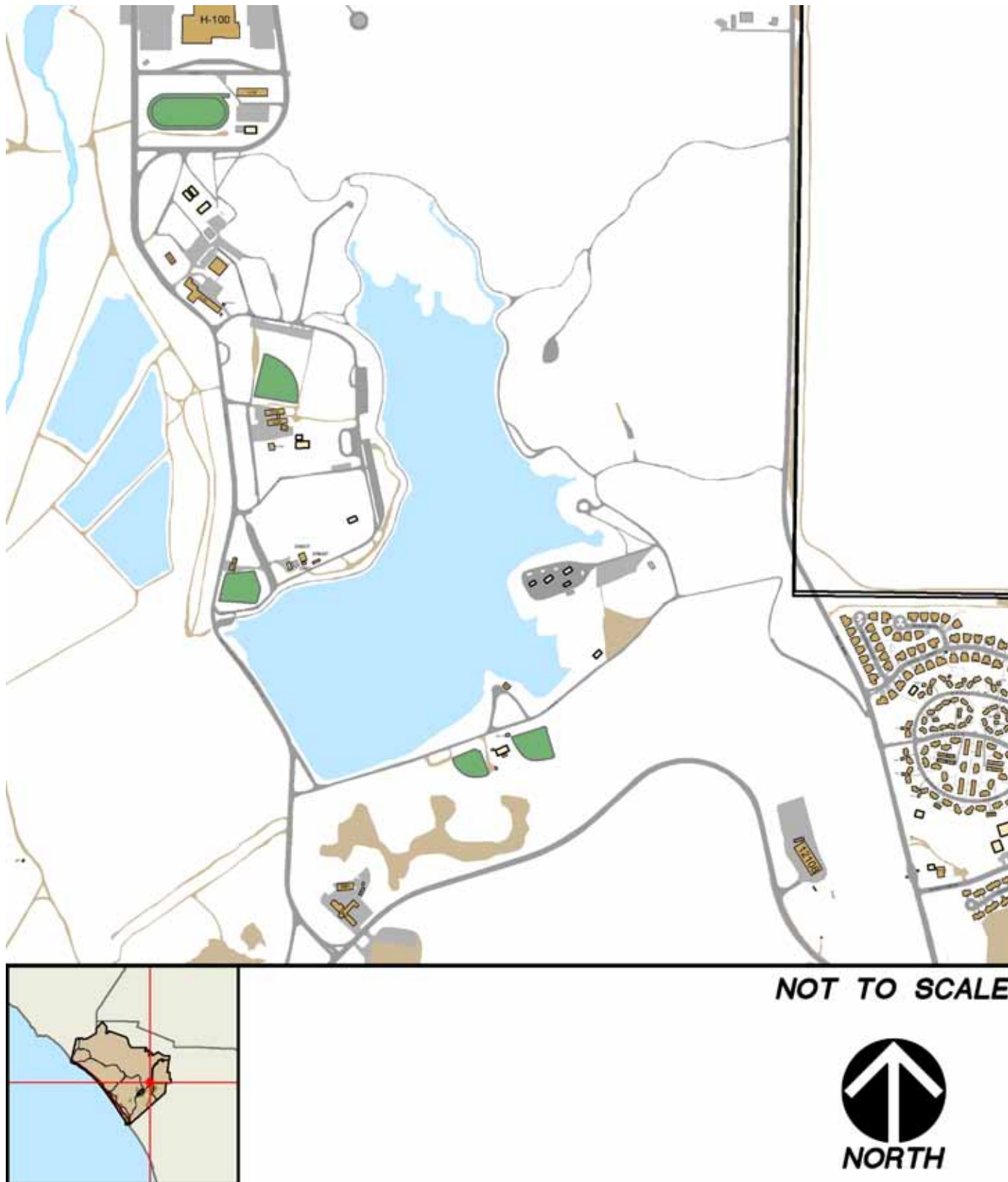


Figure 5.2-1

- h. Large central area at the camping site is suitable for expansion.

**2. Liabilities**

- a. Significant erosion is identified on the southwestern edge of the lake.
- b. Vehicular circulation on Lake O'Neill Road is unimproved in the eastern area.
- c. Parking for day use is unimproved and undefined in the peninsula area near Shelters/Buildings 26105-26114 (Figure 5.2-7).
- d. Picnic shelters are in poor condition and need upgrading or replacing.
- e. The intersection entry at Santa Margarita River and Lake O'Neill Roads presents a potential traffic hazard.
- f. The bandstand should be replaced with a more permanent facility.
- g. Miniature golf and marina facilities need to be upgraded (Figure 5.2-8).
- h. The parking area is a vast expanse of asphalt within a natural open space setting.
- i. Recreational vehicle (RV) hook-ups need to be upgraded.
- j. Existing site furniture needs to be replaced (Figure 5.2-9).
- k. Administrative structures should be replaced with a more permanent facility (Figure 5.2-10).
- l. Existing signage includes varying styles and locations.
- m. Overflow vehicle parking in the southwest portion of the campgrounds adjacent to the picnic tables is unsightly.



*Figure 5.2-8: Miniature Golf Course near main drive.*



*Figure 5.2-9: Existing site furniture at the lake.*



*Figure 5.2-10: Office at Lake O'Neill Campground.*

## 5.2 B. Recommendations

### 1. Land Use

Maintain this area as a regional open space park and continue to provide RV camping facilities. Recommend that a separate Master Plan/Long Range Development Plan be prepared.

### 2. Site Planning

- Develop a survey and analysis of park needs for the existing and future demographic population of Camp Pendleton.
- Delineate and improve all designated parking areas as outlined in Section 3.8-Parking.
- The large central open space in the camping area could be used for future recreational facilities including:
  - Ballfields
  - Recreational vehicle camping
  - Pool
  - Tennis
  - Basketball
- Provide defined recreational vehicle parking in the southwest portion of the camping area. It should be located out of the natural areas and near the lake's edge (Figure 5.2-11).
- Define the edges of the volleyball play area in the day use area.

### 3. Architecture

- Establish a program for the rehabilitation or replacement of existing structures, in particular the restroom facilities, using the guidelines in Section 3.5-Architecture.
- Provide permanent facilities for a boat rental/dock building.
- Some of the picnic shelters are in poor condition and need rehabilitation or replacement (Figure 5.2-12).
- Remove existing temporary structures at the camping area and replace with permanent facilities per Section 3.5-Architecture.

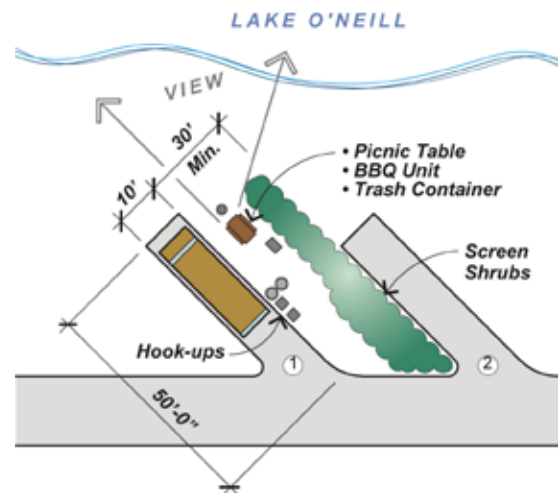


Figure 5.2-11: Typical layout for RV camp site.

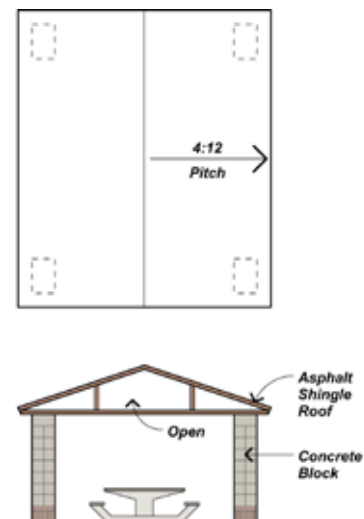


Figure 5.2-12: Typical elevation for replacement picnic shelters.

#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6-Landscaping, when upgrading the Lake O'Neill landscape or establishing a maintenance plan (Figure 5.2-13).
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works department and may be required to align with ongoing streetscape programs.
- d. Use native, local species whenever possible to perpetuate the integrity of this natural open space park. Use the Base Approved Plant List in Section 3.6 when selecting plant material.
- e. Develop a survey and analysis of existing irrigation conditions and establish future needs.
- f. Introduce tree planting within the camping site's large central open space area with:
  - Coast Live Oak
- g. Provide tree planting in the large asphalt recreational vehicle parking area with:
  - Sycamore
- h. Introduce native tree planting in the eastern area of the day use area peninsula and along the southwestern edge of the lake with:
  - Sycamore
- i. Plant palms at the day use and the camping area identification sign entry point on Santa Margarita River Road:
  - In a group of 3-5 each and an average size of 12 to 15 feet in height.
- j. Establish an erosion control program for lake banks.
- k. Establish as part of the maintenance plan an exotic non-native plant removal program at the water's edge. Replace with native habitat plant species specific to the Least Bell's Vireo as identified in the Basewide Master Plan (Figure 5.2-14).



Figure 5.2-13: Pine trees in need of replacing near the Miniature Golf Course at Lake O'Neill.



Figure 5.2-14: Plant material, both native and non-native, at the edge of Lake O'Neill.



**5. Street Design**

- a. Realign the vehicular entry on Santa Margarita River Road and Lake O'Neill Roads to a 'T' intersection to improve traffic conditions (Figure 5.2-15).
- b. Realign the area entry at Santa Margarita River Road and Lakeside Drive into a 'T' intersection to improve traffic safety (Figure 5.2-16).
- c. Pave the eastern extension of Lake O'Neill Road as it connects to parking area near the peninsula.

**6. Parking**

- a. Define parking in the day use area adjacent to the peninsula area and install crushed rock for the surface material.
- b. Provide parking from Lakeside Drive to the day use picnic area in the southwest portion of the camping site. Eliminate parking in the open space area.

**7. Pedestrian Circulation**

- a. Provide jogging and walking paths around the perimeter of the lake and connect trails to the nearby hospital complex.
- b. Construct paths per Section 3.9-Pedestrian Circulation.

**8. Signage**

- a. Provide a recreation area identification sign at the primary entrance on Santa Margarita River Road per Section 3.10-Signage.
- b. Provide a uniform program of directional and regulation signage as outlined in Section 3.10-Signage.

**9. Lighting**

The park is for day use only. There are no recommendations at this time. Provide minimal (safety and security) lighting at the camping area at the following locations:

- Primary entry
- Intersections within area
- Pedestrian lighting at administrative structure

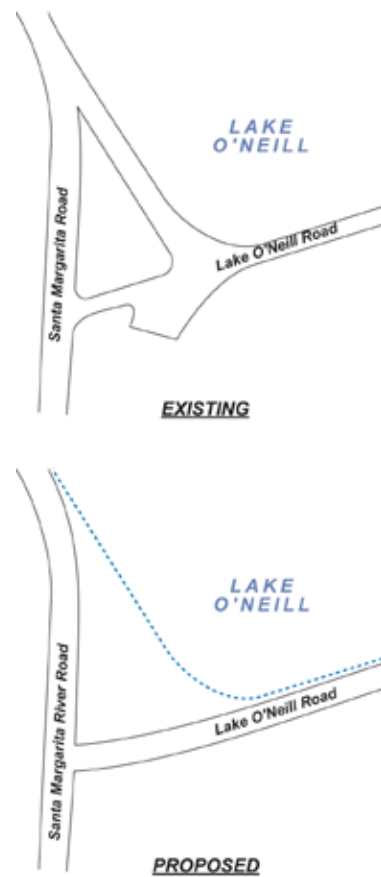


Figure 5.2-15: Redesign of the intersection on Lake O'Neill Road and Santa Margarita River Road.



Figure 5.2-16: Redesign of the intersection on Lakeside Drive and Santa Margarita River Road.

## 10. Site Furniture

Prepare a long range development program to replace all worn out, broken and non-code compliant site furniture with furniture selected in Section 8.9. See guidelines in Section 3.12-Site Furniture (Figure 5.2-17).

## 11. Screens/Walls/Fences

When replacing screens, fences or walls, use standards outlined in Section 3.13-Screens/Walls/Fences and details in Section 8.10 (Figure 5.2-18).

## 12. Utilities

Develop a survey and analysis of all above grade utilities in the interior areas of the campgrounds and along Santa Margarita River Road and Lakeside Drive. Prepare a long range plan to underground these utilities. Refer to Section 3.14-Utilities, for more information.

## 13. Playgrounds

- a. Develop a survey and analysis of existing playground facilities for both the day use and camping areas (Figure 5.2-19).
- b. Playgrounds should be located within interior areas and accessible without having to cross a street.
- c. Provide shade or a shelter for parental supervision.
- d. Each facility should be designed for barrier-free access.
- e. Connect playgrounds to adjacent use areas by a walkway system.



Figure 5.2-17: Typical trash and recycle receptacles at Lake O'Neill.



Figure 5.2-18: Unscreened utilities in the day use area.



Figure 5.2-19: Playground adjacent to Miniature Golf Course.



# DEL MAR BEACH (21) AREA

## 5.3 Del Mar Beach (21) Area

The Del Mar Beach (21) Recreation Area is immediately north of the main Oceanside Gate and the City of Oceanside (Figure 5.3-1). One of two Basewide beach oriented recreational areas, the Del Mar Beach also fronts on the City of Oceanside's inner harbor and shares entry and circulation with the Del Mar Cantonment Area.

### 5.3 A. Del Mar Beach (21) Area Observations

The following is a summary of the assets and liabilities observed at the Del Mar Beach Area that are the basis for specific design recommendations.

#### 1. Assets

- a. The setting is in close proximity to the ocean.
- b. Del Mar Beach offers large group facilities, restaurants and overnight facilities for military personnel.
- c. Significant parking areas are provided for day users.
- d. Recreational vehicle campgrounds are provided.

#### 2. Liabilities

- a. The area is not well defined or visually separate from the high profile Del Mar Cantonment Area.
- b. The vehicular circulation into the Del Mar Beach (21) Area is confusing on approach and exit (Figure 5.3-2).
- c. Cantonment storage and staging facilities are prominent.
- d. Recreational buildings often look temporary (Figure 5.3-3).
- e. Site furniture and fencing is in disrepair and lacks uniformity.
- f. Trash dumpsters are not enclosed or screened.
- g. Above ground utilities add to the visual clutter (Figure 5.3-4).



Figure 5.3-2: Vehicular Entry to Del Mar Beach.



Figure 5.3-3: Existing structures at Del Mar Beach.



Figure 5.3-4: Utility lines add visual clutter.

# ***DEL MAR BEACH (21) AREA- RECREATION AREA MAP***



**NOT TO SCALE**



Figure 5.3-1

## 5.3 B. Recommendations

### 1. Land Use

Continue recreational uses for this area. It is recommended that a separate Long Range Development Plan be prepared.

### 2. Site Planning

Establish a program of land use separation and selective entry for the Del Mar Beach (21) Area.

### 3. Architecture

- a. Establish a program of architectural uniformity in materials and color.
- b. Consolidate uses and services within permanent buildings and remove remaining underutilized structures.
- c. Adopt the palm frond hut detail as a typical beach shelter (Figure 5.3-5).

### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6-Landscaping, when upgrading the landscape or establishing a maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works department and may be required to align with ongoing streetscape programs.
- d. Use native, local species whenever possible to perpetuate the integrity of this natural open space park. Use the Base Approved Plant List in Section 3.6 when selecting plant material.
- e. Provide screen/buffer planting of *Myoporum*, five feet on center (Figure 5.3-6) at the following areas:
  - Between all mobile home rental spaces.
- f. Screen all trash enclosure areas with plant material selected from the Base Approved Plant List.



Figure 5.3-5: Typical beach shelter with palm fronds.



Figure 5.3-6: Typical screen planting between camp sites.

- g. Provide trees in the parking lot adjacent to cantonment area:
  - Along the perimeter, one per five stalls.
- h. Develop a survey and analysis of existing irrigation conditions and establish future needs.

## 5. Street Design

- Develop a survey and evaluation of the existing street conditions and compare to the guidelines established in Section 3.7-Street Design.
- Provide direct and clear vehicular circulation and parking for recreational users. Separate recreation related traffic from cantonment traffic as much as possible.

## 6. Parking

Discourage random parking. Existing parking may not be sufficient during peak summer months. Provide an accurate parking demand analysis for year-round service as outlined in Section 3.8-Parking.

## 7. Pedestrian Circulation

Provide a continuous textured concrete walk along beach (Figure 5.3-7). Refer to Section 3.9-Pedestrian Circulation, for more information.

## 8. Signage

Prepare a long range plan to replace all signs to conform to Section 3.10-Signage.

## 9. Lighting

- Provide consistent lighting levels for:
  - Pedestrian walkways used at night.
  - Parking areas.
  - Streets.
- Develop a survey and analysis of the existing lighting conditions as outlined in Section 3.11-Lighting.

## 10. Site Furniture

Prepare a long range development program to replace worn out and broken site furniture with furniture selected in Section 3.12-Site Furniture.

## 11. Screens/Walls/Fences

- Prepare a long range development program to replace all screen fences in disrepair as outlined in Section 3.13-Screens/Walls/Fences.
- Screen trash dumpsters.
- Provide screen planting between the RV campsites.

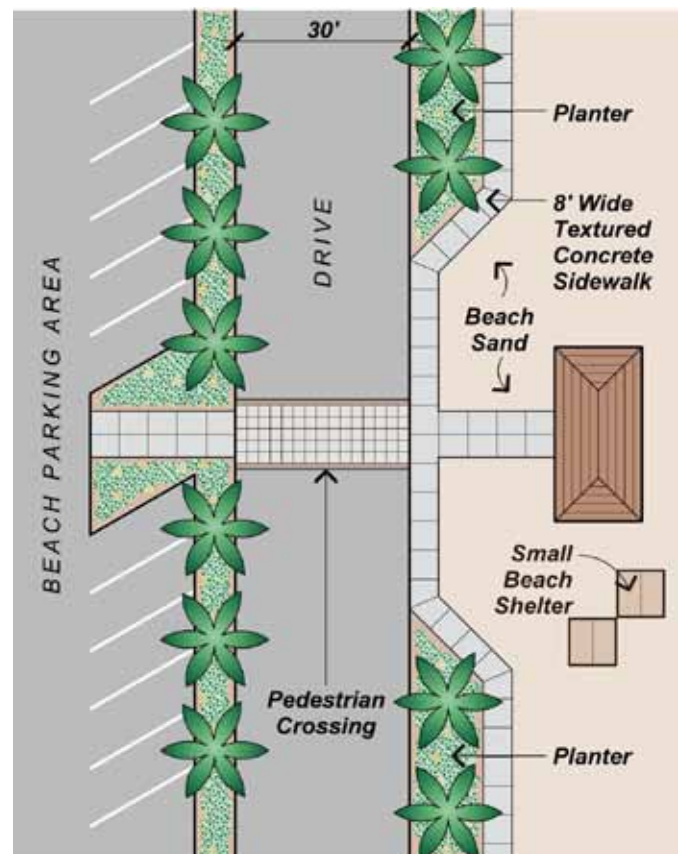


Figure 5.3-7: Typical north/south sidewalk detail at Del Mar Beach.

## 12. Utilities

Develop a survey and analysis of the existing above grade utilities. Prepare a long range plan to underground these utilities. Refer to Section 3.14-Utilities, for more information.

## 13. Playgrounds

Provide playground equipment at the south end of the Del Mar Beach (21) Area near the rental trailers.

- Playgrounds should be located within interior areas and accessible without having to cross a street.
- Provide shade or a shelter for parental supervision.
- Each facility should be designed for barrier-free access.

# SAN ONOFRE BEACH (51) AREA

## 5.4 San Onofre Beach (51) Area

The San Onofre Beach (51) Area is the most northerly recreational area for Basewide regional use. Primarily ocean related park uses and campgrounds are provided (Figure 5.4-1).

### 5.4 A. San Onofre Beach (51) Area Observations

The following is a summary of the assets and liabilities observed at the San Onofre Beach (51) Area that are the basis for specific design recommendations.

#### 1. Assets

- a. The site is in close proximity to the ocean.
- b. The Beach Club building is architecturally significant (Figure 5.4-2).
- c. The area playground is well maintained and in a good location.
- d. The newly renovated restroom facilities adjacent to the mini-exchange are well maintained.
- e. Good screening of *Myoporum* planting is provided between camp sites (Figure 5.4-3).

#### 2. Liabilities

- a. Above grade utilities add to the visual clutter.
- b. The entry road into the San Onofre Beach (51) Area (which occasionally washes out) is undefined and in need of street design upgrade (Figure 5.4-4).
- c. Trash dumpsters are not enclosed or screened.

### 5.4 B. Recommendations

#### 1. Land Use

- a. Continue recreational uses in this area.
- b. It is recommended that a separate Long Range Development Plan be prepared for this area.



Figure 5.4-2: The west side of the Beach Club.



Figure 5.4-3: Existing *Myoporum* separating the individual camp sites.



Figure 5.4-4: Entry road prior to beach use.



# ***SAN ONOFRE BEACH (51) AREA- RECREATION AREA MAP***



**NOT TO SCALE**



Figure 5.4-1

## 2. Site Planning

Camp sites are in high demand at this beach. Prepare a conceptual site plan to determine if additional camp sites can be provided or accommodated.

## 3. Architecture

- a. Establish a program of architectural uniformity in materials and color (Figure 5.4-5). Use the white with red trim roof color palette from the Beach Club as a precedent.
- b. Consolidate uses and services within permanent buildings and remove underutilized structures.
- c. Adopt the palm frond hut as a typical beach shelter.

## 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6-Landscaping, when upgrading the landscape or establishing a maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works department and may be required to align with ongoing streetscape programs.
- d. Use native, local species to perpetuate the integrity of this natural open space park. Use the Base Approved Plant List in Section 3.6 when selecting plant material.
- e. Provide palms in all parking lot areas. Palms shall be an average size of 12 to 15 feet in height and planted at a ratio of one for every five stalls.
- f. In areas of 3:1 slope or greater install erosion control.
- g. Refer to Section 3.6-Landscaping, when upgrading the landscape or establishing a maintenance plan.
- h. Develop a survey and analysis of existing irrigation conditions and establish future needs.



Figure 5.4-5: Lifeguard Station Building.



Figure 5.4-6: Asphalt circulation road within the San Onofre Beach Area.

## 5. Street Design

Provide positive drainage grading and asphalt paving for the street at the entry to the area and the parking area east and west of the railroad trestle. (Figure 5.4-6)

## 6. Parking

Remove white PVC pipe used for parking wheel stops and provide concrete curbs (Figure 5.4-7).

## 7. Pedestrian Circulation

No recommendations at this time.

## 8. Signage

Prepare a long range plan to replace all signs to conform to Section 3.10-Signage.

## 9. Lighting

- a. Provide consistent lighting levels for:
  - Pedestrian walkways used at night.
  - Parking areas.
  - Streets.
- b. Develop a survey and analysis of the existing lighting conditions as outlined in Section 3.11-Lighting.

## 10. Site Furniture

Prepare a long range development program to replace worn out and broken site furniture with furniture selected in Section 3.12-Site Furniture.

## 11. Screens/Walls/Fences

- a. Prepare a long range development program to replace all screen fences in disrepair as outlined in Section 3.13-Screens/Walls/Fences.
- b. Screen trash dumpsters.
- c. The stone steps north of the Beach Club on the east side of the roadway are attractive and serves as a precedent for future stairs.

## 12. Utilities

Develop a survey and analysis of the existing above grade utilities. Prepare a long range plan to underground these utilities. Refer to Section 3.14-Utilities, for more information.

## 13. Playgrounds

No recommendations at this time.

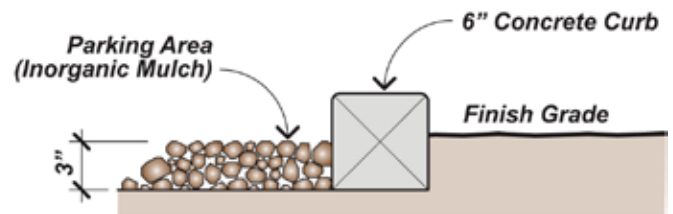


Figure 5.4-7: Typical concrete curb for use in parking lots.



Figure 5.4-8: Overview of beach and campground.

# **GOLF COURSE (18) AREA**

## **5.5 Golf Course (18) Area**

The Camp Pendleton Golf Course (18) Area is located in a small canyon east of Vandegrift Boulevard and south of the main Headquarters Area. The course consists of 18 holes that lie within a canyon with a north/south orientation (Figure 5.5-1).

### **5.5 A. Golf Course (18) Area Observations**

The following is a summary of the assets and liabilities observed at the Golf Course (18) Area that are the basis for specific design recommendations.

#### **1. Assets**

- a. The drive into the Golf Course (18) Area offers scenic views of the ample open space making up the golf course.
- b. The existing clubhouse, Building 18415, is well maintained (Figure 5.5-2).
- c. The clubhouse architecture is well designed. The inclusion of rock in the facade is an aesthetically pleasing treatment.
- d. Mature tree landscaping is a visual amenity.
- e. The course is well maintained.
- f. The clubhouse sign is well designed.
- g. Good views of the golf course are offered from the club house courtyard. (Figure 5.5-3).
- h. The clubhouse interior and pro shop have been renovated.

#### **2. Liabilities**

- a. Maintenance Building 18422 and support buildings are poorly sited with the service entry facing the clubhouse (Figure 5.5-4).
- b. Parking may not be sufficient at peak playing times.
- c. Roof equipment is exposed on the clubhouse roof.
- d. Erosion has been identified on the east side of Golf Course Road in the parking lot area and on the north side of the parking lot.



Figure 5.5-2: Main entry to clubhouse Building 18415.



Figure 5.5-3: Views to the Golf Course from the clubhouse.



Figure 5.5-4: Maintenance Building 18422 area and storage facility.

# ***GOLF COURSE (18) AREA- RECREATION AREA MAP***



Figure 5.5-1

- e. Minor grading is needed for better drainage in the southeast corner of the parking lot.

## **5.5 B. Recommendations**

### **1. Land Use**

Continue the recreational use for this area. It is recommended that a separate Master Plan/Long Range Development Plan be prepared for future development.

### **2. Site Planning**

Improve the siting and layout of the maintenance facility buildings and upgrade the temporary buildings.

### **3. Architecture**

- a. Utilize the current color scheme of the Clubhouse building for all future buildings (Figure 5.5-5).
- b. Retain the stone facades.

### **4. Landscape**

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6-Landscaping when upgrading the landscape or establishing a maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed in accordance with Section 3.6-Landscaping and 3.9D-Walkway Standards. Streetscape designs are subject to approval by the Public Works department and may be required to align with ongoing streetscape programs.
- d. Use of the Base Approved Plant List in Chapter 3 is mandatory when selecting replacement plants or new planting.
- e. In areas of 3:1 slope or greater install erosion control planting (Figures 5.5-6 and 5.5-7).
- f. Initiate a parking lot tree planting around perimeter of parking lot, one tree for every five spaces.



*Figure 5.5-5: Recommended color scheme for future buildings-Golf Course Clubhouse.*



*Figure 5.5-6 : Provide erosion control planting on slopes.*



*Figure 5.5-7: Slope at edge of parking lot in need of erosion control planting.*

- g. Plant palms at the identification sign entry located at the future Golf Course Road and Fourth Street. Palms should be planted in groups of five to seven each and an average size of 12-15 feet in height.
- h. Supplement the streetscape planting on Golf Course Road adjacent to Golf Course putting greens with Sycamores in informal groups of 3-5.
- i. Screen/buffer the parking lot edge from the golf course with shrubs planted five feet on center.
- j. Screen/buffer the maintenance facilities with shrubs planted five feet on center.

### 5. Street Design

- a. Provide asphalt paving for the service road to maintenance buildings (Figure 5.5-8).
- b. Provide gravel paving for the dirt road south of the maintenance yard.

### 6. Parking

- a. Delineate the parking area with permanent concrete curbing as outlined in Section 3.8-Parking.
- b. Re-stripe the parking lot per Section 3.8-Parking and continue to provide accessible parking.

### 7. Pedestrian Circulation

No recommendations at this time.

### 8. Signage

Provide for area identification entry signage that conforms with Section 3.10-Signage at the intersection of Golf Course Road and Fourth Street.

### 9. Lighting

Provide area wide lighting following the equipment standards for parking lot lighting. Refer to Section 3.11-Lighting.



Figure 5.5-8: Existing dirt road to maintenance buildings.

### 10. Site Furniture

Replace existing courtyard site furniture with selections outlined in Section 3.12-Site Furniture and Section 8.9, including, but not limited to:

- Benches
- Tables
- Drinking fountain
- Trash containers
- Recycle containers

### 11. Screens/Walls/Fences

Provide trash enclosures on the north side of the Clubhouse. Refer to Section 3.13-Screens/Walls/Fences, for more information.

### 12. Utilities

Develop a survey and analysis of the existing above grade utilities. Prepare a long range plan to underground these utilities. Refer to Section 3.14-Utilities, for more information.

# STABLES (15) AREA

## 5.6 Stables (15) Area

The Base stables are located on the east side of Vandegrift Boulevard in the easternmost portion of the Base (Figure 5.6-1). The stables are nearest to the San Luis Rey gate and provide equestrian facilities for military personnel.

### 5.6 A. Stables (15) Area Observations

The following is a summary of the assets and liabilities observed at the Stables (15) Area that are the basis for specific design recommendations.

#### 1. Assets

- a. The Area provides a long maintained equestrian center for a full range of riding needs.
- b. Building 1515 has a good stable character and should be retained (Figure 5.6- 2).
- c. The general site layout is integrated well with the natural topography of the area.
- d. The stables are in close proximity to a large expanse of open space for riding purposes.
- e. Mature Evergreen Elms along the entry road are a visual amenity (Figure 5.6-3).

#### 2. Liabilities

- a. The entry road appears to be too narrow for two-way traffic. This is even more noticeable when trucks pulling trailers use the road.
- b. Pipe fencing adds to the visual clutter (Figure 5.6-4).
- c. Horse shelters and overhead structures are constructed of multiple materials and styles which contributes to their temporary appearance.
- d. Above ground utilities add to the visual clutter.
- e. A variety of architectural styles are present creating a haphazard appearance (Figure 5.6-5).
- f. The parking area appears to be inadequate when stables are in full use.
- g. Signage in general is varied and has no uniformity.
- h. The stables are too close to the access road and pose a safety risk to pedestrians and horses.



Figure 5.6-2: Building 1515 is an example of appropriate stable character.



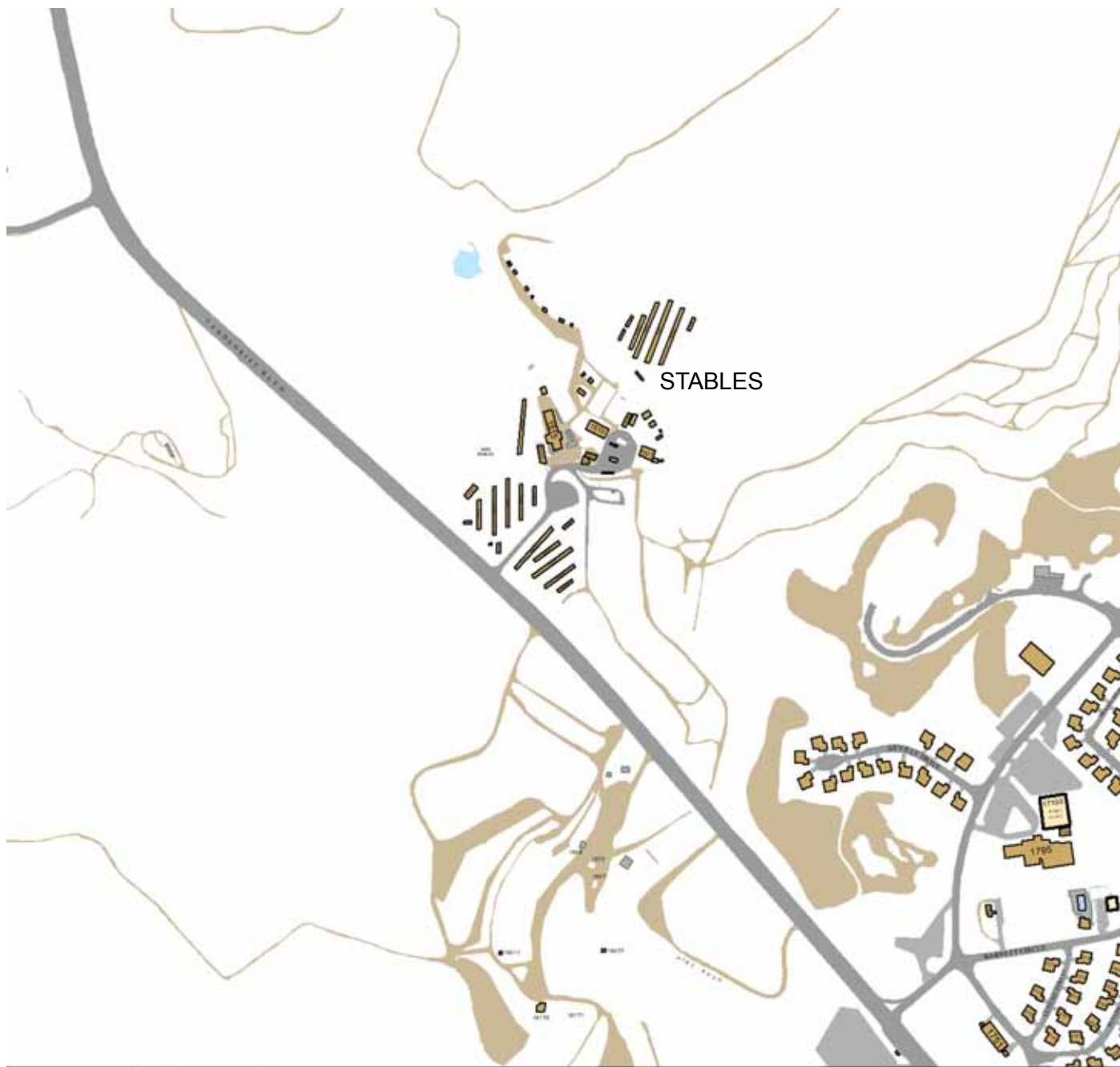
Figure 5.6-3: Main entry to the stables lined with mature trees.



Figure 5.6-4: Pipe fencing used for corrals is not appropriate aesthetically.



# STABLES (15) AREA- RECREATION AREA MAP



NOT TO SCALE



Figure 5.6-1

- i. Horse stalls are too close to vehicle parking area.
- j. Manure storage area is located in close proximity to horse stables.
- k. Lighting is inadequate and nighttime visibility very poor.
- l. Training equipment is poorly maintained and poses a health and safety risk for riders and their horses.
- m. There is no landscape buffer between stables and Vandegrift Boulevard.



*Figure 5.6-5 Variety of architectural styles found throughout the stable area.*

## **5.6 B. Recommendations**

### **1. Land Use**

Continue current uses for this area. It is recommended that a separate Long Range Development Plan be prepared.

### **2. Site Planning**

- a. Prepare a site master plan to review the area layout and to determine specific locations for future expansion. For future work, review the entire area to better organize the existing development.

### **3. Architecture**

- a. Consolidate uses within the permanent buildings and remove underutilized, temporary structures.
- b. Establish a program for the rehabilitation of existing structures to be retained using the guidelines in Section 3.5-Architecture (Figure 5.6-6).
- c. Establish minimum acceptable quality workmanship for all repair and construction. Shelters should conform to current codes and provide protection from the elements.

### **4. Landscape**

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6-Landscaping when upgrading the landscape or establishing a maintenance plan.
- c. When preparing landscape plans for new development, all adjacent streets shall be addressed



*Figure 5.6-6: Existing buildings at stables in need of rehabilitation.*

- d. Use of the Base Approved Plant List in Chapter 3 is mandatory when selecting replacement plants or new planting for Stables (15) Area.
- e. In areas of 3:1 slope or greater and at the entry and along corral edges install erosion control planting (Figure 5.6- 7).
- f. Develop a survey and analysis of existing irrigation conditions and establish future needs. See Section 3.6- Landscaping.
- g. Provide landscape buffer planting.

### **5. Street Design**

Consider a one-way entry road. Provide a secondary exit to Vandegrift Boulevard to improve circulation for vehicles with large trailers.

## 6. Parking

- a. Develop a survey and analysis of the existing parking conditions and capacity as outlined in Section 3.8-Parking.
- b. Separate leased horse stalls from the communal spaces for the stable herd.
- c. Relocate parking area away from horse stalls. Provide dedicated area for servicing the stalls.

## 7. Pedestrian Circulation

No recommendations at this time.

## 8. Signage

Conform to the MCCS facility signage per Section 3.10-Signage (Figure 5.6- 8).

## 9. Lighting

- a. Provide area wide lighting utilizing the lighting standards per Section 3.11-Lighting.
- b. Provide consistent lighting throughout stable areas, including exercise rings.

## 10. Site Furniture

- a. Replace and provide the following site furniture per Section 3.12-Site Furniture:
  - Picnic tables/benches
  - Trash containers
  - Drinking fountains
- b. Ensure all training equipment, fences, stanchions, and gates are in proper working order and well maintained.

## 11. Screens/Walls/Fences

- a. Standardize corral fencing with fencing selections as shown in Detail 8.10 A-12 (Figure 5.6- 9).
- b. Standardize gate closures. Recommend sliding bar locks in lieu of current chains and clasps.

## 12. Utilities

Develop a survey and analysis of the existing above grade utilities. Prepare a long range plan to underground these utilities. Refer to Section 3.14-Utilities, for more information.



Figure 5.6-7: Existing slope planting.



Figure 5.6-8: Memorial plaque.



Figure 5.6-9: Current fence conditions at feed shelter. Replace chainlink with Base approved standard fence for this area.



# Chapter 6

## PUBLIC GATE DESIGN GUIDELINES

### 6.1 Overview

There are seven entry control facilities (ECFs), or public gates, to the Base (Figure 6.1-1). The primary gates (Oceanside and San Luis Rey) are the most public, experience significant commercial traffic flow, and are important in establishing the Base’s first impression. The secondary gates perform a more perfunctory role, and are principally used by military personnel.

Although the primary purpose of a gate is to act as a security checkpoint to secure the installation from unauthorized access and intercept contraband while maximizing vehicular traffic flow, it also functions as a gateway or portal to the Base. ECF priorities include security, safety (for motorists and guards), traffic flow, and aesthetics. The focus of this section

is aesthetics, but current ECF criteria and guidance, including Unified Facilities Criteria (UFC), Security Engineering: Entry Control Facilities/Access Control Points, as well as AT/FP Guidelines, should be reviewed during the design process for all gates.

The Public Gate Design Guidelines, in conjunction with Section 3.10-Signage, outlined in Chapter 3, will provide the necessary design recommendations for implementing improvements. A description of the Public Gates analysis is provided, outlining each site’s assets and liabilities. These analyses highlight the major issues at each gate and are intended to provide the necessary information to establish the design direction and general development standards for each gate.



Figure 6.1-1: Camp Pendleton gate locations.

# OCEANSIDE MAIN GATE

## 6.2 Oceanside Main Gate

This is the Base's busiest public entry and is visible from Interstate 5. It is the first opportunity to present the image of Camp Pendleton as a primary military installation. To establish this image, the Mainside gate is to receive the most significant improvements of all the gates. These improvements include the vehicle approach and exit, sentry shelter, entry landmark gates, Base identification signage, gate house, landscaping, and visitor parking.

In 2009-2010 the Oceanside Main Gate was redesigned following the above criteria and BEAP recommendations, and included new guardhouse facilities, overhead canopy, vehicular improvements, and landscaping.

### 6.2 A. Oceanside Main Gate Observations

The following is a summary of the Oceanside Gate observations that influenced the specific design recommendations.

#### 1. Assets

- a. The Oceanside Gate is a primary opportunity to present a positive impression of the Base (Figure 6.2-1).
- b. Excellent queuing for cars exists at base entry and inspection (Figure 6.2-2).
- c. Significant area exists for entry circulation (Figure 6.2-2).
- d. The gate is in close proximity to Interstate 5.

#### 2. Liabilities

Liabilities were addressed in the redesign.



Figure 6.2-1: Oceanside Main Gate.



Figure 6.2-2: Vehicle lanes at Oceanside Main Gate.

## 6.2 B. Recommendations

Base gates should be highly recognizable as entry points into Camp Pendleton. This is achieved through architectural elements and also with the use of consistent landscaping and site features.

The following is a summary of recommendations for the Oceanside Gate.

### 1. Land Use

Continue the present land use.

### 2. Site Planning

No recommendations at this time.

### 3. Architecture

Limit materials to those outlined in Section 3.5-Architecture.

### 4. Landscape

- For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- Refer to Section 3.6 when upgrading the Oceanside Main Gate area landscape or establishing a maintenance plan.
- Use of Base Approved Plant List in Section 3.6-Landscaping is mandatory when selecting new plant material.
- Keep landscaping to a minimum, with low maintenance requirements.
- Include line-of-sight considerations in landscape design, including consideration of overwatch positions that require an adequate and acceptable line-of-fire.

### 5. Street Design

No recommendations at this time.

### 6. Parking

No recommendations at this time.

### 7. Pedestrian Circulation

No recommendations at this time (Figure 6.2-3).

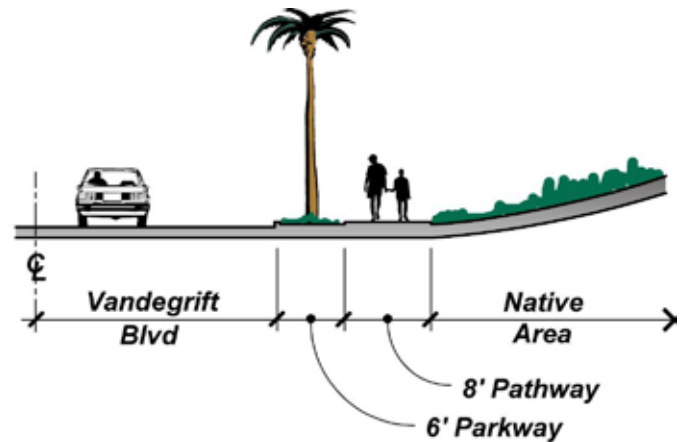


Figure 6.2-3: Pedestrian access at Vandegrift Boulevard.

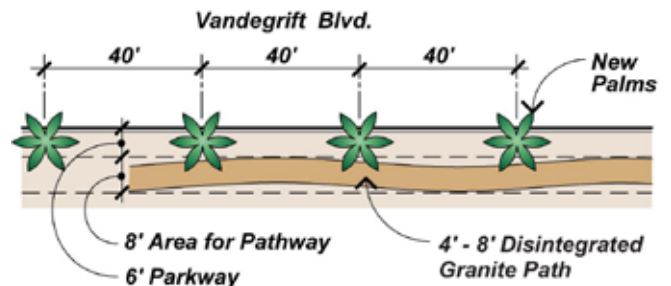


Figure 6.2-4: Spacing of trees on Vandegrift Boulevard.

### 8. Signage

No recommendations at this time.

### 9. Lighting

No recommendations at this time (Figure 6.2-4).

### 10. Site Furniture

No recommendations at this time.

### 11. Screens, Walls, and Fences

No recommendations at this time.

### 12. Utilities

Prepare a long range plan to underground the utilities.

# SAN LUIS REY GATE

## 6.3 San Luis Rey Gate

The San Luis Rey Gate is the second most public entry to the Base and is accessible via Highway 76. This entry receives a high volume of light vehicle traffic, serving an extensive population of active duty military personnel living off base.

### 6.3 A. San Luis Rey Gate Observations

The following is a summary of the San Luis Rey Gate observations that influenced the specific design recommendations.

#### 1. Assets

- a. The mature palms and eucalyptus trees provide a handsome backdrop to the entry (Figure 6.3-1).
- b. The existence of only two inbound lanes allows for easy security checks (Figure 6.3-2).
- c. The gate is in close proximity to the residential area of the City of Oceanside. Good access is provided to close off-base housing.
- d. The overhang on the guardhouse provides excellent protection from afternoon sun.
- e. Significant area exists for improving entry circulation.
- f. Visibility is good and not blocked by signs or landscape.

#### 2. Liabilities

- a. Some above grade utilities beyond the gate create visual clutter.
- b. There is no pedestrian linkage to the Base Headquarters area or to the City of Oceanside.
- c. There is slope erosion on the west bank of the ECF.
- d. The signage letter "A" is missing from the word "CAMP."
- e. There is a significant way-finding issue at this gate. People occasionally get lost and accidentally enter this area. There is no signage outside the gate warning drivers they are entering a military base.



Figure 6.3 -1: San Luis Rey Gate.



Figure 6.3-2: Sentry stations at San Luis Rey Gate.

- f. There is no rejection area. This is a requirement for ECFs.

### 6.3 B. Recommendations

Base gates should be highly recognizable as entry points into Camp Pendleton. This is achieved through architectural elements and also with the use of consistent landscaping and site features. The following is a summary of recommendations for improvements to the San Luis Rey Gate.

#### 1. Land Use

Continue the present land use.

#### 2. Site Planning

Provide a rejection area per ECF requirements.



### 3. Architecture

Limit materials to those outlined in Section 3.5-Architecture.

### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6 when upgrading the landscape or establishing a maintenance plan.
- c. Use of Base Approved Plant List in Section 3.6-Landscaping is mandatory when selecting new plant material.
- d. Keep landscaping to a minimum, with low maintenance requirements.
- e. Include line-of-sight considerations in landscape design, including consideration of overwatch positions that require an adequate and acceptable line-of-fire (Figure 6.3-3).
- f. Provide groundcover on the west slope bank of the ECF to prevent erosion that consists of:
  - Native groundcover

### 5. Street Design

No recommendations at this time.

### 6. Parking

- a. Provide a minimum of 10 guest parking stalls, including one accessible space.
- b. Design parking stalls per Section 3.8-Parking.
- c. Provide trees at the perimeter at one per every five stalls (Figure 6.3-4).

### 7. Pedestrian Circulation

Provide a pedestrian path along Vandegrift Boulevard per Section 3.9-Pedestrian Circulation.

### 8. Signage

Provide the signage letter "A" in the same style and finish to the word "CAMP" at the Base identification sign.



Figure 6.3-3: Clear view of vehicle travel lanes with queuing.

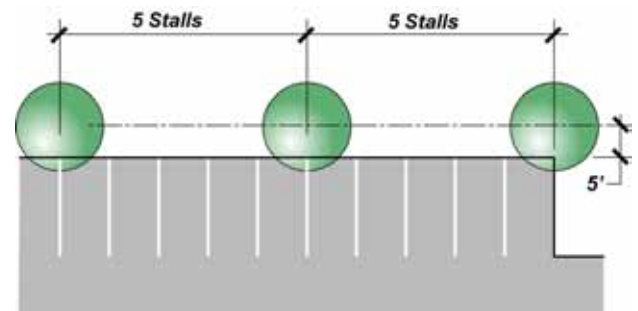


Figure 6.3-4: Typical tree layout at parking lot perimeter.

### 9. Lighting

Use up-lighting to highlight existing Cypress trees at night.

### 10. Site Furniture

No recommendations at this time.

### 11. Screens, Walls and Fences

No recommendations at this time.

### 12. Utilities

- a. Develop a survey and analysis of the remaining above ground utilities on the east side of Vandegrift Boulevard and prepare a long-range plan to underground the utilities.

# SAN ONOFRE GATE

## 6.4 San Onofre Gate

The San Onofre Gate is located along Interstate 5, near the northern boundary of Camp Pendleton. This gate has a high volume of civilian (family) vehicle activity accessing housing, commissary and recreation facilities, as well as military personnel traveling Basilone Road to Base cantonments (Figure 6.4-1).

### 6.4 A. San Onofre Gate Observations

The following is a summary of the San Onofre Gate observations that influenced the specific design recommendations.

#### 1. Assets

- a. Mature palms on the south side of Basilone Road are aesthetically pleasing.
- b. Significant area exists for improving entry circulation.
- c. The gate is in close proximity to Interstate 5.
- d. Mature landscaping of palms exists (Figure 6.4-2).
- e. Excellent queuing for cars exists at base entry and inspection.
- f. There is minimal use of turf and inorganic mulch has been incorporated into the entry design.

#### 2. Liabilities

- a. Some warning signs block the view from the guardhouse window to the approach zone (Figure 6.4-3).
- b. The area behind the guardhouse should be kept free of cleaning accessories, loose furniture, and trash.
- c. The signage letter "D" is missing from the word "PENDLETON".

### 6.4 B. Recommendations

Base gates should be highly recognizable as entry points into Camp Pendleton. This is achieved through architectural elements and also with the use of consistent landscaping and site features. The following is a summary of recommendations for improvements to the San Onofre Gate.



Figure 6.4-1: San Onofre Gate.



Figure 6.4-2: Mature palms at gate.

**1. Land Use**

Continue the present land use.

**2. Site Planning**

Provide better pedestrian circulation on Basilone Road.

**3. Architecture**

Limit materials to those outlined in Section 3.5-Architecture.

**4. Landscape**

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6 when upgrading the Oceanside Main Gate area landscape or establishing a maintenance plan.
- c. Use of Base Approved Plant List in Section 3.6-Landscaping is mandatory when selecting new plant material.
- d. Keep landscaping to a minimum, with low maintenance requirements.
- e. Include line-of-sight considerations in landscape design, including consideration of overwatch positions that require an adequate and acceptable line-of-fire.
- f. Provide groundcover that consists of:
  - Native groundcover.
  - Inorganic mulch per Detail 8.3 A-7.

**5. Street Design**

Provide concrete curbs and sidewalks on both sides of Basilone Road.

**6. Parking**

- a. Provide a minimum of 10 guest parking spaces, including one accessible space.
- b. Design parking stalls per Section 3.8-Parking.

**7. Pedestrian Circulation**

Provide concrete sidewalks on both sides of Basilone Road per Section 3.9-Pedestrian Circulation.

**8. Signage**

Provide the signage letter “D” in the same style and finish to the word “PENDLETON” at the Base identification sign.

**9. Lighting**

- a. Provide street lighting on Basilone Road per Section 3.11-Lighting.
- b. Use up-lighting to highlight existing palms at night.
  - Attach lights to the base of the trunks a minimum of 18 inches from finish grade.

**10. Site Furniture**

No recommendations at this time.

**11. Screens, Walls and Fences**

No recommendations at this time.

**12. Utilities**

- a. Enclose concrete drainage swale south of Basilone Road.
- b. Develop a survey and analysis of the remaining above ground utilities on the south side of Basilone Road. Prepare a long-range plan to underground all utilities.



Figure 6.4-3: Signs block view from the guardhouse window.

# LAS PULGAS GATE

## 6.5 Las Pulgas Gate

This gate is perhaps the Base's most isolated entry, located off Interstate 5, between the Mainside Gate and San Onofre Gate. It serves, almost exclusively, military personnel accessing the central/western Base vicinity (Figure 6.5-1).

### 6.5 A. Las Pulgas Gate Observations

The following is a summary of the Las Pulgas Gate observations that influenced the specific design recommendations.

#### 1. Assets

- a. When approaching the gate from the west, the views to the distant mountains are attractive.
- b. The entry is well located to serve and secure the central portion of the Base.
- c. Native landscape, requiring little to no maintenance, is growing right up to the security fencing on the south side of Las Pulgas Road.
- d. The location of the gate identification sign does not block the view of incoming traffic.

#### 2. Liabilities

- a. No curbs or sidewalks are provided along Las Pulgas Road.
- b. Sentry personnel are located in a hazardous area when stationed in middle of the road (Figure 6.5-2).
- c. Some signage obscures visibility from the guardhouse.
- d. Security fencing is visually dominant at the street.

### 6.5 B. Recommendations

Base gates should be highly recognizable as entry points into Camp Pendleton. This is achieved through architectural elements and also with the use of consistent landscaping and site features. The following is a summary of recommendations for improvements to the Las Pulgas Gate.



Figure 6.5-1: Las Pulgas Gate.



Figure 6.5-2: Sentry located in the middle of the road.

#### 1. Land Use

Continue the present land use.

#### 2. Site Planning

- a. Redesign vehicular circulation at the entry to allow for a safer sentry station.
- b. Provide improved pedestrian circulation on Basillone Road.

#### 3. Architecture

- a. Provide a sentry station in the middle of Las Pulgas Road per Section 3.5-Architecture.
- b. Limit materials to those outlined in Section 3.5-Architecture.

#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6 when upgrading the Oceanside Main Gate area landscape or establishing a maintenance plan.
- c. Use of Base Approved Plant List in Section 3.6-Landscaping is mandatory when selecting new plant material.
- d. Keep landscaping to a minimum, with low maintenance requirements.
- e. Include line-of-sight considerations in landscape design, including consideration of overwatch positions that require an adequate and acceptable line-of-fire.
- f. Provide groundcover that consists of:
  - Native groundcover.
  - Inorganic mulch per Detail 8.3 A-7.

#### 5. Street Design

- a. Provide street improvements per Section 3.7-Street Design.
- b. Improve the intersection of Las Pulgas Road and El Camino Real near the existing guardhouse to a “T” intersection (Figure 6.5-4).
- c. Improve the intersection design at Las Pulgas Road and El Camino Real near the Las Flores Ranch House to a “T” intersection (Figure 6.5-5).

#### 6. Parking

No recommendations at this time.

#### 7. Pedestrian Circulation

Provide pedestrian paths on both sides of Las Pulgas Road per Section 3.9-Pedestrian Circulation.

#### 8. Signage

No recommendations at this time.

#### 9. Lighting

Provide street lighting on Las Pulgas Road per Section 3.11-Lighting.

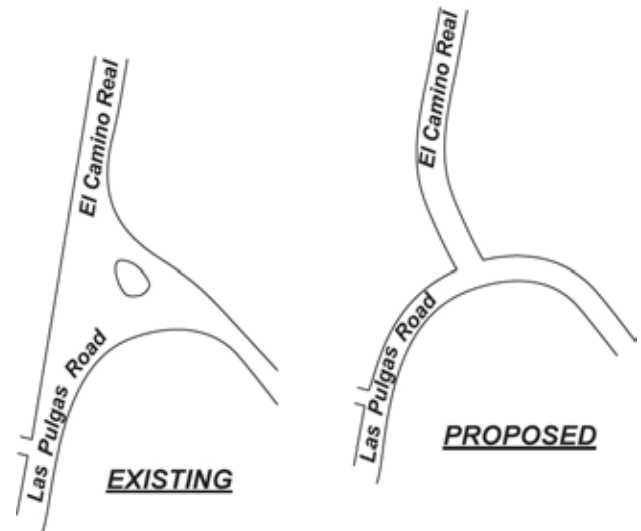


Figure 6.5-4: Proposed redesign of Las Pulgas Road and El Camino Real intersection near the guard house.

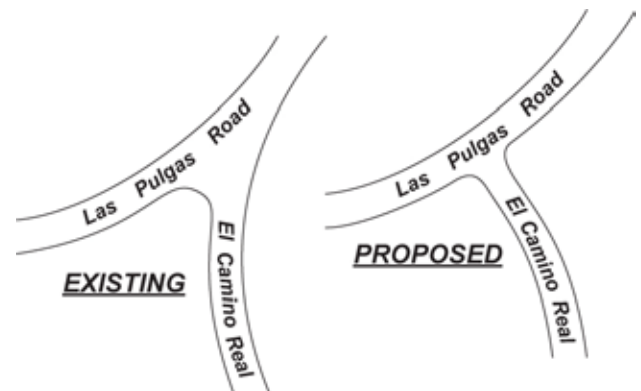


Figure 6.5-5: Proposed redesign of Las Pulgas Road and El Camino Real intersection near the Las Flores Ranch House.

#### 10. Site Furniture

Provide bollards at sentry station for further protection from vehicles.

#### 11. Screening, Walls and Fencing

Replace security fencing on the north side of Las Pulgas Road. Set back fencing a minimum of eight feet from the edge of the road.

#### 12. Utilities

Develop a survey and analysis of the remaining above ground utilities on the north side of Las Pulgas Road and prepare a long range plan to underground the utilities.

# CRISTIANITOS GATE

## 6.6 Cristianitos Gate

The Cristianitos Gate is the most northern entry to the Base. This gate serves a relatively limited military user population and is accessed by Cristianitos Road from Interstate 5. The cantonments closest to the Cristianitos Gate are Talega, Cristianitos, and San Onofre.

### 6.6 A. Cristianitos Gate Observations

The following below is a summary of the Cristianitos Gate observations that influenced the specific design recommendations.

#### 1. Assets

- a. When approaching the gate from the west, the views to the east are dramatic (Figure 6.6-1).
- b. This is an appropriate entry location to secure the northern portion of the Base.
- c. Native landscape, requiring little to no maintenance, is growing right up to the curb.
- d. Visibility is good and not blocked by signs or landscape.
- e. The gate has excellent all-weather protection due to large metal canopy (Figure 6.6-2).

#### 2. Liabilities

- a. No sidewalks are provided along Cristianitos Road.
- b. During rainy weather, the bridge at Cristianitos Creek is susceptible to being washed out, requiring a detour to access the Base.
- c. Overhead utility lines provide additional visual clutter.

### 6.6 B. Recommendations

Base gates should be highly recognizable as entry points into Camp Pendleton. This is achieved through architectural elements and also with the use of consistent landscaping and site features. The following is a summary of recommendations for improvements to the Cristianitos Gate.



Figure 6.6-1: Cristianitos Gate.



Figure 6.6-2: Canopy over entrance.

#### 1. Land Use

Continue the present land use.

#### 2. Site Planning

When installing improvements, minimize the disruption to the native terrain and vegetation.

#### 3. Architecture

Limit materials to those outlined in Section 3.5-Architecture.

#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6 when upgrading the Oceanside Main Gate area landscape or establishing a maintenance plan.

- c. Use of Base Approved Plant List in Section 3.6-Landscaping is mandatory when selecting new plant material.
- d. Keep landscaping to a minimum, with low maintenance requirements.
- e. Include line-of-sight considerations in landscape design. Consideration of overwatch positions that require an adequate and acceptable line-of-fire.
- f. Provide irrigation to all planting areas. Design irrigation system to be turned off once plants have become established.
- g. Provide groundcover that consists of:
  - Native groundcover.
  - Inorganic mulch per Detail 8.3 A-7.

**5. Street Design**

Redesign the intersection alignment at Cristianitos Road and San Mateo Road (Figure 6.6-3).

**6. Parking**

- a. Design parking stalls and aisles per Section 3.8-Parking (Figure 6.6-4).
- b. Provide accessible parking per Section 3.8.

**7. Pedestrian Circulation**

Provide pedestrian paths on both sides of Cristianitos Road from the gate to the cantonments per Section 3.9-Pedestrian Circulation.

**8. Signage**

- a. Provide a Base identification entry sign, per Section 3.10, on the south side of Cristianitos Road.
- b. Provide a primary directional sign, per Section 3.10-Signage, on the south side of Cristianitos Road, approximately 300 feet east of the guard house.

**9. Lighting**

- a. Provide street lighting on Cristianitos Road per Section 3.11-Lighting.
- b. Provide ground installed up-lighting to highlight the Base identification entry sign.
  - Design lights into the entry sign pedestal.

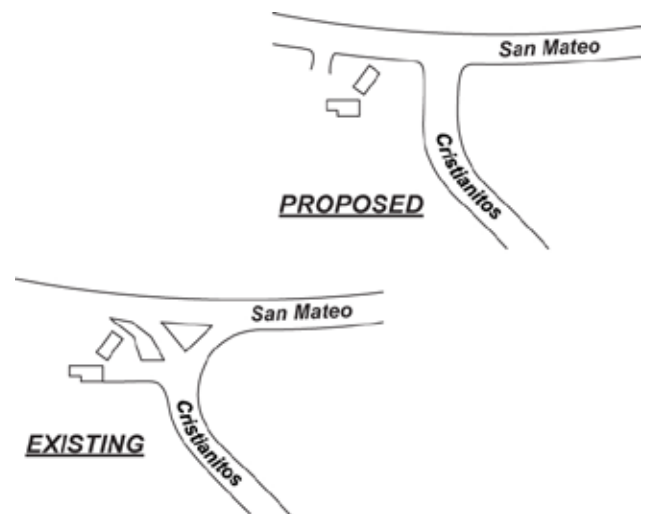


Figure 6.6-3: Proposed redesign of intersection at Cristianitos Road and San Mateo Road.



Figure 6.6-4: Vehicle holding area.

- Do not install lights into the surrounding landscape.
- c. Use up-lighting to highlight trees at night.

**10. Site Furniture**

No recommendations at this time.

**11. Screens, Walls and Fences**

No recommendations at this time.

**12. Utilities**

Develop a survey and analysis of the remaining above ground utilities along Cristianitos Road and prepare a long-range plan to underground the utilities.

# DEL MAR GATE

## 6.7 Del Mar Gate

The Del Mar Gate is located at the south end of the Del Mar Family Housing Area (Figure 6.7-1).

### 6.7 A. Del Mar Gate Observations

The following is a summary of the Del Mar Gate observations that influenced the specific design recommendations.

#### 1. Assets

- a. This gate is an excellent location for residents exiting the Base to access the City of Oceanside or Interstate 5.
- b. The background to the gate entry is base residential housing, and residential open space/recreation area.
- c. A significant area exists for future improvements.

#### 2. Liabilities

- a. When entering the Base, the gate identification sign is located past the security fence (Figure 6.7-2).
- b. Above grade utilities add to the visual clutter.
- c. There is a lack of landscaping at the perimeter.

### 6.7 B. Recommendations

Base gates should be highly recognizable as entry points into Camp Pendleton. This is achieved through architectural elements and also with the use of consistent landscaping and site features. The following is a summary of recommendations for improvements to the Del Mar Gate.

#### 1. Land Use

Continue the present land use.

#### 2. Site Planning

No recommendations at this time.

#### 3. Architecture

Limit materials to those outlined in Section 3.5-Architecture.



Figure 6.7-1: Del Mar Gate and guardhouse.



Figure 6.7-2: Sentry booth and guardhouse.



#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6 when upgrading the Oceanside Main Gate area landscape or establishing a maintenance plan.
- c. Use of Base Approved Plant List in Section 3.6-Landscaping is mandatory when selecting new plant material.
- d. Keep landscaping to a minimum, with low maintenance requirements.
- e. Include line-of-sight considerations in landscape design, including consideration of overwatch positions that require an adequate and acceptable line-of-fire.
- f. Provide irrigation to all planting areas. Design irrigation system to be turned off once plants have become established.
- g. Provide groundcover that consists of:
  - Native groundcover.
  - Inorganic mulch per detail 8.3 A-7.
- h. Provide plant material to screen/buffer security fencing on both sides of Santa Fe Avenue from Harbor Drive to the sentry station.

#### 5. Street Design

No recommendations at this time.

#### 6. Parking

No recommendations at this time.

#### 7. Pedestrian Circulation

Provide sidewalk connections on both sides of Santa Fe Avenue to Harbor Drive per Section 3.9 Pedestrian Circulation.

#### 8. Signage

No recommendations at this time.

#### 9. Lighting

No recommendations at this time.

#### 10. Site Furniture

No recommendations at this time.

#### 11. Screens, Walls and Fences

Set back security fencing a minimum of 15 feet from Santa Fe Avenue.

#### 12. Utilities

Develop a survey and analysis of the remaining above ground utilities on the west side of Santa Fe Avenue and prepare a long-range plan to underground the utilities (Figure 6.7-3).



Figure 6.7-3: Overhead utility lines add to visual clutter.

# FALLBROOK GATE

## 6.8 Fallbrook Gate

This gate is rather typical of the lesser-used rear entries to the Base, experiencing mostly personnel dominated traffic surges, as opposed to a consistent flow of military and commercial use. The gate also has a combined use as a Pass and ID office in a separate building. The ECF is now located at 700 Ammunition Road, Building 314, east of the former location (Figure 6.8-1).

An April 2009 Report, Traffic Engineering at Various Locations (Gannett Fleming) noted technical deficiencies at this gate related to UFC Security Engineering: Entry Control Facilities/Access Control Points.

### 6.8 A. Fallbrook Gate Observations

The following is a summary of the Fallbrook Gate observations that influenced the specific design recommendations.

#### 1. Assets

- a. The sentry building is in good condition (Figure 6.8-2).
- b. One lane in each direction allows for easy security checks.

#### 2. Liabilities

- a. There is too much water intensive turf.
- b. The gate does not conform to the identity of other Base ECF's in the treatment of architectural elements, including coloration and roof materials.
- c. Technical deficiencies have been noted in regards to the Approach Zone, Access Control zone, and Response/Safety zone in the Gannett Fleming, April 2009 Report.



Figure 6.8-1: Abandoned former Fallbrook Gate.



Figure 6.8-2: Fallbrook Gate.



Figure 6.8-3: Vehicle access way.

## 6.8 B. Recommendations

Base gates should be highly recognizable as entry points into Camp Pendleton. This is achieved through architectural elements and also with the use of consistent landscaping and site features. Listed below is a summary of recommendations for improvements to the Fallbrook Gate.

### 1. Land Use

Continue the present land use.

### 2. Site Planning

No recommendations at this time.

### 3. Architecture

Limit materials to those outlined in Section 3.5 - Architecture.

### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6-Landscaping.
- b. Refer to Section 3.6 when upgrading the Oceanside Main Gate area landscape or establishing a maintenance plan.
- c. Use of Base Approved Plant List in Section 3.6-Landscaping is mandatory when selecting new plant material.
- d. Landscaping is to be kept to a minimum, with low maintenance requirements.
- e. Include line-of-sight considerations in landscape design, including consideration of overwatch positions that require an adequate and acceptable line-of-fire.
- f. Provide irrigation to all planting areas. Design irrigation system to be turned off once plants have become established.
- g. Eliminate turf and provide groundcover that consists of:
  - Native groundcover.
  - Inorganic mulch per Detail 8.3 A-7.

### 5. Street Design

Provide adequate turnaround for large vehicles (Figure 6.8-3).

### 6. Parking

- a. Separate the guest parking from Ammunition Road by a minimum of 10 feet.
- b. Provide one accessible parking stall per Section 3.8-Parking.

### 7. Pedestrian Circulation

Provide pathway connections on both sides of Ammunition Road from the gate to the adjacent structures per Section 3.9-Pedestrian Circulation.

### 8. Signage

No recommendations at this time.

### 9. Lighting

- a. Provide parking lot lighting per Section 3.11-Lighting for the parking area.
- b. For inspection purposes, integrate security lighting into the design of the sentry station.
- c. Provide street lighting on Ammunition Road per Section 3.11-Lighting.
- d. Provide ground installed up-lighting to highlight the Base identification entry sign.
  - Design lights into the entry sign pedestal.
  - Do not install lights into the surrounding landscape.

### 10. Site Furniture

No recommendations at this time.

### 11. Screens, Walls and Fences

No recommendations at this time.

### 12. Utilities

Develop a survey and analysis of the remaining above ground utilities on Ammunition Road and prepare a long-range plan to underground the utilities.



# Chapter 7

## GUIDELINES FOR NATIVE PLANT USE

### 7.1 Overview

Camp Pendleton's semiarid Mediterranean climate, varied topography (coastal plains, valleys, and rolling mountain foothills), and diverse soil types, are reflected in the type and distribution of plant communities and wildlife species present. Among the plant communities that characterize Camp Pendleton are oak woodlands, a range of chaparral and sage scrub communities (including the largest remaining shard of contiguous Diegan coastal sage scrub), coastal bluff scrub, native and non-native grasslands, coastal dunes, riparian communities, and wetlands.

For additional information regarding vegetation communities at Camp Pendleton, refer to the Integrated Natural Resources Management Plan (INRMP), Chapter 3, Natural Resources.

#### 7.1 A. Observations

The following observations were noted of the plant selections Basewide.

1. Much of the undeveloped portions of the base are native, local scrub, which is appropriate for the climate and growing conditions.
2. Ornamental plants in cantonments are not always used effectively and efficiently.
3. Artificial turf is sometimes used excessively or where it is not suitable.

#### 7.1 B. Objectives

1. Use plant species appropriate to the Camp Pendleton region and local climate.
2. Use native plant seeds/propagules from Camp Pendleton or within two counties
3. Limit ornamental planting to within cantonment areas.



Figure 7.1-1: This view toward the air station and Chappo (22) Area includes primarily open space with native California scrub.



Figures 7.1-2 and 3: Newer areas are utilizing more drought-tolerant, ornamental planting in urbanized settings.

4. Eliminate all invasive plant material within Camp Pendleton.
5. Use region-specific native plant material in open space and areas adjacent to cantonments.
6. Use plant materials that reduce maintenance and water costs within cantonments.
7. Reduce the amount of turf and use substitute plantings to reduce maintenance and water costs within cantonments.
8. Remove Eucalyptus trees whenever they are on a project site



*Figure 7.1-4: Native planting found throughout Camp Pendleton.*

### **7.1 C. Guidelines for Native Plant Use**

The following guidelines address native landscaping, its development, use, and care. The Base Approved Plant List, Section 3.6-Landscaping, delineates native plants allowed for use on the Base. Criteria for plant list selection include: adaptability, hardiness, availability, ease in establishing, values for wildlife, meeting conservation objectives, and level of use.

#### **1. Logistics of Native Plantings**

Vegetative goals are best achieved through management rather than revegetation. Although a good revegetation plan requires considerable thought and planning, it need not be complicated.

- a. Keep use of non-native species to a minimum and only specify when native species will not be in the best interest of the landscape improvements due to the need to blend with an existing adjoining landscape, maintenance constraints, environmental site conditions (soil, exposure, micro-climate, etc.) and/or desired aesthetics.
- b. Any non-native plants shall be selected so as not to pose a threat of excessive proliferation or threat to native species.
- c. If appropriate plant materials are not available, consider planting in phases until plants can be obtained.



*Figure 7.1-5: Drought-tolerant plants have been used effectively as streetscapes in cantonment areas.*



*Figure 7.1-6: Drought-tolerant plants have been used effectively in parking lots and at BEQs in cantonment areas.*

## 2. Site Evaluation

Natives are appropriate for a variety of conservation practices, from field borders and hedgerows to revegetating stream banks and wetlands. As in all plantings, a thorough site evaluation is necessary prior to developing a plan.

- a. Take inventory of existing plants, in addition to determining soil type and soil limitations, available precipitation, temperature (maximum, minimum, average), aspect and hydrology. Nearby plant communities, remnant native trees, and fragments of native vegetation offer design ideas and indications of a site's potential.
- b. Determine primary use of the seeding, native planting, or revegetation.
- c. Assess presence and extent of any noxious weed populations, including the presence and amount of weed seed in the topsoil after seed-bed preparation.
- d. Any existing native vegetation to be conserved should be delineated.
- e. All site evaluation information should be considered along with project goals and objectives to develop the plan.
- f. Consider topography and its relation to microclimate, such as coastal fog. Consider the degree and direction of slopes and how they will affect soil drainage, temperature, and solar condition of north and south-facing slopes.

## 3. Plant Selection and Procurement

Match values of plant species with conservation goals. The plant list in Chapter 3 is a source for native plant selection. Nursery sources can be obtained on the Internet. The California Department of Conservation publishes a list of Nursery Sources for California Native Plants that is updated periodically. Plant Materials Centers, UC Extension, and County Agricultural Officers may also provide references for sources for plants.

- a. When buying seed or plants from a nursery that are already grown out, it is best to inquire about the origin of the parent stock or population where collected. At a minimum, try to match the elevation, latitude and climate of nursery stock with the project site.



Figure 7.1-7: *Coreopsis maritima*.



Figure 7.1-8: *Opuntia littoralis*.



Figure 7.1-9: *Coreopsis maritima*

- b. Consider micro-environment aspects such as light, soil type and plant associations. Species can adapt to disturbance, so for revegetating highly-disturbed sites, select species adapted to harsh conditions, or ones that compete well with non-natives.
- c. Consult with nurseries to determine the amount of lead-time needed to produce rooted plugs. Cool-season grasses, for example, require approximately six to ten weeks to grow. If the grasses are propagated in small containers or small cells in flats, they quickly become root bound, so should not be stored, but need to be planted immediately.
- d. Contracted seed/cutting collectors need a minimum of six months to a year of lead-time. The time must be added to the time needed to grow the seed or cuttings into plants. It is extremely important for collectors to have experience, to know when and what they are harvesting. Testing for percent germination and purity of any wild seed collection is highly recommended.
- e. When a major difference in climate exists between the nursery and project site, plants should be hardened off in the destination location for a brief time (two weeks minimum to one month or more) before planting. Nursery-grown plants are usually given regular fertilizer treatments, so it's best to eliminate these and apply water only during the hardening-off period. Inquire with nurseries as to the best location and conditions for plants during the hardening-off period.



*Figure 7.1-10: Arctostaphylos and Oaks.*



*Figure 7.1-11: A typical San Diego County grass land habitat.*

#### **4. Plant Size**

Consider establishment goals, competition from other species, availability of water, and cost in determining what size plant is most suitable.

Place orders with nurseries as soon as possible to ensure delivery of the sizes and quantities desired. Growth rates vary with species, but in general a minimum of one year is required for a very small plant, but preferably two is necessary to grow woody cuttings to a suitable size. Plugs require a minimum of three months to a year depending on the species.



*Figure 7.1-12: Invasive, non-native plant species.*



## 5. Site Preparation

The need for site preparation is evaluated similarly for both native and non-native plantings. Non-native species are valued for their ability to establish quickly and compete with weeds, which minimizes the amount of site preparation needed. Many native trees and shrubs can perform equally well to non-natives and do not require additional practices to get them established.

Measures such as grading, soil decompaction, soil amendments, overhead irrigation, plant protection, mulch, legume inoculation, seed treatment, weed control fabric and weed eradication require more work, lead time and expense, but they dramatically increase the chances for a successful planting. For the less competitive natives, one or more of these measures may be needed, in addition to continued maintenance.

- a. Weed removal is necessary prior to and after planting. In many instances it is beneficial to perform at least two grow-and-kill cycles, where existing weed seed is germinated with irrigation and then sprayed with herbicide to help deplete the seedbed. For native grass seeding to be optimally successful, multiple herbicide treatments may be required a year or longer before and after the seeding. Fertilizer can benefit tree and shrub plantings, but it is not generally recommended for native grass seeding because fast-growing weeds utilize it first and then out-compete the desired species.
- b. Other potential amendments include mycorrhizal and microbial inoculants. Mycorrhizae enhance plant establishment, increase productivity, reduce transplant shock and the need for fertilizers, lower a plant's water requirement, increase resistance to weed invasion, reduce soil erosion and increase soil aeration and drainage.
- c. Grading, excavating, fertilizer application, and soil erosion can disrupt or destroy existing mycorrhizae populations. Minimal soil disturbance and retention of existing topsoil are recommended practices where possible. When stockpiling topsoil, the depth of the stockpile should not exceed 2 feet to avoid harming or killing the beneficial microbes and mycorrhizae present.
- d. In seeded areas, mycorrhizae inoculant must be incorporated into the soil to a depth of six inches to be most effective. To decide whether an inoculant is warranted, research must be done to determine if the target plant species is a host to mycorrhizae, and if so, then sampling may be done to detect presence or absence of mycorrhizae and estimate quantity needed.
- e. Consider the soil characteristics of the site, including pH, depth, texture, and chemical composition by taking horticultural soil tests.



Figure 7.1-13: *Baccharis pilularis* with annual grasses.

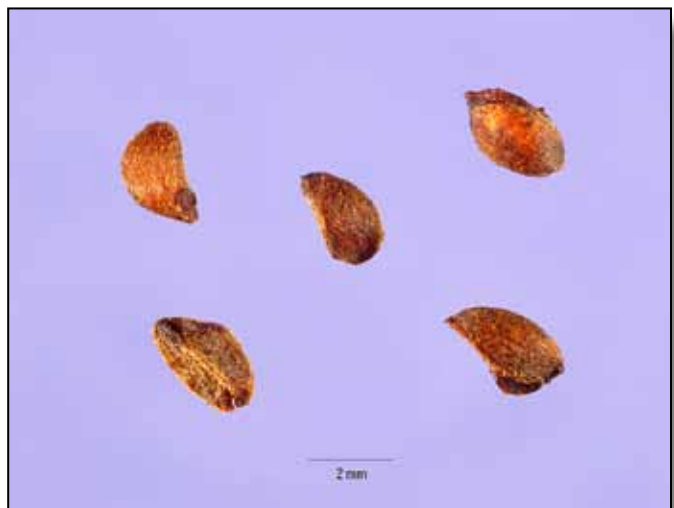


Figure 7.1-14: *Arctostaphylos glauca* on a hillside.

## 6. Planting Guidelines

Planting methods will vary with each project.

- a. Protect new plants from browsing or other damage. Mulch mats, tar paper or landscape fabric placed around the base of the plant reduces the need for weed control the first few seasons. A two inch to four inch layer of wood chips on top further suppresses weeds and protects the barrier underneath. This method is effective and relatively inexpensive, and less weed maintenance will be needed.
- b. Supplemental irrigation should be given to all tree and shrub plantings in areas that are not naturally moist until plant roots reach the water table. Native species often need irrigation at first, but are generally more drought-tolerant once established. Supplemental water reduces the time needed for establishing healthy plants. If overhead spray-heads are proposed, low precipitation heads should be utilized to promote infiltration and reduce run-off. When an irrigation system is not an option, construct a berm around each plant to retain water.
- c. For native grass seedings, the drill-seeding method is preferable because less seed is needed, seed placement is more accurate and can be placed without disturbing adjacent vegetation (minimizes erosion). However, drills can not be used in steep or rocky terrain. Native grass seed planting depth is shallow and should be no more than 1/8-1/2" depending on the seed size. More seedlings are lost due to seeding too deep than seeding too shallow. When broadcast seeding, ensure that the soil is in a roughened condition and always broadcast onto a fresh seed bed. Be sure to rescarify old, settled seed beds. Obtaining good soil-to-seed contact is critical when broadcast seeding.
- d. Some seedlings cannot be irrigated, making mulches a valuable tool for minimizing moisture loss. Imprint seeding is an effective method for addressing this because it creates furrows around the seeds, funneling water to them. Where irrigation is not possible, the seeding must be timed to take full advantage of seasonal precipitation.



Figures 7.1-15, 16 and 17: *Arbutus menziesii*: flower, fruit, and seeds.

- e. Seeding after wildfires and planting in wildfire prone areas requires an evaluation of fire intensity, soil, seed banks and careful plant selection.
- f. Avoid mixing natives with drought tolerant exotics. Fertilization of exotics will eventually compromise the symbiotic mycorrhizal fungi system that trades nutrients with the plants, and over-watering will encourage pathogenic fungi.
- g. Grouping plants according to their horticultural needs will reduce maintenance activities and promote healthy plants. Combinations may include plants that do best in well-drained soils on south-facing slopes, or species with specialized habitat needs such as dry, shady sites.
- h. Consider appropriate plant placement and spacing so plants can meet their ultimate growth characteristics.
- i. Select plants that fit the microclimates and spaces of the site. They will require less maintenance.
- j. Avoid plants that are or have the potential to become invasive.
- k. The plant hole for each container stock plant should be twice as wide as the size of the rootball. Avoid digging a hole that is perfectly round and smooth as this discourages root penetration. The rootball should be moist before removing the plant from the container. Gently loosen the edges of any rootball that has formed a tight mat in the pot.
- l. Practice pest management.
- m. Make use of recycled, or regional local products.

## 7. Watering

California natives in their home plant communities need the amount of water that is naturally provided through rainfall and local moisture, including riparian (river and creekside), coastal (fog), and shade plants that may need water all year long.

- a. Native plant roots plunge deeply into the soil, and for this reason native plants, when watered, should be watered deeply.



Figure 7.1-18: Collecting native seeds.



Figure 7.1-19: Native plants grown in a nursery.

- b. The root crown of each plant is vulnerable to water rot and overhead watering during summer months should be avoided. When planting keep crown slightly above adjacent soil or mulch surface.
- c. Consider water-quality when planting natives. Some native plants are sensitive to high levels of sodium, chloride, and boron, which may cause chlorosis and leaf burn. Irrigation with gray or reclaimed water may have high concentrations of salts and may have a long-term negative effect on native plants.
- d. All watering needs to be adjusted both seasonally and as plants mature. Supplemental irrigation should emulate natural rainfall patterns with more water being applied during the typical wet months (December-February), less during the Fall (September-November), and very little to no water during the Summer (July-August).
- e. Do not water if the soil is already moist at the root level. The soil surface will often appear dry even though the soil is adequately moist where the roots are growing. When in doubt, do not water. It is easier to add water to a plant than it is to dry out an overwatered specimen.
- f. During droughts, it is imperative to water all plants thoroughly during the normal rainy season, since this is when most species require water.
- g. After repeated cycles of watering and drying, some soils, particularly those with high clay content, will develop a thin dense crust that greatly impedes water penetration. Shallow cultivation of the soil on a regular basis or applying mulch will prevent this layer from forming and allow water to reach the root zone of plants.

## 8. Fertilizing

As a general rule, California natives thrive in nutrient-poor soils. Fertilizing is not needed on a regular basis unless the soils are depleted or if the particular native plant only occurs naturally in soils with higher fertility. If the decision is made to fertilize, it should occur when the plants are actively growing, which is typically from late fall to spring. Avoid fertilizing during summer months when plants are dormant.

Provide for follow-up fertilization as needed. Compost, mulch or other organic amendments that improve soil structure and fertility are generally rec-

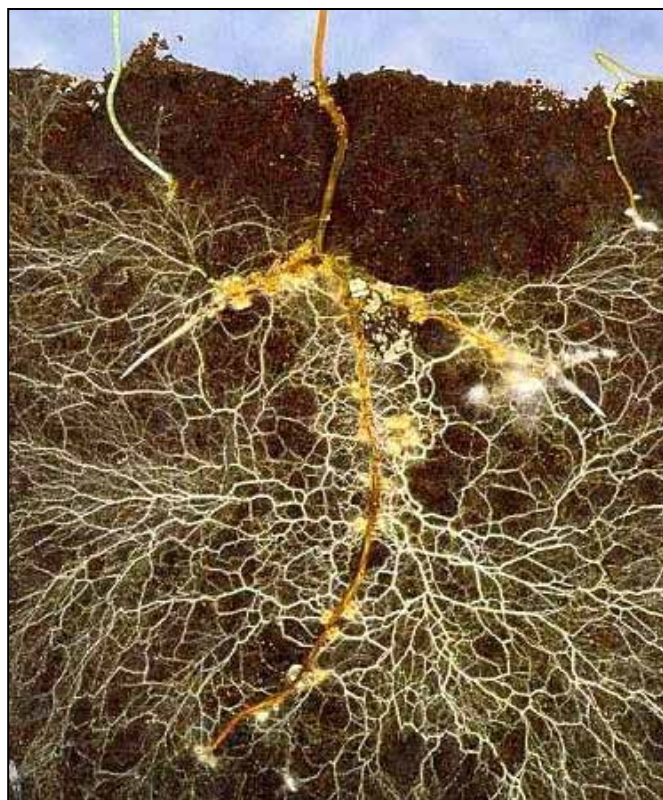


Figure 7.1-20: Root systems are enhanced with the use of mycorrhizae.



Figure 7.1-21: Erosion depletes nutrients and mycorrhizae from soil.

ommended. Protect from damage such as grazing, trampling and traffic, during establishment.

## 9. Mulch

Mulch can significantly reduce moisture evaporation from the soil, thereby decreasing water demands. Mulch helps moderate soil temperature extremes, prevents formation of a soil crust, reduces dust levels, curbs erosion, and suppresses weeds. As the mulch decomposes, it supplies nutrients that support biological activity in the soil. Maintaining a two-to four-inch deep layer of mulch is recommended. Keep crown area of plants free of mulch.

Inorganic mulch also helps retain moisture while trapping and holding warmth from the sun.

## 10. Maintenance

Maintenance is the key to successful plantings whether using native or non-native plants. Measures may include watering, weed treatment, and replacement of dead or diseased plants. Maintenance practices and schedules vary with each project and type of planting (seeding vs. tree/shrub planting). Plan for a minimum of two to three years of maintenance for successful plant establishment.

## 11. Native Grass Plantings

In selecting species or ecotype, consider characteristics such as seedling vigor, environmental range, genetic diversity within a species, susceptibility to frost, drought and disease, and if it is a short- or long-lived species. In special cases, consider phased planting. For example, a slower growing species, such as melic grass is planted a year before a more aggressive species, like slender wheatgrass or California brome. Any mixes used should contain a balance of fast-growing, short-lived species with slower-growing, long-lived species. Another situation where a phased planting might be appropriate is with riparian shrubs, where the more drought and sun-tolerant species are planted first with the less tolerant species planted later.

## 12. Native Plant Care – Pruning Basics

California native plants benefit from pruning for the purposes of rejuvenation, aesthetics, and health. Under natural conditions, native plants are “pruned” by disturbances such as animal browsing, fires, and storms. Some of the most useful pruning techniques mimic these processes. Lightly shearing Toyon,



Figures 7.1-22 and 23: Grasses planted using the drill-seeding method.

Catalina Cherry, or Coffeeberry is analogous to animals browsing these plants tips. Cutting back a specimen of Lemonadeberry or California Bay to ground level is similar to the effect of fire.

- a. It is essential to have proper pruning tools that are clean, sharp, and well oiled.
- b. When pruning consider the particular species and pruning needs.
- c. Thin branches to increase light penetration and air circulation to prevent powdery mildew and future storm damage.
- d. Prune to reduce crowding where plants have overgrown their space.
- e. Winter-deciduous species should be pruned during their dormant period. When leaves are out of the way, pruning will be more effective due the ability to see the underlying branch structure more clearly.
- f. Semi-evergreen species enter a resting period in late summer to early winter. Prune these species when growth during this period has stopped.
- g. Evergreen herbaceous perennials and shrubs are best pruned after they have flowered, usually in the fall.
- h. Long-blooming plants that have multiple waves of flowers should be pruned after the primary blooming cycle is over. A secondary flush of blossoms that is more vigorous may occur. The degree of pruning is species-dependent.



*Figure 7.1-24: Coastal fog provides moisture to plants.*



*Figure 7.1-25: Riparian corridor.*



*Figure 7.1-26: Example of chlorotic plant.*

# Chapter 8

## **BASEWIDE STANDARD DETAILS**

### **8.1 Summary/Overview**

This Chapter includes the standard details and product types to be used Basewide for future projects or improvements. This section also provides reference to specific products in the form of product sheets. This reference is for establishing the design type or style and is not an endorsement for the product manufacturer. Substitutions for “like” or similar products are acceptable. All product types must be approved by the AC/S Facilities prior to installation. When BEAP standard details do not include a specific required detail, use “City of San Diego Standard Drawings, (most current edition).”

#### **8.1 A. Index of Details**

#### **8.2 Architecture Details and Standards**

- 8.2 A-1 Precast Concrete Sill Detail
- 8.2 A-2 Precast Concrete Sill Detail
- 8.2 A-3 Wheel and Corner Guards
- 8.2 A-4 Wheel and Corner Guards

#### **8.3 Landscape Details and Standards**

- 8.3 A-1 Tree Planting and Staking
- 8.3 A-2 Tree Planting and Staking on Slope
- 8.3 A-3 Tree Guying
- 8.3 A-4 Palm Planting
- 8.3 A-5 Tree Drainage
- 8.3 A-6 Shrub Planting
- 8.3 A-7 Concrete Curb
- 8.3 A-8 Concrete Mow Curb - Turf

- 8.3 B-1 Sprinkler on Slope
- 8.3 B-2 Sprinkler Head on Riser
- 8.3 B-3 Pop-Up Sprinkler with Swing Joint

#### **8.4 Street Design Details and Standards**

- 8.4 A-1 Trench Resurfacing Type A
- 8.4 A-2 Trench Resurfacing Type C
- 8.4 A-3 Narrow Trenches - Trenching and Backfilling (A&B)
- 8.4 A-4 Narrow Trenches - Trenching and Backfilling (C)
- 8.4 A-5 Narrow Trenches - Trenching and Backfilling
- 8.4 A-6 Narrow Trenches - Trenching and Backfilling
- 8.4 A-7 Joint Trench Locations
- 8.4 B-1 Fire Hydrant Protection Post
- 8.4 B-2 Fire Hydrant Markers
- 8.4 C-1 Cross Gutter
- 8.4 C-2 Curb and Gutter-Separate
- 8.4 C-3 Curb and Gutter-Combined
- 8.4 C-4 Alternate Curb and Gutter
- 8.4 C-5 Curbs and Gutter-Medians
- 8.4 D-1 Concrete Driveway/Commercial Alternate
- 8.4 D-2 Concrete Driveway (Contiguous Sidewalk)
- 8.4 D-3 Concrete Driveway (Non-Contiguous Sidewalk)
- 8.4 D-4 Driveway Location - Adjacent to Curb Returns and Street Lines
- 8.4 D-5 Driveway Location and Width Requirements
- 8.4 E-1 Fire Prevention Bureau Policy

## **8.5 Parking Details and Standards**

- 8.5 A-1 Disabled Parking Stall(s)
- 8.5 A-2 Diagonal Disabled Parking Stall(s)
- 8.5 A-3 Pavement Symbol - Disabled Parking
- 8.5 A-4 Disabled Parking Sign
- 8.5 A-5 Van Accessible Sign For Disabled Parking Space
- 8.5 A-6 Wheel Stop and Temporary Parking Lot

## **8.6 Pedestrian Circulation Details and Standards**

- 8.6 A-1 Pedestrian Ramp-Types A and B (New Construction)
- 8.6 A-2 Pedestrian Ramp-Types A-1 and B-1 (For Existing Sidewalk)
- 8.6 A-3 Pedestrian Ramp-Type C (For Existing Sidewalk)
- 8.6 A-4 Truncated Domes
- 8.6 A-5 Pedestrian Ramp-Type D
- 8.6 A-6 General Notes for Curb Ramps
- 8.6 B-1 Concrete Joint Details
- 8.6 B-2 Sidewalk Joint Locations
- 8.6 C-1 Sidewalk-Typical Sections
- 8.6 C-2 New Pavement at Existing Walk Pavement
- 8.6 D-1 Concrete Steps with Railing
- 8.6 D-2 Pedestrian Protective Railing Details No. 1

## **8.7 Signage Details and Standards**

- 8.7 A-1 Street Name Sign
- 8.7 A-2 Street Name Sign
- 8.7 A-3 Street Name Sign
- 8.7 A-4 Typical Construction Signs
- 8.7 A-5 Typical Traffic / Road Signs
- 8.7 A-6 Disabled Parking Sign
- 8.7 A-7 Typical Sign Connection Detail

- 8.7 A-8 Primary Directional Sign
- 8.7 A-9 Directional Sign Connection Detail
- 8.7 A-10 Sign Connection Detail
- 8.7 A-11 "War Prize" Monument Sign Detail
- 8.7 A-12 2" x 2" Pole Mounting Detail
- 8.7 A-13 4" x 4" Pole Mounting Detail

## **8.8 Lighting Details and Standards**

- 8.8 A-1 Street Light
- 8.8 A-2 Building Light
- 8.8 A-3 Sign Light
- 8.8 A-4 Security Light
- 8.8 A-5 Parking Lot Light
- 8.8 A-6 Palm Tree Light

## **8.9 Site Furniture Details and Standards**

- 8.9 A-1 Square Picnic Table-Center Post
- 8.9 A-2 Picnic Table Set
- 8.9 A-3 Picnic Table Set Recycled Plastic
- 8.9 A-4 Recreational Park Bench
- 8.9 A-5 Recreational Park Bench with Back
- 8.9 A-6 Alternate Park Bench
- 8.9 A-7 Recycled Plastic Bench
- 8.9 A-8 Recycled Plastic Bench
- 8.9 B-1 Drinking Fountain
- 8.9 B-2 Drinking Fountain Detail
- 8.9 B-3 Drinking Fountain Detail
- 8.9 D-1 Primary Bus Shelter
- 8.9 D-2 Primary Bus Shelter (continued)
- 8.9 E-1 Recycling Containers
- 8.9 E-2 Single Recycling Container
- 8.9 E-3 Square Single Container



- 8.9 E-4 Round Single Container
- 8.9 E-5 Hot Coals Container
- 8.9 G-1 Flagpole
- 8.9 H-1 Metal Bike Rack
- 8.9 H-2 Bike Storage
- 8.9 I-1 Bollard - 9" square
- 8.9 I-2 Bollard - 9" square
- 8.9 I-3 Bollard - 12" square
- 8.9 I-4 Bollard 16" square-Handicapped
- 8.9 I-5 Moveable Bollard
- 8.9 I-6 Protection Bollard Installation
- 8.9 J-1 Concrete Tree Grate
- 8.9 J-2 Concrete Tree Grate
- 8.9 J-3 Metal Tree Grate
- 8.9 J-4 Concrete Square Planter
- 8.9 J-5 Concrete Square Planter
- 8.9 J-6 Concrete Round Planter
- 8.9 K-1 Metal Tree Guard
- 8.9 K-2 Metal Tree Guard
- 8.9 L-1 Single Container Trash Enclosure
- 8.9 L-2 Triple Container Trash Enclosure
- 8.9 L-3 Trash Container
- 8.9 O-1 Barbecue Units
- 8.9 R-1 Volleyball Court Detail
- 8.9 R-2 Volleyball Court Edge and Sand Area
- 8.9 R-3 Volleyball Post Detail
- 8.9 S-1 Mail Box-Group

**8.10 Screening and Fencing Details and Standards**

- 8.10 A-1 Fence
- 8.10 A-2 Gate

- 8.10 A-3 20" Precast Concrete Cap
- 8.10 A-4 Precast Concrete Cap
- 8.10 A-5 Concrete Straight Cap
- 8.10 A-6 Masonry Retaining Wall Type 5 (Lever Backfill)
- 8.10 A-7 27" Precast Concrete Cap
- 8.10 A-8 Typical Retaining Wall
- 8.10 A-9 Utility Equipment Screen
- 8.10 A-10 Roof Equipment Screen
- 8.10 A-11 Corral Fence

**8.11 Utilities Details and Standards**

- 8.11 A-1 Underground Typical Location (New Construction)
- 8.11 A-2 Underground Typical Location (Conversion/Replacement/Upgrade)
- 8.11 B-1 Utility Location in Local and Collector Streets (New Construction)
- 8.11 B-2 Utility Locations Local and Major Streets
- 8.11 C-1 Utility Locations Prime Arterials and Expressways
- 8.11 C-2 Utility Locations in Major Streets, Prime Arterial and Expressways
- 8.11 D-1 Pedestal for Electrical Equipment
- 8.11 E-1 24 Inch Wide Maintenance Edge for Medians
- 8.11 F-1 Grass Swale with Perforated Pipe Detail
- 8.11 F-2 Concrete Lined Open Storm Drain Channel



## 8.2 Architecture Details and Standards

This section provides reference to specific products in the form of product sheets. This reference is for establishing the design type or style and is not an endorsement for the product manufacturer. Substitutions for “like” or similar products are acceptable. All product types must be approved by the AC/S Facilities prior to installation.

8.2 A-1 Precast Concrete Sill Detail

8.2 A-2 Precast Concrete Sill Detail

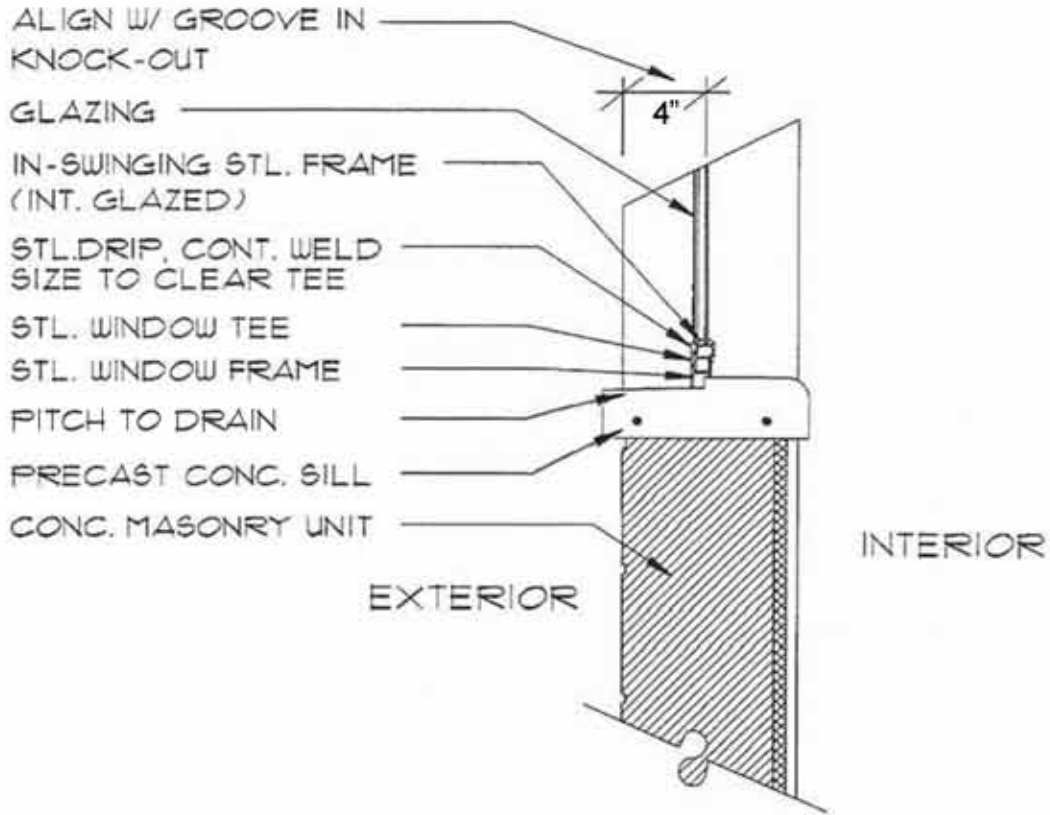
8.2 A-3 Wheel and Corner Guards

8.2 A-4 Wheel and Corner Guards



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



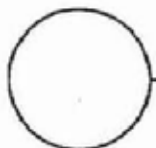
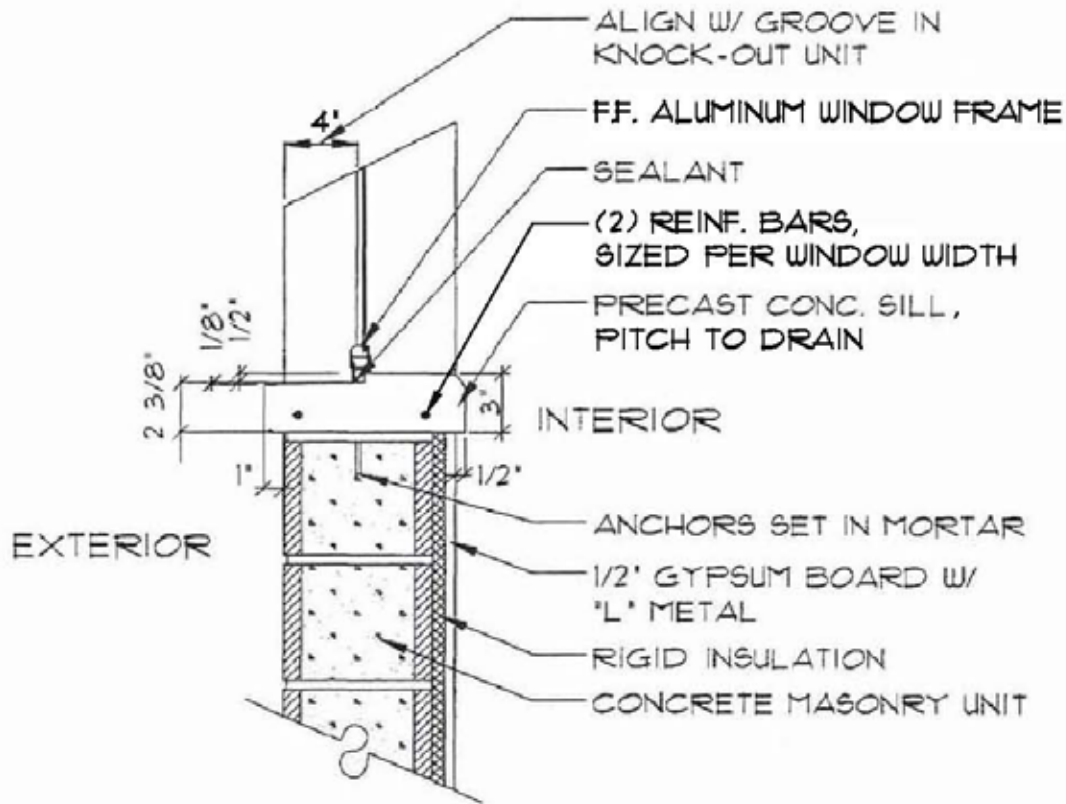
## PRECAST CONCRETE SILL

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.2 A-1</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



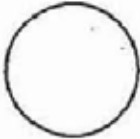
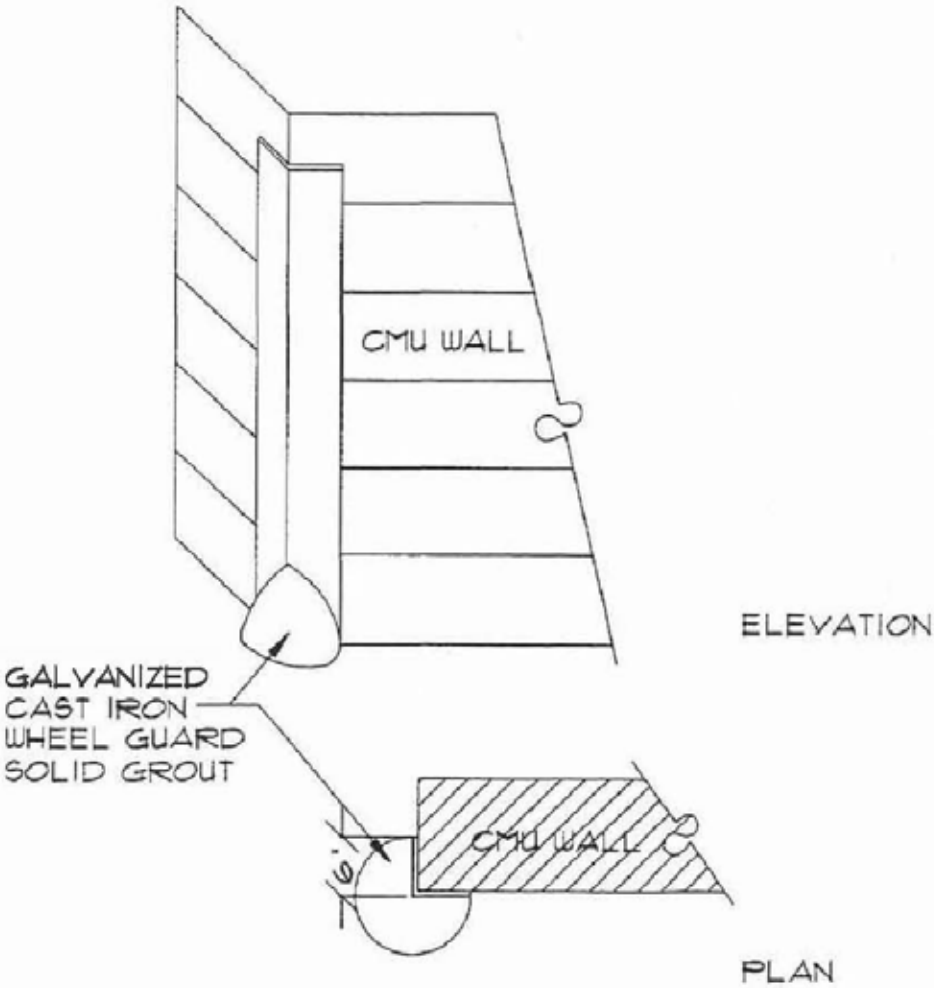
## PRECAST CONCRETE SILL

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.2 A-2</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



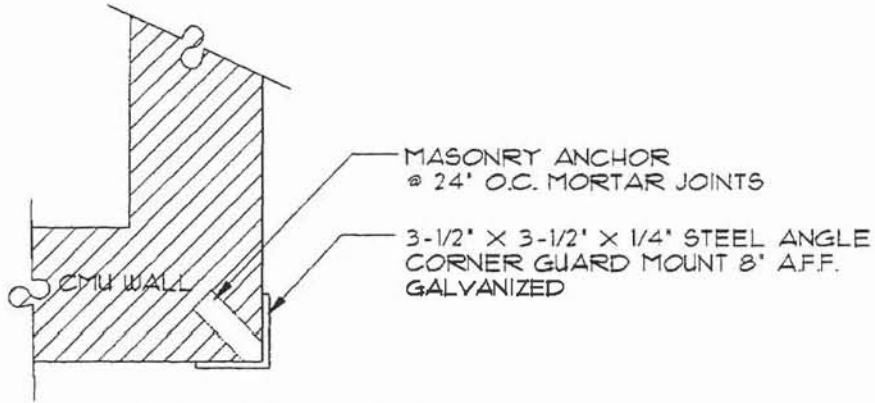
## WHEEL AND CORNER GUARDS

SCALE: N.T.S.

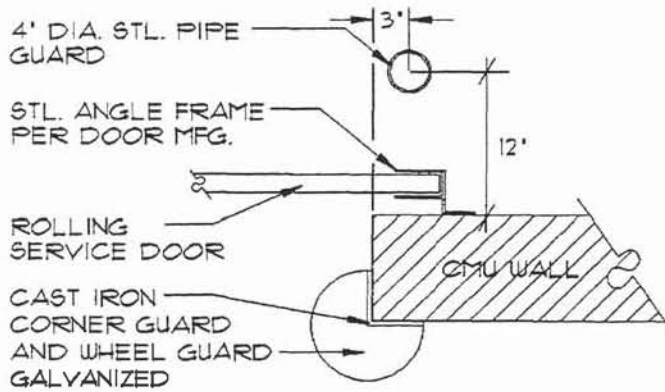
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.2 A-3</b>
			Scale:

# BEAP Standard Detail Sheet

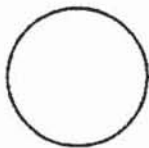
Public Works Office Marine Corps Base Camp Pendleton



**CORNER GUARD DETAIL**



**WHEEL GUARD DETAIL**



## WHEEL AND CORNER GUARDS

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.2 A-4</b>
			Scale:



## **8.3 Landscape Details and Standards**

This section provides reference to specific products in the form of product sheets. This reference is for establishing the design type or style and is not an endorsement for the product manufacturer. Substitutions for “like” or similar products are acceptable. All product types must be approved by the AC/S Facilities prior to installation.

8.3 A-1 Tree Planting and Staking

8.3 A-2 Tree Planting and Staking on Slope

8.3 A-3 Tree Guying

8.3 A-4 Palm Planting

8.3 A-5 Tree Drainage

8.3 A-6 Shrub Planting

8.3 A-7 Concrete Curb

8.3 A-8 Concrete Mow Curb - Turf

8.3 B-1 Sprinkler on Slope

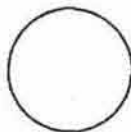
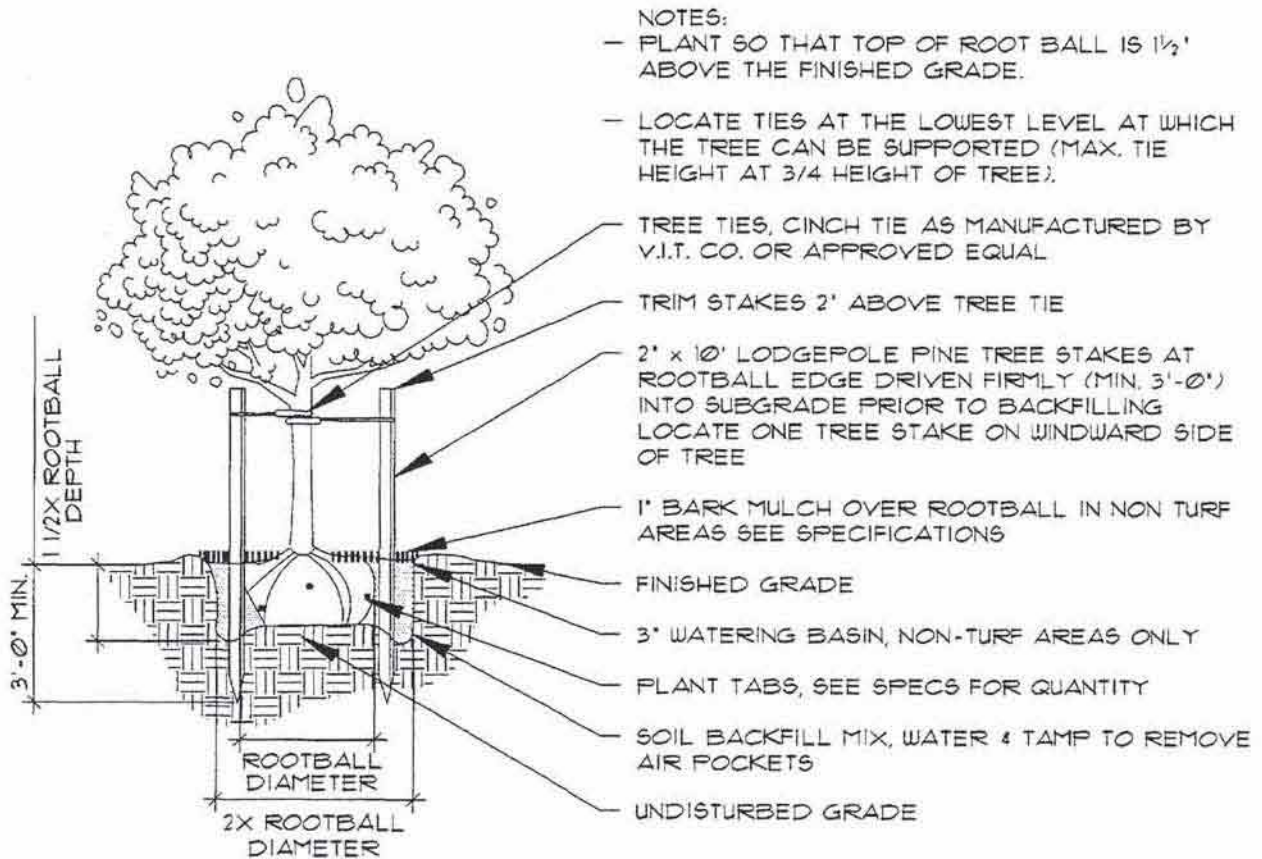
8.3 B-2 Sprinkler Head on Riser

8.3 B-3 Pop-Up Sprinkler with Swing Joint



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



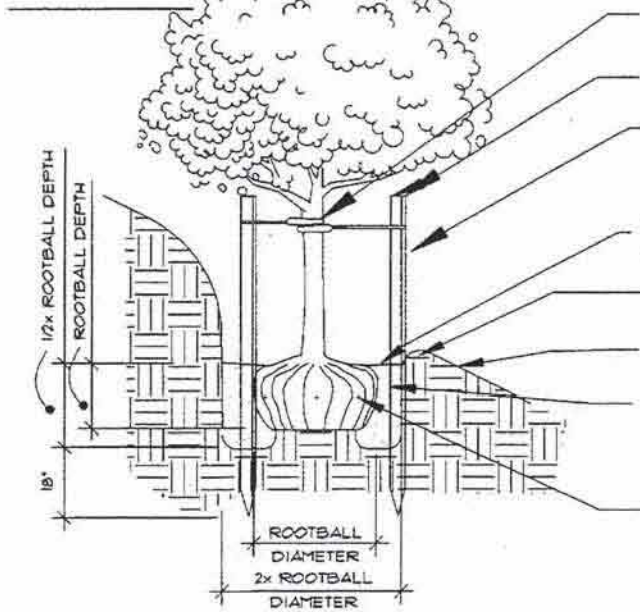
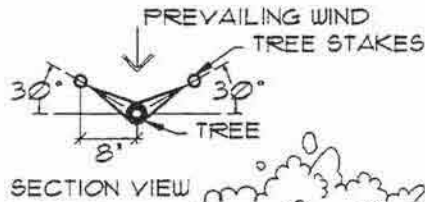
## TREE PLANTING AND STAKING

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.3 A-1</b>
			Scale:

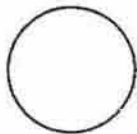
# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



- NOTES:
- PLANT SO THAT TOP OF ROOT BALL IS 1 1/2' ABOVE THE FINISHED GRADE.
  - LOCATE TIES AT THE LOWEST LEVEL AT WHICH THE TREE CAN BE SUPPORTED (MAX. TIE HEIGHT AT 3/4 HEIGHT OF TREE).
  - TREE TIES, 'CINCH TIE' AS MANUFACTURED BY V.I.T. CO. OR APPROVED EQUAL
  - TRIM STAKES 2" ABOVE TREE TIE
  - 2" x 10' TREATED LODGEPOLE PINE TREE STAKES AT ROOTBALL EDGE DRIVEN FIRMLY (MIN. 3'-0") INTO SUBGRADE PRIOR TO BACKFILLING
  - TOP OF ROOTBALL 1 1/2' ABOVE FINISH GRADE
  - FORM BASIN WITH 3" CONTINUOUS RIM
  - FINISH GRADE
  - SOIL BACKFILL MIX, WATER AND TAMP TO REMOVE AIR POCKETS
  - PLANT TABS, SEE PLANT NOTES

PLAN VIEW



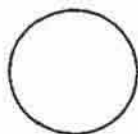
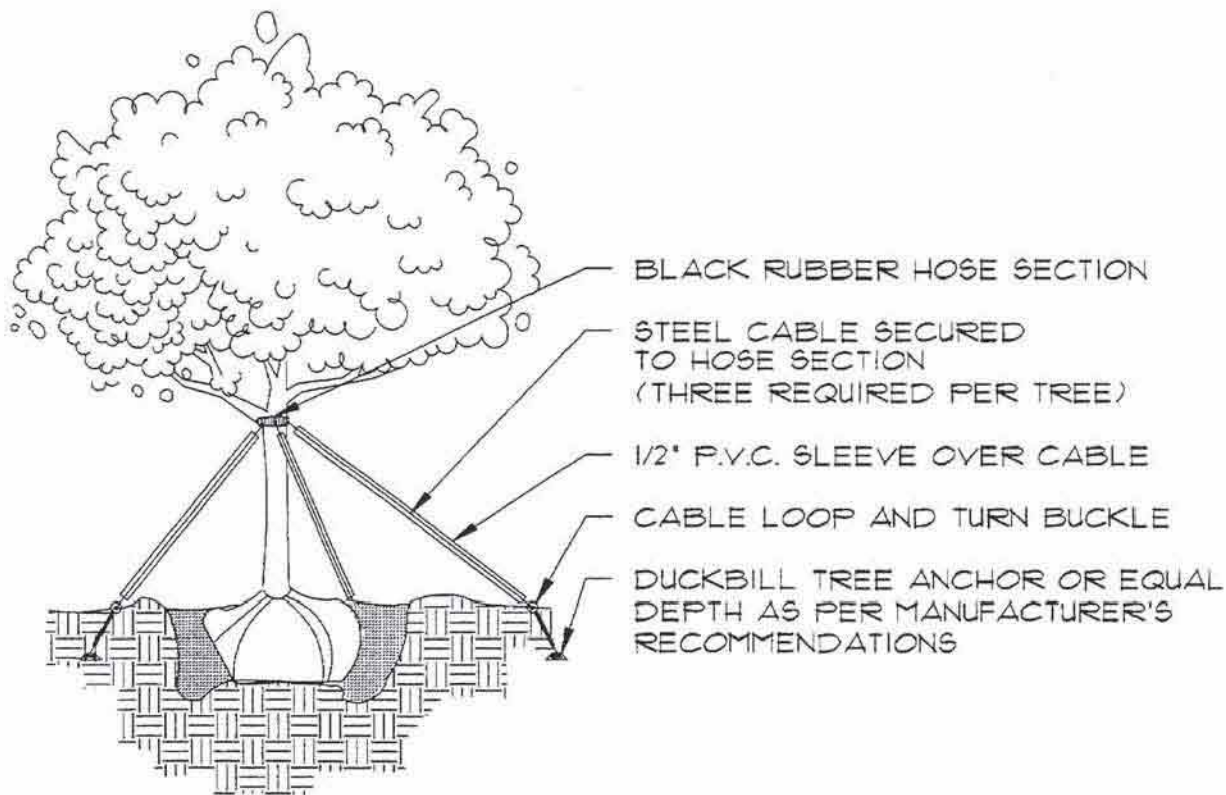
## TREE PLANTING AND STAKING ON SLOPE

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.3 A-2</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



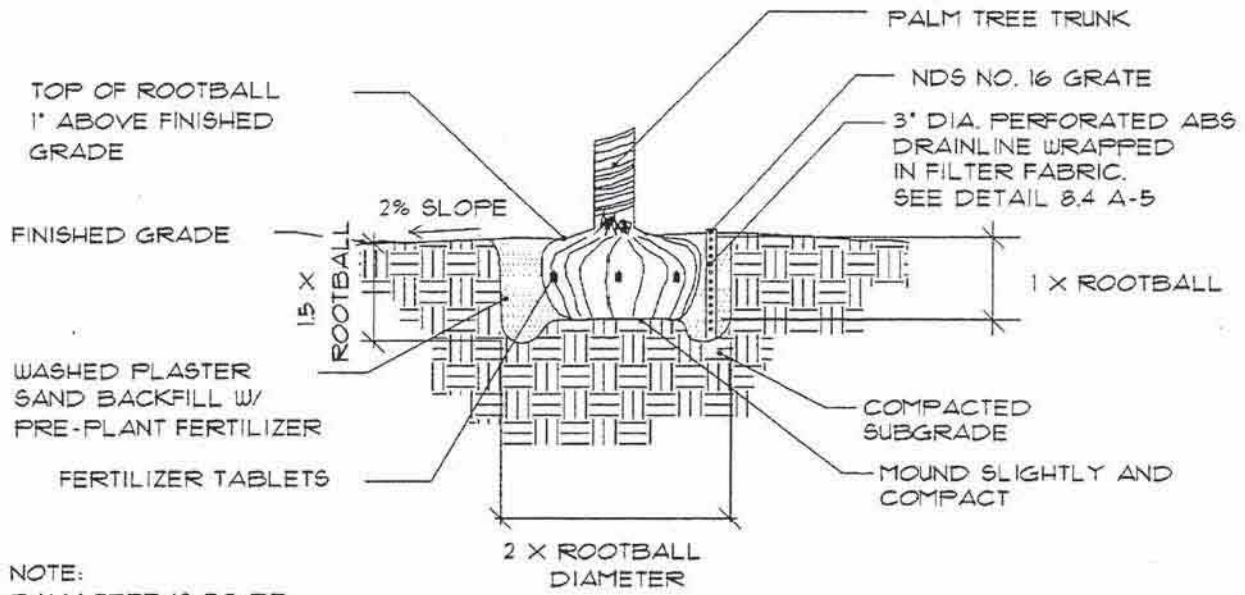
## TREE GUYING

SCALE: N.T.S.

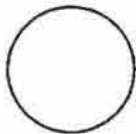
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.3 A-3</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



NOTE:  
 PALM TREE IS TO BE MAINTAINED @ 90 DEG. TO GROUND AND STRAIGHTENED THROUGHOUT MAINTENANCE PERIOD AS NECESSARY. PALM FRONDS TO BE TIED WITH ORGANIC TWINE PRIOR TO PLANTING.



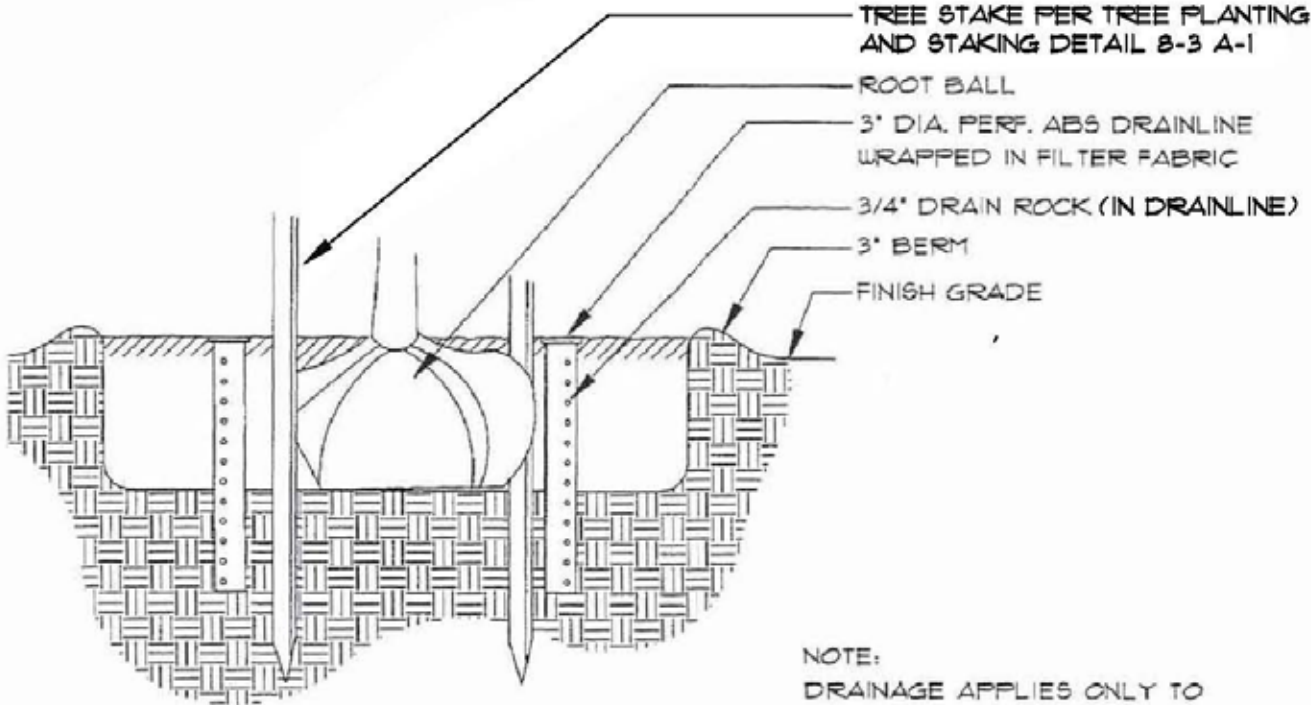
## PALM PLANTING

SCALE: N.T.S.

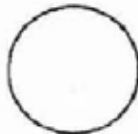
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.3 A-4</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



NOTE:  
DRAINAGE APPLIES ONLY TO BOXED TREES



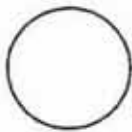
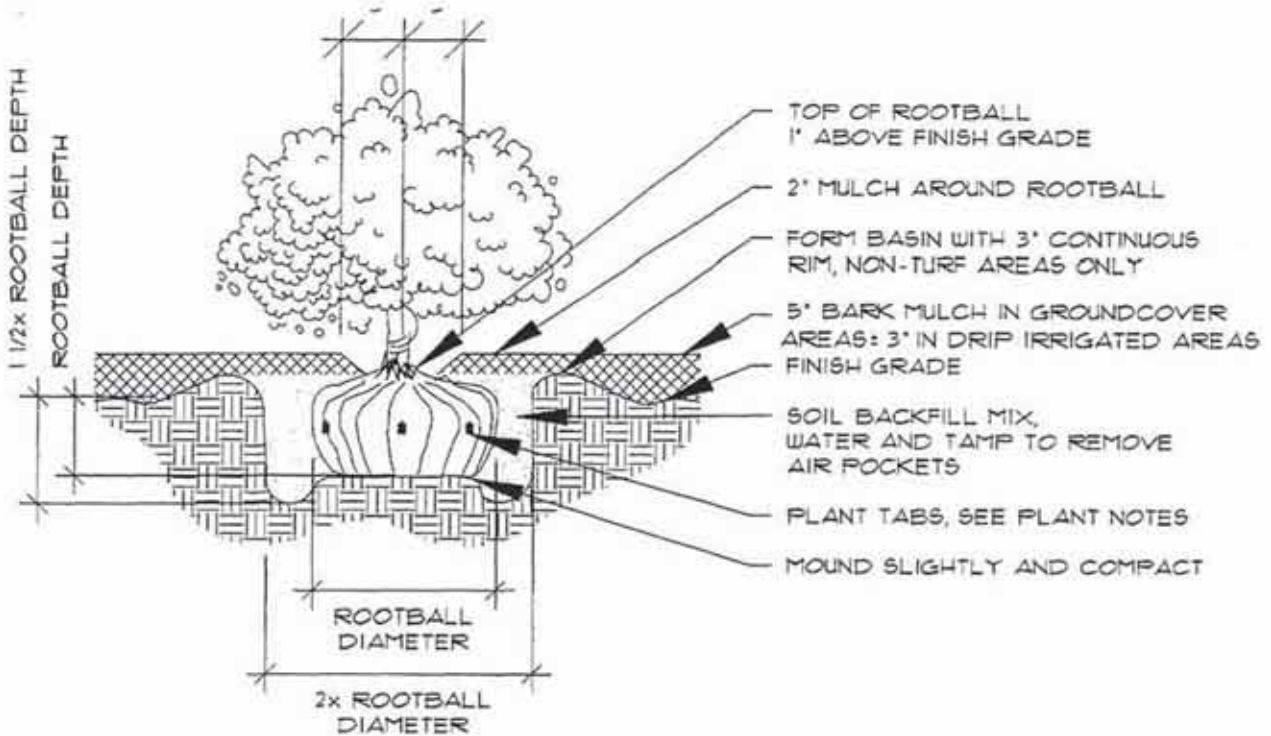
## TREE DRAINAGE

SCALE: N.T.S.

	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.3 A-5</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



## SHRUB PLANTING

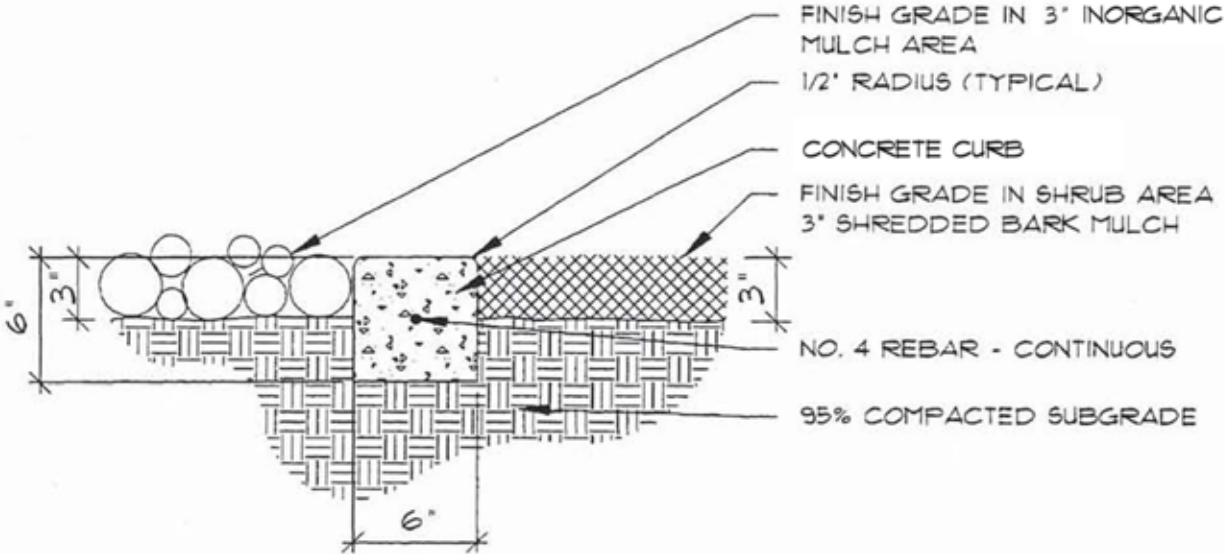
SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.3 A-6</b>
			Scale:

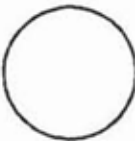


# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



- NOTE:
1. WEAKENED PLANE JOINTS AT 15' O.C.
  2. EXPANSION JOINTS AT 80' O.C. AND AT ALL INTERSECTIONS AND ENDS.
  3. INORGANIC MULCH TYPE AND COLOR TO BE APPROVED BY PUBLIC WORKS DEPARTMENT.
  4. USE NATURAL EARTH TONE COLORS FOR COBBLE MATERIAL.



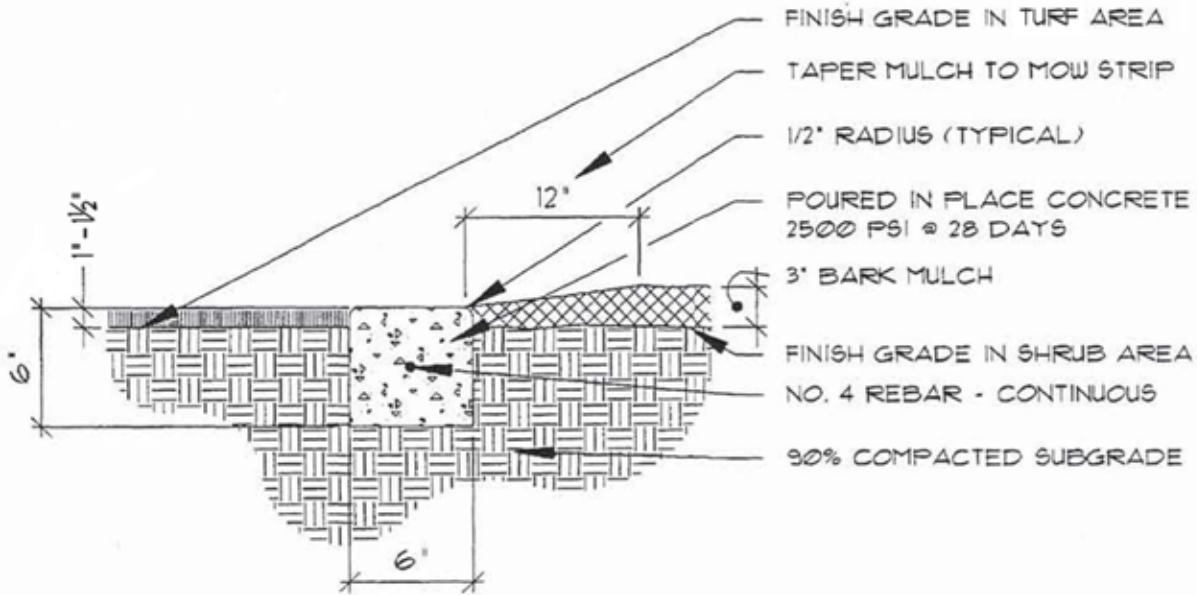
## CONCRETE CURB

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.3 A-7</b>
			Scale:

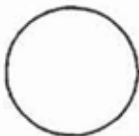
# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTE:**

1. INSTALL 2' DEEP WEAKENED PLANE JOINTS AT 15' O.C.
2. INSTALL TAR IMPREGNATED FELT EXPANSION JOINTS AT 50' O.C. AND AT ALL INTERSECTIONS AND TANGENTS WITH OTHER PAVING



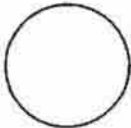
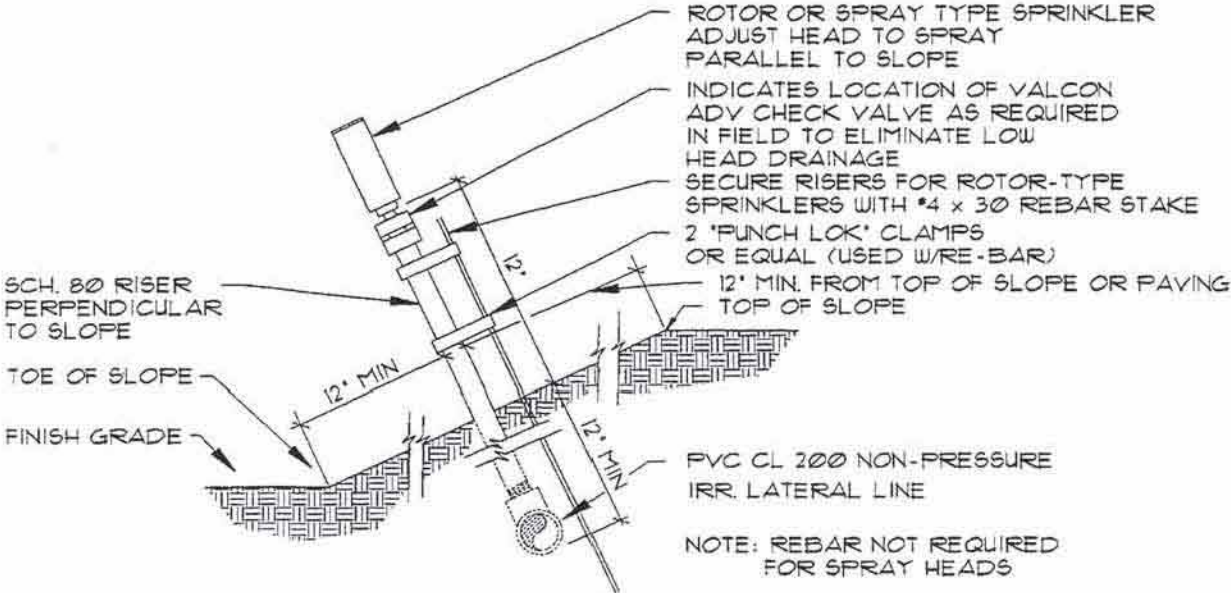
## CONCRETE MOW CURB - TURF

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.3 A-8</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



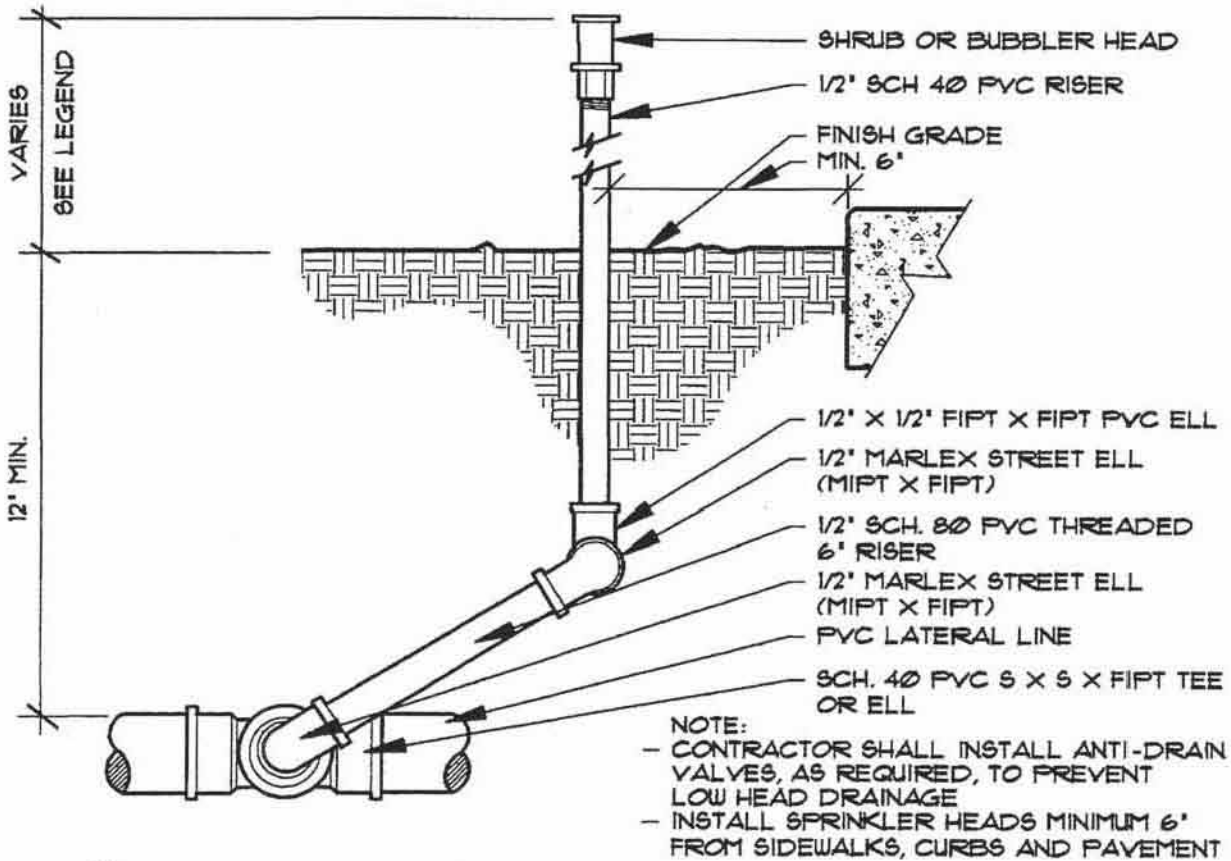
## SPRINKLER ON SLOPE

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.3 B-1</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



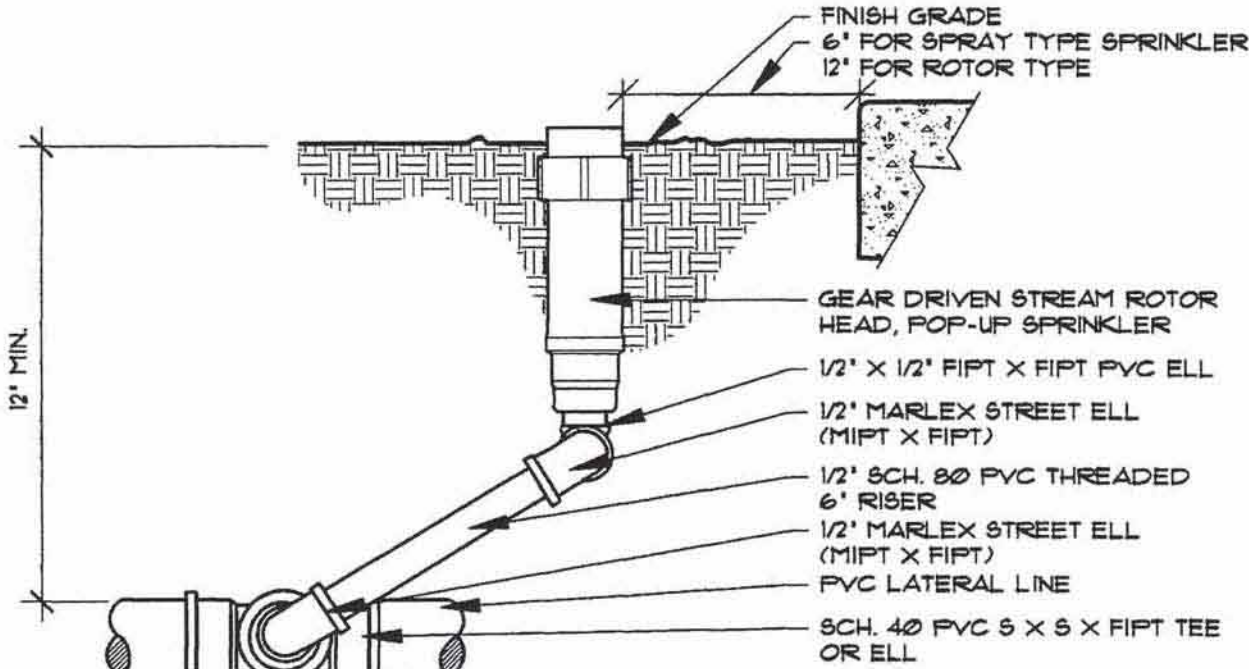
## SPRINKLER HEAD ON RISER

SCALE: N.T.S.

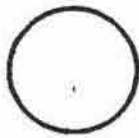
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.3 B-2</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



- NOTE:
- CONTRACTOR SHALL INSTALL ANTI-DRAIN VALVES, AS REQUIRED, TO PREVENT LOW HEAD DRAINAGE
  - INSTALL SPRINKLER HEADS MINIMUM 6" FROM SIDEWALKS, CURBS AND PAVEMENT
  - USE 3/4" FITTINGS AND RISERS WHEN SPRINKLER INLET IS 3/4"



## POP-UP SPRINKLER W/ SWING JOINT

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number: <b>8.3 B-3</b>
	Public Works Office		
			Scale:



## 8.4 Street Design Details and Standards

This section provides reference to specific products in the form of product sheets. This reference is for establishing the design type or style and is not an endorsement for the product manufacturer. Substitutions for “like” or similar products are acceptable. All product types must be approved by the AC/S Facilities prior to installation.

8.4 A-1 Trench Resurfacing Type A

8.4 A-2 Trench Resurfacing Type C

8.4 A-3 Narrow Trenches - Trenching and Backfilling (A&B)

8.4 A-4 Narrow Trenches - Trenching and Backfilling (C)

8.4 A-5 Narrow Trenches - Trenching and Backfilling

8.4 A-6 Narrow Trenches - Trenching and Backfilling

8.4 A-7 Joint Trench Locations

8.4 B-1 Fire Hydrant Protection Post

8.4 B-2 Fire Hydrant Markers

8.4 C-1 Cross Gutter

8.4 C-2 Curb and Gutter-Separate

8.4 C-3 Curb and Gutter-Combined

8.4 C-4 Alternate Curb and Gutter

8.4 C-5 Curbs and Gutter-Medians

8.4 D-1 Concrete Driveway/Commercial Alternate

8.4 D-2 Concrete Driveway (Contiguous Sidewalk)

8.4 D-3 Concrete Driveway (Non-Contiguous Sidewalk)

8.4 D-4 Driveway Location - Adjacent to Curb Returns and Street Lines

8.4 D-5 Driveway Location and Width Requirements

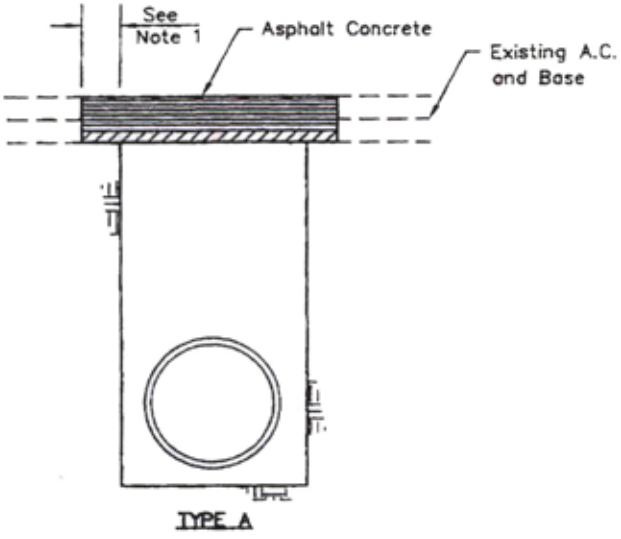
8.4 E-1 Fire Prevention Bureau Policy





# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES**

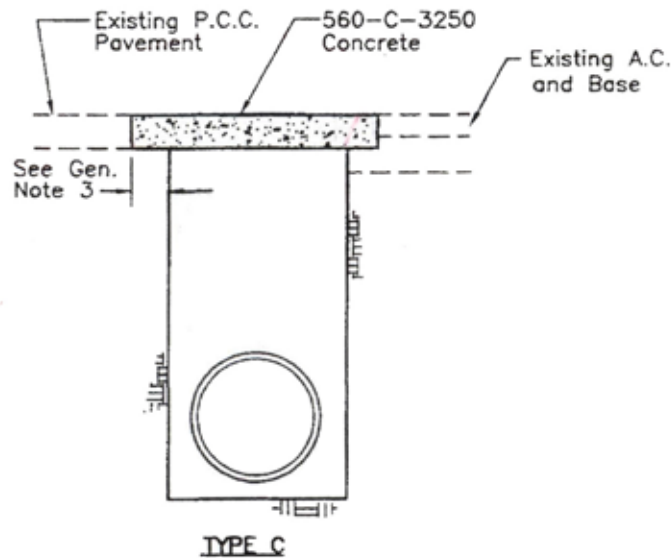
1. Trench edges to be cut a minimum of 6" wider than trench for trenches 3' wide or less, and 12" wider for trenches over 3' wide.
2. Existing A.C. shall be cut and removed in such a manner so as not to tear, bulge or displace adjacent pavement. Edges shall be clean and vertical. All cuts shall be parallel or perpendicular to street centerline, when practical.
3. Base material shall be replaced to depth of existing base. A.C. may be substituted for base material.
4. A tack coat of asphaltic emulsion or paving asphalt shall be applied to existing A.C. at all contact surfaces, prior to resurfacing.
5. Asphalt Concrete Resurfacing:
  - a) Minimum total thickness shall be one inch greater than existing A.C.
  - b) A.C. shall be hot plant mix.
  - c) Finish course for Type B resurfacing shall be laid down using a spreader box.
6. All A.C. resurfacing shall be seal coated with an emulsified asphalt and covered with sand. Chip sealing shall be applied as required by Agency.
7. Type B shall not be used on lateral crossings.
8. Sloughing of trench under pavement shall be cause for requiring additional pavement and base.
9. When the trench is very close to the edge of the pavement and the remaining A/C strip is less than 2 ft., it shall be replaced as part of the trench repair.

**TRENCH RESURFACING TYPE A**

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:  <b>8.4 A-1</b>
	Public Works Office		
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**GENERAL NOTES**

1. Existing A.C. shall be cut and removed in such a manner so as not to tear, bulge or displace adjacent pavement. Edges shall be clean and vertical. All cuts shall be parallel or perpendicular to street centerline, when practical.
2. Sloughing of trench under pavement shall be cause for requiring additional pavement and base.
3. Trench edges shall be cut a minimum of 6" wider than trench for trenches 3' wide or less, and 12" wider for trenches over 3' wide.
4. When the trench is very close to the edge of the pavement and the remaining A/C strip is less than 2 ft., it shall be replaced as part of the trench repair.

**NOTES TYPE-C**

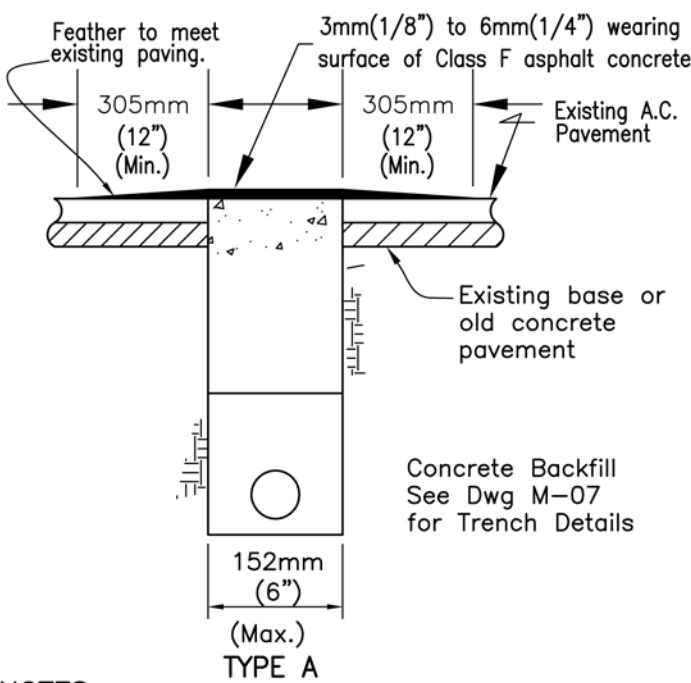
1. Concrete shall be colored black where required to match existing pavement, method to be specified by Agency.
2. Minimum concrete thickness:
  - Alleys and local residential street -----5 inches
  - Major streets and highway -----7 inches
 Trench resurfacing in P.C.C. pavement shall have the above minimum thickness or match the existing concrete thickness plus one inch, whichever is greater.

## TRENCH RESURFACING TYPE C

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:  <b>8.4 A-2</b>
	Public Works Office		
			Scale:

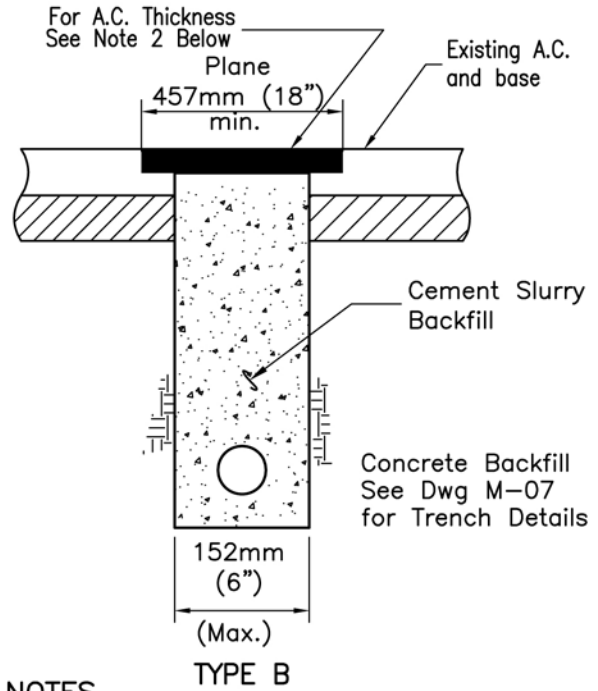
# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES**

1. Concrete shall be screeded off to match pavement grade and floated to assure proper edge match.
2. A tack coat shall be applied to the concrete and existing asphalt pavement prior to placing the new asphalt pavement wearing surface.
3. Existing A.C. pavement will not require saw cutting when using rockwheel for excavation.
4. Allow concret backfill to cure for seven prior to paving operation



**NOTES**

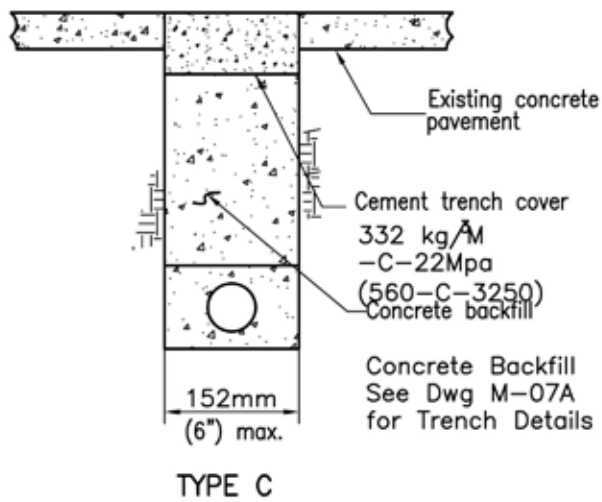
1. A tack coat shall be applied to the cement slurry backfill and existing asphalt pavement prior to placing the new asphalt surface.
2. Asphaltic Concrete Resurfacing:
  - a. Allow cement slurry backfill seven days minimum to cure before planing.
  - b. Thickness of Asphaltic Concrete shall be a minimum of 51mm (2 inch) or as specified by the Agency's engineer.
  - c. A.C. shall be hot mix.
3. A.C. shall be sealed or chip sealed when required by the Agency's Engineer.

## NARROW TRENCHES TRENCHES & BACKFILLING (A&B)

Project Title:    SDRSD G-33	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:  <b>8.4 A-3</b>
	Public Works Office		
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



### NOTES

1. Concrete shall be screeded off to match existing pavement grade and floated to assure proper edge match.
2. match.

Concrete trench cover shall be a minimum of 140mm (5 1/2") thick in alley or local residential streets and 178mm (7") thick in all other streets.

3. Existing concrete pavement will require sawcutting when using rockwheel for excavation.
- 4.

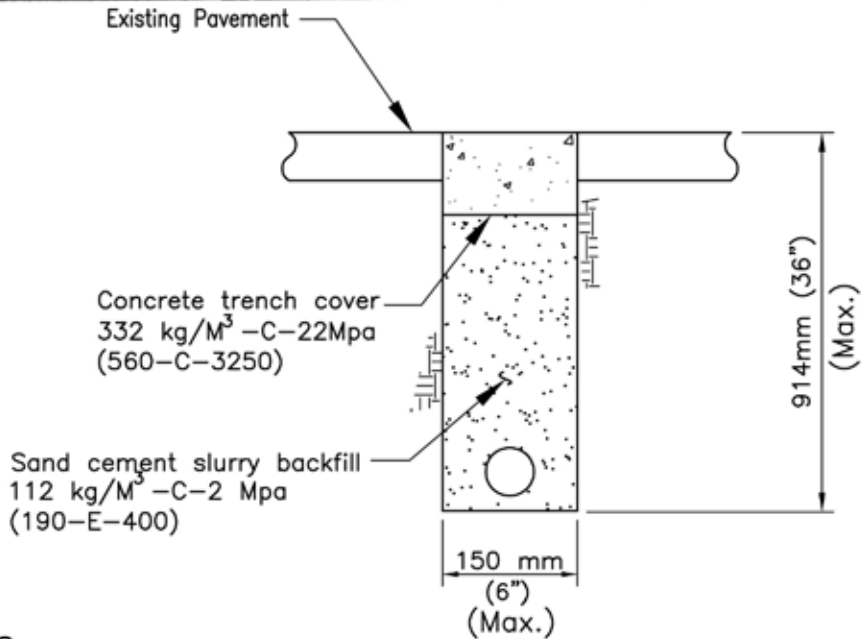
In major or prime arterial streets, an approved set accelerating admixture, such as Calcium Chloride, may be used only with prior approval of the Agency's engineer.

## NARROW TRENCHES TRENCHES & BACKFILLING (C)

Project Title:    SDRSD G-33	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:  <b>8.4 A-4</b>
	Public Works Office		
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES**

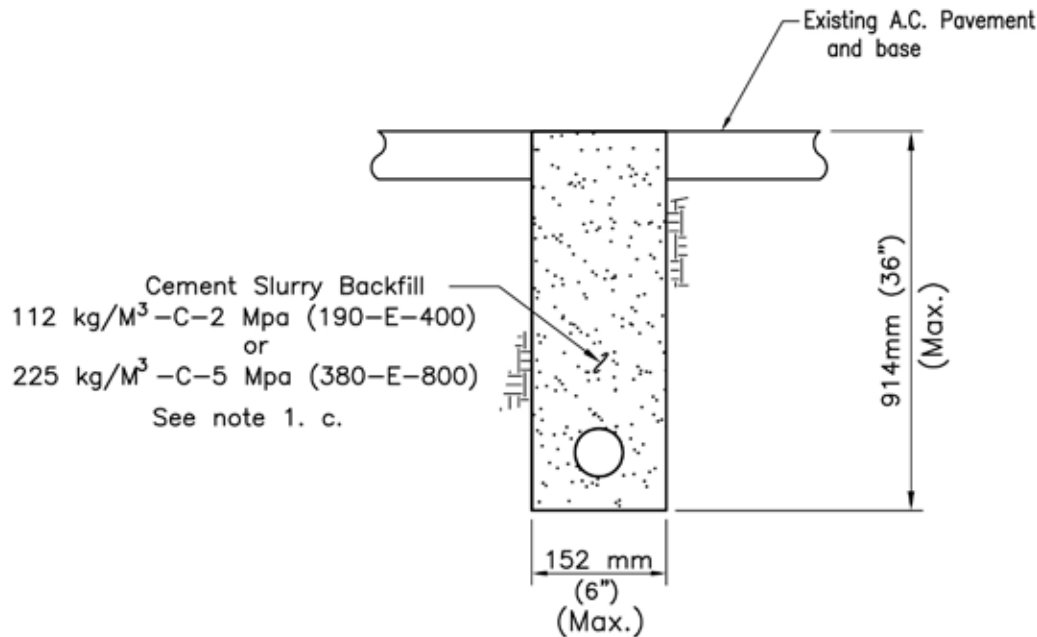
1. Concrete encasement or sand cement slurry backfill shall have a minimum slump of 102mm (4").
2. Sand cement slurry backfill shall be thoroughly consolidated to encase conduits. Tampers or vibrators shall be used.
3. Concrete shall be screeded off to match pavement grade and floated to assure proper edge match.
4. Existing pavement will not require saw cutting when using rockwheel for excavation except when the existing pavement is concrete and trench finish is concrete.
5. All cuts shall be parallel or perpendicular to street centerline, when practical.
6. Allow concrete backfill or concrete trench cover 7 calendar days minimum, but no longer than 30 calendar days to cure and dry before applying any road surface finishes.
7. In major or prime arterial streets, an approved set accelerating admixture, such as calcium chloride, may be used only with prior approval of the Agency's Engineer otherwise the contractor shall protect the trench with the approval of the agency's Engineer.
8. See drawing G-33 for narrow trench resurfacing.
9. See table on drawing M-15 for standard minimum conduit depths.

**NARROW TRENCHES  
TRENCHING & BACKFILLING**

Project Title:  SDRSD M-7	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:  <b>8.4 A-5</b>
	Public Works Office		
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



## NOTES

1. Cement Slurry Backfill:
  - a. Cement slurry backfill shall have a maximum slump of 102 mm (4").
  - b. Cement slurry backfill shall be thoroughly consolidated to encase conduits. Tampers or vibrators shall be used.
  - c. Cement slurry backfill shall be as follows:
 

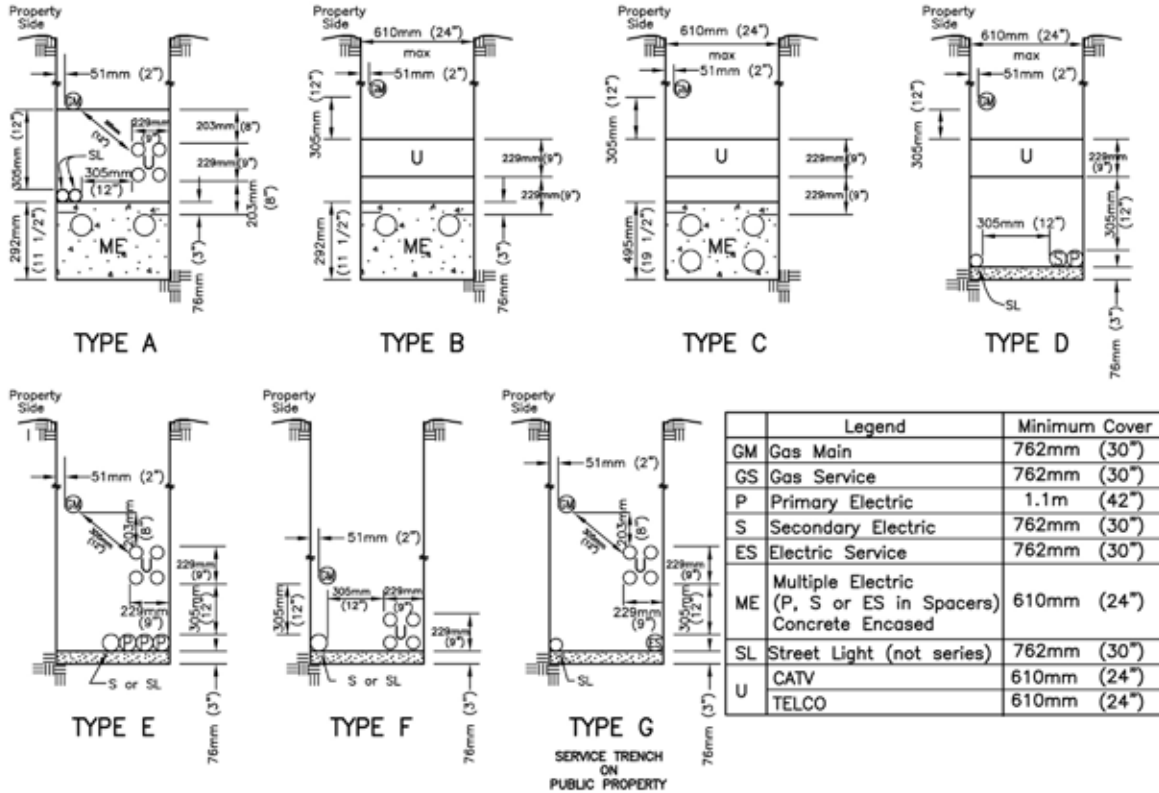
Alleys and local residential streets .....	Class 112 kg/M <sup>3</sup> -C-2 Mpa (190-E-400)
All other streets .....	Class 225 kg/M <sup>3</sup> -C-5 Mpa (380-E-800)
2. Existing A.C. pavement will not require sawcutting when using rockwheel for excavation.
3. All cuts shall be parallel or perpendicular to street centerline, when practical.
4. See drawing G-33 for narrow trench resurfacing.
5. See table on drawing M-15 for standard minimum conduit depths.

## NARROW TRENCHES TRENCHING & BACKFILLING

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:  <b>8.4 A-6</b>
	Public Works Office		
	SDRSD M-7A		

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES**

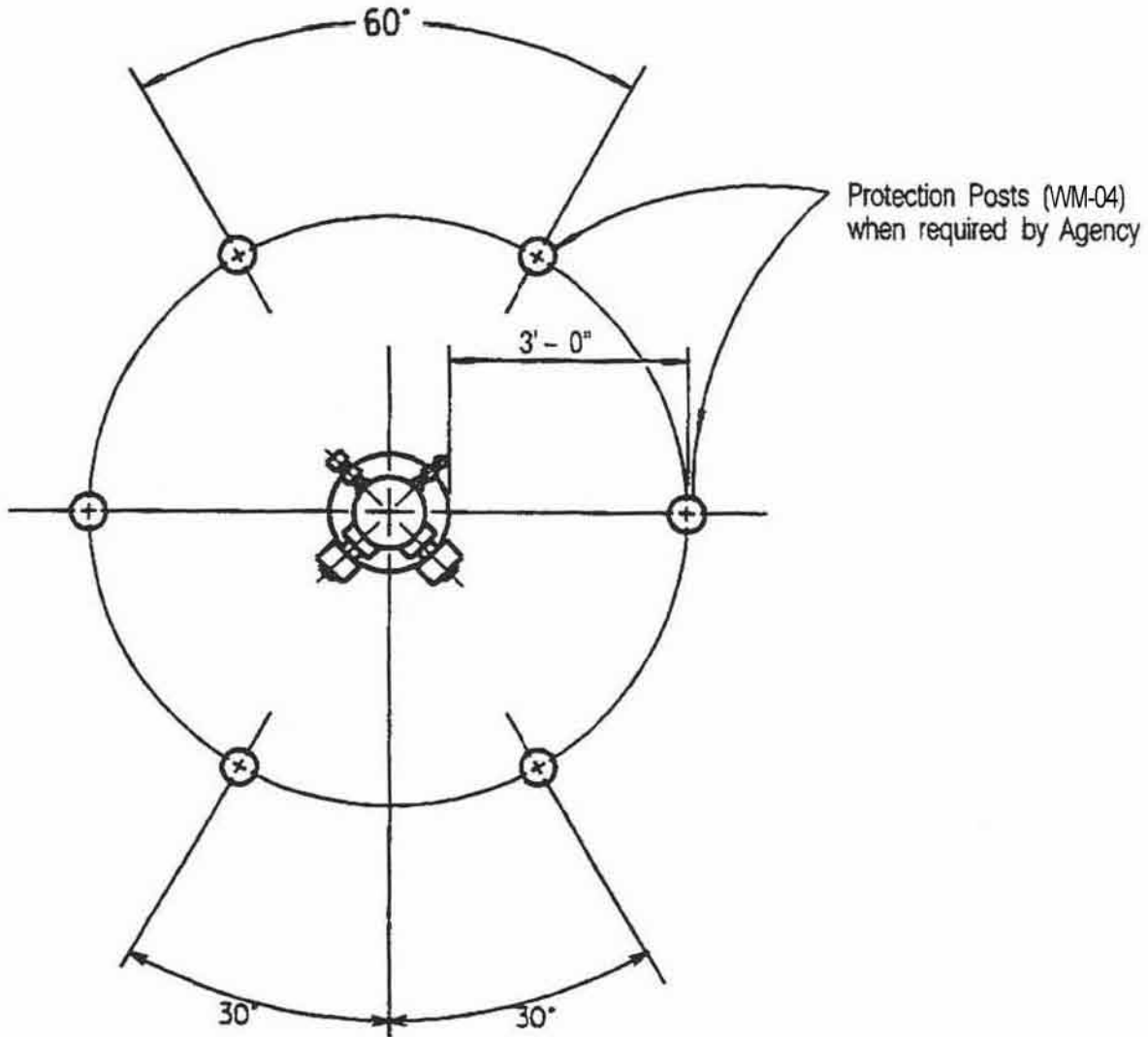
1. All dimensions are typical unless otherwise noted.
2. Generally utilities are to be installed under the applicable specifications for the particular utility and the specifications of the owner Agency.
3. The location of utilities as shown by the Standard Drawing shall in no way violate existing codes or regulations applicable to individual utilities.
4. Installation of sewer and/or water utilities are not permitted in the joint trenches shown above.
5. Minimum depth of gas pipe may, subject to gas company inspectors approval, be reduced to 610mm (24") where necessary to clear structure crossings.
6. Depth and width of trench varies.
7. CATV main or trunk line conduit required along all streets, except cul-de-sac streets less than 305m (1,000') in length which may be served by feeder lines only.
8. CATV 38mm (1-1/2") feeder conduit shall run across streets with each power service line and capped at edge of sidewalk.
9. All CATV terminals and conduits shall be terminated at generally accepted locations and marked. A map shall be filed with the appropriate agency showing the locations of the CATV system.
10. In no case shall CATV conduits be placed within 305mm (12") of gas lines, also conduits are not to be placed directly over gas lines.
11. Catv conduit may be placed with the TELCO conduit provided the TELCO minimum depth is held.

**JOINT TRENCH LOCATIONS**

Project Title:  SDRSD M-15	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:  <b>8.4 A-7</b>
	Public Works Office		
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



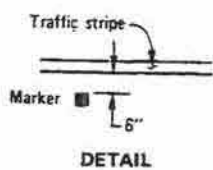
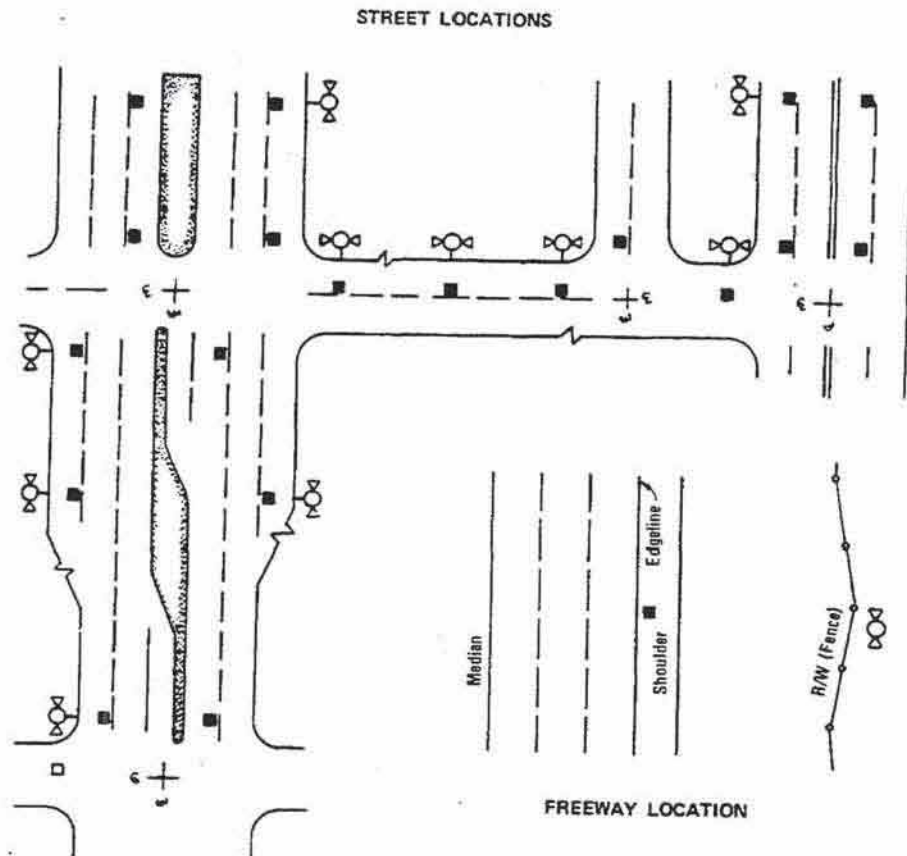
## FIRE HYDRANT PROTECTION POST

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.4 B-1</b>
			Scale:



# BEAP Standard Detail Sheet

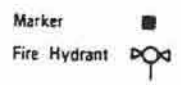
Public Works Office Marine Corps Base Camp Pendleton



**MARKERS** - Shall be blue 2-way stimonite lifelife 88AB or equal.  
**ADHESIVE** - An ample amount of two part ( A&B ) epoxy or equal.  
**SURFACES** - Clean and dry prior to installation per manufacturer's recommendations. Install markers with reflective surfaces facing oncoming vehicles and offset 2" from lane lines toward fire hydrant.

- NOTES:**
1. Fire Department will provide location(s) for all markers in PRD's, Commercial Lots and other areas outside of Public Right of Way.
  2. Markers must be installed at all new and relocated hydrants and within all resurfacing projects.
  3. For streets without lane lines or streets with raised pavement markers and no painted lane lines, install markers 6" from centerline or existing markers.

**LEGEND ON PLANS**

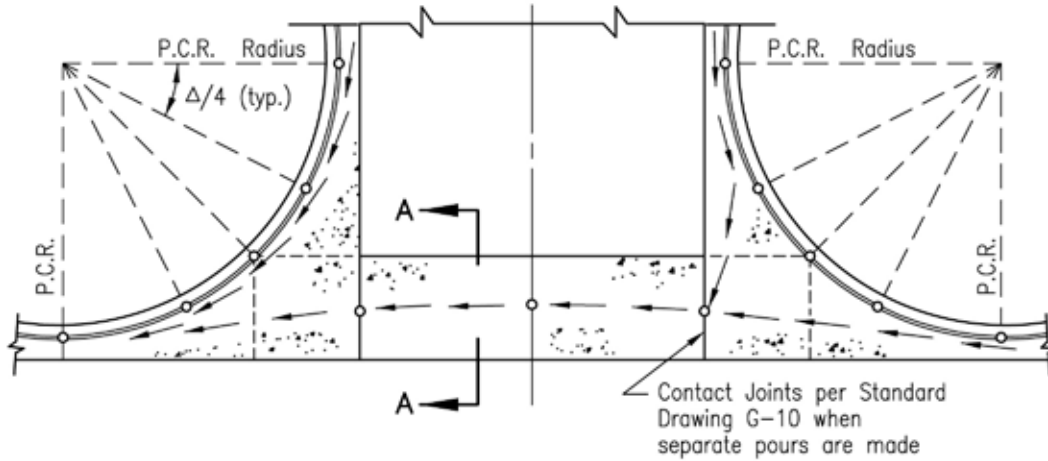


## FIRE HYDRANT MARKERS

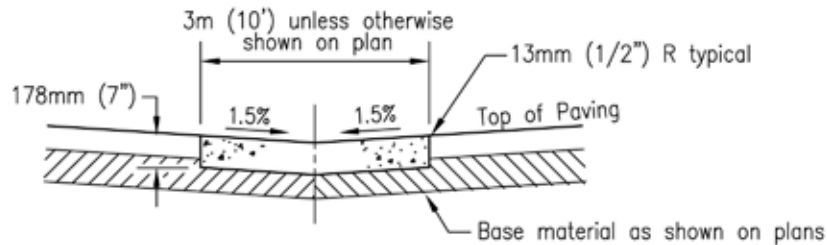
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.4 B-2</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



PLAN



SECTION A-A

**NOTES:**

1. Concrete shall be 332kg/m<sup>3</sup>-C-22-MPa (560-C-3250).
2. ----- = Weakened plane joints.
3. ← → = Typical flowlines.
4. ○ = Elevations to be shown on plans.
5. Return segments to be 178mm (7") Thick.
6. Curb between P.C.R.s. shall be considered as part of cross gutter.
7. In all cases subgrade shall be compacted to 95% min. relative compaction to depth of 305mm (12").

LEGEND ON PLANS

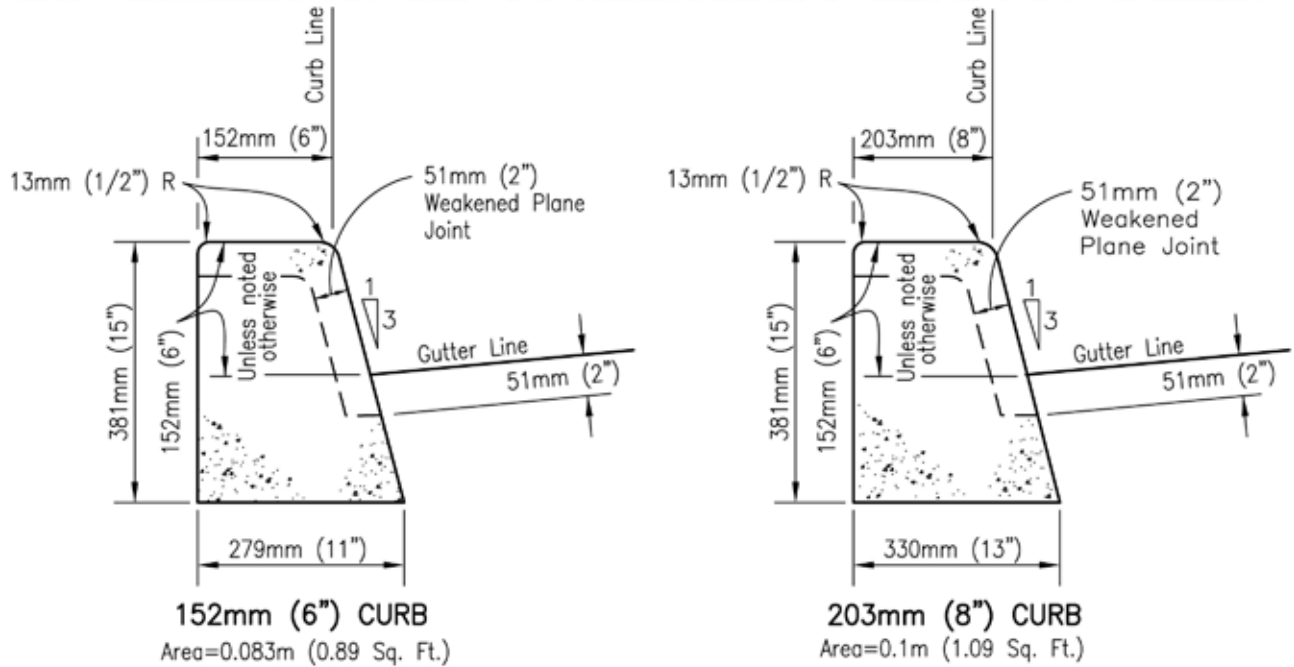


**CROSS GUTTER**

Project Title:  SDRSD G-12	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.4 C-1</b>
			Scale:

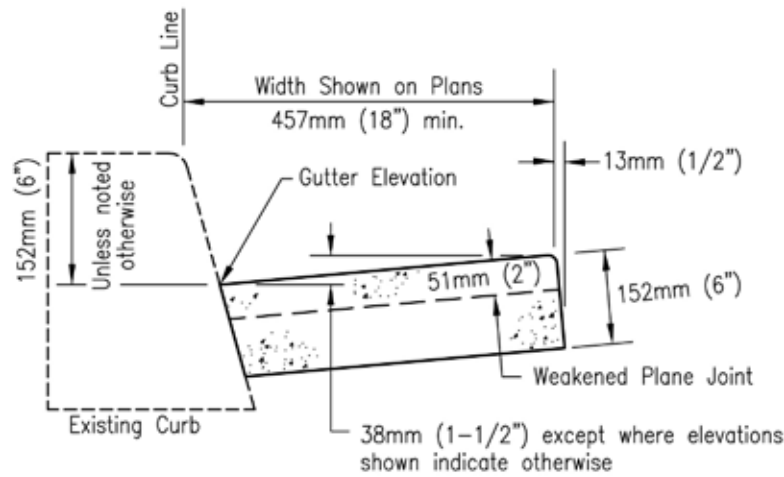
# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**152mm (6") CURB**  
Area=0.083m (0.89 Sq. Ft.)

**203mm (8") CURB**  
Area=0.1m (1.09 Sq. Ft.)



## GUTTER

### NOTES:

1. Concrete shall be 308kg/M<sup>3</sup>-C-17-MPa (520-C-2500).
2. See Standard Drawings G-9 and G-10 for joint details.
3. Slope top of curb 6.35mm (1/4") per foot toward street.

### LEGEND ON PLANS

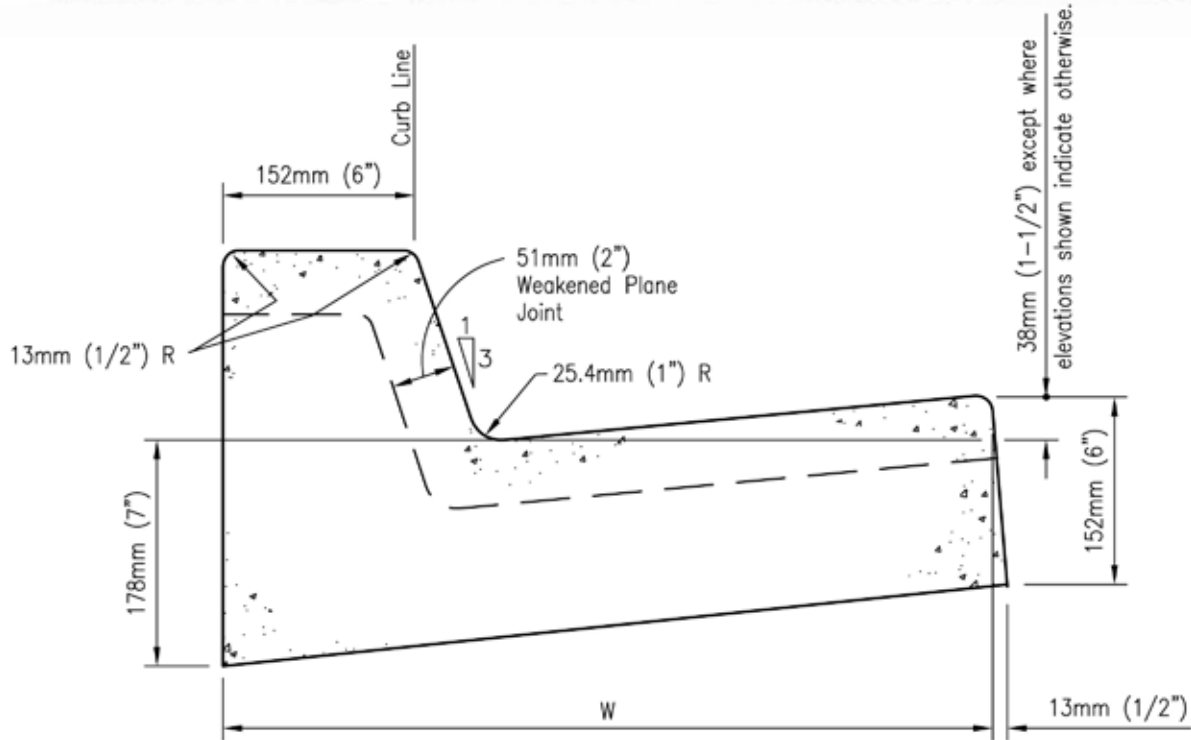
### CURBS AND GUTTER - SEPARATE

152mm (6") curb

Project Title:  SDRSD G-1	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:  <b>8.4 C-2</b>
	Public Works Office		
Scale:			

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



TYPE	W	*AREA
G	610mm (24")	0.124sq. m (1.34sq ft.)
H	762mm (30")	0.150sq. m (1.61sq ft.)

\* with 152mm (6") Curb Face

**NOTES:**

- Concrete shall be 308kg/M<sup>3</sup>-C-17-MPa (520-C-2500).
- See Standard Drawings G-9 and G-10 for joint details.
- Slope top of curb 6.35mm (1/4") per foot toward street.

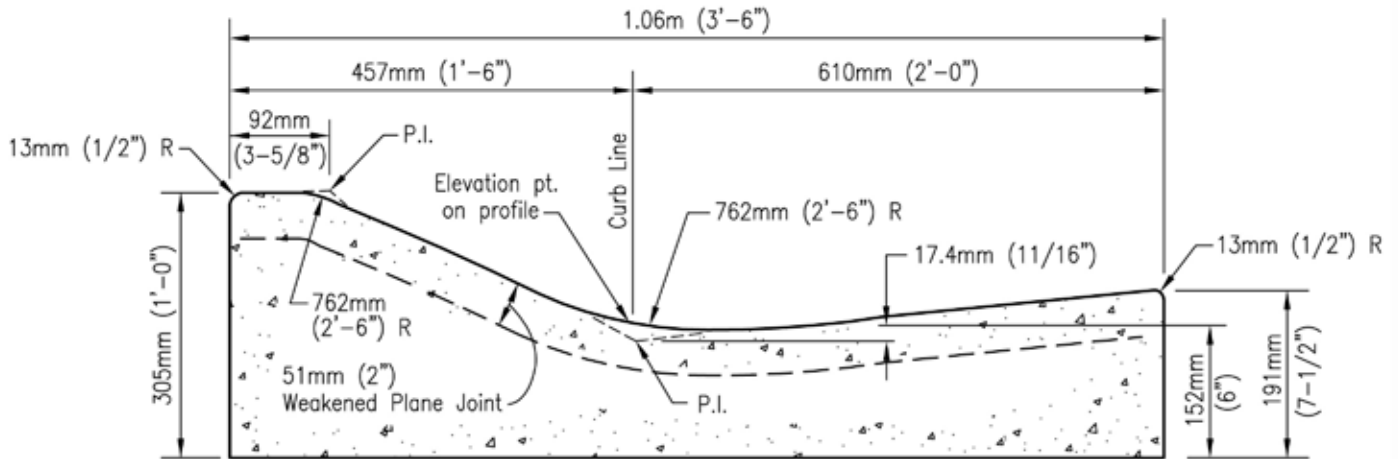
LEGEND ON PLANS

**CURB AND GUTTER - COMBINED**

Project Title:  SDRSD G-2	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.4 C-3</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**CURB AREA**  
(0.21 sq. m (2.23 sq. ft.))

**NOTES:**

1. Transition to type G curb at all curb returns, except where sidewalk ramps are provided, and at all cul-de-sacs with drainage structures.
2. Concrete shall be 308kg/M<sup>3</sup>-C-17-MPa (520-C-2500).
3. See Standard Drawings G-9 and G-10 for joint details.

LEGEND ON PLANS

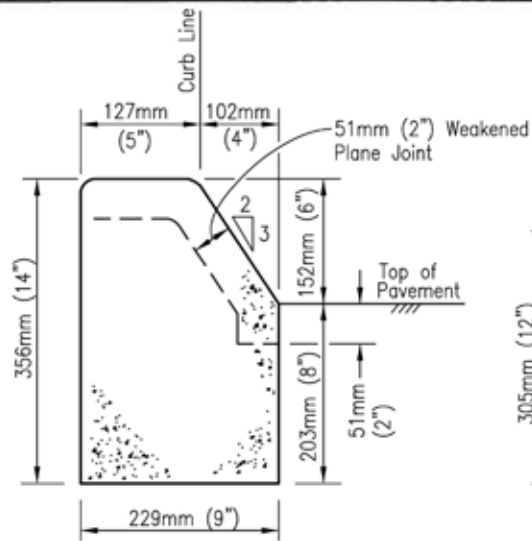


## CURB AND GUTTER - ROLLED

Project Title:  SDRSD G-4	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.4 C-4</b>
			Scale:

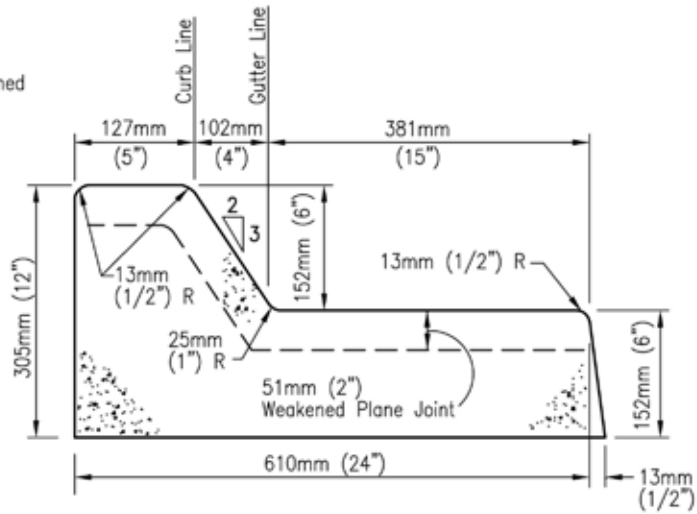
# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



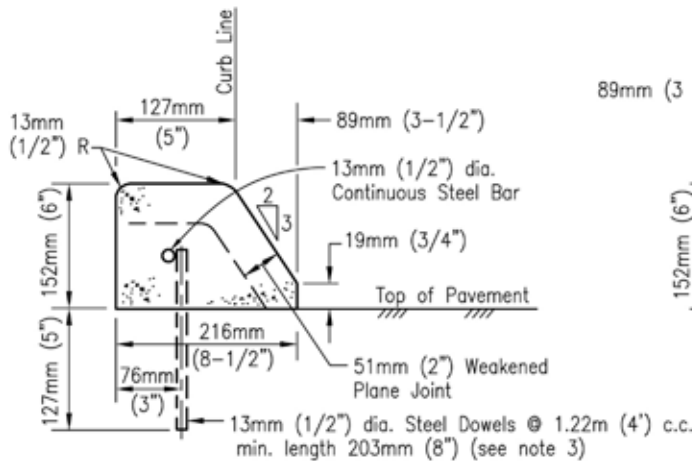
**B-1**

Area=0.073 sq. m (0.79 Sq.Ft.)



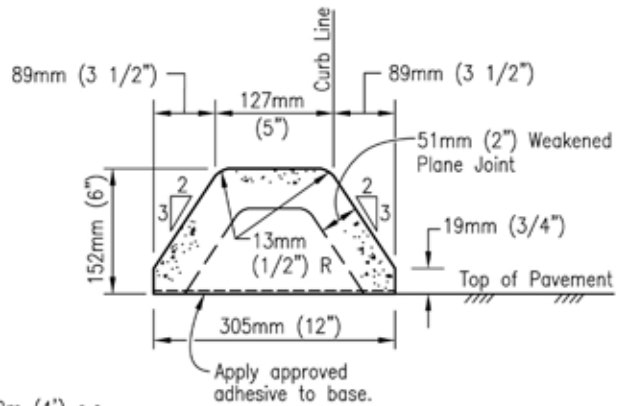
**B-2**

Area=0.120 sq. m (1.29 Sq.Ft.)



**B-3**

Area=0.027 sq. m (0.29 Sq.Ft.)



**B-4**

Area=0.033 sq. m (0.35 Sq.Ft.)

**NOTES:**

- Concrete shall be 308kg/m<sup>3</sup>-C-17-MPa (520-C-2500).
- See Standard Drawings G-9 and G-10 for joint details.
- Extruded type B-3 curb shall be anchored to existing pavement by placing steel dowels and reinforcing steel as shown or by using an approved adhesive.

**LEGEND ON PLANS**

Type B-2 Curb and Gutter

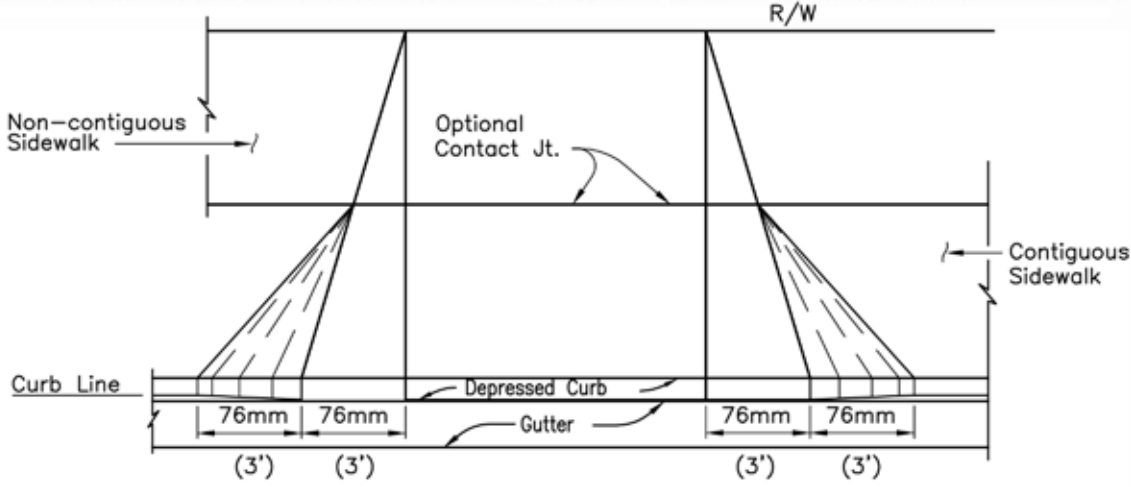
Type B-1, B-3, B-4 Curb

**CURBS AND GUTTER - MEDIANS**

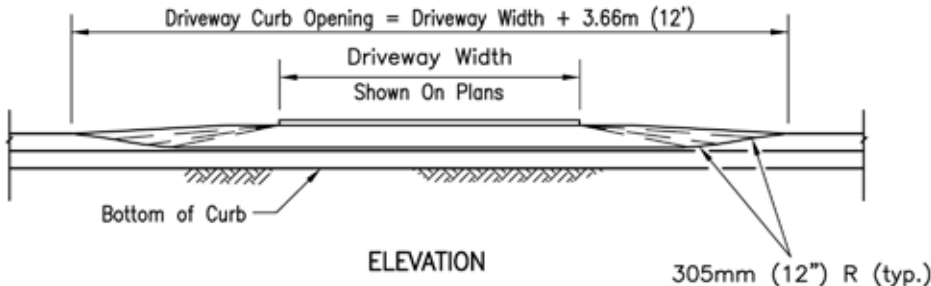
Project Title:  SDRSD G-6	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:  <b>8.4 C-5</b>
	Public Works Office		
			Scale:

# BEAP Standard Detail Sheet

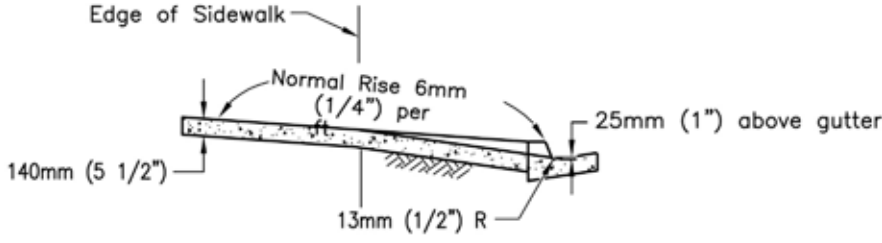
Public Works Office Marine Corps Base Camp Pendleton



PLAN



ELEVATION



SECTION

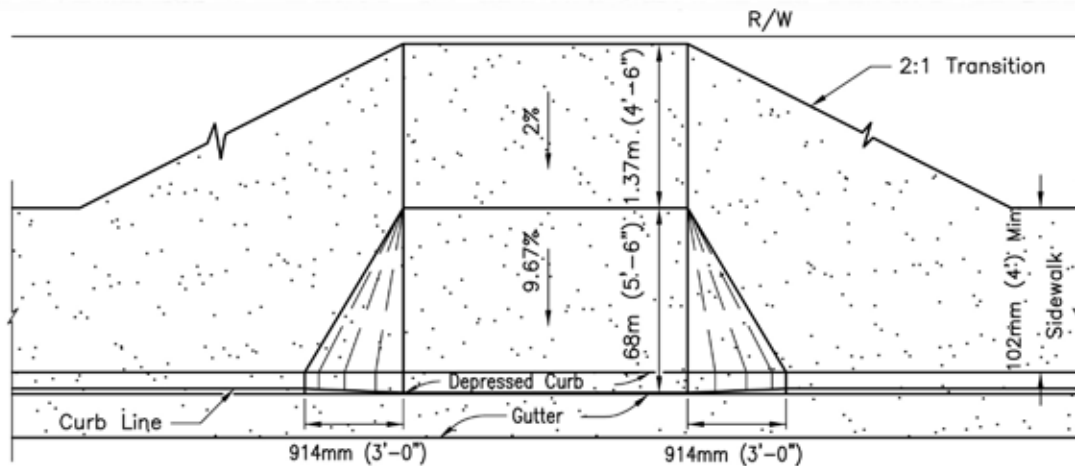
- NOTES:
1. No concrete shall be placed until forms and subgrade are inspected by the Agency.
  2. Concrete shall be 308 kg/M<sup>3</sup> C 17 Mpa (520-C-2500.)
  3. See Standard Drawings G-15 and G-16 for width and location requirements
  4. Driveway ramp to extend to 3m (10') from curb face or to property line whichever is less. (For commercial driveways only)
  5. See Standard Drawings G-2 and G-10 for curb and joint details.

## CONCRETE DRIVEWAY / COMMERCIAL ALTERNATE

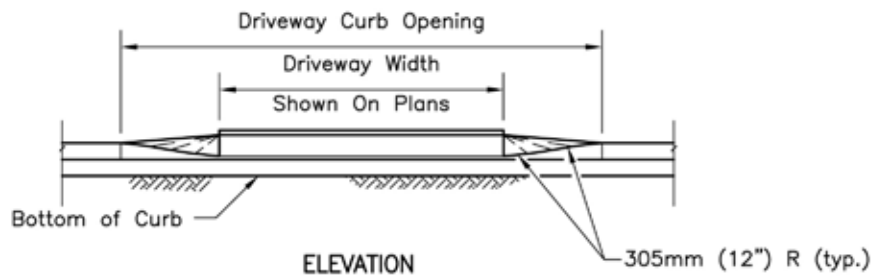
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.4 D-1</b>
SDRSD G-26			Scale:

# BEAP Standard Detail Sheet

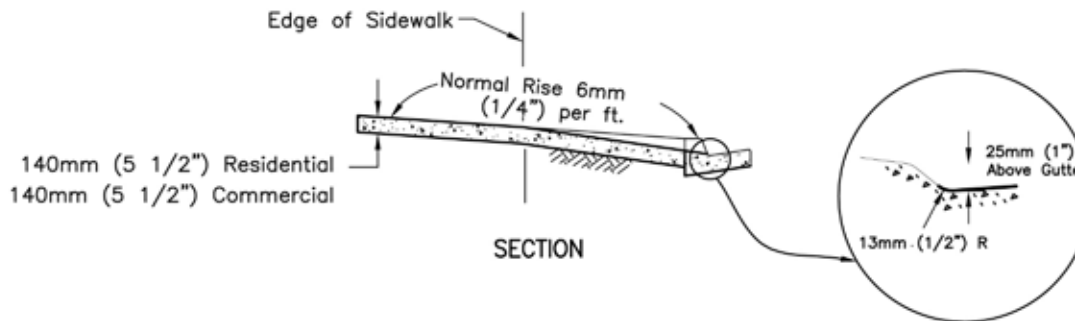
Public Works Office Marine Corps Base Camp Pendleton



PLAN



ELEVATION



SECTION

**NOTES:**

1. No concrete shall be placed until forms and subgrade are inspected by the Agency.
2. Concrete shall be 332 kg/M<sup>3</sup>C 22 Mpa (520-C-2500).
3. See Standard Drawings G-15 and G-16 for width and location requirements.
4. Driveway ramp to extend to 3m (10') from curb face or to property line whichever is less. (For commercial driveways only)
5. See Standard Drawings G-2 and G-10 for curb and joint details.

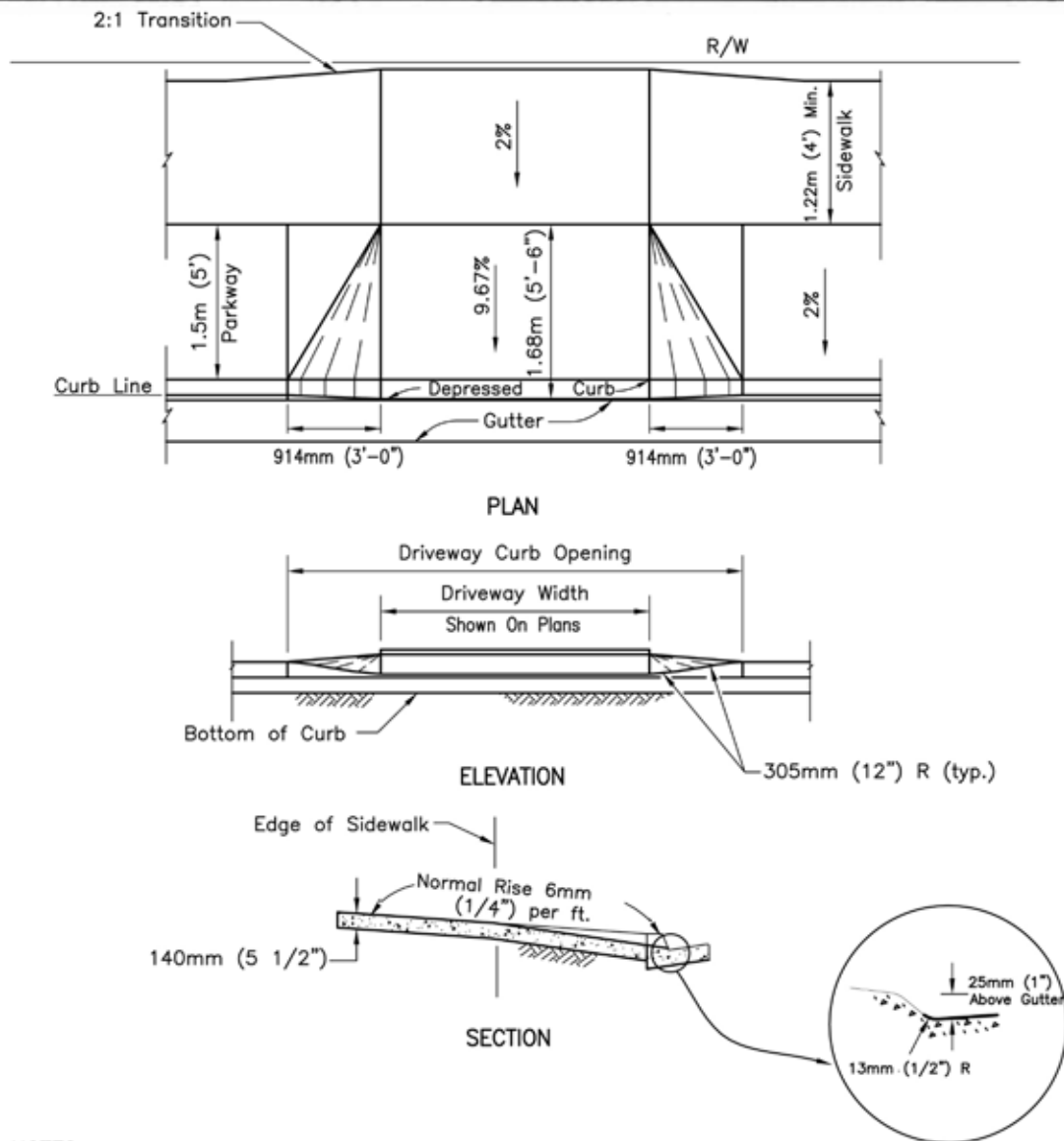
## CONCRETE DRIVEWAY (CONTIGUOUS SIDEWALK)

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.4 D-2</b>
SDRSD G-14A			Scale:



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES:**

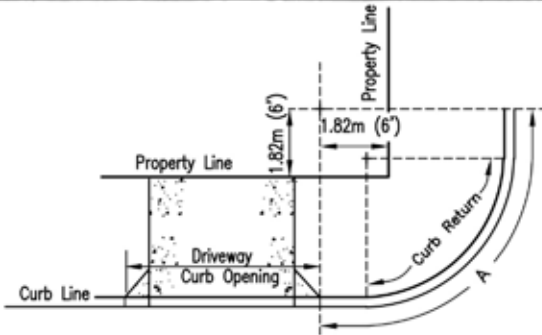
1. No concrete shall be placed until forms and subgrade are inspected by the Agency.
2. Concrete shall be 308 kg/M<sup>3</sup> C 17 Mpa (520-C-2500).
3. See Standard Drawings G-15 and G-16 for width and location requirements.
4. Driveway ramp to extend to 3m (10') from curb face or to property line whichever is less. (For commercial driveways only)
5. See Standard Drawings G-2 and G-10 for curb and joint details.

## CONCRETE DRIVEWAY (NON-CONTIGUOUS SIDEWALK)

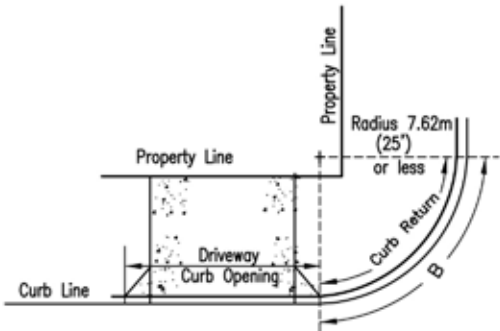
Project Title:    SDRSD G-14B	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:  <b>8.4 D-3</b>
	Public Works Office		
			Scale:

# BEAP Standard Detail Sheet

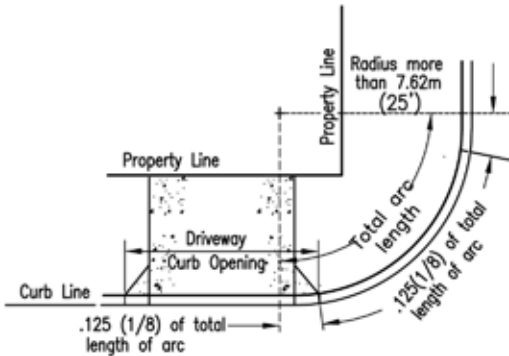
Public Works Office Marine Corps Base Camp Pendleton



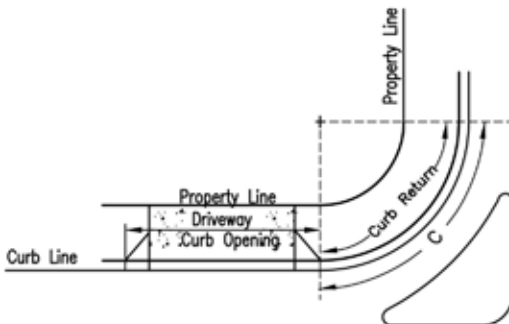
**REQUIREMENT 1**  
No portion of any curb opening shall be permitted within 6' of the intersection of the prolonged property lines and the curb as shown by arc A.



**REQUIREMENT 2**  
No portion of any curb opening shall be permitted in the curb return where the radius of curb is 7.62m (25') or less, as shown by arc B.



**REQUIREMENT 3**  
On all curb returns where the radius is more than 25', curb openings may encroach upon each end of the return a distance equal to 12 1/2% or .125 (1/8) of the total length of the arc on the curb return, thus leaving at least 75% of the length of arc on the return face free from driveway encroachment, provided Requirement 1 is met.



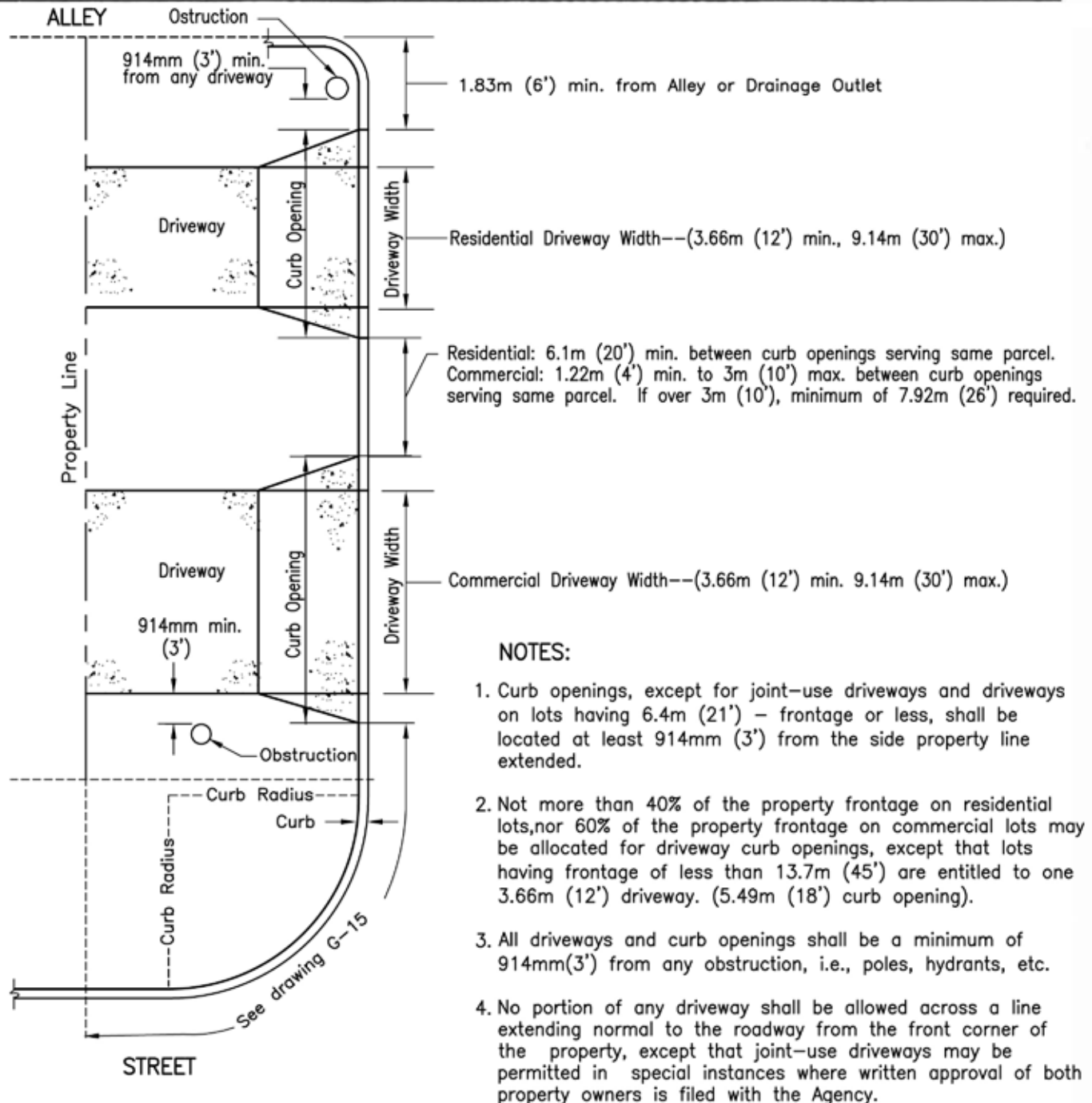
**REQUIREMENT 4**  
No portion of any curb opening shall be permitted in the curb return where a separate turning movement is provided, as shown by arc C.

## DRIVEWAY LOCATION - ADJACENT TO CURB RETURNS AND STREET LINES

Project Title:  SDRSD G-15	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.4 D-4</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES:**

1. Curb openings, except for joint-use driveways and driveways on lots having 6.4m (21') - frontage or less, shall be located at least 914mm (3') from the side property line extended.
2. Not more than 40% of the property frontage on residential lots, nor 60% of the property frontage on commercial lots may be allocated for driveway curb openings, except that lots having frontage of less than 13.7m (45') are entitled to one 3.66m (12') driveway. (5.49m (18') curb opening).
3. All driveways and curb openings shall be a minimum of 914mm(3') from any obstruction, i.e., poles, hydrants, etc.
4. No portion of any driveway shall be allowed across a line extending normal to the roadway from the front corner of the property, except that joint-use driveways may be permitted in special instances where written approval of both property owners is filed with the Agency.

**DRIVEWAY LOCATION AND WIDTH REQUIREMENTS**

Project Title:  SDRSD G-16	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.4 D-5</b>
			Scale:

# BEAP Standard Detail Sheet

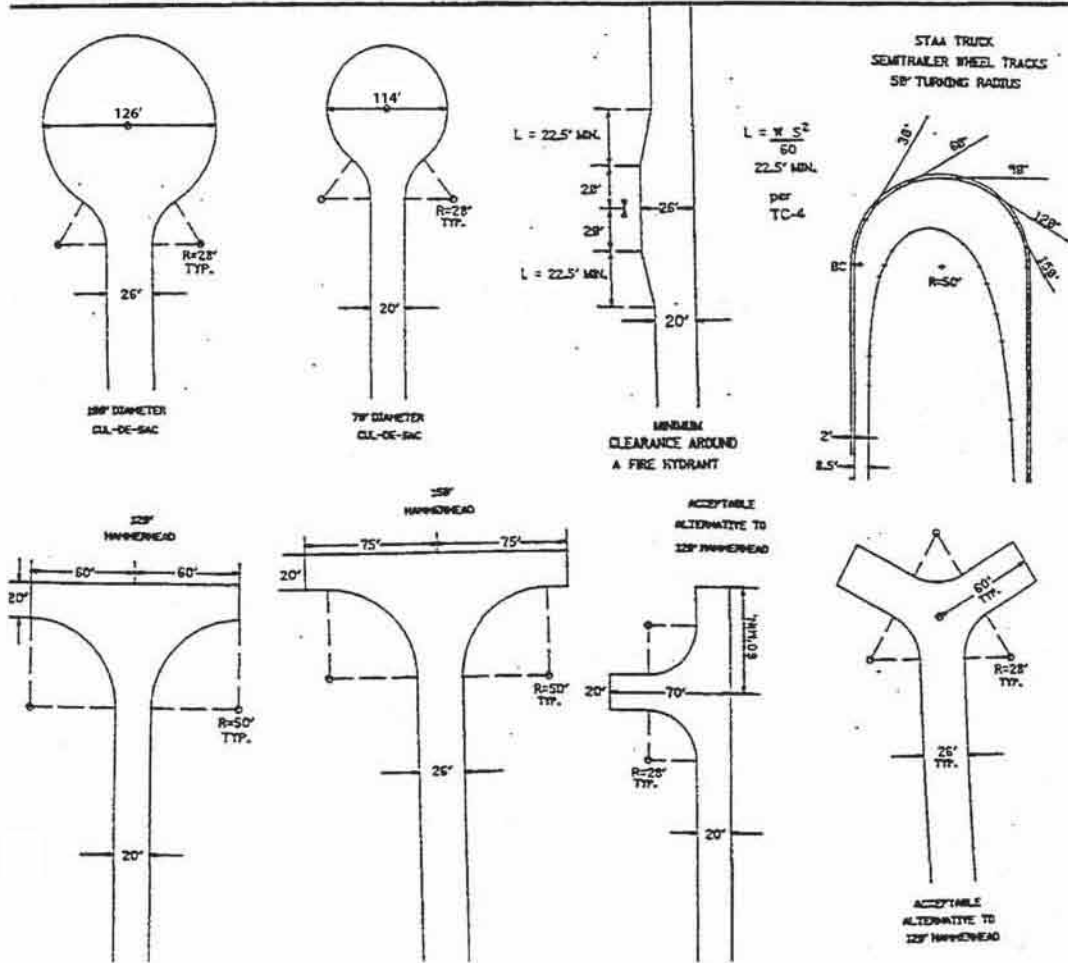
Public Works Office Marine Corps Base Camp Pendleton

## REQUIREMENTS FOR DEAD-END AND LOOPED ACCESSWAYS

LENGTH	WIDTH	TURNAROUND REQUIRED
0-150'	20'	None Required
150'-300'	20'	114' Diameter Cul-de-sac 120' Hammerhead
300'-750'	26'	126' Diameter Cul-de-sac 150' Hammerhead

OVER 750' - SPECIAL APPROVAL REQUIRED

Curves and topographical conditions could alter the requirements for turnarounds and the width of accessways. When access road is serving more than 100 units two means of access are required.



## FIRE PREVENTION BUREAU POLICY

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number: <b>8.4 E-1</b>
	Public Works Office		
			Scale:

## **8.5 Parking Details and Standards**

This section provides reference to specific products in the form of product sheets. This reference is for establishing the design type or style and is not an endorsement for the product manufacturer. Substitutions for “like” or similar products are acceptable. All product types must be approved by the AC/S Facilities prior to installation.

8.5 A-1 Disabled Parking Stall(s)

8.5 A-2 Diagonal Disabled Parking Stall(s)

8.5 A-3 Pavement Symbol - Disabled Parking

8.5 A-4 Disabled Parking Sign

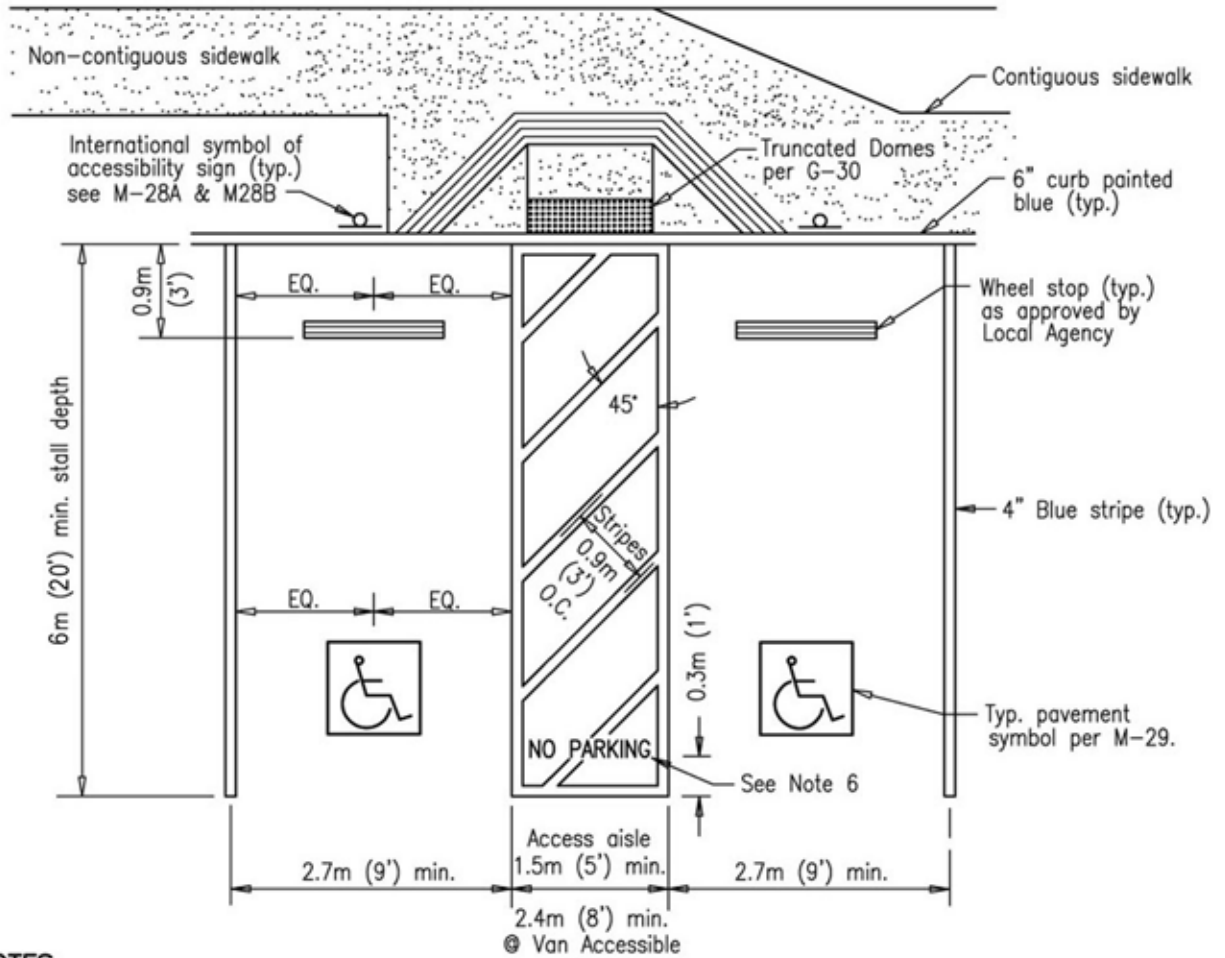
8.5 A-5 Van Accessible Sign For Disabled Parking  
Space

8.5 A-6 Wheel Stop and Temporary Parking Lot



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES:**

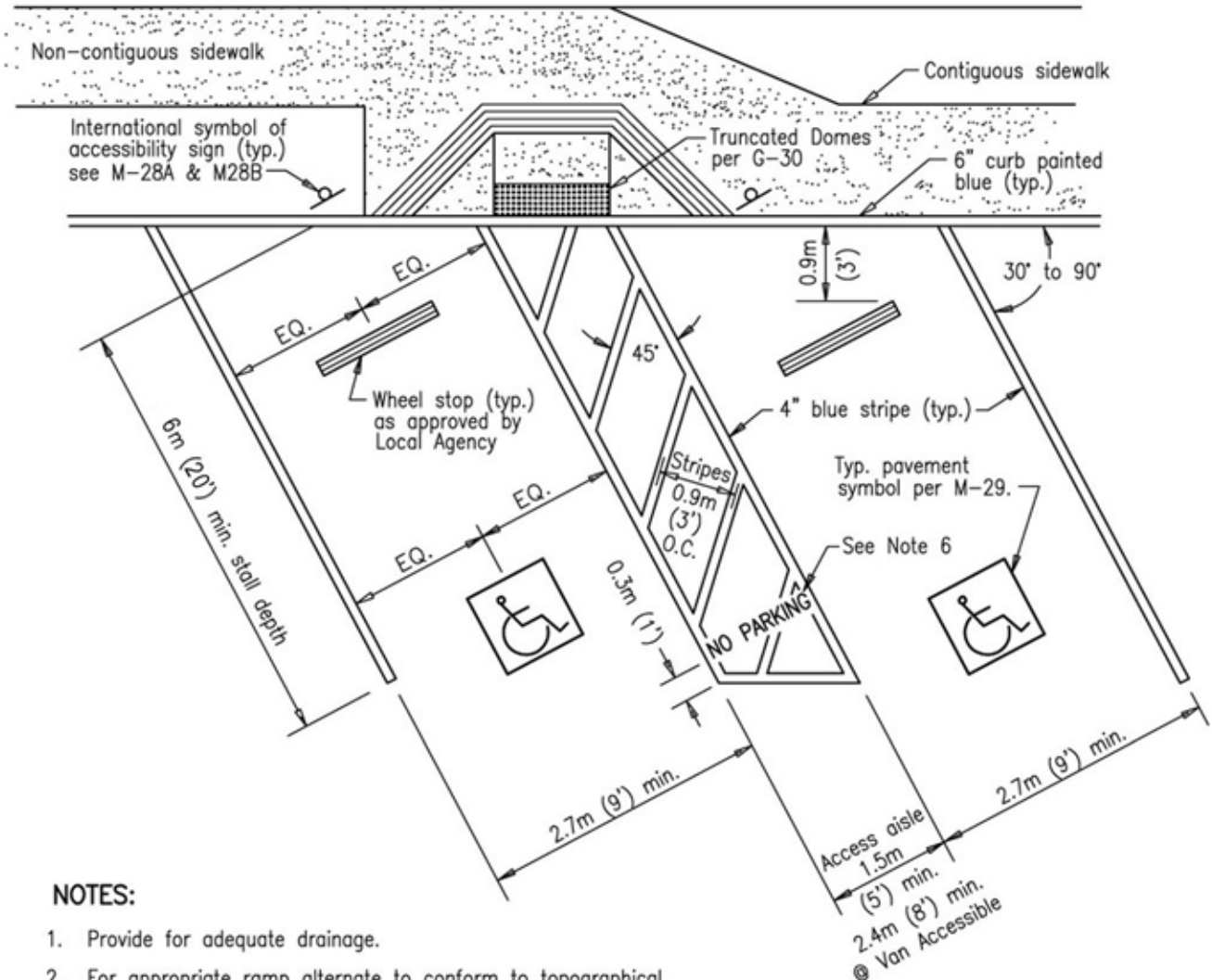
1. Provide for adequate drainage.
2. For appropriate ramp alternate to conform to topographical conditions, see standard drawings G-27 through G-30.
3. Blue color should match color No. 15090 in the Federal Standard 595a as specified in Section 522(b)2.
4. If only one accessible parking stall is going to be provided, the access aisle shall be 2.4m (8') (van accessible) and located on the passenger side.
5. Sidewalk cross slope shall not exceed 2.0%.
6. "NO PARKING" 12" high stencil marking, reflective white over blue stripes.

**DISABLED PARKING STALL(S)**

Project Title:  SDRSD M-27A	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:  <b>8.5 A-1</b>
	Public Works Office		
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES:**

1. Provide for adequate drainage.
2. For appropriate ramp alternate to conform to topographical conditions, see standard drawings G-27 through G-30.
3. Blue color should match color No. 15090 in the Federal Standard 595a as specified in Section 522(b)2.
4. If only one accessible parking stall is going to be provided, the access aisle shall be 2.4m (8') (van accessible) and located on the passenger side.
5. Sidewalk cross slope shall not exceed 2.0%.
6. "NO PARKING" 12" high stencil marking, reflective white over blue stripes.

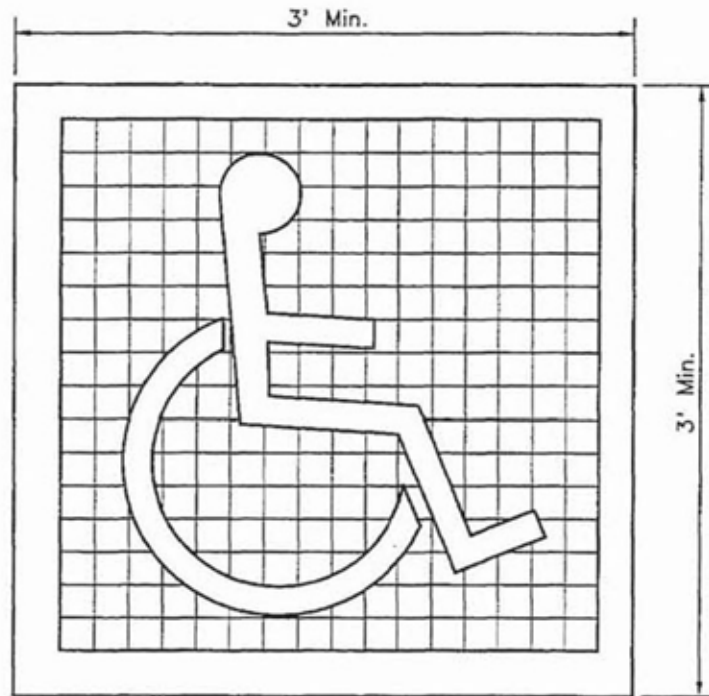
## DIAGONAL DISABLED PARKING STALL(S)

Project Title:  SDRSD M-27B	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.5 A-2</b>
			Scale:



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



(a) SYMBOL PROPORTIONS



INTERNATIONAL SYMBOL OF ACCESSIBILITY

(b) DISPLAY CONDITIONS

NOTES:

1. Pavement symbol shall be painted white on a blue background.
2. Blue color should match color No. 15090 in the Federal Standard 595a as specified in Section 522(b)2.

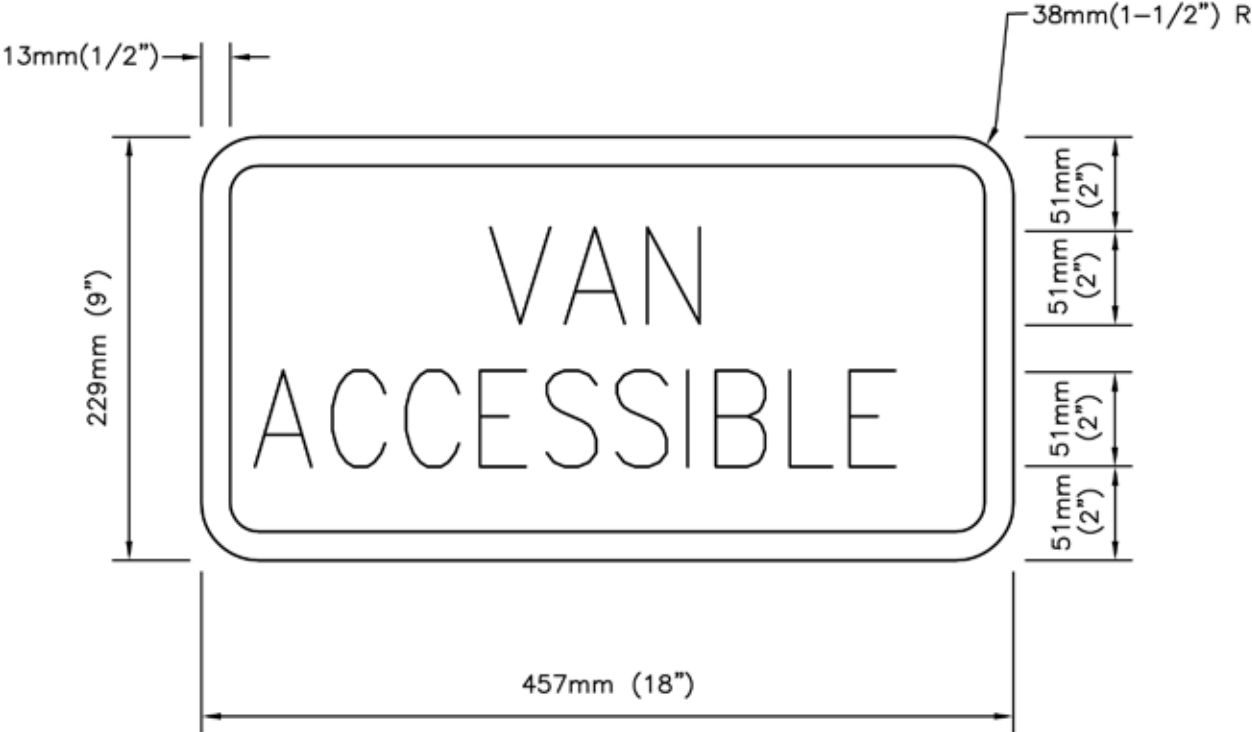
## PAVEMENT SYMBOL - DISABLED PARKING

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.5 A-3</b>
SDRSD M-29			Scale:



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES**

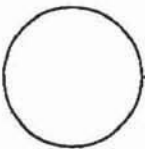
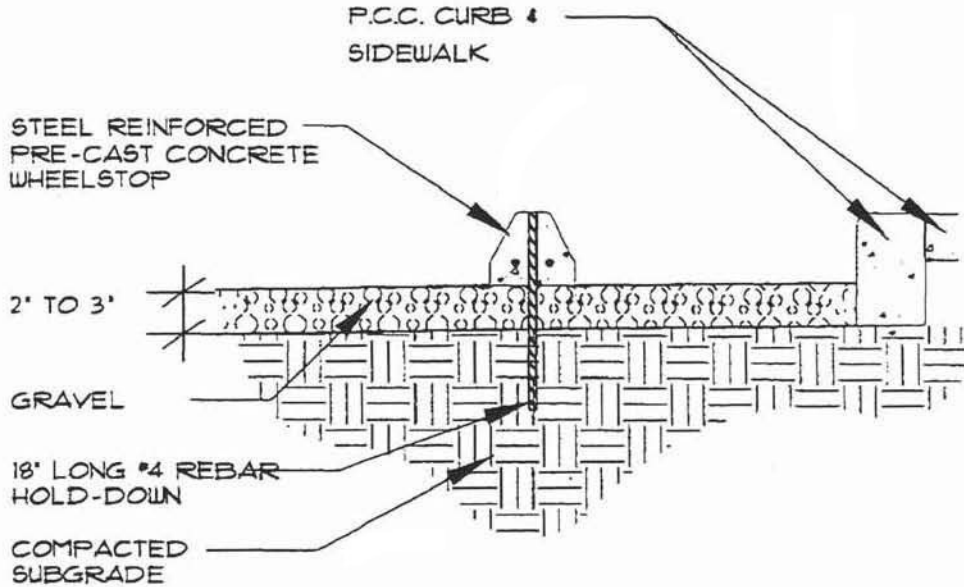
1. Sign shall be constructed of aluminum, 1.57mm (0.062") minimum thickness.
2. Colors: Background—Reflectorized Blue  
 Border and letters— Reflectorized White  
 Blue color shall match color No. 15090 in the  
 Federal Standard 595a as specified in Section 522(b)2.

**VAN ACCESSIBLE SIGN  
FOR DISABLED PARKING SPACE**

Project Title:  SDRSD M-28B	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.5 A-5</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



## WHEEL STOP AND TEMPORARY PARKING LOT

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.5 A-6</b>

## 8.6 Pedestrian Circulation Details and Standards

This section provides reference to specific products in the form of product sheets. This reference is for establishing the design type or style and is not an endorsement for the product manufacturer. Substitutions for “like” or similar products are acceptable. All product types must be approved by the AC/S Facilities prior to installation.

8.6 A-1 Pedestrian Ramp-Types A and B  
(New Construction)

8.6 A-2 Pedestrian Ramp-Types A-1 and B-1  
(For Existing Sidewalk)

8.6 A-3 Pedestrian Ramp-Type C  
(For Existing Sidewalk)

8.6 A-4 Truncated Domes

8.6 A-5 Pedestrian Ramp-Type D

8.6 A-6 General Notes for Curb Ramps

8.6 B-1 Concrete Joint Details

8.6 B-2 Sidewalk Joint Locations

8.6 C-1 Sidewalk-Typical Sections

8.6 C-2 New Pavement at Existing Walk Pavement

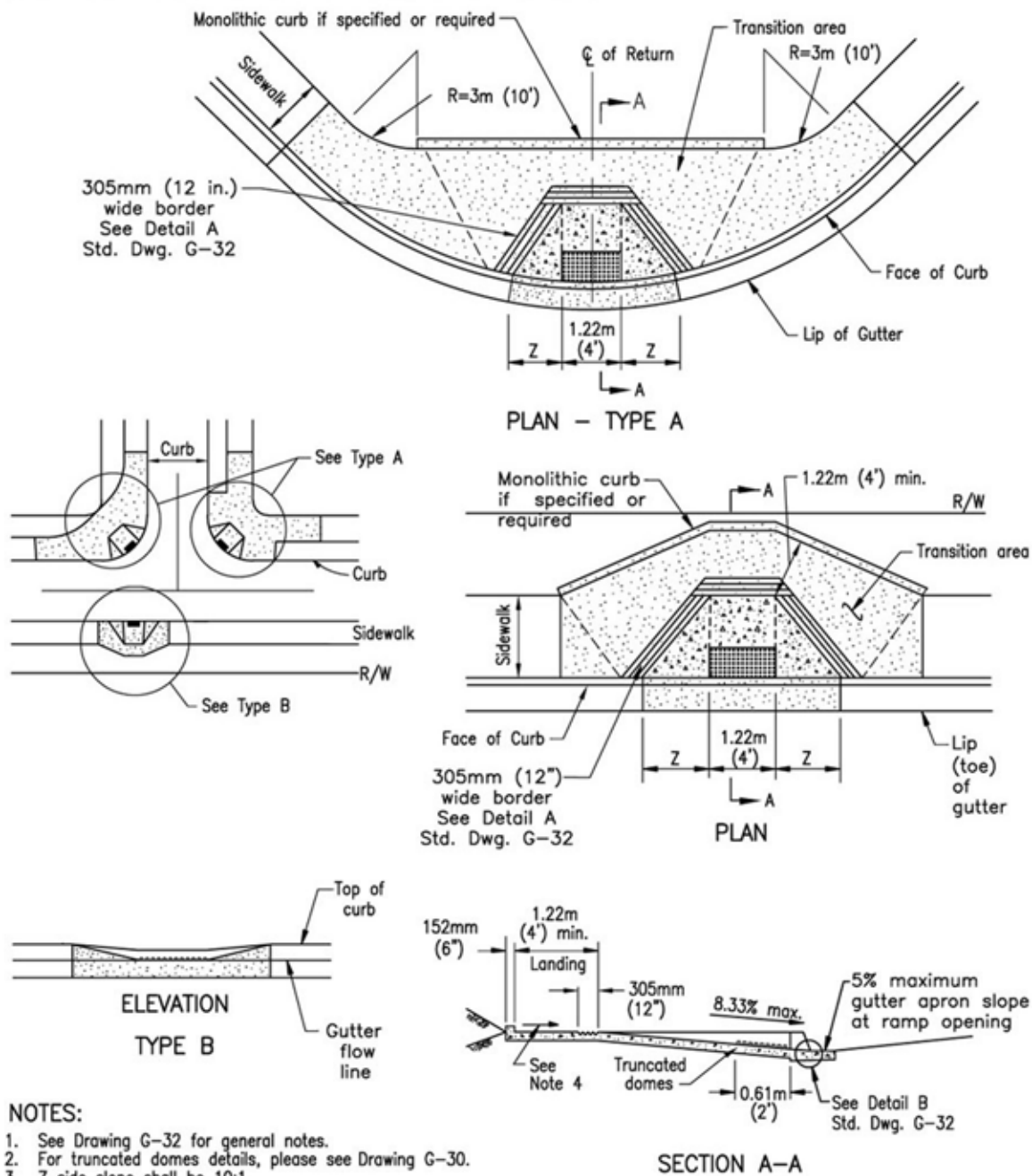
8.6 D-1 Concrete Steps with Railing

8.6 D-2 Pedestrian Protective Railing Details No.1



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton

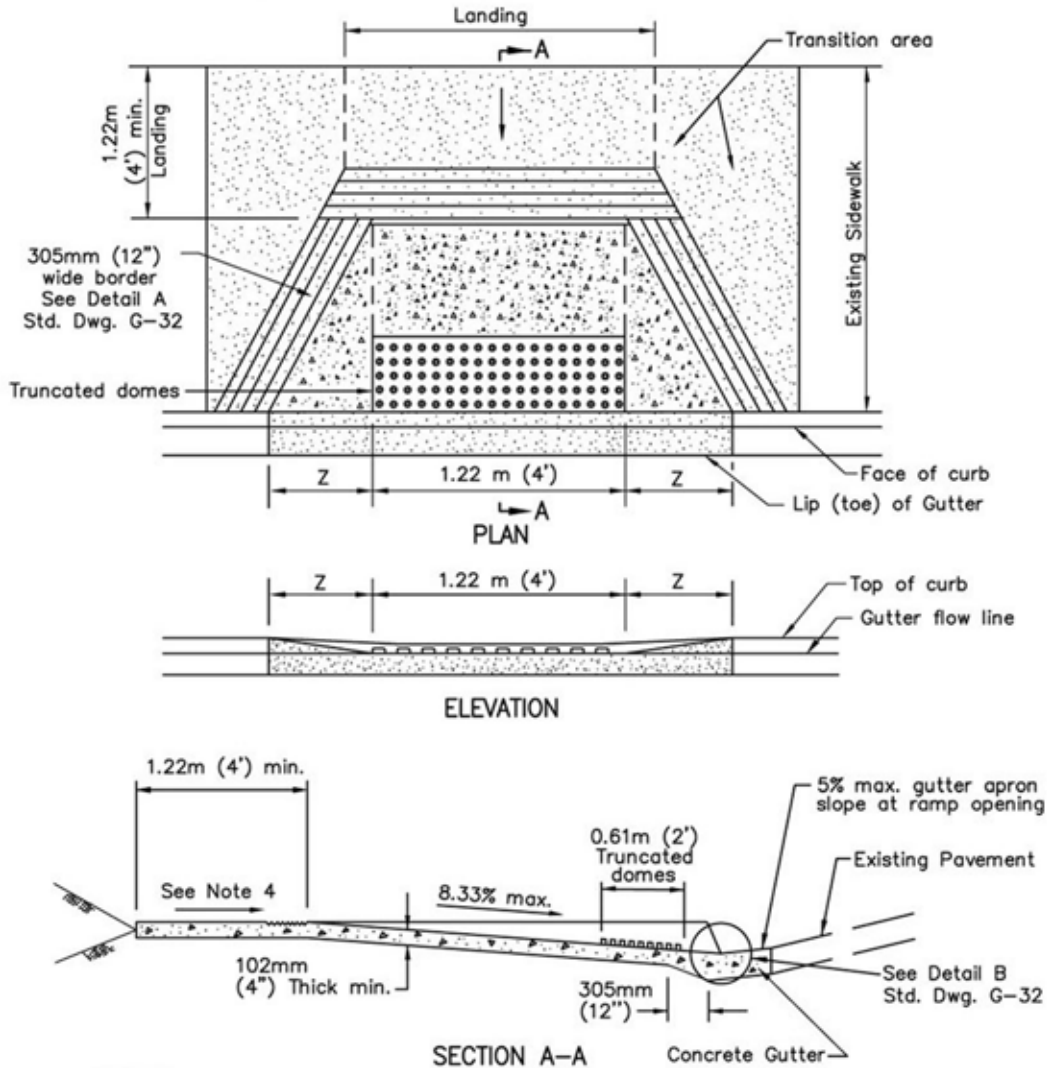


## CURB RAMP - TYPES A AND B (NEW CONSTRUCTION)

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.6 A-1</b>
SDRSD G-27			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES:**

1. See Standard Drawing G-32 for general notes.
2. Type A-1 is a designation for ramp at curb return.
3. Type B-1 is a designation for ramp at straight curb (shown above).
4. Landing cross slope shall be 2.0% max. in both directions.
5. For truncated domes details, please see Standard Drawing G-30.
6. Z side slope shall be 10:1.

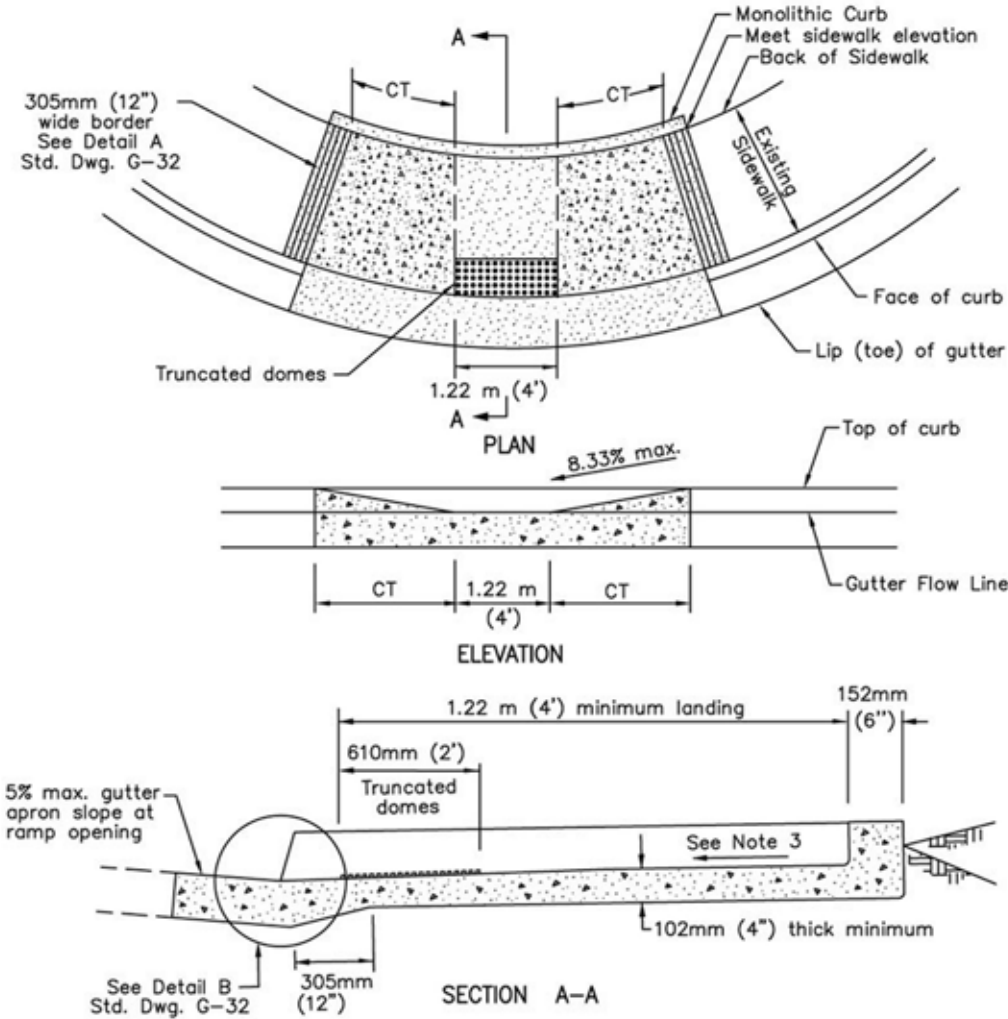
**CURB RAMP – TYPES A-1 AND B-1  
(FOR EXISTING SIDEWALK)**

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.6 A-2</b>
SDRSD G-28			Scale:



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



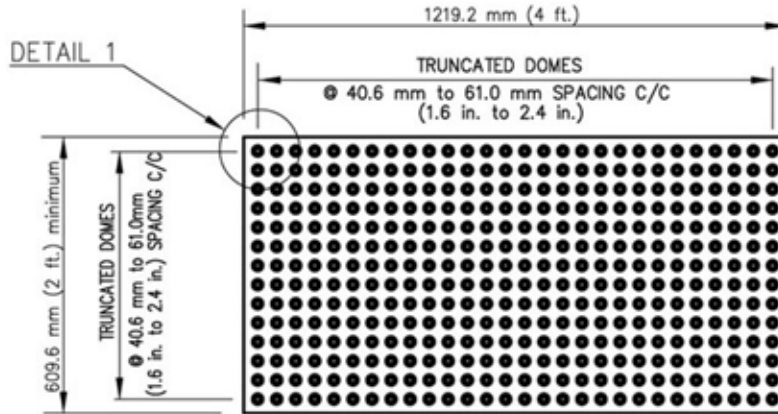
- NOTES:**
1. Type C ramps are only to be used to mitigate existing conditions where inadequate right of way exists to use Standard Drawing G-28, and are not to be used in new construction.
  2. See Standard Drawing G-32 for general notes.
  3. Landing cross slope shall be 2.0% max. in both directions.
  4. For truncated domes, please see Standard Drawing G-30.
  5. CT Curve Transition slope shall be 8.33% maximum.

CURB RAMP - TYPE C  
(FOR EXISTING SIDEWALK)

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number: <b>8.6 A-3</b>
	Public Works Office		
SDRSD G-29			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton

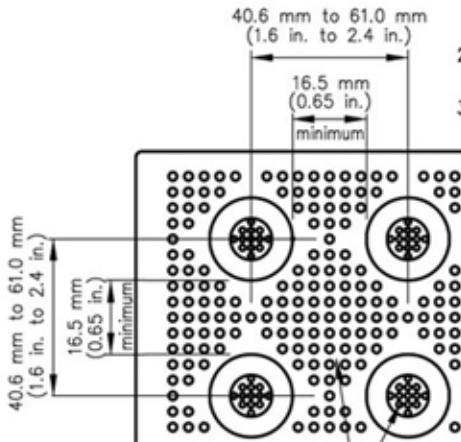


PLAN - TILE

NOT TO SCALE

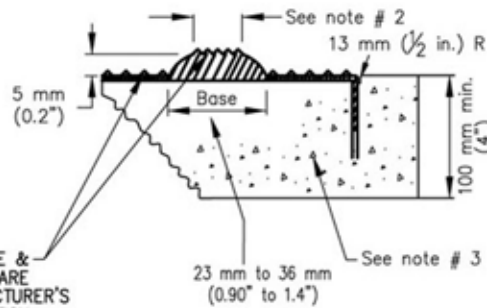
NOTES

1. Detectable warning surface color shall be yellow conforming to federal standards 595B Table IV, color No. 33538, or as specified by the agency. Color shall be homogeneous throughout the tile.
2. Truncated dome top diameter of 50% of the base diameter minimum to 65% of the base diameter maximum.
3. During and after the tile installation and the concrete curing stage, it is imperative that there is no walking, leaning or external forces placed on the tile to rock the tile, causing a void between the underside of tile and concrete.



DETAIL 1  
NOT TO SCALE

NOTE:  
PATTERN, SIZE &  
ORIENTATION ARE  
PER MANUFACTURER'S  
RECOMMENDATION

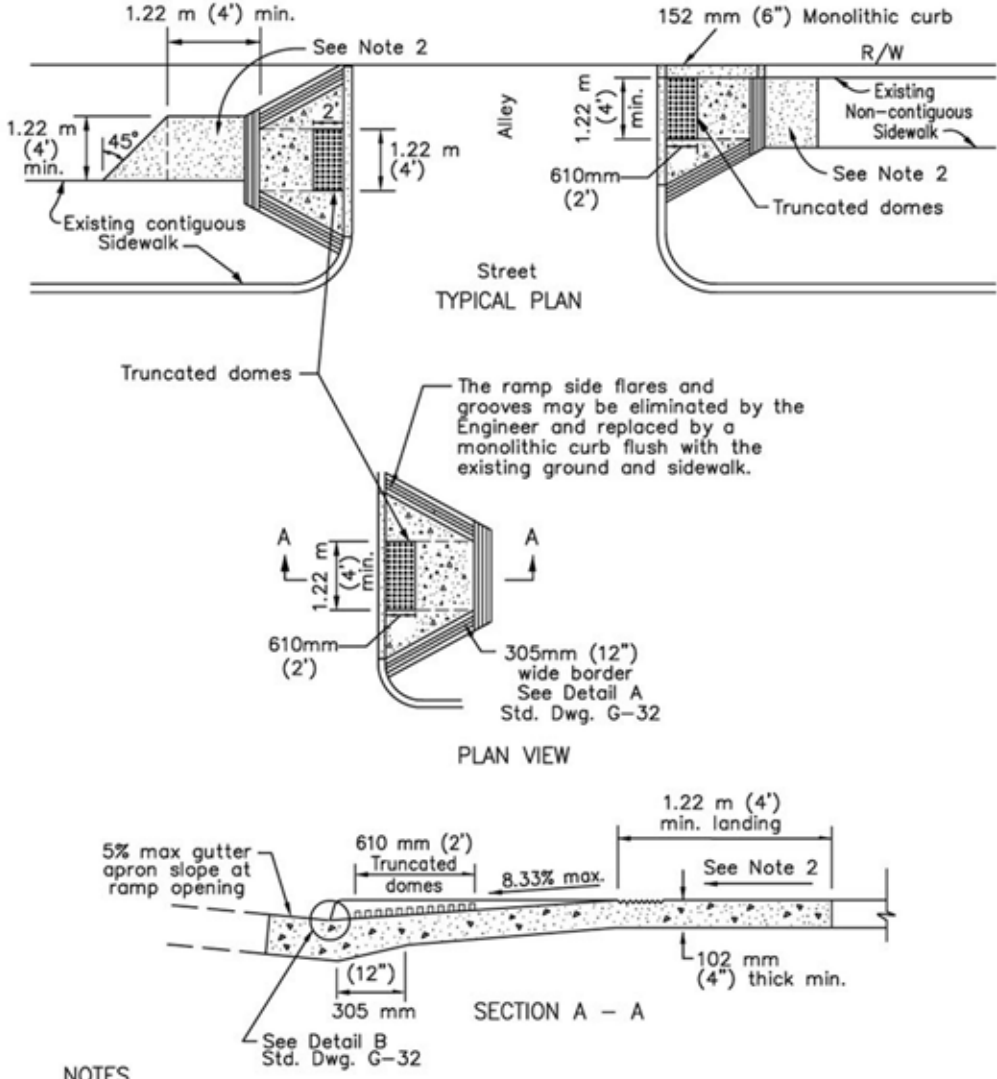


## TRUNCATED DOMES

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.6 A-4</b>
SDRSD G-30			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



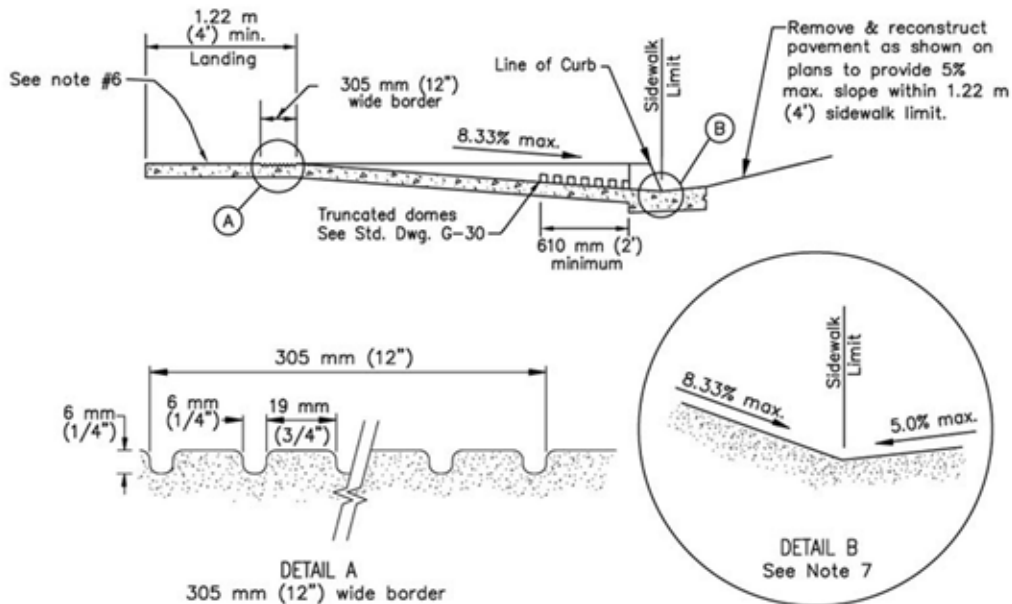
- NOTES**
1. See Standard Drawing G-32 for general notes.
  2. Landing cross slope shall be 2.0% max. in both directions.
  3. For truncated domes details, see Standard Drawing G-30.

CURB RAMP - TYPE D

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.6 A-5</b>
SDRSD G-31			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES**

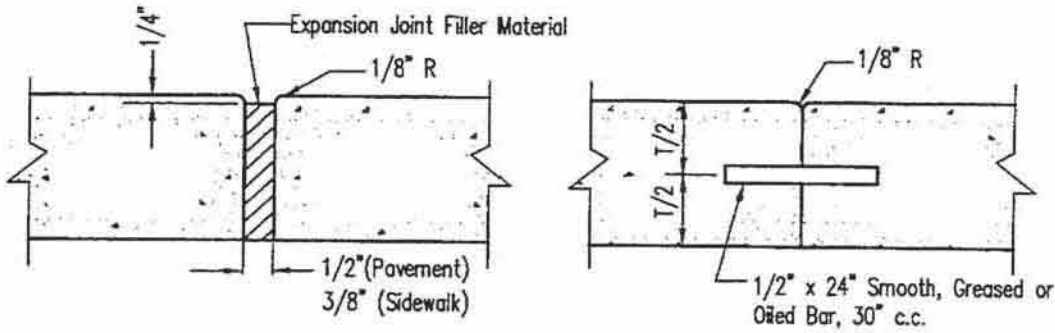
1. The removal of existing concrete curb, gutter, sidewalk and pavement for pedestrian ramp installation shall comply with Standard Drawing G-11. For construction of Curb Ramps on existing sidewalks, removal of additional sidewalk maybe required to comply with ADA requirements to meet the existing grade.
2. Areas shown thus: shall have a medium to heavy broom texture finish, perpendicular to the axis of the ramp.
3. Areas shown thus: are the minimum required for a complete ramp installation and shall be concrete class 520-C-2500.
4. If obstructions such as inlets, utility poles, fire hydrants, etc., are encountered, the ramp locations may be adjusted upon the approval of the Resident Engineer, or Local Agency Inspector.
5. The ramp slopes will be measured relative to the sidewalk slope. Adjoining slope beyond ramp shall not exceed 20:1 (5%).
6. Landing cross slope shall be 2.0% max. in both directions.
7. All projects (new construction & alteration), the lower end of 1.22 m (48 in.) width of the ramp shall be flush and free of abrupt changes between the bottom of the ramp and the street pavement surface.
8. There shall be no more than 203.2 mm (8 in.) separation between the face of the curb and any given point on the nearest edge of the truncated domes.

GENERAL NOTES FOR CURB RAMPS

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		8.6 A-6
SDRSD G-32			Scale:

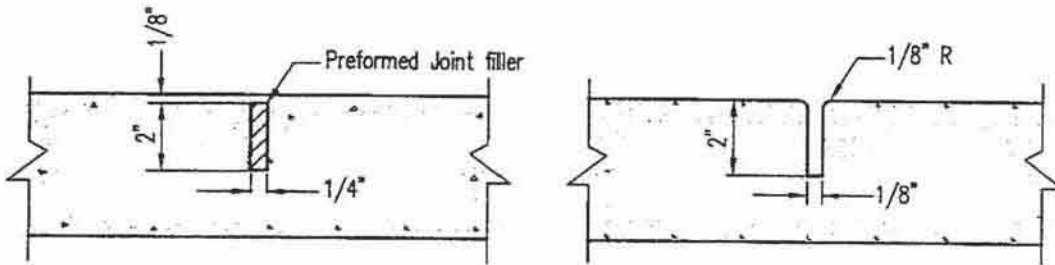
# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



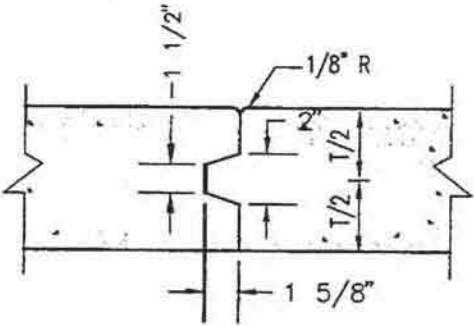
EXPANSION JOINT

CONTACT JOINT



WEAKENED PLANE JOINT  
GUTTER AND PAVEMENT

WEAKENED PLANE JOINT  
CURB AND SIDEWALK



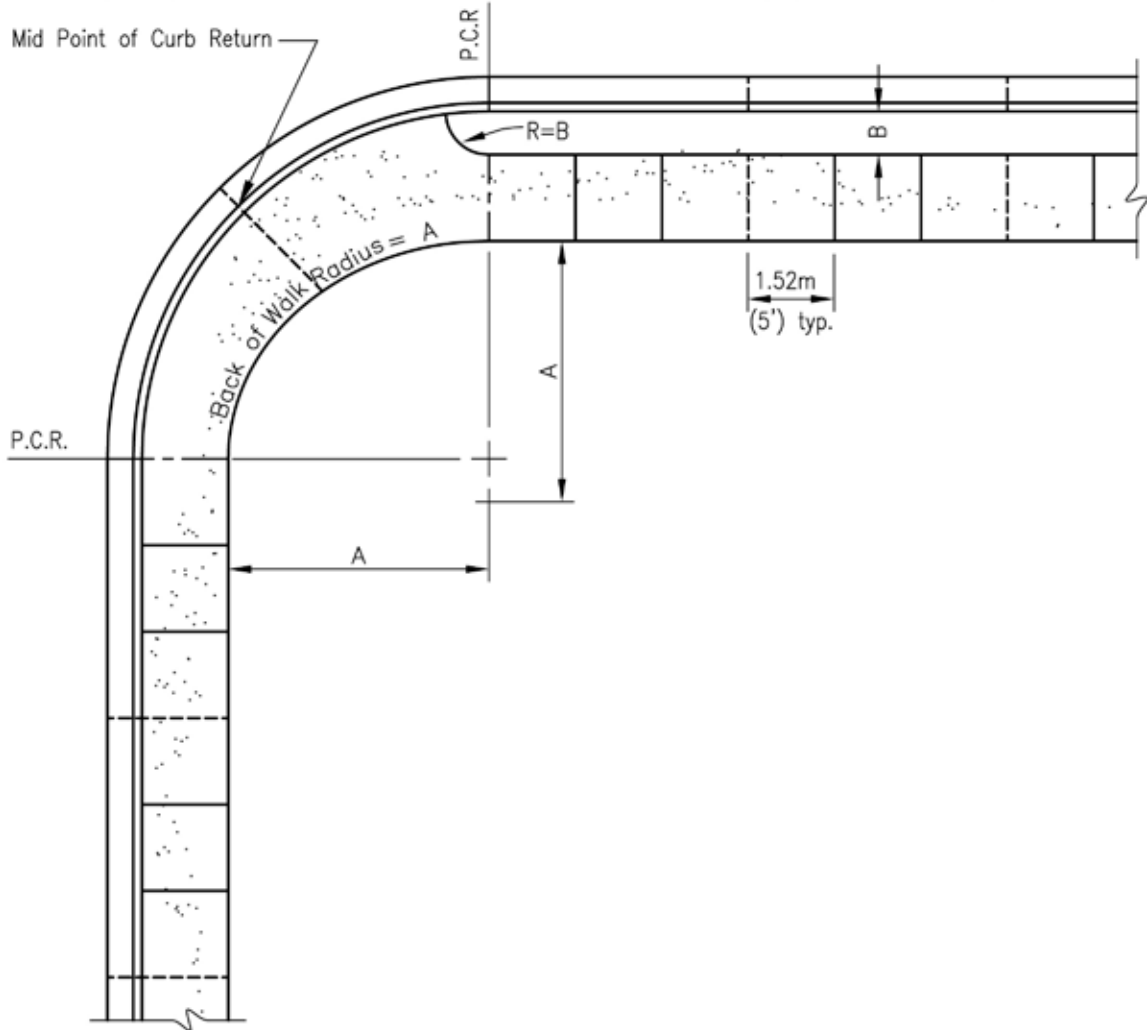
KEYED JOINT

## CONCRETE JOINT DETAILS

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.6 B-1</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES:**

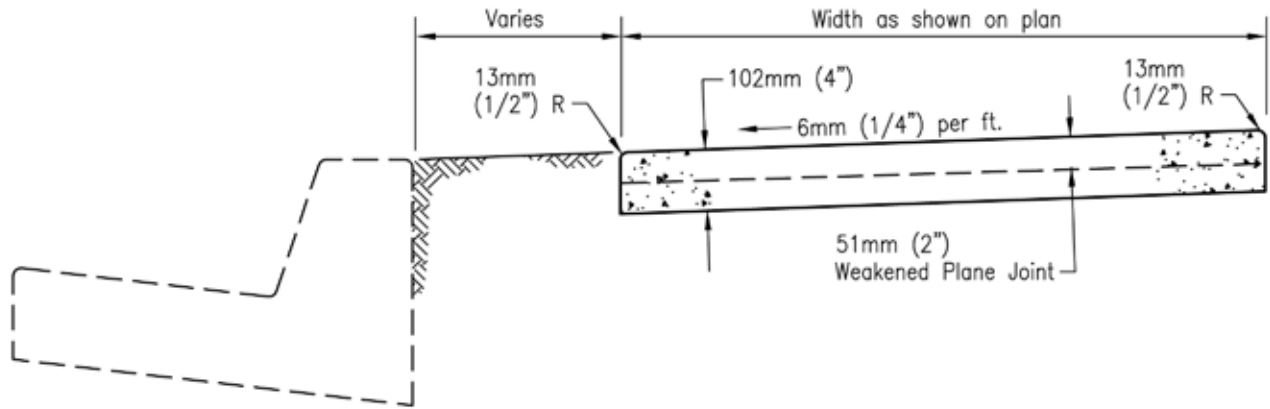
1. Expansion joints at curb returns, adjacent to structures and at 13.7m (45') intervals. (See Standard Drawing G-10).
2. Weakened Plane Joints at mid point of curb return, when required, and at 4.57m (15') intervals from P.C.R.'s (See Standard Drawing G-10).
3. 6.35mm (1/4") grooves with 6.35mm (1/4") radius edges at 1.52m (5') intervals.

**SIDEWALK JOINT LOCATIONS**

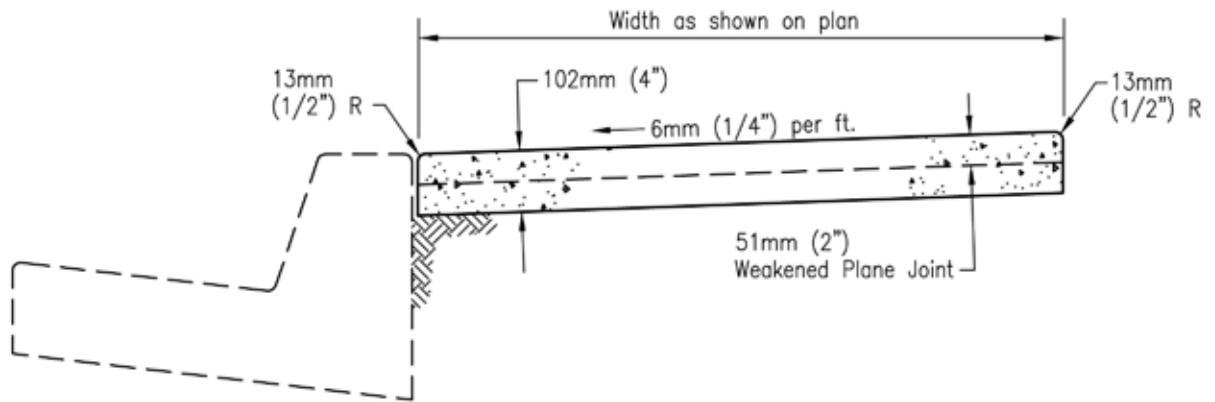
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:  <b>8.6 B-2</b>
	Public Works Office		
	SDRSD G-9		

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



NON-CONTIGUOUS

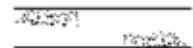


CONTIGUOUS

**NOTES:**

1. Concrete shall be 308kg/M<sup>3</sup>-C-17-MPa (520-C-2500).
2. See Standard Drawings G-9 and G-10 for joint details.

LEGEND ON PLANS

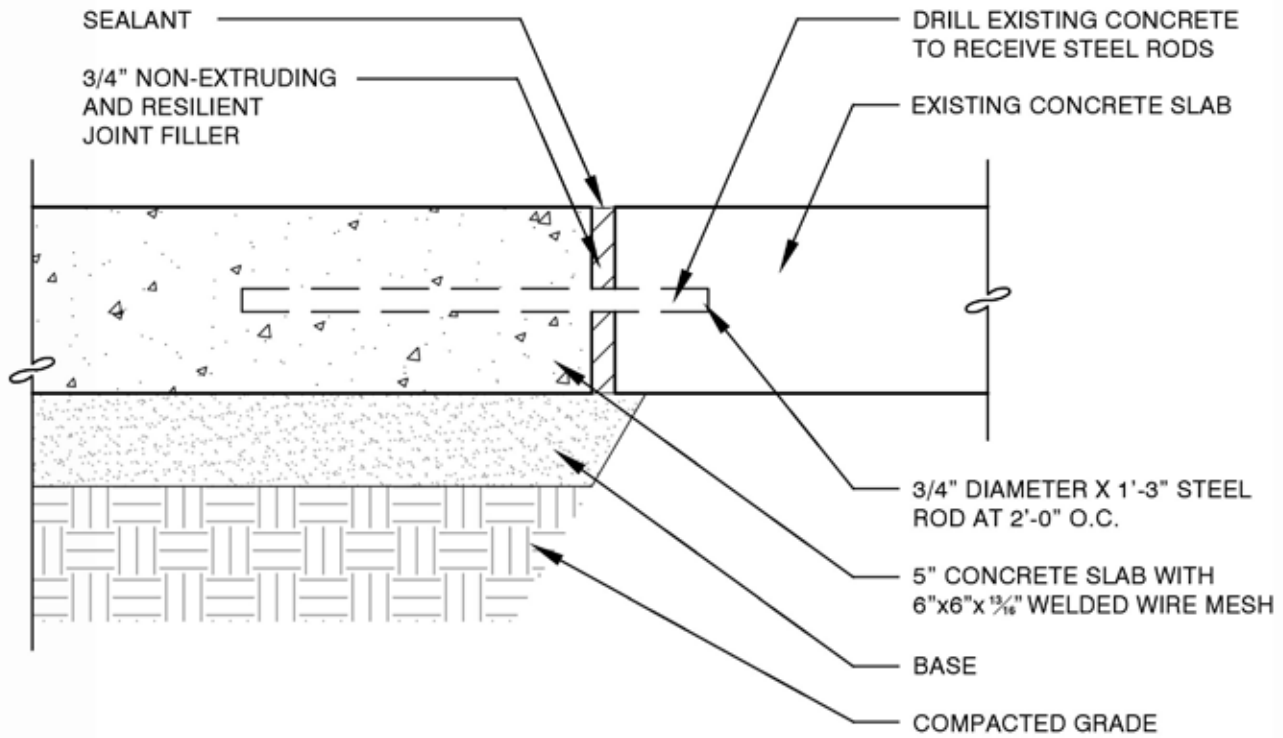


## SIDEWALK - TYPICAL SECTIONS

Project Title:   SDRSD G-7	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.6 C-1</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



## NEW PAVEMENT AT EXISTING WALK PAVEMENT

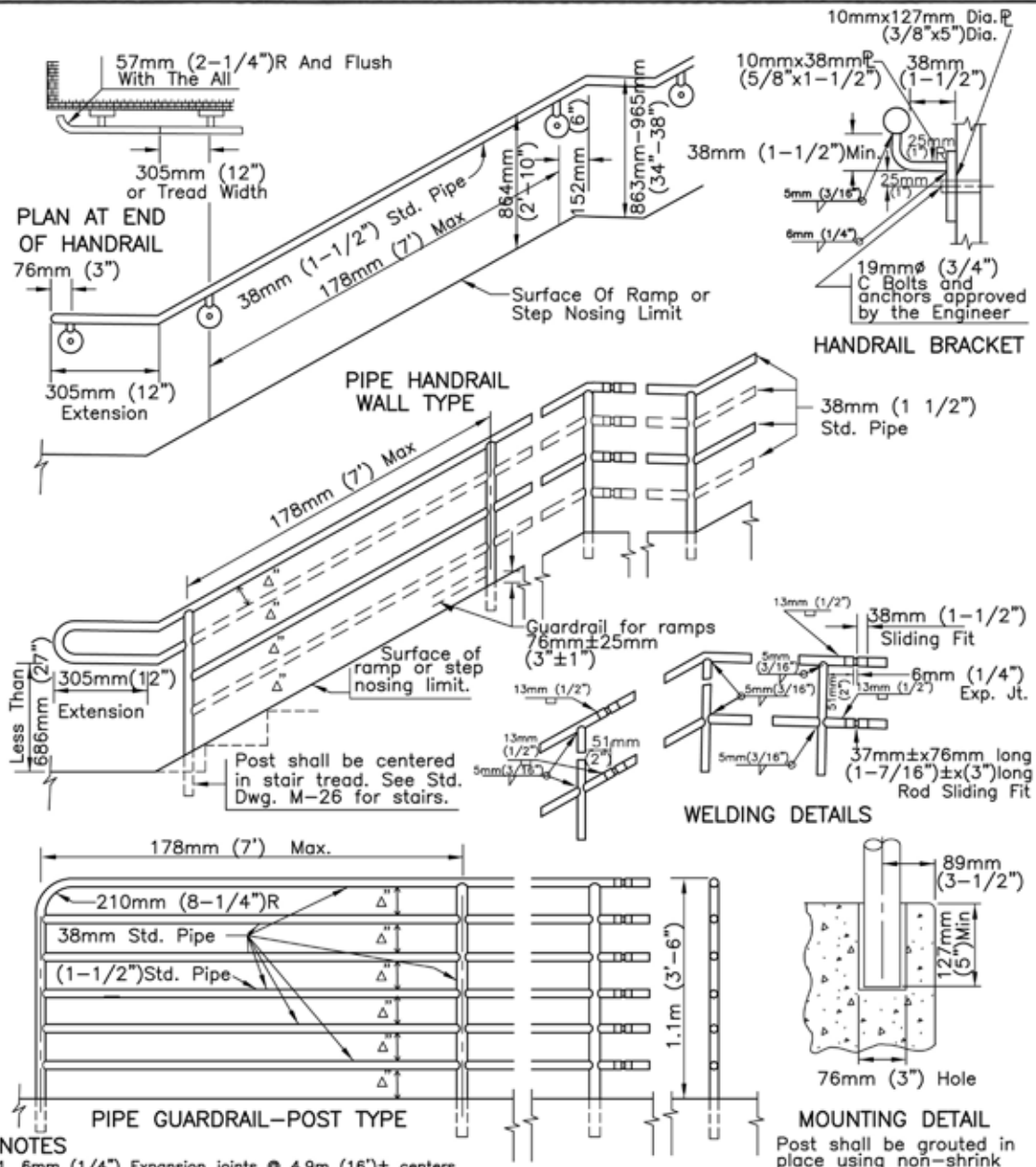
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.6 C-2</b>
			Scale:





# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES**

1. 6mm (1/4") Expansion joints @ 4.9m (16') ± centers.
2. Weld and grind smooth all connections.
3. All railing to be hot dip galvanized after fabrication.
4. Pipe shall seamless steel ASTM A53 Grade B.
5. Maximum = Δ102mm (4"). Guardrails and handrails for stairs and ramps more than 762mm (30") above have intermediate rails equally spaced such that a sphere 102mm (4") in diameter cannot pass through.
6. Handrail extension for stairs, at all bottom risers, shall be 305mm (12") plus one tread width.

## PEDESTRIAN PROTECTIVE RAILING DETAILS No. 1

Project Title:  SDRSD M-24	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.6 D-2</b>
			Scale:

## 8.7 Signage Details and Standards

This section provides reference to specific products in the form of product sheets. This reference is for establishing the design type or style and is not an endorsement for the product manufacturer. Substitutions for “like” or similar products are acceptable. All product types must be approved by the AC/S Facilities prior to installation.

8.7 A-1 Street Name Sign

8.7 A-2 Street Name Sign

8.7 A-3 Street Name Sign

8.7 A-4 Typical Construction Signs

8.7 A-5 Typical Traffic / Road Signs

8.7 A-6 Disabled Parking Sign

8.7 A-7 Typical Sign Connection Detail

8.7 A-8 Primary Directional Sign

8.7 A-9 Directional Sign Connection Detail

8.7 A-10 Sign Connection Detail

8.7 A-11 “War Prize” Monument Sign Detail

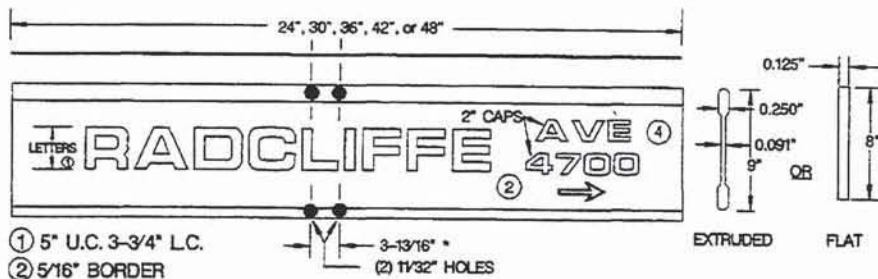
8.7 A-12 2” x 2” Pole Mounting Detail

8.7 A-13 4” x 4” Pole Mounting Detail



# BEAP Standard Detail Sheet

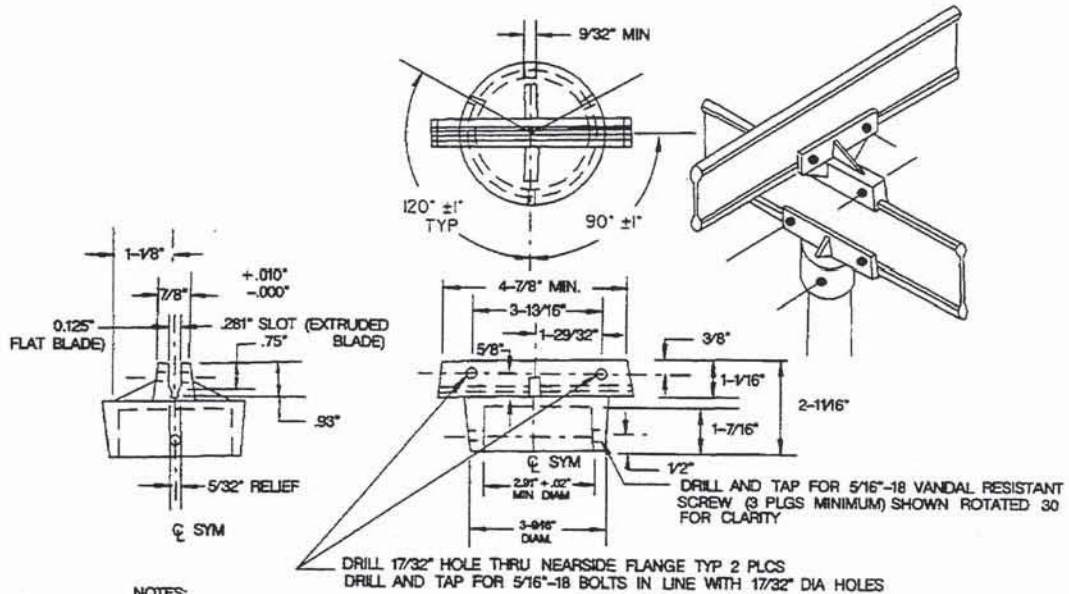
Public Works Office Marine Corps Base Camp Pendleton



- ① 5" U.C. 3-3/4" L.C.
- ② 5/16" BORDER
- ③ 1-3/4" x 3-1/2" ARROW
- ④ BLOCK NUMBER ENDING IN NINE (9) DENOTES DESCENDING ORDER IN DIRECTION OF ARROW

FOR TYPICAL LAYOUT, ALUMINUM AND REFLECTIVE SHEETING SPECIFICATIONS SEE SHEETS NOS. 3 AND 4.

TYPICAL STREET NAME LAYOUT



NOTES:

1. DRAFT ANGLE 3° MAXIMUM
  2. PROVIDE 5/16"-18 x 1" LONG HEX HEAD BOLT. TWO REQUIRED (CADMIUM PLATED)
  3. PROVIDE 5/16"-18 x 5/16" LONG SERRATED CUP POINT (CADMIUM PLATED), VANDAL RESISTANT ALLEN HEAD SET SCREWS. 3 MINIMUM REQUIRED.
  4. \* DENOTES 3-13/16" SPACING SHALL MATCH THE HOLES IN THE EXTRUDED BLADES.
  5. POST CAPS TO BE DIE CAST ALUMINUM ALLOY NO. 384 OR 385
  6. FRACTIONAL TOLERANCE = ±1/32"
  7. SIGN POST TO BE 2 3/8 INCH O.D. PIPE, ALUMINUM ALLOY 6061-T6 OR EQUAL
- SIGN BRACKET ASSEMBLY  
POST CAP MOUNT

## STREET NAME SIGN

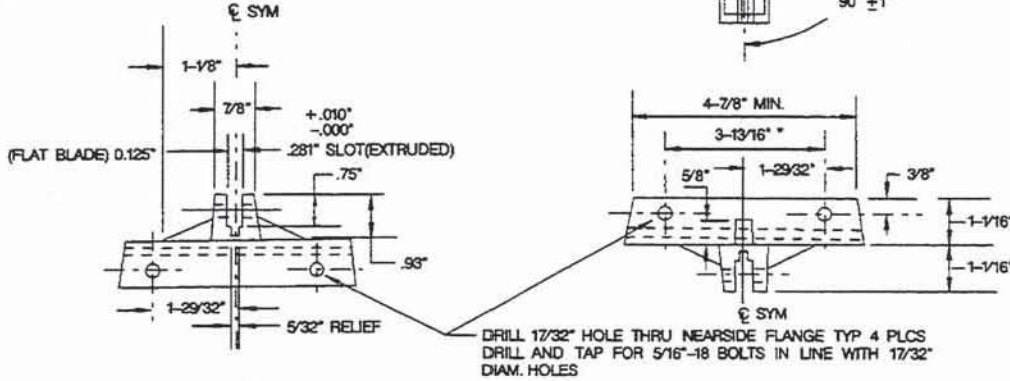
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number: <b>8.7 A-1</b>
	Public Works Office		
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton

**NOTES**

1. DRAFT ANGLE 3° MAXIMUM
2. PROVIDE 5/16" -18 x 1" LONG HEX HEAD CADMIUM PLATED BOLT (4) REQUIRED
3. \* DENOTES 3-13/16" SPACING SHALL MATCH THE HOLES IN THE EXTRUDED BLADES
4. SIGN TO SIGN 45° OR 90° BRACKET TO BE DIE-CAST ALUMINUM
5. FRACTIONAL TOLERANCE = ± 1/32"

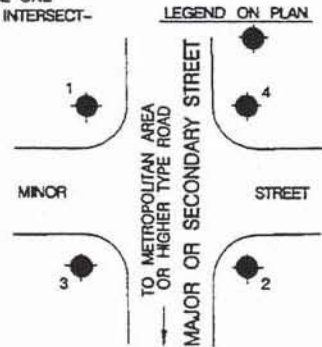
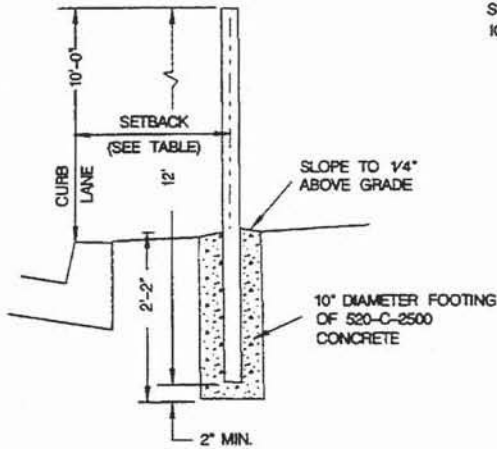


CURB & SIDEWALK	SIDEWALK WIDTH	SETBACK
CONTIGUOUS	6' OR LESS	SIDEWALK WIDTH
CONTIGUOUS	MORE THAN 6'	2' - 6'
SEPARATE		2' - 6'

**SIGN TO SIGN BRACKET ASSEMBLY**

**LOCATION NOTES**

1. ALONG MAJOR OR PRIMARY STREETS THERE SHALL BE 2 SIGN INSTALLATIONS PER INTERSECTION PLACED ON OPPOSITE CORNERS
2. ALONG A COLLECTOR OR LOCAL STREETS THERE SHALL BE ONE SIGN INSTALLATION PER INTERSECTION



**STREET NAME SIGN LOCATION**  
(NUMBERS INDICATE PRIORITY OF LOCATION SELECTION WHEN THERE IS A CONFLICT WITH OTHER IMPROVEMENTS)

## STREET NAME SIGN

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.7 A-2</b>
			Scale:

# BEAP Standard Detail Sheet

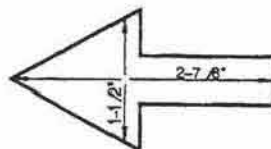
Public Works Office Marine Corps Base Camp Pendleton

## STREET NAME SIGN STANDARDS

Flat Blades – 24" to 36": .125 aluminum, 8" wide alloy, 5052-H38 or 6061-T6. 42" to 48": use extruded blades, 9" wide only. Optional to use extruded blades for all lengths of signs.

Reflective Sheeting – Background: 3M High Intensity or equal, #3877 Green-no borders.

Die cut letters – 3M High Intensity or equal, #3870 Silver. All letters and numbers must meet State and Federal Specifications. Letter Style: Highway Gothic. Name of Street: 5" Uppercase, 3-3/4" Lowercase Letters, Series "C". Ave., St., Blvd., ect.: 2" Uppercase Letters, Seiries "B". Block Numbers: 2" Numbers, Series "D", use extended spacing between numbers. Block Number Arrows: 1-1/2" x 2-7/8", as follows



### Format of Street Name Signs



### Abbreviations:

Avenue—AVE	Boulevard—BLVD
Street—ST	Terrace—TER
Place—PL	Mountain—MTN
Court—CT	Highway—HWY
Drive—DR	Parkway—PKWY
Road—RD	Mount—MT

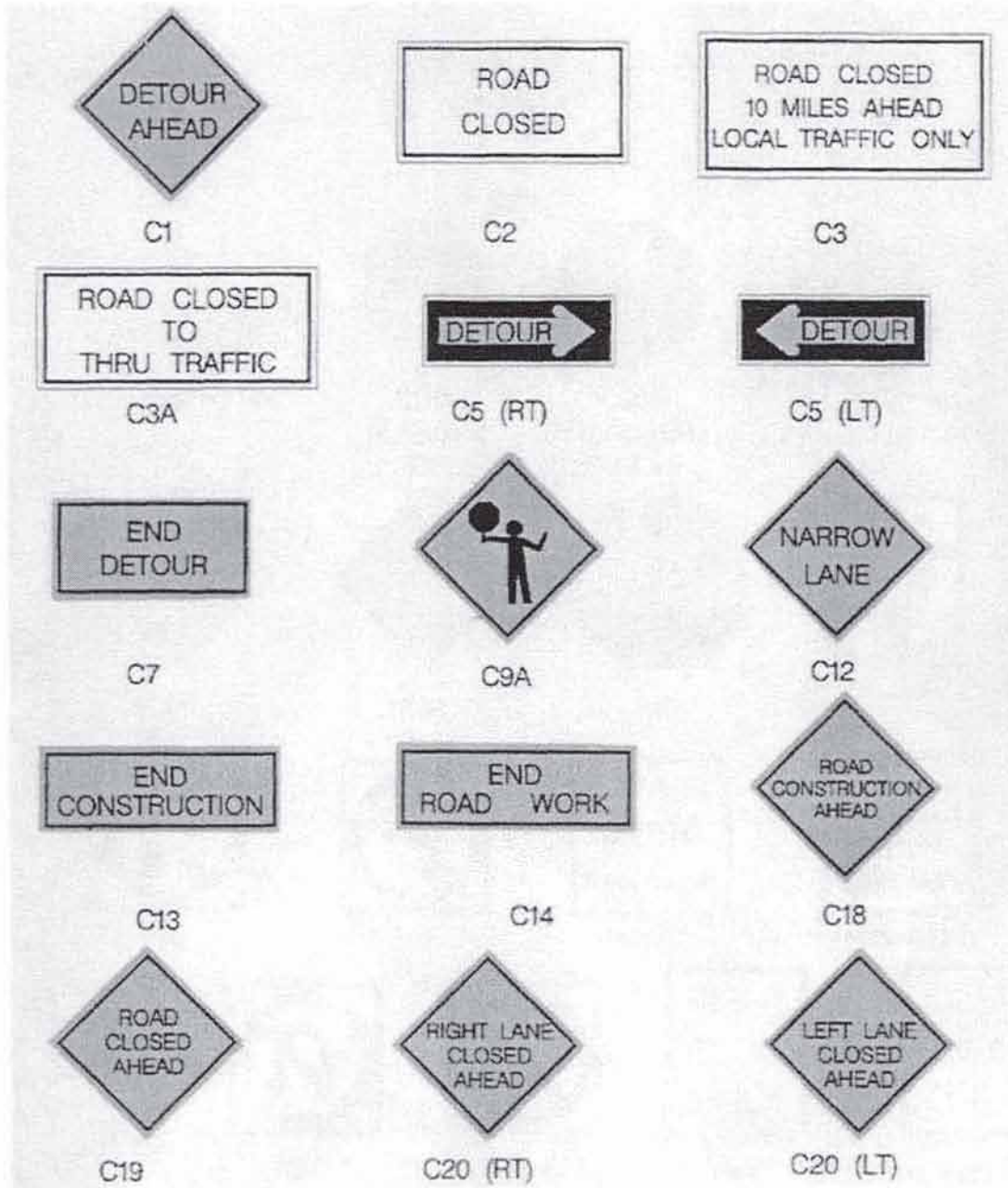
Spell out all others completely. Allow 2" margin on end of blade.

## STREET NAME SIGN

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number: <b>8.7 A-3</b>
	Public Works Office		
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



## TYPICAL CONSTRUCTION SIGNS

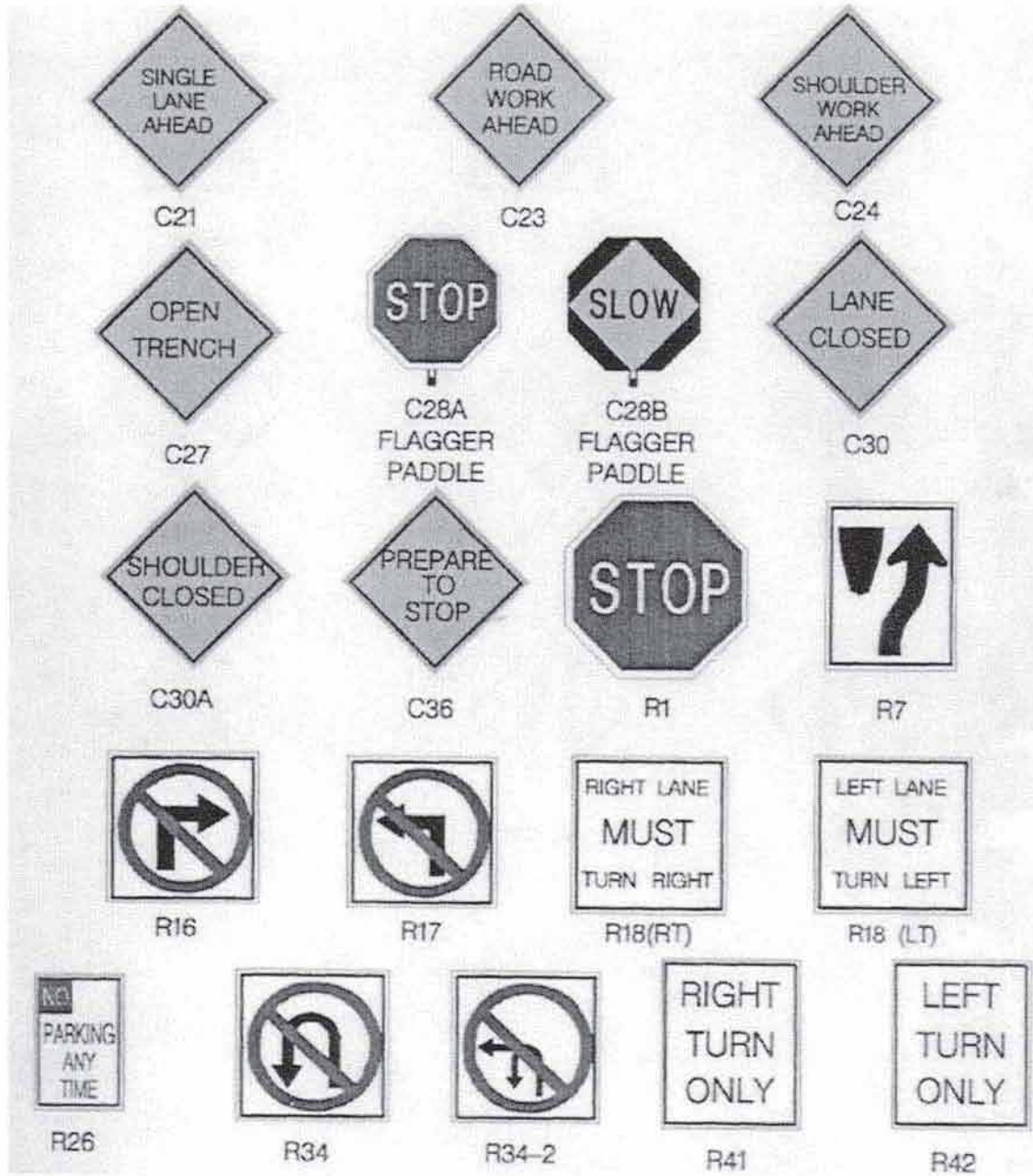
Note: The reference number below each sign refers to City of San Diego standard drawings.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.7 A-4</b>
			Scale:



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



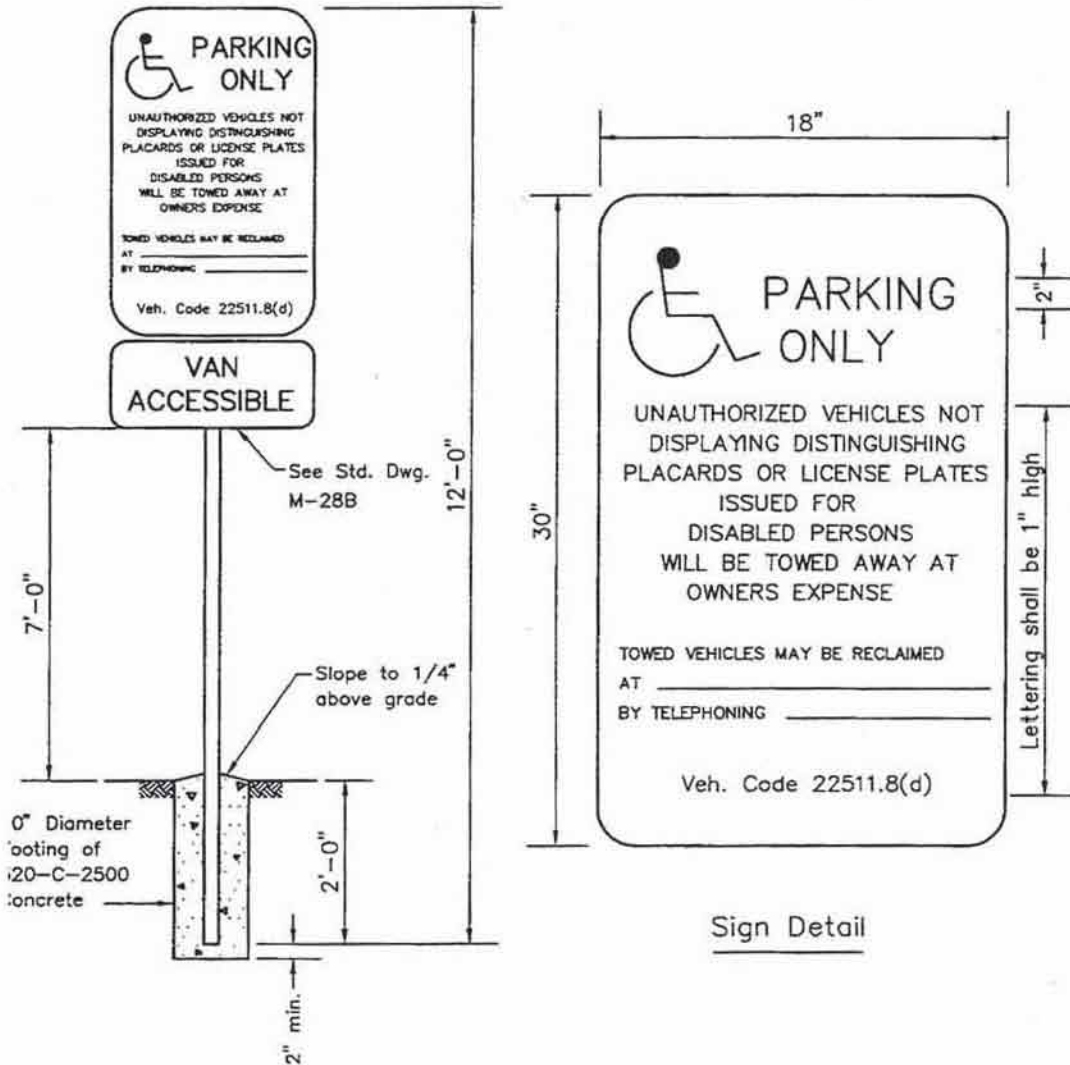
## TYPICAL TRAFFIC / ROAD SIGNS

Note: The reference number below each sign refers to City of San Diego standard drawings.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.7 A-5</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



NOTES:

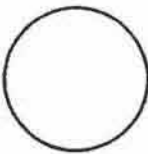
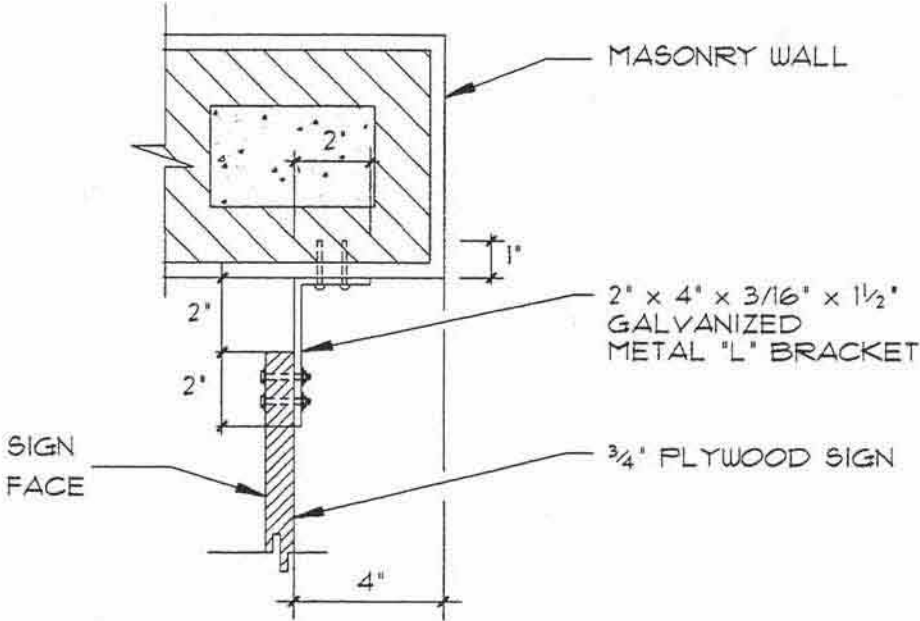
1. Sign shall be constructed of a minimum 0.062" thick aluminum.
2. Lettering, symbol and border shall be reflectorized white, on a blue background.
3. Lettering shall be 1 inch and 2 inches high.
4. Where space is designed for van accessibility, a sign "VAN ACCESSIBLE" shall be installed.
5. Minimum van accessible vertical clearance is 8'-2".

### DISABLED PARKING SIGN

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.7 A-6</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



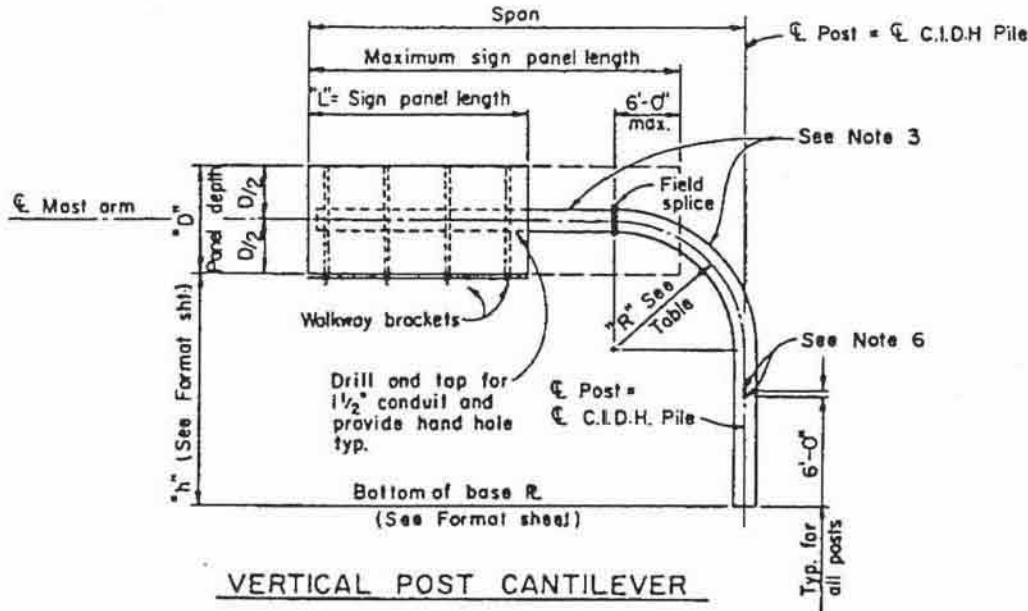
## TYPICAL SIGN CONNECTION DETAIL

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.7 A-7</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



### VERTICAL POST PIPE SELECTION PROCEDURE

- A. For vertical post cantilevers add 2'-0" to the vertical post span and enter table to proper column with know panel depth "D" and appropriate height "h".
- B. Read down column to desired span length.
- C. Determine Pipe Post "Dia" and "R" for elbow by reading to the left horizontally.

### NOTES

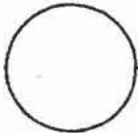
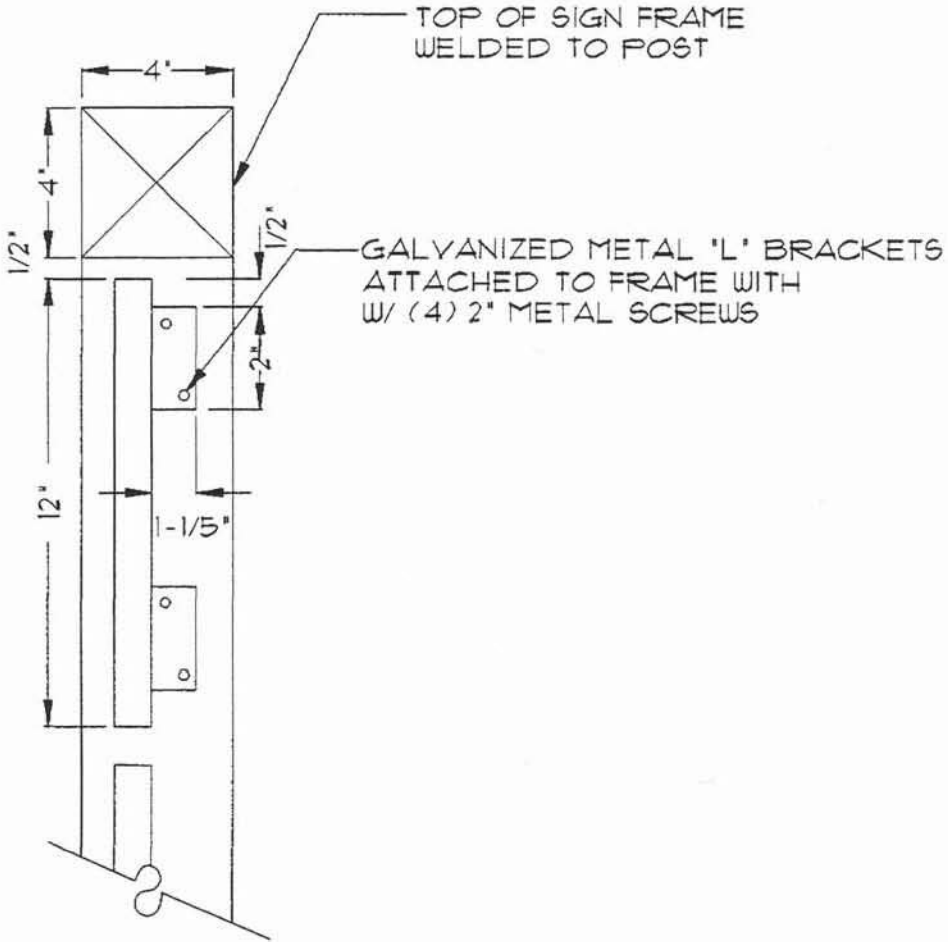
1. The maximum sign panel overlap onto the post elbow shall not exceed 6'-0" from the field splice.
2. When several sign panels are to be installed with a space between the panels, the space shall be as small as possible and 2' maximum.
3. All posts between base plate and field splice are Extr Strong pipe. All mast arms are Standard pipe.
4. During sign erection the post shall be raked as necessary with the use of the leveling nuts to make the sign panel level.
5. At final position of post all top and bottom anchor bolt nuts shall be wrench tightened against base plate.
6. Drill and tap for 1 1/2" chase nipples and plug with recessed pipe plugs. Place perpendicular to sign panel axis and away from approaching traffic.

### PRIMARY DIRECTIONAL SIGN

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.7 A-8</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



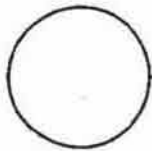
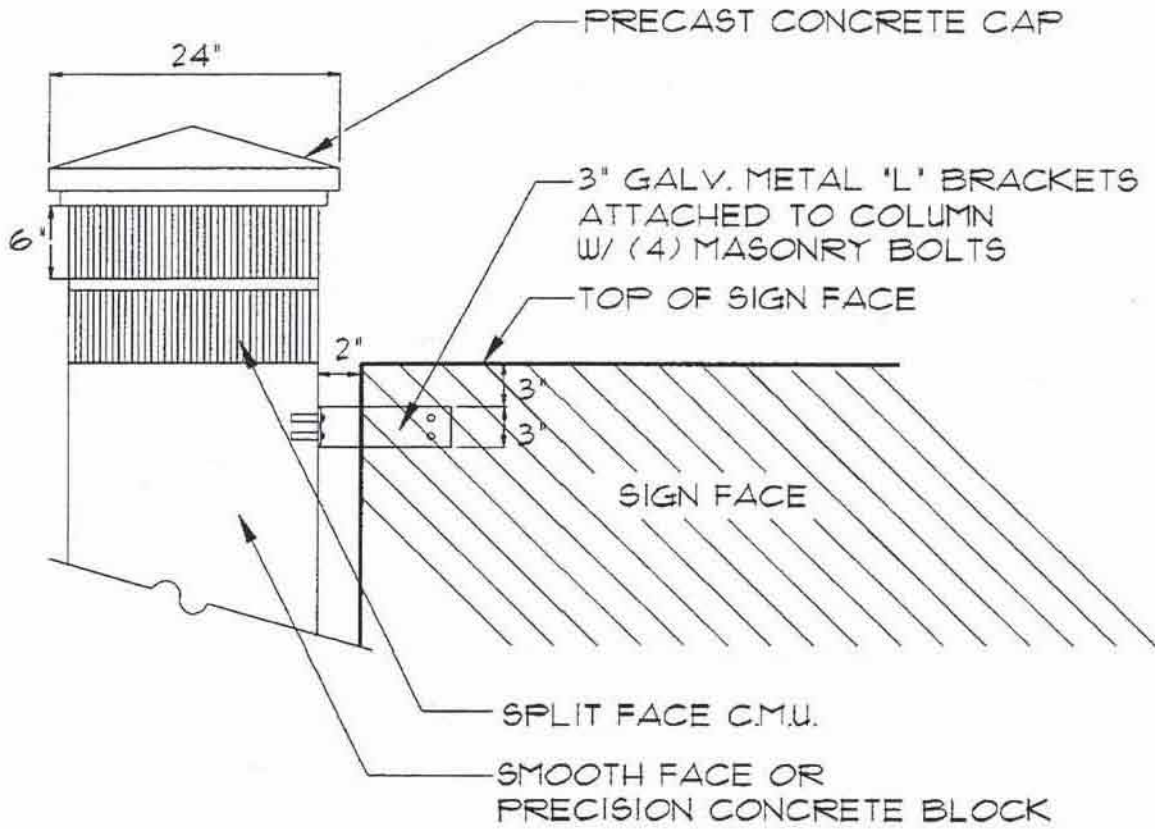
## DIRECTIONAL SIGN CONNECTION

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.7 A-9</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



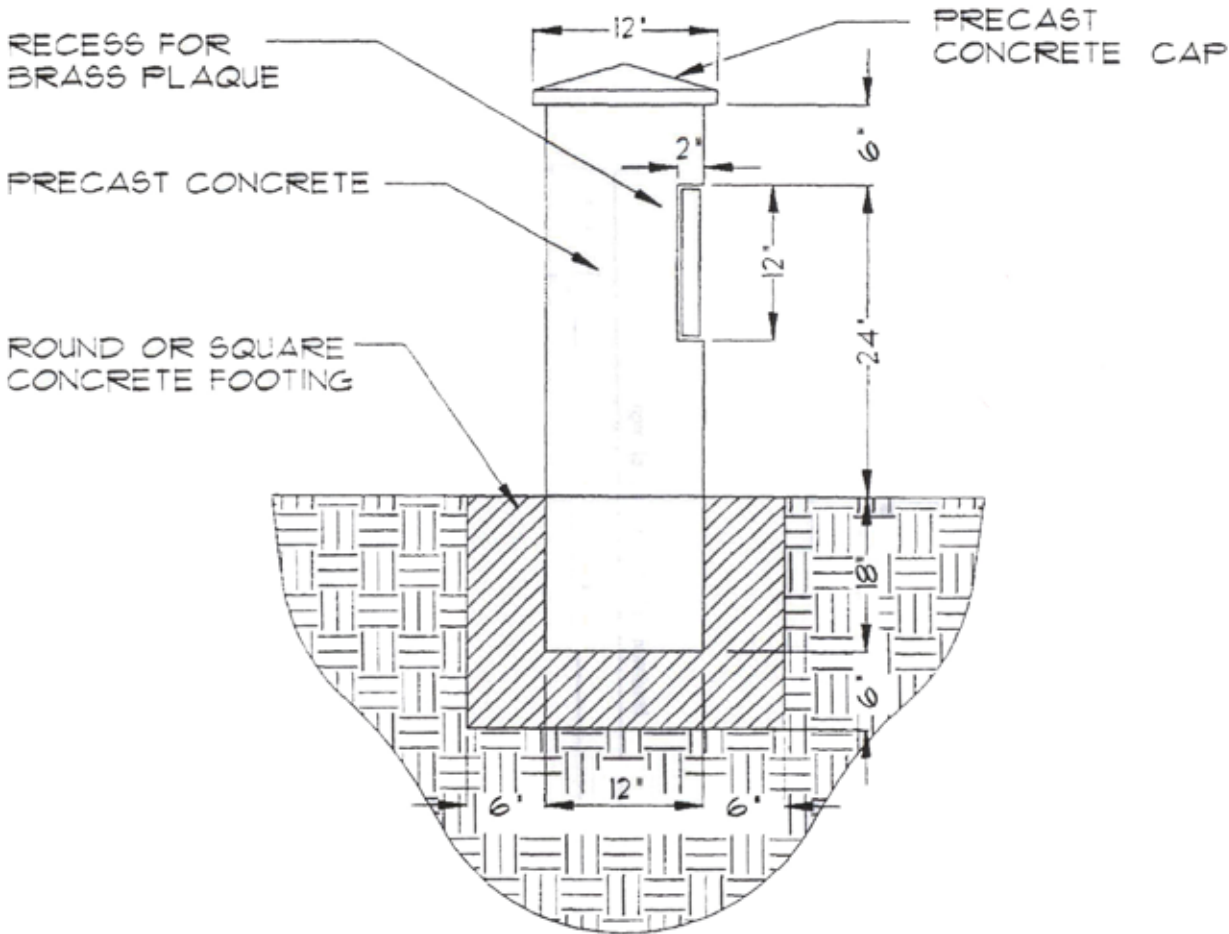
## SIGN CONNECTION

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.7 A-10</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**"WAR PRIZE" MONUMENT**  
**SIGN**

SCALE: N.T.S.

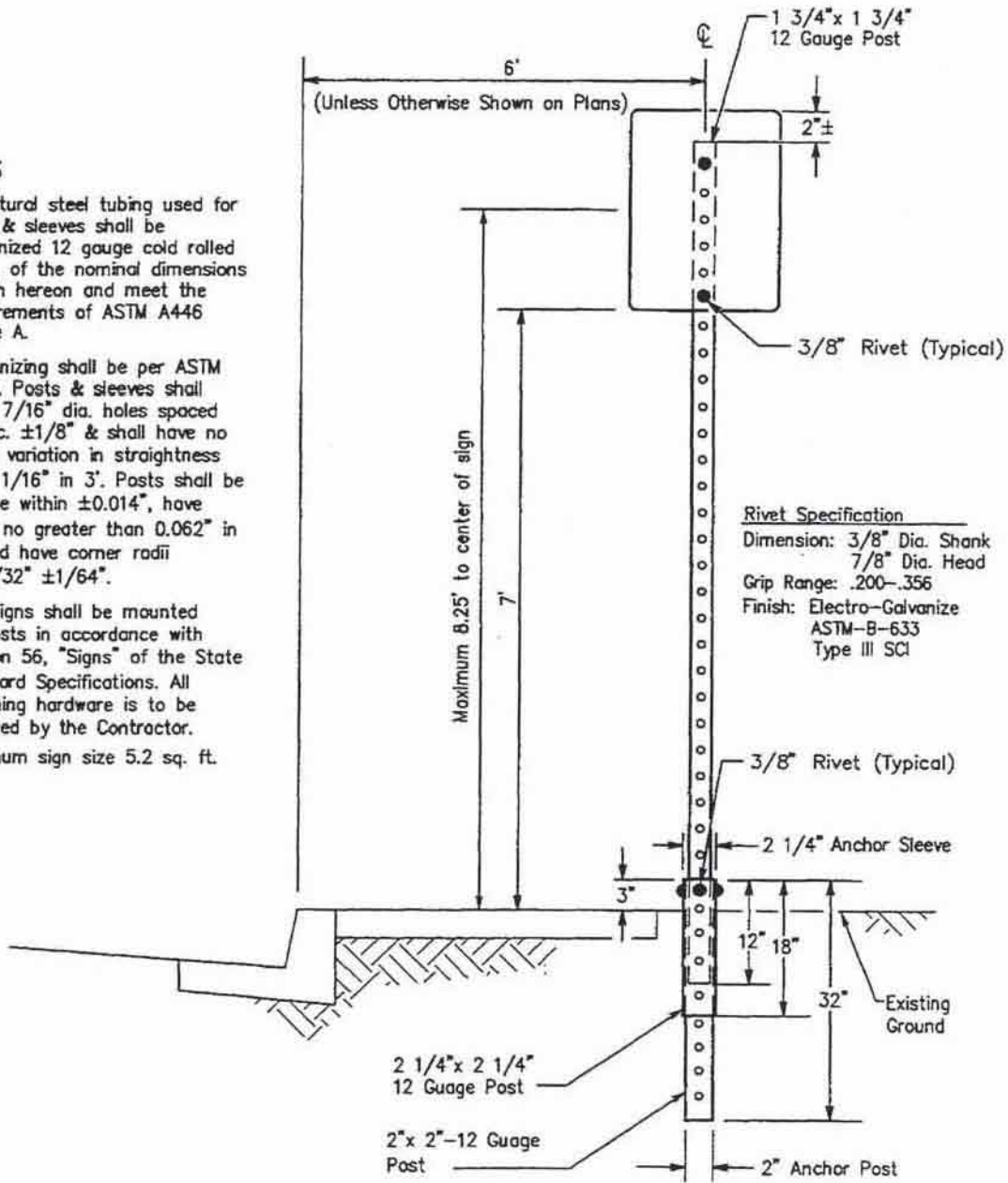
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.7 A-11</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton

**NOTES**

1. Structural steel tubing used for post & sleeves shall be galvanized 12 gauge cold rolled steel, of the nominal dimensions shown hereon and meet the requirements of ASTM A446 Grade A.
2. Galvanizing shall be per ASTM A525. Posts & sleeves shall have 7/16" dia. holes spaced 1" o.c. ±1/8" & shall have no more variation in straightness than 1/16" in 3'. Posts shall be square within ±0.014", have twist no greater than 0.062" in 3' and have corner radii of 5/32" ±1/64".
3. The signs shall be mounted on posts in accordance with Section 56, "Signs" of the State Standard Specifications. All fastening hardware is to be provided by the Contractor.
4. Maximum sign size 5.2 sq. ft.



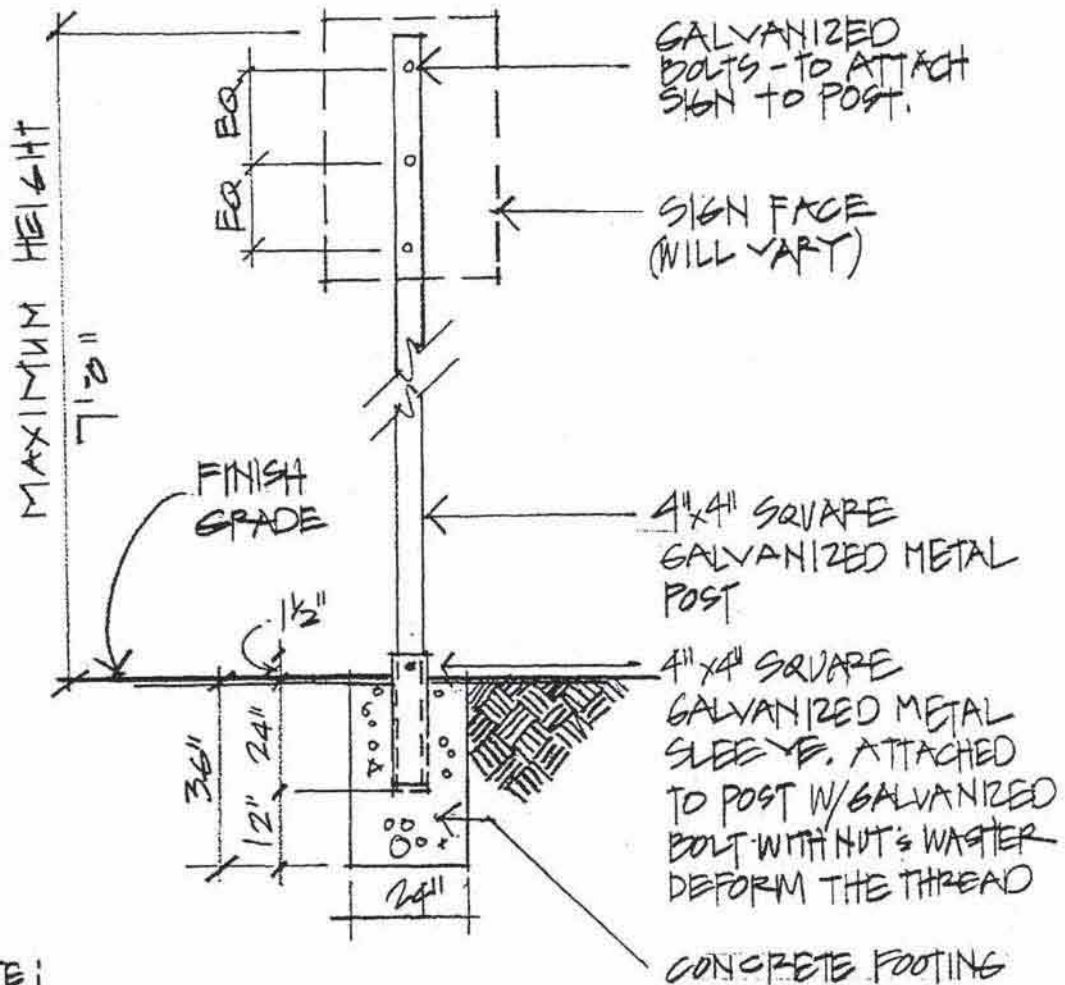
**2"X2" POLE MOUNTING**

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works		<b>8.7 A-12</b>
			Scale:



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTE:**

METAL SLEEVE TO BE CONSTRUCTED WITH AN OPENING 1/16" LARGER THAN POST. WALL THICKNESS OF SLEEVE TO BE SAME AS POST OR LARGER.

**4"X4" POLE MOUNTING**

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works		<b>8.7 A-13</b>
			Scale:



## **8.8 Lighting Details and Standards**

This section provides reference to specific products in the form of product sheets. This reference is for establishing the design type or style and is not an endorsement for the product manufacturer. Substitutions for “like” or similar products are acceptable. All product types must be approved by the AC/S Facilities prior to installation.

8.8 A-1 Street Light

8.8 A-2 Building Light

8.8 A-3 Sign Light

8.8 A-4 Security Light

8.8 A-5 Parking Lot Light

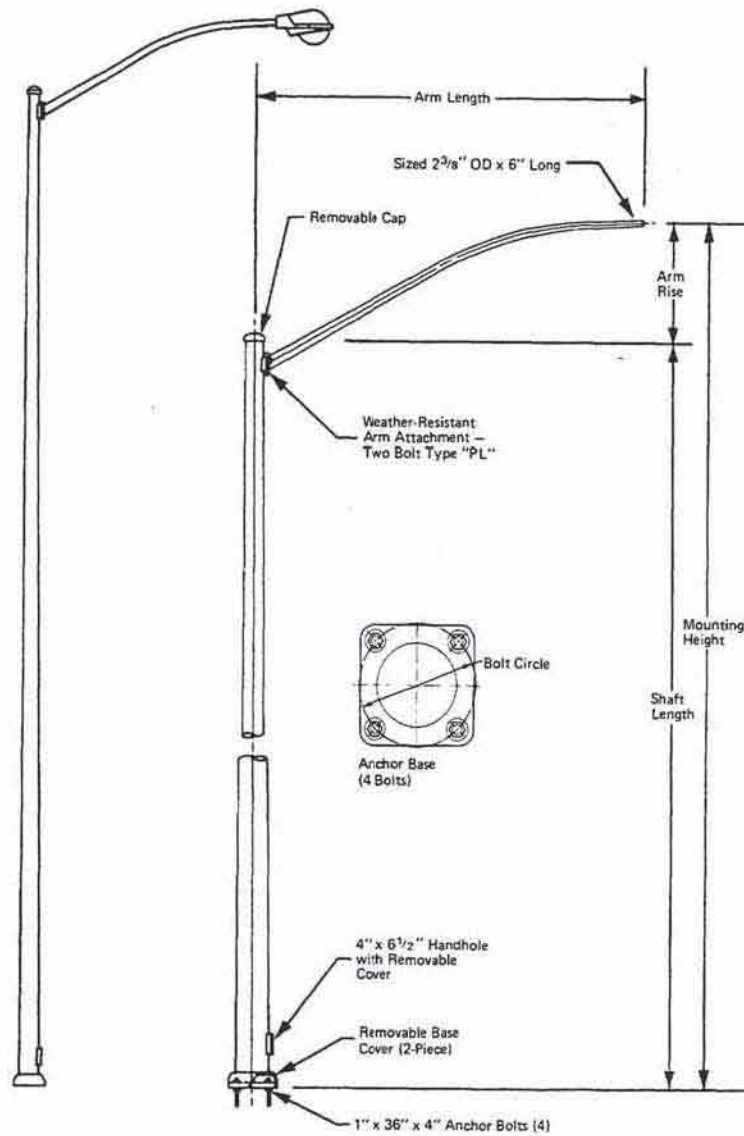
8.8 A-6 Palm Tree Light



# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Street Light



### Product Reference: Series PL

Street Light

PL 254, PL 284, PL304, PL354, PL404

Height: 25'-0", 28'-0", 30'-0", 35'-0", 40'-0"

Elliptical Tapered Luminaire Arm

Single Arm: PL254

Double Arm: PL254-D

Manufactured by:

**Ameron Pole Products Division**

1020 "B" Street,

P.O. BOX 7558

Fillmore, CA 93015

Tel:(800)552-6376

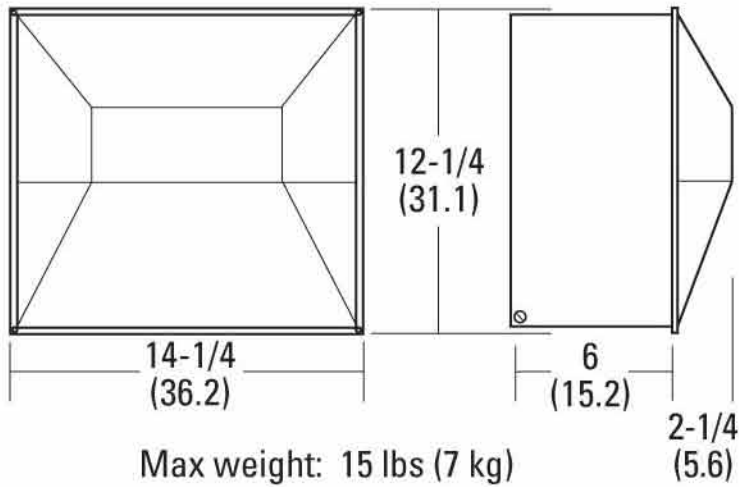
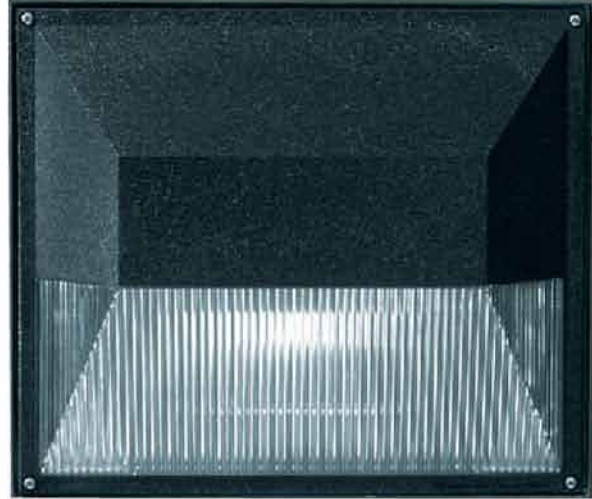
Fax:(805)524-1537

**DETAIL**  
8.8 A-1

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Building Light



### Product Reference: KL

Recessed Low-Mount Floods

One-piece, cast aluminum housing, finish is clear polyester powder for corrosion protection.

Standard lens finish is dark bronze enamel.

Anodized, hydroformed aluminum reflectors.

Manufactured by:

**Lithonia Lighting**

PO Box A

Conyers, GA 30012

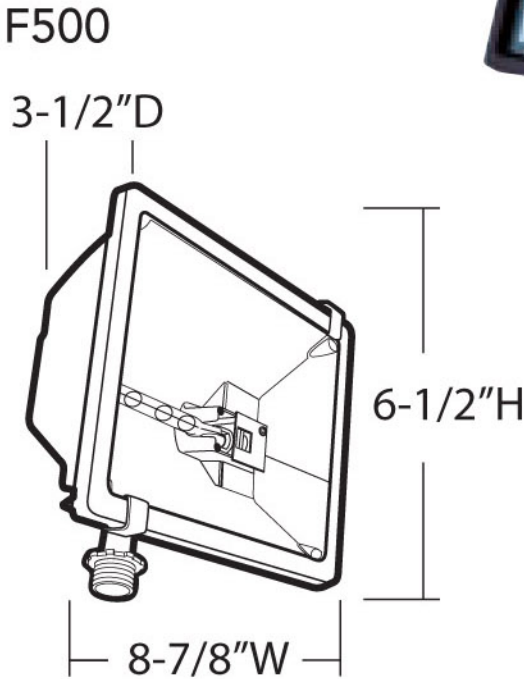
Tel:(770) 922-9000

**DETAIL**  
8.8 A-2

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Sign Light



**Product Reference: F500QL 120 M12**

CFL/Quartz Floodlighting  
Anodized aluminum reflector with high efficiency and wide beam spread.  
Adjustable mounting knuckle with 1/2" NPS threaded stem.  
Finish: Rugged, die-cast aluminum housing is ribbed for maximum heat dissipation.  
Dark Bronze

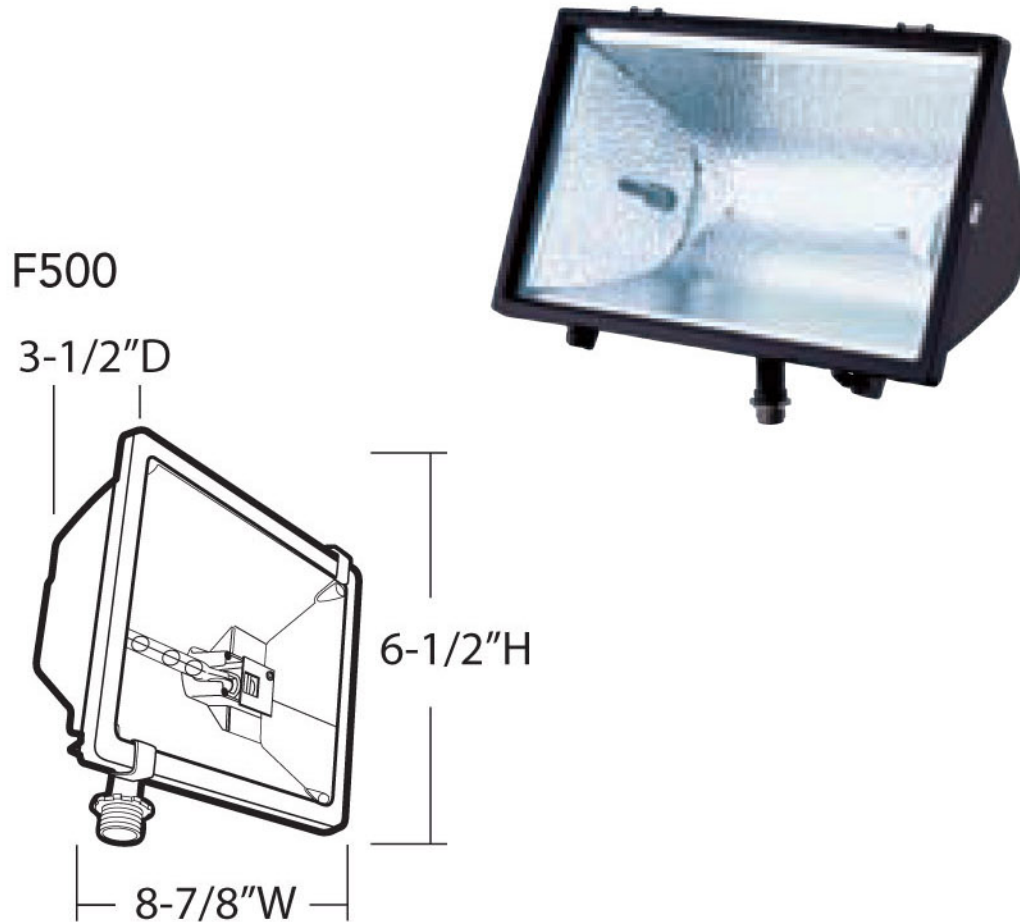
Manufactured by:  
**Lithonia Lighting**  
PO Box A  
Conyers, GA 30012  
Tel:(770) 922-9000



# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Security Light



### Product Reference: F500QL 120 M12

CFL/Quartz Floodlighting

Anodized aluminum reflector with high efficiency and wide beam spread.

Adjustable mounting knuckle with 1/2" NPS threaded stem.

Finish: Rugged, die-cast aluminum housing is ribbed for maximum heat dissipation.

Dark Bronze

Manufactured by:

**Lithonia Lighting**

PO Box A

Conyers, GA 30012

Tel:(770) 922-9000

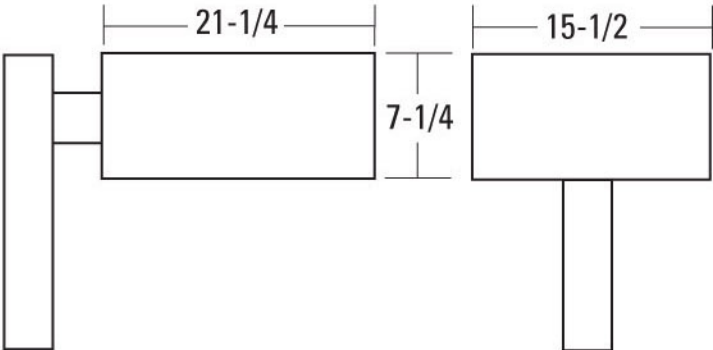
**DETAIL**  
8.8 A-4



# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Parking Lot Light



### Product Reference: KSF1

Parking Lot Light  
Rugged, aluminum rectilinear housing.  
Naturally anodized, extruded, aluminum dooframe with mitered corners is retained with two hinge pins and secured with one (1) quarter-turn, quick release fastener.  
Standard finish is dark bronze (DDB) polyester finish.  
Anodized segmented reflectors provide superior uniformity and control.

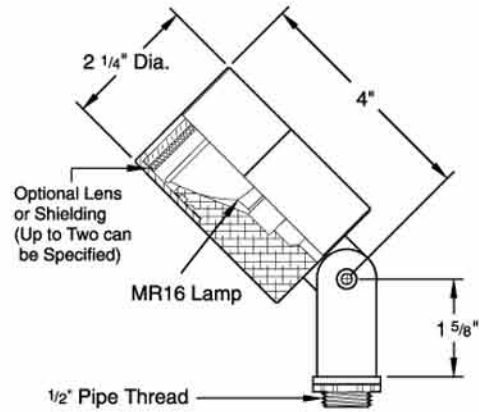
Manufactured by:  
**Lithonia Lighting**  
PO Box A  
Conyers, GA 30012  
Tel:(770) 922-9000



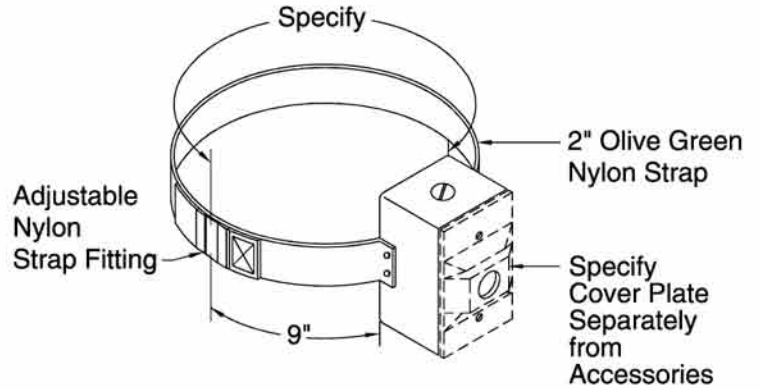
# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Palm Tree Light



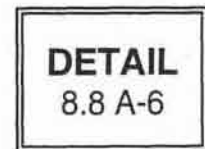
## TS-MB-2



**Product Reference:**  
**Light: Nite Star™ MR16**  
**Tree Strap: TS-MB2**

Palm Tree Light  
Tempered glass lens, factory sealed  
Enclosed wireway mounting knuckle  
Finish: Machined aluminum construction w/  
stainless steel hardware.  
Long lasting, super strength, nylon straps  
MB2 allows multiple fixture mounting  
Finish: 2" olive green nylon straps

Manufactured by:  
**B-K Lighting, Inc.**  
40429 Brickyard Dr.  
Madera, CA 93636  
Phone: (559)438-5800  
Fax: (559)438-5900  
Distributed by: O'Connor Sales Agency  
5797 Chesapeake Court, Suite 200  
San Diego, Ca 92123  
Tel: (858)514-4000  
Fax: (858)505-1818



## 8.9 Site Furniture Details and Standards

This section provides reference to specific products in the form of product sheets. This reference is for establishing the design type or style and is not an endorsement for the product manufacturer. Substitutions for “like” or similar products are acceptable. All product types must be approved by the AC/S Facilities prior to installation.

- 8.9 A-1 Square Picnic Table-Center Post
- 8.9 A-2 Picnic Table Set
- 8.9 A-3 Picnic Table Set Recycled Plastic
- 8.9 A-4 Recreational Park Bench
- 8.9 A-5 Recreational Park Bench with Back
- 8.9 A-6 Alternate Park Bench
- 8.9 A-7 Recycled Plastic Bench
- 8.9 A-8 Recycled Plastic Bench
- 8.9 B-1 Drinking Fountain
- 8.9 B-2 Drinking Fountain Detail
- 8.9 B-3 Drinking Fountain Detail
- 8.9 D-1 Primary Bus Shelter
- 8.9 D-2 Primary Bus Shelter (continued)
- 8.9 E-1 Recycling Containers
- 8.9 E-2 Single Recycling Container
- 8.9 E-3 Square Single Container
- 8.9 E-4 Round Single Container
- 8.9 E-5 Hot Coals Container
- 8.9 G-1 Flagpole
- 8.9 H-1 Metal Bike Rack
- 8.9 H-2 Bike Storage
- 8.9 I-1 Bollard - 9” square
- 8.9 I-2 Bollard - 9” square
- 8.9 I-3 Bollard - 12” square
- 8.9 I-4 Bollard 16” square-Handicapped
- 8.9 I-5 Moveable Bollard
- 8.9 I-6 Protection Bollard Installation
- 8.9 J-1 Concrete Tree Grate
- 8.9 J-2 Concrete Tree Grate
- 8.9 J-3 Metal Tree Grate
- 8.9 J-4 Concrete Square Planter
- 8.9 J-5 Concrete Square Planter
- 8.9 J-6 Concrete Round Planter
- 8.9 K-1 Metal Tree Guard
- 8.9 K-2 Metal Tree Guard
- 8.9 L-1 Single Container Trash Enclosure
- 8.9 L-2 Triple Container Trash Enclosure
- 8.9 L-3 Trash Container
- 8.9 O-1 Barbecue Units
- 8.9 R-1 Volleyball Court Detail
- 8.9 R-2 Volleyball Court Edge and Sand Area
- 8.9 R-3 Volleyball Post Detail
- 8.9 S-1 Mail Box-Group



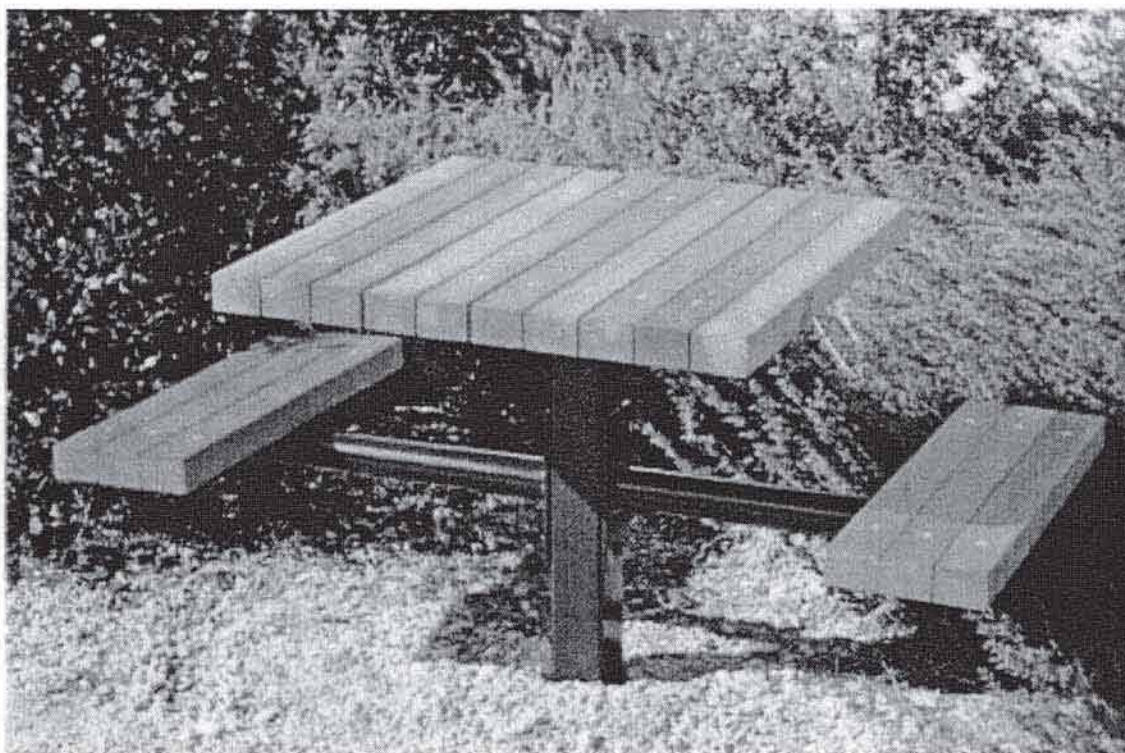
# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---

## Tables

### Picnic Table

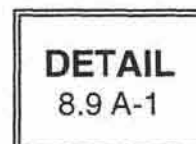


Note:  
Available with 3-foot square or  
4-foot (ADA Accessible) square  
tops.

### Product Reference: CP-2

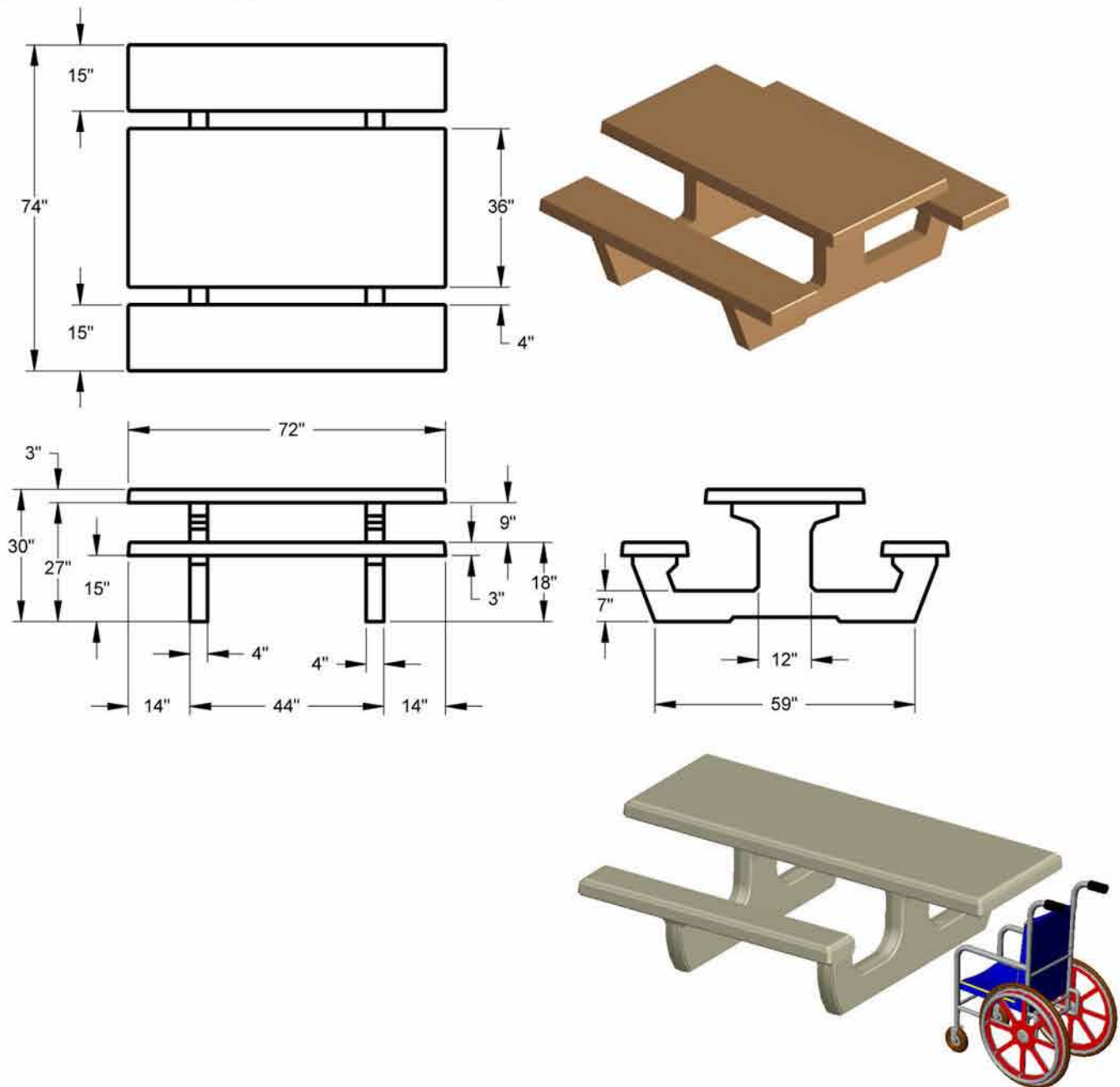
Center-Post Square Table

Manufactured by :  
**Victor Stanley, Inc.**  
Brick House Road.  
Dunkirk, Maryland 20754  
Tel: (800) 368-2573  
Fax: ( 410) 257-757



# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton



## Product Reference: TS6-5PC

Picnic Table Set

Approx. wt. : 1,770 lbs.

Finish: smooth sealed tops / natural concrete  
smooth aggregate legs

## ADA Product Reference: TS8-1PC-HC

Picnic Table Set

Approx. wt. : 3030 lbs.

Finish: smooth sealed tops / natural concrete  
smooth aggregate legs

Manufactured by:

**San Diego Precast Concrete, Inc.**

2735 Cactus Rd.

San Diego, CA 92154

Tel: (619)240-8000

Fax: (619)661-1038

**DETAIL**

8.9 A-2

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton



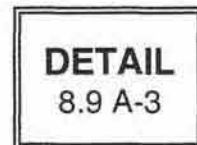
**Product Reference: 6CJGRRP**

Picnic Table Set Recycled Plastic  
295 lbs. 2"x10" Planks 6' or 8' length  
Finish: Frame w/ Recycle Plastic  
Color: Gray or Brown

Manufactured by:  
**Kay Park-Recreation Corp.**  
Distributed by Dave Bang Assoc., Inc.  
P.O. BOX 1088  
Tustin, CA 92681  
Tel:(800)669-2585  
Fax:(800)729-2483

**ADA Product Reference: 6J2GRRP-SWC**

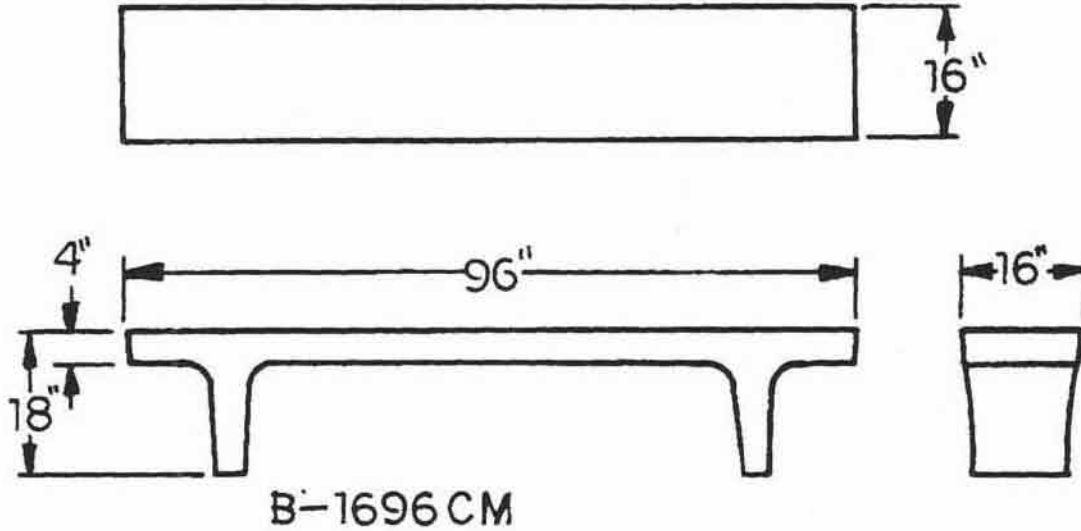
Picnic Table Set Recycled Plastic  
295 lbs. 2"x10" Planks 6' or 8' length  
Finish: Frame w/ Recycle Plastic  
Color: Gray or Brown



# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Bench



### Product Reference: B-1696CM

Recreational Park Bench

Finish: smooth aggregate / natural concrete

Manufactured by:

**San Diego Precast Concrete, Inc.**

2735 Cactus Rd.

San Diego, CA 92154

Tel: (619)240-8000

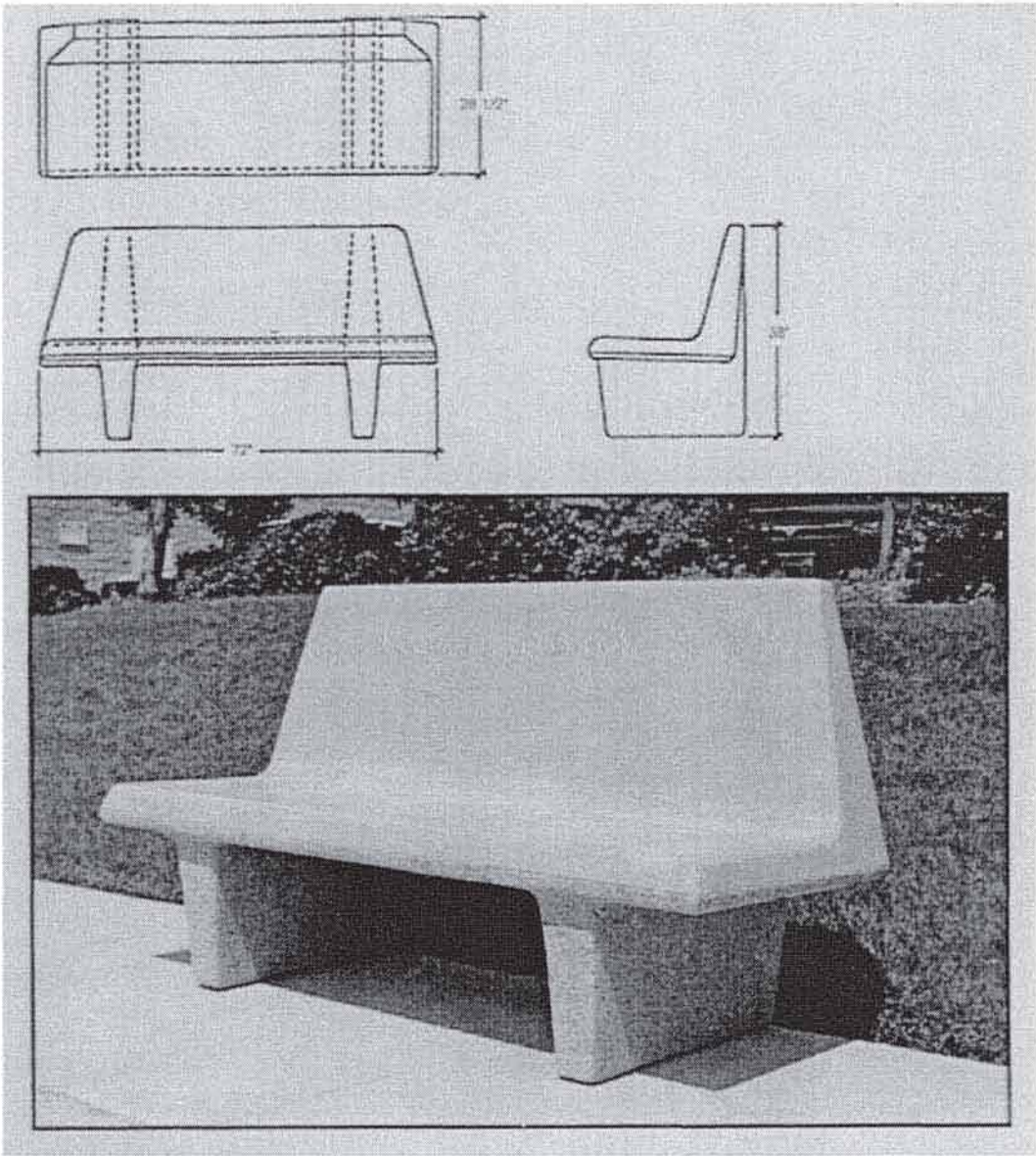
Fax: (619)661-1038

**DETAIL**  
8.9 A-4



# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton



**Product Reference: B1972SD**  
Recreational Park Bench with Back  
Finish: smooth aggregate / natural concrete

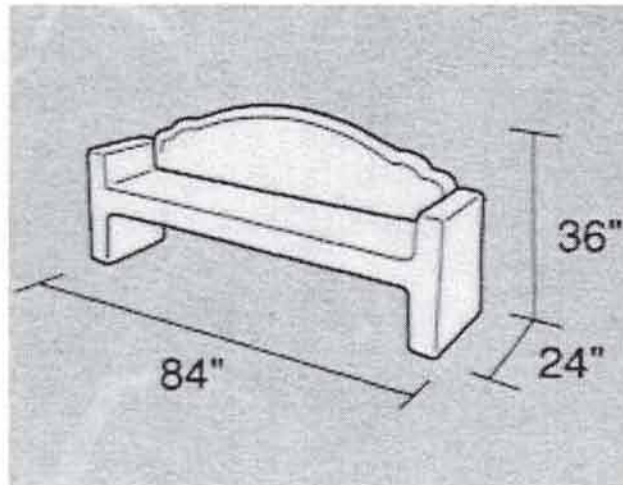
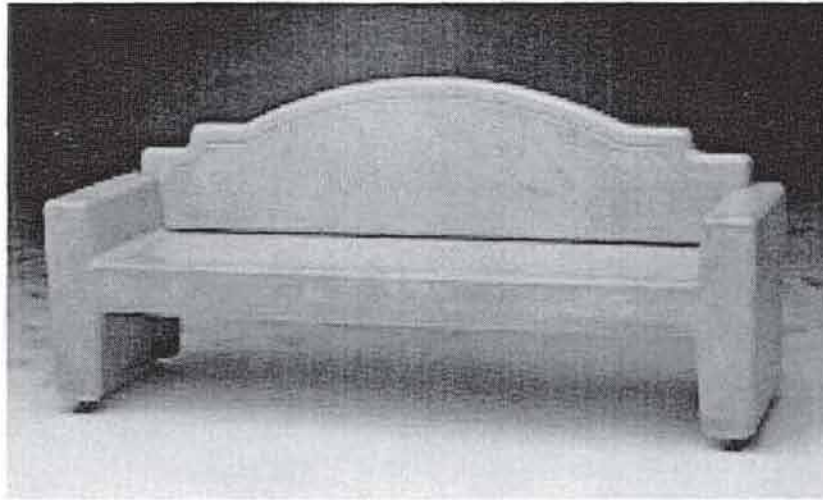
Manufactured by:  
**San Diego Precast Concrete, Inc.**  
2735 Cactus Rd.  
San Diego, CA 92154  
Tel: (619)240-8000  
Fax: (619)661-1038

**DETAIL**  
8.9 A-5

## BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---



### Product Reference: TF5065

Alternate Park Bench  
84"x24"x36" 1500 lbs  
Finish: Gray smooth concrete

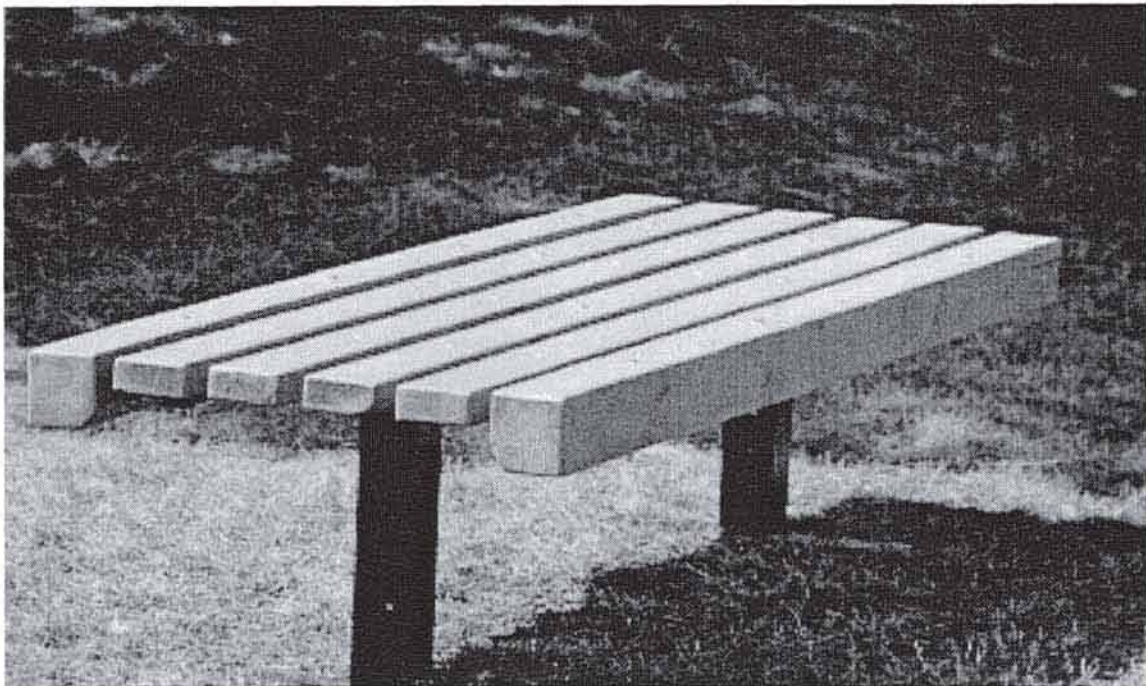
Manufactured by :  
**Terra-Form Inc.**  
Wausau Tile, Inc.  
9001 Bus. Hwy 51  
Rothschild, WI 54474  
Tel: (715)359-3121  
Toll Free: (800)388-8728  
Fax: (715) 355-4627

**DETAIL**  
8.9 A-6

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---



**Product Reference: LLA120**

Recycled Plastic Bench

Green Mountain Bench 4', 6', 8' sizes 123/166/218 lbs.

3" square stand or ground mount. Slats are two 4"x4", four 2"x4"

Finish: EnviroTech recycled plastic

Color: Mocha Brown or Pewter Gray

Manufactured by:

**RIPCO**

Recreational and Industrial Products Corporation

101 Townline Rd.

Tillsonburg, Ontario, Canada N4G 4H8

Tel:(800)565-3498 (519)842-5941

Fax:(519)842-2116

**DETAIL**  
8.9 A-7

## BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---



**Product Reference: 6FB4RP**

Recycled Plastic Bench

4"x4"x6' bench without back, direct bury stake legs. 155 lbs.

Finish: Recycled Plastic

Color: Gray or Brown

Manufactured by:

**Kay Park Recreation**

Distributed by Dave Bang Assoc., Inc.

P.O. BOX 1088

Tustin, CA 92681

Tel:(800)6692585

Fax:(800)729-2483

**DETAIL**  
8.9 A-8

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---

## Drinking Fountain



**Product Reference: Model 3177**

Drinking Fountain  
Complete barrier-free handicapped accessibility.  
Unit features vibracast-reinforced concrete construction and vandal-resistant trim.  
Finish: Light sandblast finish  
Color: Riverside Buff

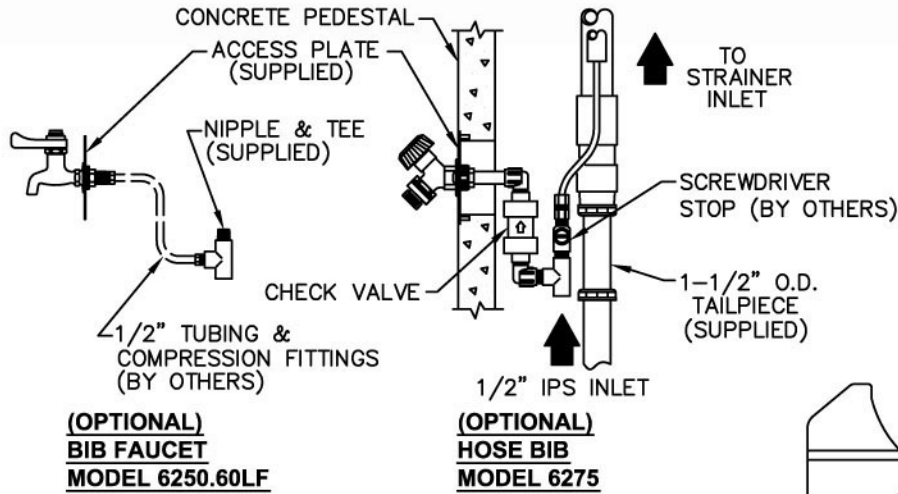
Manufactured by:  
**Haws Ornamental Stone**  
1435 Fourth Street  
P.O. BOX 1999  
Berkeley, CA 94701  
Tel:(415)525-5801  
Fax:(415)528-2812



# BEAP Standard Detail Sheet

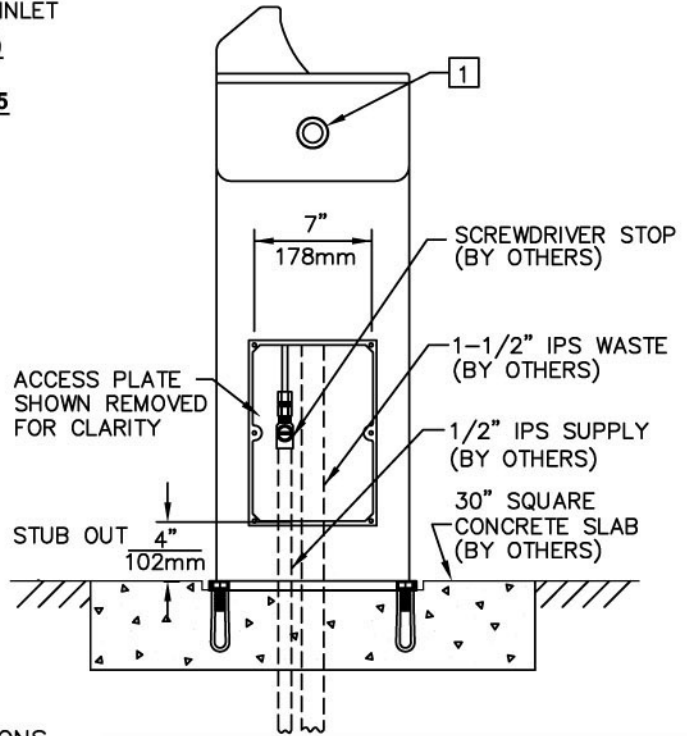
Public Works Office Marine Corps Base Camp Pendleton

THIS DOCUMENT IS TRUE AND CORRECT AT TIME OF PUBLICATION. CONTINUED PRODUCT IMPROVEMENTS MAKE SPECIFICATIONS AND MEASUREMENTS SUBJECT TO CHANGE WITHOUT NOTICE.



**(OPTIONAL)**  
**BIB FAUCET**  
**MODEL 6250.60LF**

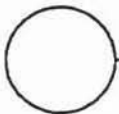
**(OPTIONAL)**  
**HOSE BIB**  
**MODEL 6275**



**NOTES:**

- 1. REFER TO 5874/VRK5874 OPERATION AND MAINTENANCE MANUAL FOR PUSH BUTTON AND VALVE INSTALLATION/MAINTENANCE INSTRUCTIONS.

©2006 Haws Corporation - All Rights Reserved



## DRINKING FOUNTAIN

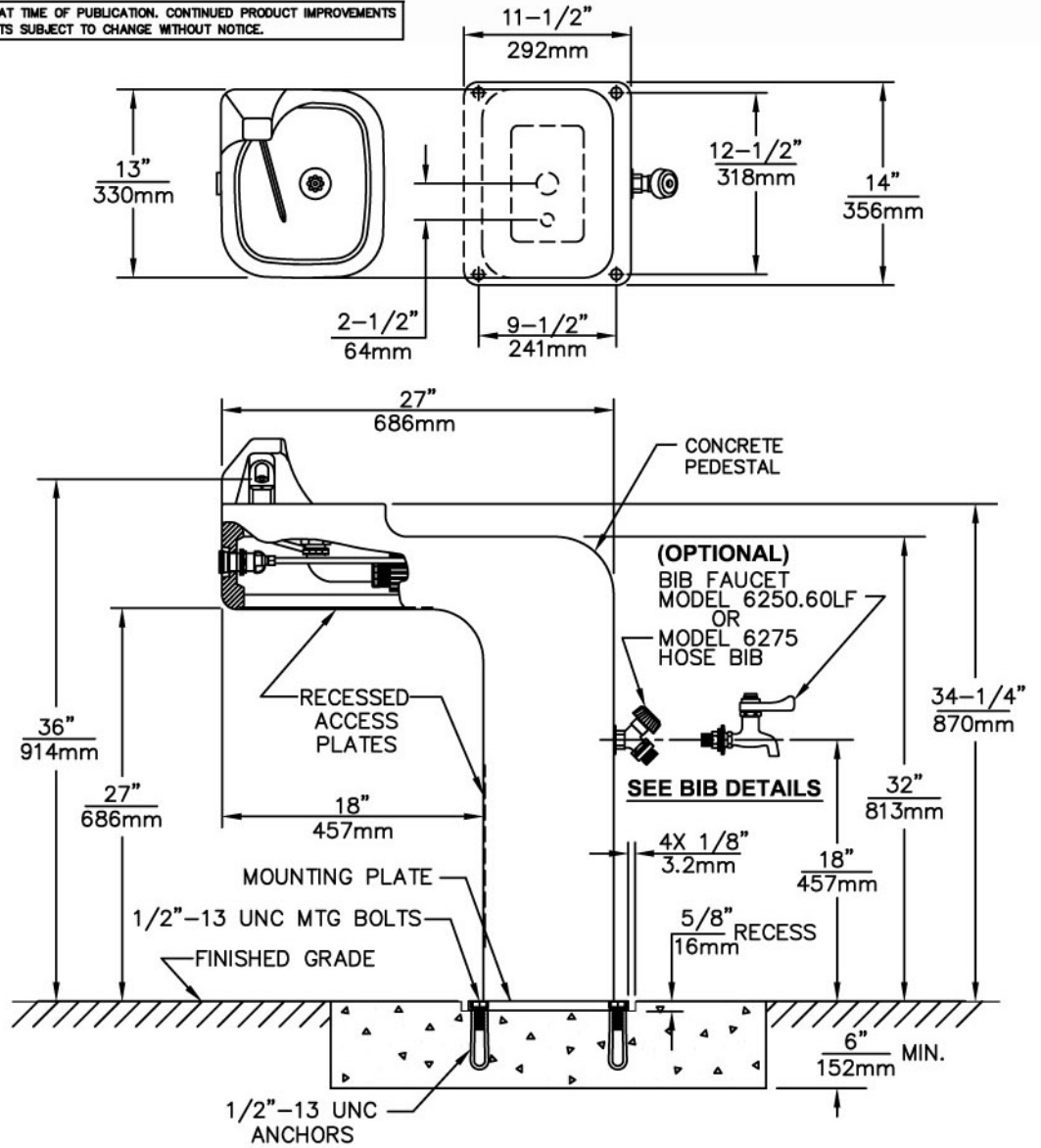
SCALE: N.T.S.

<b>Project Title:</b>	<b>Drawn By:</b>	<b>Issue Date:</b>	<b>Project Number:</b>
	<b>Branch Head:</b>	<b>Revision:</b>	<b>Detail Number:</b>
	<b>Public Works Office</b>		<b>8.9 B-2</b>
			<b>Scale:</b>

# BEAP Standard Detail Sheet

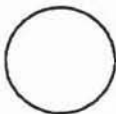
Public Works Office Marine Corps Base Camp Pendleton

THIS DOCUMENT IS TRUE AND CORRECT AT TIME OF PUBLICATION. CONTINUED PRODUCT IMPROVEMENTS MAKE SPECIFICATIONS AND MEASUREMENTS SUBJECT TO CHANGE WITHOUT NOTICE.



**NOTES:**

- REFER TO 5874/VRK5874 OPERATION AND MAINTENANCE MANUAL FOR PUSH BUTTON AND VALVE INSTALLATION/MAINTENANCE INSTRUCTIONS.



## DRINKING FOUNTAIN

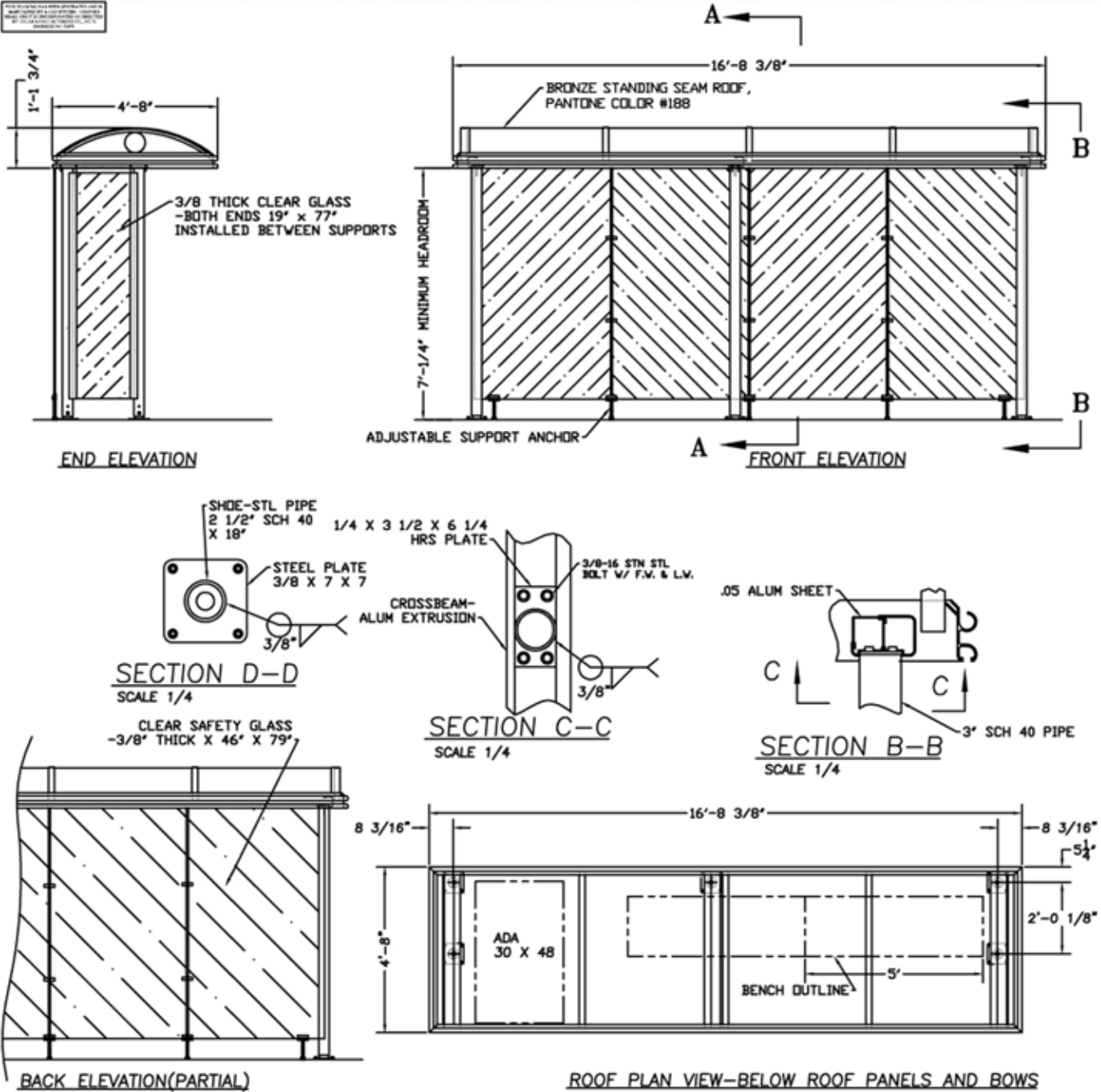
SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.9 B-3</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton

THIS DETAIL SHEET HAS BEEN APPROVED FOR USE BY THE MARINE CORPS PUBLIC WORKS OFFICE. IT IS THE PROPERTY OF THE MARINE CORPS PUBLIC WORKS OFFICE. IT IS TO BE USED ONLY FOR THE PROJECT AND LOCATION SPECIFIED HEREON. IT IS NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF THE MARINE CORPS PUBLIC WORKS OFFICE.



**PRIMARY BUS SHELTER** (Detail continues on 8.9 D-2)

<b>Project Title:</b>	<b>Drawn By:</b>	<b>Issue Date:</b>	<b>Project Number:</b>
	<b>Branch Head:</b>	<b>Revision:</b>	<b>Detail Number:</b>
	<b>Public Works Office</b>		<b>8.9 D-1</b>
			<b>Scale:</b>



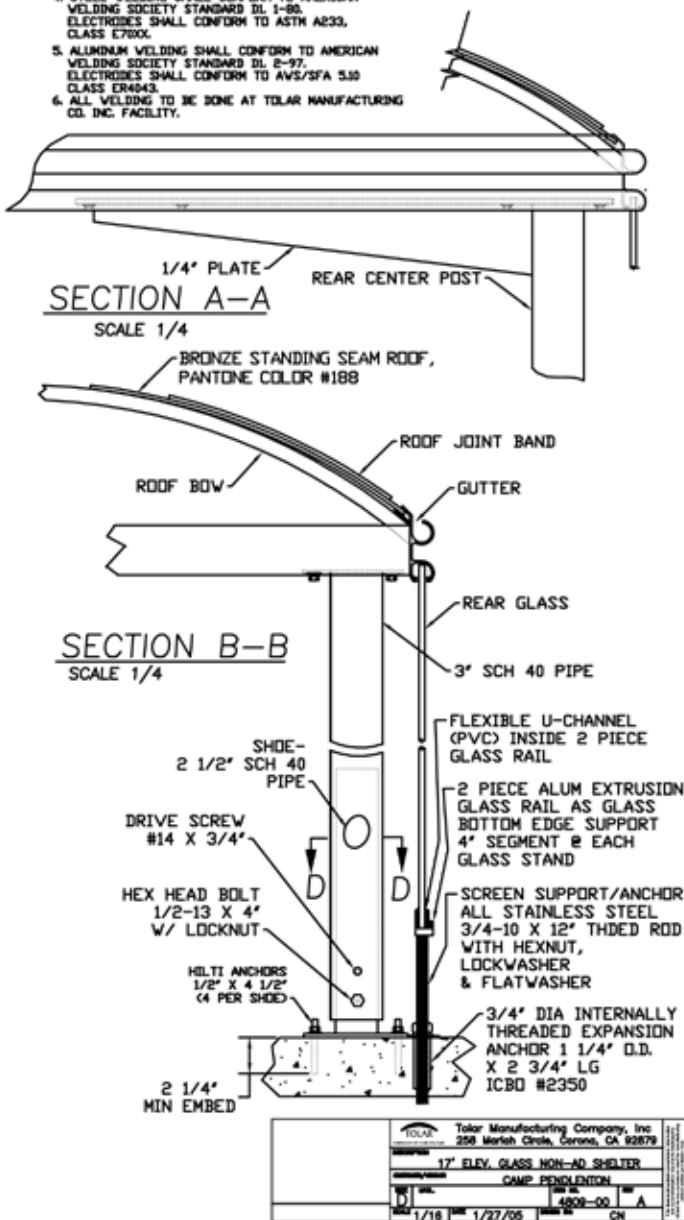
# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton

**GENERAL NOTES:**

1. ALL STRUCTURAL STEEL, UNLESS OTHERWISE NOTED, SHALL BE ASTM A-36, MINIMUM YIELD STRENGTH 36,000 PSI.
2. ALL ALUMINUM MEMBERS, UNLESS OTHERWISE NOTED, SHALL BE OF ALLOY 6063-T5.
3. ALL HOLES SHALL BE DRILLED OR PUNCHED.
4. STEEL WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY STANDARD D1. 1-80. ELECTRODES SHALL CONFORM TO ASTM A233, CLASS E70XX.
5. ALUMINUM WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY STANDARD D1. 2-97. ELECTRODES SHALL CONFORM TO AWS/SFA 5.10 CLASS ER4043.
6. ALL WELDING TO BE DONE AT TOLAR MANUFACTURING CO. INC. FACILITY.

NO.	DATE	DESCRIPTION	BY	APPROVED
1		FILED AND IN HOLD STATUS BY CAMP PENDLETON		



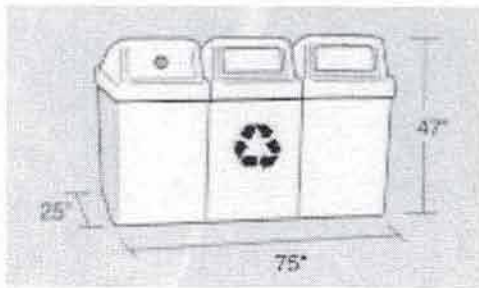
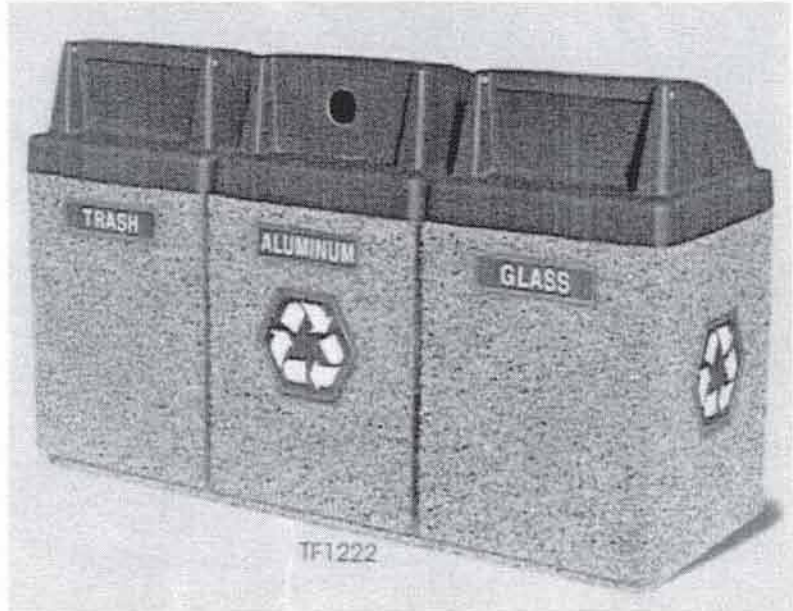
**PRIMARY BUS SHELTER** (continued from 8.9 D-1)

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.9 D-2</b>
			Scale:

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Trash Receptacles



### Product Reference: TF1222

Recycling Containers

25"x75"x47" 1,500 lbs.

3 Bins / 45 gal. per bin.

TF1430 W24 Push-Door 25"sq.x13" 12lbs. Blue, 3Bin Rec.

TF1429 W24 Can Recycle Top 25"sq.x13" 12 lbs. Blue, 3 Bin Rec.

Finish: Sand Weatherstone/smooth finish

(Weatherstone/aggregate finish shown)

Color: Sand or Gray

Matrix with matching steel door

Manufactured by :

**Terra-Form Inc.**

Wausau Tile, Inc.

9001 Bus. Hwy 51

Rothschild, WI 54474

Tel: (715)359-3121

Toll Free: (800)388-8728

Fax: (715) 355-4627

NOTE: Stocked Recycling Logos

Silk screened recycling inserts can be specified for all Terra-Form waste containers. Inserts are made of weather-resistant Lucite, and are bolted to containers for added security.

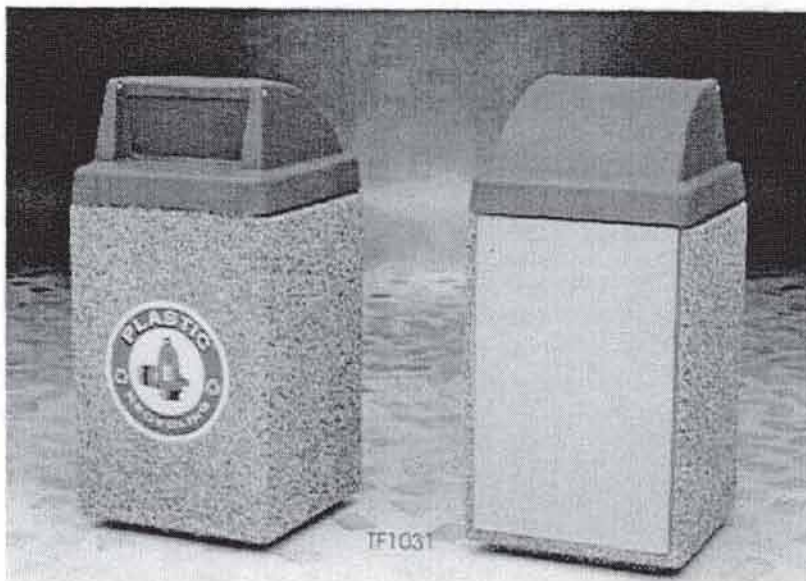
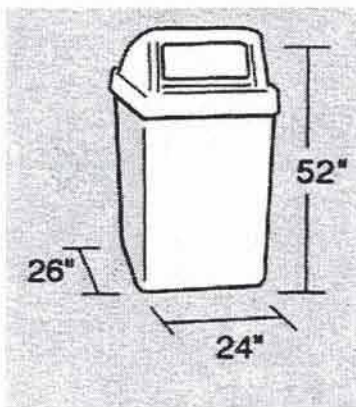
**DETAIL**

8.9 E-1

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Single containers



### Product Reference: TF1029

Single Recycling Container

24"x26"x51" 850 lbs. 45 gal.

TF1430 W24 Push-Door 25"sq.x13" 12 lbs. Blue

Finish: Sand Weatherstone/smooth finish

(Weatherstone/aggregate finish shown)

Color: Sand or Gray

Matrix with matching steel door

Manufactured by :

**Terra-Form Inc.**

Wausau Tile, Inc.

9001 Bus. Hwy 51

Rothschild, WI 54474

Tel: (715)359-3121

Toll Free: (800)388-8728

Fax: (715) 355-4627

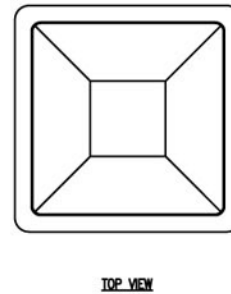
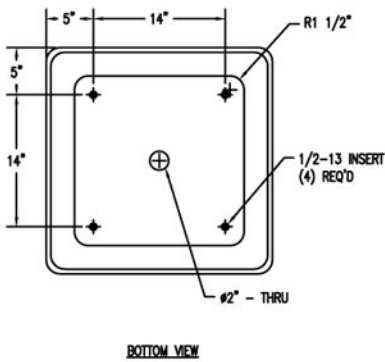
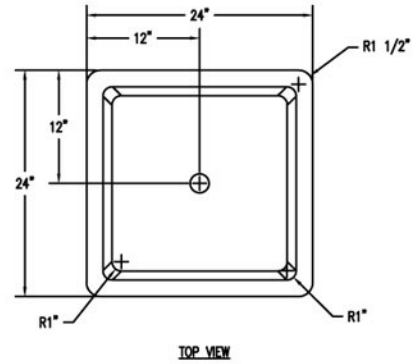
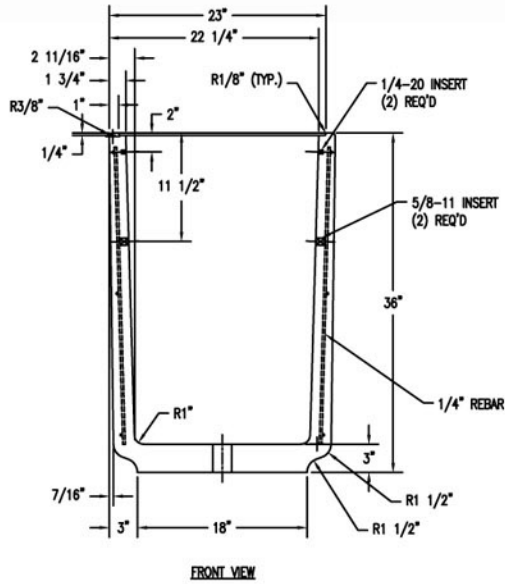
NOTE: Stocked Recycling Logos

Silk screened recycling inserts can be specified for all Terra-Form waste containers. Inserts are made of weather-resistant Lucite, and are bolted to containers for added security.

**DETAIL**  
8.9 E-2

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton



## Product Reference: TF1031

Square Single Container  
24"x24"x36" 615lbs. 45 gal.  
Finish: B-3 Weatherstone (Sand)  
Bronze aluminum lid

Manufactured by:

**Wausau Tile, Inc.**

Vicki Tressler

PO Box 1520

Wausau, WI 54402-1520

Tel: (715)359-3121 Ext. 365

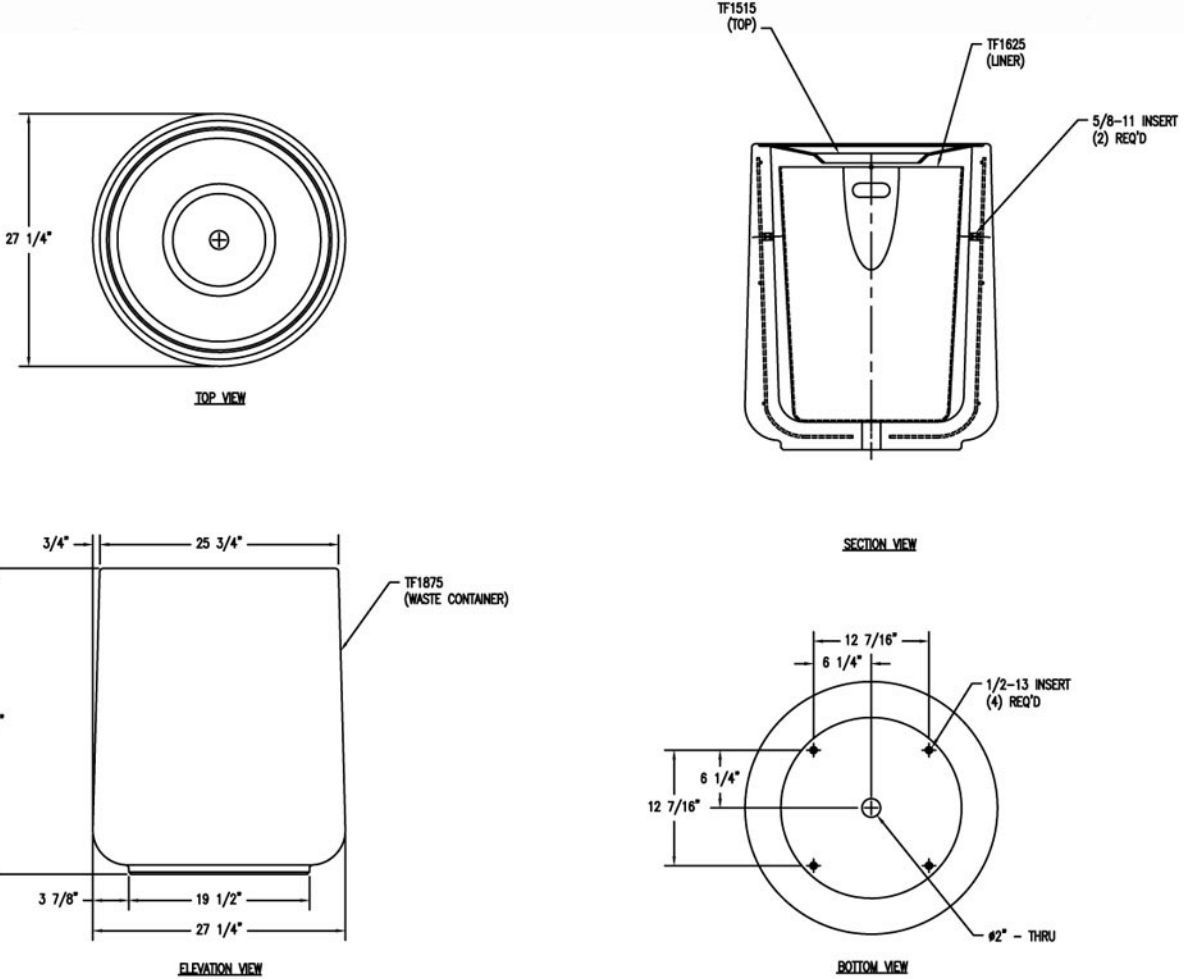
Toll Free: 1-800-388-8728

Fax: (715)355-4627

DETAIL  
8.9 E-3

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton



### Product Reference: TF1175

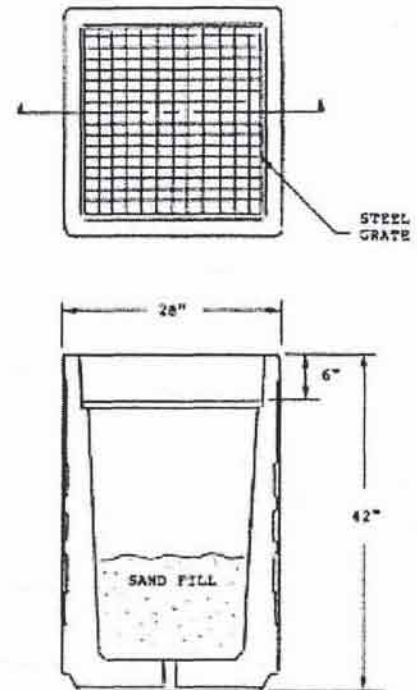
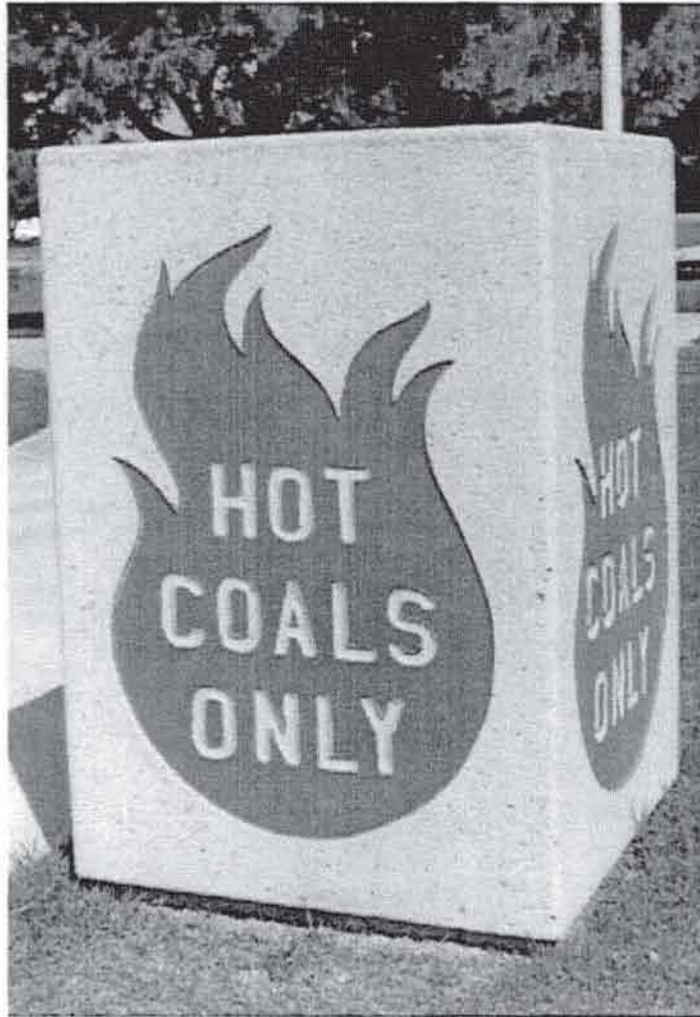
Round Single Container  
 27 1/4" Dia. x 33" 675lbs.  
 Finish: B-3 Weatherstone (Sand)  
 Bronze aluminum lid

Manufactured by:  
**Wausau Tile, Inc.**  
 Vicki Tressler  
 PO Box 1520  
 Wausau, WI 54402-1520  
 Tel: (715)359-3121 Ext. 365  
 Toll Free: 1-800-388-8728  
 Fax: (715)355-4627

**DETAIL**  
 8.9 E-4

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton



## Product Reference: HCR42S

Hot Coals Container

28"SQX42" 1400lbs

Finish: Background Sandblasted

Color: Natural grey concrete

Manufactured by :

**San Diego Precast Concrete, Inc.**

2735 Cactus Rd

San Diego, CA 92154

Tel: (619)240-8000

Fax: (619)661-1038

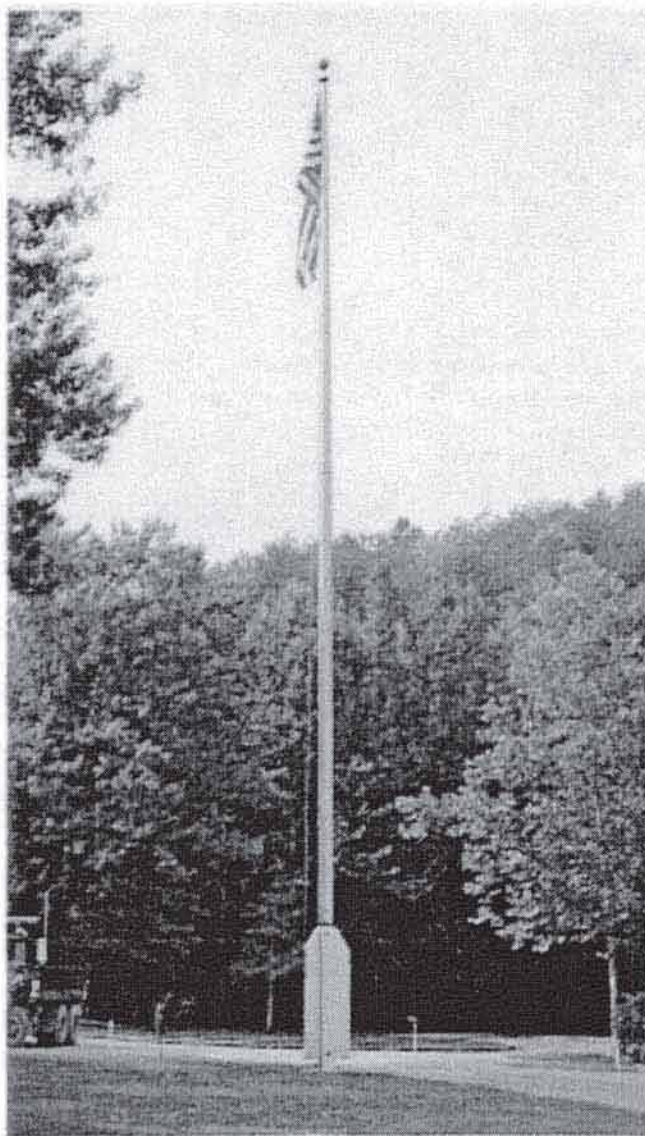
**DETAIL**  
8.9 E-5

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---

## Flagpole



### Product Reference: 10350/AMC

Flagpole

Material: 6063-T6 aluminum tubing, uniform taper

Finish: Pole is directional satin ground, 50 grit.

Steel is painted to match color of pole.

Ball: No. 14 gauge clear anodized aluminum w/ flush seam.

Anchor bolts: Four 1"x36" galvanized steel anchor bolts are provided for installing in concrete foundation.

Manufactured by:

**American Flagpole**

26252 Hillman Highway

Abingdon, VA 24212-0547

Tel: (800)368-7171

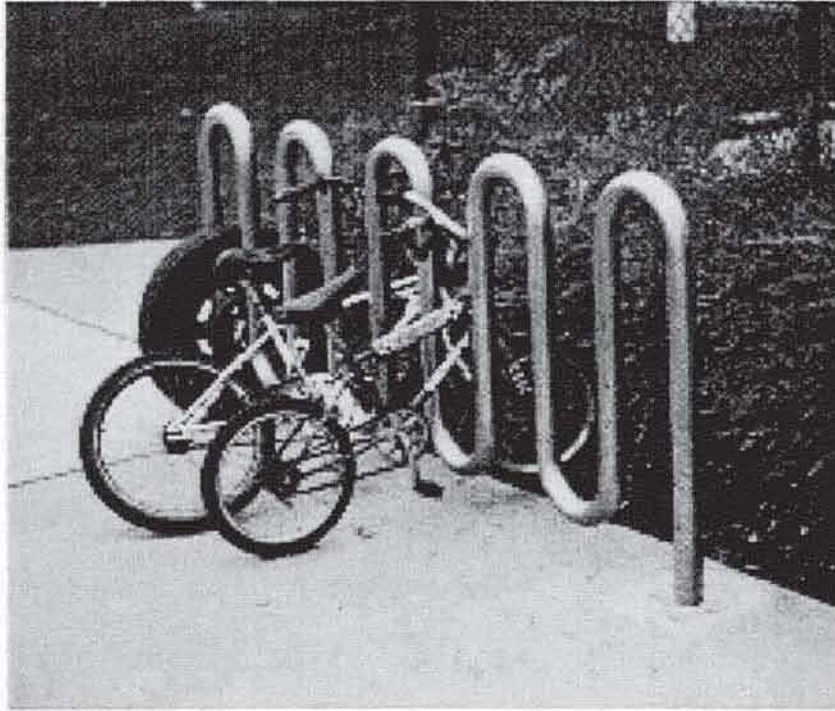
Fax: (276)676-3090

**DETAIL**  
8.9 G-1

## BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---



### Product Reference: BR-1

Metal Bike Rack

H:36" 2" schedule 40 pipe

Bike capacity: 1 to 13 bikes

Embed, surface mount, free standing.

Color: No color; galvanized finish.

Manufactured by:

**Fair Weather Site Furnishings and Accessories**

1540 Leader International Dr.

Port Orchard, WA 98367-6437

Tel: (800)323-1798

Fax: (360)895-1284

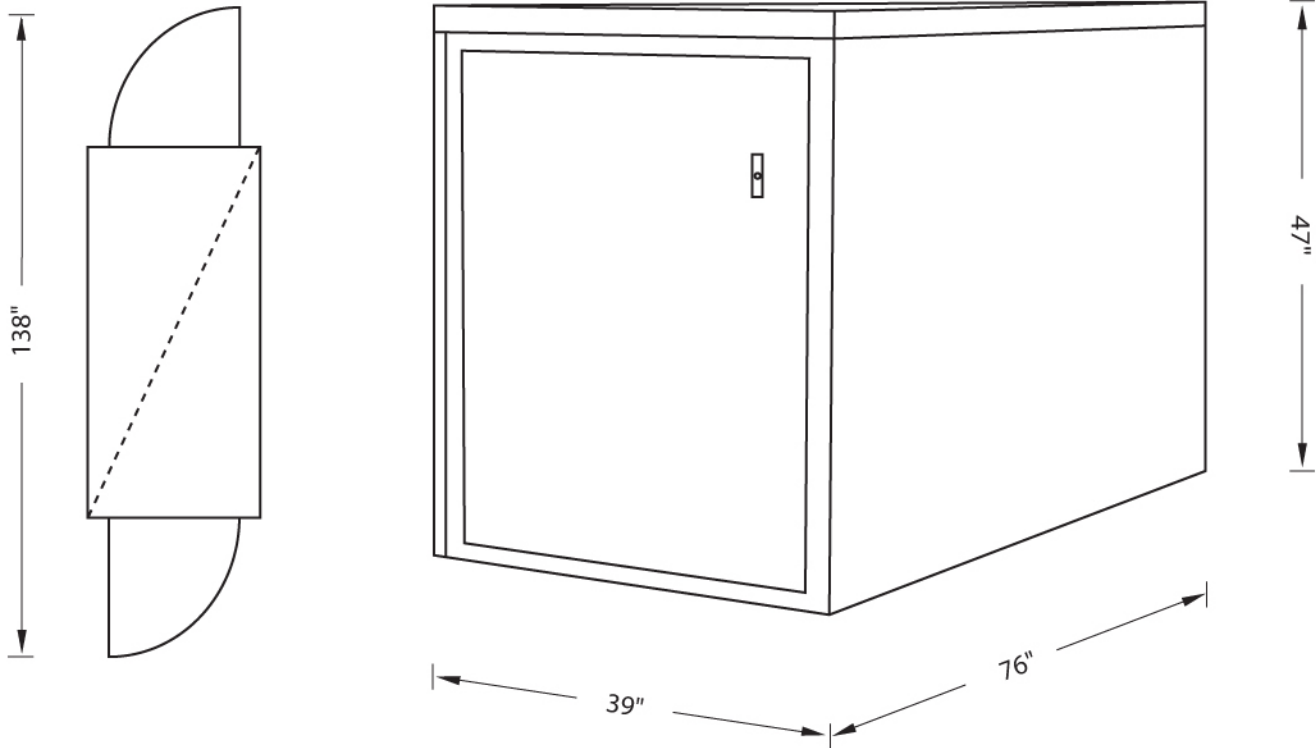
**DETAIL**  
8.9 H-1



# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Bike Storage



### Product Reference: BTWL02M

Bike Storage

For two standard bicycles (or small motorcycles) with locker. 39"x76"x47"

Finish: Metal or polyethylene.

Powder-coat finish, variety of colors

Manufactured by:

**Palmer Group**

1072 Folsom St., #328

San Francisco, CA 94103

Tel: (888)764-BIKE (2453)

Fax: (415)333-2032

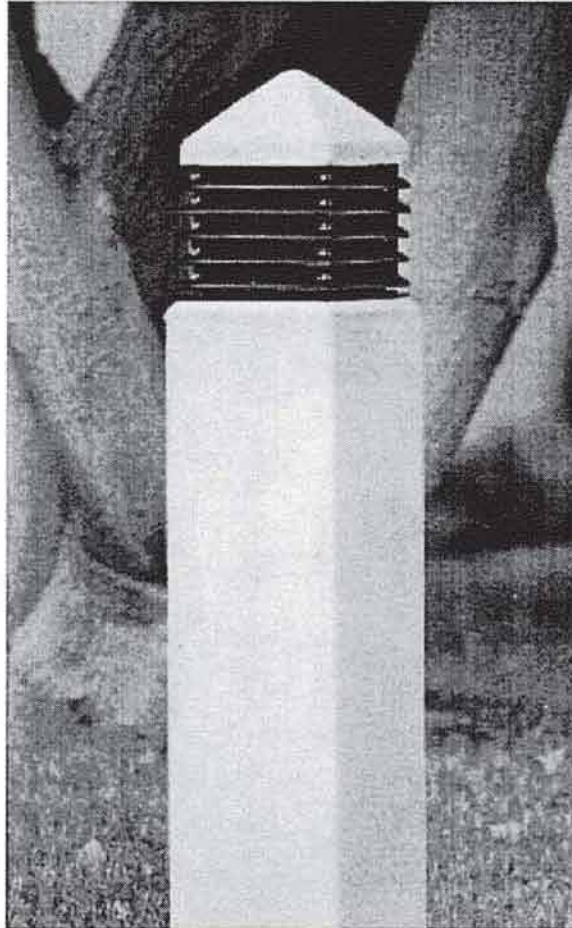


# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---

## Bollards



### Product Reference: CB9S

Bollard 9" Square

CUTOFF LIT PYRM MSB 9" square x 36" height

Finish: Medium sandblast natural color

Color of grill: Galvanized

Mounting: 9" square available only w/ external mount

Manufactured by:

**Architectural Area Lighting**

14249 Artesia Blvd. / P.O. BOX 1869

La Miranda CA 90638 -1869

Tel: (714)994-2700

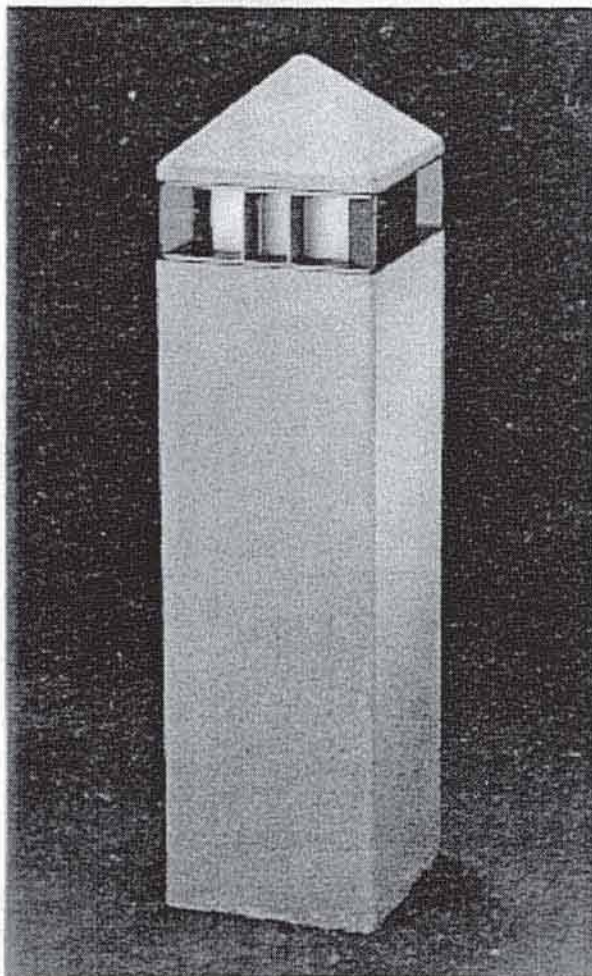
Fax: (714)994-0522

**DETAIL**  
8.9 I-1

## BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---



### Product Reference: CB12S

Bollard 9" Square

36 UNLIT PYRM MSB 9" square x 36" height

Finish: Medium sandblast natural color

Color of grill: Galvanized

Mounting: 9" square available only w/ external mount

Manufactured by:

**Architectural Area Lighting**

14249 Artesia Blvd. / P.O. BOX 1869

La Mirada CA. 90638-1869

Tel:(714)994-2700

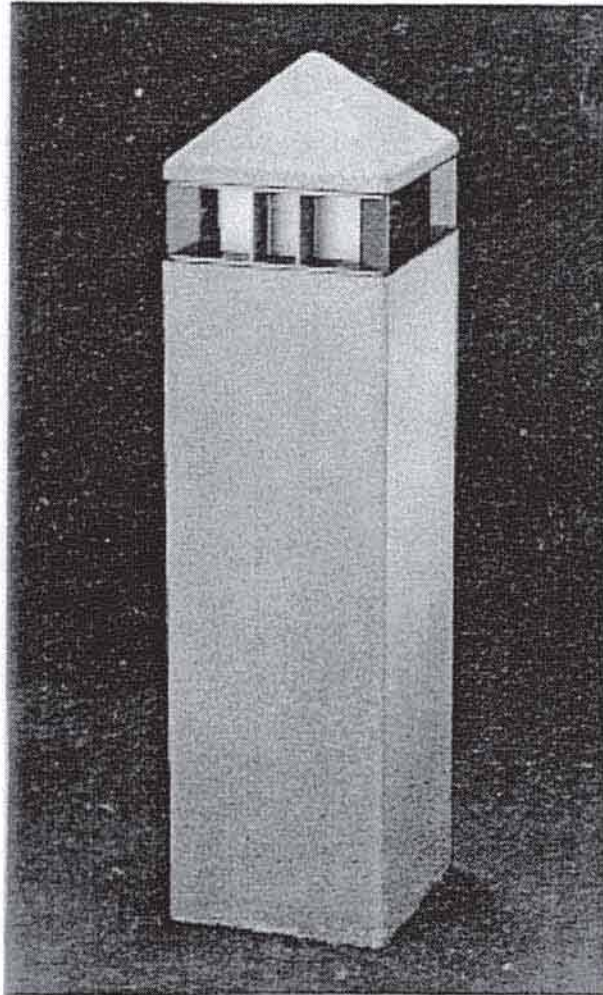
Fax:(714)9940-522

**DETAIL**  
8.9 I-2

## BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---



### Product Reference: CB12S

Bollard 12" Square

36 LIT VERT PYRM MSB 12" square x 36" or 42" height

Finish: As standard are medium sandblast natural color

Color of grill can be standard or customer choice

Mounting: 12" square available w/ internal or external mount

Manufactured by:

**Architectural Area Lighting**

14249 Artesia Blvd. / P.O. BOX 1869

La Mirada CA. 90638-1869

Tel:(714)994-2700

Fax:(714)994-0522

**DETAIL**  
8.9 I-3

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---



**Product Reference: CB16S**

Bollard 16" Square - Handicapped

36 LIT HORZ PYRM MSB 16" square x 36" height

Finish: Medium sandblast natural color

Color of grill: Galvanized

Mounting: 16" square available w/ internal or external mount

Manufactured by:

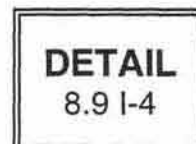
**Architectural Area Lighting**

14249 Artesia Blvd. / P.O. BOX 1869

La Mirada CA. 90638 -1869

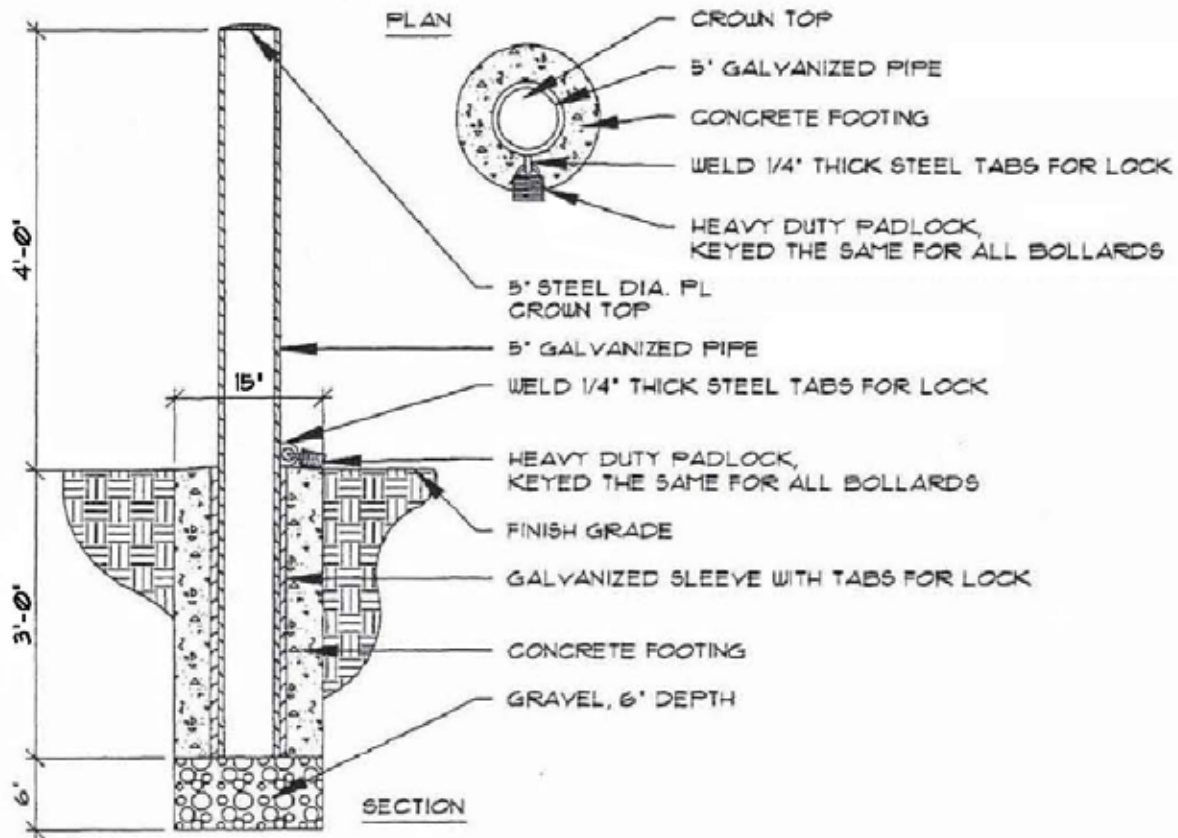
Tel:(714)994-2700

Fax:(714)994-05



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



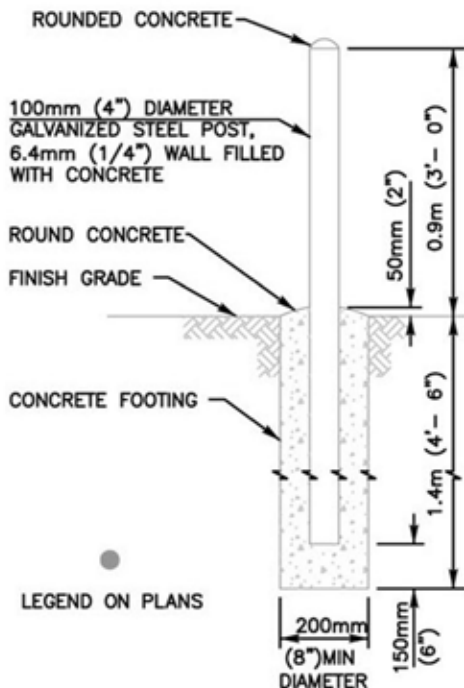
## MOVEABLE BOLLARD

SCALE: N.T.S.

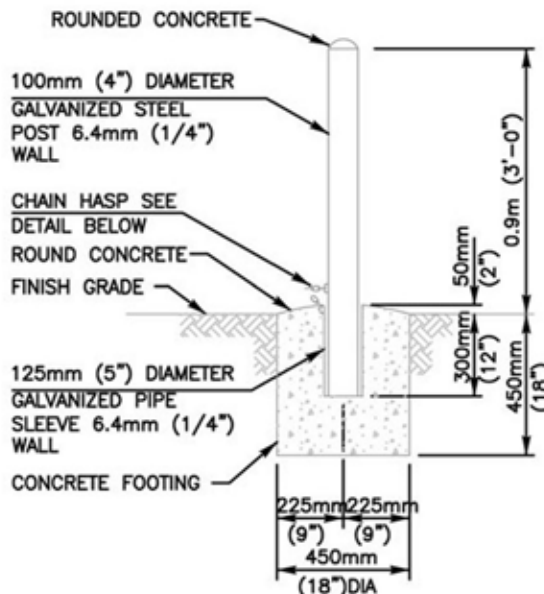
	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:  <b>8.9 I-5</b>
	Public Works Office		
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton

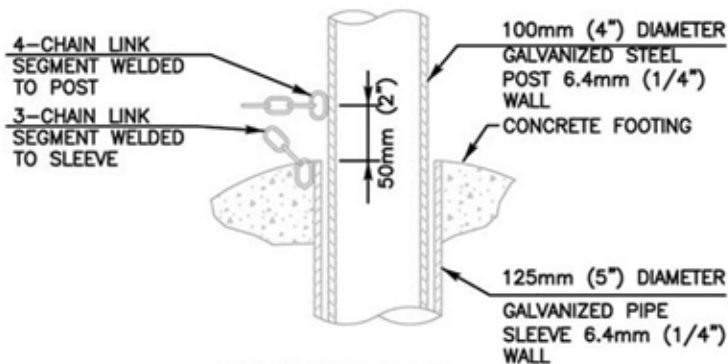


PROTECTION POST TYPE "A"



DEMOUNTABLE PROTECTION POST TYPE "B"

LEGEND ON PLANS



CHAIN HASP DETAIL

**NOTES:**

- 1) TYPE "A" AND TYPE "B" PROTECTION POSTS SHALL BE INSTALLED WHERE INDICATED ON THE APPROVED PLANS OR AS DIRECTED BY THE ENGINEER. SDG&E REQUIREMENTS DICTATE IN AREAS OF SDG&E EQUIPMENT
- 2) CHAIN TO BE 6.4mm (1/4") PROOF COIL CHAIN GALVANIZED STEEL. WELD 4-LINK SEGMENT TO POST AND 3-LINK SEGMENT TO SLEEVE
- 3) TYPE "A" AND TYPE "B" PROTECTION POSTS SHALL BE COATED USING SAFETY YELLOW IN ACCORDANCE WITH AGENCY'S STANDARDS

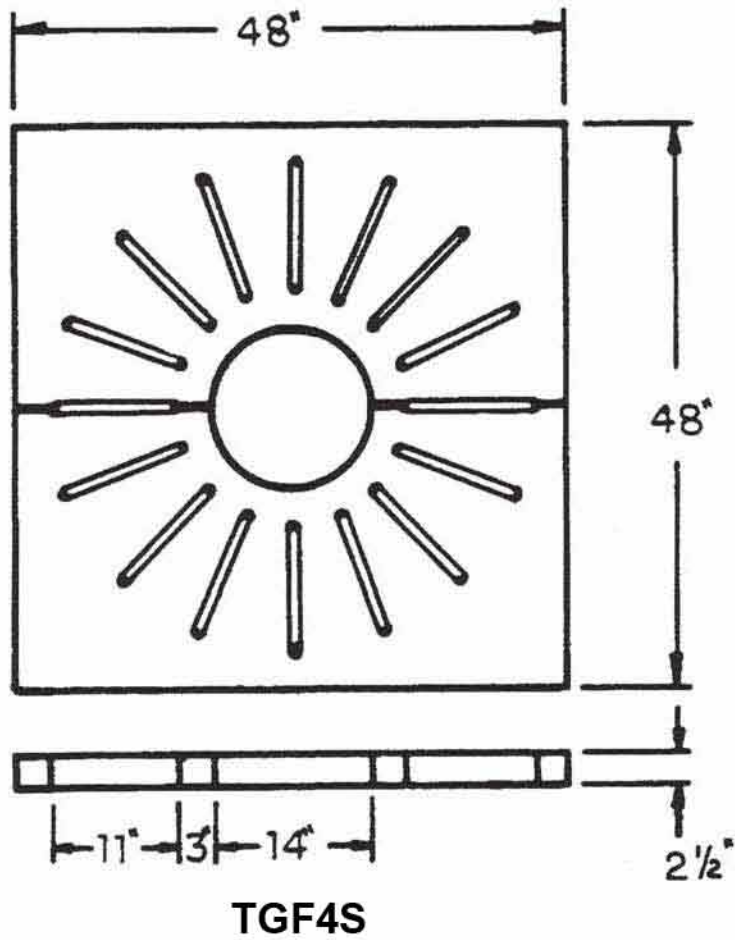
## PROTECTION BOLLARD INSTALLATION

Project Title:  SDRSD WM-4	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.9 I-6</b>
			Scale:

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Tree Grates



**Product Reference: TGF4S**

Concrete Tree Grate

48"x48"x2 1/2"

Finish: Smooth concrete

Color: Natural grey concrete

Manufactured by:

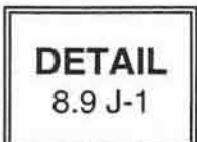
**San Diego Precast Concrete, Inc.**

2735 Cactus Rd.

San Diego, CA 92154

Tel: (619)240-8000

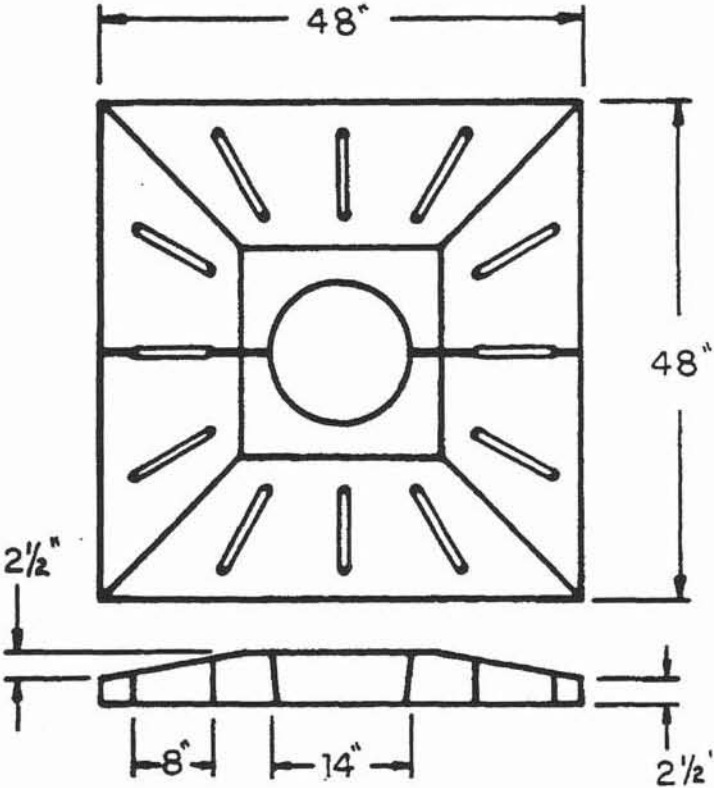
Fax: (619)661-1038





# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton



**TGT4S**

**Product Reference: TGT4S**

Concrete Tree Grate  
48"x48"x2 1/2" (central part 5" height)  
Finish: Smooth concrete  
Color: Natural grey concrete

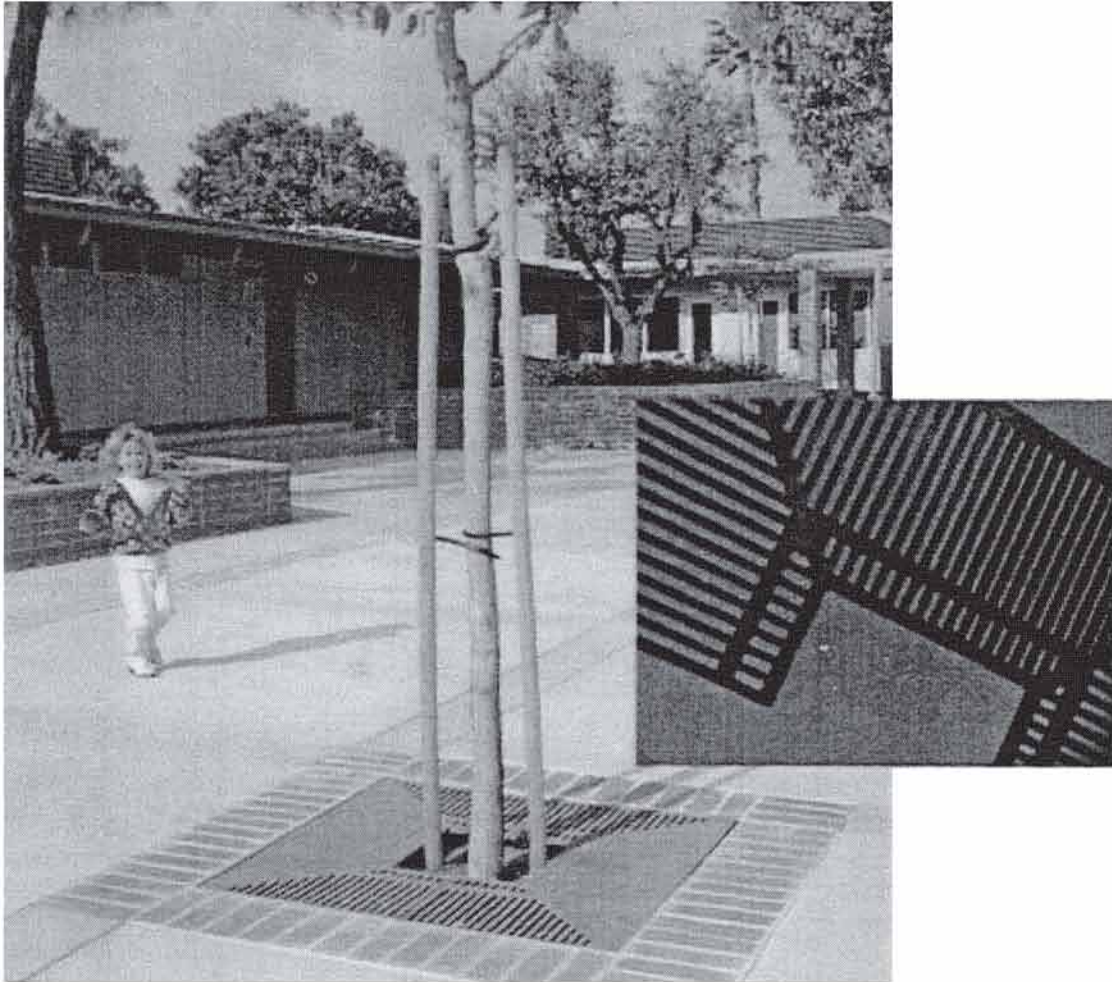
Manufactured by:  
**San Diego Precast Concrete, Inc.**  
2735 Cactus Rd.  
San Diego, CA 92154  
Tel: (619)240-8000  
Fax: (619)661-1038



## BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---



### Product Reference: ADA

Metal Tree Grate

½"x48"x48" min. (option of 16" and 22" opening)

Designed to meet the Americans with Disabilities Act Guidelines at minimum cost.

Finish: Cast Iron / Integral Painted Surface

Manufactured by:

**Ironsmith Inc.**

41-701 Corporate Way # 3

Palm Desert, CA 92260

Tel: (800)338-4766

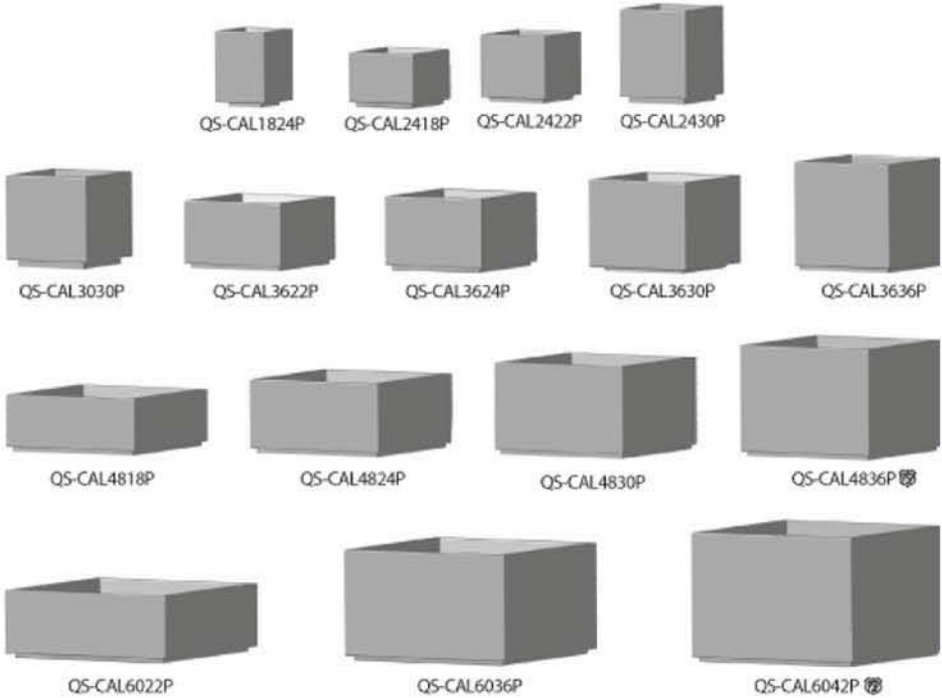
Fax: (760)776-5080

**DETAIL**  
8.9 J-3

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Planter



Model #	O.D.	Btm O.D.	Height	Top I.D.	Btm I.D.	Depth
QS-CAL1824P	18"	12"	24"	14"	10"	20"
QS-CAL2418P	24"	21"	18"	20"	17 1/4"	16"
QS-CAL2422P	24"	20"	22"	20"	18 3/4"	18"
QS-CAL2430P	24"	20"	30"	19 1/4"	17 1/2"	26"
QS-CAL3030P	30"	24 1/2"	30"	26"	19"	27"
QS-CAL3622P	36"	33"	22"	31"	25 1/2"	18"
QS-CAL3624P	36"	33"	24"	30"	26"	20 1/2"
QS-CAL3630P	36"	31"	30"	31"	25 1/2"	25 1/2"
QS-CAL3636P	36"	34"	36"	31"	29 3/4"	32 3/4"
QS-CAL4818P	48"	45"	18 1/2"	42"	40"	16"
QS-CAL4824P	48"	44 1/2"	24"	43"	40"	20 1/2"
QS-CAL4830P	48"	45 1/2"	30"	42"	39"	26"
QS-CAL4836P	48"	45"	36"	43"	40"	31"
QS-CAL6022P	60"	55 1/2"	22"	55"	53"	17"
QR-CAL6036P	60"	55 1/2"	36"	55"	50 1/2"	31"
QS-CAL6042P	60"	57"	42"	55"	52"	39"

**Product Reference: California Square**

Concrete Square Planter

Sizes shown above

Finish: Light sandblast

Color: Sand

Manufactured by:

**Quick Crete Products Corp.**

P.O. Box 639

731 Parkridge Avenue

Norco, CA 92860

Tel: (866)703-3434

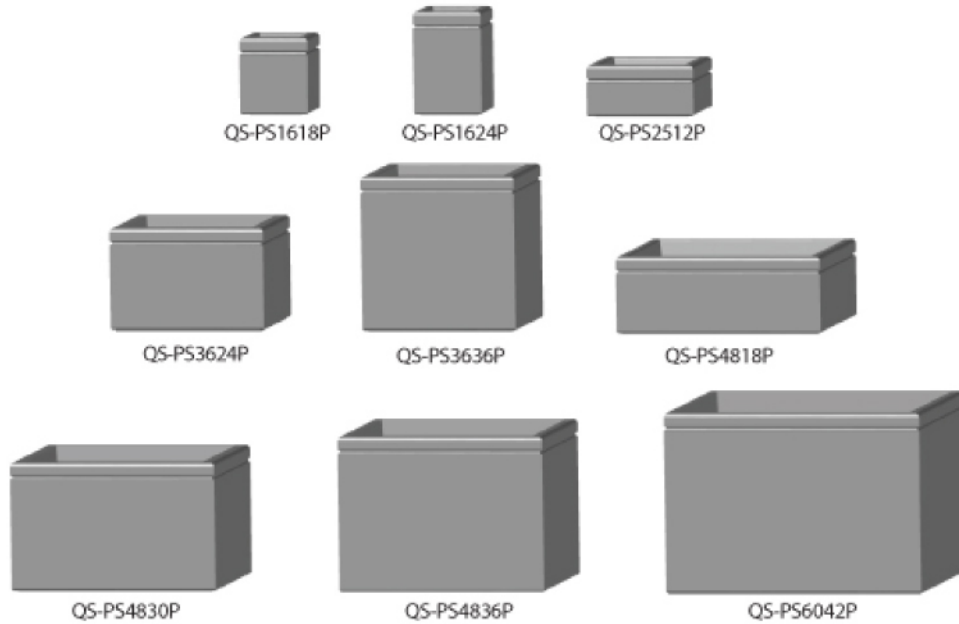
Fax: (951)737-7032



# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Planter



Model #	O.D.	Btm O.D.	Height	Top I.D.	Btm I.D.	Depth
QS-PS1618P	16"	16"	18"	11"	9 1/4"	15 3/4"
QS-PS1624P	16"	16"	24"	11"	9"	19"
QS-PS2512P	25"	25"	12"	20"	18"	9 1/4"
QS-PS3624P	36"	36"	24"	29 3/4"	27 3/4"	21"
QS-PS3636P	36"	36"	36"	30"	26 1/2"	32 1/2"
QS-PS4818P	48"	48"	18"	43"	40 1/2"	14"
QS-PS4830P	48"	48"	30"	42"	39"	26"
QS-PS4836P	48"	48"	36"	43"	40"	31"
QS-PS6042P	60"	60"	42"	55"	52"	38"

**Product Reference: Palm Square**

Concrete Square Planter

Sizes shown above

Finish: Light sandblast

Color: Sand

Manufactured by:

**Quick Crete Products Corp.**

P.O. Box 639

731 Parkridge Avenue

Norco, CA 92860

Tel: (866)703-3434

Fax: (951)737-7032



# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Planter



Model #	O.D.	Btm O.D.	Height	Top I.D.	Btm I.D.	Depth
QR-CAL129P	12"	9"	9"	9 1/2"	7"	6 3/4"
QR-CAL1218P	12"	6"	18"	8"	7"	14 1/2"
QR-CAL1620P	16"	9"	20"	11 3/4"	11"	17"
QR-CAL1624P	16"	9"	24"	11 3/4"	9 1/2"	20"
QR-CAL1812P	18"	11"	12"	15"	14"	10"
QR-CAL1818P	18"	13"	18"	14"	12 3/4"	14"
QR-CAL1824P	18"	11"	24"	14"	11"	20"
QR-CAL2014P	20"	11"	14 1/2"	17"	16"	10 1/2"
QR-CAL2412P	24"	16"	12"	19 1/2"	17"	8 1/2"
QR-CAL2418P	24"	17"	18"	19 1/2"	17"	14"
QR-CAL2422P	24"	16"	22"	19 1/2"	17"	18 1/2"
QR-CAL3024P	30"	22 1/2"	24"	24"	23 5/16"	21"
QR-CAL3030P	30"	21 1/2"	30"	25"	22 7/8"	27"
QR-CAL3612P	36"	28"	12"	32"	30"	8 1/2"
QR-CAL3618P	36"	28"	18"	32"	30"	14 1/2"
QR-CAL3622P	36"	28"	22"	31 3/4"	29"	19"
QR-CAL3624P	36"	23 1/4"	24"	30"	28 3/4"	20"
QR-CAL3630P	36"	28"	30"	30"	28"	27"
QR-CAL3636P	36"	28"	36"	32"	28"	32"
QR-CAL4812P	48"	40"	12"	44"	42"	8 1/2"
QR-CAL4818P	48"	39 3/4"	18"	41"	36"	14"
QR-CAL4822P	48"	40 1/8"	22"	44"	43"	19"
QR-CAL4830P	48"	40 1/2"	30"	44"	40"	24 1/2"
QR-CAL4836P	48"	40"	36"	44"	42"	31"
QR-CAL4848P	48"	33"	48"	44"	42"	43"
QR-CAL6018P	60"	52"	18"	56"	54"	14"
QR-CAL6022P	60"	52 1/2"	22"	56"	53"	14 1/2"
QR-CAL6030P	60"	52"	30"	56"	51"	25 1/2"
QR-CAL6236P	62"	49"	36"	57"	54"	32"
QR-CAL7222P	72"	64"	22"	67 1/2"	64"	19 1/2"
QR-CAL7230P	72"	64"	30"	67 1/2"	64"	26"
QR-CAL7236P	72"	70"	36"	68"	65"	33"
QR-CAL7248P	72"	64"	48"	68"	65"	44"
QR-CAL8430P	84"	76"	30"	79"	76 1/4"	26"

### Product Reference: California Round

Concrete Round Planter

Sizes shown above

Finish: Light sandblast

Color: Sand

Manufactured by:

**Quick Crete Products Corp.**

P.O. Box 639

731 Parkridge Avenue

Norco, CA 92860

Tel: (866)703-3434

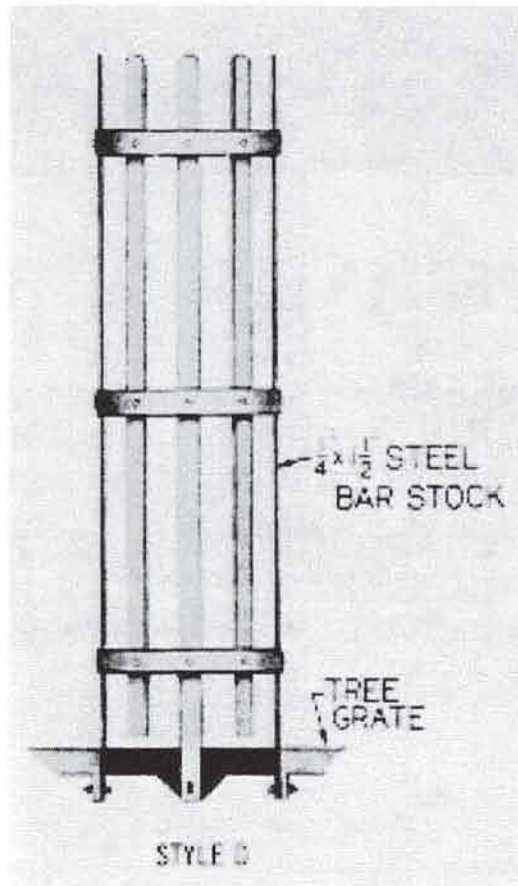
Fax: (951)737-7032



# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Tree Guards



### Product Reference: 02980 / NEE

Metal Tree Guard

Buyline 3224 Style D

1/4"x1 1/2" Steel Bar Stock 5' Height

Finish: Factory paint finished

Note: Attach tree guard to tree grate

Manufactured by:

**Neenah Foundry Company**

2121 Brooks Ave. P.O. BOX 729

Neenah, Wisconsin 54957

Tel: (800)558-5075

Fax: (920)729-3661

Regional sales office:

Cypress, CA 90630

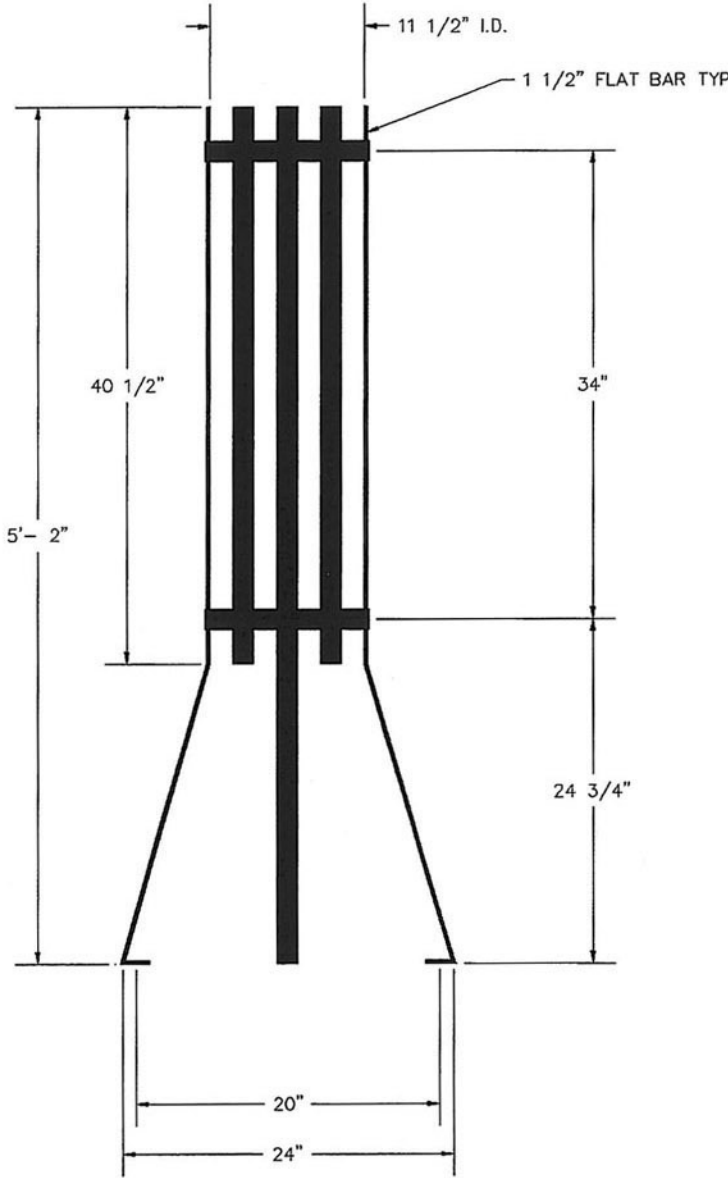
Tel: (714)827-5369

Fax: (714)827-5370

**DETAIL**  
8.9 K-1

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton



**Product Reference: ECO**

Metal Tree Guard

24"x5'2" (overall dimension)

20"x11 1/2"x5'2" (internal dimension)

Finish: All tree guards come as a finished unit

Cast iron, Factory paint finished

Note: Attach tree guard to tree grate

Manufactured by:

**Urban Accessories**

Distributed by Recreation Republic

Contact: Suzanne or Mark

Tel: (760)510-1758

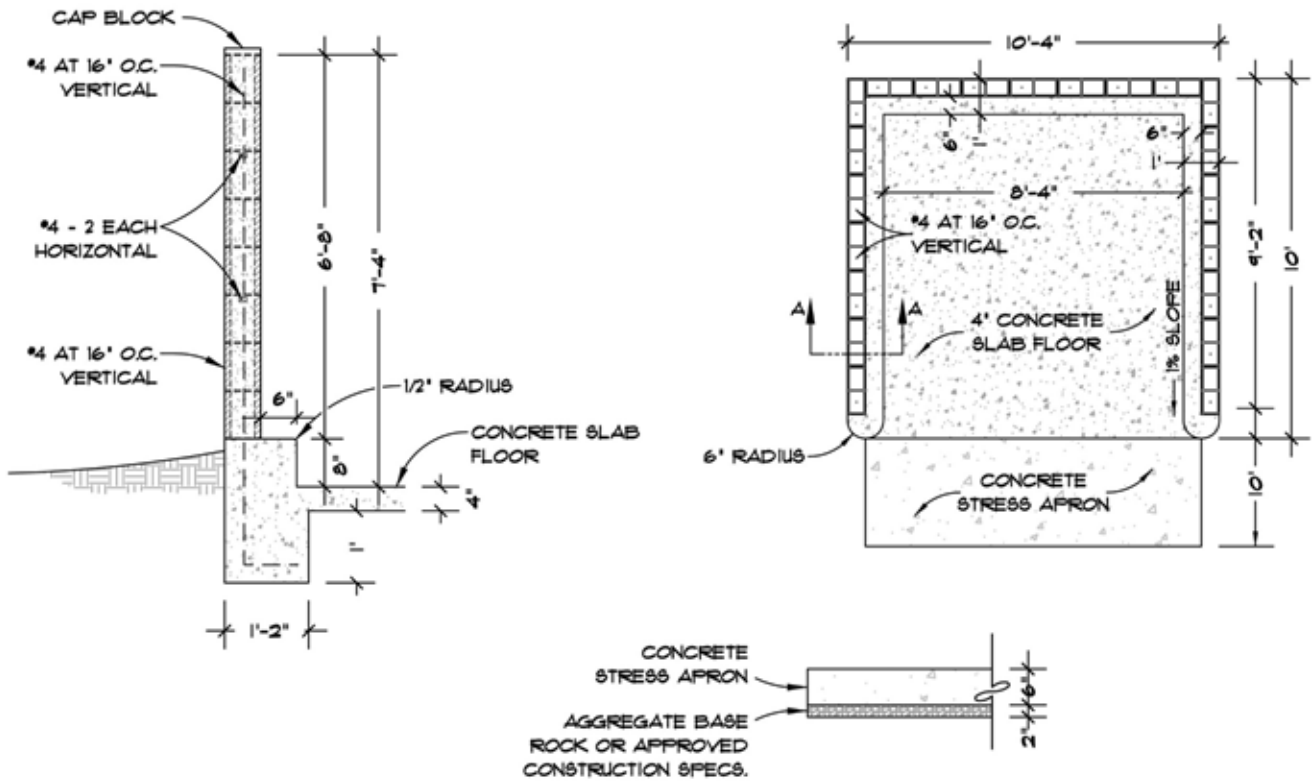
Toll Free: (888)843-6128 x500

Fax: (760)282-7082



# BEAP Standard Detail Sheet

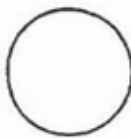
Public Works Office Marine Corps Base Camp Pendleton



**NOTES:**

1. ALL MASONRY SHALL COMPLY WITH CURRENT EDITION OF THE CALIFORNIA BUILDING CODE.
2. SLAB FLOOR AND FOOTING SHALL BE CLASS 3 CONCRETE.
3. GROUT ALL HORIZONTAL AND VERTICAL REINFORCING STEEL SOLID.
4. REFUSE CONTAINER ENCLOSURE SHALL BE LOCATED A MINIMUM OF 33'-0" FROM ANY BUILDING WALL LINE.
5. ALL HORIZONTAL AND VERTICAL JOINTS SHALL HAVE A CONCAVE FINISH JOINT.
6. GROUND SHALL BE SLOPED AWAY FROM ENCLOSURE WALLS.
7. ALL REFUSE CONTAINER ENCLOSURES SHALL HAVE A CONCRETE APRON

## SINGLE CONTAINER TRASH ENCLOSURE



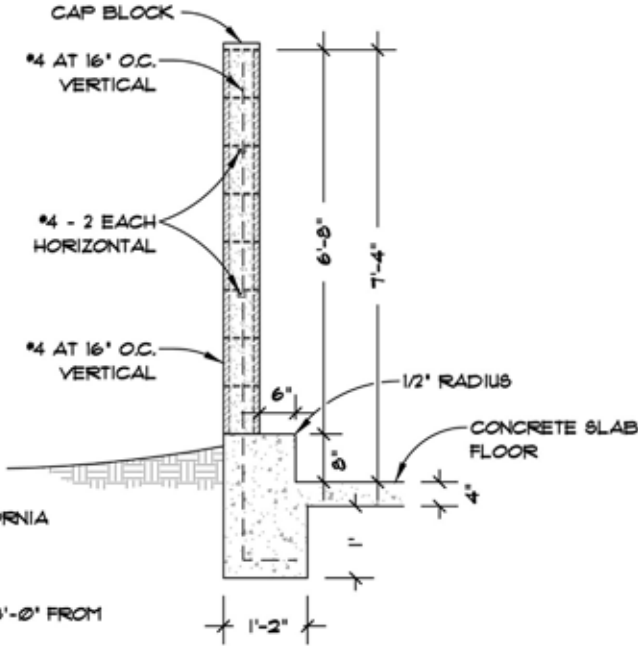
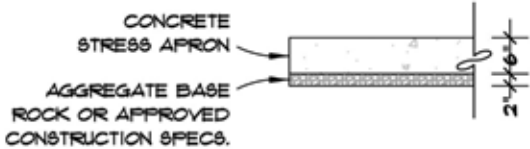
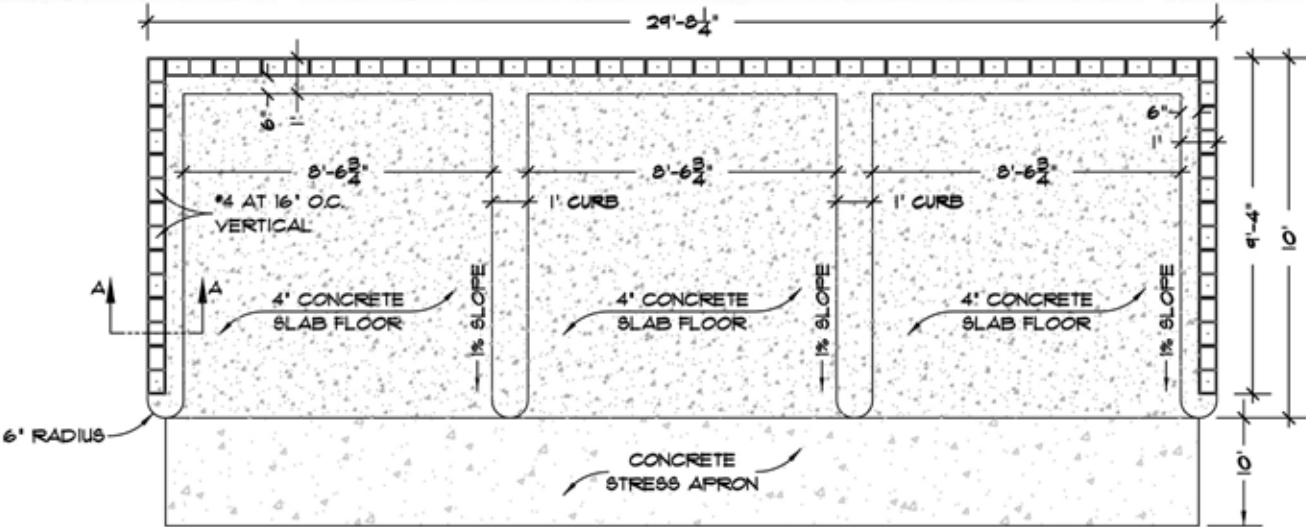
SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.9 L-1</b>
			Scale:



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES:**

1. ALL MASONRY SHALL COMPLY WITH CURRENT EDITION OF THE CALIFORNIA BUILDING CODE.
2. SLAB FLOOR AND FOOTING SHALL BE CLASS 3 CONCRETE.
3. GROUT ALL HORIZONTAL AND VERTICAL REINFORCING STEEL SOLID.
4. REFUSE CONTAINER ENCLOSURE SHALL BE LOCATED A MINIMUM OF 33'-0" FROM ANY BUILDING WALL LINE.
5. ALL HORIZONTAL AND VERTICAL JOINTS SHALL HAVE A CONCAVE FINISH JOINT.
6. GROUND SHALL BE SLOPED AWAY FROM ENCLOSURE WALLS.
7. ALL REFUSE CONTAINER ENCLOSURES SHALL HAVE A CONCRETE APRON

## TRIPLE CONTAINER TRASH ENCLOSURE

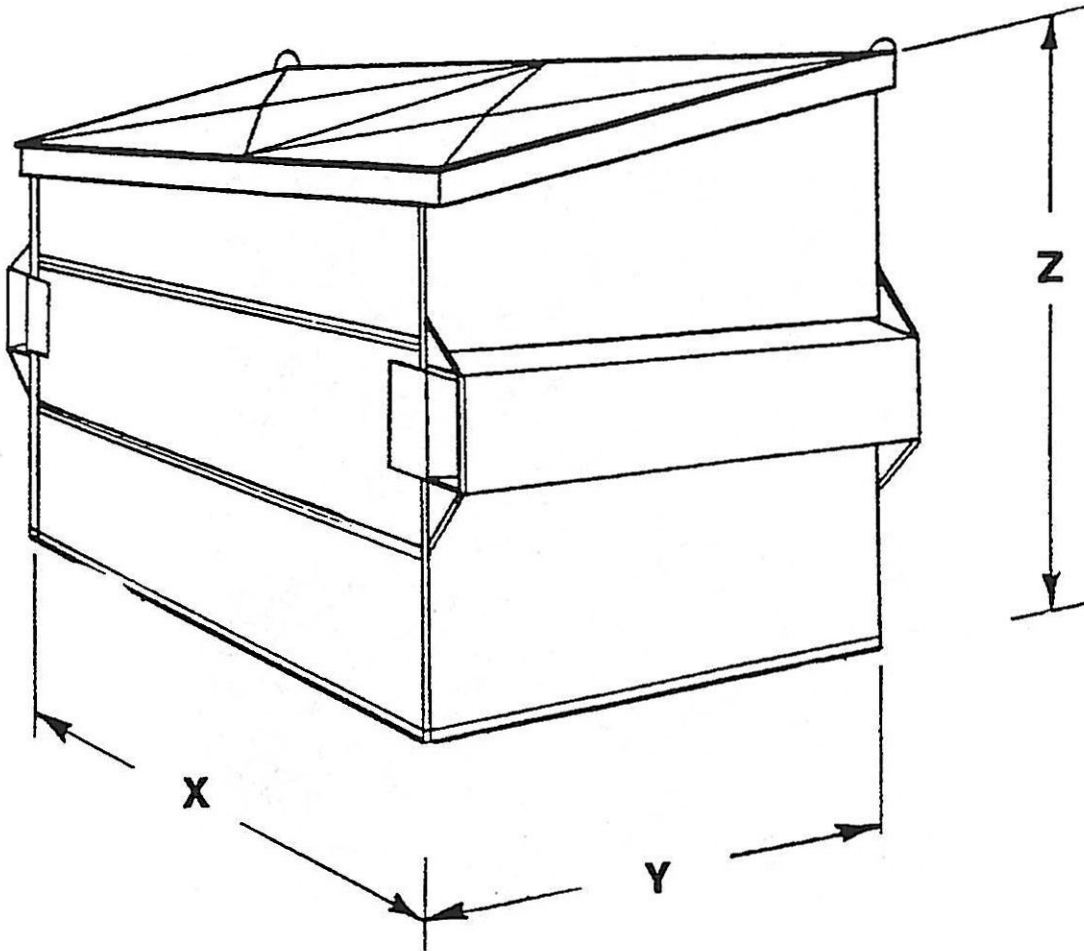
SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.9 L-2</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Trash Container



NOTE: Dimension for standard dumpsters

X	Y	Z
6'	6'	6' (Refuse)
6'	6'	7.5' (Cardboard)

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.9 L-3</b>
			Scale:

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---

## Barbecue Units



### Product Reference: LLA1520

Park Stove

Permanent 78 lbs.

280 square inch cooking space

18" wide, 16" deep

Cooking unit rotates 360 degree

Units are made of 10 gauge galvanized steel sides and back with heavy 7 gauge formed bottoms

Manufactured by:

**RIPCO**

Recreational and Industrial Products Corporation

111 Townline Rd.

Tillsonburg, Ontario N4G 5Y2

Tel: (519)842-5941

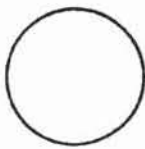
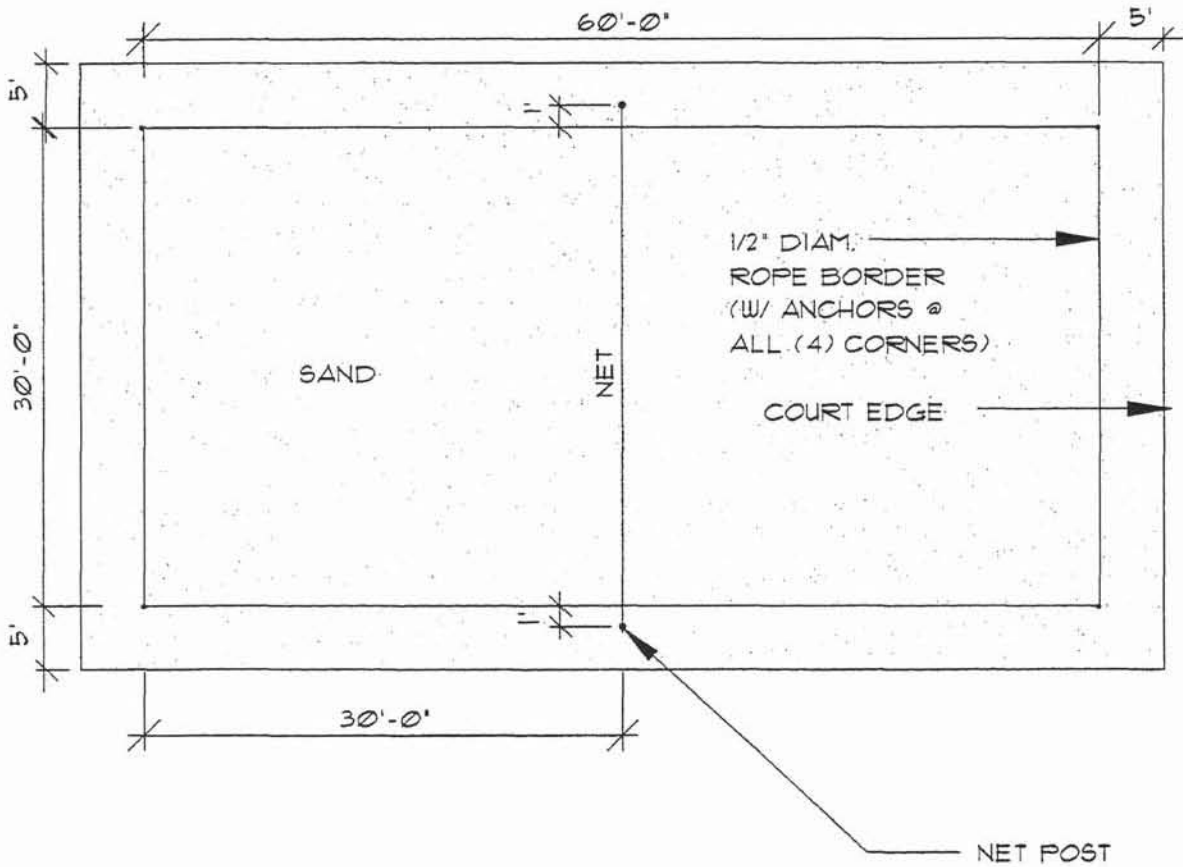
Toll Free: (800)565-3498

Fax: (519)842-2116

**DETAIL**  
8.9 O-1

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



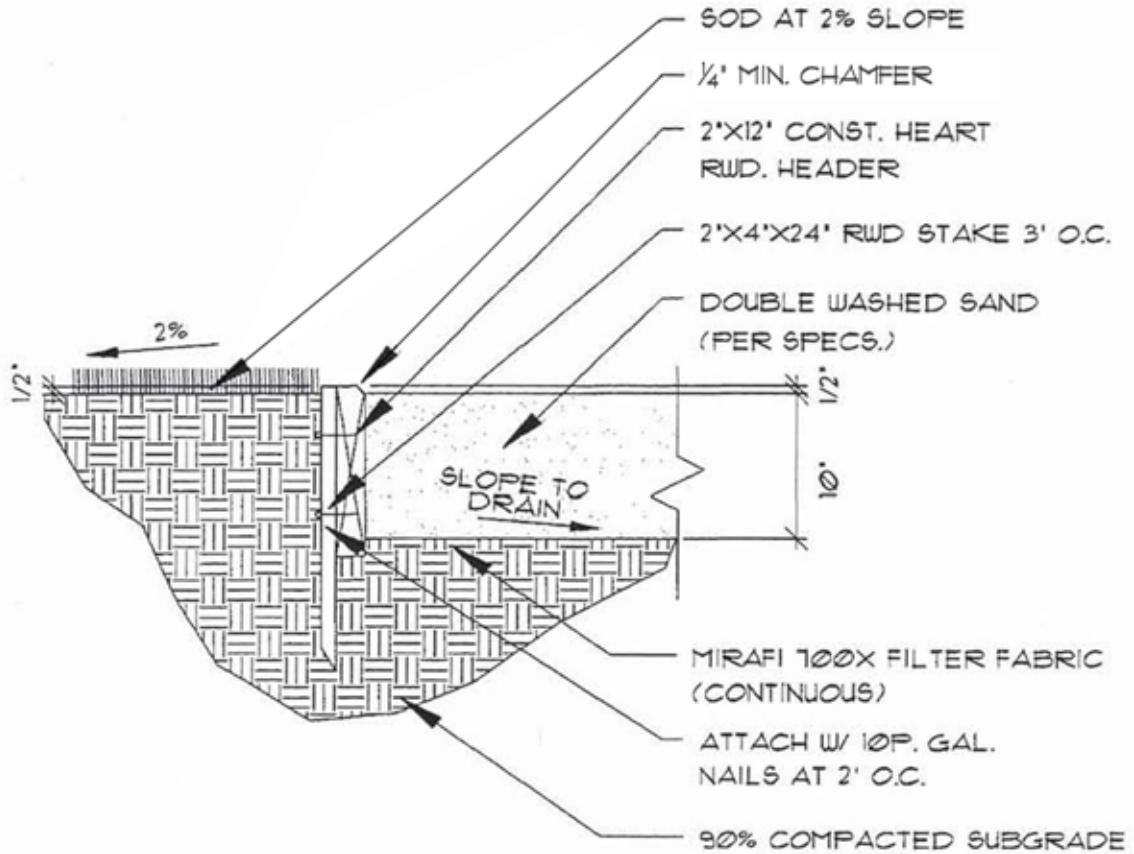
## VOLLEYBALL COURT

SCALE: N.T.S.

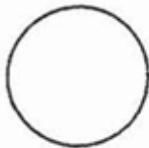
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.9 R-1</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



## VOLLEYBALL COURT EDGE AND SAND AREA

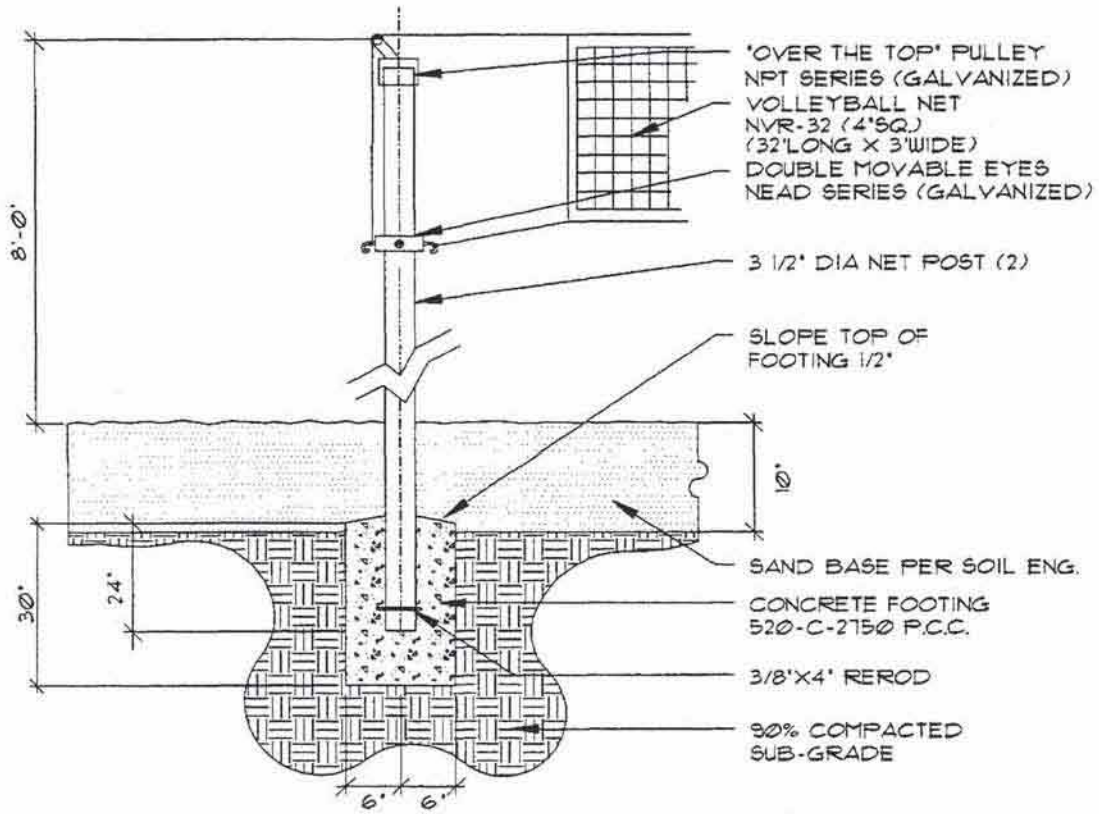


SCALE: N.T.S.

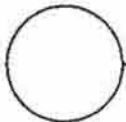
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.9 R-2</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



NOTE:  
VOLLEYBALL EQUIP. AVAIL.:  
TOMARK SPORTS, INC.  
(800) 959-1844



## VOLLEYBALL POST

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.9 R-3</b>
			Scale:

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Mail Box Group



Type I



Type II



Type IV



Type V

### Product Reference: Heavy Duty Series Group Mailboxes

Mail Box Group

- 8 compartments/2 parcel,
- 12 compartments/1 parcel,
- 16 compartments/2 parcel,
- 12 lg. compartments/1 parcel

Constructed of 300 series stainless steel and aircraft aluminum designed to prevent prying, including a heavy duty aluminum pedestal. Solid aluminum security cluster mailbox slot frame.

Finish: Sandstone, weatherproof powdercoat finish

Manufactured by:  
**US Mailboxes**  
 P.O. Box 1566  
 Redmond, OR 97756  
 Tel: (541)389-4928  
 Tax: (866)583-9946







## 8.10 Screening and Fencing Details and Standards

This section provides reference to specific products in the form of product sheets. This reference is for establishing the design type or style and is not an endorsement for the product manufacturer. Substitutions for “like” or similar products are acceptable. All product types must be approved by the AC/S Facilities prior to installation.

8.10 A-1 Fence

8.10 A-2 Chainlink Gate

8.10 A-3 20” Precast Concrete Cap

8.10 A-4 Precast Concrete Cap

8.10 A-5 Concrete Straight Cap

8.10 A-6 Masonry Retaining Wall Type 5 (Level  
Backfill)

8.10 A-7 27” Precast Concrete Cap

8.10 A-8 Typical Retaining Wall

8.10 A-9 Utility Equipment Screen

8.10 A-10 Roof Equipment Screen

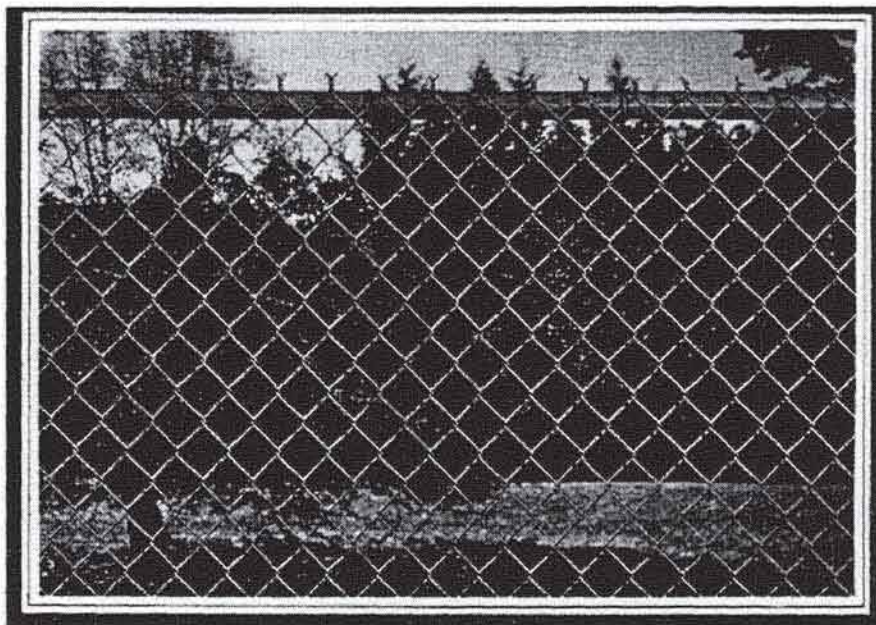
8.10 A-11 Corral Fence



# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

## Fence



### Product Reference: A2

Fence

2 1/2" square post 547 lbs.

Top rail: 2" to 2 1/2" OD size pipe post

High security barbed wire 3" spacing of barbs

Barbed wire arms: Outward

Finish: Wire Mesh: Galvanized Fabric

Frame: Galvanized Frame

Manufactured by:

**Anchor Fence, Inc.**

1015 East Market St.

Daly City, CA 94014

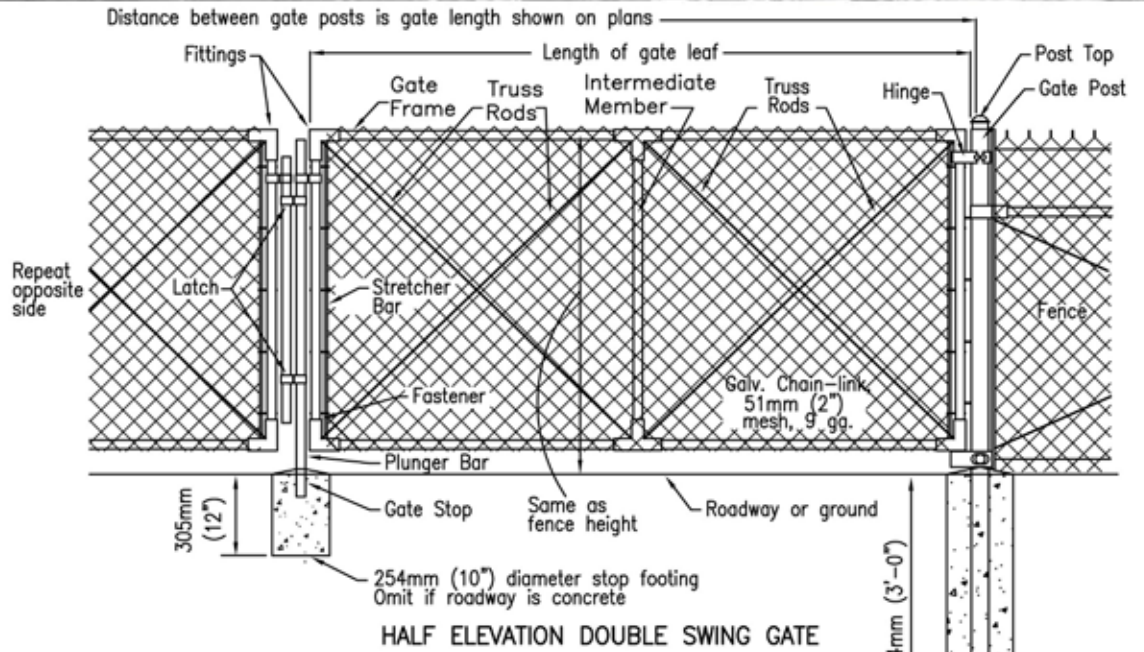
Tel:(650)757-2140

Fax:(650)757-2148

**DETAIL**  
8.10 A-1

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton

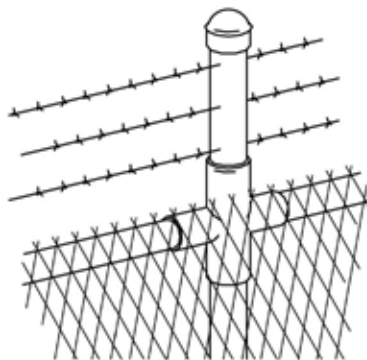


**NOTES**

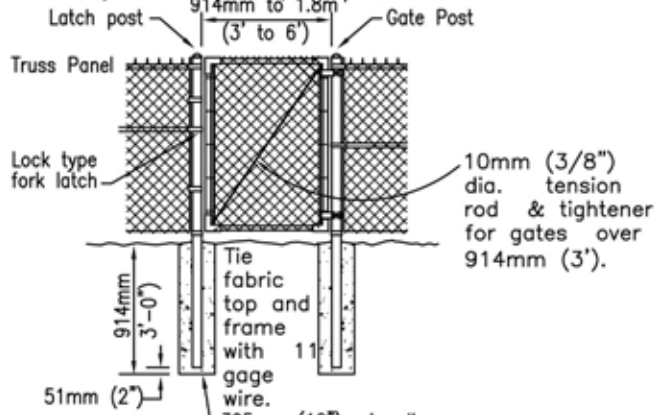
- All footings shall be 309kg/M<sup>3</sup> -C-22-Mpa (520-C-2500) concrete.
- The following items shall be furnished and installed only when shown on the plans and/or called for in the special provisions: a. Barbed wire b. Extension post
- Chain link fence shall conform to Section 206-6 of the Standard Specification for Public Works Construction unless specifically noted on this drawing.

Diameter of footing = 4 times outside diameter of post.

Clear opening shown on plans.



**EXTENSION POST AND BARBED WIRE**



**WALK GATE**

LEGEND ON PLANS



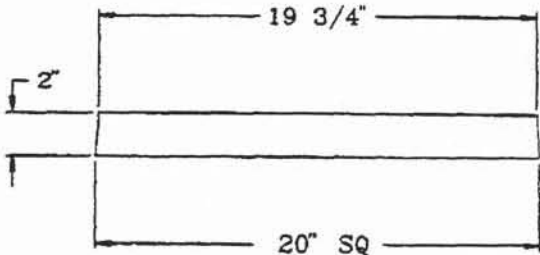
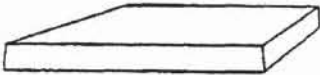
**CHAINLINK GATE**

Project Title:	Drawn By:	Issue Date:	Project Number:
SDRSD M-5	Branch Head:	Revision:	Detail Number: <b>8.10 A-2</b>
	Public Works Office		
			Scale:

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---



**Product Reference: Custom**

20" Precast Concrete Cap  
Finish: Smooth concrete  
Color: Natural grey concrete

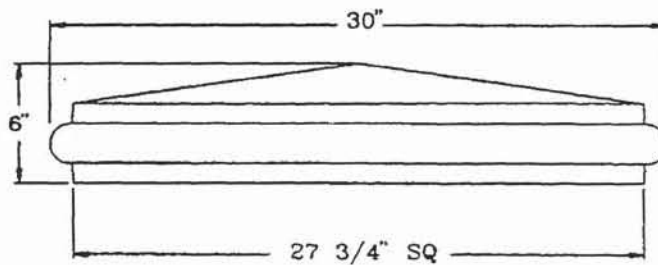
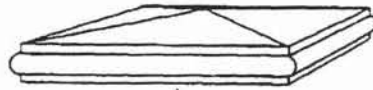
Manufactured by:  
**San Diego Precast Concrete, Inc.**  
2735 Cactus Rd.  
San Diego, CA 92154  
Tel: (619)240-8000  
Fax: (619)661-1038



# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

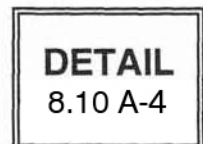
---



## Product Reference: Custom

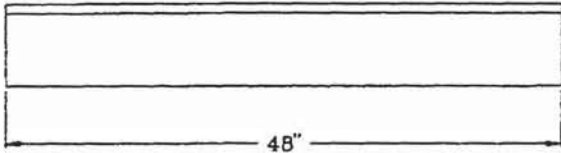
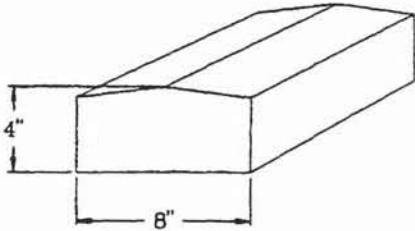
Precast Concrete Cap  
Finish: Smooth concrete  
Color: Natural grey Concrete

Manufactured by:  
**San Diego Precast Concrete, Inc.**  
2735 Cactus Rd.  
San Diego, CA 92154  
Tel: (619)240-8000  
Fax: (619)661-1038



# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton



**Product Reference: Custom**

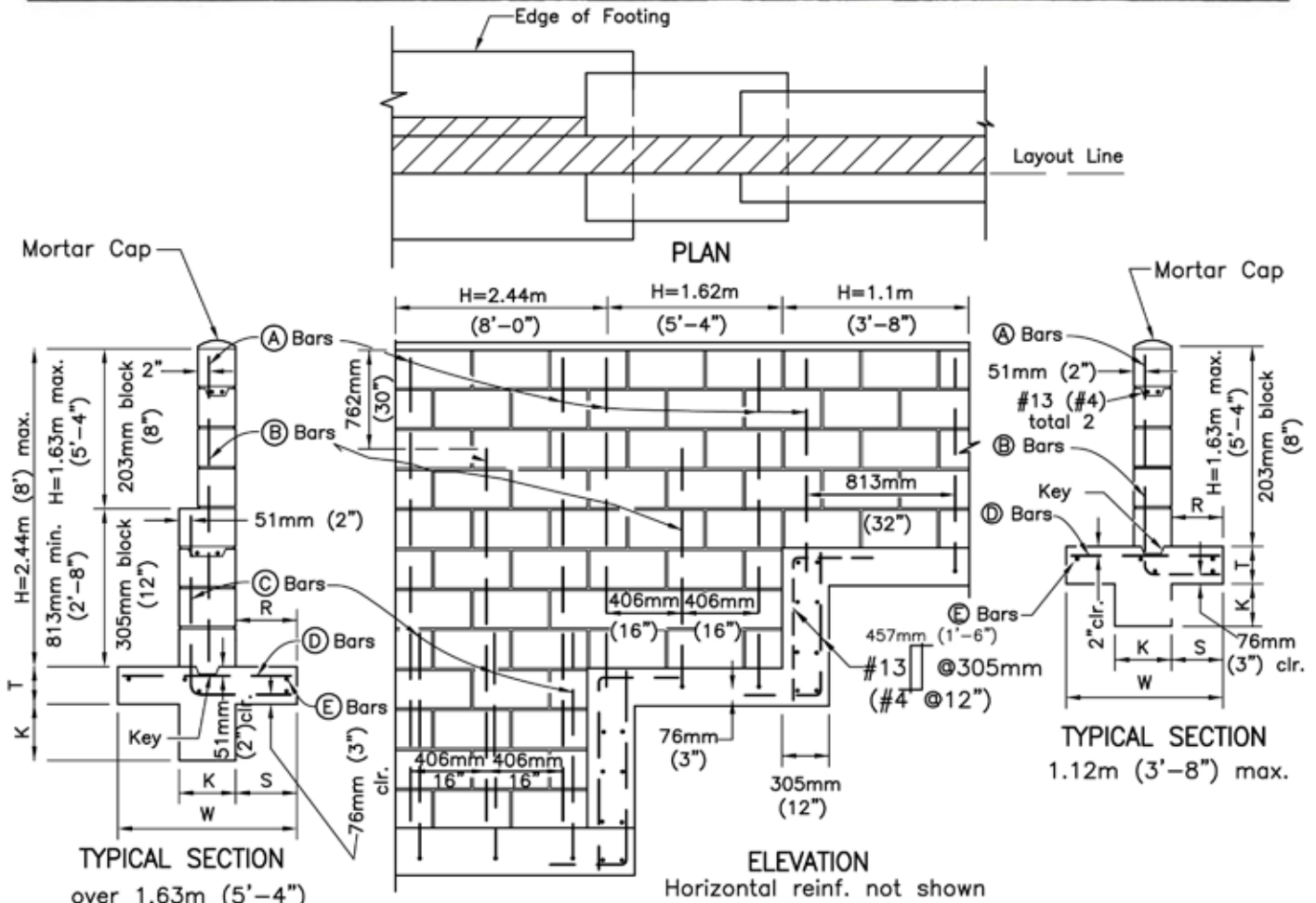
Precast Concrete Straight Cap  
Finish: Smooth concrete  
Color: Natural grey concrete  
Note: End and corner blocks are provided by manufacturer.

Manufactured by:  
**San Diego Precast Concrete, Inc.**  
2735 Cactus Rd.  
San Diego, CA 92154  
Tel: (619)240-8000  
Fax: (619)661-1038



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



DIMENSIONS AND REINFORCING STEEL			
H (max)	1.12m (3'-8")	1.63m (5'-4")	2.44m (8'-0")
T (min)	203mm (0'-8")	254mm (0'-10")	305mm (1'-0")
W (min)	635mm (2'-1")	940mm (3'-1")	1.25m (4'-3")
R	229mm (0'-9")	356mm (1'-2")	432mm (1'-5")
S	216mm (0'-8 1/2")	318mm (1'-1 1/2")	495mm (1'-7 1/2")
K	203mm (0'-8")	203mm (0'-8")	305mm (1'-0")
A Bars	#13(#4)@813mm(32")	#13(#4)@813mm(32")	#13(#4)@813mm(32")
B Bars	—	#13(#4)@813mm(32")	#13(#4)@813mm(32")
C Bars	—	—	#22(#7)@406mm(16")
D Bars	#13(#4)@813mm(32")	#13(#4)@406mm(16")	#13(#4)@406mm(16")
E Bars	#13(#4) total 5	#13(#4) total 5	#13(#4) total 6
Max. Toe Press.	37.1 Kpa (774 psf)	49.3 Kpa (1,030 psf)	79.5 Kpa (1,660psf)

**NOTES:**

- See Standard Drawings C-7 and C-8 for additional notes and details.
- Fill all block cells with grout.

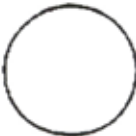
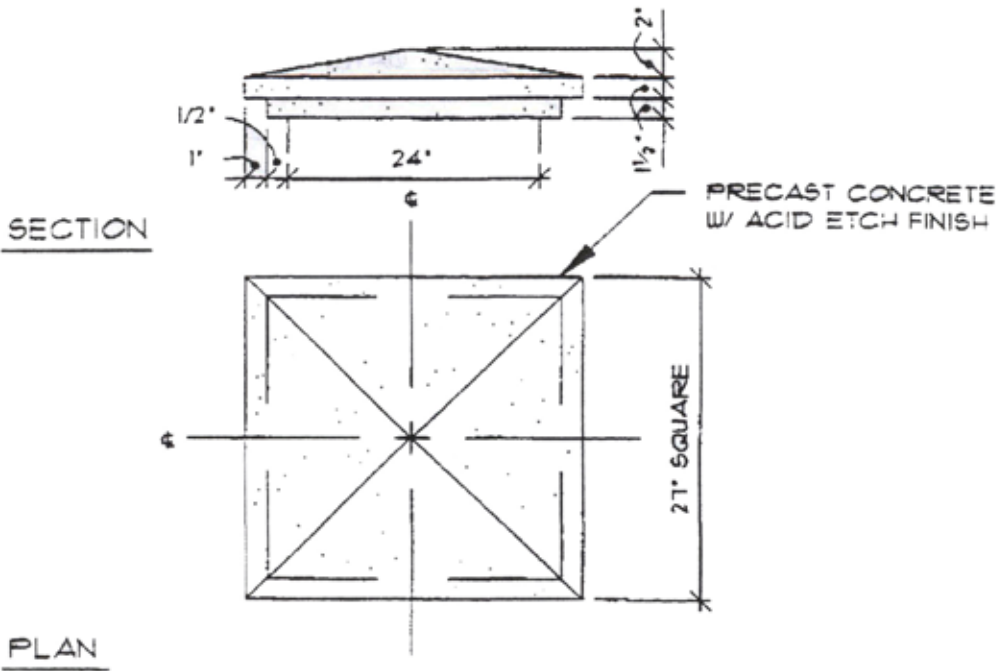
## MASONRY RETAINING WALL TYPE 5 (LEVEL BACKFILL)

Project Title:  SDRSD C-5	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:  <b>8.10 A-6</b>
	Public Works Office		Scale:



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



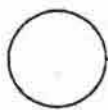
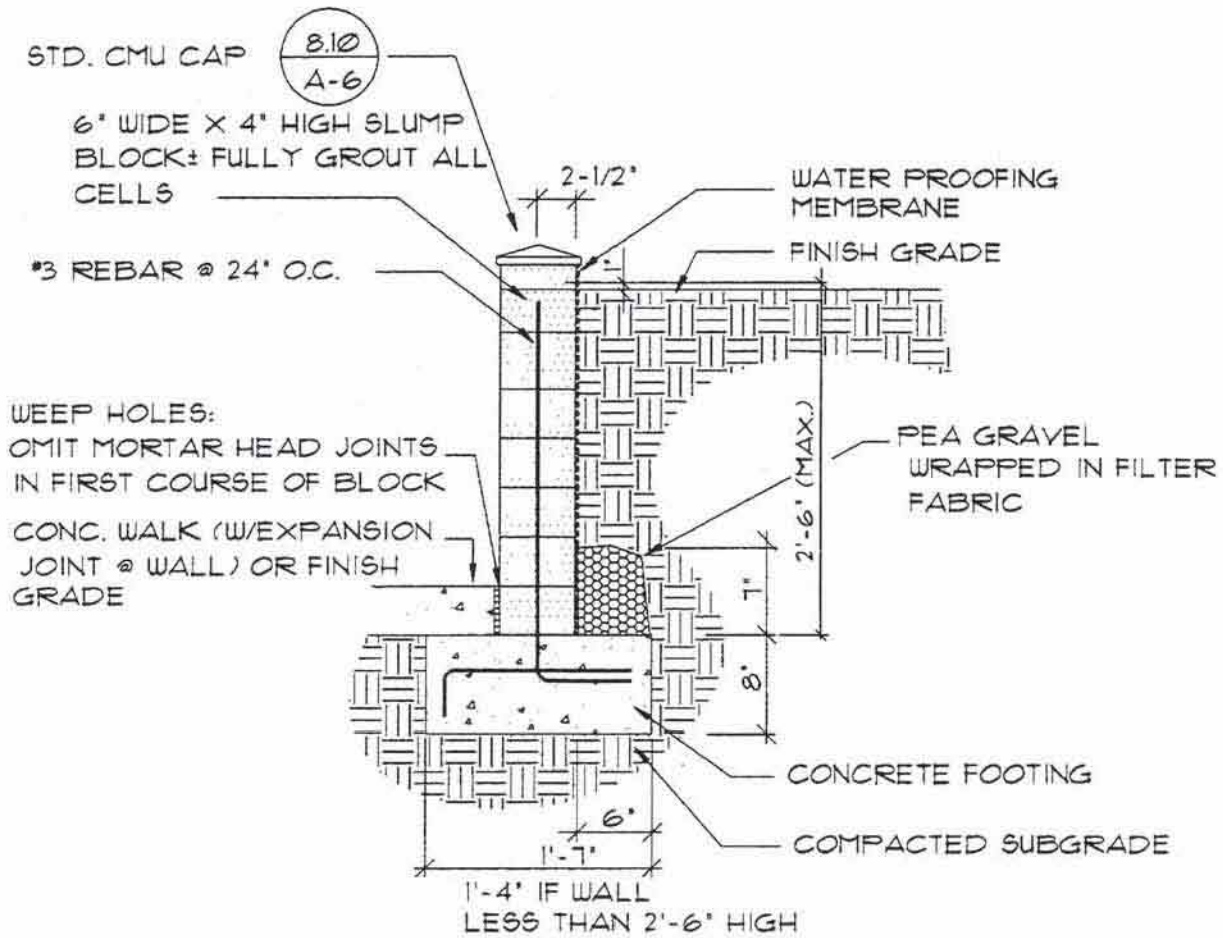
## 27° PRECAST CONCRETE CAP

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.10 A-7</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



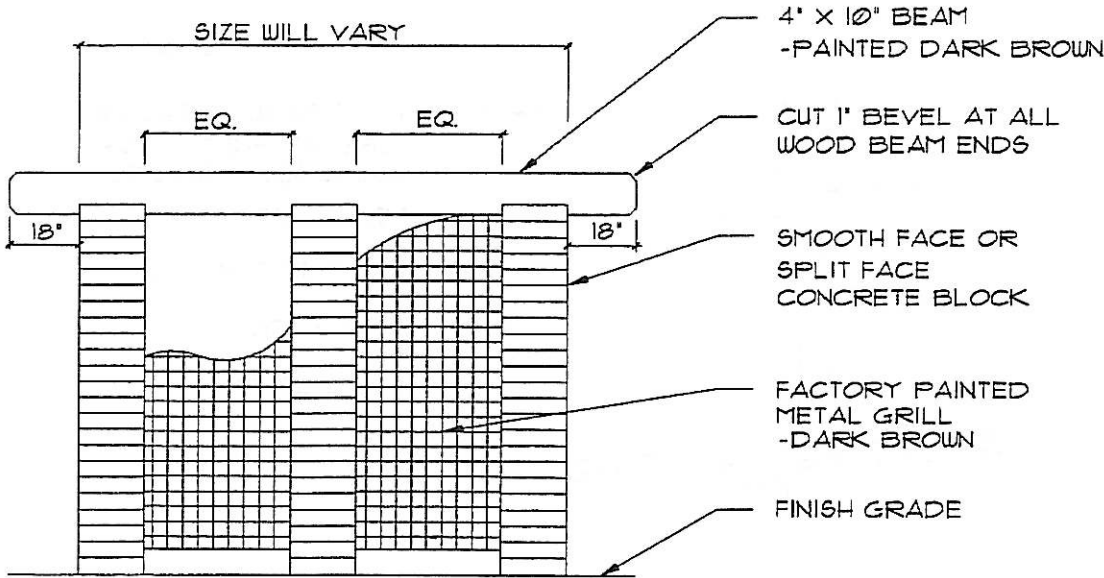
## TYPICAL RETAINING WALL

SCALE: N.T.S.

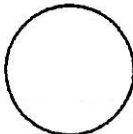
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.10 A-8</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



REFERENCE:  
NAVFAC DWG. 6265546



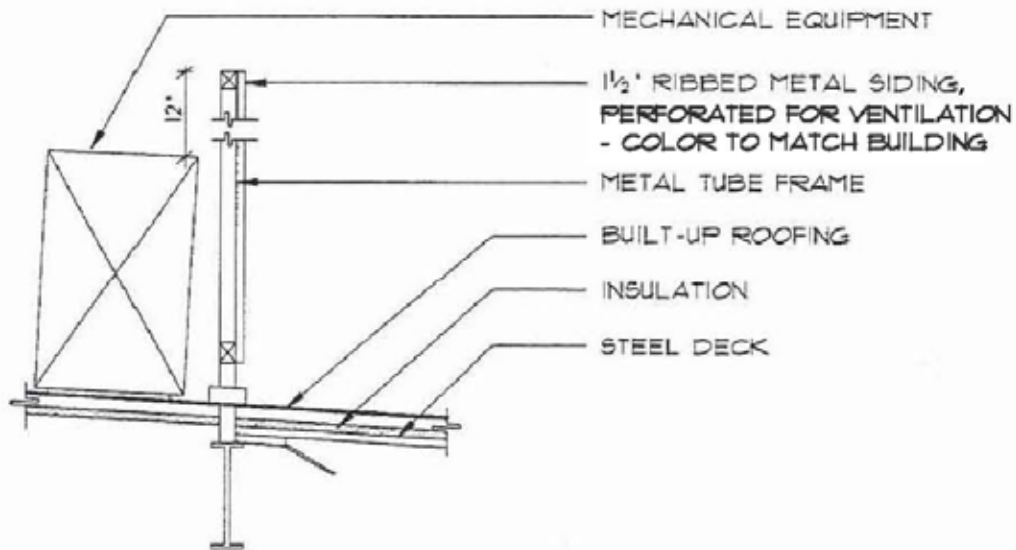
## UTILITY EQUIPMENT SCREEN

SCALE: N.T.S.

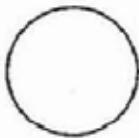
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.10 A-9</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



NOTE:  
HEIGHT OF RIBBED METAL SIDING TO BE 12" ABOVE HIGHEST PART OF EQUIPMENT BEING SCREENED.



## ROOF EQUIPMENT SCREEN

SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.10 A-10</b>
			Scale:

# BEAP Standard Product Sheet

Public Works Office Marine Corps Base Camp Pendleton

---

## Corral Fence



### Product Reference: Legend® Vinyl Post and Rail Fence

Corral Fence

Available in 2 rail, 3 rail and 4 rail

1 1/2" x 5 1/2" rails

Posts 5"x5", installed as 8' on center

Gates available from 4' to 10' in width

Finish: Rigid polyvinyl chloride (PVC) extruded with virgin vinyl

Color: White

Manufactured by:

**Master Halco, Inc.**

485 Raleigh Avenue

El Cajon, CA 92020

Tel: (858)571-8622

Toll Free: (800)338-5155

**DETAIL**  
8.10 A-11



## 8.11 Utilities Details and Standards

This section provides reference to specific products in the form of product sheets. This reference is for establishing the design type or style and is not an endorsement for the product manufacturer. Substitutions for “like” or similar products are acceptable. All product types must be approved by the AC/S Facilities prior to installation.

8.11 A-1 Underground Typical Location  
(New Construction)

8.11 A-2 Underground Typical Location  
(Conversion/Replacement/Upgrade)

8.11 B-1 Utility Location in Local and Collector  
Streets (New Construction)

8.11 B-2 Utility Locations Local and Major Streets

8.11 C-1 Utility Locations Prime Arterials and Expressways

8.11 C-2 Utility Locations in Major Streets, Prime  
Arterial and Expressways

8.11 D-1 Pedestal for Electrical Equipment

8.11 E-1 24 Inch Wide Maintenance Edge for Medians

8.11 F-1 Grass Swale with Perforated Pipe Detail

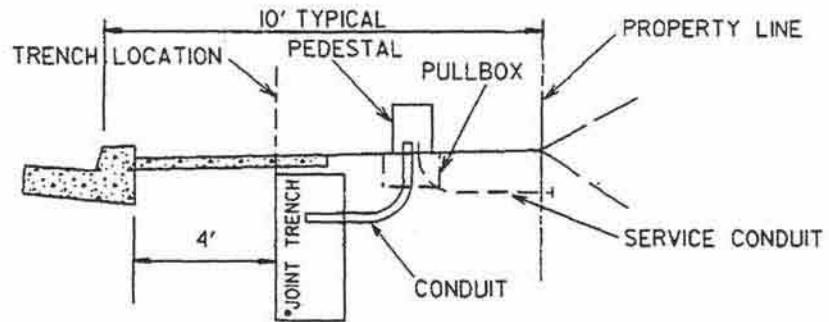
8.11 F-2 Concrete Lined Open Storm Drain Channel



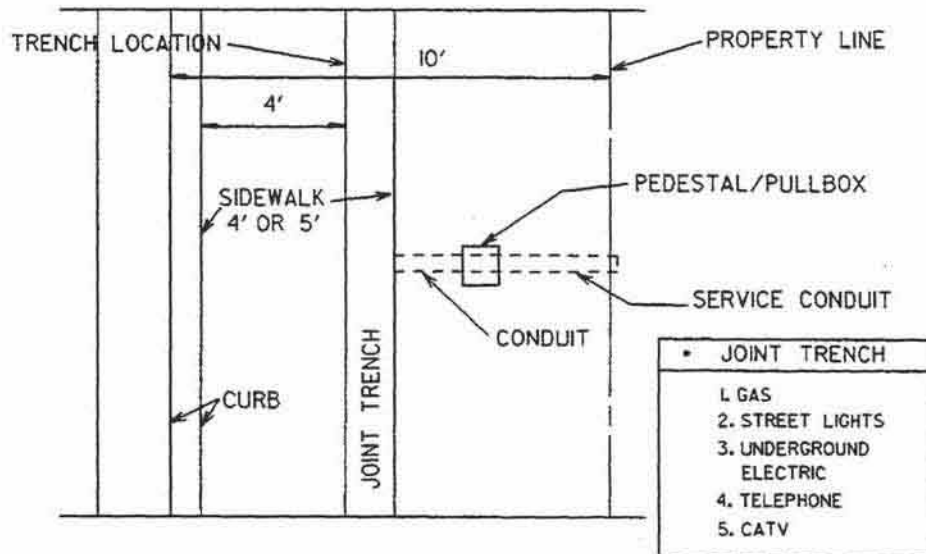


# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



SECTION VIEW



PLAN VIEW

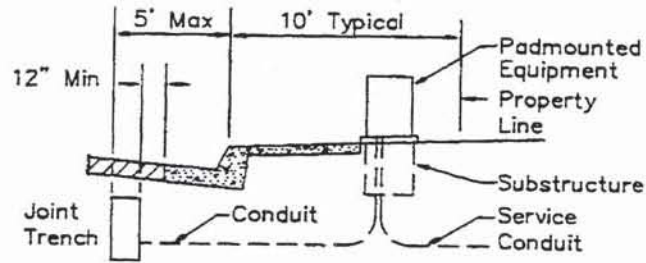
NOTE: SIDEWALK SHALL HAVE A MINIMUM OF FOUR (4) FOOT CLEAR (PATH) PASSING PEDESTALS, PULLBOXES AND OTHER STRUCTURES.

## UNDERGROUND TYPICAL LOCATION NEW CONSTRUCTION

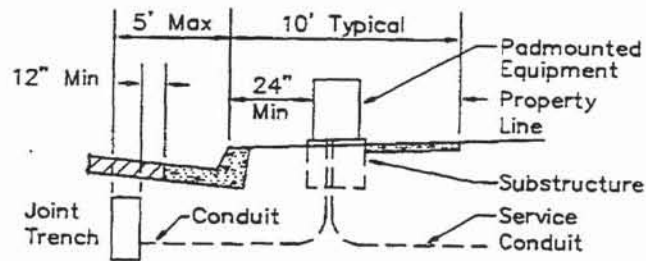
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.11 A-1</b>
			Scale:

# BEAP Standard Detail Sheet

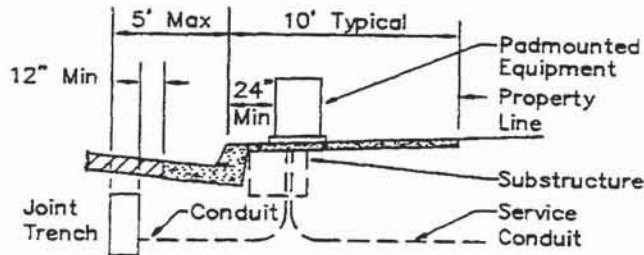
Public Works Office Marine Corps Base Camp Pendleton



**SIDEWALK NEXT TO CURB**



**SIDEWALK NEXT TO PROPERTY LINE**



**SIDEWALK NEXT TO CURB AND PROPERTY LINE**

**NOTES:**

1. Sidewalk shall have a minimum of four (4) foot clear area (path, not including curb) passing pedestals, pullboxes and other structures.
2. See San Diego District Standard Drawings for joint trench.

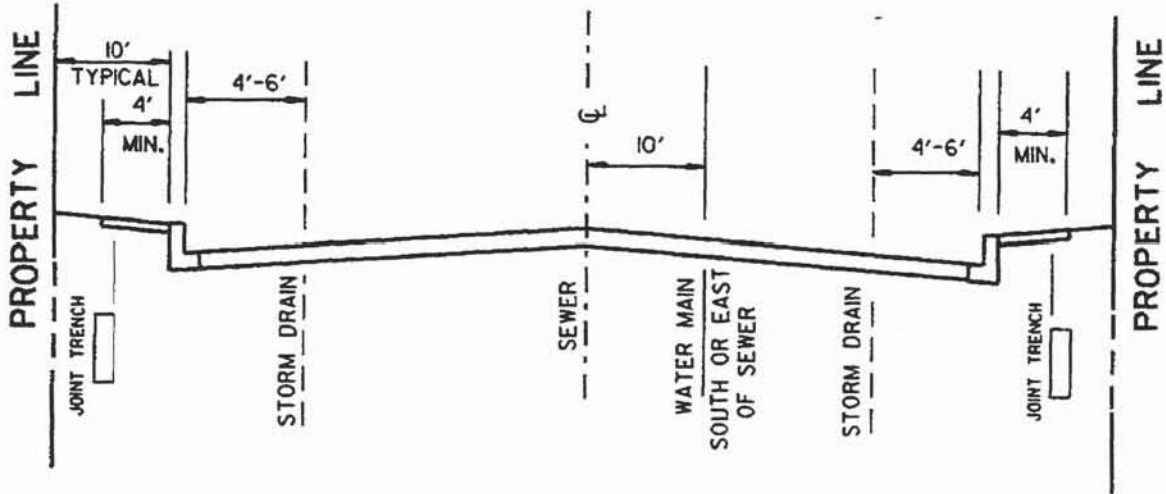
## UNDERGROUND TYPICAL LOCATION CONVERSION / REPLACEMENT / UPGRADE

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.11 A-2</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton

## NEW CONSTRUCTION



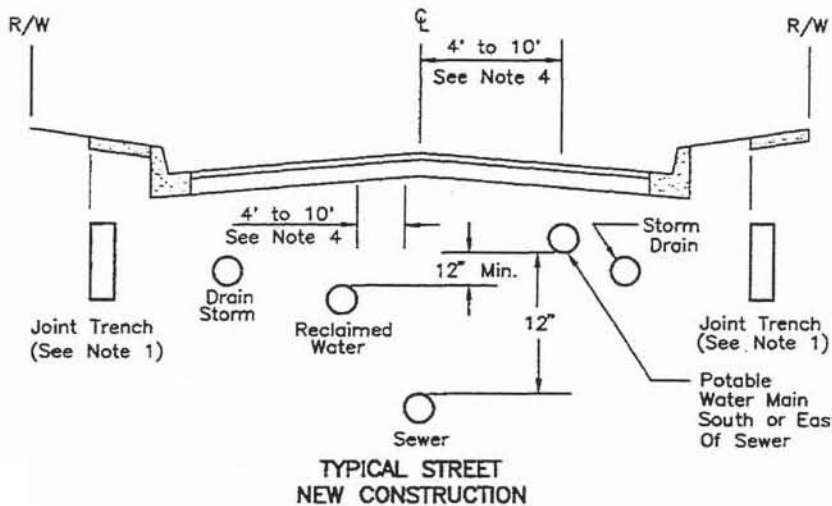
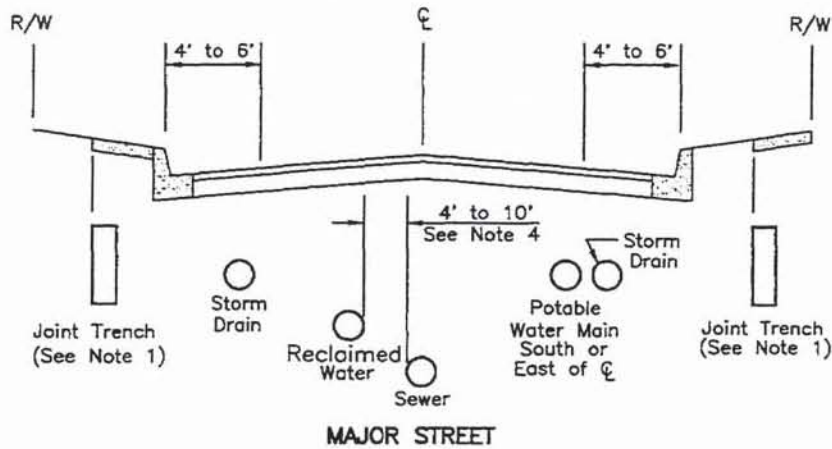
## TYPICAL STREET

### UTILITY LOCATION IN LOCAL AND COLLECTOR STREETS

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.11 B-1</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES**

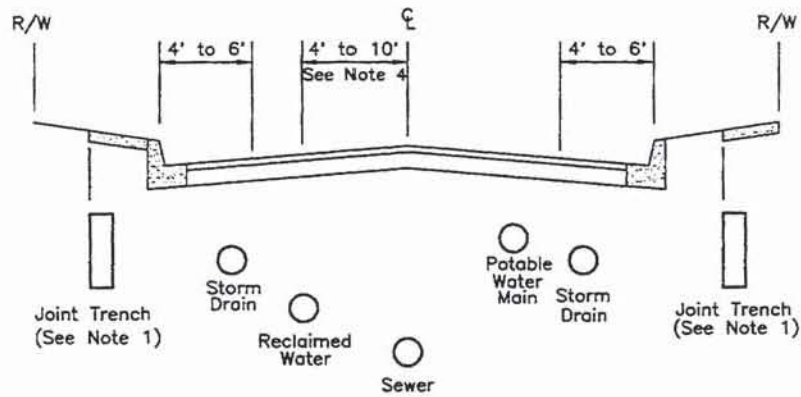
1. At catch basin locations, joint trench shall be 4 ft. minimum from back of curb to inside wall of trench. See San Diego Regional Standard Drawings for configuration of utilities in joint trench.
2. Sewer and reclaimed water mains shall be designed to cross under potable water mains. The vertical separation between potable water and reclaimed water shall be an minimum vertical separation of 12 inches.
3. Sewer and reclaimed water laterals shall cross under potable water main, with a minimum vertical separation of 12 inches.
4. Sewer and reclaimed water mains shall maintain a 10 ft. minimum horizontal separation, O.D. to O.D., with any potable water or sewer/reclaimed main. This separation may be reduced utilizing special construction, with special approval from the Agency and the County Health Dept. For sewer or reclaimed water mains less than 24 inches in diameter, only Agency approval is required.

## UTILITY LOCATIONS LOCAL AND MAJOR STREETS

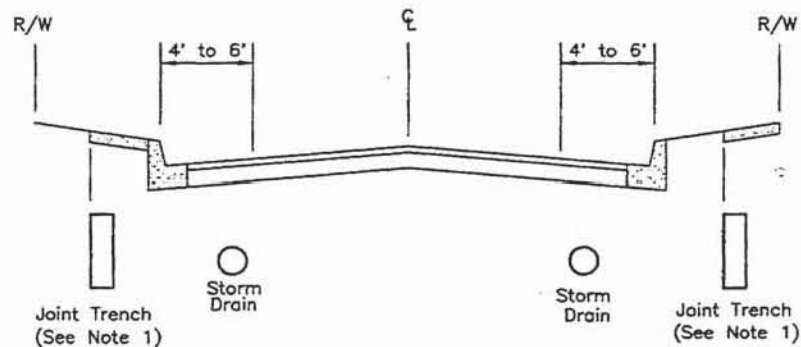
Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.11 B-2</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



PRIME ARTERIAL



EXPRESSWAY

**NOTES**

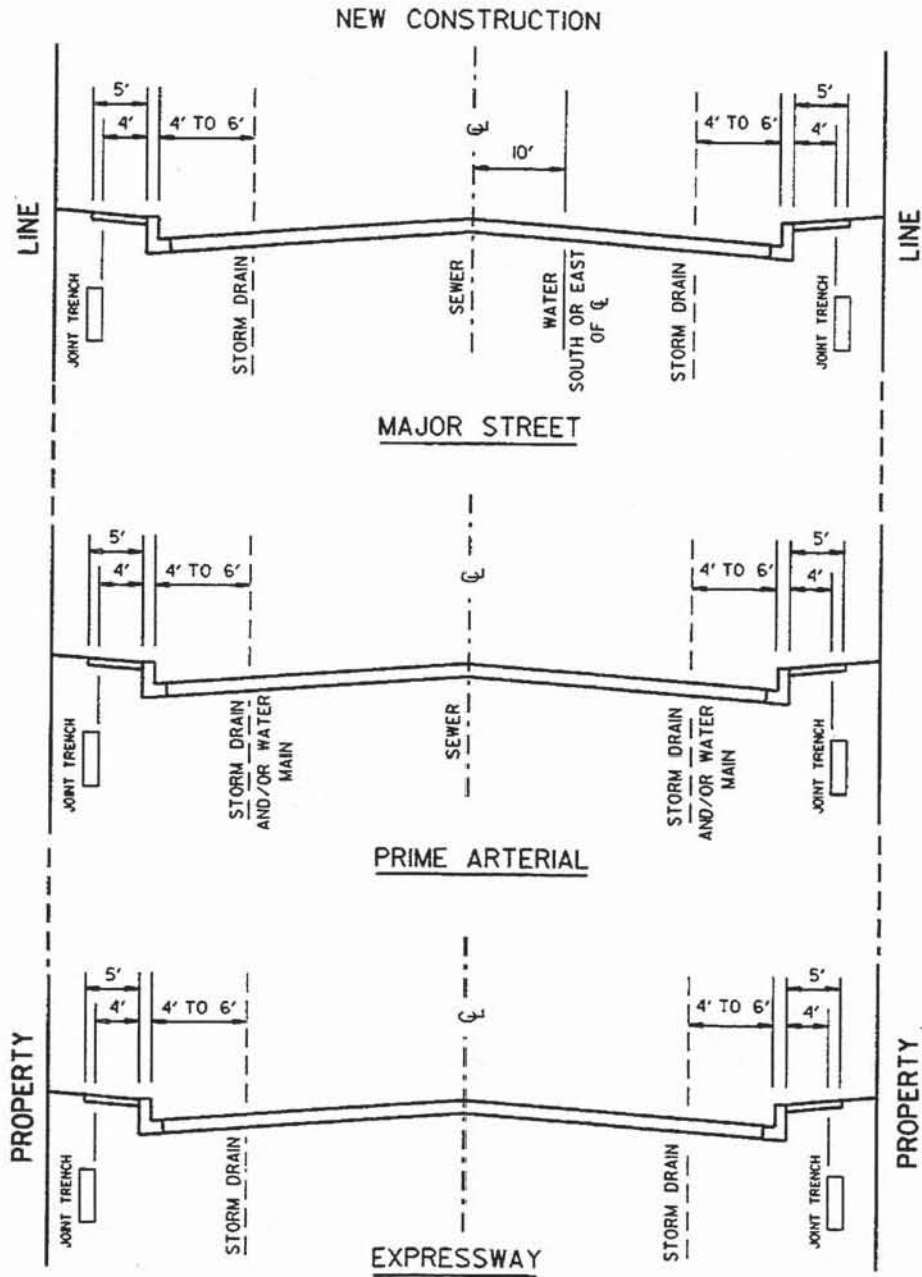
1. At catch basin locations, joint trench shall be 4 ft. minimum from back of curb to inside wall of trench. See San Diego Regional Standard Drawings for configuration of utilities in joint trench.
2. Sewer and reclaimed water mains shall be designed to cross under potable water mains. The vertical separation between potable water and reclaimed water shall be a minimum vertical separation of 12 inches.
3. Sewer and reclaimed water laterals shall cross under potable water main, with a minimum vertical separation of 12 inches.
4. Sewer and reclaimed water mains shall maintain a 10 ft. minimum horizontal separation, O.D. to O.D., with any potable water or sewer/reclaimed main. This separation may be reduced utilizing special construction, with special approval from the Agency and the County Health Dept. For sewer or reclaimed water mains less than 24 inches in diameter, only Agency approval is required.

## UTILITY LOCATIONS PRIME ARTERIALS AND EXPRESSWAY

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.11 C-1</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton

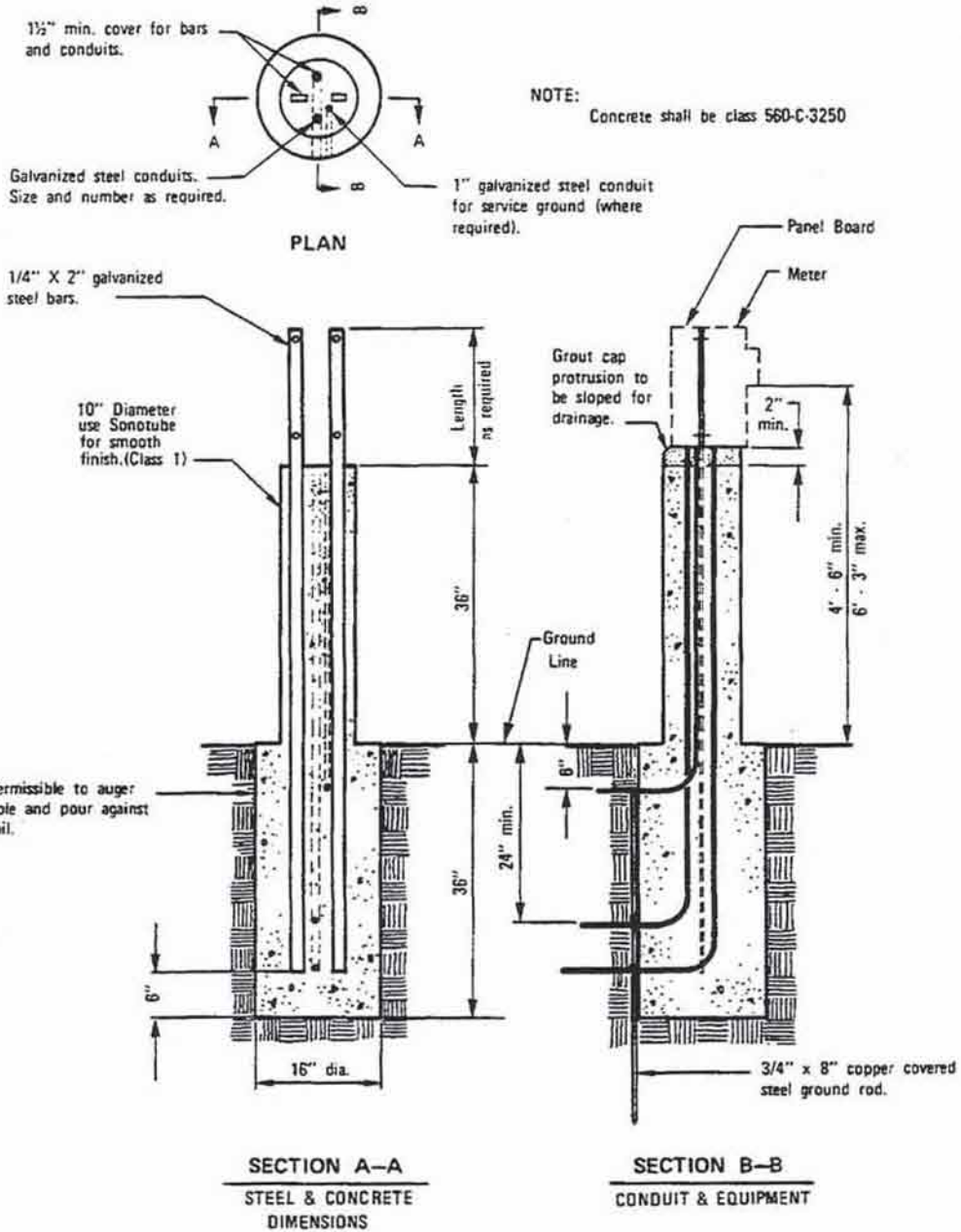


**UTILITY LOCATION IN MAJOR STREETS  
PRIME ARTERIALS AND EXPRESSWAY**

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.11 C-2</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton

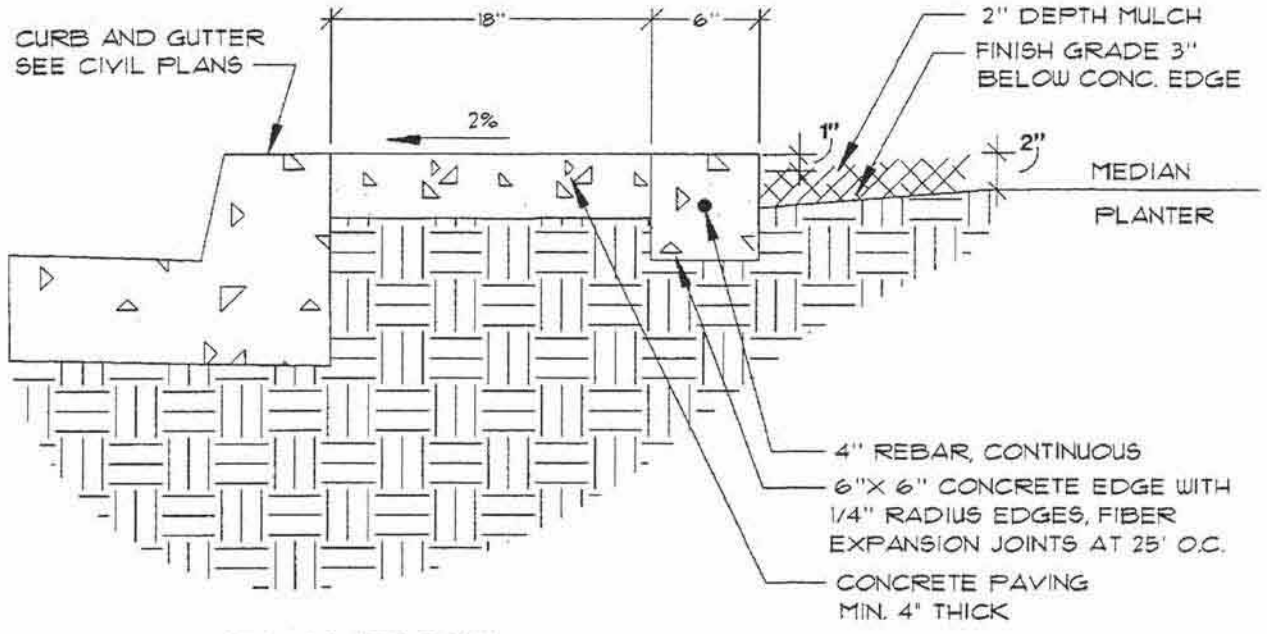


## PEDESTAL FOR ELECTRICAL EQUIPMENT

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.11 D-1</b>
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



NOTE: INTERLOCKING PAVERS SHALL MATCH EXISTING PATTERN AND COLOR IN MEDIAN.

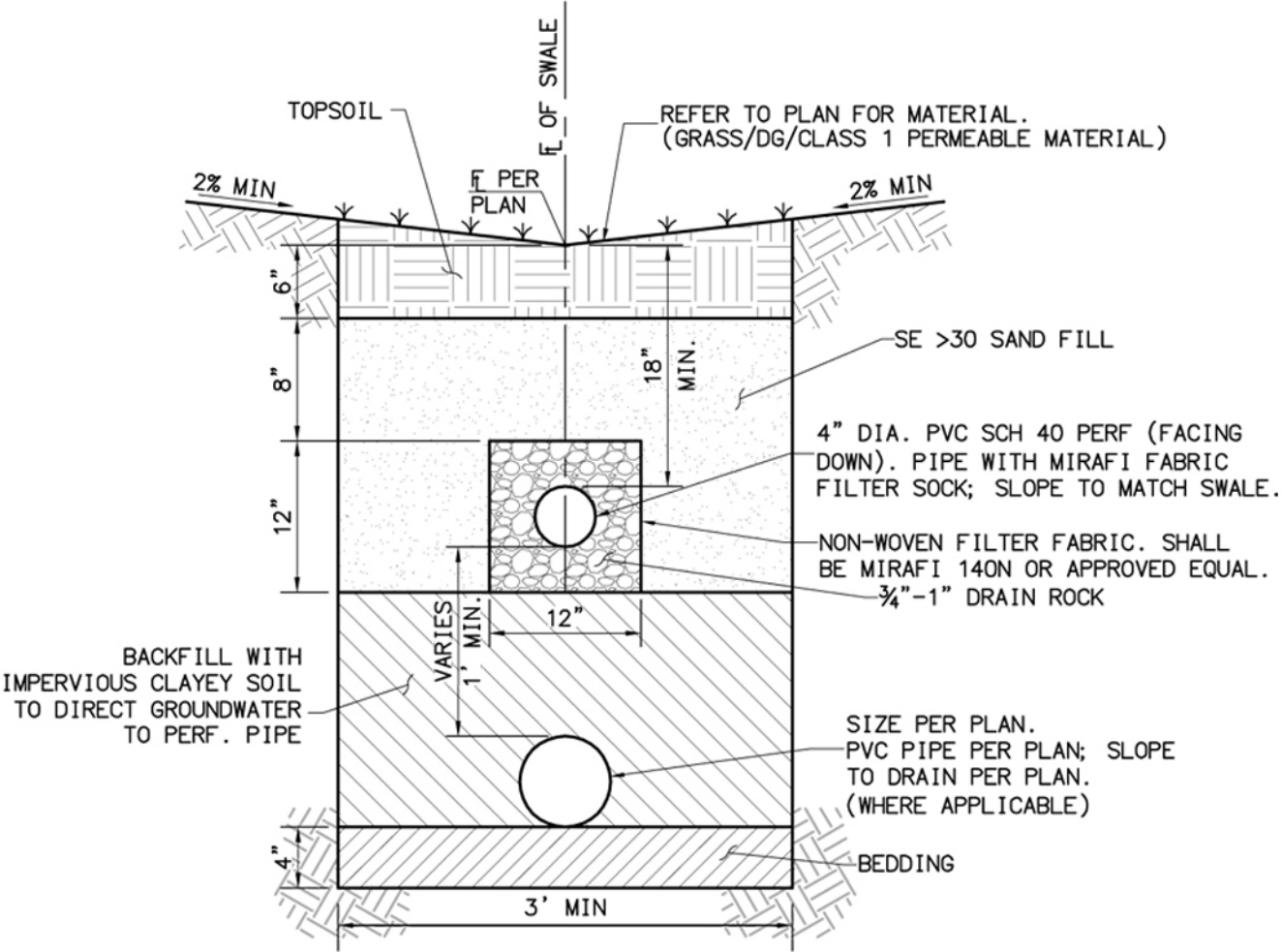
 **24" WIDE MAINTENANCE EDGE FOR MEDIANS** SCALE: N.T.S.

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.11 E-1</b>
			Scale:



# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton

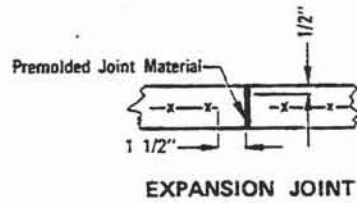
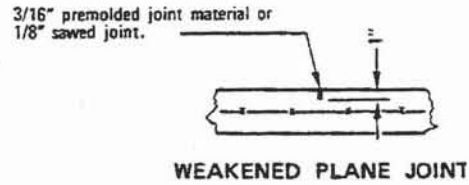
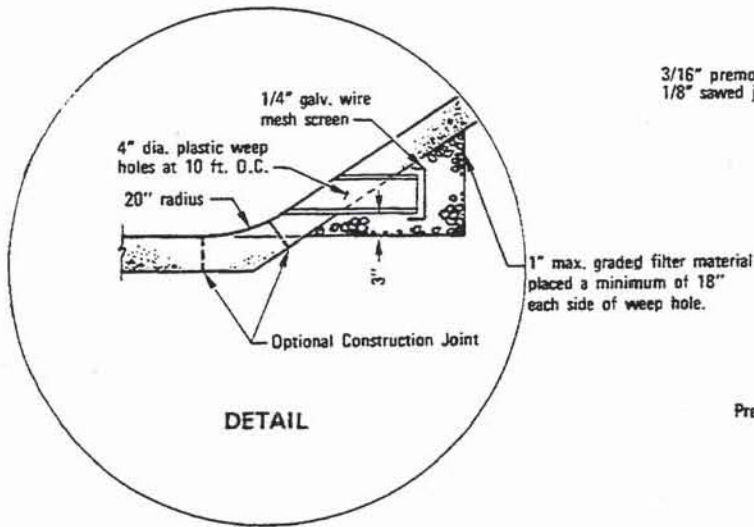
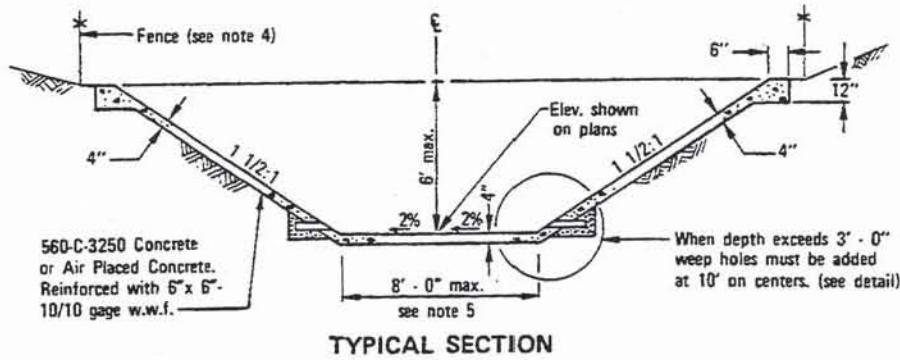


**GRASS SWALE WITH PERFORATED PIPE DETAIL**

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number: <b>8.11 F-1</b>
	Public Works Office		
			Scale:

# BEAP Standard Detail Sheet

Public Works Office Marine Corps Base Camp Pendleton



**NOTES**

1. A.C. or Clay pipe may be substituted for plastic pipe at weep holes.
2. Weakened plane joints shall be placed every 12' to 15'. Expansion joints shall be placed at all changes of section and at ends of curves.
3. Cutoff walls shall be constructed at each end of the channel along the full width of section. See San Diego District Standard Drawings.
4. Chainlink fence shall be as required by Agency.
5. For bottom widths greater than 8 feet see San Diego District Standard Drawings.
6. Reinforcement shwn is minimum.

**LEGEND ON PLANS**



## CONCRETE LINED STORM DRAIN CHANNEL OPEN

Project Title:	Drawn By:	Issue Date:	Project Number:
	Branch Head:	Revision:	Detail Number:
	Public Works Office		<b>8.11 F-2</b>
			Scale:

# Chapter 9

## HISTORIC ASSETS AND MECHANIZED MUSEUM

### 9.0 Introduction

This chapter addresses the Design and Replacement Guidelines for Historic Properties at Marine Corps Base (MCB), Camp Pendleton, California.

The Historic Assets and Mechanized Museum of Camp Pendleton comprise a unique cultural resource for the Department of Defense (Figure 9.0-1). To maintain the integrity of Camp Pendleton's historic assets, maintenance, repair, alterations, and required retrofits should follow The Secretary of the Interior's Standards for the Treatment of Historic Properties and applicable guidelines for those sites, structures, and objects listed as California Historical Landmarks, or those that have been designated as part of the National Register of Historic Places. In addition, retrofits for accessibility must conform with the Americans With Disabilities Act and Uniform Federal Accessibility Standards as they pertain to historic properties.

This chapter describes the Historic Assets and Mechanized Museum of Camp Pendleton, including their current condition and recommendations, as well as preservation guidelines for Camp Pendleton personnel involved in any facility specification, expansion, or retrofit that may affect historic character. In general, repair is preferred over replacement. Where historic features are missing or irreparable, guidelines are specified for replacement of historically compatible items, materials, and colors.

### 9.1 Regulatory Background

The National Historic Preservation Act of 1966 (Public Law [PL] 89-665, Section 106, as amended) and supporting Executive Orders require all Federal agencies to duly consider the consequences of any proposed actions on properties listed on, or eligible for, the National Register of Historic Places. The Department of Defense (DoD) is obligated by law and regulation to ensure that such historic properties are not inadvertently transferred, sold, demolished, altered substantially, or allowed to deteriorate significantly.

### 9.2 Objective

The objective of this work is to compile a concise summary of design and replacement guidelines to:

1. Enable Camp Pendleton to meet the requirements of the National Historic Preservation Act (NHPA).
2. Preserve the integrity of Camp Pendleton's historic buildings, sites, and objects.

### 9.3 Approach

Guidelines for Camp Pendleton are based primarily on The Secretary of the Interior's Standards for the Treatment of Historic Properties (National Park Service 1995), which is the principal guidance on this topic published by the U.S. Department of the Interior. Guidelines are provided both for historic district structures (exterior and interior) and eligible sites found on Camp Pendleton.

Sections 9.13 through 9.20 of this chapter contain specific observations of the Historic Assets located on Camp Pendleton, with detailed references regarding their status on the list of California Historic Landmarks, and National Register of Places.

### 9.4 Historic Designations

The following is a summary of historic designations assigned to locations across the Camp Pendleton area that were the basis for specific design recommendations. The level of Federal, State, and local protection for each Historic Asset varies and should be confirmed as a part of any development process in the vicinity of Historic Assets. The Design and Replacement Guidelines for Historic Properties as outlined above should be used where they are applicable and acceptable within the guidelines of National and State landmark designations.

Several sites at Camp Pendleton have been designated as part of the National Register of Historic Places, or have been listed as California Historical

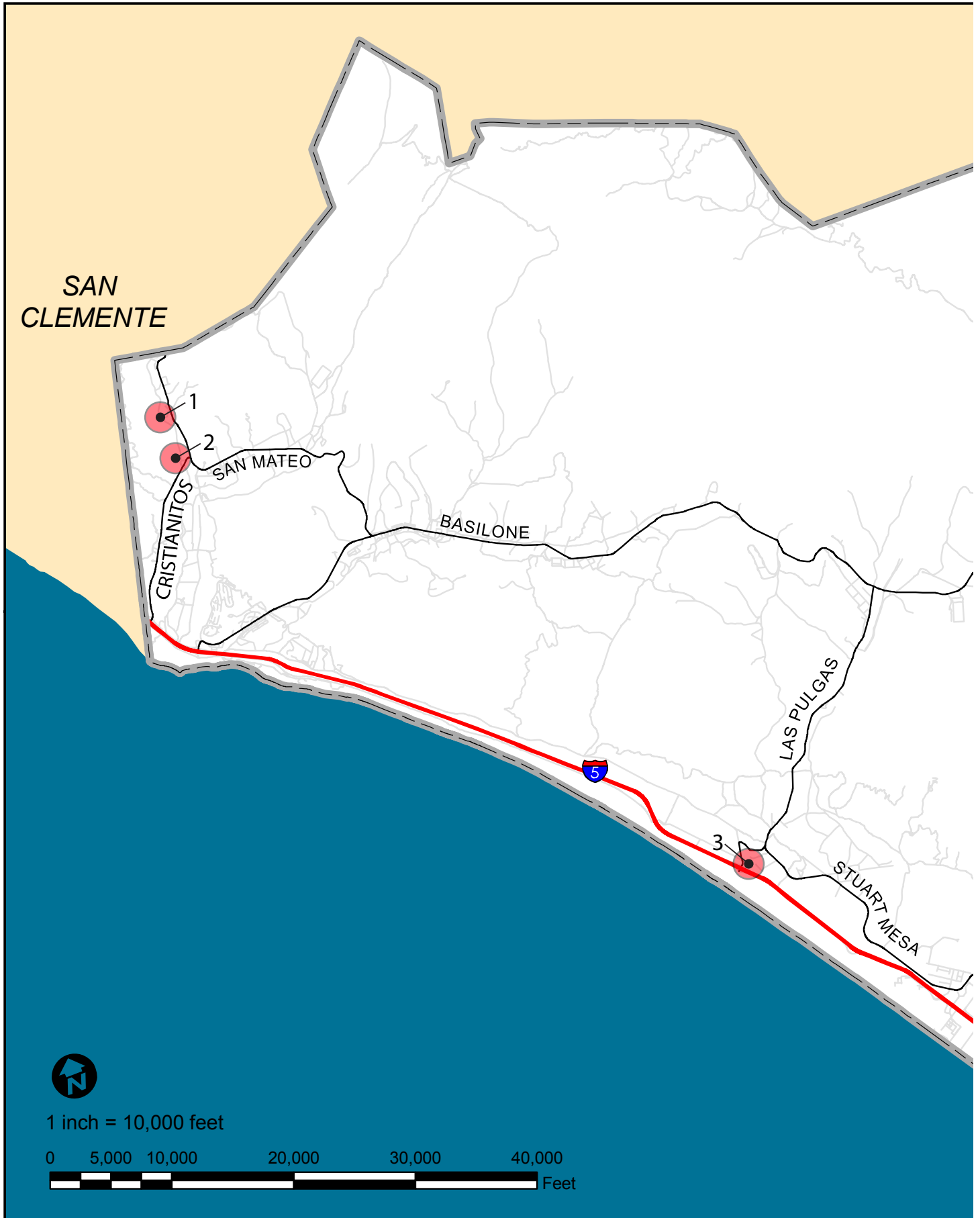
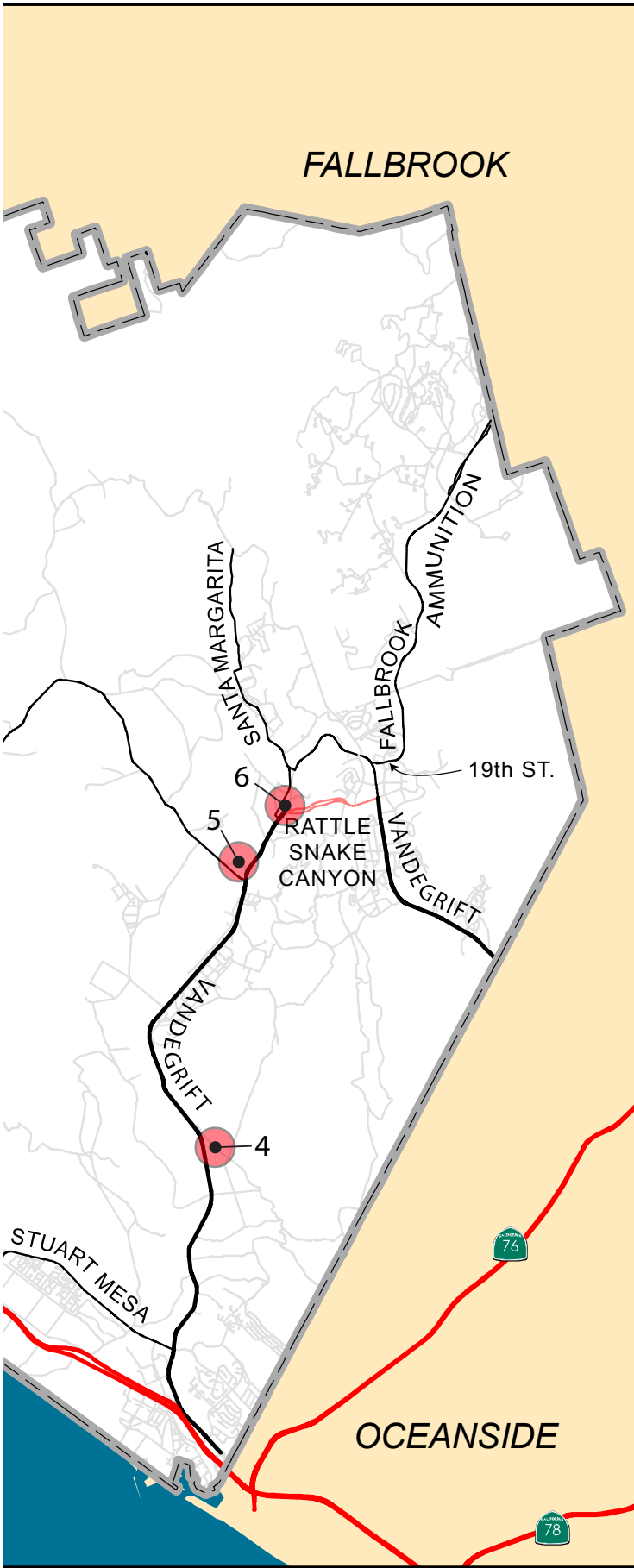


Figure 9.0-1



# Basewide Historic Assets and Museum

## Historic Assets and Museum:

- 1) Hand of Hope
- 2) Cristianitos Baptismal Site
- 3) Las Flores Resource Area
- 4) El Camino Real Historical Marker (Bell)
- 5) Santa Margarita Ranch House
- 6) Marine Corps Mechanized Museum

Landmarks. The State of California also designates sites for the California Register or as California Points of Interest, but no sites retaining these designations occur on the Base at this time.

## 9.5 National Register

The National Register of Historic Places is the nation's official list of buildings, structures, objects, sites, and districts worthy of preservation because of their significance in American history, architecture, archeology, engineering, and culture. The National Register recognizes resources of local, state and national significance, which have been documented and evaluated according to uniform standards and criteria (Figure 9.5-1).

Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archeological resources. The National Register is administered by the National Park Service, which is part of the U. S. Department of the Interior. National Historic Landmarks are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. NHLs are afforded a higher level of protection. Under Section 110(f) of the National Historic Preservation Act, the Federal agency is required to "the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark, and shall afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking.



Figure 9.5-1: National Register of Historic Places Plaque.

## 9.6 California Historical Landmarks

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have been determined to have statewide historical significance. The resource also must be approved for designation by the County Board of Supervisors or the City/Town Council in whose jurisdiction it is located; be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks.

## 9.7 California Register

The State Historical Resources Commission has designed this program for use by State and local agencies, private groups and citizens to identify, evaluate, register and protect California's historical resources. The Register is the authoritative guide to the State's significant historical and archeological resources.

The California Register program encourages public recognition and protection of resources of architectural, historical, archeological and cultural significance, identifies historical resources for State and local planning purposes, determines eligibility for State historic preservation grant funding and affords certain protections under the California Environmental Quality Act (CEQA).

## 9.8 California Points of Interest

California Points of Historical Interest are sites, buildings, features, or events of local (city or county) significance that have anthropological, cultural,



Figure 9.8-1: California Historical Landmarks Plaque.

military, political, architectural, economic, scientific or technical, religious, experimental, or other value.

Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the California Register (Figure 9.8-1).

## 9.9 Design and Replacement Guidelines for Historic Properties

### 9.10 Installation-Level Guidelines

#### 9.10.1 Site Conditions

The Secretary of the Interior's standards address important aspects of site development in historic areas:

- a. Preserve the overall appearance and character found throughout the site.
- b. Maintain the integrity of the landscape with any new buildings that need to be constructed.
- c. Retain the boundaries encompassing the historic districts. For development within these areas, see guidelines for historic district site conditions, Section 9.7.
- d. Improve energy-efficiency and sustainability by maintaining existing landscape features that moderate the effects of the climate on the setting.

#### 9.10.2 Historic Assets and Mechanized Museum

To maintain the historic integrity of Camp Pendleton, a number of historic assets and the Mechanized Museum have been identified (Figure 9.10-1).



Figure 9.10-1: Mechanized Museum.

- a. Preserve the relationship between buildings, landscape elements, and open space. If new buildings are provided, they shall be consistent in architectural quality and proportion with the existing buildings of each historic district.
- b. Where landscaping has been neglected, improve the landscape character in a manner consistent with sustainable practice and historic character. Where there is no landscaping, initiate a program to provide in a manner consistent with sustainable practice and historic character (Figure 9.10-2).
- c. Maintain grades sloping away from historic structures to retain drainage runoff and topography throughout the entire historic district.
- d. Retain site elements that are important in defining the overall historic character of the property, including elements such as lighting, site furnishings, and fence enclosures.
- e. Signage and graphics should be consistent with the historic character of the property. Commonly noticed items: name plaques, numbers on buildings, signs with names of buildings, notation of parking spaces, and street signs.
- f. Accommodate parking in designated areas without intruding on the historic area or district. Also, screen parking from view to reduce its impact on the site.
- g. Improve energy efficiency by retaining plant materials, trees, and landscape features- especially those that perform passive solar energy functions such as shading and wind breaks. Maintain landscaping to prevent damage to the structures, pavement, or historic objects.



Figure 9.10-2: Lack of landscape at the Mechanized Museum.

## 9.11 Exterior Building-Level Guidelines

### 9.11.1 General Building Treatments

Several building types have been identified as either historic assets. Guidelines for general building treatments include the following:

- a. Maintain historic use, or allow new use to maximize the retention of distinctive materials, features, spaces, and spatial relationships.
- b. Retain historic character. Alterations to the property shall be physically and visually compatible, but shall be differentiated from the old. New construction shall be reversible.
- c. Retain elements that are important in defining the overall historic character of the building. These include entrance lighting, name and number signage, ornamentation, and craftsmanship.
- d. Preserve and retain architectural changes that have historic significance.
- e. Evaluate the property's level of deterioration to determine the treatment required before taking action.
- f. Any physical treatment undertaken shall use the least invasive means possible. Those causing damage to the historic material shall not be used.
- g. Deteriorated historic features shall be repaired rather than replaced whenever feasible. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and materials where possible.
- h. Energy conservation measures shall maintain character-defining features. Executive Order 12902, "Energy Efficiency and Water Conservation at Federal Facilities" requires all measures that have a 10 year payback to be funded.

### 9.11.2 Concrete

- a. Analyze existing concrete so that a compatible mix can be made for repairs. New concrete mixtures should be composed with ingredients of the same character. Aggregate size, color, and strength shall match that of the old.

- b. Retain correct joint size and profile.
- c. Repair concrete steps and stoops where rust damage from ironwork has occurred.

### 9.11.3 Metals

- a. Metal elements that contribute to the architectural character of the building shall be retained and preserved. Also, retain and preserve the type of finish, its historic color, and accent scheme.
- b. Copper and bronze should not be painted or coated. Other metals should be painted to protect them from weathering.
- c. Retain, rather than replace, deteriorated architectural metal elements when repair and limited replacements can be accomplished.

### 9.11.4 Wood

- a. Wood elements that are important in defining the overall historic character of the building shall be retained and preserved. Similar elements such as original cornices and brackets, door surrounds, pediments, railings, and moldings shall remain as original fabric with repairs. Replace such elements only if the original is irreparable (Figure 9.11-1).
- b. Analyze deteriorated wood sections thoroughly for damage due to water, insects, invasive vegetation, or fungi. Repairs should eliminate initial causes of damage instead of merely covering damaged wood.
- c. Repairs shall match the original woodwork in terms of construction technique, coating, grain direction, ornamentation, and if possible, wood species.



Figure 9.11-1: Mechanized Museum wood exterior.



### 9.11.5 Paint

- a. Retain historic finishes or color schemes to preserve the historic character of the exterior. Paint wood only as needed with colors that are appropriate to the historic building and district.
- b. Carefully remove paint buildup from woodwork, while taking careful recordings of the various layers of paint from different time periods.
- c. The surface should be prepared by cleaning, scraping, sanding, and priming before applying paint.
- d. The coating shall match the historic style and texture by using the same workmanship and instrument to apply it with, such as brushes, rollers, or sprayers.

### 9.11.6 Stucco

- a. Save or preserve as much as possible of the historic stucco (Figure 9.11-2); patching rather than wholesale replacement is preferable.
- b. Stucco repair to be carried out in a contained or well-defined area, or if the stucco is scored, the repair patch should be “squared-off” in such a way as to follow existing scoring. Severely cracked and loose stucco should be removed down to the lath, or down to the masonry.
- c. A stucco mix compatible with the historic stucco should be selected after analyzing the existing stucco. Allow stucco test samples to weather as long as possible in order to study the durability of the mix and its compatibility with the existing stucco, as well as the weathering of the tint if the building will not be painted and color match is an important factor. The number and thickness of stucco coats used in the repair should also match the original. Match tint or coloration of the historic stucco surface.
- d. The area to be stuccoed should be shaded or covered, particularly in hot weather. Keep the newly stuccoed area damp, at approximately 90 per cent humidity, for a period of 48 to 72 hours. Stucco repairs should not be undertaken in below 40 degrees Fahrenheit.

### 9.11.7 Roofs

- a. Retain character-defining roof shapes and materials instead of introducing incompatible designs or improper installation techniques. Retain the configuration of existing roofs without the addition of new elements that diminish the historic character.
- b. Roofing material shall be appropriate to the style and period of the building and its historic district. Return nonconforming roofs to compatible when replacement is necessary.
- c. Repairs shall match the original structure. Substitute materials may be considered when the original materials have not performed well, but must continue to maintain the integrity of the building.
- d. Retain roof ventilation to preserve elements of construction. Provide ventilation if there is none or it is inadequate, but locate it in an inconspicuous place away from public view.

### 9.11.8 Gutters and Downspouts

- a. Retain original characteristics instead of replacing with incompatible materials. Where repair or replacement is necessary, use gutters and downspouts that have compatible detailing and material.
- b. Replace deteriorated incompatible gutters and downspouts with those compatible to the original.



Figure 9.11-2: Santa Margarita Ranch House with stucco finish.

### 9.11.9 Windows

- a. Windows and their surrounds that define the historic character of the building shall be retained and preserved (Figure 9.11-3). Retain, repair, and maintain historic hardware where it exists. Replacement hardware shall be compatible.
- b. Replace deteriorated incompatible windows with units made to match the original.
- c. Maintain original operating condition, and locate weather-stripping to facilitate operation.
- d. Maintain the historic appearance of windows and their frames through retention of design, materials, finishes, and colors, including the configuration of sashes and muntions, depth of reveals, molding profiles, and the reflectivity and color of the glazing.
- e. Provide protective glazing where the weather demands it. Protective glazing should be as unobtrusive as possible and should be removable without damaging historic fabric.
- f. Improve energy efficiency by using weather-stripping, storm windows, caulking, interior shades, and blinds, not by replacing original windows. Existing operable shutters and canopies can be used for energy conservation.

### 9.11.10 Doors

- a. Doors and their surrounds that define the historic character of the building shall be retained and preserved. Retain, repair, and maintain historic hardware where it exists.
- b. Replace deteriorated incompatible doors with doors compatible with the structure. Replacement hardware shall be compatible.



Figure 9.11-3: Mechanized Museum windows.

- c. Maintain the original operating condition, and locate weather-stripping to facilitate operation.
- d. Maintain the historic appearance of doors and their frames through retention of designs, materials, finishes, and colors, including the reveals, molding profiles, and door knockers.
- e. Combination storm and screen doors shall be simple and discreet, of one panel, glazing, or screening divisions aligning with the door it protects, and without ornamentation.
- f. Replacement elements shall match the original. If use of the same materials is not feasible, then a compatible substitute material, which conveys the visual appearance and design of the surviving parts, may be considered.
- g. Improve energy efficiency by using weather stripping, storm doors, caulking, and canopies, if historically appropriate.

### 9.11.11 Exterior Wall Coverings

- a. Retain historic exterior wall coverings that are character-defining elements of the building. Some significant types are wood siding, and stucco.
- b. Avoid vinyl, aluminum, or other incompatible sidings. They can cause damage that can alter the appearance of historic buildings.
- c. Compatible substitute materials may be considered when the original materials have not performed well. Modern metals that withstand corrosion better may be used as substitutes.
- d. Substitute material must be properly installed to allow for galvanic (electrochemical) compatibility, adequate expansion and contraction, and structural security. When the physical properties are not compatible damage can occur.

### 9.11.12 Compatible Accessibility

- a. Make historic properties universally accessible while preserving their historic character. Review the historic significance of the property and identify character-defining features. Assess the property's existing and required level of accessibility. Evaluate accessibility options within a preservation context.

- b. When new features are incorporated for accessibility, historic materials and features should be retained whenever possible. Accessibility modifications shall be appropriately scaled, visually compatible, and easily reversible.
- c. If alterations would result in a substantial loss or impairment of the historic property, alternative methods for allowing program accessibility shall be used. Audiovisual devices can be used to depict inaccessible portions. Assigned persons could guide individuals with disabilities through parts that would otherwise be inaccessible. Other innovative methods also may be used.
- d. Accessibility barriers include parking, building and site entrances, surface textures, widths and slopes of walkways, grade changes, and size, weight, and configuration of doorways.
- e. Parking should be as convenient as possible for people with disabilities. Modifications to parking configurations and pathways should not alter significant landscape features.
- f. Maintain integrity of entrances when making accessibility changes. Solutions may include regrading the soil, incorporating ramps, installing wheelchair lifts (not recommended because they require frequent maintenance), creating new entrances, and modifying doors, hardware, and thresholds.
- g. Ramps shall be placed at the most sensitive location in respect to the historic structure. Location of the ramps does not necessarily need to be at the main entrance, but where greatest access to public spaces occurs. Also, materials shall be chosen that are most visually compatible with the historic structure.
- h. Historic doors generally should not be replaced, nor should door frames be altered. Automatic and door openers can reduce or eliminate door pressures that are accessibility barriers.

A door threshold that exceeds the allowable height can be altered or removed in a historically compatible manner to meet accessibility requirements.

For barrier-free accessibility and clearances, refer to Uniform Federal Accessibility Standards and the Americans With Disabilities Act.

### 9.11.13 Penetrations Through Walls and Roofs

To maintain the historic character of the structure there should be no objects penetrating the walls or roof. If it is mechanically necessary for equipment to penetrate the structure it shall be placed in the least noticeable location.

Exterior walls shall not be cut, or blocked in, for installation of mechanical units.

Penetrations through windows by air conditioners, vents, etc. shall be removed and other alternatives investigated.

### 9.11.14 Utility Elements

Maintain historic facades when adding or replacing utility elements to preserve historic character of the exterior.

Install required mechanical systems and service equipment to cause the least alteration possible to the building's exterior elevations, and the least damage to historic building materials.

## 9.12 Interior Building-Level Guidelines

### 9.12.1 General Interior Building Treatments

Guidelines for general interior building treatments include the following:

Maintain historic use, or allow new use that retains distinctive materials, features, spaces, and spatial relationships (Figure 9.12-1).



Figure 9.12-1: Mechanized Museum wood interior.

Retain historic interior character. Alterations to the structure shall be physically and visually compatible, but shall be differentiated from the old. New construction shall be reversible.

Retain interior elements important in defining the overall historic character of the building. These include wall finishes, floor finishes, ceiling finishes, doors, windows, lighting, and plumbing fixtures (Figure 9.12-2).

Preserve and retain architectural changes that have historic significance.

Evaluate the interior's level of deterioration to determine the treatment required.

Any physical treatment undertaken shall use the least disturbing means possible. Those causing damage to the historic material shall not be used.

Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and material where possible.

### **9.12.2 Entrances**

Retain historic entrances and vestibules that define the historic character of the building.

Repair entrance elements rather than replacing them.

When repair is no longer practical, replacement elements shall match the original. If using the same kind of material is not feasible, then a compatible substitute material that conveys the visual appearance and design of the surviving parts may be considered.



Figure 9.12-2: Mechanized Museum wood interior.

Preserve the use of the main entrance as originally intended.

### **9.12.3 Corridors**

Retain historic corridors and hallways that define the historic character of the building.

Repair elements rather than replacing them.

When repair is no longer practical, replacement elements shall match the original. If using the same kind of material is not feasible, then a compatible substitute material that conveys the visual appearance and design of the surviving parts may be considered.

### **9.12.4 Stairwells**

Repair elements rather than replace them. Such elements include treads, risers, railings, balusters, and detailing.

When repair is no longer practical, replacement elements shall match the original. If using the same kind of material is not feasible, then a compatible substitute material that conveys the visual appearance and design of the surviving parts may be considered.

When new features are incorporated for accessibility, or fire regulations, historic materials and features should be retained whenever possible. Code modifications shall be appropriately scaled, visually compatible, and easily reversible.

### **9.12.5 Ceremonial Rooms (Main Spaces)**

Retain historic rooms that define the historic character of the building.

Repair elements rather than replace them.

When repair is no longer practical, replacement elements shall match the original. If using the same kind of material is not feasible, then a compatible substitute material that conveys the visual appearance and design of the surviving parts may be considered.

Maintain the original circulation intended upon entry into the historic room.

Retain all historic plumbing fixtures such as radiators, toilets, lavatories, and tubs. Abandon in place malfunctioning radiators.

### 9.12.6 Lighting

Retain and preserve fixtures that define the historic character of the building. Retain, repair, and maintain original historic lighting where it exists.

Replace deteriorated incompatible light fixtures with compatible fixtures. Replacement hardware shall be compatible.

Do not use fixtures of a different style than that of the room.

### 9.12.7 Finishes

Finishing elements important in defining the overall historic character of the building shall be retained and preserved. Similar elements such as the original floor, wall, ceiling, and trim work finishings shall remain as original fabric with repairs. Replace such elements only if the original is irreparable.

Repairs shall match the original work in terms of construction technique, coating, ornamentation, craftsmanship, color, and material.

## 9.13 Camp Pendleton Marine Corps Mechanized Museum

### 9.13.1 Overview

**Location:** The Marine Corps Mechanized Museum itself, along with associated structures, are located on Vandegrift Boulevard at the base of Rattlesnake Canyon. The Museum Building is designated as Building 2612, Camp Pendleton, California.

Building 2612 is not eligible for listing to the National Register and not a historic property. An inventory and evaluation of over 3,500 buildings conducted in 1998 concluded that it was ineligible to the National Register individually and as a district (JRP 2000).

Established in 1999, the Marine Corps Mechanized Museum offers one of the largest and most unique collections of operational historical military vehicles in the United States. The museum houses working Marine Corps transport and battle vehicles demonstrating the history of Marine usage since 1942. The museum has acquired, restored, and maintained over 90 wheeled and tracked military vehicles spanning over 60 years. The collection includes a large selection of Vietnam and Desert Storm era vehicles and a Vietnamese road marker from the road to Hue City. Outside the museum, there are several military tanks

on display. Inside the Museum, the changing display includes Missile Carriers, a 75 mm Pack Howitzer, Light Strike Vehicles, and Tractor Carriers as well as two dozen other combat vehicles. Descriptions are provided with the vehicles explaining their capabilities and when they were used in combat.

The Museum was originally built as a rail station in 1942, the same year that the camp was built as a result of Franklin D. Roosevelt's call for construction of a new Marine Base during a time of national emergency, World War II. The wood frame and truss structure rests on a concrete podium; the west elevation provided an embarkation platform for troops boarding trains, where they would make their way to troop ships awaiting them in the San Diego harbor. Period graffiti can still be found on wood posts of the



Figure 9.13-1: Period graffiti.



Figure 9.13-2: WWII period railroad tracks.

structure (Figure 9.13-1). An existing set of railroad tracks running north/south remain today, and a vintage locomotive is located on the tracks outside the museum (Figure 9.13-2).

A number of similar wood frame structures form a coherent collection of buildings from the 1942 period. They include Buildings 2613, 2626, 2642, and 2653. Considering the Marine contribution to the success of the Pacific War during World War II, the building collection represents one of the few remaining visual assets of that period on the Base. The wood frame structures embody the speed of construction and functionality called for during the early days of World War II, but also echo vernacular design in their form, scale, proportion, detailing, and materials as exhibited in the walls, windows, eaves, barn-style doors, structural reinforcement, and roof.

### **1. Assets**

- a. The site represents a unique chapter in California and national history. The Mechanized Museum serves as a conduit for connecting the Marine Corps from World War II to the present, and offers one of the largest and most unique collections of operational historical military vehicles in the United States (Figure 9.13-3).
- b. The multi-building complex reinforces the context, and displays the architectural expression of the 1942 period.
- c. The surrounding landscape area has not been subject to extensive development and has a rural, quiet character. The presence of Eucalyptus groves also reinforces the image of an earlier California landscape



*Figure 9.13-3: Military vehicles outside the Mechanized Museum.*

- d. Sufficient informal asphalt parking is available for groups and individuals visiting the site and is situated adjacent to the Mechanized Museum. Traffic volume in the parking lot is typically very light.
- e. The site occupies a prominent focal point where Rattlesnake Canyon meets Vandegrift Boulevard, one of the most used intersections on the Base.
- f. The building coloration and wood frame construction of the Mechanized Museum is out of character with other structures on the Base, adding to its visual prominence.

### **2. Liabilities**

- a. Directional signage to the Mechanized Museum site is limited.
- b. The area may be subject to drainage problems in heavy rain due to its lower elevation from Vandegrift Boulevard.
- c. There is no site furniture or shelter for day-use. There is no on-site restroom for visitors.
- d. The surrounding wood frame structures house Marine Corps functions and are not accessible to the general public (Figure 9.13-4).
- e. Research should be conducted to authenticate the paint color used for the Mechanized Museum and surrounding structures in order to connect their establishment to the World War II period.
- f. The railroad locomotive and tracks are not integrated into the visitor experience.



*Figure 9.13-4: 1942 period building used for Marine functions.*

- g. The Museum interior access is restricted to approximately 25 percent of the interior space and the appreciation of the departing soldier in wartime conditions is limited, as well as the whole of the structural and architectural interest of the interior.

### 9.13.2 Recommendations

The following is a summary of recommendations or improvements for the Marine Corps Mechanized Museum and surrounding structures.

All improvements should be coordinated with the Public Works Department.

#### 1. Land Use

- a. To assist in the development of future projects or the reuse of existing facilities, refer to the Land Use Compatibility Matrix in Section 3.3-Land Use. This matrix establishes appropriate compatible uses.
- b. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.

#### 2. Site Planning

For new developments refer to the guidelines established in Section 3.4 – Site Planning.

#### 3. Architecture

Refer to Exterior and Interior Building Guidelines in this chapter.

#### 4. Landscape

- a. Coordinate with appropriate site conservators and consider introduction of low water use groundcover.
- b. Coordinate with appropriate site conservators. Use only one color and size inorganic mulch as groundcover. See Detail 8.3 A-7.

#### 5. Street Design

No recommendations at this time.

#### 6. Parking

Consider parking lot improvements and ADA access (Figure 9.13-5).

#### 7. Pedestrian Circulation

Consider ADA accessibility in future improvements.

#### 8. Signage

Coordinate with site conservators and provide way finding and identification signs for assets.

#### 9. Lighting

No recommendations at this time.

#### 10. Site Furniture

Coordinate with appropriate site conservators and develop a survey and analysis of the existing site furniture conditions as outlined Section 3.11-Site Furniture.

#### 11. Screens, Walls and Fences

No recommendations at this time.

#### 12. Utilities

- a. Coordinate with appropriate site conservators and develop a survey and analysis of the existing above grade utilities and prepare a long-range plan to underground these facilities.
- b. Coordinate with appropriate site conservators and provide right-of-way easements for above grade utilities in streets.
- c. Place utilities underground per the Utility Details and Standards in Section 8.11.
- d. Minimize utility easements through development or open space areas.



Figure 9.13-5: Access from parking lot to 1942 period building near the Museum.

## 9.14 Camp Pendleton Historic Assets

### 9.15 Talega (64) Area WWII Quonset Huts

See Chapter 4.19, Talega (64) Area

### 9.16 Hand of Hope Artwork, Cristianitos (63) Area

#### 9.16.1 Overview

Location: Site and plaque in Camp Pendleton on Cristianitos Road, 0.6 miles north, opposite Building 63121, Cristianitos (63) Area.

The Hand of Hope (Figure 9.16-1) was created by Vietnamese lawyer and artist Dr. Luu Nguyen Dat with assistance from Marines. The piece was inspired by a similar artwork he had created on the grounds of his home in Ho Chi Minh City (formerly Saigon). The sculpture represents a unique and proud chapter in Base history when Camp Pendleton housed more than 900 Vietnamese refugees in a tent city in 1975 (Figures 9.16-2 and 9.16-3). The medium for the monumental artwork is cast-in-place concrete, which has been painted white.

#### 1. Assets

- a. The artist piece is currently in good physical condition.
- b. The site is highly visible to passing vehicles and the monument is well positioned to be seen and appreciated.
- c. The grassy site has no physical problems of soil erosion or invasive plant species.
- d. The surrounding area is large enough to accommodate larger gatherings of people who return to celebrate their association with the Marines and the physical site.
- e. A service roadway and the grassy nature of the site can accommodate informal parking on a limited basis.

#### 2. Liabilities

- a. Directional signage to the artwork does not exist.
- b. Over time, the unconventional art materials may degrade.



Figure 9.16-1: Hand of Hope, Marine Corps Base-Camp Pendleton, CA.



Figure 9.16-2: Original piece in Ho Chi Minh City, inspiration for Hand of Hope.



Figure 9.16-3: Refugee tent camp at Camp Pendleton, 1975.



- c. Information regarding the genesis of the artist piece, its relation to the physical site, and admirable Marine heritage does not exist.
- d. The artist piece lacks a setting specifically designed to highlight the three dimensional artwork.
- e. There is no site furniture or shelter for day-use.

### 9.16.2 Recommendations

The following is a summary of recommendations or improvements for the Hand of Hope. These recommendations are based on the existing assets and liabilities at the Cristianitos (63) Area.

#### 1. Land Use

- a. To assist in the development of future projects or the reuse of existing facilities, refer to the Land Use Compatibility Matrix in Section 3.3-Land Use. This matrix establishes appropriate compatible uses.
- b. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.

#### 2. Site Planning

For new developments refer to the guidelines established in Section 3.4 – Site Planning.

#### 3. Architecture

No recommendations at this time.

#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6 – Landscaping for the purpose of creating a more integrated landscape setting for the artwork.
- b. Use trees as the dominant landscape planting element in the developed area.
- c. Introduce groundcover with low water requirements.
- d. Inorganic mulch can be used as groundcover. Use only one color and size of inorganic mulch. See Detail 8.3 A-7.

#### 5. Street Design

The occasional use of the site and relative significance does not justify changes to the street design at this time.

#### 6. Parking

The occasional use of the site and relative significance does not justify changes to parking at this time.

#### 7. Pedestrian Circulation

The occasional use of the site and relative significance does not justify changes to pedestrian circulation at this time.

#### 8. Signage

No recommendations at this time.

#### 9. Lighting

The occasional use of the site and relative significance does not justify introduction of new lighting at this time.

#### 10. Site Furniture

Develop a survey and analysis of the existing site furniture conditions as outlined Section 3.11–Site Furniture.

#### 11. Screens, Walls and Fences

No recommendations at this time.

#### 12. Utilities

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long-range plan to underground these facilities.
- b. Provide right-of-way easements for above grade utilities in streets.
- c. Place utilities underground per the Utility Details and Standards in Section 8.11.
- d. Minimize utility easements through development or open space areas.

## 9.17 Cristianitos Baptismal Site

### 9.17.1 Overview

Historic Designation: No. 562 La Cristianita, California Historic Landmark, Office of Historic Preservation, California State Parks (Figure 9.17-1).

Location: Site and plaque in Los Cristianitos Canyon, on Cristianitos Road, 0.4 miles north of intersection of San Mateo Road, 3 miles east of I-5 at San Clemente, plaque in San Clemente Civic Center 100 Avenida Presidio, San Clemente.

Spanish priests of the Portola-Serra expedition, who made their trek through the Base in 1769 to northern California, named this area. First named after St. Apollinaris, the expedition soldiers referred to the site as “Los Cristianitos,” or the little Christians, after the priests conducted California’s first Christian baptisms for two dying Indian infants at this site.

Cristianitos is also the location of an archeological site, and subject to the requirements of Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, “Protection of Historic Properties”. Section 106 of the National Historic Preservation Act requires federal agencies to “take into account” the effects of their undertakings on historic properties and to provide the Advisory Council on Historic Preservation (ACHP) a “reasonable” opportunity to comment. Federal agencies meet these two requirements through the process set out in the ACHP’s regulations, “Protection of Historic Properties”.

#### 1. Assets

- a. The site represents a unique chapter in California history and has been recognized as a California Historic Landmark. Educational plaques are provided (Figure 9.17-2).
- b. The site is located in a mature riparian environment and offers views of the valley and surrounding hills.
- c. The area is relatively untouched or developed.
- d. Sufficient crushed rock parking is available for visitors. Traffic volumes are light in this area of the Base.

#### 2. Liabilities

- a. Directional signage to baptismal site is limited.
- b. Pathway leading to site is by a set of locally constructed stairs. Parts of the stairs and hand-



Figure 9.17-1: Cross, marking the site.



Figure 9.17-2: Crushed rock path to Cristianitos Baptismal Site accompanied by education plaque.



Figure 9.17-3: Historic plaque, buried in silt.

rails are in disrepair. Treads, risers and railings of stairs do not meet local or Base standards of construction.

- c. Erosion occurs frequently in the area due to steep canyon slopes and introduction of access pathway.
- d. The actual site and plaque area is subject to silt build up due to the canyon wash area. Silt has accumulated since the plaque was installed (Figure 9.17-3).
- e. A consistent presentation of the historic aspects of the site has not been established via signage and directions.
- f. There is no site furniture or shelter for day-use.

### 9.17.2 Recommendations

The following is a summary of recommendations or improvements to Cristianitos Baptismal Site. These recommendations are based on the existing assets and liabilities at the Area.

#### 1. Land Use

- a. To assist in the development of future projects or the reuse of existing facilities, refer to the Land Use Compatibility Matrix in Section 3.3-Land Use. This matrix establishes appropriate compatible uses.
- b. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.



Figure 9.17-4: Stairs leading to site are in disrepair.

#### 2. Site Planning

For new developments refer to the guidelines established in Section 3.4 – Site Planning.

#### 3. Architecture

No recommendations at this time.

#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6–Landscaping.
- b. Use trees as the dominant landscape element in all developed areas.
- c. Introduce groundcover with low water requirements.
- d. Inorganic mulch can be used as groundcover. Use only one color and size of inorganic mulch. See Detail 8.3 A-7.
- e. Install erosion control planting for areas that show signs of erosion and on slopes that exceed 3:1.

#### 5. Street Design

No recommendations at this time.

#### 6. Parking

No recommendations at this time.



Figure 9.17-5: Site signage.

## 7. Pedestrian Circulation

Improve access to stairs including treads, risers, and handrails to minimum Base standards (Figure 9.17-4).

## 8. Signage

Organize signage to maximize educational value (Figure 9.17-5).

## 9. Lighting

No recommendations at this time.

## 10. Site Furniture

Develop a survey and analysis of the existing site furniture conditions as outlined Section 3.11—Site Furniture.

## 11. Screens, Walls and Fences

No recommendations at this time.

## 12. Utilities

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long-range plan to underground these facilities.
- b. Provide right-of-way easements for above grade utilities in streets.
- c. Place utilities underground per the Utility Details and Standards in Section 8.11.
- d. Minimize utility easements through development or open space areas.

## 9.18 Las Flores Resource Area

### 9.18.1 Overview Las Flores Adobe and Site

Las Flores Adobe, National Register Number: National Historic Landmark 68000021 (Figure 9.18-1)

Location: Stuart Mesa Rd., about 7 mi. N of junction with Vandegrift Blvd., Camp Pendleton.

Location: Jct. of Pulgas and Stuart Mesa Roads, Camp Pendleton

Las Flores Site, National Register Number 75000464

Las Flores Site, No. N383, California Historic Site, Office of Historic Preservation, California State Parks. In addition, recorded archeological site, CA-SDI-812/H is present in this area.

Location: 0.6 miles SE of Las Pulgas gate, 0.9 SW of I-5 at Las Pulgas Road, 10 miles south of San Clemente, CA.

Juan Forster built the Las Flores Adobe Ranch House (Figure 9.18-2) as a wedding present for his son, Marcus Forster, between 1865 and 1868. The National Register of Historic Places describes the structure as “an outstanding example of a two-story 19th century Monterey style residence.” This building combined the traditional Spanish-Mexican adobe with elements of New England frame architecture, including a double veranda across the facade, to create a popular building type unique to California during the mid-19th century.

The Resource Area is also the location of an archeological site and ethnohistoric village of Huisme, and



Figure 9.18-1: Las Flores Adobe Ranch House plaque.

subject to the requirements of Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, “Protection of Historic Properties”. Section 106 of the National Historic Preservation Act requires federal agencies to “take into account” the effects of their undertakings on historic properties and to provide the Advisory Council on Historic Preservation (ACHP) a “reasonable” opportunity to comment. Federal agencies meet these two requirements through the process set out in the ACHP’s regulations, “Protection of Historic Properties”.

### 9.18.2 Overview Las Flores Asistencia

Las Flores Asistencia, No. 616, No. N43, California Historic Landmark, Office of Historic Preservation, California State Parks (Figure 9.18-3).

Las Flores Estancia, National Register Number 93000391

Las Flores Estancia, No. N1831, California Historic Landmark, Office of Historic Preservation, California State Parks.

Las Flores Site, No. N383, California Historic Site, Office of Historic Preservation, California State Parks.

Location: 0.6 miles SE of Las Pulgas gate, 0.9 SW of I-5 at Las Pulgas Road, 10 miles south of San Clemente, CA.

The Las Flores Asistencia was established in 1823 as an estancia, or station, situated approximately halfway between Mission San Luis Rey de Francia and Mission San Juan.



Figure 9.18-2: Las Flores Adobe Ranch House, present day.

The Las Flores Estancia was established in 1823 as an estancia (station) situated approximately half-way between Mission San Luis Rey de Francia and Mission San Juan Capistrano. The estancia, located on what was known as the San Pedro Rancho, was under the jurisdiction of Mission San Luis Rey. Priests traveled regularly to preach at the estancia. The chapel served two native villages, Chumella and Questmille, both located in a nearby valley.

#### 1. Assets

- a. The site represents a unique chapter in California history that has been recognized as a California Historic Landmark and Historic Site (Figures 9.18-4 and 9.18-5). Educational plaques are provided. The multi-building complex adds interest.
- b. The surrounding landscape area has not been subject to development and has a rural, quiet character.
- c. Sufficient informal crushed rock parking is available for visitors and is situated apart from the historic structure. Traffic volumes are moderate in this area of the Base.
- d. The national significance of the site and structure has drawn interest and desire for further study from universities and private entities.
- e. The site and structure are legally protected.

#### 2. Liabilities

- a. Directional signage to the Las Flores Estancia Resource site is limited.



Figure 9.18-3: Las Flores Asistencia Plaque.

- b. The area may be subject to drainage problems, including flooding, in heavy rain.
- c. There is no site furniture or shelter for day-use.
- d. A consistent presentation of the historic aspects of the site has not been established via signage and directions.

### **9.18.3 Recommendations**

The following is a summary of recommendations or improvements for the Las Flores Estancia Resource.

All improvements should be coordinated within the guidelines of the National Register of Historic Places and the State of California Historic Landmark guidelines and regulations.

#### **1. Land Use**

- a. Refer to the Land Use Compatibility Matrix in Section 3.3-Land Use when developing future projects or the reuse of existing facilities.
- b. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.

#### **2. Site Planning**

For new developments refer to the guidelines established in Section 3.4 – Site Planning.

#### **3. Architecture**

No recommendations at this time.

#### **4. Landscape**

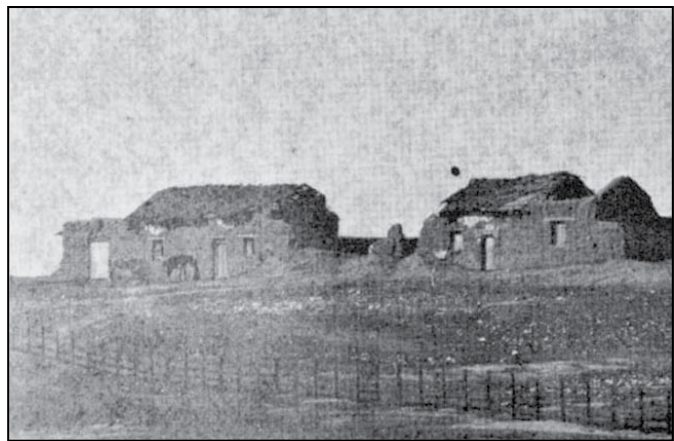
- a. Coordinate with appropriate site conservators. Consider introduction of low water use groundcover.
- b. Inorganic mulch can be used as groundcover. Use only one color and size of inorganic mulch. See Detail 8.3 A-7.

#### **5. Street Design**

No recommendations at this time.

#### **6. Parking**

Consider parking lot improvements including ADA accessibility.



*Figure 9.18-4: Photo of Las Flores Estancia, circa 1873.*



*Figure 9.18-5: The remains of Las Flores Estancia today.*

#### **7. Pedestrian Circulation**

Coordinate with appropriate site conservators and consider ADA accessibility in future improvements.

#### **8. Signage**

Coordinate with appropriate site conservators and provide way-finding and identification signage for the Historical assets.

#### **9. Lighting**

No recommendations at this time.

#### **10. Site Furniture**

Coordinate with appropriate site conservators and develop a survey and analysis of the existing site furniture conditions as outlined Section 3.11-Site Furniture.

#### **11. Screens, Walls and Fences**

No recommendations at this time.

## 12. Utilities

- a. Coordinate with appropriate site conservators and develop a survey and analysis of the existing above grade utilities and prepare a long-range plan to underground these facilities.
- b. Coordinate with appropriate site conservators and provide right-of-way easements for above grade utilities in streets.
- c. Place utilities underground per the Utility Details and Standards in Section 8.11. Minimize easements through development and open space.
- d. Minimize utility easements through development or open space area.

## 9.19 Santa Margarita Ranch House

### 9.19.1 Overview

No. 1026 Santa Margarita Ranch House, California State Landmark (Figure 9.19-1).

Location: Pico (24) Area.

Gaspar de Portola named this area Santa Margarita in 1769 during his first expedition north from San Diego. While still inhabited by Native Americans, Mission San Juan Capistrano took ownership of the land until it later became part of Mission San Luis Rey. In 1841, during secularization, Pio and Andres Pico were deeded the 89,742 acres comprising Rancho Santa Margarita and built the first two rooms of the Ranch House. Pio later lost the land in a horse bet with Don Sepulveda but the debt was paid off by his English brother-in-law Don Juan Forster, who lived at Rancho Santa Margarita some 18 years and greatly expanded the house. Due to debts, the Forster family sold Rancho Santa Margarita and Las Flores to James Flood and Richard O'Neill in 1882. In 1942, the land including the Rancho (126,000 acres) was purchased by the government for 4.25 million dollars. The Joseph H. Pendleton Marine Corps Base was dedicated by Franklin D Roosevelt in September 1942.

The Santa Margarita Ranch House is also the location of the ethnohistoric village of Topomai, an archeological site, and is subject to the requirements of Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, "Protection of Historic Properties". Section 106 of the National Historic Preservation Act requires federal



Figure 9.19-1: Santa Margarita Ranch plaque.

agencies to "take into account" the effects of their undertakings on historic properties and to provide the Advisory Council on Historic Preservation (ACHP) a "reasonable" opportunity to comment. Federal agencies meet these two requirements through the process set out in the ACHP's regulations, "Protection of Historic Properties".

### 1. Assets

- a. The site represents a unique chapter in California history and, as a recognized California Historic Landmark, has educational plaques.
- b. The site is highly visible and is centrally located near the Air Station, west of the Mechanized Museum.
- c. The site features numerous mature decorative planting, specimen trees, palms, ornamental gardens, and decorative lawns (Figure 9.19-2).
- d. The multi-building complex has consistent, attractive historical character and architecture style including a chapel open to the public (Figure 9.19-3).

### 2. Liabilities

- a. There is no landscaped street frontage along Vandegrift Boulevard nor is there landscape that might act as a buffer/setting for the Ranch House.
- b. A consistent presentation of the historic aspects of the site has not been established via signage and directions.

## 9.19.2 Recommendations

The following is a summary of recommendations for improvements of the Santa Margarita Ranch House Site.

### 1. Land Use

- a. To assist in the development of future projects or the reuse of existing facilities, refer to the Land Use Compatibility Matrix in Section 3.3 Land Use.
- b. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.

### 2. Site Planning

For new developments refer to the guidelines established in Section 3.4 – Site Planning.

### 3. Architecture

Coordinate with appropriate site conservators when considering any architectural modifications.

### 4. Landscape

- a. Coordinate with appropriate site conservators and consider introduction of plant material with low water requirements.
- b. Inorganic mulch can be used as groundcover. Use only one color and size of inorganic mulch. See Detail 8.3 A-7.

### 5. Street Design

No recommendations at this time.



Figure 9.19-2: Santa Margarita Ranch house with decorative landscape.

### 6. Parking

No recommendations at this time.

### 7. Pedestrian Circulation

No recommendations at this time.

### 8. Signage

Coordinate with appropriate site conservators and provide way-finding and identification signage for the Historical assets.

### 9. Lighting

No recommendations at this time.

### 10. Site Furniture

Coordinate with appropriate site conservators and develop a survey and analysis of the existing site furniture conditions as outlined Section 3.11 – Site Furniture.

### 11. Screens, Walls and Fences

No recommendations at this time.

### 12. Utilities

- a. Coordinate with appropriate site conservators and develop a survey and analysis of the existing above grade utilities and prepare a long-range plan to underground these facilities.
- b. Coordinate with appropriate site conservators and provide right-of-way easements for above grade utilities in streets.



Figure 9.19-3: Chapel.



- c. Place utilities underground per the Utility Details and Standards in Section 8.11. Minimize easements through development and open space.

## 9.20 El Camino Real Historical Marker (Bell)

### 9.20.1 Overview

Location: Site and plaque in Camp Pendleton, on Vandegrift Boulevard, 0.4 miles north of intersection of Stewart Mesa Road, 3 miles east of I-5.

On July 20, 1769 the Portola-Serra expedition arrived at the area now designated as Camp Pendleton. The historical marker is a bell attached to a shepherd's staff and is one of 450 in place along the 700-mile route between missions, marking the route of the El Camino Real (King's Highway), which connected the 21 California missions (Figure 9.20-1).

#### 1. Assets

- a. The site represents a unique chapter in California history that took place within the landscape of Camp Pendleton. An educational plaque is provided (Figure 9.20-2).
- b. The site is located on Vandegrift Boulevard, the major north/south access road leading from the Main Gate and Base residential area of Wire Mountain to the Air Station and is easily visible to passing cars (Figure 9.20-3).
- c. The streetscape is lined with mature palm planting, and adjacent grassy fields are used for helicopter training.
- d. The mission monument, bell, and plaque are all in good physical condition.
- e. The grassy site has no physical problems of soil erosion or invasive plant species.

#### 2. Liabilities

- a. There is no signage leading to the Mission Bell.
- b. Parking is not available to interested visitors.
- c. Vehicular turning movements, or speed changes are not suited to the constant speed and movement of Vandegrift Boulevard.
- d. The monument is visible, but is not highlighted by surrounding landscape treatment.



Figure 9.20-1: El Camino Real Bell on Vandegrift Boulevard.

- e. The site is adjacent to helicopter training air operations and does not invite a public interface.

### 9.20.2 Recommendations

The following is a summary of recommendations or improvements to the El Camino Real Historical Marker (Bell).

#### 1. Land Use

- a. To assist in the development of future projects or the reuse of existing facilities, refer to the Land Use Compatibility Matrix in Section 3.3-Land Use.
- b. For the appropriate location of future developments, refer to the sites selected in the Basewide Master Plan.

#### 2. Site Planning

For new developments refer to the guidelines established in Section 3.4 – Site Planning.

#### 3. Architecture

No recommendations at this time.

#### 4. Landscape

- a. For future development, prepare a survey and evaluation of the existing landscape conditions of the site as outlined in Section 3.6 – Landscaping.
- b. Use trees as the dominant landscape planting element in all developed areas.
- c. Introduce plant material with low water requirements.

- d. Inorganic mulch can be used as groundcover. Use only one color and size of inorganic mulch. See Detail 8.3 A-7.

### **5. Street Design**

The significance of the site does not justify changes to the street design at this time.

### **6. Parking**

The significance of the site does not justify introduction of a dedicated parking area at this time.

### **7. Pedestrian Circulation**

The significance of the site does not justify introduction of pedestrian path improvements at this time.

### **8. Signage**

Consider signage to raise awareness of the marker.

### **9. Lighting**

The significance of the site does not justify introduction of lighting at this time.

### **10. Site Furniture**

The significance of the site does not justify introduction of pedestrian site furniture at this time.

### **11. Screens, Walls and Fences**

No recommendations at this time.

### **12. Utilities**

- a. Develop a survey and analysis of the existing above grade utilities and prepare a long-range plan to underground these facilities.
- b. Provide right-of-way easements for above grade utilities in streets.
- c. Place utilities underground per the Utility Details and Standards in Section 8.11.
- d. Minimize utility easements through development or open space areas.

### **9.21 Chapter References**

The Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings (U.S. Department of the Interior, National Park Service, 1995).

The Secretary of the Interior's Standards Guidelines for Archeology and Historic Properties (U.S. Department of the Interior, National Park Service, 1992).

When questions arise, please contact the Public Works Department, Planning Division Administration or the AC/S Environmental Security Office Administration.



Figure 9.20-2: El Camino Real Bell plaque.



Figure 9.20-3: El Camino Real Bell on Vandegrift Boulevard.

# Chapter 10

## PROJECT EVALUATION CHECKLIST

### 10.1 Summary

The Project Evaluation Checklist serves as a summary for the planning, design objectives, and quality control for all development projects at Camp Pendleton. All future projects shall use the checklist to assure that building program requirements and important design issues are taken into consideration. Also, to determine conformance of development objectives, it is necessary to review the Base Master Plan.

### 10.2 Project Evaluation

The following evaluation checklist serves as a summary of planning and design objectives. Staff personnel (military, planning and civil engineering) are to use the checklist when formulating a program for a specific project. An A/E may use it as a reminder of important items to consider during the planning and design phases of a project. The Government may use the checklist to evaluate design work during its review and approval process.



Figure 10.1-1: BEQ under construction.

### 10.2 A. Project Evaluation Checklist

Uses	Comments	Yes/No
<b>Land Use</b> Reference Section 3.3	• Is the plan compatible with the existing development character and functions of the area?	
	• Is the plan compatible with natural site and environmental factors?	
	• Does the plan foster convenient, harmonious and workable relationships among the land uses?	
	• Does the plan ensure provisions of adequate open space?	
	• Does the plan (project) encourage wise use and sound management?	
	• Does the plan (project) promote a distinct "sense of place" and community or cantonment identity?	

Uses	Comments	Yes/No
<b>Site Planning</b> Reference Section 3.4	<ul style="list-style-type: none"> <li>• Has a site analysis been prepared?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the plan provide appropriate linkages to existing development?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Has the proposed project been sited near other similar uses?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the project meet the setback requirements?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Are the buildings oriented to maximize:</li> </ul>	
	<ul style="list-style-type: none"> <li>- Views?</li> </ul>	
	<ul style="list-style-type: none"> <li>- Solar access?</li> </ul>	
	<ul style="list-style-type: none"> <li>- Wind?</li> </ul>	
	<ul style="list-style-type: none"> <li>- Drainage?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the layout of the buildings follow the existing development patterns?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Will the site drain away from the building and toward the street or storm drain?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the project maximize use of existing parking, access, and pedestrian circulation and improve the efficiency of the area with the existing development?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the plan provide for barrier free access?</li> </ul>	
<ul style="list-style-type: none"> <li>• Does the plan take into consideration future expansion opportunities?</li> </ul>		
<b>Architecture</b> Reference Section 3.5	<ul style="list-style-type: none"> <li>• Does the architecture present a style and form that is simple, functional, and direct and that follows the BEAP Design Policy Letter?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is the mass and scale of the building consistent with adjacent projects?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the project contribute to greater unity between it and adjacent buildings?</li> </ul>	
	<ul style="list-style-type: none"> <li>• If there are multiple buildings are they arranged to provide courtyards or enclosed outdoor spaces?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Do the openings (windows and doors) present a uniform rhythm on the building face?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Are the windows recessed from the face of the wall?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is the roof pitch correct?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Are the building materials consistent with those outlined in the Appendix of this document?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is the roof color consistent with those outlined in the Appendix of this document?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Are the colors for the building's doors, windows and seamed metal roofs factory finished?</li> </ul>	
	<ul style="list-style-type: none"> <li>• If stairs are provided are they enclosed?</li> </ul>	

Uses	Comments	Yes/No
<b>Architecture (continued)</b> Reference Section 3.5	<ul style="list-style-type: none"> <li>• Are downspouts with subdrains to the street provided?</li> </ul>	
	<ul style="list-style-type: none"> <li>• If the project entails modifications to an existing building, does the design conform to the existing building in form style and materials?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is equipment screening provided for the ground mounted mechanical equipment?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Do the buildings include energy efficient items?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is the roof equipment properly screened?</li> </ul>	
<b>Landscape</b> Reference Section 3.6	<ul style="list-style-type: none"> <li>• Does the project maintain and preserve the existing landscape resources?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is landscaping provided as an integral element of the proposed project?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the planting design contribute to the functional, aesthetic and environmental qualities of the site? Adjacent sites?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the landscape concept provide a simple design palette? This consists of trees as the dominant landscape element and the use of low growing shrubs, groundcover or inorganic mulch.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is the proposed project site located adjacent to a major arterial or collector street that requires Base wide street tree planting?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the proposed project provide the required street trees?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is the parking area landscaped per the BEAP requirements?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the project transitional area use the proper plant material for this area?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Are proposed plants selected from the BEAP's Plant Matrix?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Will the plants selected maintain a natural form and not require extensive pruning or maintenance?</li> </ul>	
	<ul style="list-style-type: none"> <li>• When the selected plants grow to a mature size, will they be appropriate for the area where they are planted?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Will an automatic irrigation system be provided?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is the project designed for recycled water?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is the automatic controller placed in a convenient location?</li> </ul>	
<ul style="list-style-type: none"> <li>• Can the project share a controller with an adjacent project?</li> </ul>		

Uses	Comments	Yes/No
<p><b>Street Design</b> Reference Section 3.7</p>	<ul style="list-style-type: none"> <li>• Does the proposed improvement result in greater clarity to the circulation hierarchy?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the proposed project provide for the safety of motorists, bicyclists and pedestrians?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the project result in an improved streetscape appearance?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the project result in an improved intersection design?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Are concrete curbs and gutters provided for the street and parking areas?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the project meet the access requirements in Section 3.7C?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Are sidewalks provided?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Are signs and other visual or physical obstructions set back the proper distance from the street?</li> </ul>	
<p><b>Parking</b> Reference Section 3.8</p>	<ul style="list-style-type: none"> <li>• Is the efficiency of the proposed parking facility maximized?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Has an accurate parking demand analysis been prepared to determine the appropriate number of parking stalls?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is the parking facility access provided from a secondary street and not a minor arterial?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Are the parking stalls and aisles oriented to allow for direct pedestrian access to the building entry?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the parking area provide clear and safe circulation for motorists and pedestrians?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Does the plan incorporate the proper setbacks from street and buildings?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Are the stalls and aisles measurements according to the BEAP?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Are concrete curbs and gutters provided in the parking area?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is handicap parking provided per ADA standards?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is the parking area clearly defined from the circulation?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is additional parking required to help relieve overflow parking for adjacent or nearby facilities?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is temporary parking being proposed? For how long and will the site provide landscaping and other site furnishings?</li> <li>• Is landscaping and lighting provided per the BEAP standards?</li> </ul>	

Uses	Comments	Yes/No
<b>Parking (continued)</b> Reference Section 3.8	<ul style="list-style-type: none"> <li>• Have appropriate measures been taken to reduce the visual impact of the parking facility with mounding and landscaping?</li> </ul>	
<b>Pedestrian Circulation</b> Reference Section 3.9	<ul style="list-style-type: none"> <li>• Does the proposed project augment continuous and convenient pedestrian network to the surrounding facilities?</li> <li>• Are walks provided and are the walks safe and comfortable?</li> <li>• Are the walkways properly sized?</li> <li>• Are the walkways lighted?</li> <li>• Are new walks compatible in design, material, and location with adjacent walks?</li> <li>• Have pedestrian amenities been provided?</li> <li>• Are handicap ramps provided to allow access to the project?</li> </ul>	
<b>Signage</b> Reference Section 3.10	<ul style="list-style-type: none"> <li>• Do signs for the proposed project conform with the guidelines for design materials, color, and typography?</li> <li>• Are the signs properly located for visibility, safety, and appearance?</li> <li>• Are the proposed signs absolutely necessary?</li> <li>• Are there multiple signs in this location that could be grouped with the new sign(s)?</li> <li>• If temporary signs are being provided what is the "lifetime" of the sign?</li> </ul>	
<b>Lighting</b> Reference Section 3.11	<ul style="list-style-type: none"> <li>• Do the light standards (fixtures and poles) conform to the design guidelines?</li> <li>• Have proper illumination levels for pedestrians been provided for orientation, safety and security?</li> <li>• Have proper illumination levels for parking been provided for orientation, safety and security?</li> <li>• Are signs illuminated per the design guidelines?</li> <li>• Has proper building entry and exit lighting been provided?</li> </ul>	
<b>Site Furniture</b> Reference Section 3.12	<ul style="list-style-type: none"> <li>• Have site furnishings been provided as part of the proposed project?</li> <li>• Are the furnishings properly located and grouped for user comfort, convenience, safety and enjoyment?</li> <li>• Have adequate provisions for the handicapped been incorporated in the design of the site furnishing setting?</li> <li>• Do the furnishings incorporate the use of recycled material?</li> </ul>	

Uses	Comments	Yes/No
<b>Screens, Walls and Fences</b> Reference Section 3.13	<ul style="list-style-type: none"> <li>• Have unsightly areas and objects been screened from public view?</li> </ul>	
	<ul style="list-style-type: none"> <li>- Parking?</li> </ul>	
	<ul style="list-style-type: none"> <li>- Utilities?</li> </ul>	
	<ul style="list-style-type: none"> <li>- Mechanical equipment (Roof and Ground)?</li> </ul>	
	<ul style="list-style-type: none"> <li>- Trash enclosures?</li> </ul>	
	<ul style="list-style-type: none"> <li>- Storage areas ?</li> <li>• Do screen walls and fences conform to the design guidelines?</li> </ul>	
<b>Utilities</b> Reference Section 3.14	<ul style="list-style-type: none"> <li>• Have the utilities been located in a low visibility area?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Have the visual and functional impacts of existing utilities been minimized by screening?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Can the existing or the proposed utilities be undergrounded to minimize the visual impact to the project?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Is the proposed project connected to the existing storm drain?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Will patches to existing pavement be made with matching materials?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Will planting areas be disturbed by construction and be fully restored?</li> </ul>	
<b>Bus Shelters</b> Reference Section 3.15	<ul style="list-style-type: none"> <li>• Are bus stops located within the project boundary?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Do existing shelters need repair or replacement?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Do shelters meet ADA and AT/FP requirements?</li> </ul>	
<b>Trash Enclosures</b> Reference Section 3.16	<ul style="list-style-type: none"> <li>• Are dumpsters located within enclosures?</li> </ul>	
	<ul style="list-style-type: none"> <li>• Can enclosures accommodate three dumpsters? (2 solid waste, 1 recycle)</li> </ul>	
	<ul style="list-style-type: none"> <li>• Are enclosures located per AT/FP and Chapter 3 requirements?</li> </ul>	
<b>Above Ground Storage Tanks (AST)</b> Reference Section 3.17	<ul style="list-style-type: none"> <li>• Are AST's screened per Chapter 3 requirements?</li> </ul>	



# Chapter 11

## SUBMITTAL REQUIREMENTS

### 11.1 Summary

Prepare construction documents under the direction of a registered Architect or Engineer, licensed by the State of California. Wet sign, stamp and include the license expiration date on each sheet of the drawings.

The designer and/or contractor is required to review the design documents for technical accuracy and constructability. Government review is for functional adequacy only. Approval of the design documents by the Government does not relieve the designer/contractor of the responsibilities in providing a complete and accurate set of plans, specifications and design calculations for the project.

Provide written responses to all government design review comments in accordance with the NAVFAC SW Guide For Architectural Engineering (A/E) firms. Prepare drawing format and content according to the NAVFAC SW Guide For A/E firms. The Public Works Office will return incomplete construction documents submitted for plan review. Do not use adhesive transparencies (sticky backs) on plans submitted for final approval. Site development, parking, building accessibility and building interiors are to conform to the Americans with Disabilities Act (ADA) for accessibility requirements. Allow twenty-one days for Government review of design/construction submittals, from the date of the submittal reception.

All designs are to comply with National/Federal, State and local building codes including:

- International Building Code (IBC)
- United Facilities Criteria (UFC)
- International Mechanical Code (IMC)
- International Plumbing Code (IPC)
- National Fire Protection Association (NFPA)
- National Electric Code (NEC)
- Americans with Disabilities Act (ADA)
- Architectural Barriers Act (ABA)
- Specific Military Handbooks



Figure 11.1-1: Marine Corps Base - Camp Pendleton.

## 11.2 Submittal Matrix

Submittal Requirements Matrix	Concept Design Development Submittal		Construction Document Submittal		Special Notes
	No. of Sets	Set Size	No. of Sets	Set Size	
1. Site Analysis	10	8-1/2" x 11"			
2. Site Plan	10	8-1/2" x 11"	10	Full Size: 24" x 36" Half Size: 11" x 17"	Refer to Chapter 10 for a checklist of minimum information required.
3. Floor Plans	10	8-1/2" x 11"			
4. Rendered Elevations	10	8-1/2" x 11"			Keyed to Color Board
5. Materials Boards:	5	16" x 20"			Provide Title Block per Section 11.6 in the upper right corner of Board. Key to a colored rendering of the buildings' elevation.
5a. Building Color & Material Boards					
5b. Architectural Site Elements					
5c. Photographs of Plant Material					
6. Landscape Plans			10	1/2 size	
7. Architecture Plans			10	1/2 size	
8. Structural Plans			10	1/2 size	
9. Mechanical & Plumbing Plans			10	1/2 size	
10. Electrical Plans			10	1/2 size	
11. Fire Protection Plan			10	1/2 size	If required by code analysis.
12. Project Manual			1		Prepared according to the latest edition in one of the following formats: - Specsintact (Navy) - AIA - CSI
13. Project Cost Estimate			5		
14. Title 24 Energy			3		
15. Erosion Control Plan			10	1/2 size	
16. Geotechnical Report			3		Prepared by a California Licensed Civil Engineer.
17. Review Period for Submittals	30 days		30 days		Provide written response to the government design review per the NAVFAC SW A/E Guide.

When the work shown on the plans is installed, the Architect or Engineer of record is to provide Record Drawings (As-Built) in accordance with of the NAVFAC SW guide for A/E firms.

### 11.3 Signage Requirements

Submit five copies of a Comprehensive Sign Package to the Public Works Department for review and approval before sign fabrication and installation. The sign package is to include exterior and interior signage, graphic descriptions of size, shape, design, materials, colors, lettering, lighting, and installation methods. Include accurate locations proposed for all signage.

### 11.4 Facilities Management System (FMS)

Applicability: FMS interface is required for all building with one or more of the following items:

	Monitor	Control
Air Handling (All Types)	YES	YES
Radiant Heat Systems	YES	
Mech. Pumping System (HW, CW, CHW, etc.)	YES	YES
Boiler Systems	YES	YES
Exterior Lighting	YES	
Electrical Meters	1	YES
Gas Meters	1	YES
Solar Systems	YES	1
Security Systems (By Zone)	YES	1
Fire Alarm Systems (By Zone)	YES	
Fire Alarm Panels (By Zone)	YES	
Security Alarm Panels	YES	
Domestic Hot Water Systems	YES	
Sewage Pumping/Handling Systems	YES	YES
Potable Water Pumping/Handling Systems	YES	YES
Refrigeration Equipment	YES	
Training Tanks/Pools and Related Equipment	YES	YES
Weather Data for Building Control	YES	
Hazardous Alarms and Equipment Alarms of all types, including secondary containment monitoring, oily waste, etc.	YES	
Landscape Irrigation	YES	YES
Generators	YES	YES

Notes:

1. Depending on Application.
2. Contact the Facilities Management Department for technical questions, points of connections and trunk line locations.

## 11.5 Site Plan Preparation Guidelines

### 11.5 A. Site Survey of Improvements

Show all existing and proposed improvements including:

1. Proposed project limits or boundaries.
2. Names, widths and centerline of bordering streets and alleys.
3. Existing and proposed topography.
4. Existing and proposed curbs, access aprons, sidewalks and landscape.
5. All utilities and proposed routes or rerouting.
6. Identification of all existing and proposed buildings or structures, their uses, and number of stories.
7. Distances from the street to the nearest building or structure.
8. Distance from the centerline of the street to the proposed building.
9. Distance between buildings and structures to streets or project boundaries.
10. Heights and types of all fences and walls.
11. North arrow and drawing scale.
12. All easements or security setbacks.
13. Any existing survey hubs, pipes, or similar permanently installed survey monuments.

### 11.5 B. Traffic Circulation Study

Provide a study and impact to the proposed project on surrounding existing Base vehicle circulation and traffic.

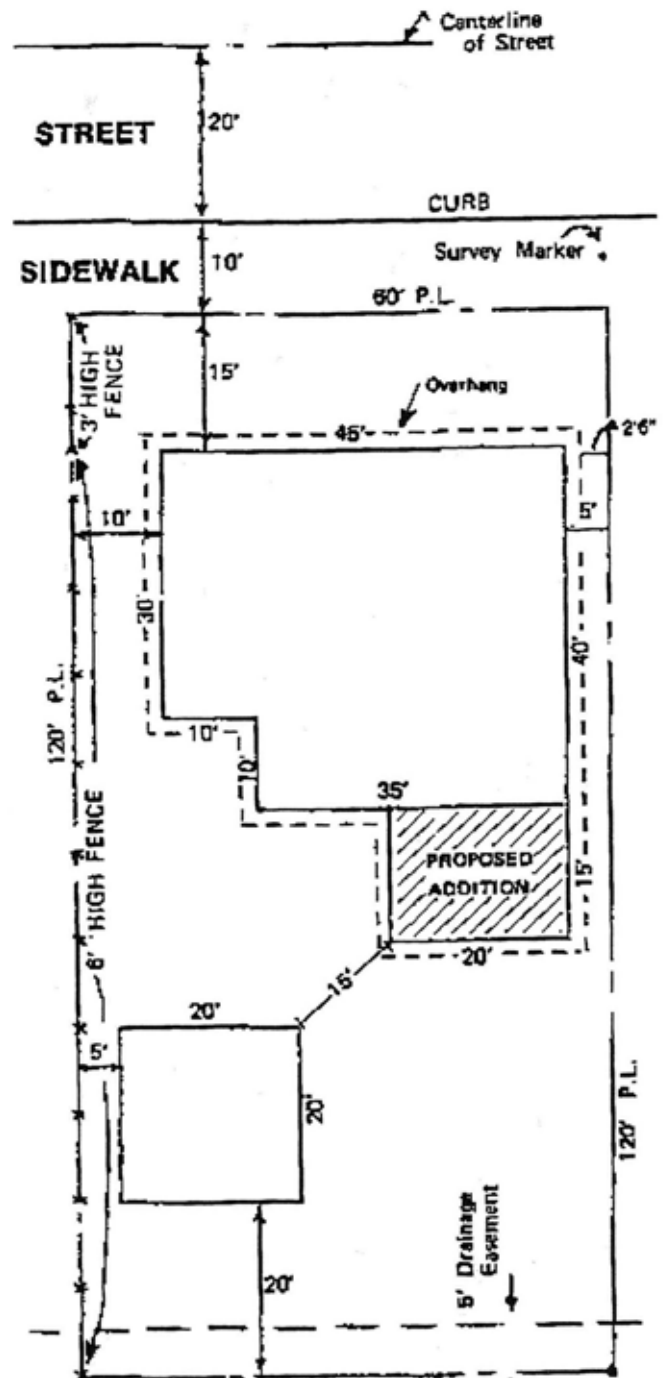


Figure 11.1-2: Typical Site Plan Layout

**11.6 Color Board Title Block**

Note: Place the Color Board Title Block in the upper right hand corner of 16" x 20" board. See Appendix B for example of layout.

DEPARTMENT OF THE NAVY		NAVAL FACILITIES ENGINEERING COMMAND	
<b>PUBLIC WORKS OFFICE</b>			
MARINE CORPS BASE		CAMP PENDLETON	
<b>BASE EXTERIOR ARCHITECTURE PLAN</b>			
EXTERIOR COLOR & MATERIAL STANDARDS			
REVISIONS			
APPR	DATE	PREP BY	Description

**11.7 Drawing I Sheet Title Block**

Note: Place the Drawing I Sheet Title Block in the lower right hand side of the drawing.

A/E FIRM		DEPARTMENT OF THE NAVY		NAVAL FACILITIES ENGINEERING COMMAND	
		<b>PUBLIC WORKS OFFICE</b>			
		MARINE CORPS BASE		CAMP PENDLETON	
ENGINEER IN CHARGE	DATE	SHEET TITLE			
DESIGN MANAGER		PROJECT TITLE AND LOCATION			
APPROVED		CAT CODE	SIZE	NAVFAC DWG NO	
_____ PUBLIC WORKS OFFICER                      DATE					
SATISFACTORY TO		SCALE	CONTRACT NO		SHEET NO
_____ TITLE    DATE					of



# ***Appendix A***

## ***COLOR BOARD / BUILDING MATERIALS - BASEWIDE & REHABILITATION***

## Appendix A

### Color Board / Building Materials - Basewide & Rehabilitation

BASEWIDE COLOR STANDARDS - NEW AND EXISTING	
ARCHITECTURAL ELEMENTS	MATERIAL DESCRIPTION
Exterior Walls	<p>Concrete Block-Precision/Split Face</p> <ul style="list-style-type: none"> <li>- ORCO-Gray</li> <li>RCP-Natural</li> <li>ANGELUS-Warm Gray</li> <li>- ORCO-Cool Gray</li> <li>RCP-Castle Gray</li> <li>ANGELUS-Cool Gray</li> <li>- ORCO-Sourdough</li> <li>RCP-La Paz</li> <li>ANGELUS-Champagne</li> </ul> <p>Concrete Block Accent Colors-Precision/Split Face</p> <ul style="list-style-type: none"> <li>- ORCO-Red Brown</li> <li>RCP- Chestnut</li> <li>ANGELUS-Sienna Brown</li> <li>- ORCO-Black 250</li> <li>RCP-Charcoal</li> <li>ANGELUS-Slate</li> <li>- ORCO-Wheat</li> <li>RCP-Pueblo</li> <li>ANGELUS-Shoreline</li> </ul>
Exterior Finishes for Existing Buildings	Concrete plaster building wall-PANTONE 7528, PANTONE 7536
Roofing	Galvanized metal standing seam roofing with a factory applied Fluor Polymer Coating System resin finish: Color - PANTONE 188
Exterior Doors and Door Frames Window Frames Metal Accent/Trim	<p>All windows and doors-aluminum with a factory applied Fluor Polymer Coating System resin finish of:</p> <ul style="list-style-type: none"> <li>- PANTONE 405</li> <li>- PANTONE 188</li> <li>- PANTONE 7 BLACK 7C</li> </ul>
Galvanized Downspouts	Color to match dominant color of building
Gutters and Flashings	Color - PANTONE 188
Handrails and Guardrails	Hot dip galvanized steel
Door Hardware	#304 Stainless Steel, #4 Finish
Site Wall Cap	Saddleback or Peaked



**Color Board Notes:**

1. Refer to BEAP - Chapter 3 for additional guidance on the correct application of these standards.
2. The use of scored concrete masonry units (CMU) is acceptable. Use of 4" high block is acceptable.
3. To promote a creative exterior appearance, the final articulation of approved CMU colors & textures is at the discretion of the designer of record; except that one course of precision CMU shall be used adjacent to all finished grades, hardscape, and where "through the wall" penetrations, louvers, and vents occur.
4. CMU mix: Approximate percentages should be as follows: 40% split face and 60% precision block. This is graphically shown in Chapter 3.5a "Exterior Walls" of the BEAP.
5. Use factory applied Fluor Polymer Coating System for all exterior metal & aluminum finishes.
6. Minimize the use of field painted colors & finishes.
7. Guard rails shall be designed for minimal maintenance; use hot-dipped galvanized steel at hand and guardrails.
8. Use finish colors #1 and #2 for exteriors on existing buildings.
9. Downspouts shall match dominant building background color.
10. All deviations from the BEAP shall be reviewed and approved by the Camp Pendleton Public Works Officer during the Concept Development Phase (See BEAP Appendix G for application for exceptions form).



# ***Appendix B***

## ***COLOR BOARD LAYOUT***

# Appendix B

## Colorboard Layout

DEPARTMENT OF THE NAVY  
MARINE CORPS BASE

NAVAL FACILITIES ENGINEERING COMMAND  
PUBLIC WORKS OFFICE  
CAMP PENDLETON

### BASE EXTERIOR ARCHITECTURE PLAN

18 1/2"

### CMU - COLORS & TEXTURES

(All color samples shown are available in both Precision and Splitface)



PRECISION

① ORCO - Gray  
RCP - Natural  
ANGELUS - Warm Gray



PRECISION

② ORCO - Gray (Cool Gray)  
RCP - Castle Gray  
ANGELUS - Cool Gray



PRECISION

③ ORCO - Sourdough  
RCP - La Paz  
ANGELUS - Champagne



SPLITFACE

④ ORCO - Red Brown  
RCP - Chestnut  
ANGELUS - Sienna Brown



SPLITFACE

⑤ ORCO - Black 250  
RCP - Charcoal  
ANGELUS - Slate  
(Used as accent, up to 5%)



SPLITFACE

⑥ ORCO - Wheat  
RCP - Pueblo  
ANGELUS - Shoreline

EXTERIOR COLOR & MATERIAL STANDARDS	
REVISIONS	
APPR	DATE
PREP	BY
Description (DATE & SIGN BLOCK)	
<p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>Refer to BEAP - Chapter 3 for additional guidance on the correct application of these standards.</li> <li>The use of scored concrete masonry units (CMU) is acceptable. Use of 4" high block is acceptable.</li> <li>To promote a creative exterior appearance, the final articulation of masonry units shall be at the discretion of the designer of record; except that one course of precision CMU shall be used adjacent to all finished grades, hardscapes, and where "through the wall" conditions exist.</li> <li>CMU mix: Approximate percentages should be as follows: 40% soft face and 60% precision block. This is graphically shown in Chapter 3.5a "Exterior Walls" of the BEAP.</li> <li>Use factory applied Fluor Polymer Coating System for all exterior metal &amp; aluminum finishes.</li> <li>Minimize the use of field painted colors &amp; finishes.</li> <li>Guard rails shall be designed for minimal maintenance; use hot-dipped galvanized steel at hand and guardrails.</li> <li>Use finish colors #1 and #2 for exterior on existing buildings.</li> <li>Downspouts shall match dominant building background color.</li> <li>All deviations from the BEAP shall be reviewed and approved by the Camp Pendleton Public Works Office during the Concept Development Phase (See BEAP Appendix C for application for exceptions).</li> </ol>	

### FINISH COLORS

EXISTING BUILDING WALLS



① PANTONE 7528



② PANTONE 7536

NEW OR EXISTING METAL COMPONENTS



③ PANTONE 188  
Metal Roof  
Doors/Frames  
Window Frames



④ PANTONE 405  
Doors/Frames  
Window Frames



⑤ PANTONE 7  
Black 7C  
Doors/Frames  
Window Frames

### DOOR HARDWARE / SITE WALL CAP



DOOR HARDWARE  
FINISH  
#304 St. Steel  
#4 Finish



PRECAST WALL CAP  
Style:  
Saddleback/Peaked  
Natural Gray

16"

22"

# ***Appendix C***

## ***GLOSSARY OF TERMS***

## Appendix C

### Glossary of Terms

A/E	Architect/Engineer
AC/S	Assistant Chief of Staff
ADA	Americans with Disabilities Act
BEAP	Base Exterior Architecture Plan
BEQ	Bachelor Enlisted Quarters
BOQ	Bachelor Officer Quarters
CG	Commanding General
CHW	Chilled Water
CW	Cold Water
DPL	Design Policy Letter
EIFS	Exterior Insulation and Finish System
FMD	Facilities Maintenance Department
FMO	Facilities Maintenance Officer
FMS	Facilities Management System
FSC	Federal Standard Colors
FY	Funding Year
Haz-Mat	Hazardous Material
HQ	Headquarters
HW	Hot Water
IBC	International Building Code
LADD	Low Altitude Air Defense
LCAC	Landing Craft Air Cushion
M1/R1	Within Base Command General Funding Authority
M2/R2	Headquarter Marine Corps Funding Authority
MACS	Marine Air Control Squadron
MASS	Marine Air Support Squadron
MCAS	Marine Corps Air Station
MCB	Marine Corps Base

MCC	Military Communications Center
MCCS	Marine Corps Community Services
MCI	Military Communications Incorporated
MCRD	Marine Corps Recruit Depot
MCTB	Marine Corps Training Battalion
MCTSSA	Marine Corps Tactical Systems Support Activity
MILCON	Military Construction
MIL-HDBK	Military Handbook
NAF	Non Appropriated Funds
NAVFAC	Naval Facilities Command
NEC	National Electric Code
NFPA	National Fire Protection Association
POV	Privately Owned Vehicles
PVC	Polyvinyl Chloride (pipe)
PWD	Public Works Department
RCUZ	Range Compatible Use Zone
RDT&E	Research, Development, Testing and Evaluation
R.O.W.	Right-of-way
RV	Recreational Vehicle
SF	Square Feet
SWDIV	Southwest Division
UFC	Unified Facilities Criteria
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
USNH	United States Naval Hospital
WFTBN	Weapons and Field Training Battalion





# ***Appendix D***

## ***REFERENCES***

## Appendix D

### References

- UNIFIED FACILITIES CRITERIA (UFC) SECURITY ENGINEERING: ENTRY CONTROL FACILITIES / ACCESS CONTROL POINTS. 25 May 2005.
- UFC 3-400-01 ENERGY CONSERVATION. Including Change 4, August 2008.
- UFC 3-201-02 LANDSCAPE ARCHITECTURE. Including Change 1, Nov 2009.
- UFC 4-010-01 DoD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS. Including Change 1, 22 January 2007.
- UFC 4-010-02 DoD MINIMUM ANTITERRORISM STANDOFF DISTANCES FOR BUILDINGS. Including Change 1, January 2007.
- UFC 3-210-10 UNIFIED FACILITIES CRITERIA (UFC) LOW IMPACT DEVELOPMENT 25 October 2004.
- UFC 3-600-01 FIRE PROTECTION. Including Change 1, 14 July 2009.
- Landscape Water Conservation Design Manual, Department of Planning and Land Use
- Handbook for Preparing, Revising and Implementing Integrated Natural Resources Management Plans on Marine Corps Installations
- May 2004, Headquarters US Marine Corps, Facilities and Services Division, Land Use and Military Construction Branch, Natural Resources Section
- Secretary of the Interiors Standards for the Treatment of Historic Properties, with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, National Park Service
- The National Trust for Historic Preservation
- Low Impact Development Design Strategies, An Integrated Design Approach
- Low Impact Development Conference 2007: Proceedings of the National Low Impact Development Conference, March 12-14, 2007, Wilmington, North Carolina by National Low Impact Development Conference and Michael Clar
- LEED Reference Guide for Green Building Design and Construction by U.S. Green Building Council (USGBC)
- Historic preservation planning on military bases: An example from Fort Polk, Louisiana, by David G. Anderson, 1989
- Historic Preservation: An Introduction to Its History, Principles, and Practice (Second Edition) by Ted J. Ligibel, Ilene R. Tyler, and Norman Tyler, 2009
- Camp Pendleton (CA) (Images of America) by Thomas O'Hara, 2005
- OFFICE OF HISTORIC PRESERVATION, California State Parks, California Historical Resources
- National Historic Landmarks Program, Las Flores Adobe
- Establishing Baseline and Meeting Water Conservation Goals of Executive Order 13423 January 2008

# ***Appendix E***

## ***DESIGN POLICY LETTER***

## Appendix E

### Design Policy Letter

**DESIGN POLICY LETTER DPL-OO-0001**

**4 January 1988**

From: Commander, Naval Facilities Engineering Command

Subj: ARCHITECTURAL DESIGN POLICY GUIDANCE (Design Policy Letter DPL-OO-0001 )

Encl : (I) Appropriate Architecture for Naval Facilities

1. Purpose. To provide a clear concise statement regarding an overall architectural design policy for the Naval Facilities Engineering Command.
2. Background. NAVFACENGCOM has in the past few years produced some new Navy facilities of questionable architectural design. Recent stylish trends in architectural design and misinterpretation of Base Exterior Architectural Plans have contributed to the problem. The problem is not widespread, nor is it an indication of any basic deficiency on the part of the NAVFACENGCOM management or design professionals. In the future, we must assure the architectural character of the shore facilities will not only be responsive, responsible, and defensible, but will appear logical and conservative as well.
3. Action. Engineering Field Divisions shall take action to assure that the design of Navy facilities results in a pleasant shore environment demonstrating respect for and blending of four elements: (a) image (the Navy's character), (b) function, (c) environment, and (d) economy. One of these elements must not dominate at the expense of the others, but rather, place proper weight and emphasis on each element. Each engineer/architect-in-charge and each project manager should ensure that the policy contained in enclosure (I) is diligently applied to every Navy facility design.

**B. F. MONTOYA**

Rear Admiral, CEC, U. S. Navy

Distribution:

COMLANTNAVFACENGCOM  
COMPACNAVFACENGCOM  
COMWESTNAVFACENGCOM  
CO NORTHNAVFACENGCOM  
CO SOUTHNAVFACENGCOM  
CO CHESNAVFACENGCOM  
OICC TRIDENT  
CO PWC GREAT LAKES  
CO PWC NORFOLK  
CO PWC PEARL HARBOR  
O PWC PENSACOLA  
CO PWC SAN DIEGO  
CO PWC OAKLAND  
CO PWC GUAM  
CO PWC SUBIC BAY  
O PWC YOKOSUKA

(ENCLOSURE)

### **APPROPRIATE ARCHITECTURE FOR NAVAL FACILITIES**

Appropriate architecture for naval facilities should result from the successful blending of four elements: (1) respect of image (Navy characteristics), (2) respect of function, (3) respect of environment, and (4) respect of economy. Appropriate architecture does not let one of these elements dominate at the expense of the others, but places proper weight and emphasis on each element.

Appropriate architecture for naval facilities should be reflective and supportive of characteristics of the Navy's image. The Navy's image is timeless, it is dignified and serious, it is honest and rational, it is respectful, and it is a subservient part of the whole.

Appropriate architecture for naval facilities should be timeless. Transient architectural styles such as "Post-Modernism" (facadism) or "High-Tech" (strong expression of the mechanical ductwork) should be avoided. These styles are short-lived and become obsolete and dated quickly. Naval bases should not ride the roller coaster of quickly changing and short-lived architectural styles. Naval bases should not become architectural junkyards.

Appropriate architecture for naval facilities should be dignified and serious. Arbitrary, capricious, and frivolous architecture is not appropriate for the Navy. The use of multiple materials and forms just for the sake of decoration or style is not appropriate. Architecture for the Navy should be simple and straight-forward, using compatible cost effective materials.

Appropriate architecture for naval facilities should be honest and rational. Architecture for the Navy should clearly represent the function it serves. Forms other than rectangular boxes are appropriate when those forms are honestly required for functional and/or economic reasons. The envelope of a building should not disguise the function of the building but should help to explain the function.

Appropriate architecture for naval facilities should be respectful. Architecture for the Navy should relate to its surroundings in terms, color, materials, detailing, and generic form(s). It should enhance the overall architecture of a base by honoring and preserving significant architectural, historical, local themes which bring consistency to a Naval base.

Appropriate architecture for naval facilities should be subservient to the whole. No single building on a Naval base should dominate architecturally, but each building should become an integral part of the whole base. No building should figuratively shout, "Look at Me." In most cases a definitive statement is not what is called for in integrating new facilities into a large complex of buildings constructed over many years.

Appropriate architecture for naval facilities must be economical and cost effective and should also appear to be economical and cost effective. Arbitrary and unexplainable uses of forms and materials may, in fact, not be costly, but there is a general perception that they are costly.

This is not to say more durable materials should never be used, but when they are they should be used for purposes of cost effectiveness, not decoration.

In summary, appropriate architecture for naval facilities respects and projects the image of the Navy, honestly reflects the function of the facility, respects and enhances its immediate environment, and achieves its mission in a cost-effective manner.



# ***Appendix F***

## ***USER SUGGESTION AND COMMENT FORM***

## **Appendix F**

### **User Suggestion and Comment Form**



**The Public Works Department at Marine Corps Base Camp Pendleton welcomes your feedback on this Base Exterior Architecture Plan. Your comments will help improve the quality of this document for future users.**

**Please describe your suggestions, errors or other comments below. In some cases, it may be helpful to send a copy of the page(s) marked with your comments.**

Your Name: \_\_\_\_\_

Unit: \_\_\_\_\_

Date: \_\_\_\_\_

What features do you find most useful?

What errors have you found? Please include page number.

What topics are hard to locate, confusing, or not covered completely?

What comments or suggestions do you have to improve this document?

FOLD

---

Place  
Stamp  
Here

Assistant Chief of Staff Facilities  
Attn: Public Works Office /Director of Architecture & Engineering Division  
Box 555013  
Camp Pendleton, California 92055-5013

FOLD

---

# ***Appendix G***

## ***EXCEPTIONS REQUEST FORM***





