



SWCA[®]

ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.[®]

DRAFT | JUNE 2013

**LOPERENA MINOR USE PERMIT / COASTAL DEVELOPMENT PERMIT
DRC 2005-00216**

ENVIRONMENTAL IMPACT REPORT

SCH #2007081044

Prepared for:

**COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING AND BUILDING**

976 Osos Street, Room 200
San Luis Obispo, CA 93408

Prepared by:

SWCA ENVIRONMENTAL CONSULTANTS

1422 Monterey Street, Suite C200
San Luis Obispo, CA 93401

Loperena Minor Use Permit / Coastal Development Permit

DRC 2005-00216

Draft
Environmental Impact Report
SCH No. 2007081044

Prepared for:

County of San Luis Obispo
Department of Planning and Building
976 Osos Street, Room 200
San Luis Obispo, CA 93408-2040
Contact: Ryan Hostetter, Project Manager
(805) 788-2351

Prepared by:

SWCA Environmental Consultants
1422 Monterey Street, Suite C200
San Luis Obispo, California 93401
Contact: Shawna Scott, Project Manager
(805) 543-7095

June 2013

This page intentionally left blank.

TABLE OF CONTENTS

Executive Summary	ES-1
A. Purpose of the EIR.....	ES-1
B. Project Location	ES-1
C. Project Background.....	ES-1
D. Project Objectives	ES-4
E. Proposed Project.....	ES-4
F. Scoping and Notice of Preparation Process	ES-15
G. Significant Environmental Impacts Identified.....	ES-15
H. Project Alternatives	ES-16
1. No Project Alternative	ES-17
2. Design Alternative A – Reduced Project, Pilings	ES-17
3. Design Alternative B – Reduced Project, Traditional Design	ES-18
4. Design Alternative C – Vegetation and Articulation.....	ES-18
I. Environmentally Superior Alternative.....	ES-18
CHAPTER 1 Introduction	1-1
1.1 Purpose of the EIR	1-1
1.2 Scoping and Notice of Preparation Process.....	1-1
1.3 EIR Contents	1-1
1.4 Project Sponsors	1-3
1.5 Review of the Draft EIR.....	1-3
1.6 Commonly Used Acronyms	1-4
CHAPTER 2 Project Description	2-1
2.1 General Background.....	2-1
2.1.1 Project Location	2-1
2.1.2 Project Background.....	2-1
2.2 Project Objectives.....	2-1
2.3 Proposed Project	2-4
2.3.1 Design.....	2-5
2.3.2 Grading Estimates	2-5
2.3.3 Drainage Plan	2-5
2.3.4 Services and Utilities.....	2-5
CHAPTER 3 Environmental Setting	3-1
3.1 Existing Conditions	3-1
3.1.1 Physical Setting	3-1
3.2 Plans and Policies	3-4
3.2.1 Overview	3-4
3.2.2 State Plans and Policies	3-4
3.2.3 County of San Luis Obispo Plans and Policies	3-5
3.3 Cumulative Analysis	3-37
3.3.1 CEQA Requirements	3-37
3.3.2 Cumulative Development Scenario	3-37

CHAPTER 4 Environmental Impacts Analysis	4-1
4.1 Aesthetic Resources	4.1-1
4.1.1 Existing Conditions	4.1-1
4.1.2 Regulatory Setting	4.1-6
4.1.3 Thresholds of Significance	4.1-7
4.1.4 Impact Assessment and Methodology	4.1-9
4.1.5 Project-specific Impacts and Mitigation Measures	4.1-13
4.1.6 Cumulative Impacts	4.1-17
4.2 Cultural Resources.....	4.2-1
4.2.1 Existing Conditions	4.2-1
4.2.2 Regulatory Setting	4.2-2
4.2.3 Thresholds of Significance	4.2-4
4.2.4 Impact Assessment and Methodology	4.2-5
4.2.5 Project-specific Impacts and Mitigation Measures	4.2-5
4.2.6 Cumulative Impacts	4.2-6
4.3 Geology and Soils	4.3-1
4.3.1 Existing Conditions	4.3-2
4.3.2 Regulatory Setting	4.3-23
4.3.3 Thresholds of Significance	4.3-26
4.3.4 Impact Assessment and Methodology	4.3-26
4.3.5 Project-specific Impacts and Mitigation Measures	4.3-26
4.3.6 Cumulative Impacts	4.3-36
4.4 Issue Areas with Less than Significant Impacts.....	4.4-1
4.4.1 Agricultural Resources	4.4-1
4.4.2 Air Quality and Climate Change	4.4-3
4.4.3 Biological Resources	4.4-16
4.4.4 Hazards and Hazardous Materials	4.4-24
4.4.5 Noise.....	4.4-30
4.4.6 Population and Housing	4.4-33
4.4.7 Public Services and Utilities	4.4-35
4.4.8 Recreation	4.4-40
4.4.9 Transportation and Circulation	4.4-42
4.4.10 Water	4.4-45
4.4.11 Land Use	4.4-50
CHAPTER 5 Alternatives Analysis	5-1
5.1 Introduction.....	5-1
5.2 Project Alternatives	5-1
5.2.1 Significant Impacts Resulting from the Proposed Project	5-1
5.3 Alternatives Analysis	5-2
5.4 Alternatives Impacts Analysis	5-2
5.4.1 No Project Alternative	5-3
5.4.2 Design Alternative A – Reduced Project, Pilings	5-3
5.4.3 Design Alternative B – Reduced Project, Traditional Design	5-5
5.4.4 Design Alternative C – Vegetation and Articulation	5-6
5.5 Environmentally Superior Alternative	5-8
CHAPTER 6 Other CEQA Considerations	6-1
6.1 Growth Inducing Impacts	6-1
6.2 Significant Irreversible Environmental Changes	6-1

6.2.1 Irreversible Commitment of Resources 6-1

CHAPTER 7 Mitigation Monitoring and Reporting Program 7-1

7.1 Statutory Requirement..... 7-1

7.2 Administration of the Mitigation Monitoring and Reporting Program..... 7-1

7.3 Mitigation Measures and Monitoring Program..... 7-1

CHAPTER 8 References and Report Preparation 8-1

8.1 References 8-1

 8.1.1 Aesthetic Resources 8-1

 8.1.2 Cultural Resources 8-1

 8.1.3 Geology and Soils..... 8-1

 8.1.4 Issue Areas with Less than Significant Impacts 8-3

8.2 List of Preparers 8-8

LIST OF TABLES

Table ES-1. Environmental Impacts Summary Table	ES-20
Table 1-1. Commonly Used Acronyms	1-8
Table 3-1. Consistency with Plans and Policies	3-8
Table 4.3-1. Seismic Deterministic Analysis Results for the Project Site	4.3-6
Table 4.3-2. Tidal Datum Elevations.....	4.3-21
Table 4.4-1. Ambient Air Quality Standards.....	4.4-3
Table 4.4-2. SLOAPCD Thresholds of Significance for Operational Emissions.....	4.4-11
Table 4.4-3. Thresholds of Significance for Construction Operations	4.4-12
Table 4.4-4. Surrounding Land Use Categories/Uses	4.4-51
Table 7-1. Mitigation Monitoring and Reporting Program	7-2

LIST OF FIGURES

Figure ES-1. Project Vicinity Map..... ES-2

Figure ES-2. Project Location Map ES-3

Figure ES-3. Project Site Plan..... ES-6

Figure ES-4a. Project Floor Plans ES-7

Figure ES-4b. Project Floor Plans ES-8

Figure ES-4c. Project Floor Plans ES-9

Figure ES-4d. Project Floor Plans ES-10

Figure ES-5. Project Elevations ES-11

Figure ES-6. Sections..... ES-12

Figure ES-7a. Shoring Detail..... ES-13

Figure ES-7b. Shoring Detail..... ES-14

Figure 2-1. Project Vicinity Map 2-2

Figure 2-2. Project Location Map 2-3

Figure 2-3. Project Site Plan..... 2-6

Figure 2-4a. Project Floor Plans 2-7

Figure 2-4b. Project Floor Plans 2-8

Figure 2-4c. Project Floor Plans 2-9

Figure 2-4d. Project Floor Plans 2-10

Figure 2-5. Project Elevations 2-11

Figure 2-6. Sections 2-12

Figure 2-7a. Shoring Detail..... 2-13

Figure 2-7b. Shoring Detail..... 2-14

Figure 3-1. Site Map 3-2

Figure 3-2. Land Use Designations 3-3

Figure 4.1-1. Approaching Cayucos from the South on Highway 1 4.1-1

Figure 4.1-2. Studio Drive Neighborhood Adjacent to the Project 4.1-2

Figure 4.1-3. Studio Drive Neighborhood South of the Project 4.1-3

Figure 4.1-4. Bluff-top Homes along Studio Drive South of the Project 4.1-3

Figure 4.1-5. Pacific Avenue Neighborhood North of the Project 4.1-4

Figure 4.1-6. Neighborhood East of the Project across Highway 1 4.1-4

Figure 4.1-7. Project Site as seen from the Beach 4.1-5

Figure 4.1-8. Key Viewing Area (KVA) Location Map 4.1-10

Figure 4.1-9. Project Site as seen from Southbound Highway 1 North of Studio Drive..... 4.1-11

Figure 4.1-10. Project Site as seen from the Parking Area near Pacific Avenue..... 4.1-13

Figure 4.1-11. Key Viewing Area 1 – Studio Drive Looking South..... 4.1-18

Figure 4.1-12. Key Viewing Area 2 – Highway 1 Looking Southbound 4.1-19

Figure 4.1-13. Key Viewing Area 3 – Highway 1 Looking Northbound 4.1-20

Figure 4.1-14. Key Viewing Area 4 – Morro Strand State Beach Looking Northeast 4.1-21

Figure 4.1-15. Key Viewing Area 5 – Morro Strand State Beach Looking Southeast..... 4.1-22

Figure 4.1-16. Key Viewing Area 6 – Obispo Avenue East of Highway 1 Looking West 4.1-23

Figure 4.3-1. Regional Geologic Hazard Map..... 4.3-4

Figure 4.3-2. Regional Fault Location Map..... 4.3-7

Figure 4.3-3. Engineering Geologic Map 4.3-10

Figure 4.3-4. Engineering Geologic Cross Section 1-1'..... 4.3-11

Figure 4.3-5. Engineering Geologic Cross Section 2-2'..... 4.3-13

Figure 4.3-6. 1937 Aerial Photo Features..... 4.3-18

Figure 4.3 7. Bluff Edge Delineation 4.3-19

LIST OF APPENDICES

- Appendix A: Notice of Preparation
- Notice of Preparation for the Draft Environmental Impact Report
 - Notice of Preparation Comment Letters
- Appendix B: Biological Resources Background Information
- Special Status Species Table
- Appendix C: Geology and Soils Background Information
- Technical Report: Geotechnical and Coastal Hazards Review; Cotton, Shires and Associates, Inc., May 31, 2011
 - Supplemental Geotechnical Peer Review for Environmental Impact Report Preparation; Cotton, Shires and Associates, Inc., August 21, 2012
 - Second Supplemental Geotechnical Peer Review for Environmental Impact Report Preparation; Cotton, Shires and Associates, Inc., October 31, 2012
 - Additional Geotechnical and Coastal Engineering Review and Response to Technical Comments; Cotton, Shires and Associates, Inc., May 17, 2013
 - Updates to Engineering Geology Reports; Cleath-Harris Geologists, Inc., June 25, 2012
 - Update #2 to Engineering Geology Reports; Cleath-Harris Geologists, Inc., September 19, 2012
 - Responses to Supplemental Geotechnical Peer Review for EIR Preparation, 8/21/12; Shoreline Engineering, September 20, 2012
 - Shoring Detail (SL-1); Shoreline Engineering, January 2012
 - Shoring Detail (SL-2); Shoreline Engineering, January 2012
 - Engineering Evaluation; Shoreline Engineering, January 2012
 - Updated Geotechnical Investigation; GSI Soils, Inc., December 27, 2011
 - Response to Supplemental Geotechnical Peer Review; GSI Soils, Inc., October 1, 2012

This page intentionally left blank.

EXECUTIVE SUMMARY

A. PURPOSE OF THE EIR

The applicant, Mr. Jack Loperena (landowner) and architect, Mr. James Maul, request a Minor Use Permit / Coastal Development Permit (MUP/CDP) to allow for the construction of a single-family residence. The purpose of this Environmental Impact Report (EIR) is to identify the potential significant impacts of the proposed project on the environment, indicate the manner in which such significant impacts will be mitigated or avoided, and identify alternatives to the proposed project that avoid or reduce these impacts. The EIR is intended to serve as an informational document for use by the County of San Luis Obispo (County), the California Environmental Quality Act (CEQA) lead agency; the other responsible agencies; and the general public in their consideration and evaluation of the environmental consequences associated with the implementation of the proposed project. The EIR addresses potentially significant impacts to Aesthetics, Air Quality, Biological Resources, Noise, and Water. Significant impacts identified and the measures recommended to avoid them are shown in Table ES-1. No significant, unavoidable, adverse impacts were identified.

B. PROJECT LOCATION

The project site is located in the unincorporated community of Cayucos, within San Luis Obispo County, California (refer to Figure ES-1). The project site is located adjacent to State of California Department of Parks and Recreation (State Parks) property on the northern end of Studio Drive, approximately 250 feet south of the intersection of Studio Drive and Highway 1 (refer to Figure ES-2). The project site consists of a single 3,445-square-foot parcel (Assessor Parcel Number 064-253-007).

C. PROJECT BACKGROUND

The applicant submitted an application for a MUP/CDP in May of 2006. At the time, the environmental document prepared and issued by the County was a Mitigated Negative Declaration (MND) (August 9, 2007). A Planning Department Hearing was scheduled for August 17, 2007, to consider the proposed project and MND. At the hearing, staff requested a continuance until September 21, 2007 because the MND had been re-issued and re-noticed, and required a 30-day public review period. On August 23, 2007, County staff received a Request for Review of the MND, and requested that the project be continued off calendar to address issues raised in the Request for Review. Based on the comments included in the Request for Review, County staff consulted with County experts in geology, cultural resources, emergency services, air quality, and public works and drainage. Information and data obtained from County experts were incorporated into an amended MND, which was re-circulated for public review (April 2, 2009). A Planning Department Hearing was scheduled for May 15, 2009. A Request for Review of the amended MND was received by County staff on April 16, 2009, and County staff requested that the project be continued off calendar a second time.

Based on the issues raised in the April 2009 Request for Review, the County Environmental Coordinator determined that a fair argument was raised regarding the significance of potential environmental impacts. Upon consideration of these issues, the applicant proposed that an EIR be prepared for the proposed project.

Figure ES-2. Project Location Map



D. PROJECT OBJECTIVES

The objectives of the project are to:

- Develop a single-family residence on Studio Drive, within an existing, developed, single-family residential neighborhood;
- Allow development consistent with the County General Plan and Local Coastal Program; and,
- Provide coastal access

In addition, the applicant provided the following project objectives:

- Reduce visual impacts by design;
- Avoid development on the sandy beach and minimize site grading and disruption of the natural contours; and,
- Incorporate green building considerations into the design, and maximize exposure for solar panels.

E. PROPOSED PROJECT

The applicant proposes to grade for and construct a 3,097-square foot residence, including approximately: 1) 1,097 square feet of living space; 2) 1,040-square foot basement; 3) 338-square foot mezzanine; 4) 242-square foot garage and 200-square foot carport; and, 5) 180-square foot covered deck (refer to Figures ES-3 through ES-7b). The residence would consist of one main floor and a basement. The footprint of the house would be 1,040 square feet. The maximum width of the structure would be 19 feet, and the maximum length would be 95 feet. An approximately 200-square foot paved driveway would provide access from Studio Drive. The maximum height of the residence would be 15 feet above the centerline elevation of Studio Drive. The basement would be located below the elevation of Studio Drive. The applicant proposes a cantilevered design, which would be elevated above the sandy beach. This portion would include approximately 325 square feet of living space and a 180-square foot covered deck.

The overall design of the residence would be modern style. Proposed exterior colors would include tans, browns, dark purple, and grays. Proposed materials would consist of glass panels, concrete, and cedar siding in sections. The applicant proposes a 6.5-foot-tall wall that incorporates a design or pattern, such as concrete with a patterned in-lay design, stucco with a patterned design or a stone veneer. The retaining wall would be constructed along the northern property boundary, ranging from an elevation of 28.5 feet to 22.5 feet, and a height of 6.5 feet above natural grade (for reference, the basement finished floor elevation would be 15 feet and the main level finished floor would be at the 26-foot elevation). At the northern corner of the parcel, the stepped wall would approximately match the grade of Studio Drive.

Approximately 238 square feet of landscaping is proposed, including hardscape and private walkways along the northern side of the residence. Potted plants would be located along the walkways and front entry. Existing iceplant, grasses, a small pine tree, and stepping stones would be removed during grading activities. The southern side yard and an existing mature cypress tree, rock, and flat sandy beach in the southwestern portion of the parcel would remain. No landscaping is proposed along the beachside of the property.

Figure ES-3. Project Site Plan

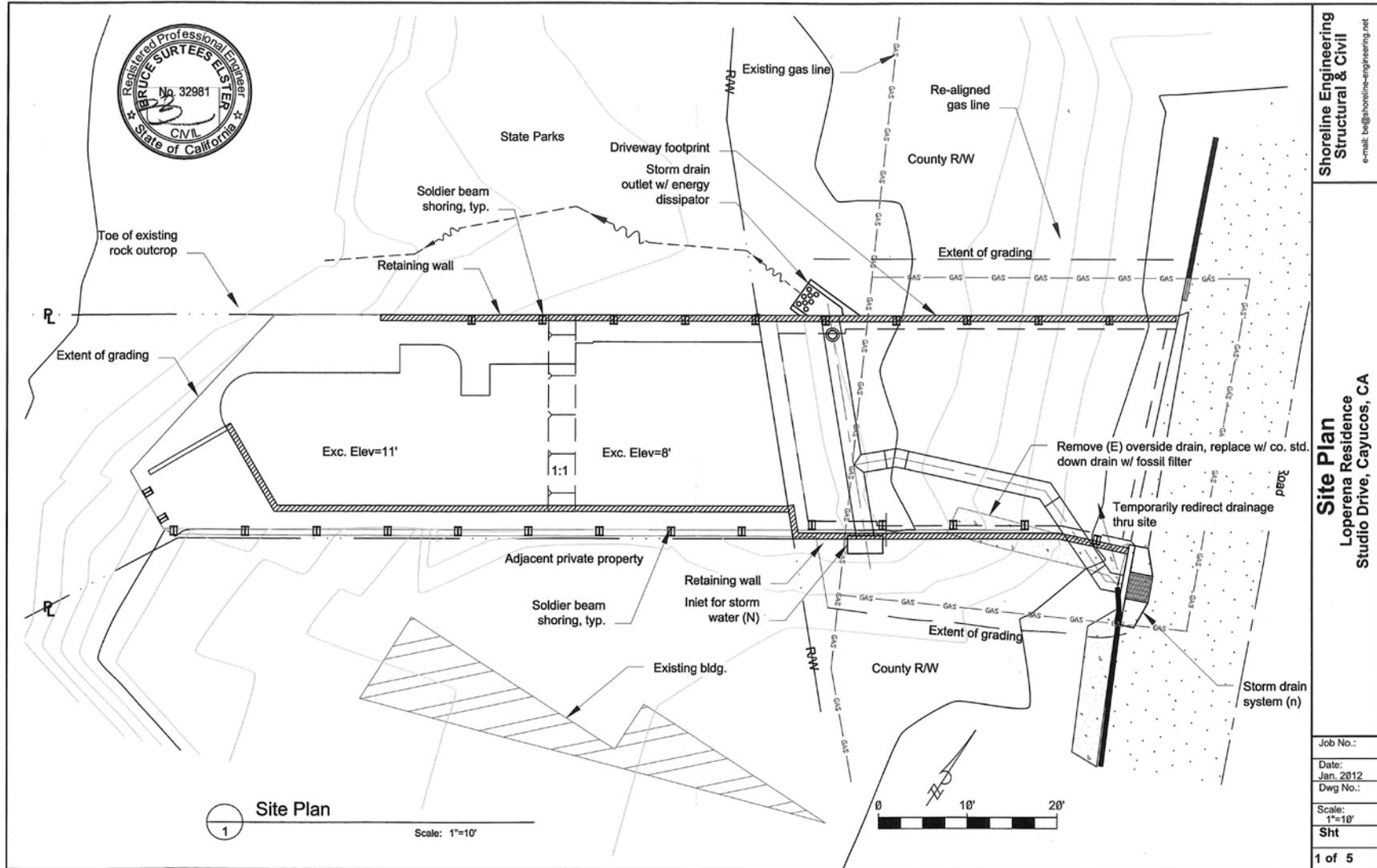


Figure ES-4a. Project Floor Plans

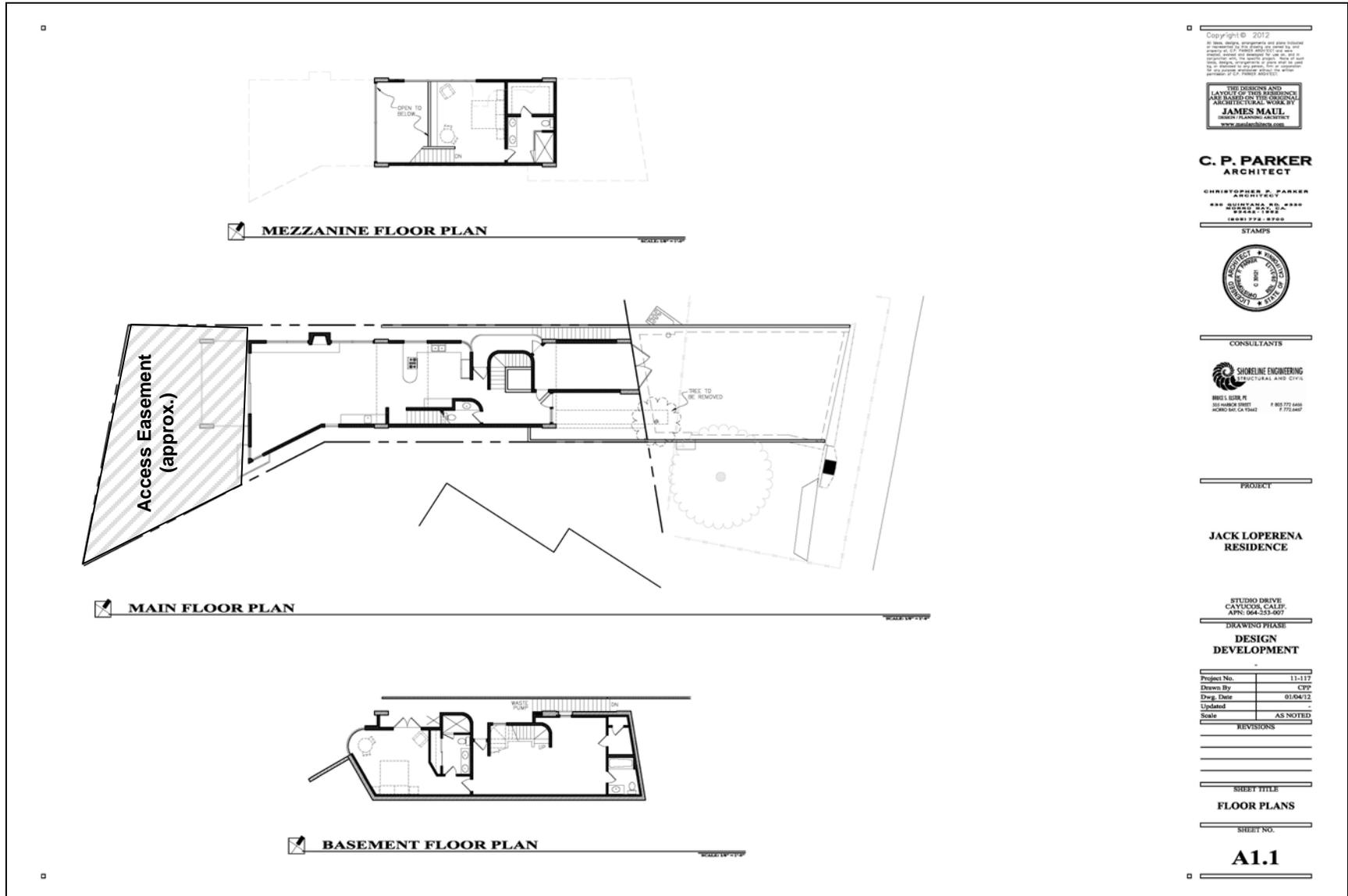


Figure ES-4b. Project Floor Plans

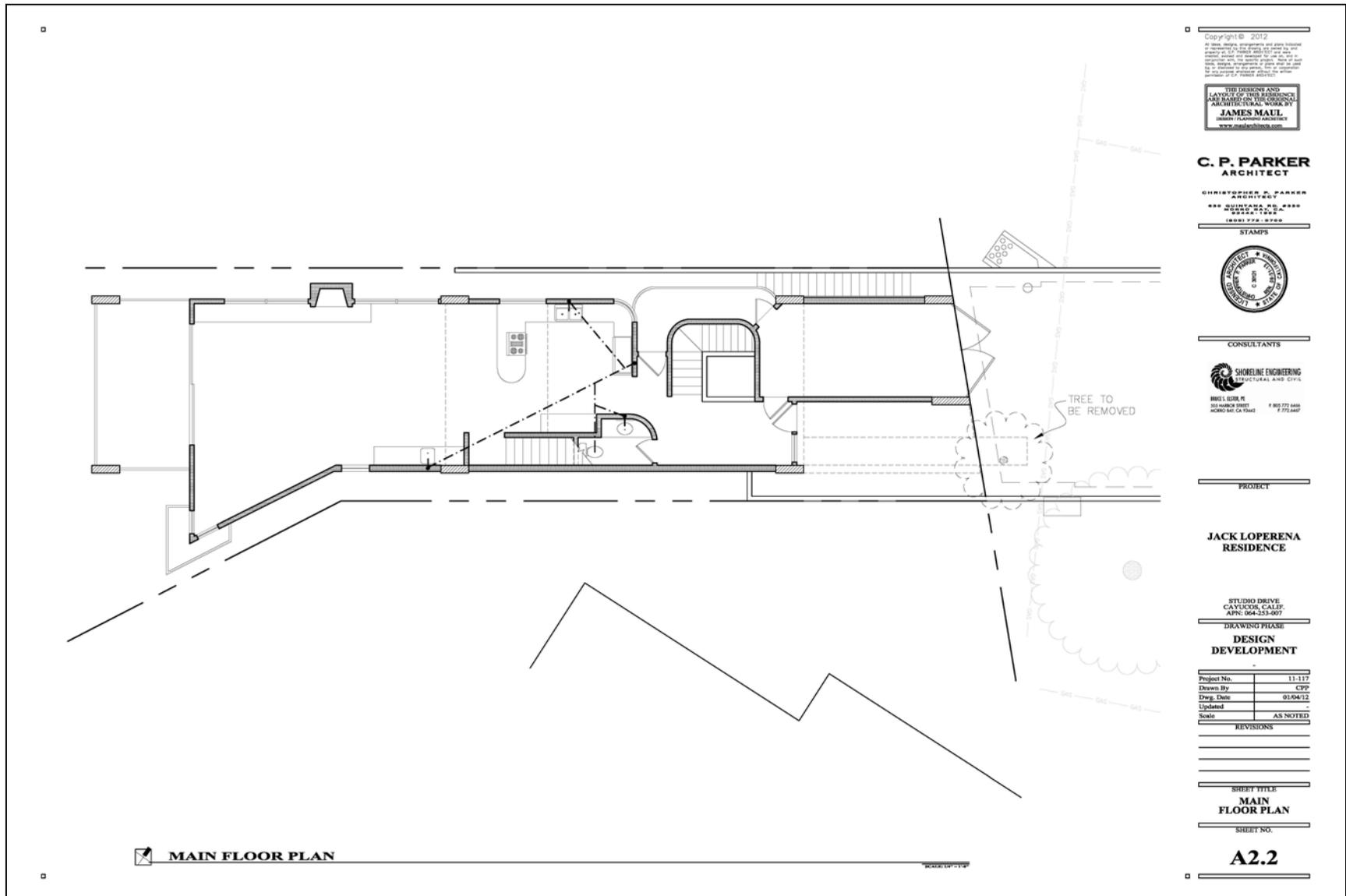


Figure ES-4c. Project Floor Plans

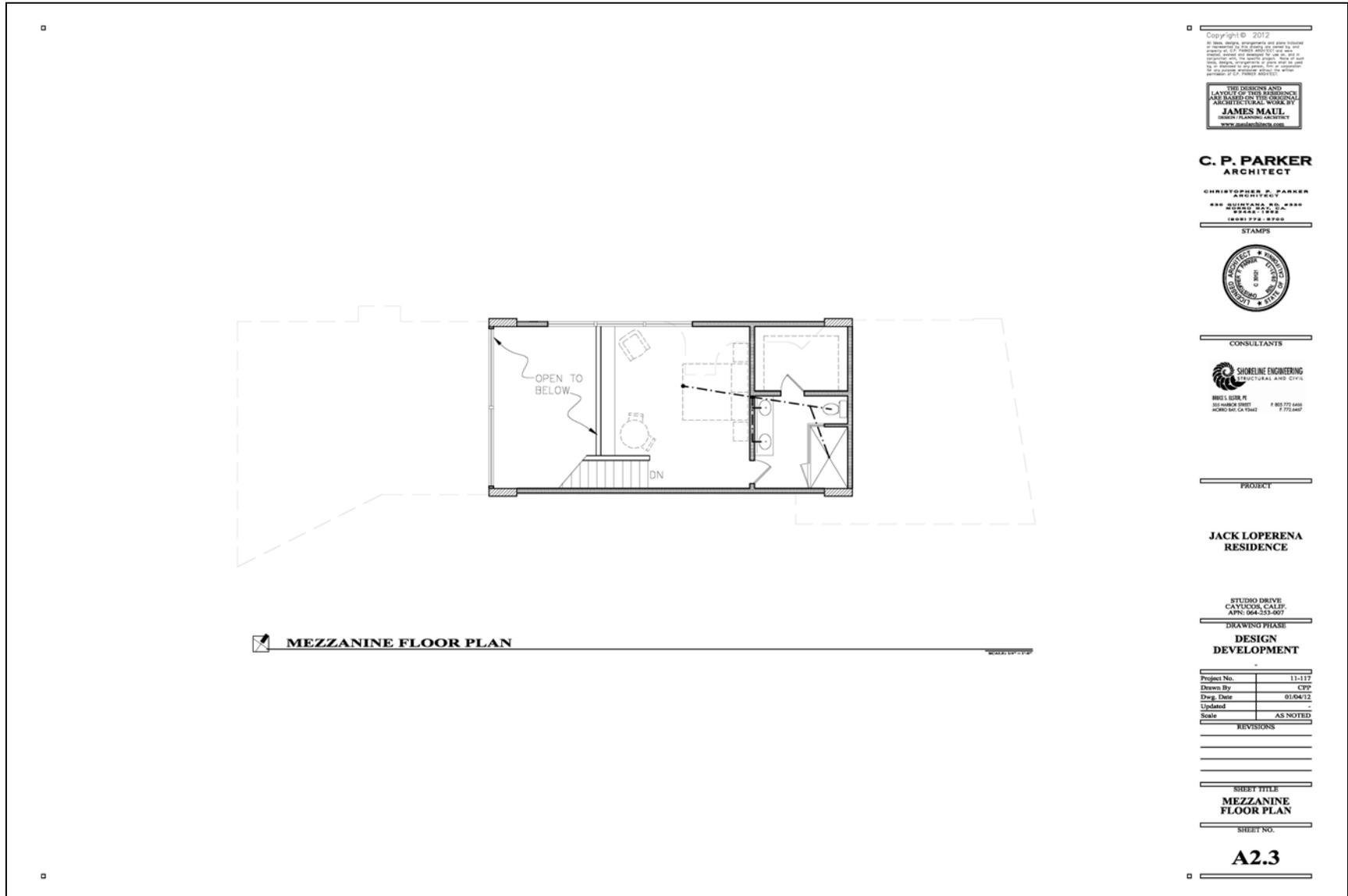
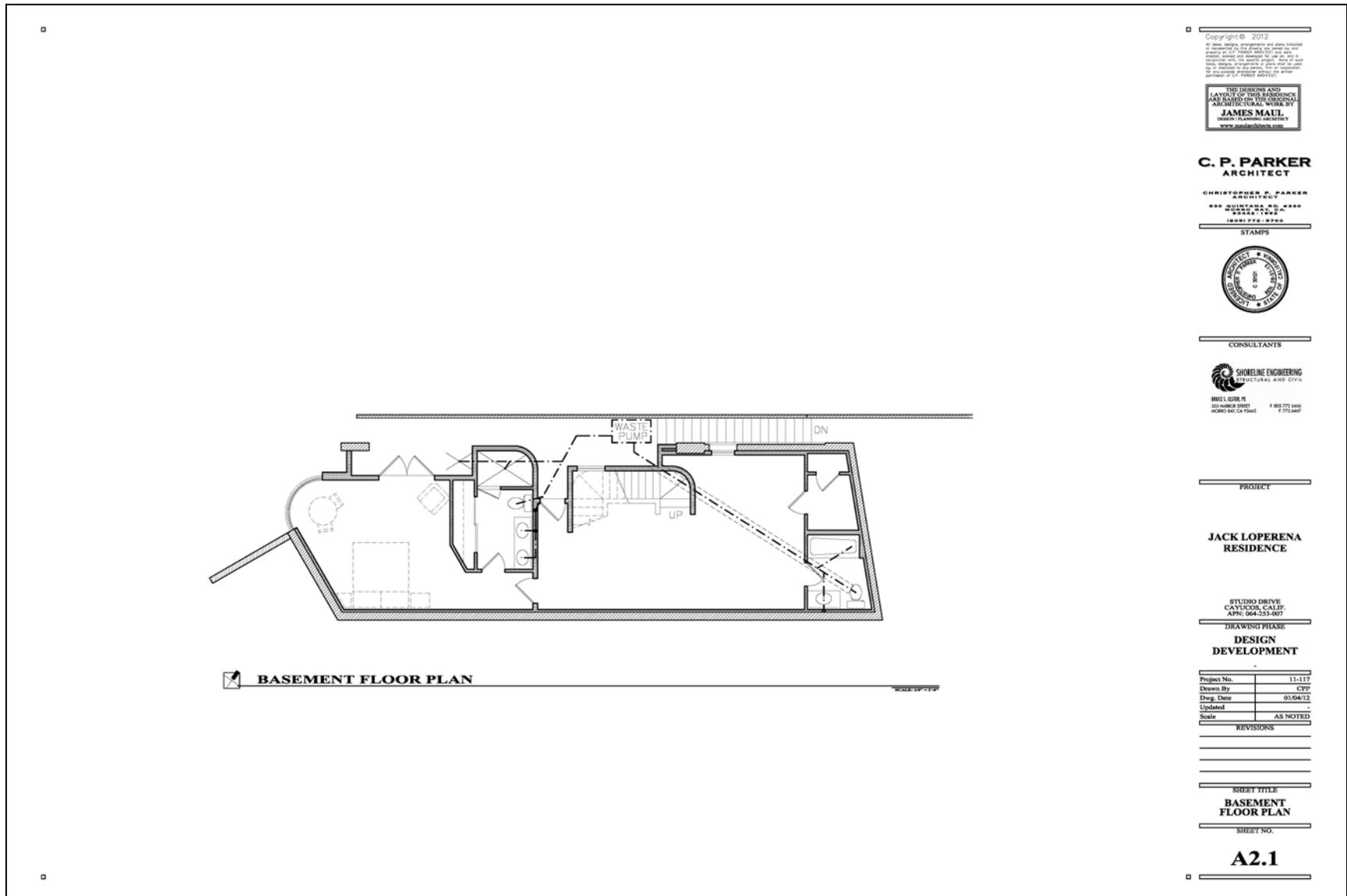


Figure ES-4d. Project Floor Plans



Copyright © 2012
 All ideas, designs, arrangements and plans included herein are the property of the Architect and shall remain the property of the Architect and shall not be used, copied, reproduced, or otherwise disseminated without the written consent of the Architect. The Architect shall not be held responsible for any errors or omissions in this drawing or any other drawings or specifications prepared by the Architect or any other person or entity under the Architect's professional supervision.

THE DESIGN AND LAYOUT OF THIS RESIDENCE ARE BASED ON THE PROFESSIONAL ARCHITECTURAL WORK BY
JAMES MAUL
 LICENSED PROFESSIONAL ARCHITECT
 www.jamesmaul.com

C. P. PARKER
 ARCHITECT

CHRISTOPHER P. PARKER
 ARCHITECT
 333 SULLY ROAD, SUITE 200
 SULLY, INDIANA 46788
 (317) 772-8700

STAMPS



CONSULTANTS

SHORELINE ENGINEERING
 STRUCTURAL AND CIVIL
 11011 150th St.
 Shoreline, WA 98148
 P: 206-772-1444
 F: 206-772-1447

PROJECT

JACK LOPERENA
 RESIDENCE

STUDIO DRIVE
 CAVEYTON, CALIF.
 APN: 064-233-007

DRAWING PHASE
DESIGN
DEVELOPMENT

Project No.	11-117
Drawn By	CFP
Draw. Date	01/04/12
Updated	
Scale	AS NOTED

REVISIONS

SHEET TITLE
BASEMENT
FLOOR PLAN

SHEET NO.

A2.1

Figure ES-5. Project Elevations

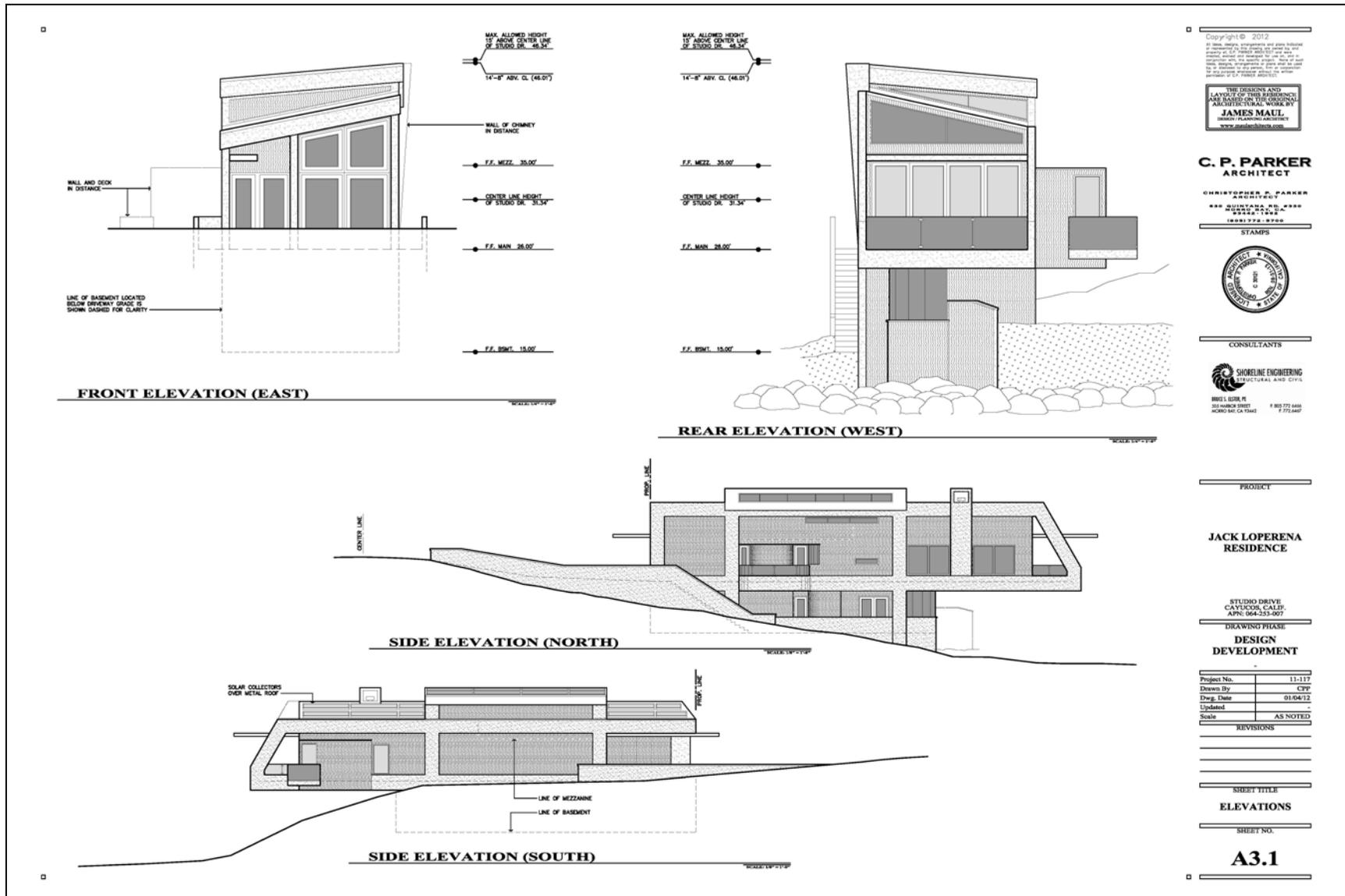


Figure ES-6. Sections

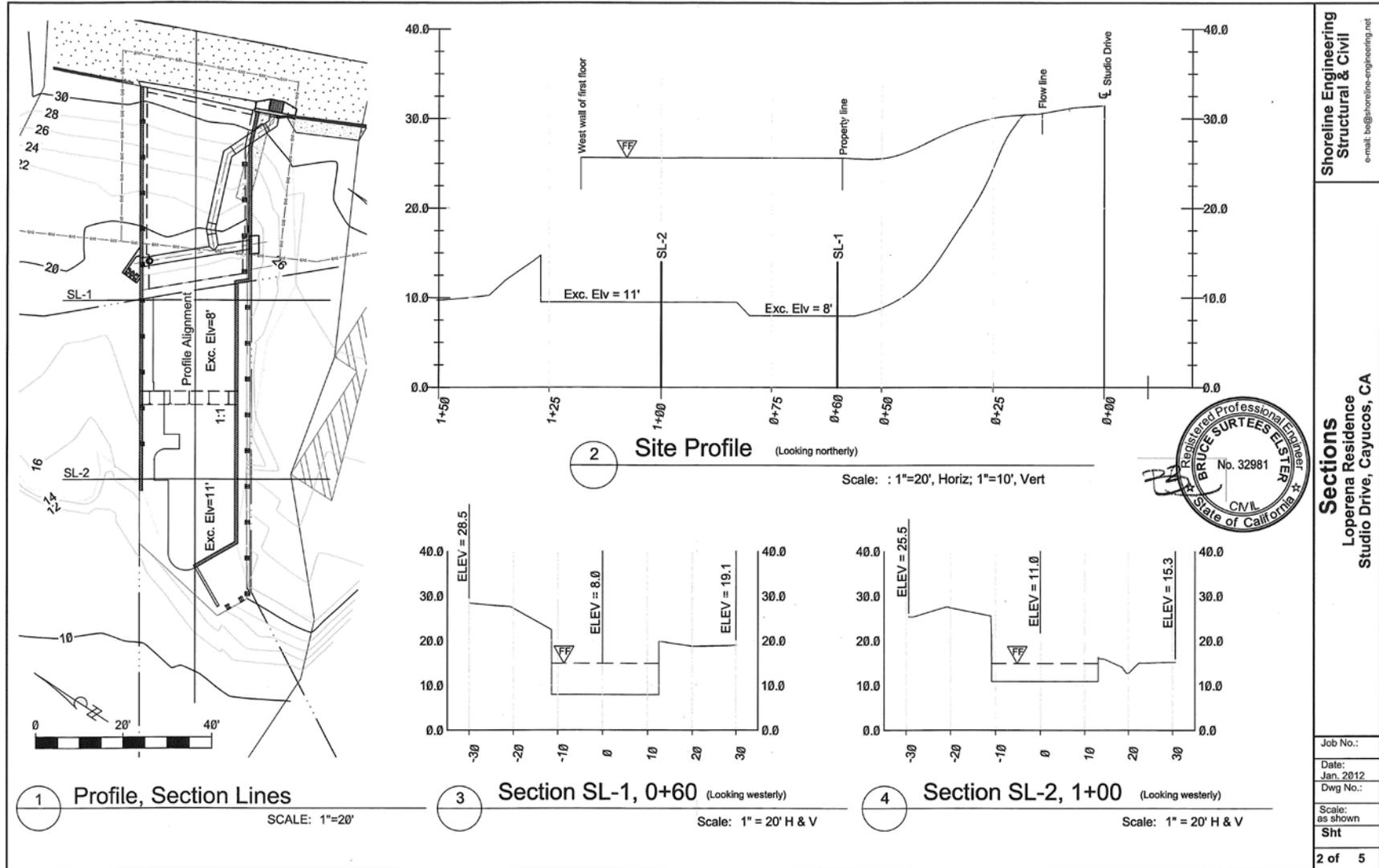
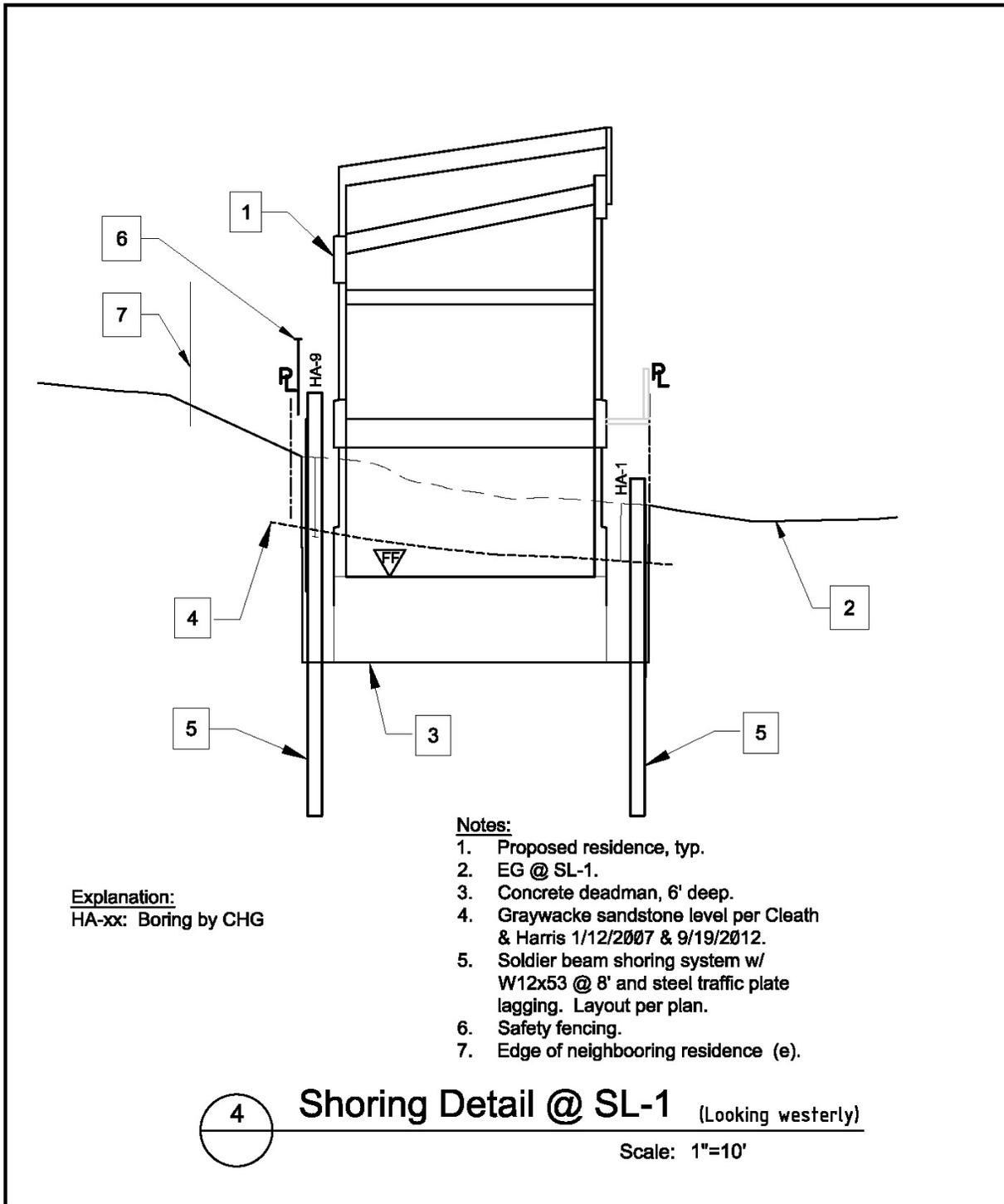


Figure ES-7a. Shoring Detail

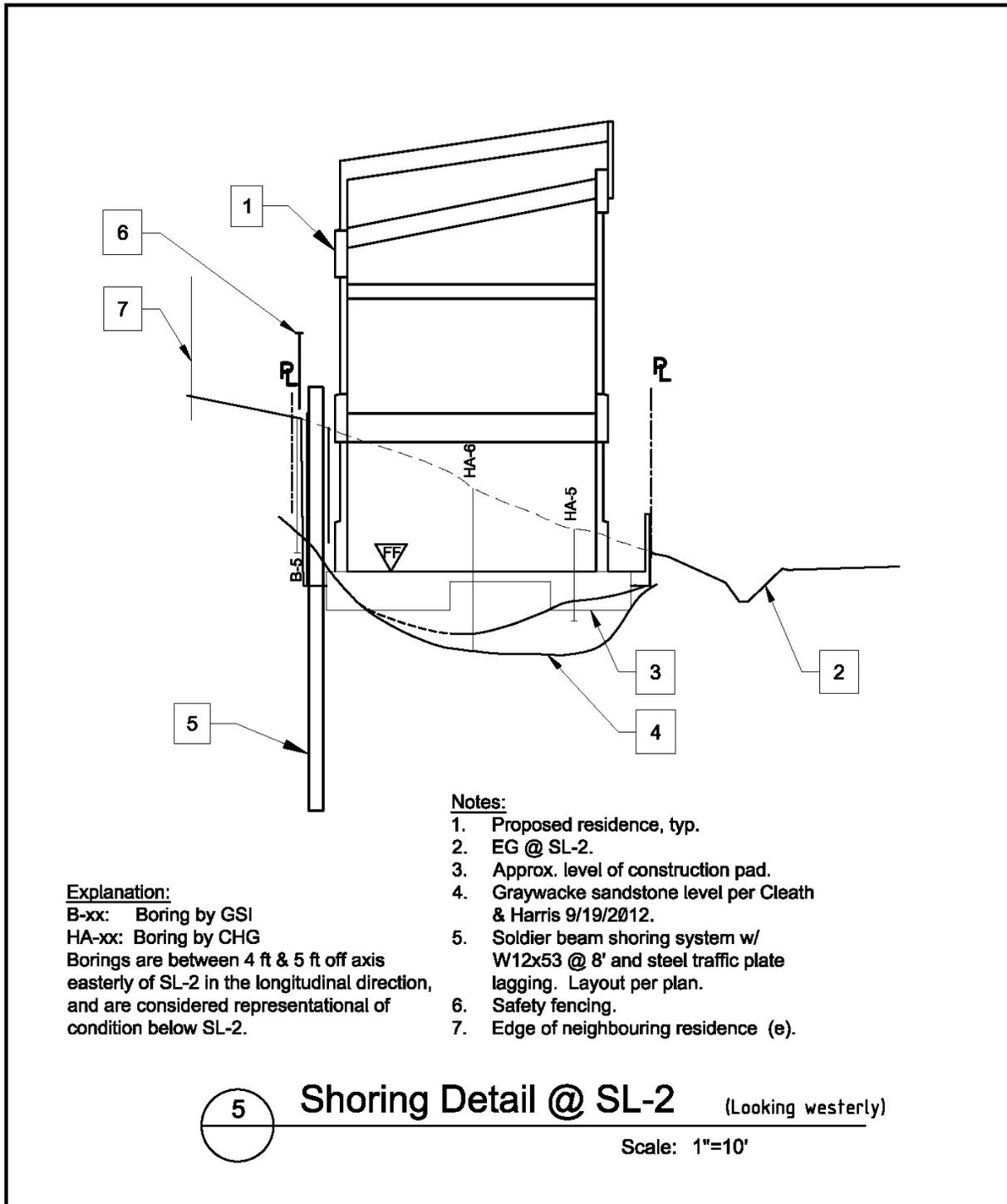


Shoreline Engineering
Structural & Civil
505 Harbor Street
Morro Bay, CA 93442
(805) 772-6466 v
(805) 772-6467 f
be@shoreline-engineering.net

Shoring Detail
Loperena Residence
Studio Drive, Cayucos, CA

Job No.: 293-02	Dwg No.: —	Scale: 1"=10'
Sht 4 of 5		
Date: Jan 2012		

Figure ES-7b. Shoring Detail



Shoreline Engineering
 Structural & Civil
 505 Harbor Street
 Morro Bay, CA 93442
 (805) 772-6466 v
 (805) 772-6467 f
 be@shoreline-engineering.net

Shoring Detail
 Loperena Residence
 Studio Drive, Cayucos, CA

Job No.: 293-02	Dwg No.: —	Scale: 1"=10'
Sht 5 of 5		
Date: Jan 2012		

Grading activities would disturb approximately 3,000 square feet of the 3,445-square-foot parcel, including 400 cubic yards of cut (foundation) and 150 cubic yards of fill (driveway). The average depth of cut would be 5 feet (minimum 1 foot, maximum 12 feet). Approximately 250 cubic yards of soil would be exported offsite. Proposed drainage plans include removal of an existing overside drain and construction of a new storm drain system including an overside drain with a fossil filter, stormwater inlet, and stormwater outlet with energy dissipators. Stormwater would flow from the outlet in a northwesterly direction offsite. A concrete deck would be constructed over the new pipe system to allow entry to the property. Rainfall from the roof would be collected by a gutter system and facilitated to an underground holding tank below the driveway grade. Captured runoff would be used as gray water for toilet flushing and landscape watering. Runoff would be piped and directed westward to exit onto the beach.

An existing high pressure gas main would be re-routed so that no structures are located over the top of the pipeline. The proposed residence would be served by the County Service Area 10A for water supply and Cayucos Sanitary District for wastewater collection, treatment and disposal. Cayucos Fire would provide fire protection.

F. SCOPING AND NOTICE OF PREPARATION PROCESS

In compliance with CEQA Guidelines, the County has taken steps to provide opportunities to participate in the environmental process. During the environmental determination process, an effort was made to contact various federal, state, regional, and local governmental agencies and other interested parties to solicit comments and inform the public of the proposed project. This included the distribution of the Notice of Preparation (NOP) on August 7, 2009, to various agencies, organizations and interested persons throughout San Luis Obispo County and the surrounding area. The proposed project was described, the scope of the environmental review was identified, and agencies and the public were invited to review and comment on the NOP. The close of the NOP review period was September 14, 2009. Agencies, organizations, and interested parties not contacted or who did not respond to the request for comments about the project during the preparation of the Draft EIR currently have the opportunity to comment during the 45-day public review period on the Draft EIR. In addition, a scoping meeting was held on at the Cayucos Veteran's Hall.

G. SIGNIFICANT ENVIRONMENTAL IMPACTS IDENTIFIED

Impacts of the proposed project and alternatives have been classified using the categories described below:

- **Significant, unavoidable, adverse impacts (Class I):** Significant impacts that cannot be fully and effectively mitigated. No measures could be taken to avoid or reduce these adverse effects to insignificant or negligible levels.
- **Significant, but mitigable impacts (Class II):** These impacts are potentially similar in significance to those of Class I, but can be reduced or avoided by the implementation of mitigation measures.
- **Less than significant impacts (Class III):** Mitigation measures may still be required for these impacts as long as there is rough proportionality between the environmental impacts caused by the project and the mitigation measures imposed on the project.
- **Beneficial impact (Class IV):** Project would have a beneficial environmental impact.

The term “significance” is used throughout the EIR to characterize the magnitude of the projected impact. For the purpose of this EIR, a significant impact is a substantial or potentially substantial change to resources in the local proposed project area or the area adjacent to the proposed project. In the discussions of each issue area, thresholds are identified that are used to distinguish between significant and insignificant impacts. To the extent feasible, distinctions are also made between local and regional significance and short-term versus long-term duration. Where possible, measures have been identified to reduce project impacts to less than significant levels. CEQA requires that public agencies should not approve projects as proposed if there are feasible mitigation measures available which would substantially lessen the environmental effects of such projects (CEQA Statute §21002). Included with each mitigation measure are the plan requirements needed to ensure that the mitigation is included in the plans and construction of the project and the required timing of the action (e.g., prior to development of final construction plans, prior to commencement of construction, prior to operation, etc.).

The impacts and associated mitigation measures are shown in the Summary of Impacts and Mitigation Measures (refer to Table ES-1). The table includes significant impacts, which are identified with an impact number (i.e. AES Impact 1). The table also includes less than significant impacts, which are not identified with an impact number, but are included and summarized in the table for reference.

Each issue area section of the impact summary table describes and classifies each impact, lists recommended mitigation when applicable, and states the level of residual impact (i.e., impact after implementation of mitigation). A brief summary of the key significant impacts and mitigation measures for each issue area is presented below.

1. **Aesthetic Resources.** Impacts resulting from increased night lighting would be mitigated by standard measures, including shielding light fixtures, using motion-detectors to reduce the duration of lighting.
2. **Air Quality.** Construction of the project would generate fugitive dust and diesel particulate matter; standard air quality mitigation measures are identified including dust suppression and compliance with equipment idling restrictions.
3. **Biological Resources.** Impacts to sensitive wildlife and potential for pollutant discharge into the beach area and Pacific Ocean during construction would be mitigated by measures including, but not limited to, delineation of disturbance areas, pre-construction surveys for sensitive wildlife, installation of protection fencing, implementation of sedimentation, erosion, and pollution control plans, construction monitoring by a qualified biologist, and, submittal of monitoring inspection reports.
4. **Geology and Soils.** Exposure to geologic hazards including liquefaction, expansive soils, and beach scour, and the creation of potential hazards including short-term slope instability and erosion during storm events. These impacts would be mitigated by compliance with the Uniform Building Code and recommendations identified in the project-specific geotechnical and structural foundation reports. Compliance would be verified by the County and the applicant’s Engineer of Record prior to, during, and following the construction of the project.
5. **Noise.** The project is located in proximity to Highway 1, which generates transportation-related noise. Identified mitigation includes standard noise-reduction

measures including building standards to ensure interior noise levels are within acceptable levels.

6. **Water.** During construction, there is a potential for sediments and construction-related fuels, oils, and materials to contaminate surface waters including the Pacific Ocean. Measures are identified, including erosion, sedimentation, and pollution control plans to prevent, contain, control, and clean-up any potential leaks or on-site discharges.

The reader should refer to Table ES-1 and Chapter 4, Environmental Impacts Analysis, of the EIR for a more detailed discussion of the impacts and associated mitigation measures.

H. PROJECT ALTERNATIVES

Potential alternatives to the proposed project are limited due to the small project area, project land use category, and project objectives to construct a single-family residence. Criteria used to develop potential alternatives included the potential of the project to avoid impacts to sensitive resources and the human environment, whether or not it could generally meet the project objectives, and costs. Specific consideration was given to potential alternatives that appeared to avoid or minimize impacts to natural resources and the human environment.

Table ES-1 shows each potential impact and all mitigation measures recommended to avoid or reduce identified impacts. Generally, the alternatives analysis considers alternatives that would avoid or reduce, to the maximum extent feasible, the identified unavoidable impacts. However it was determined that the proposed project would not result in any unavoidable impacts. Therefore the considered alternatives focused on avoiding or reducing the significant impacts which require the most intensive mitigation measures, including biological resources and geology, soils, and coastal hazards.

No significant aesthetic resource impacts were identified; however, the Cayucos Land Use Committee and the adjacent neighbors identified concerns with the modern design of the structure, including the cantilevered main floor, flat roofs, basement, and side wall visible from Studio Drive. Therefore, some design options are considered in the feasible range of alternatives.

Identified alternatives include the No Project (No Action) Alternative, Design Alternative A – Reduced Project, Pilings, Design Alternative B – Reduced Project, Traditional Design, and Design Alternative C – Vegetation and Articulation.

1. No Project Alternative

The No Project Alternative would include none of the components of the proposed project. If a project is not built at this time, a residential project may be proposed in the future.

2. Design Alternative A – Reduced Project, Pilings

The project site is located on the beachside of Studio Drive, and would be exposed to coastal hazards including sea level rise, wave-up, and storm surge. Independently, these conditions would not adversely affect the proposed structure; under extreme conditions, ocean water may reach the 22.2-foot elevation, and may overtop the existing rock outcrop and splash against the basement wall.

An alternative to this would be to eliminate the basement and construct the residence on steel-reinforced concrete pilings. This would allow ocean water to flow under the structure entirely before receding back. Under this alternative, the main floor and mezzanine, including the cantilevered portion, would remain.

This alternative consists of an approximately 1,857-square-foot residence including:

- 1,097 square feet of main floor living space
- 338-square-foot mezzanine
- 242-square-foot garage and 200-square-foot carport
- 180-square-foot covered deck
- Solar panels installed on the south-facing slopes of the roof

The residence would consist of one main floor supported on pilings. The maximum width of the structure would be 18 feet, and the maximum length would be 95 feet. A paved driveway would provide access from Studio Drive. The maximum height of the residence would be 15 feet above the centerline elevation of Studio Drive. It is expected that retaining walls would be necessary adjacent to Studio Drive, and along a portion of the southern and northern sides of the residence, with continuous footings extending into the underlying bedrock materials.

3. Design Alternative B – Reduced Project, Traditional Design

This design alternative incorporates a more traditional design, as opposed to the modern structure proposed by the applicant. It does not include the extended cantilevered main floor, or a substantial reduction in the extension, and provides sloped roofs. This alternative is considered a reduced design option, and consists of an approximately 2,572-square-foot residence including:

- 772 square feet of main floor living space
- 1,040-square-foot basement
- 338-square-foot mezzanine
- 242-square-foot garage and 200 square-foot-carport
- 180-square-foot covered deck
- Solar panels installed on the south-facing slopes of the roof

The residence would consist of one main floor and a basement. The footprint of the house would be 1,040 square feet. The maximum width of the structure would be 18 feet, and the maximum length would be 70 feet. A paved driveway would provide access from Studio Drive. The maximum height of the residence would be 15 feet above the centerline elevation of Studio Drive. The basement would be located below the elevation of Studio Drive.

The exterior walls of the structure would be concrete and would retain soils along the southern, eastern, and northern sides of the residence. Retaining walls will also be constructed adjacent to Studio Drive with continuous footings extending into the underlying bedrock materials.

4. Design Alternative C – Vegetation and Articulation

As noted above, no significant aesthetic resource impacts were identified; however, a reasonable alternative to the project includes additional features to articulate the design and

blend it into the beach landscape. This includes incorporation of native, low-growing shrubs and vegetation along the northern and western aspects, and the use of native (or simulated native) rocks along the driveway retaining wall. This alternative would consist of the same size, footprint, width, and height, as the proposed project.

I. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the alternatives section of an EIR to describe a reasonable range of alternatives to the project that avoid or substantially lessen any of the significant effects identified in the EIR analysis while still attaining most of the basic project objectives. The alternative that most effectively reduces impacts while meeting project objectives should be considered the “environmentally superior alternative.” In the event that the No Project Alternative is considered the environmentally superior alternative, the EIR should identify an environmentally superior alternative among the other alternatives.

In this EIR, the No Project Alternative results in the fewest environmental impacts, although it does not meet any of the project objectives, including the primary objective to build a single-family residence.

As proposed, and with incorporation of recommended mitigation measures, the proposed project would not result in any significant, unavoidable environmental effects, and would meet project objectives. All proposed alternatives would meet the project objectives, and would not result in any significant, adverse, and unavoidable (Class I) impacts upon implementation of mitigation measures similar to those identified for the proposed project.

The proposed Reduced Project and Design Alternatives (A, B, and C) provide some variation in size and project design in response to public comment, and include alternatives to the proposed basement, cantilevered living space, and exterior design elements. Design Alternative A – Reduced Project, Pilings, would marginally reduce the intensity of identified geology and soils impacts, primarily related to coastal hazards, and would still require substantial engineered design and incorporation of design-specific mitigation measures. Design Alternative B – Reduced Project, Traditional Design does not include the cantilevered portion of the residence, which may be more consistent with Small Scale Neighborhood Standards. Alternatives A, B, and C (Vegetation and Articulation) may reduce the perceived mass of the structure as seen from Studio Drive and the beach area, and may be more consistent with County Plans and Policies related to visual resources.

Based strictly on an analysis of the relative environmental impacts, the proposed project, with adoption and incorporation of recommended mitigation measures, is considered the Environmentally Superior Alternative. The decision-making body will consider the whole of the record when considering the approved project including, but not limited to, public comment and testimony related to the size and design of the residence. The decision-making body may select the project as proposed, an Alternative, or a specified combination of particular elements identified in the Alternatives, as the approved project. In all scenarios, the Mitigation and Monitoring Program (MMRP) would be applied to the approved project.

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Mitigation Measures	Residual Impacts
Aesthetic Resources		
<p>Because of the existing residential setting, and the proposed structure's general consistency with the scale and architecture of the Studio Drive neighborhood, the project would be aesthetically compatible with the area, and potential impacts to public views is considered to be less than significant (CEQA Class III).</p>	None Applicable	Less than significant (long-term)
<p>Because the project would affect only a minor percentage of the available ocean and hillside views as seen from Highway 1 or from public roadways in the surrounding neighborhood or public beach, and because what would be affected would appear as an incremental extension of the existing visual condition along Studio Drive, the project's effect on scenic views is considered to be less than significant (CEQA Class III).</p>	None Applicable	Less than significant (long-term)
<p>The project would have no adverse effect on scenic resources as seen from Officially Designated State Scenic Highway 1. Because the project would affect only a minor percentage of the available ocean and hillside views as seen from Highway 1 and because what would be affected would appear as an incremental extension of the existing visual condition along Studio Drive, the project's effect on scenic vistas is considered to be less than significant (CEQA Class III).</p>	None Applicable	Less than significant (long-term)
<p>Because of the existing residential setting, and the proposed structure's general consistency with the scale and architecture of the Studio Drive neighborhood, the effect of the project on visual character and quality of the site is considered to be less than significant (CEQA Class III).</p>	None Applicable	Less than significant (long-term)
<p>AES Impact 1 Visibility of night lighting would affect views resulting in a direct long-term impact.</p>	<p>AES/mm-1 Prior to issuance of the building permit, the applicant shall submit interior and exterior lighting plans to the Department of Planning and Building for review and approval consistent with the following:</p> <ul style="list-style-type: none"> a. The point source of all exterior lighting shall be shielded from off-site views, including beach areas. 	Less than significant with mitigation (long-term)

Impacts	Mitigation Measures	Residual Impacts
	<ul style="list-style-type: none"> b. All required security lights shall utilize motion detector activation. c. Light trespass from exterior lights shall be minimized by directing light downward and utilizing cut-off fixtures or shields. d. Lumination from exterior lights shall be the lowest level allowed by public safety standards. 	
<p>The visual context of the site is one of a residential beach neighborhood. The project site is mostly covered with non-native vegetation such as iceplant and ornamental plantings. Although the site's topography provides some visual interest to the setting, it is not memorable or unique. The exposed rock area along western portion of the site is a relatively insignificant portion of a larger, continuous rock face extending east along the bluffs. Furthermore, the project would not block or adversely affect views of any unique off-site geological or physical features. As a result, the effect of the project on unique geological or physical features is considered to be less than significant (CEQA Class III).</p>	None applicable	Less than significant (long-term)
<p>The project would be consistent with the development patterns throughout Cayucos, and would not be an unexpected visual feature. Although the proposed residence would contribute to the built environment, it is considered in-fill and would merely add one more house on an existing legal lot of record, along a 1 mile long neighborhood of existing houses. As a result, and because the project would appear as a minor incremental extension of the existing visual condition along Studio Drive, the project's cumulative effect on the visual environment is considered to be less than significant (CEQA Class III).</p>	None applicable	Less than significant (long-term)
Air Quality		
<p>As proposed, the project would result in the disturbance of approximately 3,000 square feet, including driveways, walkways, the residential structure coverage, and landscaping. This would result in the creation of construction dust, as well as short-term vehicle emissions. Long-term operational impacts would include an increase in vehicle emissions on surrounding</p>	None applicable	Less than significant (short-term and long-term)

Impacts	Mitigation Measures	Residual Impacts
<p>roads. Based on the CEQA Air Quality Handbook, the project would result in less than 10 pounds per day of pollutants, which is below the threshold warranting mitigation. Therefore, potential impacts would be less than significant (Class III).</p>		
<p>AQ Impact 1 Construction of the proposed project would generate fugitive dust, which could become a nuisance to local residents and businesses in proximity to the construction site.</p>	<p>AQ/mm-1 Prior to initiation of construction, the project applicant shall implement the following dust control measures:</p> <ul style="list-style-type: none"> a. Reduce the amount of the disturbed area where possible; b. Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15 miles per hour. Reclaimed (non-potable) water should be used whenever possible. c. All dirt stockpile areas should be sprayed daily as needed; and d. All roadways, driveways, sidewalks, etc., to be paved should be completed as soon as possible, and building pads should be lain as soon as possible after grading unless seeding or soil binders are used. 	<p>Less than significant with mitigation (short-term)</p>
<p>AQ Impact 2 Use of construction equipment would generate diesel particulate matter, potentially resulting in an adverse effect to sensitive receptors within 1,000 feet of the project site.</p>	<p>AQ/mm-2 Prior to issuance of construction permits, the applicant shall include the following measures on applicable grading and building plans:</p> <p><u>Idling Restrictions Near Sensitive Receptors for Both On and off-Road Equipment</u></p> <ul style="list-style-type: none"> a. Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors; b. Diesel idling within 1,000 feet of sensitive receptors is not permitted; c. Use of alternative fueled equipment is recommended whenever possible; and, d. Signs that specify the no idling requirements must be posted and enforced at the construction site. <p><u>Idling Restrictions for On-road Vehicles</u></p> <ul style="list-style-type: none"> a. Section 2485 of Title 13, the California Code of Regulations limits diesel-fueled commercial motor vehicles that operate in the State of California with 	<p>Less than significant with mitigation (short-term)</p>

Impacts	Mitigation Measures	Residual Impacts
	<p>gross vehicular weight ratings of greater than 10,000 pounds and licensed for operation on highways. It applies to California and non-California based vehicles. In general, the regulation specifies that drivers of said vehicles:</p> <ol style="list-style-type: none"> 1. Shall not idle the vehicle's primary diesel engine for greater than 5 minutes at any location, except as noted in Subsection (d) of the regulation; and, 2. Shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5.0 minutes at any location when within 100 feet of a restricted area, except as noted in Subsection (d) of the regulation. <p>Signs must be posted in the designated queuing areas and job sites to remind drivers of the 5 minute idling limit. The specific requirements and exceptions in the regulation can be reviewed at the following web site: www.arb.ca.gov/msprog/truck-idling/2485.pdf.</p> <p><u>Idling Restrictions for off-Road Equipment</u></p> <ol style="list-style-type: none"> a. Off-road diesel equipment shall comply with the 5 minute idling restriction identified in Section 2449(d)(3) of the California Air Resources Board's In-Use off-Road Diesel regulation: www.arb.ca.gov/regact/2007/ordiesl07/frooal.pdf. b. Signs shall be posted in the designated queuing areas and job sites to remind off-road equipment operators of the 5 minute idling limit. 	
<p>The project consists of a residence, which will not require the storage or use of any materials or equipment that would generate objectionable odors. Therefore, potential impacts would be less than significant (Class III).</p>	<p>None applicable</p>	<p>Less than significant (short-term and long-term)</p>

Impacts	Mitigation Measures	Residual Impacts
<p>The project is consistent with the general level of development anticipated and projected in the CAP, including promotion of residential infill in proximity to essential services and alternative transportation services. Therefore, potential impacts would be less than significant (Class III).</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>
<p>Because the project proposes only one single-family residence in an existing residential neighborhood, and is consistent with land use components necessary to meet the goals of AB32 and set forth in the Clean Air Plan, this increase in GHGs is not considered significant. Therefore, no significant adverse GHG impacts would occur as a result of the proposed project, and no mitigation measures are necessary (Class III).</p>	<p>None applicable</p>	<p>Less than significant (short-term and long-term)</p>
<p>The proposed project is consistent with the APCD's CEQA Handbook and County's EnergyWise Plan because it consists of a residential development within an urban area, in proximity to recreational resources and opportunities for alternative transportation, such as walking and bicycling. As noted above, the project includes energy-efficiency measures, including incorporation of solar energy. Potential impacts would be less than significant (Class III).</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>
<p>Compliance with identified air quality, energy efficiency, and water conservation mitigation measures would reduce the project's contribution to cumulative GHG emissions, and subsequent climate change. Cumulative effects would be less than significant (Class III).</p>	<p>None applicable</p>	<p>Less than significant (short-term and long-term)</p>
<p>Biological Resources</p>		
<p>BR Impact 1 Construction of the project may have an adverse impact on special-status species and their habitats, including off-site use of equipment, storage of materials, and inadvertent transport of debris or discharge of oils, fuels, and other pollutants into the beach area.</p>	<p>BR/mm-1 Prior to issuance of construction permits, the applicant shall submit documentation verifying designation of a qualified environmental monitor for all measures requiring environmental mitigation to ensure compliance with Conditions of Approval and EIR mitigation measures. The monitor shall be responsible for: (1) ensuring that procedures for verifying compliance with environmental mitigations are followed; (2) lines of communication and reporting methods; (3) daily and weekly compliance reporting; (4) construction crew training</p>	<p>Less than significant with mitigation (short-term)</p>

Impacts	Mitigation Measures	Residual Impacts
	<p>regarding environmentally sensitive areas; (5) authority to stop work; and (6) action to be taken in the event of non-compliance. Monitoring shall be at a frequency and duration determined by the affected natural resource agencies (e.g., USACE, CDFW, RWQCB, California Coastal Commission, USFWS, and the County).</p> <p>BR/mm-2 Prior to the initiation of construction, the environmental monitor shall conduct environmental awareness training for all construction personnel. The environmental awareness training shall include discussions of sensitive habitats and animal species in the immediate area. Topics of discussion shall include: general provisions and protections afforded by the Endangered Species Act; measures implemented to protect special-status species; review of the project boundaries and special conditions; the monitor's role in project activities; lines of communications; and procedures to be implemented in the event a special-status species is observed in the work area.</p> <p>BR/mm-3 At the time of application for construction permits all grading plans shall clearly show the location of project delineation fencing, including protection fencing surrounding the Monterey cypress tree on the southern property boundary.</p> <p>BR/mm-4 Prior to the initiation of construction, the applicant's contractors and the environmental monitor shall coordinate the placement of project delineation fencing throughout the work areas. The environmental monitor shall field fit the placement of the project delineation fencing to minimize impacts to sensitive resources. The project delineation fencing shall remain in place and functional throughout the duration of the project. During construction, no project related work activities shall occur outside of the delineated work area.</p> <p>BR/mm-5 At the time of application for grading permits, all applicable plans shall clearly show stockpile and staging areas. Stockpiles and staging areas shall not be placed in areas that have potential to experience significant runoff during the rainy season. All project-related spills of hazardous materials within or adjacent to project sites shall be cleaned up immediately. Spill prevention and cleanup materials shall be on-site at all times during construction. The staging areas shall conform to</p>	

Impacts	Mitigation Measures	Residual Impacts
	<p>standard BMPs applicable to attaining zero discharge of storm water runoff. At a minimum, all equipment and vehicles shall be checked and maintained on a daily basis to ensure proper operation and to avoid potential leaks or spills. Maintenance, cleaning, and refueling of equipment and vehicles shall not be permitted onsite, within adjacent beach areas, or on Studio Drive.</p> <p>BR/mm-6 Prior to issuance of construction permits, the applicant shall submit a detailed sediment and erosion control plan for approval, which shall address both temporary and permanent measures to control erosion and reduce sedimentation. Erosion and soil protection shall be provided on all cut and fill slopes. Revegetation shall be facilitated by mulching, hydro-seeding or other methods, and shall be initiated as soon as possible after completion of grading, and prior to the onset of the rainy season (October 15). Permanent revegetation and landscaping shall emphasize native shrubs, and trees, to improve the probability of slope and soil stabilization without adverse impacts to slope stability due to irrigation infiltration and long-term root development. All plans shall show that sedimentation and erosion control measures are installed prior to any other ground disturbing work.</p>	
<p>BR Impact 2 Construction activities conducted during the nesting season (March through September) could directly or indirectly impact nesting western snowy plover and other bird and bat species.</p>	<p>BR/mm-7 Upon application for construction permits, the following measure shall be included on all applicable plans: The applicant shall avoid ground disturbing activities conducted during the snowy plover nesting season to the extent feasible. If work activities must occur during the nesting season the following measures shall be taken:</p> <ul style="list-style-type: none"> a. Prior to installation of the project delineation fencing and the commencement of site grading, a qualified biologist shall conduct a series of pre-construction nesting bird surveys for western snowy plover. Surveys shall be conducted every other day for two weeks prior to any project related disturbances. b. Surveys for snowy plovers shall include walking through all potential nesting and foraging habitat within 300 feet of the site on each survey day. The survey area shall include all available snowy plover nesting habitat within 300 feet of anticipated project activities. 	<p>Less than significant with mitigation (short-term)</p>

Impacts	Mitigation Measures	Residual Impacts
	<ul style="list-style-type: none"> c. The number of snowy plover individuals observed and their activities (e.g. nesting, foraging, resting, etc.) shall be documented. All documented occurrences would be reported to USFWS and documented on the CNDDDB. d. If nesting activity is identified, all project activities within 300 feet of the nest shall be delayed until the nesting activity has ceased. e. During construction, the environmental monitor shall conduct snowy plover surveys twice a week (preferably two to three days apart). <p>BR/mm-8 Upon application for construction permits, the following measure shall be included on all applicable plans: If commencement of construction begins between March and September, the environmental monitor shall conduct pre-construction nesting bird surveys. If nesting activity is identified, the following measures shall be implemented:</p> <ul style="list-style-type: none"> a. If active nest of common passerine or shorebird species' are observed in the work area or within 100 feet of the work area, construction activities shall be modified and or delayed as necessary to avoid direct take or indirect disturbance of the nests, eggs, or young; b. If active nest sites of raptors or other special-status species are observed within the work area or 300 feet of the work area, the environmental monitor shall establish a suitable buffer around the nest site. Construction activities in the buffer zone shall be prohibited until the young have fledged the nest and achieved independence. c. Active raptor or special-status species nests should be documented by a qualified biologist and a letter report should be submitted to the County, USFWS, and CDFW, documenting project compliance with the MBTA and applicable project mitigation measures. □ 	
<p>BR Impact 3 The proposed project could result in direct take of coast horned lizard during project grading and construction.</p>	<p>BR/mm-9 Upon application for construction permits, the following measure shall be included on all applicable plans: Prior to site grading, the environmental monitor shall conduct a</p>	<p>Less than significant with mitigation (short-term)</p>

Impacts	Mitigation Measures	Residual Impacts
	survey for coast horned lizard and other reptiles. The surveyor shall utilize hand search methods in areas of disturbance where coast horned-lizards are expected to be found (e.g., under shrubs, other vegetation, or debris). Any lizards located during this survey should be safely removed from the construction area and placed in suitable habitat.	
BR Impact 4 Construction of the project may impact the root zone or result in inadvertent disturbance of a mature cypress tree.	Implement BR/mm-3 and BR/mm-4.	Less than significant with mitigation (short-term)
Based on the location and size of the project, and implementation of recommended mitigation measures, the project would not have any significant residual direct or indirect adverse impacts to sensitive biological resources, including special-status species, habitats, and wildlife. The site is not within a designated ESHA. The project would not significantly contribute to the loss of species or sensitive habitat. Therefore, potential cumulative impacts would be less than significant (Class III).	Implement BR mm/1 through BR/mm-9	Less than significant (short-term and long-term)
Cultural Resources		
The project site is located within a culturally sensitive region; however, the field studies and background research conducted by the applicant's consultant and EIR archaeologist did not identify the presence of any significant cultural resources within the project site. As with any ground disturbing activities, the potential for encountering previously undocumented cultural resources exists. In the event of inadvertent discovery, compliance with Section 23.05.140 of the CZLUO will be required. Potential impacts to pre-historic resources would be less than significant (Class III).	None applicable	Less than significant (short-term and long-term)
The proposed project would be located within formations that are not known to contain significant paleontological resources. Impacts to paleontological resources would be less than significant (Class III). No mitigation is required.	None applicable	Less than significant (short-term and long-term)

Impacts	Mitigation Measures	Residual Impacts
Geology and Soils		
<p>The potential for risk of landslides adversely impacting the site is considered to be low. Potential impacts related to landslides are less than significant (Class III), and no mitigation measures are necessary.</p>	<p>None applicable</p>	<p>Less than significant (short-term and long-term)</p>
<p>No known active faults trend through the property and no topographic anomalies in the area are suggestive of faulting. The potential for surface faulting and ground rupture at the site to be low. Therefore, potential impacts would be less than significant (Class III), and no mitigation measures beyond compliance with the CBC are necessary.</p>	<p>None applicable</p>	<p>Less than significant (short-term and long-term)</p>
<p>The only significant slope that would exist at the site upon completion of the project is the fill slope descending from Studio Drive to the property; however, the plans indicate this slope will be filled over and supported by retaining walls; the potential for seismically-induced landsliding is low. Therefore, potential impacts would be less than significant (Class III), and no mitigation measures are necessary.</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>
<p>GS Impact 1 The proposed residence would be exposed to the effects of liquefaction during a ground-shaking event.</p>	<p>GS/mm-1 Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which incorporate the recommendations identified in the Engineering Evaluation (Shoreline Engineering 2012) and Updated Geotechnical Investigation (GSI Soils, Inc.) dated December 27, 2011, specifically the recommendations identified in Section 5.2 – Preparation of the Building Pad, Section 5.3 – Structural Fill, Section 5.4 – Drilled Piers, Section 5.5 – Conventional Deepened Foundation, Section 5.6 – Slab Construction, and Section 5.9 – Surface and Subsurface Drainage.</p>	<p>Less than significant with mitigation (long-term)</p>
<p>GS Impact 2 The proposed residence would be exposed to the effects of ground lurching and differential compaction during a ground-shaking event.</p>	<p>GS/mm-2 Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which incorporate the recommendations identified in the Updated Geotechnical Investigation (GSI Soils, Inc.) dated December 27, 2011, and specifically the following:</p> <ol style="list-style-type: none"> a. All surface and subsurface deleterious materials shall be removed from the proposed building area and disposed of 	<p>Less than significant with mitigation (long-term)</p>

Impacts	Mitigation Measures	Residual Impacts
	<p>offsite. This includes, but is not limited to, any buried utility lines, loose fills, debris, building materials, and any other surface and subsurface structures.</p> <p>b. Voids left from site clearing shall be cleaned and backfilled as recommended for structural fill.</p> <p>c. Once the site has been cleared, the exposed ground surface shall be stripped to remove surface vegetation and organic soil.</p>	
<p>Based on the proposed foundation design, site grading, and confined condition of the sands near the center of the building pad, the potential for lateral spreading displacements would be negligible (GSI Soils, Inc. 2011). Therefore, based on the design of the project, potential impacts would be less than significant (Class III), and no mitigation beyond compliance with the CBC is necessary.</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>
<p>Due to the limited depth of sand (approximately 6 feet) within the building pad area, dry settlements of these sands during seismic ground shaking is expected to be less than 0.5 inch. With the proposed grading, these settlements are anticipated to be less than 0.25 inch (GSI Soils, Inc. 2011). Therefore, potential impacts would be less than significant (Class III), and no mitigation beyond compliance with the CBC is necessary.</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>
<p>GS Impact 3 Grading and excavation required for the construction of the project would result in significant, short-term, adverse impacts related to erosion and down-gradient sedimentation.</p>	<p>Implement BIO/mm-4, BIO/mm-5, and BIO/mm-6.</p>	<p>Less than significant with mitigation (short-term)</p>
<p>In the long term, the project would not create any changes that would result in significant soil erosion. The proposed drainage plan includes stormwater diffusers to slow down runoff during rain events and minimize the potential for storm-related beach erosion. Therefore, potential long-term impacts would be less than significant (Class III), and no mitigation beyond compliance with existing regulations is necessary.</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>

Impacts	Mitigation Measures	Residual Impacts
<p>GS Impact 4 The creation of steep cut slopes during site preparation and grading associated with construction of the proposed residence would result in short-term slope instability.</p>	<p>GS/mm-3 Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which incorporate the following: recommendations for slope stability identified in the Updated Geotechnical Investigation (GSI Soils, Inc.), dated December 27, 2011, specifically the recommendations identified in Section 5.10 – Temporary Excavations and Slopes; and Shoring Detail prepared by Shoreline Engineering (January 2012, updated September 20, 2012).</p>	<p>Less than significant with mitigation (short-term)</p>
<p>GS Impact 5 Beach sand scour caused by heavy surf may periodically and temporarily create unstable slopes adjacent to the proposed residence.</p>	<p>GS/mm-4 Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which include the use of deepened pier foundations identified in the Engineering Evaluation (Shoreline Engineering, Inc.), dated January 2012, and Updated Geotechnical Investigation (GSI Soils, Inc.), dated December 27, 2011, specifically the recommendations identified in Section 5.2 – Preparation of Building Pad, Section 5.4 – Drilled Piers, and Section 5.5 – Conventional Deepened Foundation.</p>	<p>Less than significant with mitigation (long-term)</p>
<p>Based on the location, size, and design of the project, it would not significantly change the rates of soil absorption or amount and direction of surface runoff. Therefore, potential impacts would be less than significant (Class III), and no mitigation beyond compliance with existing regulations is necessary.</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>
<p>GS Impact 6 The proposed residence would be constructed on soils with a high expansion potential, resulting in a potentially significant long-term impact.</p>	<p>GS/mm-5 Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which incorporate the recommendations identified in the Updated Geotechnical Investigation (GSI Soils, Inc.), dated December 27, 2011, specifically the recommendations identified in Section 5.1 – Clearing and Stripping, Section 5.2 – Preparation of Building Pad, and Section 5.3 – Structural Fill.</p>	<p>Less than significant with mitigation (long-term)</p>
<p>GS Impact 7 The proposed stormwater drainage plan may result in erosion down-gradient of the proposed drain outlet.</p>	<p>GS/mm-6 Prior to issuance of grading and construction permits, the applicant shall submit a drainage plan for review and approval by the County Department of Public Works. The drainage plan shall be coordinated with the sedimentation and erosion control plan, be consistent with CZLUO §23.050.036</p>	<p>Less than significant with mitigation (long-term)</p>

Impacts	Mitigation Measures	Residual Impacts
	and 040, and specifically include engineered energy dissipators and controls that would limit peak runoff to pre-development levels.	
<p>Potential impacts related to geologic, soils, and seismic hazards are all site-specific, and mitigation measures are applied to each project to minimize the potential for significant geologic impacts. All development projects are required to comply with State and local regulations regarding grading and construction; therefore, no cumulative impacts related to these issues have been identified. Implementation of mitigation measures identified above, and compliance with existing regulations would mitigate impacts to less than significant (Class III), and no additional measures are necessary.</p>	None applicable	Less than significant (short-term and long-term)
<p>Hazards and Hazardous Materials</p>		
<p>Due to the type of project proposed, and lack of hazards or hazardous materials within or near the project site, construction and operation of the project would not contribute to environmental impacts related to hazards. Cumulative impacts would be less than significant (Class III). No additional mitigation is required.</p>	None applicable	Less than significant (short-term and long-term)
<p>Noise</p>		
<p>N Impact 1 Construction of the proposed project would potentially expose people to transportation-related noise levels that exceed the County Noise Element thresholds.</p>	<p>N/mm-1 Upon application for building permits, the project applicant shall include in the project design the following standard mitigation measures for interior noise mitigation provided in the Noise Element for levels in the 60-65 dBA range:</p> <ul style="list-style-type: none"> a. Air conditioning or a mechanical ventilation system; b. Windows and sliding glass doors mounted in low air infiltration rate frames (0.5 cubic feet per minute or less, per American National Standards Institute [ANSI] specifications); and, c. Solid core exterior doors with perimeter weather stripping and threshold seals. 	Less than significant with mitigation (long-term)

Impacts	Mitigation Measures	Residual Impacts
<p>The project would also generate construction-related noise and vibration associated with construction and development of the structure. However, the project does not propose any significant sources of man-made vibration (i.e., sonic booms, blasting, pile driving, pavement breaking, and demolition). Per the County's Land Use Ordinance, §23.06.042d, construction noise between the hours of 7:00 a.m. and 9:00 p.m. on Mondays through Fridays, and 8:00 a.m. and 5:00 p.m. on Saturdays and Sundays, is exempt from control or mitigation. This type of noise is considered a short term impact and less than significant (Class III). Therefore, the project is not expected to expose people to severe noise or vibration, or to result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity.</p>	<p>None applicable</p>	<p>Less than significant (short-term)</p>
<p>Recreation</p>		
<p>The project proposes the development of one single-family residence in an existing developed residential area, and would not create a significant increase in the use or demand of recreational areas or facilities. The project applicant will pay all applicable public facility fees to address increased demand on area recreational facilities. Therefore, potential impacts would be less than significant (Class III).</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>
<p>Transportation and Circulation</p>		
<p>The project proposes one single-family residence within an existing residential area with all roads operating at acceptable levels. While the project would add trips to the local circulation system (approximately 9.6 per day), all roads in the area are operating at acceptable levels and are capable of accommodating the small increase in trips. A referral was sent to the County Department of Public Works requesting their review of the project. They had no comments related to traffic concerns associated with the proposed project other than that an encroachment permit would be required for the new driveway. Therefore, no significant increase to local or areawide circulation systems is anticipated, and potential impacts would be less than significant (Class III).</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>

Impacts	Mitigation Measures	Residual Impacts
<p>The project includes a private driveway, which would connect to Studio Drive. Based on review by the County Department of Public Works, a standard Encroachment Permit will be required. The project does not include any features that would result in unsafe traffic conditions; therefore, potential impacts would be less than significant (Class III).</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>
<p>The project consists of a single-family residence on an existing lot. The site is accessible to emergency services by Studio Drive, which connects to Highway 1, and occupants have clear access out of the area. Potential impacts related to emergency access would be less than significant (Class III).</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>
<p>Sufficient parking for the proposed residential development is proposed at the project site, including a private driveway, carport, and garage. Therefore, potential impacts related to parking capacity would be less than significant (Class III).</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>
<p>The project is not located within two miles of a public or private airport or airstrip, and is not located at an elevation that would affect air traffic patterns. Modern solar panel technology incorporates anti-glare coatings that absorb, rather than reflect, sunlight. Therefore, the project would not affect air traffic, and potential impacts would be less than significant (Class III).</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>
<p>Population and tourism in the areas surrounding the proposed project are expected to slowly and steadily increase in the future, resulting in a corresponding steady increase in traffic, parking demands, and safety conflicts in the Cayucos area. The proposed project would contribute to cumulative traffic volumes in the area; however, because it is not resulting in an increase in residential density, the increase would be minor, and at a level anticipated in by the Estero Area Circulation Element. Therefore, potential cumulative impacts would be less than significant (Class III).</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>

Impacts	Mitigation Measures	Residual Impacts
Water		
<p>WAT Impact 1 The project would include construction activities that would require ground disturbance and use of heavy equipment, which may result in the discharge of sediment and other pollutants, potentially affecting surface water quality.</p>	<p>WAT/mm-1 Upon application for construction permits, the applicant shall submit grading and construction plans showing BMPs, and shall implement BMPs during grading and construction activities. BMPs shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> a. Erosion control barriers shall be applied, such as silt fences, hay bales, drain inlet protection, and gravel bags; b. Disturbed areas shall be stabilized with vegetation or hard surface treatments upon completion of construction in any specific area. c. All inactive disturbed soil areas are required to be stabilized with both sediment and temporary erosion control prior to the onset of the rainy season (October 15 to April 15). <p>WAT/mm-2 Prior to issuance of grading and construction permits, the applicant shall submit a copy of the RWQCB-issued stormwater construction permit. The permit shall be on-site during all major grading and construction activities.</p> <p>Implement BR/mm-1, BR/mm-5, and BR/mm-6.</p>	<p>Less than significant with mitigation (short-term)</p>
<p>The project includes improvements to the existing stormwater drain onsite. The project has been reviewed by the County Department of Public Works, and the proposed plan has been approved at a preliminary level by County staff. Stormwater currently flows into a County drain, and onto the beach via the stormwater system or surface flow. The proposed system would direct water through the project site and onto the beach. Energy dissipaters are included to slow down storm water flow and minimize the potential for erosion at the outlet. Based on the proposed plan, and compliance with existing regulations identified in the County CZLUO, potential impacts would be less than significant (Class III).</p>	<p>None applicable</p>	<p>Less than significant (short-term and long-term)</p>

Impacts	Mitigation Measures	Residual Impacts
<p>Long-term use of a single-family residence is expected to require approximately 0.270 afy, or 4,375.8 gallons/month (City of Santa Barbara 1989; County of San Luis Obispo 2011). As noted above, the project would be served by CSA 10A, which has adequate water supply to serve the project. A preliminary will-serve letter was issued for the project in 2006. Therefore, potential impacts would be less than significant (Class III).</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>
<p>Water demand for the proposed use represents a small percentage of total water demand in the Cayucos area, and the boundaries of CSA 10A (approximately 0.6%). As previously discussed, CSA 10A has available water to serve this project, in addition to others within the service area. Therefore, potential cumulative impacts would be less than significant (Class III).</p>	<p>None applicable</p>	<p>Less than significant (long-term)</p>

This page intentionally left blank

CHAPTER 1

INTRODUCTION

The County of San Luis Obispo (County), serving as the lead agency under the California Environmental Quality Act of 1970 (CEQA), has prepared this Environmental Impact Report (EIR) to assess the impacts that may result from approval of the Loperena Minor Use Permit and Coastal Development Permit (project). The project includes the construction of a 3,097-square-foot residence. The project would result in the disturbance of approximately 3,000 square feet of a 3,445-square-foot parcel. The project site is located on the southwest side of Studio Drive, approximately 250 feet south of the intersection of Studio Drive and Highway 1 in the community of Cayucos.

1.1 PURPOSE OF THE EIR

The purpose of this EIR is to identify the proposed project's significant impacts on the environment, indicate the manner in which such significant impacts would be mitigated or avoided, and identify alternatives to the proposed project that avoid or reduce these impacts. This EIR is intended to serve as an informational document for use by the County, the other responsible agencies, and the general public in their consideration and evaluation of the environmental consequences associated with the implementation of the proposed project on the environment. This document is provided to decision-makers and the public for their review and comment as required by CEQA. Under the CEQA process, an EIR must serve as a full disclosure document that enables the lead and responsible agencies to fully evaluate potential environmental impacts and the consequences of their decision on a proposed project. This EIR has been written to comply with the requirements of CEQA.

1.2 SCOPING AND NOTICE OF PREPARATION PROCESS

In compliance with CEQA Guidelines, the County has taken steps to provide opportunities to participate in the environmental process. During the environmental determination process, an effort was made to contact various federal, state, regional, and local governmental agencies and other interested parties to solicit comments and inform the public of the proposed project. This included the distribution of the Notice of Preparation (NOP) on August 7, 2009 to various agencies, organizations and interested persons throughout San Luis Obispo County and the surrounding area. The proposed project was described, the scope of the environmental review was identified, and agencies and the public were invited to review and comment on the NOP. The close of the NOP review period was September 14, 2009. Agencies, organizations, and interested parties not contacted or who did not respond to the request for comments about the project during the preparation of the Draft EIR currently have the opportunity to comment during the 45-day public review period on the Draft EIR. In addition, a scoping meeting was held at the Cayucos Veteran's Hall.

1.3 EIR CONTENTS

The scope of the EIR includes issues identified by the lead agency during the preparation of the NOP for the proposed project, as well as environmental issues raised by agencies and the general public in response to the NOP and at the scoping meeting. The EIR is divided into the following major sections:

Executive Summary. Provides a brief summary of the project background, description, impacts and mitigation measures, and alternatives.

Introduction. Provides the purpose of an EIR, as well as scope, content, and the use of the document.

Project Description. Provides the general background of the project, objectives, a detailed description of the project characteristics, and a listing of necessary permits and government approvals.

Environmental Setting. Describes the physical setting and surrounding land uses.

Environmental Impacts and Mitigation Measures. Discusses the environmental setting as it relates to the various issue areas, regulatory settings, thresholds of significance, impact assessment and methodology, project-specific impacts and mitigation measures, cumulative impacts, and secondary impacts. The EIR analyzes the potentially significant impacts to the following resource areas, as identified during the preparation of the NOP:

- Aesthetics
- Cultural Resources
- Geology and Soils/Coastal Hazards

In addition, the EIR includes a section titled “Issue Areas with Less than Significant Impacts, which evaluates the impacts to the following resource areas:

- Agricultural Resources
- Air Quality/Climate Change
- Biological Resources
- Hazardous Materials
- Noise
- Population and Housing
- Public Services/Utilities
- Recreation
- Transportation and Circulation
- Water Quality
- Land Use

Alternatives. Summarizes the environmental advantages and disadvantages associated with the project and alternatives. As required, the “No Project” alternative is included among the alternatives considered. An “Environmentally Superior Alternative,” is identified.

Environmental Analysis. Identifies growth-inducing impacts and includes a discussion of long-term/short-term productivity and irreversible environmental changes.

Mitigation Monitoring and Reporting Plan. This section contains a matrix of all mitigation measures contained in the EIR, the requirements of the mitigation measures, the applicant’s responsibility and timing for implementation of these measures, the party responsible for verification, the method of verification, and verification timing.

1.4 PROJECT SPONSORS

Lead Agency: County of San Luis Obispo
Department of Planning and Building
County Government Center, Room 300
San Luis Obispo, CA 93408

Ms. Ryan Hostetter, Project Manager

Project Applicant: Mr. Jack Loperena
2764 West Athens
Fresno, CA 93711

Ms. Cathy Novak, Project Representative

Environmental Consultant: SWCA Environmental Consultants
1422 Monterey Street, Suite C200
San Luis Obispo, CA 93401

Ms. Shawna Scott, Project Manager

1.5 REVIEW OF THE DRAFT EIR

This Draft EIR was distributed to responsible and trustee agencies, other affected agencies, surrounding cities, interested parties, and all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3). The Notice of Completion and Notice of Availability of the Draft EIR was also distributed as required by CEQA. During this 45-day period, the EIR and all technical appendices are available for review at the following locations:

County of San Luis Obispo	San Luis Obispo City/County Library
Environmental Coordinator's Office	995 Palm Street
County Government Center Room 200	San Luis Obispo, CA 93401
San Luis Obispo, CA 93408	

On behalf of the lead agency, comments on the Draft EIR shall be addressed to:

Ms. Ryan Hostetter
County of San Luis Obispo
Department of Planning and Building
County Government Center Room 200
San Luis Obispo, CA 93408

The public review period is 45 days. Written responses to all significant environmental issues raised will be prepared and included as part of the Final EIR and the environmental record for consideration by decision-makers for the project.

1.6 COMMONLY USED ACRONYMS

The following acronyms are used extensively in the EIR. The acronyms are spelled out the first time they are used in the EIR, but are also provided in Table 1-1 below.

Table 1-1. Commonly Used Acronyms

Acronym	Term
AB 32	Assembly Bill 32
ACES	Automated Coastal Engineering System
af	artificial fill
afy	acre-feet per year
ANSI	American National Standards Institute
AS	Archaeologically Sensitive
Basin Plan	Water Quality Control Plan for the Central Coast Region
BMPs	best management practices
C5	Central Coast Clean Cities Coalition
CalEPA	California EPA
California CAA	California Clean Air Act
Caltrans	California Department of Transportation
CAO	Cleanup and Abatement Order
CAP	Clean Air Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCA	California Coastal Act
CCCP	California Climate Change Portal
CCIC	Central Coast Information Center
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDIP	Coast Data Information Program
CDMG	California Division of Mines and Geology
CDO	Cease and Desist Order

Table 1-1. Commonly Used Acronyms

Acronym	Term
CDP	Coastal Development Permit
CDWR	California Department of Water Resources
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH ₄	methane
CHRIS	California Historical Resources Information System
cm	centimeter
CNDDB	California Natural Diversity Database
CO ₂	carbon dioxide
COSE	Conservation and Open Space Element
County	County of San Luis Obispo
County Parks	County of San Luis Obispo Division of Parks and Recreation
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CSA	County Service Area
CWC	California Water Code
CZLUO	Coastal Zone Land Use Ordinance
dB	Decibels
dBA	A-weighted decibels
DHS	California Department of Health Services
DOC	California Department of Conservation
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESA	Federal Endangered Species Act

Table 1-1. Commonly Used Acronyms

Acronym	Term
ESHA	Environmentally Sensitive Habitat Area
Federal CAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
GHG	greenhouse gas(es)
GIS	Geographic Information System
GSA	Geologic Study Area
HFCs	hydrofluorocarbons
IBC	International Building Code
LCP	Local Coastal Program
LID	Low Impact Development
LOS	levels of service
LUE	Land Use Element
LUFT	Leaking Underground Fuel Tank
MBTA	Migratory Bird Treaty Act of 1918
mgd	million gallons per day
MMtCO ₂ e	million metric tons of CO ₂ equivalent
MND	Mitigated Negative Declaration
MRMWC	Morro Rock Mutual Water Company
MUP	Minor Use Permit
N ₂ O	nitrous oxide
NAHC	Native American Heritage Commission
NAVD88	North American Vertical Datum of 1988
NHPA	National Historic Preservation Act of 1966
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries	NOAA National Marine Fisheries Service
NOP	Notice of Preparation

Table 1-1. Commonly Used Acronyms

Acronym	Term
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OES	Office of Emergency Services
°F	degrees Fahrenheit
OHP	Office of Historic Preservation
PE	Professional Engineer
PFCs	perfluorocarbons
PGA	peak horizontal ground accelerations
PM ₁₀	respirable particulate matter
PRBWA	Paso Robles Beach Water Association
PRC	Public Resources Code
PSHA	Probabilistic Seismic Hazard Analysis
REC	Recreation land use category
ROG	reactive organic gas
RR	Residential Rural land use category
RSF	Residential Single Family land use category
RWQCB	Regional Water Quality Control Board
SB 18	Senate Bill 18
SB 7	SBx7-7
SCCAB	South Central Coast Air Basin
SF ₆	sulfur hexafluoride
SLCUSD	San Luis Coastal Unified School District
SLOAPCD	San Luis Obispo County Air Pollution Control District
SLOCOG	San Luis Obispo Council of Governments
SO ₂	sulfur dioxide
SOP	Standard Operating Procedure
SRA	Sensitive Resource Area

Table 1-1. Commonly Used Acronyms

Acronym	Term
State Parks	State of California Department of Parks and Recreation
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCP	Transportation Choices Program
UBC	Uniform Building Code
UO ₂	uranium dioxide
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WDR	Waste Discharge Report

CHAPTER 2

PROJECT DESCRIPTION

The applicant, Mr. Jack Loperena (landowner) and architect, Mr. James Maul, request a Minor Use Permit / Coastal Development Permit (MUP/CDP) to allow for the construction of a single-family residence. A description of the project location, project history, and project elements are provided within this chapter, discussed in the sections below.

2.1 GENERAL BACKGROUND

2.1.1 Project Location

The project site is located in the unincorporated community of Cayucos, within San Luis Obispo County, California (refer to Figure 2-1). The project site is located adjacent to State of California Department of Parks and Recreation (State Parks) property on the northern end of Studio Drive, approximately 250 feet south of the intersection of Studio Drive and Highway 1 (refer to Figure 2-2). The project site consists of a single 3,445-square-foot parcel (Assessor Parcel Number 064-253-007).

2.1.2 Project Background

The applicant submitted an application for a MUP/CDP in May of 2006. At the time, the environmental document prepared and issued by the County was a Mitigated Negative Declaration (MND) (August 9, 2007). A Planning Department Hearing was scheduled for August 17, 2007, to consider the proposed project and MND. At the hearing, staff requested a continuance until September 21, 2007 because the MND had been re-issued and re-noticed, and required a 30-day public review period. On August 23, 2007, County staff received a Request for Review of the MND, and requested that the project be continued off calendar to address issues raised in the Request for Review. Based on the comments included in the Request for Review, County staff consulted with County experts in geology, cultural resources, emergency services, air quality, and public works and drainage. Information and data obtained from County experts were incorporated into an amended MND, which was re-circulated for public review (April 2, 2009). A Planning Department Hearing was scheduled for May 15, 2009. A Request for Review of the amended MND was received by County staff on April 16, 2009, and County staff requested that the project be continued off calendar a second time.

Based on the issues raised in the April 2009 Request for Review, the County Environmental Coordinator determined that a fair argument was raised regarding the significance of potential environmental impacts. Upon consideration of these issues, the applicant proposed that an EIR be prepared for the proposed project.

2.2 PROJECT OBJECTIVES

The objectives of the project are to:

- Develop a single-family residence on Studio Drive, within an existing, developed, single-family residential neighborhood;
- Allow development consistent with the County General Plan and Local Coastal Program
- Provide coastal access

Figure 2-1. Project Vicinity Map



Figure 2-2. Project Location Map



In addition, the applicant provided the following project objectives:

- Reduce visual impacts by design;
- Avoid development on the sandy beach and minimize site grading and disruption of the natural contours; and,
- Incorporate green building considerations into the design, and maximize exposure for solar panels.

2.3 PROPOSED PROJECT

The applicant proposes to grade for and construct a 3,097-square-foot residence (refer to Figure 2-3), including approximately:

- 1,097 square feet of main floor living space
- 1,040-square-foot basement
- 338-square-foot mezzanine
- 242-square-foot garage and 200 square foot carport; and,
- 180-square-foot covered deck.

The residence would consist of one main floor and a basement (refer to Figures 2-4a-d, 2-5, and 2-6). The footprint of the house would be 1,040 square feet. The maximum width of the structure would be 18 feet, and the maximum length would be 95 feet. A paved driveway would provide access from Studio Drive. The maximum height of the residence would be 15 feet above the centerline elevation of Studio Drive (refer to Figure 2-5). The basement would be located below the elevation of Studio Drive. The applicant proposes a cantilevered design, which would be elevated above the sandy beach. This portion would include approximately 325 square feet of living space and a covered deck.

The residence would be constructed on a structural mat slab supported on deepened/deadman footings and/or drilled piers. The footing on the east side of the residence would extend the full width of the structure (18 feet), and be 6 to 8 feet deep and 18 feet long. The purpose of the deadman footings will be to resist the cantilever loading of the west side of the residence, which would extend 28 feet over the sand. The mat slab would be located at basement level (15 feet above mean sea level) (refer to Figures 2-5, 2-6, and 2-7a-b). Cuts varying from approximately 5 feet on the north side of the pad to 12 feet on the south side are anticipated. Temporary excavation support would be provided by steel soldier beams installed in drilled holes filled with lean concrete. The soldier beams would be lagged with steel plates to provide support during construction. The soldier beams and lagging would be removed once the excavated area is backfilled. The exterior walls of the structure would be concrete and would retain soils along the southern, eastern, and northern sides of the residence. Retaining walls will also be constructed adjacent to Studio Drive with continuous footings extending into the underlying bedrock materials.

A photo-voltaic system would provide electricity for the residence, including 1,400 square feet of solar panels to be located on the south-facing slopes of the roof. Light tubes would be installed to allow outside light to filter through to the basement.

2.3.1 Design

The overall design of the residence would be modern style. Proposed exterior colors would include tans, browns, dark purple, and grays. Proposed materials would consist of glass panels, concrete, and cedar siding in sections.

The applicant originally proposed a 6.5-foot-tall wooden fence along the northern edge of the property with the intention of shielding views of the basement from Studio Drive and the adjacent beach area to the north. The applicant investigated use of vines or other vegetation to be installed on the fence; however, the applicant found that there are no suitable drought tolerant, native vines or plant materials appropriate for this location and purpose. Therefore, the applicant currently proposes a 6.5-foot-tall wall that incorporates a design or pattern, such as concrete with a patterned in-lay design, stucco with a patterned design or a stone veneer. The retaining wall would be constructed along the northern property boundary, ranging from an elevation of 28.5 feet to 22.5 feet, and a height of 6.5 feet above natural grade (for reference, the basement finished floor elevation would be 15 feet and the main level finished floor would be at the 26-foot elevation). At the northern corner of the parcel, the stepped wall would approximately match the grade of Studio Drive.

Approximately 238 square feet of landscaping is proposed, including hardscape and private walkways along the northern side of the residence. Potted plants would be located along the walkways and front entry. Existing iceplant, grasses, a small pine tree, and stepping stones would be removed during grading activities. The southern side yard and an existing mature cypress tree, rock, and flat sandy beach in the southwestern portion of the parcel would remain. No landscaping is proposed along the beachside of the property.

2.3.2 Grading Estimates

Grading activities would disturb approximately 3,000 square feet of the 3,445-square-foot parcel, including 400 cubic yards of cut (foundation) and 150 cubic yards of fill (driveway). The average depth of cut would be 5 feet (minimum 1 foot, maximum 12 feet). Approximately 250 cubic yards of soil would be exported offsite.

2.3.3 Drainage Plan

Proposed drainage plans include removal of an existing overside drain and construction of a new storm drain system including an overside drain with a fossil filter, stormwater inlet, and stormwater outlet with energy dissipators. Stormwater would flow from the outlet in a northwesterly direction offsite (refer to Figure 2-3).

A concrete deck would be constructed over the new pipe system to allow entry to the property. Rainfall from the roof would be collected by a gutter system and facilitated to an underground holding tank below the driveway grade. Captured runoff would be used as gray water for toilet flushing and landscape watering. Runoff would be piped and directed westward to exit onto the beach.

2.3.4 Services and Utilities

An existing high pressure gas main would be re-routed so that no structures are located over the top of the pipeline. The proposed residence would be served by the County Service Area 10A for water supply and Cayucos Sanitary District for wastewater collection, treatment, and disposal. Cayucos Fire would provide fire protection.

Figure 2-3. Project Site Plan

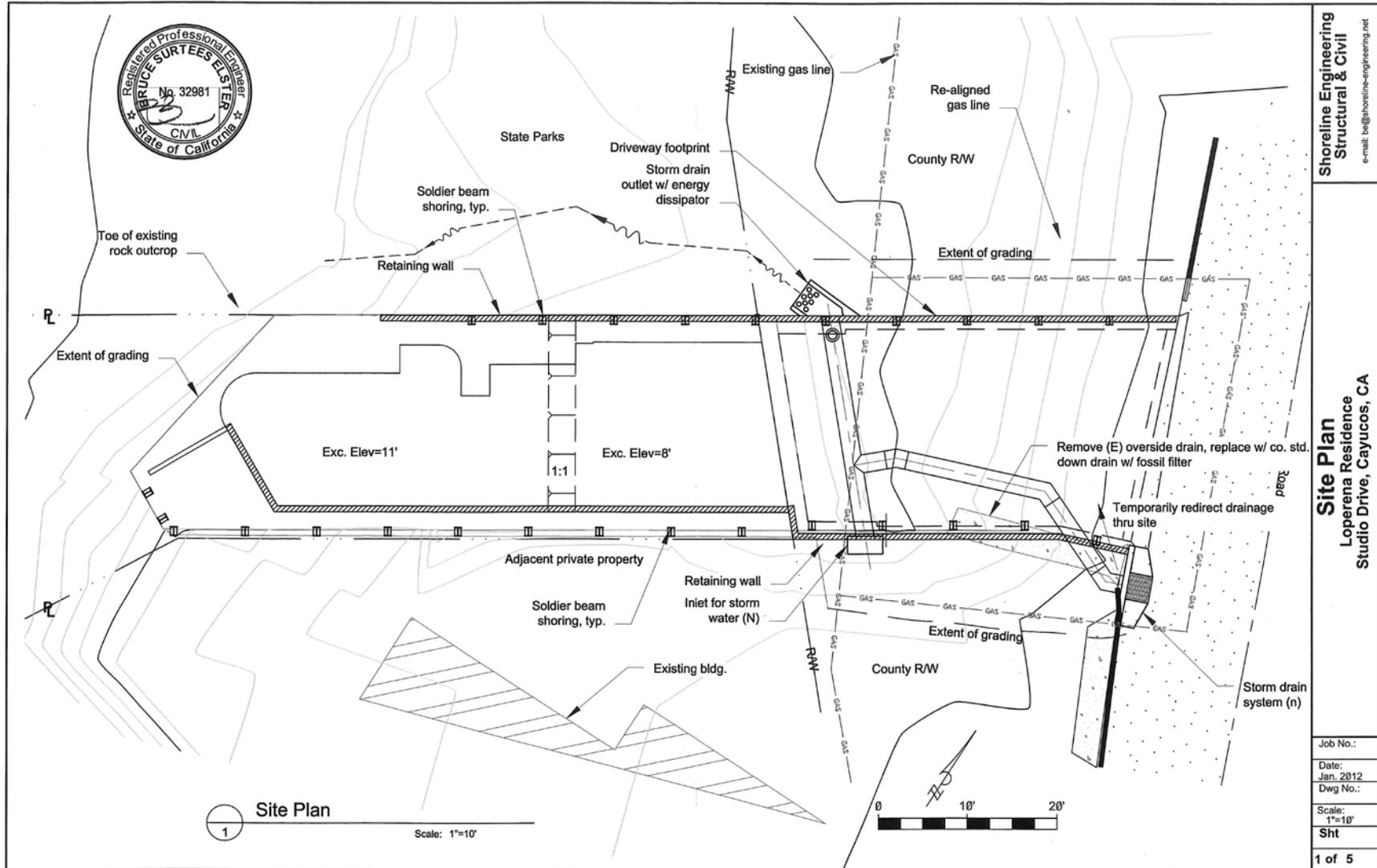


Figure 2-4a. Project Floor Plans

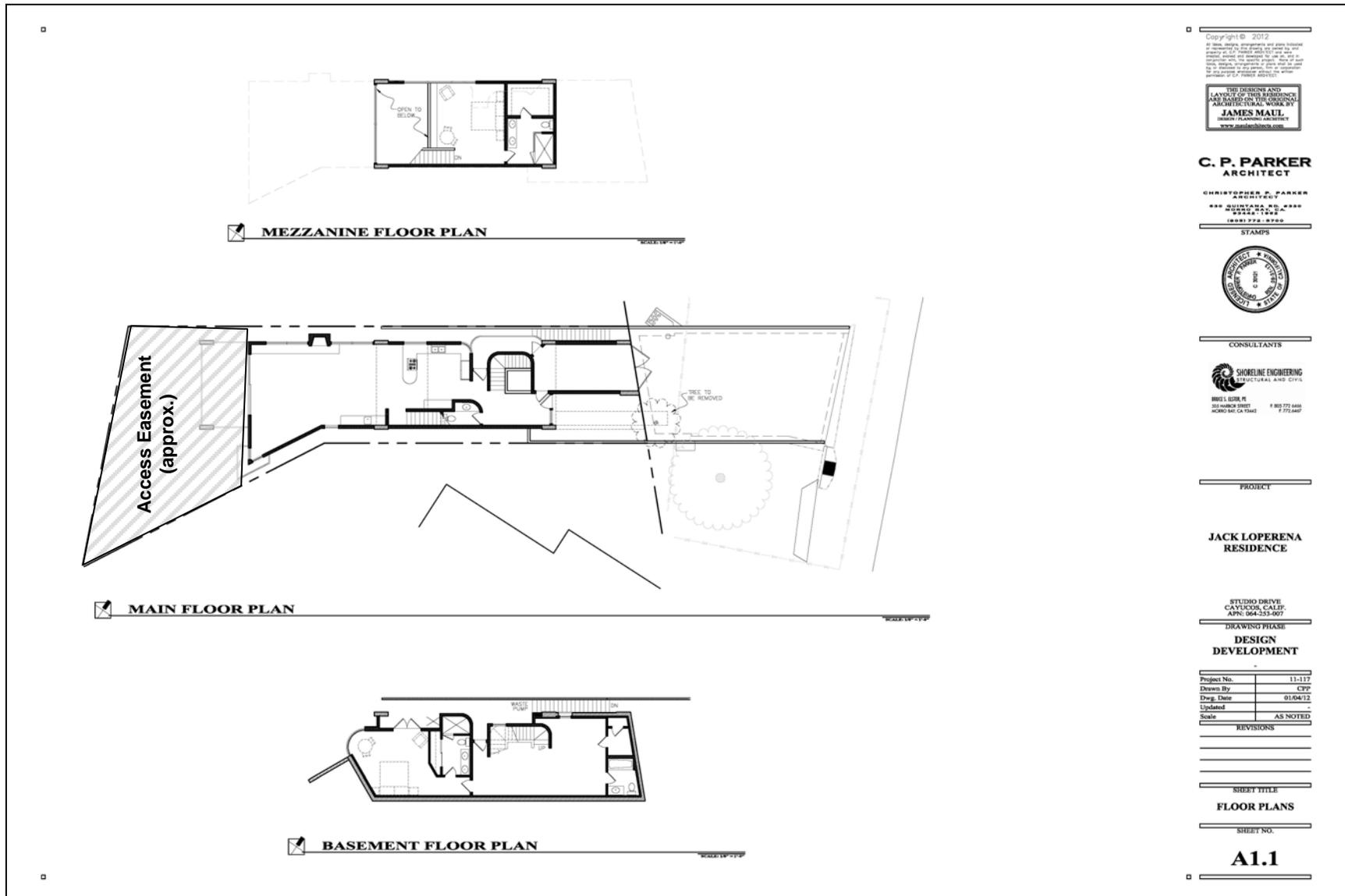


Figure 2-4b. Project Floor Plans

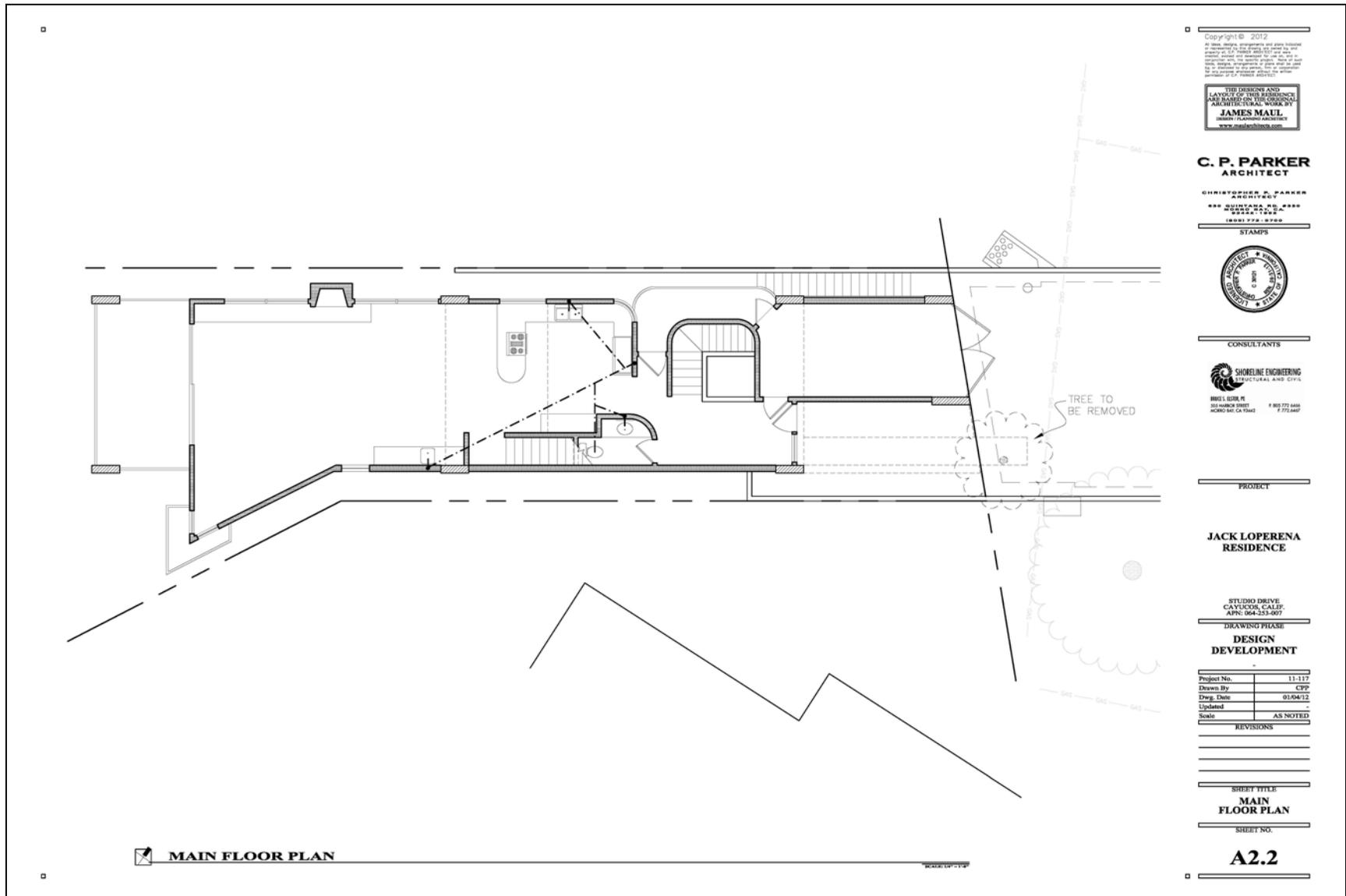


Figure 2-4c. Project Floor Plans

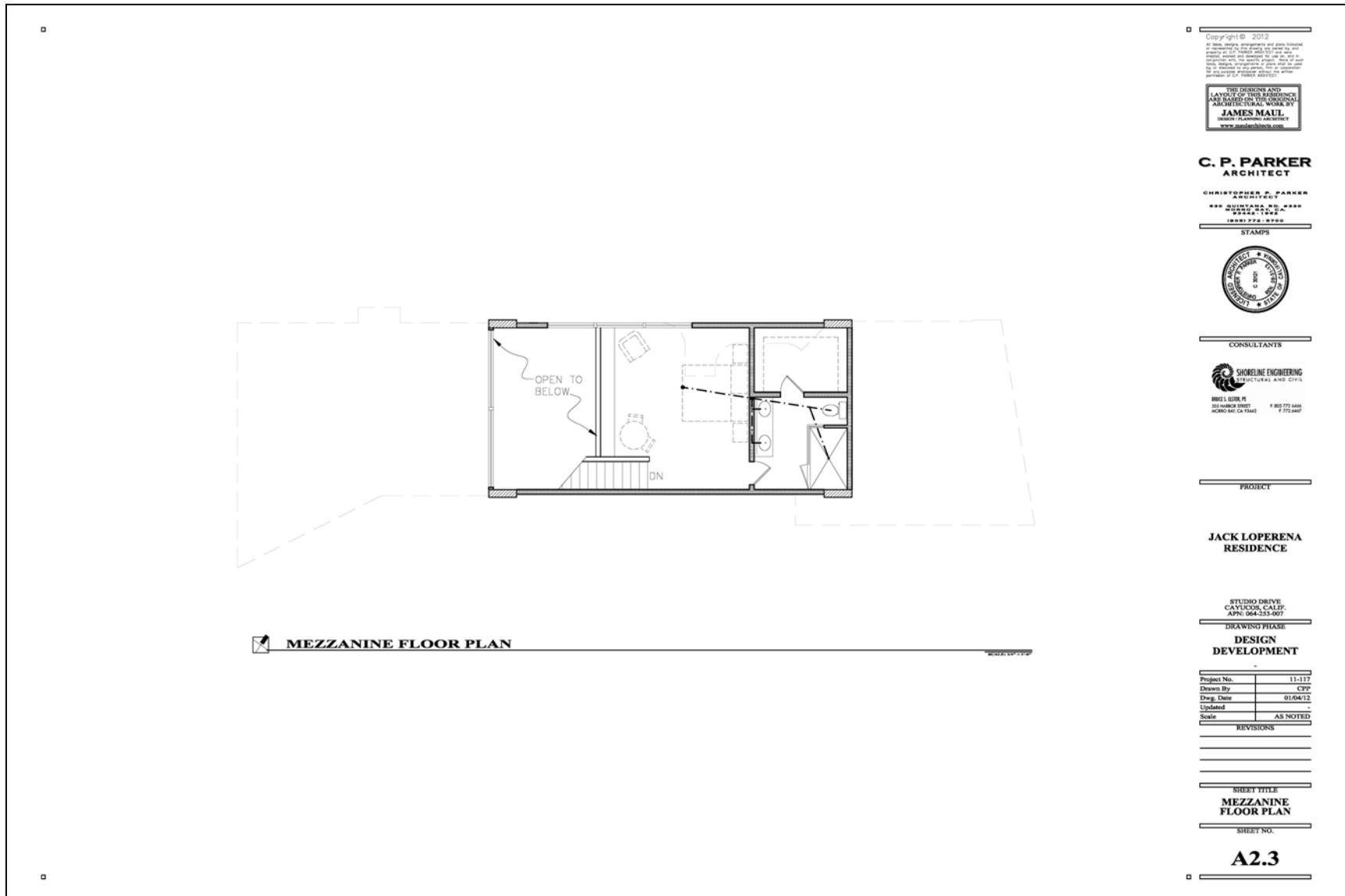
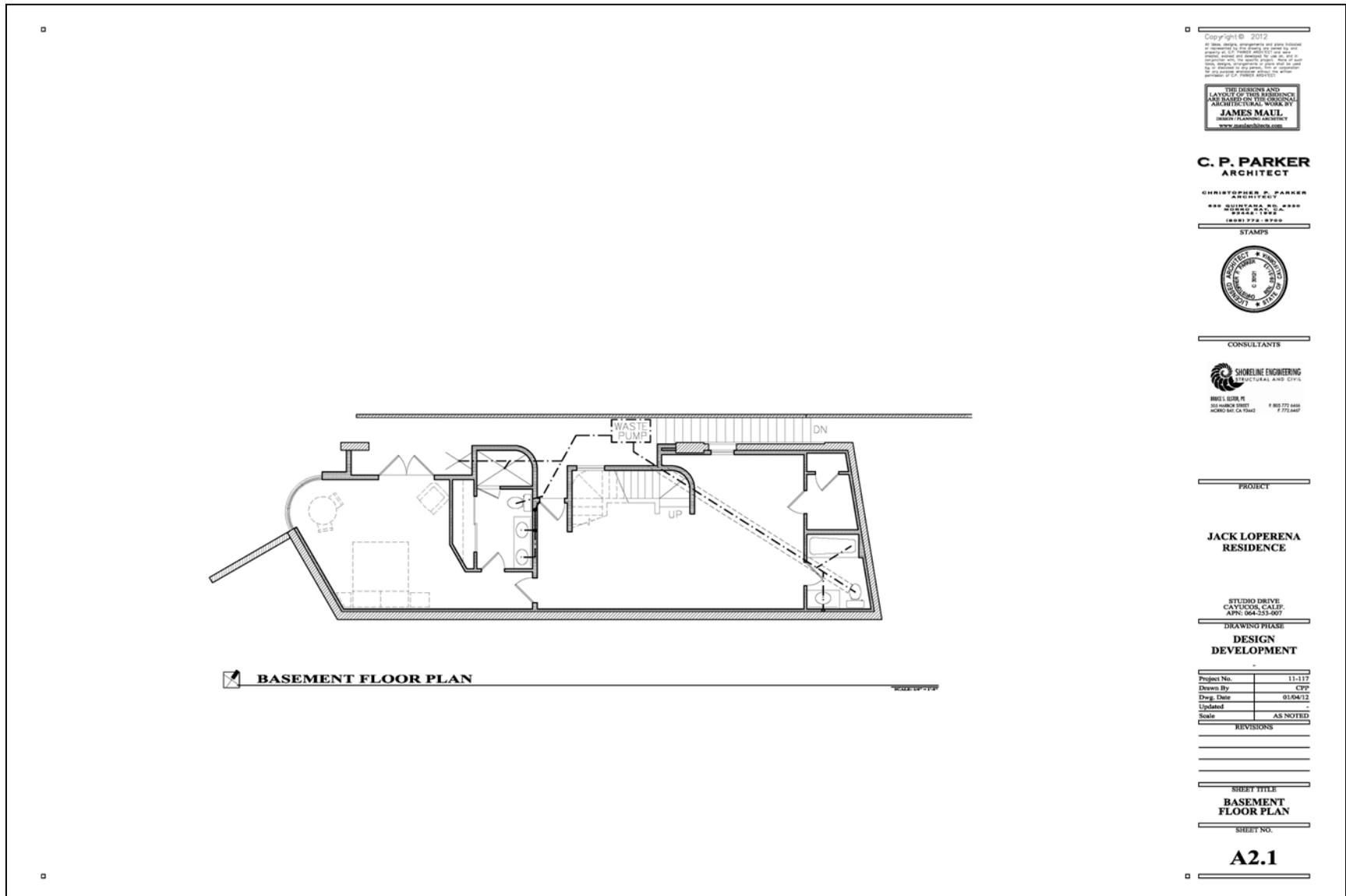


Figure 2-4d. Project Floor Plans



Copyright © 2012
 All ideas, designs, arrangements and plans herein are the property of the Architect and shall remain the property of the Architect and shall not be used for any other project without the written consent of the Architect. This drawing is not to be used for any other project without the written consent of the Architect.

THE DESIGN AND LAYOUT OF THIS RESIDENCE ARE BASED ON THE PROFESSIONAL ARCHITECTURAL WORK BY
JAMES MAUL
 LICENSED PROFESSIONAL ARCHITECT
 www.jamesmaul.com

C. P. PARKER
 ARCHITECT

CHRISTOPHER P. PARKER
 ARCHITECT
 333 SULLY ROAD, SUITE 100
 SHERMAN OAK, CALIFORNIA 91764
 (909) 772-8700



CONSULTANTS

SHORELINE ENGINEERING
 STRUCTURAL AND CIVIL
 11611 S. GARDEN ST.
 SUITE 100
 GARDEN GROVE, CA 92647
 P: 949-441-1400
 F: 949-441-1407

PROJECT

JACK LOPERENA
 RESIDENCE

STUDIO DRIVE
 CAVEWOOD, CALIF.
 APN: 064-333-007

DRAWING PHASE
DESIGN
DEVELOPMENT

Project No.	11-117
Drawn By	CFP
Draw Date	01/04/12
Updated	
Scale	AS NOTED

REVISIONS

SHEET TITLE
BASEMENT
FLOOR PLAN

SHEET NO.
A2.1

Figure 2-5. Project Elevations

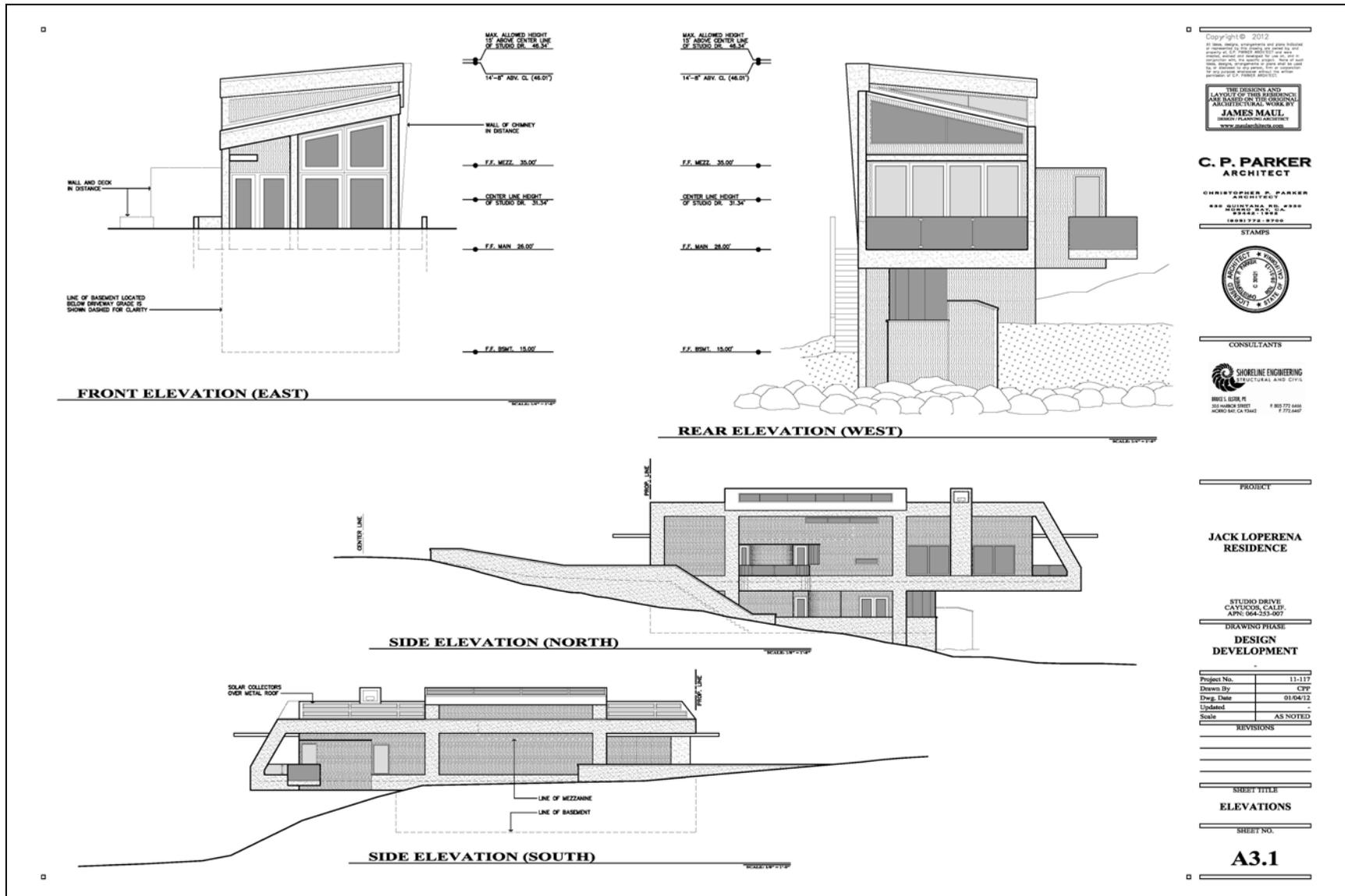


Figure 2-6. Sections

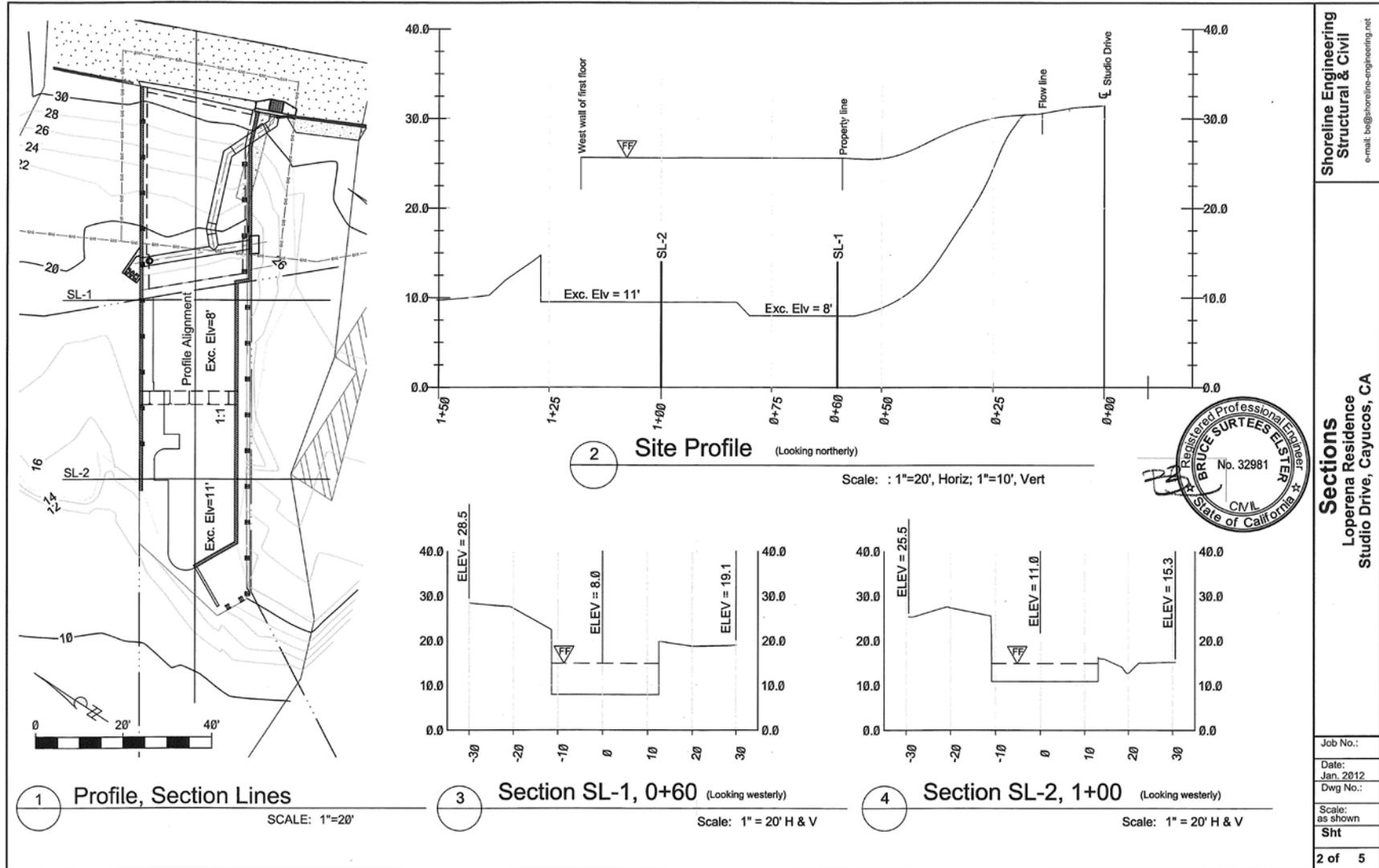
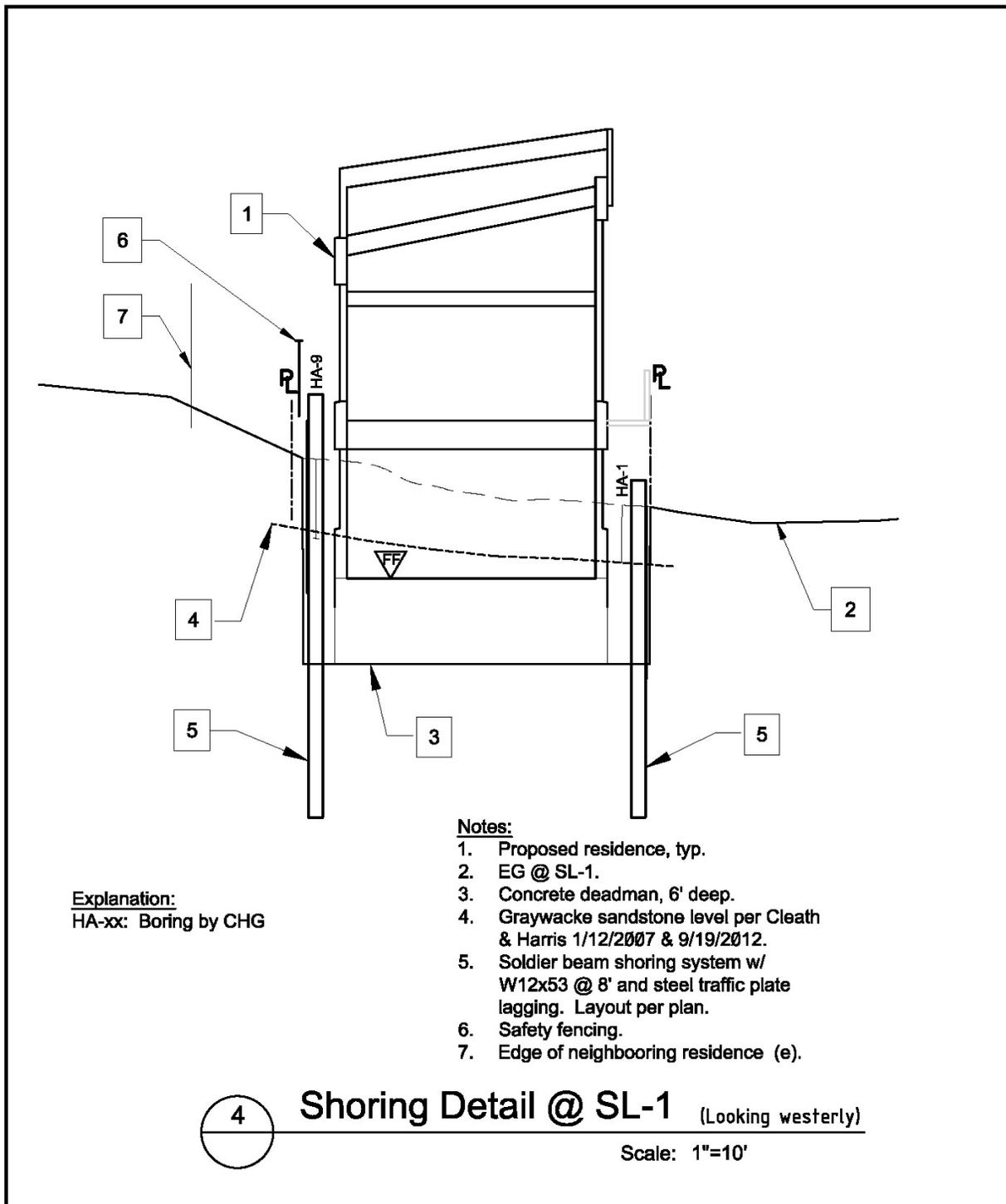


Figure 2-7a. Shoring Detail

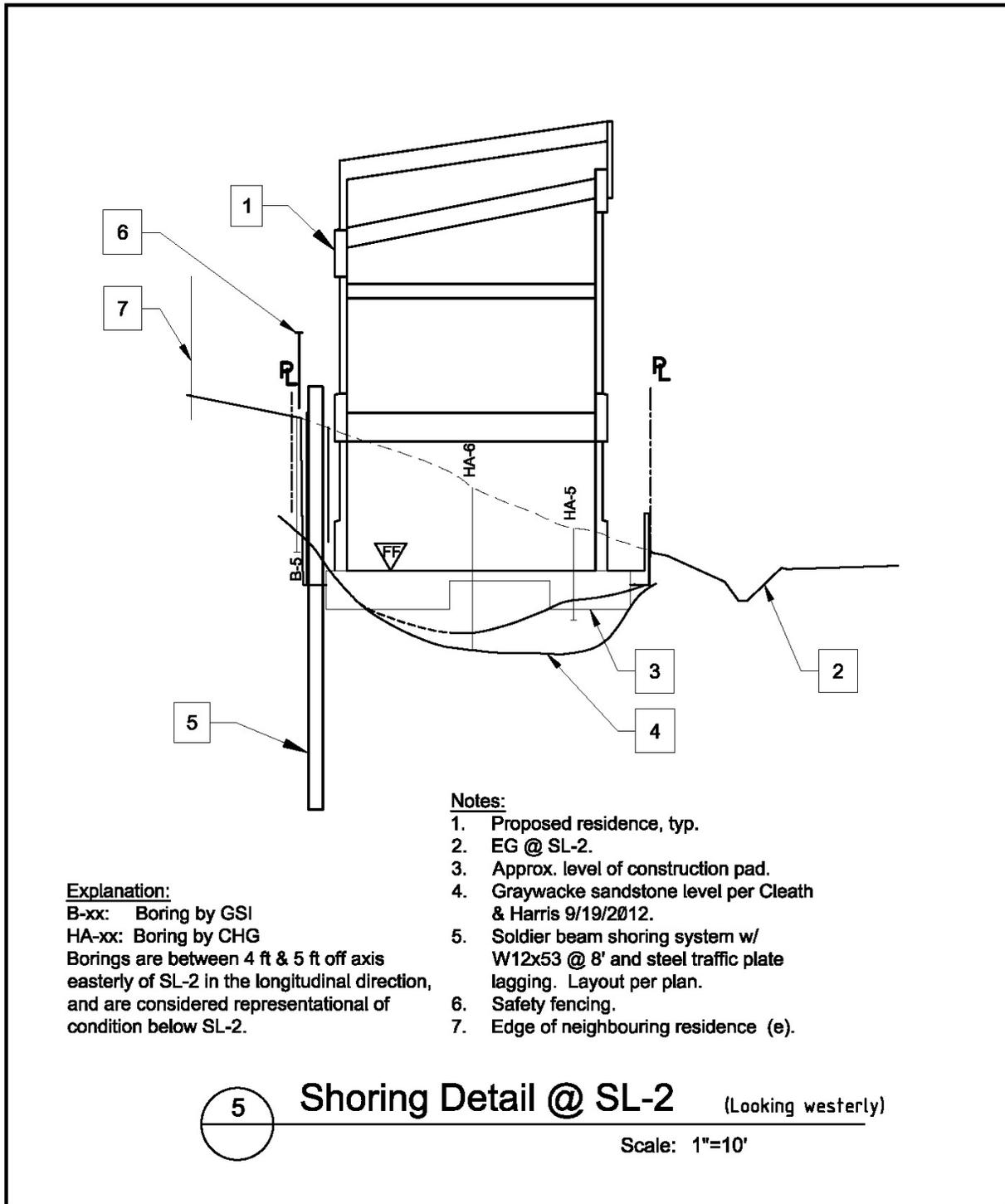


Shoreline Engineering
Structural & Civil
505 Harbor Street
Morro Bay, CA 93442
(805) 772-6466 v
(805) 772-6467 f
be@shoreline-engineering.net

Shoring Detail
Loperena Residence
Studio Drive, Cayucos, CA

Job No.: 293-02	Dwg No.: —	Scale: 1"=10'
Sht 4 of 5		
Date: Jan 2012		

Figure 2-7b. Shoring Detail



Shoreline Engineering
 Structural & Civil

505 Harbor Street
 Morro Bay, CA 93442
 (805) 772-6466 v
 (805) 772-6467 f
 be@shoreline-engineering.net

Shoring Detail

Loperena Residence
 Studio Drive, Cayucos, CA

Job No.: 293-02	Dwg No.: —	Scale: 1"=10'
--------------------	---------------	------------------

Sht 5 of 5

Date: Jan 2012

CHAPTER 3

ENVIRONMENTAL SETTING

This chapter of the EIR addresses the project area's environmental setting and existing and designated land uses in the project area, and provides an overview of relevant lands use plans and a policy consistency analysis. Also included in this chapter is a discussion of the cumulative development scenario.

3.1 EXISTING CONDITIONS

3.1.1 Physical Setting

The project site consists of a 3,445-square-foot parcel, and is located in the unincorporated community of Cayucos, within San Luis Obispo County, California. The project site is located adjacent to State Parks property on the northern end of Studio Drive, approximately 250 feet southwest of the intersection of Studio Drive and Highway 1. The project site is located within the Residential Single Family (RSF) land use category. Properties to the south are also in the RSF category, and are developed with single-family residences. State Parks land to the north and west of the project site is within the Recreation (REC) land use category, and supports public beach uses including a public parking area. Land to the immediate east of Studio Drive is within California Department of Transportation (Caltrans) jurisdiction, and includes Highway 1 and its associated right-of-way. Property to the east of Highway 1 is within the Residential Rural (RR) and RSF land use categories, and supports residential development. Coastal access is provided at the State Parks public parking area to the north, and coastal access paths throughout the Studio Drive neighborhood.

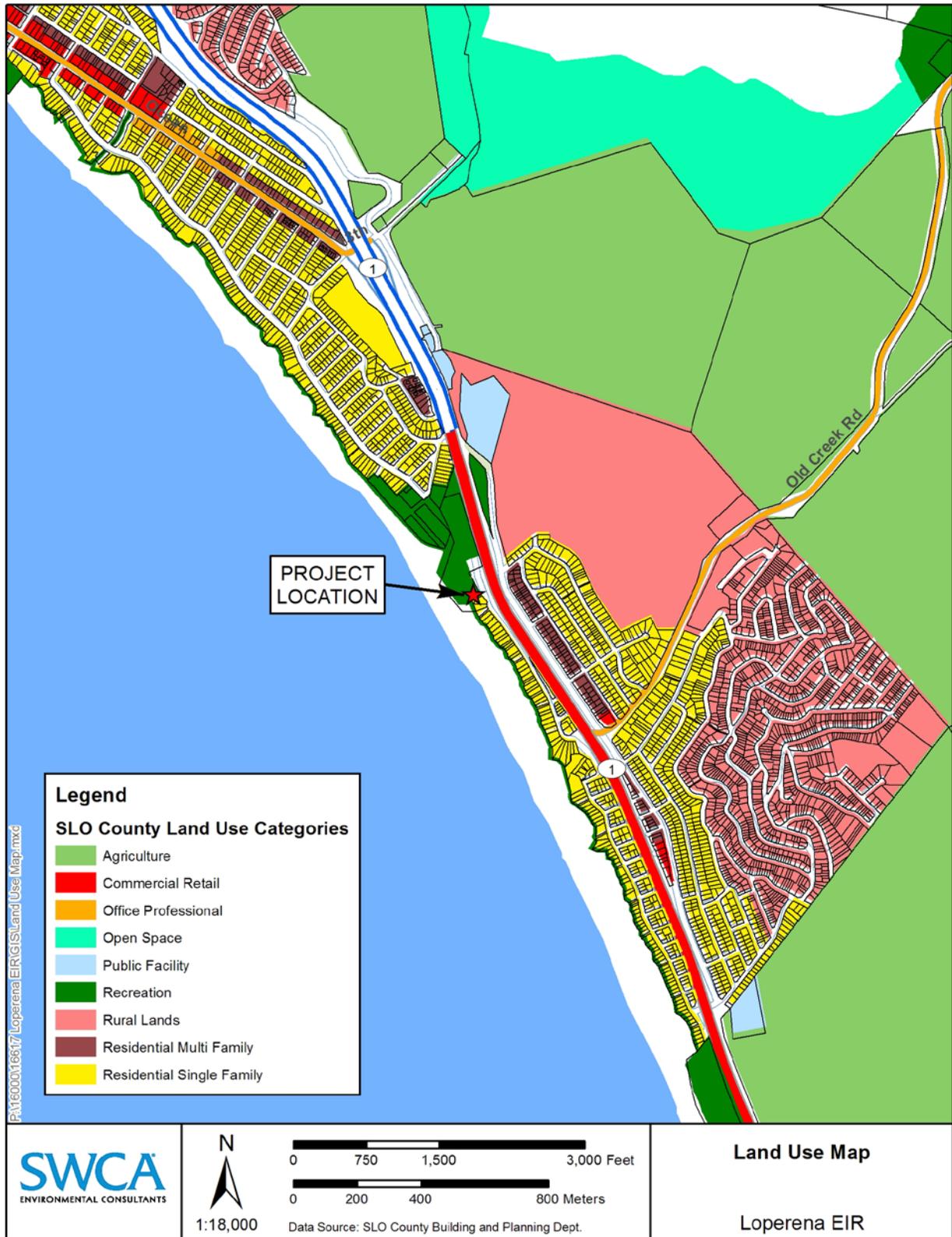
The project site is currently undeveloped and consists of undulating topography supporting grasses, iceplant, and sandy beach (refer to Figure 3-1). The beach area is actively used by surfers, pedestrians, and other visitors year round, and is popular with both local residents and tourists. The Coast Range is located to the east of Highway 1, trending approximately north-south, and slopes down to a grassy plain. The plain contains several main drainage features including Old Creek and Willow Creek, which generally run east-west and convey runoff towards the Pacific Ocean approximately 600 feet north and 2,000 feet south of the project site, respectively. The Pacific Ocean mean high tide line is located at 4.54 feet in elevation, approximately 200 feet west of the western property line

Project site elevations range from slightly less than 10 feet to approximately 31 feet above present sea level. The general area surrounding the project site is characterized by coastal features, including beachfront adjacent to relatively low coastal and fluvial bluffs that range in elevation from approximately 30 to 50 feet. Nearby moderately to steeply sloping foothills northeast of Highway 1 rise to elevations ranging from 300 to 500 feet. The project site is situated near the broad mouth and alluvial valley of Old Creek (approximately 600 feet northwest of the site), and appears to physically sit atop and/or straddle a bedrock remnant of the fluvial bluff that is now mostly buried by artificial fill materials. Above the beach, a bedrock outcropping extends to approximately 17 feet in elevation where it is capped by soils, and slopes generally west to northwest at roughly a 2:1 gradient. The remainder of the property slopes northwest at 2.5:1 to 5:1 gradients. Within the County right-of-way along Studio Drive, an approximately 10-foot-high 2:1 gradient fill slope descends west-southwest from the pavement toward the east property line. Figure 3-2 shows the land use designations of the proposed project site and vicinity.

Figure 3-1. Site Map



Figure 3-2. Land Use Designations



3.2 PLANS AND POLICIES

3.2.1 Overview

CEQA Guidelines §15125(d) states, “the EIR shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans”. While CEQA requires a discussion of consistency with public plans, inconsistency does not necessarily lead to a significant impact. Inconsistency with public plans creates significant impacts under CEQA only when an adverse physical effect on the environment would result from the inconsistency. This section provides general information as to the plans and policies applicable to the proposed project. It is the responsibility of the County Planning Commission or Board of Supervisors, the lead CEQA decision makers, to make the final determination regarding consistency issues. The following plans and policies are applicable to the proposed project and are described in the following sections:

- California Coastal Act
- Coastal Plan Policies – Local Coastal Program Policy Document
- County of San Luis Obispo General Plan, Land Use Element, Framework for Planning – Coastal Zone
- Coastal Zone Land Use Ordinance – Combining Designation Standards
- Estero Area Plan
- County of San Luis Obispo General Plan, Conservation and Open Space Element
- County of San Luis Obispo General Plan, Noise Element
- County of San Luis Obispo General Plan, Safety Element
- County of San Luis Obispo EnergyWise Plan
- Basin Plan for the Central Coast Region
- 2001 Clean Air Plan

Table 3-1 presents a summary of potential inconsistencies between the proposed project and the applicable plans and policies listed above. Additional consistency analysis with local plans and policies is provided in the individual environmental analysis sections of the EIR. For example, the Noise sub-section includes an assessment of the project’s consistency with the standards identified in the Noise Element of the County’s General Plan. To the extent that the proposed project may be inconsistent with portions of these documents, remedies such as project revisions, special conditions of approval, or variance may be required. All adverse physical effects resulting from any inconsistency are discussed in the appropriate environmental analysis sections of the EIR (refer to Chapter 4).

3.2.2 State Plans and Policies

California Coastal Act

The California Coastal Act (CCA) (Public Resources Code [PRC] §30000 et. seq.) is intended to “protect, maintain, and, where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources.” By state law, the coastal zone is established by the California Coastal Commission, which has authority to permit, restrict, or prohibit certain development within the zone. The CCA mandates protection of public access, recreational opportunities, and marine and land resources. This umbrella

legislation requires local governments to prepare a land use plan and schedule of implementing actions to carry out the policies of the CCA within local jurisdictions.

3.2.3 County of San Luis Obispo Plans and Policies

Coastal Plan Policies – Local Coastal Program Policy Document

The Local Coastal Program (LCP) Policy Document is part of the Local Coastal Program and Land Use Element (LUE). Some of the policies have been implemented in the Coastal Zone Land Use Ordinance (CZLUO) and planning areas standards. The LUE is the coordinating mechanism for incorporating the policies of this document that have land use implications. In addition to amended portions of the LUE and the CZLUO, this document states the policy commitment of the County to implement the mandates of the CCA. The document includes policies related to shoreline access, recreation and visitor-serving facilities, coastal watershed, visual and scenic resources, hazards, and air quality, among others.

County of San Luis Obispo General Plan, Land Use Element, Framework for Planning – Coastal Zone

The LUE is a plan describing the official County policy on the location of land uses and their orderly growth and development. The LUE is one of several parts (elements) of the San Luis Obispo County General Plan. The LUE also incorporates the Land Use Plan portion of the County LCP. The plan has been prepared in accordance with state law regulating General Plans and LCPs, and has been adopted by the County Board of Supervisors and California Coastal Commission. The LUE coordinates policies and programs in other County General Plan Elements that affect land use, and provides policies and standards for the management of growth and development in each unincorporated community and the rural areas of the Coastal Zone. The Framework for Planning includes “General Objectives” of combining designations. These objectives are codified and implemented through the CZLUO combining designation standards.

Coastal Zone Land Use Ordinance

The CZLUO regulates land use in a manner that seeks to encourage and support the orderly development and beneficial use of lands within the county, minimize the effects on the public from such development, and protect and enhance the significant natural, historic, archaeological and scenic resources within the county. The CZLUO includes permit requirements, site design and site development standards, operational standards, and combining designation standards to implement the County General Plan and LCP and meet these goals. Site design standards include blufftop setbacks to account for potential bluff erosion, and site development standards include grading requirements, erosion control measures, shoreline protective device regulations, and combining designation standards for geologically sensitive areas.

The proposed project is within the Geologic Study Area (GSA) combining designation. Combining designations are used to identify and highlight areas of San Luis Obispo County having natural or manmade features that are sensitive, hazardous, fragile, of cultural or educational value, or of economic value as extractable natural resources. The purpose of combining designation standards is to require project design that will give careful consideration to the land features, structures, and activities identified by the combining designations. These standards provide for more detailed project review where necessary to support public safety or proper use of public resources, or to satisfy the requirements of the CCA and the LCP.

Development within a designated GSA is required to comply with standards set forth in the CZLUO, including submittal of a geotechnical report that addresses the site specific geologic hazard (i.e., landslide, surface fault rupture, seismic shaking, liquefaction or landslide). The proposed project is located with a GSA for landslide risk, which is defined as “areas within urban and village reserve lines, identified by the Seismic Safety Element as being subject to moderately high to high landslide risk, and rural areas subject to high landslide risk.” The CZLUO combining designation standards set forth specific requirements for grading, and provide for increased erosion and geologic study prior to new development within a GSA.

Estero Area Plan

The project site is located within the County of San Luis Obispo Estero planning area. The Estero Area Plan provides goals to guide the general direction of the Estero planning area over a 20-year planning period. The goals were developed with substantial community participation and seek to protect and enhance the planning area’s abundant natural resources and scenic beauty, while also providing opportunities to improve jobs, services, recreation and tourism. The land use policies and programs are implemented through application of the CZLUO. The project site is located within the Cayucos Urban Area, within the Residential Single Family Studio Drive neighborhood.

County of San Luis Obispo General Plan – Conservation and Open Space Element

The County Conservation and Open Space Element (COSE) consists of a policy and program document and a technical appendix. The COSE policy and program document includes separate chapters to address air quality, biological resources, cultural resources, energy, mineral resources, open space, visual resources, and water resources. The technical appendix includes the County’s first baseline greenhouse gas (GHG) emissions inventory. The COSE is based on the principles of smart growth, with the intent to preserve unique or valuable natural resources, to manage development within the sustainable capacity of the county’s resources, and to reduce the county’s contribution to global climate change.

County of San Luis Obispo General Plan - Noise Element

The County Noise Element provides a policy framework for addressing potential noise impacts in the planning process, and minimizing future noise conflicts. The Noise Element identifies transportation-related, stationary, and potential operational noise generators in the county, provides a list of noise-sensitive land uses, and identifies acceptable and unacceptable thresholds of noise exposure based on land use. The Noise Element also provides mitigation measures that should be applied to projects when noise attenuation is required to meet identified thresholds.

County of San Luis Obispo General Plan – Safety Element

The two primary principles of the County Safety Element are emergency preparedness and managed development to reduce risk. The Safety Element identifies potential emergency situations and natural disasters within the county, and includes goals and policies for response during an emergency or natural disaster, and avoidance of unnecessary risk.

County of San Luis Obispo EnergyWise Plan

The EnergyWise Plan is required by the COSE of the General Plan and is intended to facilitate the goals of the COSE, though implementation of the reduction measures contained in this plan will require action by the Board of Supervisors. This plan builds upon the goals and

strategies of the COSE to reduce local GHG emissions. It identifies how the County will achieve the GHG emissions reduction target of 15% below baseline levels by the year 2020 in addition to other energy efficiency, water conservation, and air quality goals identified in the COSE. This Plan will also assist the County's participation in the regional effort to implement land use and transportation measures to reduce regional greenhouse gas emissions from the transportation sector by 2035. Energy policies relevant to the project are addressed in the COSE consistency analysis.

Basin Plan for the Central Coast Region

The Water Quality Control Plan for the Central Coast Region (Basin Plan) is the Regional Water Quality Control Board's (RWQCB) master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. Periodically, the RWQCB considers amendments to the Basin Plan. Each amendment is subject to an extensive public review process. At a public hearing, the RWQCB may act to adopt the amendment. Adopted amendments are subject to approval by the State Water Resources Control Board (SWRCB), the Office of Administrative Law, and, in most cases, the U.S. Environmental Protection Agency (EPA).

2001 Clean Air Plan

As part of the California Clean Air Act, the San Luis Obispo County Air Pollution Control District (SLOAPCD) is required to develop a plan to achieve and maintain the state ozone standard by the earliest practicable date. The Clean Air Plan (CAP) outlines the District's strategies to reduce ozone precursor emissions from a wide variety of stationary and mobile sources. The 2001 CAP was adopted by the SLOAPCD at their hearing on March 26, 2002.

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
County of San Luis Obispo Coastal Plan Policies		
<p>Shoreline Access, Policy 1: Protection of Existing Access. Public prescriptive rights may exist in certain areas of the county. Development shall not interfere with the public's right of access to the sea where acquired through historic use or legislative authorization. These rights shall be protected through public acquisition measures or through permit conditions which incorporate access measures into new development.</p>	<p>The site is not fenced; therefore, informal, undesignated volunteer trails currently cross the site. A coastal access point and public parking area are located adjacent to the project site at the north. The project applicant also proposes lateral beach access across the parcel to allow access along the beachfront. The 180-square-foot cantilevered deck would be located above approximately 10 linear feet of a portion of the 25-foot lateral easement, however this will not impact the public from having access outside the cover of the house as there exists approximately 200 feet of dry sandy beach before the mean high tide line. Based on the presence of existing designated coastal access in close proximity to the site, distance of over 200 feet from the mean high tide line, and project design allowing lateral access across the western portion of the property, the project would not interfere with the public's right of access to the sea.</p>	Potentially Consistent
<p>Shoreline Access, Policy 2: New Development. Maximum public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development. Exceptions may occur where (2) adequate access exists nearby. Such access can be lateral and/or vertical. Lateral access is defined as those accessways that provide for public access and use along the shoreline.</p>	<p>The proposed project would not impact or affect existing designated coastal access points in the project vicinity. A coastal access point and public parking area is located approximately 300 feet north of the project site. The project applicant also proposes lateral beach access across the parcel to allow access along the beachfront.</p>	Potentially Consistent
<p>Shoreline Access, Policy 10: Protection of Property Rights and Privacy. The acquisition of rights for access and view purposes and other uses by the public shall be consistent with the protection of the property rights of property owners. Access routes should be selected and designed so as to minimize the public impact on private property.</p>	<p>The proposed project would not impact or affect existing coastal access points and viewing areas in the project vicinity. A coastal access point and public parking area is located approximately 300 feet north of the project site. The project applicant also proposes lateral beach access across the parcel to allow access along the beachfront. These measures are consistent with documents designed to provide the proper balance between protection of property rights and natural resources, including the Coastal Zone Land Use Ordinance, Local Coastal Program, and County General Plan.</p>	Potentially Consistent

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>Environmentally Sensitive Habitats, Policy 1: Land Uses Within or Adjacent to Environmentally Sensitive Habitats. New development within or adjacent to locations of environmentally sensitive habitats (within 100 feet unless sites further removed would significantly disrupt the habitat) shall not significantly disrupt the resource. Within an existing resource, only those uses dependent on such resources shall be allowed within the area.</p>	<p>The proposed project is not located within an environmentally sensitive habitat area (ESHA). The closest ESHA is Old Creek, located approximately 600 feet to the north. The project is located outside the 100-foot buffer.</p>	<p>Potentially Consistent</p>
<p>Environmentally Sensitive Habitats, Policy 16: Adjacent Development. Development adjacent to coastal wetlands shall be sited and designed to prevent significant impacts to wetlands through noise, sediment or other disturbances. Development shall be located as far away from the wetland as feasible, consistent with other habitat values on the site.</p>	<p>The project site is located a minimum of 600 feet from the closest wetlands, located within the Old Creek ESHA. The EIR analyzes the potential in-direct impacts to nearby surface waters (Pacific Ocean), and includes mitigation to address accidental discharges of pollutants and sediment during construction and operation of the project.</p>	<p>Potentially Consistent</p>
<p>Environmentally Sensitive Habitats, Policy 28: Buffer Zone for Riparian Habitats. In rural areas (outside the USL) a buffer setback zone of 100 feet shall be established between any new development (including new agricultural development) and the upland edge of riparian habitats. In urban areas this minimum standard shall be 50 feet except where a lesser buffer is specifically permitted. The buffer zone shall be maintained in natural condition along the periphery of all streams.</p>	<p>The proposed project is not located within an environmentally sensitive habitat area (ESHA). The closest riparian habitat ESHA is Old Creek, located approximately 600 feet to the north. The project is located outside the 100-foot (rural) and 50-foot (urban) buffer.</p>	<p>Potentially Consistent</p>
<p>Public Works, Policy 1: Availability of Service Capacity. New development shall demonstrate that adequate public or private service capacities are available to serve the proposed development. Priority shall be given to infilling within existing subdivided areas. Prior to permitting all new development, a finding shall be made that there are sufficient services to serve the proposed development given the already outstanding commitment to existing lots within the urban service line for which services will be needed consistent with the Resource Management System where applicable.</p>	<p>The EIR analyzes the capacity of public utilities to service the project. The project will be served by private solid waste disposal, water, and wastewater systems, all of which have sufficient capacity to accommodate the proposed residential use. The project is an infill project, proposing development of a single family residence within one of the last undeveloped lots in an existing residential neighborhood.</p>	<p>Potentially Consistent</p>
<p>Coastal Watersheds, Policy 7: Siting of New Development. Grading for the purpose of creating a site for a structure or other development shall be limited to slopes of less than 20 percent except: existing lots of record in the Residential Single-Family category and where a residence cannot be feasibly sited on a slope of less than 20 percent; or when grading of an access road or driveway is necessary to provide access to</p>	<p>The proposed project does not require grading on slopes exceeding 20 percent; however, proposed grading cuts would result in temporary steep slopes (nearly vertical). The project is located near surface waters (the Pacific Ocean), and the erosion potential and slope stability of the site is considered in the EIR, and review of the Minor Use Permit</p>	<p>Potentially Consistent</p>

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>an area of less than 20 percent slope where development is intended to occur, and where there is no less environmentally damaging alternative.</p> <p>The county may approve grading and siting of development on slopes between 20 percent and 30 percent through Minor Use Permit, or Development Plan approval, if otherwise required by the Coastal Zone Land Use Ordinance. In allowing grading on slopes between 20 percent and 30 percent the county shall consider the specific characteristics of the site and surrounding area that include but are not limited to: the proximity of nearby streams or wetlands, the erosion potential and slope stability of the site, the amount of grading necessary, neighborhood drainage characteristics and measures proposed by the applicant to reduce potential erosion and sedimentation.</p>	<p>and Coastal Development Permit. The proposed plan includes stabilization of cut slopes during and following construction to ensure slope stability. Mitigation is recommended to minimize erosion and protect surface waters.</p>	
<p>Policy 8: Timing of Construction and Grading. Land clearing and grading shall be avoided during the rainy season if there is a potential for serious erosion and sedimentation problems. All slope and erosion control measures should be in place before the start of the rainy season. Soil exposure should be kept to the smallest area and the shortest feasible period.</p>	<p>Implementation of the project would require a grading plan, and compliance with Sections 23.05.020 (Grading) and 23.05.036 (Sedimentation and Erosion Control), which ensure consistency with this policy.</p>	Potentially Consistent
<p>Coastal Watersheds, Policy 9: Techniques for Minimizing Sedimentation. Appropriate control measures (such as sediment basins, terracing, hydro-mulching, etc.) shall be used to minimize erosion and sedimentation.</p>	<p>Based on the project's design, and implementation of mitigation measures including soil stabilization, protection of loose soil and sand during construction, and drainage control / low impact development measures, erosion and sedimentation would be minimized.</p>	Potentially Consistent
<p>Coastal Watersheds, Policy 10: Drainage Provisions. Site design shall ensure that drainage does not increase erosion.</p>	<p>The project includes a new stormdrain system, which would collect storm runoff and dissipate waters onto the beach in a non-erosive manner.</p>	Potentially Consistent
<p>Visual and Scenic Resources, Policy 2: Site Selection for New Development. Permitted development shall be sited so as to protect views to and along the ocean and scenic coastal areas. Wherever possible, site selection for new development is to emphasize locations not visible from major public view corridors.</p>	<p>The proposed project site is visible from Highway 1 when traveling south and somewhat visible when traveling north. It is located in an existing developed residential area and would appear as an extension of the residential neighborhood consistent with the land use category. Though a more modern design is proposed, the scale and massing of the proposed house is similar to that of neighboring residences. The most visible location is the northern facing</p>	Potentially Consistent

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
	portion of the project, as there is no existing development on this side of the property. The project proposes locating a designed or patterned wall along this portion to shield the view of the basement and parking area from adjacent beach areas to the north.	
<p>Visual and Scenic Resources, Policy 6: Special Communities and Small-Scale Neighborhoods. Within the urbanized areas defined as small-scale neighborhoods or special communities, new development shall be designed and sited to complement and be visually compatible with existing characteristics of the community which may include concerns for the scale of new structures, compatibility with unique or distinguished architectural historical style, or natural features that add to the overall attractiveness of the community.</p>	<p>The design of the proposed residence is unique, and modern. Currently there is no ordinance that limits modern design within this area. The project is subject to the Small Scale Neighborhood design standards and guidelines for new construction in this area, which regulate scale and massing. The proposed home is small in scale (maximum approximate width of 19 feet, length of 95 feet, and height of 15 feet from the centerline of Studio Drive), and complies with all Small Scale Neighborhood design guidelines. It is located in an existing developed residential area and would appear as an extension of the residential neighborhood consistent with the land use category. Though a more modern design is proposed, the scale and massing of the proposed house is similar to that of neighboring residences.</p>	Potentially Consistent
<p>Visual and Scenic Resources, Policy 7: Preservation of Trees and Native Vegetation. The location and design of new development shall minimize the need for tree removal. When trees must be removed to accommodate new development or because they are determined to be a safety hazard, the site is to be replanted with similar species or other species which are reflective of the community character.</p>	<p>Implementation of the project would not require the removal of any native trees or vegetation. One small pine tree will be removed, and a mature cypress tree would be protected.</p>	Potentially Consistent
<p>Visual and Scenic Resources, Policy 10: Development on Beaches and Sand Dunes. Prohibit new development on open sandy beaches, except facilities required for public health and safety (e.g., beach erosion control structures). Limit development on dunes to only those uses which are identified as resource dependent in the LCP. Require permitted development to minimize visibility and alterations to the natural landform and minimize removal of dune stabilizing vegetation.</p>	<p>The proposed residence would be located within an existing residential lot, adjacent to an existing row of houses. The western extent of the structure, including a 180-foot deck, would be cantilevered over sandy beach, because the entire lot is located westward of the coastal bluff and extends onto the beach area. The residence would generally be in line with existing development; therefore the site is not considered to be a component of the "open sandy beach" located to the immediate west, northwest, and southwest. The project will not block access to over 200 linear feet of sandy beach (as measured from the mean high tide line to the western extent</p>	Potentially Consistent

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
	of the structure), and will provide 25-linear feet of beach access within the western portion of the property.	
Visual and Scenic Resources, Policy 11: Development on Coastal Bluffs. New development on bluff faces shall be limited to public access stairways and shoreline protection structures. Permitted development shall be sited and designed to be compatible with the natural features of the landform as much as feasible. New development on bluff tops shall be designed and sited to minimize visual intrusion on adjacent sandy beaches.	The project site consists of a residential lot within an existing neighborhood in the unincorporated community of Cayucos. Based on the geologic analysis, the site does not consist of a coastal bluff. As noted above, the development would be generally in line with existing residences, and would not create a visual intrusion onto the sandy beach area to the west, southwest, and northwest.	Potentially Consistent
Hazards, Policy 1: New Development. All new development proposed within areas subject to within areas subject to natural hazards from geologic or flood conditions (including beach erosion) shall be located and designed to minimize risks to human life and property.	The proposed project design includes engineered foundations and retaining walls, soldier piles, and a stormwater management system, which address potential natural hazards including erosion, slope stability, wave runup, and sea level rise.	Potentially Consistent
Hazards, Policy 2: Erosion and Geologic Stability. New development shall ensure structural stability while not creating or contributing to erosion or geologic instability.	The proposed project design includes engineered foundations and retaining walls, soldier piles, and a stormwater management system, which address potential natural hazards including erosion, slope stability, wave runup, and sea level rise.	Potentially Consistent
Hazards, Policy 3: Development Review in Hazard Areas. The county shall require a detailed review of development proposed within the geologic study area and flood hazard combining designations as indicated on the Land Use Element maps for the coastal zone. The review shall be performed by a qualified registered and/or certified engineering geologist and shall be adequately detailed to provide recommendations and conclusions consistent with this plan.	The project site is located within a Geologic Study Area (GSA), and is outside the Flood Hazard (FH) designation. Site specific geologic and engineering reports were prepared by the applicant and peer reviewed during the EIR process. The reports include recommendations for site preparation, grading, construction, and engineered designs, which address potential hazards identified in the reports, related to liquefaction, ground-shaking, erosion, and exposure to ocean waves.	Potentially Consistent
Hazards, Policy 6: Bluff Setbacks. New development or expansion of existing uses on blufftops shall be designed and set back adequately to assure stability and structural integrity and to withstand bluff erosion and wave action for a period of 75 years without construction of shoreline protection structures which would require substantial alterations to the natural landforms along bluffs and cliffs. A site stability evaluation report	Consistent with this policy, technical reports including a geotechnical and coastal hazards review and wave run-up analysis were prepared (refer to the Geology and Soils section of the EIR). Based on the EIR analysis, and supportive technical reports, the project site is not located on a "coastal bluff", as defined by the California Coastal	Potentially Consistent

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>shall be prepared and submitted by a certified engineering geologist based upon an on-site evaluation that indicates that the bluff setback is adequate to allow for bluff erosion over the 75 year period. Specific standards for the content of geologic reports are contained in the Coastal Zone Land Use Ordinance.</p>	<p>Commission, and the underlying landform slopes down from the road to the sandy beach. The project does not include, or require, the construction of protection structures; however, the proposed basement wall will be constructed of steel reinforced concrete to withstand spray and splash from wave run-up striking an existing rock outcropping. The EIR analysis and supportive technical reports determined that based on the location of the basement wall, geology of surrounding landforms, and analysis of wave run-up and storm surge, the project would not cause off-site erosion. Based on the location and design, no shoreline protection structures would be required over the next 100 years, which exceeds the 75-year standards identified in the policy.</p>	
<p>Policy 7: Geologic Study Area Combining Designation. The GSA combining designation in coastal areas of the county is amended to include all coastal bluffs and cliffs greater than 10 feet in vertical relief and that are identified in the Assessment and Atlas of Shoreline Erosion (DNOD, 1977) as being critical to future or present development. Maps clearly distinguish the different geologic and seismic hazards which the county covers by the GSA combining designation. These hazards shall include steep slopes, unstable slopes, expansive soils, coastal cliff and bluff instability, active faults, liquefaction and tsunami.</p>	<p>The project site is located within the GSA designation, and potential hazards are assessed in the EIR and technical support documents.</p>	Potentially Consistent
<p>Archaeology, Policy 1: Protection of Archaeological Resources. The county shall provide for the protection of both known and potential archaeological resources. All available measures, including purchase, tax relief, purchase of development rights, etc., shall be explored at the time of a development proposal to avoid development on important archaeological sites. Where these measures are not feasible and development will adversely affect identified archaeological or paleontological resources, adequate mitigation shall be required.</p>	<p>No cultural or paleontological resources were documented within the project site. The applicant is required to comply with the CZLUO in the unlikely event unknown resources are discovered during recommended construction monitoring, including stopping construction to allow for assessment of the resource.</p>	Potentially Consistent
<p>Archaeology, Policy 6: Archaeological Resources Discovered during Construction or through Other Activities. Where substantial archaeological resources are discovered during construction of new development, or through non-permit related activities (such as repair and maintenance of public works projects) all activities shall cease until a qualified archaeologist knowledgeable in the Chumash culture can</p>	<p>No cultural or paleontological resources were documented within the project site; however, the area is considered culturally sensitive due to significant findings in the region. Mitigation is recommended, which requires monitoring during grading activities, and temporary cessation in the unlikely event of resource discovery.</p>	Potentially Consistent

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
determine the significance of the resource and submit alternative mitigation measures.		
Framework for Planning – Coastal Zone		
<p>Combining Designations and Proposed Public Facilities, A. Combining Designations, GSA – Geologic Study Area, General Objectives: The Coastal Zone Land Use Ordinance provides detailed criteria for the review of projects proposed in the Geologic Study Area combining designation to achieve the following objectives:</p> <ol style="list-style-type: none"> 1. Structures for human occupancy are not to be constructed over an active fault area, without county review and approval. 2. Proposed projects in the Geologic Study Area are subject to site-specific soil and geologic evaluations by a registered civil engineer or engineering geologist as to the suitability of the site for development in accordance with the Coastal Zone Land Use Ordinance. 	The project site is located within the Geologic Study Area (GSA) designation for bluff erosion and Cayucos liquefaction. Pursuant to the CZLUO Framework for Planning, site specific geo-technical reports were prepared for the project, and peer reviewed during the EIR analysis.	Potentially Consistent
Coastal Zone Land Use Ordinance		
<p>Site Design Standards, Section 23.04.420. Coastal Access Required. Development within the Coastal Zone between the first public road and the tidelands shall protect and/or provide coastal access as required by this section.</p> <p>(d)(3) Lateral Access Dedication. All new development shall provide a lateral access dedication of 25 feet of dry sandy beach available at all times during the year. Where topography limits the dry sandy beach to less than 25 feet, lateral access shall extend from the mean high tide to the toe of the bluff. Where the area between the mean high tide line (MHTL) and the toe of the bluff is constrained by rocky shoreline or other limitations, the County shall evaluate the safety and other constraints and whether alternative siting of accessways is appropriate. This consideration would help maximize public access consistent with the Local Coastal Program and the California Coastal Act.</p>	Based on the location of the proposed residence, 25 feet of lateral access (dry sandy beach) would be available throughout the year. As noted in the Geology and Soils analysis, ocean waves would extend to the basement foundation during worst-case conditions (sea surge and sea level rise); however this condition would also affect the general area, and would not apply to average conditions.	Potentially Consistent

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>Site Development Standards, Section 23.05.040 - Drainage: Standards for the control of drainage and drainage facilities provide for designing projects to minimize harmful effects of storm water runoff and resulting inundation and erosion on proposed projects, and to protect neighboring and downstream properties from drainage problems resulting from new development. The standards of Sections 23.05.042 through 23.05.050 are applicable to projects and activities required to have land use permit approval.</p>	<p>The applicant's proposed drainage plan includes removal of the existing system, and construction of a new inlet and filter, piping, and outlet with energy dissipation, consistent with this standard.</p>	<p>Potentially Consistent</p>
<p>Site Development Standards, Section 23.05.064 - Tree Removal Standards, g. Application content: Land use permit applications that propose tree removal are to include all information specified by Section 23.02.030b (Plot Plan Content) OR 23.02.033 (Minor Use Permit) where applicable, and the following:</p> <p>(1) The size, species and condition (e.g., diseased, healthy, etc.) of each tree proposed for removal.</p> <p>(2) The purpose of removal.</p> <p>(3) The size and species of any trees proposed to replace those intended for removal.</p>	<p>The proposed land use permit application and project plans identify the removal of a 10-inch diameter pine tree, located along the southern property boundary, consistent with this standard. Removal is proposed to accommodate proposed grading and construction of the residence, and is included in the applicant's request for approval of a Minor Use Permit/Coastal Development Permit, consistent with this standard.</p>	<p>Potentially Consistent</p>
<p>Site Development Standards, Section 23.05.140 - Archeological Resources Discovery: In the event archeological resources are unearthed or discovered during any construction activities, the following standards apply:</p> <p>a. Construction activities shall cease, and the Environmental Coordinator and Planning Department shall be notified so that the extent and location of discovered materials may be recorded by a qualified archeologist, and disposition of artifacts may be accomplished in accordance with state and federal law.</p> <p>b. In the event archeological resources are found to include human remains, or in any other case when human remains are discovered during construction, the County Coroner is to be notified in addition to the Planning Department and Environmental Coordinator so that proper disposition may be accomplished.</p>	<p>This standard is incorporated as a mitigation measure, to ensure protection of unknown, subsurface archaeological resources.</p>	<p>Potentially Consistent</p>

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>Operational Standards, 23.06.100 - Water Quality:</p> <p>a. Standards for Preventing Polluted Runoff Impacts from Non-point Sources. New development shall be designed and located to avoid significant adverse impacts to wetlands, streams, tidepools, sensitive plants, riparian vegetation, agricultural lands, and other environmentally sensitive habitat areas from surface water runoff and wastewater. The following shall apply to new development:</p> <p>(1) Where potentially significant adverse impacts might occur, new development shall assess potential pollutants resulting from the development project, as well as the potential impacts of those pollutants on nearby waterways and agricultural lands. Proposed new development shall furthermore be consistent with the Central Coast Basin Plan's current water quality objectives for ocean waters, inland surface waters, enclosed bays, and estuaries. Where polluted surface water runoff might occur as the result of a proposed development project, the proposed project shall be evaluated for potential impacts to critical waterway components, such as: dissolved oxygen, pH, suspended material, oil/grease, sediment, turbidity, temperature, toxicity, pesticides, chemicals, etc. Where applicable, measures shall be developed and implemented to avoid and mitigate potentially significant adverse impacts (e.g., establish a vegetation "filter" strip between a waterway and development).</p>	<p>Currently, stormwater from Studio Drive flows into an overside drain, which discharges runoff onto the beach. The applicant proposes to remove this drain, and replace it with a standard down drain fitted with a fossil filter, underground stormwater system, and outlet with energy dissipation. Based on the design of the project, it would be consistent with these water quality standards.</p>	<p>Potentially Consistent</p>
<p>Combining Designation Standards, Section 23.07.080. Geologic Study Area. Geologic Study Area standards are applied where the following conditions exist: (c) Liquefaction hazard: Areas identified by the Seismic Safety Element as being subject to soil liquefaction.</p>	<p>Portions of the proposed project site are within the Geologic Study Area – Liquefaction Hazard designation and would be subject to Geologic Study Area standards set forth in Section 23.07.084.</p>	<p>Potentially Consistent</p>
<p>Combining Designation Standards, Section 23.07.084. Application Content – Geologic and Soils Report Required. All land use permit applications for projects located within a Geologic Study Area shall be accompanied by a report prepared by a certified engineering geologist and/or registered civil engineer (as to soils engineering), as appropriate. The report shall identify, describe and illustrate, where applicable, potential hazard of surface fault rupture, seismic shaking, liquefaction or landslide, as provided by this section. Provided, however, that no report is required for an application located in an area for which the County</p>	<p>Site specific geologic and engineering reports were prepared by the applicant and peer reviewed during preparation of the EIR. Recommendations to mitigate identified geologic hazards are provided in the reports, and are incorporated into the Mitigation and Monitoring Plan, and Conditions of Approval for the project. Identified mitigation includes engineered design, site preparation standards, and slope stability measures during grading and construction.</p>	<p>Potentially Consistent</p>

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>Engineer determines that sufficient information exists because of previous geology or soils reports. Where required, a geology report shall include:</p> <ul style="list-style-type: none"> a. A review of the local and regional seismic and other geological conditions that may significantly affect the proposed site. b. An assessment of conditions on or near the site that would contribute to the potential for the damage of a proposed use from a seismic or other geological event, or the potential for a new use to create adverse effects upon existing uses because of identified geologic hazards. The conditions assessed are to include, where applicable, rainfall, soils, slopes, water table, bedrock geology, and any other substrate conditions that may affect seismic response, landslide risk or liquefaction potential. c. Conclusions and recommendations regarding the potential for, where applicable: <ul style="list-style-type: none"> 1) Surface rupture or other secondary ground effects of seismic activity at the site; 2) Active landsliding or slope failure; 3) Adverse groundwater conditions; 4) Liquefaction hazards. d. Recommended building techniques, site preparation measures, or setbacks necessary to reduce risks to life and property from seismic damage, landslide, groundwater and liquefaction to insignificant levels. 		
<p>Combining Designation Standards, Section 23.07.085. Review of Geology Report. As required by California Code of Regulations Title 14, Section 3603, the geology and soils report required by Section 23.07.084 shall be evaluated by a geologist retained by the county who is registered in the State of California. Within 30 days of the acceptance of such report, the Planning Director shall file one copy with the State Geologist.</p>	<p>Site specific geologic and engineering reports were prepared by the applicant and peer reviewed during preparation of the EIR. The County has filed the reports with the State Geologist.</p>	<p>Potentially Consistent</p>
<p>Combining Designation Standards, Section 23.07.086. Geologic Study Area Special Standards. All uses within a Geologic Study Area are to be established and maintained in accordance with the following as applicable:</p>	<p>Site specific geologic and engineering reports were prepared by the applicant and peer reviewed during preparation of the EIR. The project is not exempt from the requirements of Sections 23.05.020 et seq. and the residence would not be</p>	<p>Potentially Consistent</p>

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>a. Grading: Any grading not otherwise exempted from the permit requirements of Sections 23.05.020 et seq. is to be performed as engineered grading under the provisions of those sections.</p> <p>b. Seismic hazard areas: As required by California Public Resources Code Section 2621 et seq. and California Administrative Code Title 14, Sections 3600 et seq., no structure intended for human occupancy shall be located within 50 feet of an active fault trace within an Earthquake Fault Zone.</p> <p>c. Erosion and geologic stability: New development shall ensure structural stability while not creating or contributing to erosion, sedimentation or geologic instability.</p>	<p>constructed within 50 feet of an Earthquake Fault Zone. Recommendations to mitigate identified geologic hazards including slope stability, liquefaction, soil expansion, and coastal hazards (i.e. wave runup, sea level rise) are provided in the reports, and are incorporated into the Mitigation and Monitoring Plan, and Conditions of Approval for the project. Identified mitigation includes engineered design, site preparation standards, and slope stability measures during grading and construction. Compliance with these recommendations is necessary to ensure consistency with this standard.</p>	
County of San Luis Obispo Area Plan (Revised January 2009)		
<p>Land Use Policies and Programs, IV. Cayucos Land Use Policies, A. General Policies, Policy No. 1: Provide for development that meets the needs of residents and visitors and that can be sustained by available public facilities and resources.</p>	<p>The EIR analyzes the capacity of public utilities to service the project. The project will be served by private solid waste disposal, water, and wastewater systems, all of which have sufficient capacity to accommodate the proposed residential use. The project is an infill project, proposing development of a single family residence within one of the last undeveloped lots in an existing residential neighborhood.</p>	Potentially Consistent
<p>Land Use Policies and Programs, IV. Cayucos Land Use Policies, A. General Policies, Policy No. 4: Encourage “in-fill” development within the existing URL that emphasizes mixed uses.</p>	<p>The proposed project would result in development of an infill lot within an existing developed residential area with one single family residence, consistent in scale and massing with surrounding residences. The project is within the existing URL consistent with this policy.</p>	Potentially Consistent
<p>Land Use Policies and Programs, IV. Cayucos Land Use Policies, C. Residential Single-Family, Policy No. 1: Preserve and enhance the unique character of single-family neighborhoods.</p>	<p>The project is a two level home (single story with a basement), and low profile with a nearly level roof as viewed from the street. A portion of the home is cantilevered to avoid dry sandy beach areas, similar to other houses in the neighborhood. Based on review of the project plans and visual analysis conducted for the EIR, the project complies with Small Scale Neighborhood design guidelines. Though a more modern design is proposed, the scale and massing of the proposed house is similar to that of neighboring residences.</p>	Potentially Consistent

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>Land Use Policies and Programs, IV. Cayucos Land Use Policies, C. Residential Single-Family, Policy No. 2: Maintain the small-scale character of the Pacific Avenue and Studio Drive neighborhoods.</p>	<p>The project is a two level home (single story with a basement) with a 1,040-square-foot footprint. The proposed home is small in scale (maximum approximate width of 19 feet, length of 95 feet, and height of 15 feet from the centerline of Studio Drive), and complies with Small Scale Neighborhood design guidelines. It is located in an existing developed residential area and would appear as an extension of the residential neighborhood consistent with the land use category. Though a more modern design is proposed, the scale and massing of the proposed house is similar to that of neighboring residences.</p>	<p>Potentially Consistent</p>
<p>Land Use Policies and Programs, IX. Circulation Programs, C. Cayucos, Coastal Access, 8. Beach Access: The County should continue to develop and maintain public walkways to the beach along Studio Drive and Pacific Avenue.</p>	<p>The proposed project would not impact or affect existing coastal access points in the project vicinity. A coastal access point and public parking area is located approximately 300 feet north of the project site. The project applicant also proposes lateral beach access across the parcel to allow access along the beachfront.</p>	<p>Potentially Consistent</p>
<p>Planning Area Standards, III. Areawide Standards, Excluding Los Osos, G. Cayucos Planning Impact Area: Within the planning area shown in Figure 7-5, applications for land divisions, general plan amendments, Minor Use Permits, and Development Plans shall be referred to the Cayucos Citizens Advisory Council or its successor for review and comment.</p>	<p>The project was reviewed by the Cayucos Citizens Advisory Council (CCAC), consistent with this standard. In addition, the Draft EIR will be circulated to the CCAC for review and comment. Additional opportunities for comment will be available upon release of the Final EIR and during the public hearing process.</p>	<p>Potentially Consistent</p>
<p>Planning Area Standards, V. Cayucos Urban Area Standards, A. Resource Capacity and Service Availability, No. 3: Building Permits: Clearance for Services. All applications for building permit approval are to be accompanied by a letter or other verification from the Cayucos Fire Protection District, the applicable water purveyor, and the Cayucos Sanitary District indicating that the proposed project has received fire clearance and water service and sewer connection approvals.</p>	<p>The EIR analyzes the capacity of public utilities to service the project. The project will be served by private solid waste disposal, water, and wastewater systems, all of which have sufficient capacity to accommodate the proposed residential use. Specified will-serve letters are on file with the County.</p>	<p>Potentially Consistent</p>
<p>Planning Area Standards, V. Cayucos Urban Area Standards, F. Setbacks – Communitywide, 1. Bluff Setbacks. Bluff setbacks shall be in accordance with the Coastal Zone Land Use Ordinance, except that the minimum setback shall be 25 feet in any case.</p>	<p>Based on the geological reports, and subsequent peer review, there is no coastal bluff on the project site. The development proposes a 25-foot setback from the rear property line.</p>	<p>Potentially Consistent</p>

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>Planning Area Standards, V. Cayucos Urban Area Standards, Combining Designations, B. Local Coastal Plan, No. 1: Vehicular Use of Accessways. New development shall not use beach accessways for vehicular access.</p>	<p>The proposed project would be accessed by Studio Drive, and includes a private driveway. The project would not use any beach accessways for vehicular access.</p>	<p>Potentially Consistent</p>
<p>Planning Area Standards, V. Cayucos Urban Area Standards, Combining Designations, B. Local Coastal Plan, No. 2: Lateral Access Requirement. New development located between the sea and the first public road shall be required to make an offer of dedication of lateral access extending from the toe of the bluff to mean high tide, or where applicable, to the inland boundary of the public beach.</p>	<p>The project applicant has proposed lateral access across the parcel to allow access to adjacent beach areas along the coastline consistent with this policy.</p>	<p>Potentially Consistent</p>
<p>Planning Area Standards, V. Cayucos Urban Area Standards, D. Community Small Scale Design Neighborhoods, 1. Location. Two neighborhoods are subject to the following standards and guidelines.</p> <p>Pacific Avenue Neighborhood – that area designated Residential Single Family between Ocean Avenue, 13th Street, Cass Avenue, Circle Drive, Highway 1, Old Creek, and the ocean.</p> <p>Studio Drive Neighborhood – That area designated Residential Single Family between Highway 1 and the ocean.</p>	<p>The proposed project is within the Studio Drive Neighborhood and Community Small Scale Design standards are applicable.</p>	<p>Potentially Consistent</p>
<p>Planning Area Standards, V. Cayucos Urban Area Standards, D. Community Small Scale Design Neighborhoods, 2. Permit Requirements and Findings.</p> <p>b. Minor Use Permit: (1) Development that is within 100 feet of any wetland, estuary or stream, or within 300 feet of the edge of the ocean bluff-top. In addition such development is subject to standards, guidelines and findings listed below.</p>	<p>The proposed project is within 300 feet of the ocean and Minor Use Permit approval is requested.</p>	<p>Potentially Consistent</p>
<p>Planning Area Standards, V. Cayucos Urban Area Standards, D. Community Small Scale Design Neighborhoods, 2. Permit Requirements and Findings.</p> <p>c. Required Findings: (1) The proposed project meets the community small scale design neighborhood standards and is therefore consistent with the character and intent of the Cayucos community small scale design neighborhood.</p> <p>(2) For any proposed structure that exceeds 15 feet in height, public view</p>	<p>The design of the proposed residence is unique, and modern. Currently there is no ordinance that limits modern design within this area. The project is subject to the Small Scale Neighborhood design standards and guidelines for new construction in this area. The proposed home is small in scale (maximum approximate width of 19 feet, length of 95 feet, and height of 15 feet from the centerline of Studio Drive), and complies with all Small Scale Neighborhood design guidelines. It is located in an existing developed</p>	<p>Potentially Consistent</p>

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>of the ocean from Highway 1 or the respective neighborhood is not being further limited.</p>	<p>residential area and would appear as an extension of the residential neighborhood consistent with the land use category. Though a more modern design is proposed, the scale and massing of the proposed house is similar to that of neighboring residences.</p>	
<p>Planning Area Standards, V. Cayucos Urban Area Standards, D. Community Small Scale Design Neighborhoods, 3. Standards.</p> <p>a. Front Setbacks. The ground level floor shall have setbacks as provided in Cayucos Communitywide Standard G and at no point shall a lower story wall exceed 12 feet in height including its above ground foundation.</p> <p>b. Side Setbacks. Single story dwellings shall have setbacks as provided in Cayucos Communitywide Standard G.</p> <p>c. Building Height Limitations. Heights shall be measured from the center line of the fronting street (narrowest side for corner lots) at a point midway between the two side property lines projected to the street centerline, to the highest point of the roof. In the community small scale design neighborhood area defined in Standard 1, upslope lots shall use average natural grade. All proposed development including remodeling and building replacement is subject to the following limitations:</p> <p>1) Ocean Front Lots. 15 feet maximum.</p> <p>d. Gross Structural Area (GSA). (1) One-story development, and all development on bluff top sites, is limited to a maximum gross structural area, including the area of all garages, of 3,500 square feet.</p> <p>e. Deck Rail Height. Rail heights for decks above the ground floor shall not exceed 36 inches. A maximum additional height of 36 inches of untinted, transparent material with minimal support members is allowable except as restricted in 3a above.</p> <p>f. Parking. New development parking spaces shall comply with the CZLUO for required parking spaces except as follows:</p> <p>1) At least one off-street parking space shall be enclosed with an interior space a minimum size of 10 feet by 20 feet.</p>	<p>Table 7-1, in Cayucos Communitywide Standard G, indicates that the properties west of Studio Drive, have required setbacks as follows:</p> <ul style="list-style-type: none"> ▪ Front setback – 0 feet ▪ Side setbacks – 3 feet <p>The project proposes setbacks consistent with these standards. The basement wall would be 11 feet in height, as measured from the basement floor to the main floor, consistent with this standard.</p> <p>The proposed residence would not exceed 15 feet in height, as measured from the centerline of Studio Drive, consistent with this policy.</p> <p>Gross structural area of the project would be 3,097, including all living areas, garages, basement, and deck space, consistent with this policy.</p> <p>Deck rails would be no taller than 36 inches.</p> <p>The proposed project includes one off-street parking space in the garage (242 square feet) and one off-street parking space in the carport/entryway.</p> <p>The maximum driveway width would be 18 feet, consistent with these standards.</p> <p>The project applicant has complied with all application requirements, including the provision of a streetscape plan and topographic map.</p>	<p>Potentially Consistent</p>

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>2) A maximum of one required off-street parking space may be located in the driveway within the required front yard setback area. However, the minimum front yard setback from the property line to the garage is 20 feet if this design is used.</p> <p>g. Driveway Widths. Driveway widths for proposed development may not exceed 18 feet.</p> <p>h. Streetscape Plan. A scale drawing showing the front exterior elevation (view) of the proposed project, and the front elevations of the adjacent buildings, is required as part of the application submittal.</p> <p>i. Topographic Map. A topographic map including the elevation of the fronting street, site contours, and existing and proposed drainage patterns is required as part of the application submittal.</p>		
<p>Coastal Access, VI. Estero Area Plan Goals, Policies and Standards, A. Goals, Cayucos.</p> <p>2. Plan with consideration for preserving the natural environment of Cayucos. Protect the seashore, estuaries and coastal area with minimal impairment of physical and visual accessibility.</p>	<p>The proposed project has been designed to preserve the natural environment and physical and visual accessibility to the surrounding areas. The proposed residence is small in scale, with a maximum height of 15 feet above the centerline elevation of Studio Drive. The cantilevered design avoids impacts to the sandy beach area, and approximately 238 square feet of landscaping is proposed. The project would be located in an existing developed residential area (infill) and would appear as an extension of the residential neighborhood consistent with the land use category.</p>	<p>Potentially Consistent</p>
<p>Coastal Access, VI. Estero Area Plan Goals, Policies and Standards, B. Policies, Cayucos.</p> <p>7. In order to preserve public access to the shoreline and public recreation areas, preserve all rights-of-way and offers of dedication for roads and other accessways.</p> <p>8. Develop and maintain accepted beach access ways for safe, public use.</p> <p>9. Provide additional parking, especially between B and E Streets, using a variety of means.</p>	<p>The proposed project would not impact the existing beach access point and public parking area located approximately 300 feet north of the project site. The project applicant has proposed lateral access across the parcel to allow access to adjacent beach areas along the coastline.</p>	<p>Potentially Consistent</p>

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>Coastal Access, VI. Estero Area Plan Goals, Policies and Standards, C. Standards, Cayucos.</p> <ol style="list-style-type: none"> 1. Vehicular Use of Accessways. New development shall not use beach accessways for vehicular access. 2. Lateral Access Requirement. New development located between the sea and the first public road shall be required to make an offer of dedication of lateral access extending from the toe of the bluff to mean high tide, or where applicable, to the inland boundary of the public beach. 	<p>The proposed project would be accessed by Studio Drive, which does provide several informal beach access points. Studio Drive is a residential street operating at acceptable levels. The project would not interfere with the formal beach access point and public parking area approximately 300 feet north of the site.</p> <p>The project applicant has proposed lateral access across the parcel to allow access to adjacent beach areas along the coastline consistent with this policy.</p>	<p>Potentially Consistent</p>
<p>Coastal Access, VII. Management Objectives, Estero Area Plan Programs, B. Programs, Cayucos.</p> <p>8. Beach Access. The county should continue to develop and maintain public walkways to the beach along Studio Drive and Pacific Avenue.</p>	<p>There is existing beach access and parking located approximately 300 feet north of the project site. The project would not impact these uses and provides lateral access across the parcel to allow access to adjacent beach areas along the coastline.</p>	<p>Potentially Consistent</p>
<p>County of San Luis Obispo Conservation And Open Space Element</p>		
<p>Policy AQ 1.1 Compact development: Encourage compact land development by concentrating new growth within existing communities and ensuring complete services to meet local needs.</p> <p>Implementation Strategy AQ 1.1.1 Strategic Growth Principles: Implement Strategic Growth principles and, as needed, amend applicable ordinances and policies to:</p> <ol style="list-style-type: none"> c. Direct most new residential development away from rural areas and concentrate it in higher density residential areas located near major transportation corridors and transit routes, where resources and services are available. g. Encourage new residential development to be within walking distance (1/2 mile or less) to public activity centers such as schools, libraries, parks, and community centers. 	<p>The project consists of a residence located within an urban area, in proximity to public use beach areas and Highway 1, consistent with this strategy.</p>	<p>Potentially Consistent</p>

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>Policy AQ 3.2 Attain air quality standards: Ensure that implementation of the Strategic Growth principles and goals are balanced with protection of sensitive receptors near high-volume transportation routes and sources of toxic emissions (i.e. railyards, downtown centers, gasoline development facilities, chrome platers, dry cleaners, and refineries).</p> <p>Implementation Strategy AQ 3.2.1 Use of APCD's CEQA Guidelines: Provide an analysis of potential health risks and identify mitigation measures to reduce risk to acceptable levels for projects involving sensitive receptors proposed within 500 feet of freeways and high-speed highways, consistent with APCD criteria.</p>	<p>The project site is located approximately 100 feet from Highway 1, which is not considered a freeway, but is a major transportation route in the area. The site is within an existing developed residential neighborhood adjacent to a public beach, and outdoor use areas face the Pacific Ocean with exposure to coastal breezes, and would be screened by the residential structure and slope of the topography.</p>	<p>Potentially Consistent</p>
<p>Policy AQ 3.6 Strategic growth principles: Attain or exceed federal or state ambient air quality standards (the more stringent if not the same) for measured criteria pollutants.</p> <p>Implementation Strategy AQ 3.2.1 Use of APCD's CEQA Guidelines: The County's CEQA process will use the APCD's CEQA Guidelines to determine significance of impacts and to identify minimum project design and mitigation requirements</p>	<p>Implementation of the project would not exceed identified thresholds for air pollutant emissions.</p>	<p>Potentially Consistent</p>
<p>Policy AQ 3.7 Reduce vehicle idling: Encourage the reduction of heavy-vehicle idling throughout the county, particularly near schools, hospitals, senior care facilities, and areas prone to concentrations of people, including residential areas.</p> <p>Implementation Strategy AQ 3.7.1 Heavy Duty Vehicle Idling: Encourage the reduction of heavy-duty vehicle idling throughout the county using APCD and California Air Resources Board idling reduction policies for schools and other sensitive receptors.</p>	<p>Mitigation is recommended, pursuant to the APCD's CEQA Handbook (April 2012) to avoid excessive idling during construction, consistent with this policy.</p>	<p>Potentially Consistent</p>
<p>Policy AQ 3.8 Reduce dust emissions: Reduce PM₁₀ and PM_{2.5} emissions from unpaved and paved County roads to the maximum extent feasible.</p> <p>Implementation Strategy AQ 3.8.1 Reduce PM emissions from County roads:</p> <ol style="list-style-type: none"> 1) Implement all APCD particulate matter (PM) emission controls. 2) Continue efforts to clean paved roads, and 3) Pave or "chip seal" public County dirt roads to minimize fugitive dust. 	<p>Mitigation is recommended to address particulate matter emissions, consistent with the APCD CEQA Handbook (2012).</p>	<p>Potentially Consistent</p>

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
Policy AQ 4.1 Development projects and land use activities: Reduce greenhouse gas emissions from development projects and other land use activities.	The project is an infill project, and is located within an existing urban area, in proximity to bicycle routes, and includes the use of solar panels for energy efficiency.	Potentially Consistent
Policy BR 1.1 Protect Sensitive Biological Resources: Protect sensitive biological resources such as, wetlands, migratory species of the Pacific flyway, and wildlife movement corridors through: 1) environmental review of proposed development applications, including consideration of cumulative impacts	The Biological Resources analysis in Section 4.4.3 of this EIR was prepared consistent with this policy.	Potentially Consistent
Policy BR 1.2 Limit Development Impacts: Regulate and minimize proposed development in areas that contain essential habitat for special-status species, sensitive natural communities, wetlands, coastal and riparian habitats, and wildlife habitat and movement corridors as necessary to ensure the continued health and survival of these species and protection of sensitive areas.	The project site is located within an existing residential neighborhood, on the western side of Studio Drive. The EIR includes an analysis of potential impacts to special-status species and a habitat associated with the beach area and Pacific Ocean, and includes mitigation to mitigate potential impacts to less than significant, consistent with this policy.	Potentially Consistent
Policy BR 1.3 Environmental Review: Require environmental review of development applications pursuant to CEQA and County procedures to assess the impact of proposed development on native species and habitat diversity, particularly special-status species, sensitive natural communities, wetlands, and important wildlife nursery areas and movement corridors.	The Biological Resources section (Section 4.4.3) of this EIR was prepared consistent with this policy.	Potentially Consistent
Policy BR 1.11 Protect Wildlife Nursery Areas and Movement Corridors: Identify, protect, and enable the management of connected habitat areas for wildlife movement. Features of particular importance to wildlife for movement may include, but are not limited to, riparian corridors, shorelines of the coast and bay, and ridgelines. Identification and designation of wildlife corridors will not interfere with agricultural uses on private lands.	The project site is located in line with existing residences on Studio Drive, and the project would not adversely affect the beach area and shoreline located immediately to the west. Mitigation is recommended to ensure potential incidental or indirect impacts would be mitigated.	Potentially Consistent
Policy BR 1.15 Restrict Disturbance in Sensitive Habitat during Nesting Season: Avoid impacts to sensitive riparian corridors, wetlands, and coastal areas to protect bird-nesting activities. Implementation Strategy BR 1.15.1 Identify setbacks from bird nesting areas: Design land divisions and development with adequate setbacks from sensitive habitat areas that are occupied during the nesting	The project site is not located in an area supporting sensitive nesting habitat; however, mitigation is recommended including pre-construction surveys to verify that no nests are present onsite prior to ground disturbance.	Potentially consistent

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>season to protect bird nesting, rearing, and fledging activities.</p> <p>Implementation Strategy BR 1.15.2 Preconstruction surveys for bird nesting areas: Require preconstruction surveys, using established protocols, where development is proposed in sensitive habitat areas during the nesting season in order to protect nests in active use.</p>		
<p>Policy BR 2.1 Coordinate with Trustee Agencies. The County will consult with trustee and other relevant state and federal agencies during environmental review when special-status species, sensitive natural communities, marine resources, or wetlands may be affected.</p> <p>Implementation Strategy BR 2.1.1 Coordination with trustees during discretionary review: During review of discretionary development applications, coordinate with relevant trustee agencies and require evidence of compliance with any necessary permits from federal and state agencies prior to issuance of grading or building permits.</p>	<p>The County submitted the Notice of Preparation (NOP) to the California Department of Fish and Game, and no comments were received. The Draft EIR will be circulated to state responsible and trustee agencies for review and comment. The project would not affect areas under the jurisdiction of CDFG or the U.S. Army Corps of Engineers, and mitigation is included to ensure avoidance of federally-protected species that may be present in the area.</p>	Potentially Consistent
<p>Policy BR 2.6 Development Impacts to Listed Species: Ensure that potential adverse impacts to threatened, rare, and endangered species from development are avoided or minimized through project siting and design. Ensure that proposed development avoids significant disturbance of sensitive natural plant communities that contain special-status plant species or provide critical habitat to special-status animal species. When avoidance is not feasible, require no net loss of sensitive natural plant communities and critical habitat areas.</p> <p>Implementation Strategy BR 2.6.1 Use of biological resource surveys: Require applications for discretionary projects and land divisions to provide a biological resource survey performed by a qualified biologist when needed to address special-status animal and plant species and their associated habitats.</p>	<p>Preparation of this EIR includes an analysis of biological resources, consistent with this policy and implementation strategies. The project is not located within sensitive habitat areas and would not affect sensitive natural plant communities. Mitigation is recommended, including preconstruction surveys and environmental monitoring.</p>	Potentially Consistent
<p>Policy BR 2.8 Invasive Plant Species: Promote and support efforts to reduce the effects of noxious weeds on natural habitats. The County will work with local resource and land management agencies to develop a comprehensive approach to controlling the spread of non-native invasive species and reducing their extent on both public and private land.</p> <p>Implementation Strategy BR 2.8.2 Prohibit invasive species in landscaping: Prohibit use of invasive plant species in landscaping of proposed development. Revise the County's invasive plant list by the end</p>	<p>The proposed project would include the removal of non-native iceplant, which covers a majority of the project site.</p>	Potentially Consistent

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>of 2010 in cooperation with County Parks and the County Department of Agriculture consistent with Implementation Strategies B.R. 2.8.4 and 2.8.5. Consider including in that list invasive plants listed in the state's Noxious Weed List, the California Invasive Plant Council's Invasive Plant Inventory, and other priority species identified by the San Luis Obispo County Agricultural Commissioner and California Department of Agriculture.</p> <p>Implementation Strategy BR 2.8.3 Require removal of invasive exotic plants: Require the removal of invasive exotic plant species, to the extent feasible, when reviewing discretionary development projects, and include monitoring to prevent re-establishment in managed areas. Support educational programs that inform property owners about appropriate vegetation management techniques.</p>		
<p>Policy BR 2.9 Promote Use of Native Plant Species: Landscaping for proposed development will use a variety of native or compatible non-native, non-invasive plant species as part of project landscaping to improve wildlife habitat values.</p>	The project does not include the planting of non-native, invasive plant species.	Potentially Consistent
<p>Policy BR 3.1 Native Tree Protection: Protect native and biologically valuable trees, oak woodlands, trees with historical significance, and forest habitats to the maximum extent feasible.</p>	Implementation of the project would not include the removal of native trees, including the mature cypress tree located to the south of the project site. Mitigation measures include standards for protection of the cypress tree during construction.	Potentially Consistent
<p>Policy BR 3.2 Protection of Native Trees in New Development: Require proposed discretionary development and land divisions to avoid damage to native trees (e.g., Monterey Pines, oaks) through setbacks, clustering, or other appropriate measures. When avoidance is not feasible, require mitigation measures.</p>	Implementation of the project would not include the removal of native trees; one small, ornamental pine tree would be removed. Mitigation measures include standards for protection of a mature cypress tree located immediately south of the project site during construction.	Potentially Consistent
<p>Policy BR 3.5 Non-native Trees: Protect healthy and non-hazardous, non-native trees (e.g., eucalyptus groves) and forests that provide raptor nesting or roosting sites or support colonies of monarch butterflies.</p>	Implementation of the project includes removal of a 10-inch diameter, non-native, pine tree. Due to the size and location of this tree, it does not provide suitable habitat for raptors or monarch butterfly colonies.	Potentially Consistent

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>Policy BR 5.1 Protect Wetlands: Require development to avoid wetlands and provide upland buffers.</p>	<p>The proposed project is located a minimum of 600 feet from wetland habitat present within the Old Creek ESHA, consistent with this policy.</p>	<p>Potentially Consistent</p>
<p>Policy BR 7.1 Coastal Protection: The County should continue to advocate sound energy and coastal protection policies and oppose proposals along the San Luis Obispo County coastline that are inconsistent with the County's Local Coastal Program and other County plans and policies.</p>	<p>The proposed project is consistent with the policies identified in the Local Coastal Program, and applicable standards identified in the Estero Area Plan and CZLUO.</p>	<p>Potentially Consistent</p>
<p>Policy CR 4.4 Development Activities and Archaeological Sites: Protect archaeological and culturally sensitive sites from the effects of development by avoiding disturbance where feasible. Avoid archaeological resources as the primary method of protection.</p> <p>Implementation Strategy CR 4.4.1 Native American participation in development review process: In areas likely to contain Native American and cultural resources, include Native Americans in tasks such as Phase I, II, and III surveys, resource assessment, and impact mitigation. Consult with Native American representatives early in the development review process and in the design of appropriate mitigations. Enable their presence during archaeological excavation and construction in areas likely to contain cultural resources.</p> <p>Implementation Strategy CR 4.4.2 Cultural Resource Studies: Require cultural resources studies (i.e., archaeological and historical investigations) by a professional who meets the Interpretation of cultural resources can include monuments, signs, plaques, artwork, publications, etc.</p>	<p>A cultural resource survey was conducted for the project, and peer reviewed during preparation of the EIR. No significant archaeological resources were identified.</p> <p>During preparation of the Draft EIR, the Native American Heritage Commission (NAHC) was contacted to obtain any information from the Sacred Lands File and a contact list of local Native American representatives. A letter was sent to each of the 23 representatives provided by the NAHC on December 29, 2010, requesting comments and information. No responses were received.</p>	<p>Potentially Consistent</p>
<p>Policy CR 4.6 Resources-Based Sensitivity: Protect archaeological resources near streams, springs and water sources, rock outcrops, and significant ridgetops, as these are often indicators of the presence of cultural resources.</p> <p>Implementation Strategy CR 4.6.1 Resource-Based Surveys:</p> <p>a. Require a preliminary site survey to determine the likelihood of resources with all development subject to a discretionary permit that is proposed within 1) 100 feet of the bank of a creek or spring or 2) 300 feet of a creek where the slope of that area is less than 10</p>	<p>A cultural resource survey was conducted for the project, and peer reviewed during preparation of the EIR. No significant archaeological resources were identified.</p>	<p>Potentially Consistent</p>

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>percent.</p> <p>b. Require that a professional archaeologist who meets the Secretary of the Interior's Professional Qualifications for Archaeology conduct the preliminary survey.</p> <p>c. Recommendations made by the archaeologist may be applied as mitigation measures.</p>		
<p>Policy E 3.1 Use of renewable energy: Ensure that new and existing development incorporates renewable energy sources such as solar, passive building, wind, and thermal energy. Reduce reliance on non-sustainable energy sources to the extent possible using available technology and sustainable design techniques, materials, and resources.</p> <p>Implementation Strategy E 3.1.1 Incorporate renewable energy systems in new and existing development: Where feasible, incorporate on-site renewable energy systems (i.e., solar or wind powered) in new and existing development. Collaborate with stakeholder groups, including business and property owners, wineries, and other agricultural operations to increase awareness of renewable systems, to streamline the permitting process, and to identify incentives.</p>	The proposed project includes the installation of solar panels on the roof, which is consistent with this policy.	Potentially Consistent
<p>Policy E 3.2 Energy efficient equipment: Require the use of energy-efficient equipment in all new development, including but not limited to Energy Star appliances, high-energy efficiency equipment, heat recovery equipment, and building energy management systems.</p>	The proposed project includes the installation of solar panels on the roof, which is consistent with this policy. . In addition, the project is required to demonstrate compliance with Title 24 energy efficiency regulations and the County Title 19 Building and Construction Ordinance, Green Building Ordinance.	Potentially Consistent
<p>Policy E 4.1 Integrate green building practices: Integrate green building practices into the design, construction, management, renovation, operations, and demolition of buildings, including publicly funded affordable housing projects, through the development review and building permitting process.</p>	The proposed project includes the installation of solar panels on the roof, which is consistent with this policy. . In addition, the project is required to demonstrate compliance with Title 24 energy efficiency regulations and the County Title 19 Building and Construction Ordinance, Green Building Ordinance.	Potentially Consistent
<p>Policy E 4.4 Solar Exposure: Orient new buildings to maximize solar resources, shading, ventilation, and lighting.</p>	The proposed project includes the installation of solar panels on the roof, which is consistent with this policy.	Potentially Consistent

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>Policy SL 1.3 Minimize Erosion associated with New Development: Avoid development, including roads and driveways, on the steeper portions of a site except when necessary to avoid flood hazards, protect prime soils, and protect sensitive biological and other resources. Avoid grading and site disturbance activities on slopes over 30%. Minimize site disturbance and protect existing vegetation as much as possible.</p> <p>Implementation Strategy SL 1.3.1 Low Impact Development (LID): Implement Low Impact development (LID) for all new public and private projects.</p>	Grading and site disturbance would not occur on slopes exceeding 30%. The applicant proposes temporary slope stabilization measures to avoid erosion during construction, and the project incorporates rainwater capture and energy dissipation to minimize erosion during rain events.	Potentially Consistent
<p>Policy VR 1.1 Adopt Scenic Protection Standards: Protect scenic views and landscapes, especially visual Sensitive Resource Areas (SRAs) from incompatible development and land uses</p>	The project site is not located within a mapped SRA; however, views from the beach area and from Highway 1 (towards the Pacific Ocean) are considered highly scenic. Based on the EIR analysis (Section 4-1 Aesthetics), the project would not adversely affect scenic views or landscapes.	Potentially Consistent
<p>Policy VR 2.1 Develop in a manner compatible with Historical and Visual Resources: Through the review of proposed development, encourage designs that are compatible with the natural landscape and with recognized historical character, and discourage designs that are clearly out of place within rural areas.</p>	Based on the EIR analysis (Section 4-1 Aesthetics), the project would be generally consistent with the existing residential neighborhood along Studio Drive.	Potentially Consistent
<p>Policy VR 7.1 Nighttime Light Pollution: Protect the clarity and visibility of the night sky within communities and rural areas, by ensuring that exterior lighting, including streetlight projects, is designed to minimize nighttime light pollution.</p>	Mitigation is recommended to address the effects of nighttime lighting, including shielding the point source, use of motion detectors for security lighting, and directing light downward.	Potentially Consistent
<p>Policy WR 1.12 Impacts of new development: Accurately assess and mitigate the impacts of new development on water supply. At a minimum, comply with the provisions of Senate Bills 610 and 221.</p>	The proposed project would be served by County Service Area (CSA) #10. A will-serve letter was provided, and CSA #10 has adequate water supply to serve the project. Based on the size of the project, a water supply assessment is not required.	Potentially Consistent
<p>Policy WR 3.1 Prevent water pollution: Take actions to prevent water pollution, consistent with federal and state water policies and standards, including but not limited to the federal Clean Water Act, Safe Drinking Water Act, and National Pollutant Discharge Elimination System</p>	Based on review by the RWQCB, the applicant will be required to obtain a stormwater construction permit due to the project's proximity to surface waters (Pacific Ocean). In addition, mitigation is recommended to minimize disturbance	Potentially Consistent

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>(NPDES). Implementation Strategy WR 3.1.3 Minimize construction-related impacts to water quality: Minimize construction and post-construction impacts of development through implementation of the County's Stormwater Management Program and Stormwater Pollution Prevention and Discharge Control Ordinance in compliance with Phase II of the National Pollutant Discharge Elimination System (NPDES).</p>	<p>and control onsite accidental spills and erosion during construction and in the long-term operation of the project and stormwater system.</p>	
<p>Policy WR 4.7 Low Impact Development: Require Low Impact Development (LID) practices in all discretionary and land division projects and public projects to reduce, treat, infiltrate, and manage urban runoff.</p>	<p>Currently, stormwater from Studio Drive flows into an overside drain, which discharges runoff onto the beach. The applicant proposes to remove this drain, and replace it with a standard down drain fitted with a fossil filter, underground stormwater system, and outlet with energy dissipation. Based on the design of the project, it would be consistent with this policy.</p>	<p>Potentially Consistent</p>
<p>San Luis Obispo County General Plan, Noise Element</p>		
<p>Chapter 3, Goals and Policies, Transportation Noise Sources, Policy 3.3.1: New development should minimize noise exposure and noise generation.</p>	<p>The project site is exposed to noise generated by traffic on Highway 1. Mitigation is recommended to ensure future residents are not exposed to noise exceeding identified thresholds, including standard design measures. The project would not generate noise exceeding identified thresholds for residential (sensitive) land uses.</p>	<p>Potentially Consistent</p>
<p>Chapter 3, Goals and Policies, Transportation Noise Sources, Policy 3.3.2: New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected future levels of noise from transportation noise sources which exceed 60 dB Ldn or CNEL unless the project design includes effective mitigation measures to reduce noise in outdoor activity areas and interior spaces to or below the levels specified for the given land use.</p>	<p>The project site is exposed to noise generated by traffic on Highway 1 (60-65 dB). Mitigation is recommended to ensure future residents are not exposed to noise exceeding identified thresholds, including standard design measures. The project would not generate noise exceeding identified thresholds for residential (sensitive) land uses.</p>	<p>Potentially Consistent</p>
<p>Chapter 3, Goals and Policies, Transportation Noise Sources, Policy 3.3.3: Noise created by new transportation noise sources, including roadway improvement projects, shall be mitigated so as not to exceed the levels specified within the outdoor activity areas and interior spaces of existing noise sensitive land uses.</p>	<p>Implementation of the project would not generate noticeable levels of increased transportation-related noise.</p>	<p>Potentially Consistent</p>

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>Chapter 3, Goals and Policies, Stationary Noise Sources, Policy 3.3.4: New development of noise-sensitive land uses shall not be permitted where the noise level due to existing stationary noise sources will exceed the noise level standards unless noise mitigation measures have been incorporated into the design of the development to reduce noise exposure to or below the levels specified.</p>	<p>The project is not located in an area that would be adversely affected by stationary noise.</p>	<p>Potentially Consistent</p>
<p>Chapter 3, Goals and Policies, Existing and Cumulative Noise Impacts, Policy 3.3.6: San Luis Obispo County shall consider implementing mitigation measures where existing noise levels produce significant noise impacts to noise-sensitive land uses or where new development may result in cumulative increases of noise upon noise-sensitive land uses.</p>	<p>Implementation of the project would not result in a cumulative increase of noise affecting sensitive land uses.</p>	<p>Potentially Consistent</p>
<p>Chapter 4, Implementation Measure 4.1: New public and private development proposals shall be reviewed to determine conformance with the policies of this Noise Element.</p>	<p>This analyzes the potential noise impacts, consistent with the Noise Element.</p>	<p>Potentially Consistent</p>
<p>Chapter 4, Implementation Measure 4.2: When mitigation must be applied to satisfy the policies in Chapter 3.3, the following mitigation measures shall be considered and preference shall be given where feasible to the measures in following item a:</p> <ul style="list-style-type: none"> a) Site layout, including setbacks, open space separation and shielding of noise-sensitive uses with non-noise-sensitive uses. b) Acoustical treatment of buildings. c) Structural measures: construction of earthen berms or wood or concrete barriers. 	<p>The EIR identifies interior design measures to mitigate levels below identified thresholds, consistent with this measure.</p>	<p>Potentially Consistent</p>
<p>Chapter 4, Implementation Measure 4.8: Procedures shall be developed and employed to monitor compliance with the policies of the Noise Element after completion of projects requiring noise mitigation.</p>	<p>The County will verify that noise mitigation has been implemented prior to occupation of the residence.</p>	<p>Potentially Consistent</p>
<p>Chapter 4, Implementation Measure 4.9: The State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code (UBC) shall be enforced.</p>	<p>Design of the proposed residence would comply with existing regulations.</p>	<p>Potentially Consistent</p>

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
County of San Luis Obispo Safety Element		
Geologic and Seismic Hazards, Goal S-5: Minimize the potential for loss of life and property resulting from geologic and seismic hazards.	Based on compliance with the CBC, County Code, and incorporation of recommendations identified in the Updated Geotechnical Investigation (GSI Soils, Inc.; December 27, 2011) and Engineering Evaluation (Shoreline Engineering, January 2012), the project would be consistent with this goal.	Potentially Consistent
Geologic and Seismic Hazards, Policy S-21: Slope Instability. The County acknowledges that areas of known landslide activity are generally not suitable for residential development. The County will avoid development in areas of known slope instability or high landslide risk when possible, and continue to encourage that developments on sloping ground use design and construction techniques appropriate for those areas.	The project site is not located within an area of high landslide risk; however, short-term slope instability may occur during construction. Based on incorporation of recommendations identified in the Updated Geotechnical Investigation (GSI Soils, Inc.; December 27, 2011) and Engineering Evaluation (Shoreline Engineering, January 2012), which include use of temporary soldier piles to stabilize cut slopes during excavation and construction, the project would be consistent with this policy.	Potentially Consistent
Geologic and Seismic Hazards, Implementation Measures, Standard S-56: For developments in areas of known slope instability, landslides, or slopes steeper than 20 percent, the stability of slopes shall be addressed by registered professionals practicing in their respective fields of expertise.	The applicant submitted technical reports and plans completed by registered engineers, and independently peer reviewed during the EIR analysis, consistent with this implementation measure.	Potentially Consistent
Geologic and Seismic Hazards, Implementation Measures, Standard S-57: New development will not be permitted in areas of known landslide activity unless development plans indicate that the hazard can be reduced to a less than significant level prior to beginning development.	The project site is not located in an area of known landslide activity.	Potentially Consistent
Geologic and Seismic Hazards, Implementation Measures, Standard S-59: Development proposals will be required to mitigate the impacts that their projects contribute to landslides and slope instability hazards on neighboring property, and appurtenant structures, utilities, and roads; such as emergency ingress and egress to the property, and loss of water, power or other lifeline facilities.	Based on incorporation of recommendations identified in the Updated Geotechnical Investigation (GSI Soils, Inc.; December 27, 2011) and Engineering Evaluation (Shoreline Engineering, January 2012), which include use of temporary soldier piles to stabilize cut slopes during excavation and construction, the project would be consistent with this implementation measure and would not destabilize areas adjacent to Studio Drive and the neighboring developed property to the south.	Potentially Consistent

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
Geologic and Seismic Hazards, Implementation Measures, Standard S-60: Enforce current building code requirements and applicable ordinances and sections of the General Plan that pertain to development on sloping ground.	The County requires compliance with the CBC, Estero Area Land Use Element and Local Coastal Plan, and Coastal Zone Land Use Ordinance, consistent with this implementation measure.	Potentially Consistent
Geologic and Seismic Hazards, Implementation Measures, Standard S-61: Require slope stability evaluations for new developments in area of moderate or higher landslide risk as indicated in the Technical Background Report.	The project site is not located in an area of known landslide activity.	Potentially Consistent
Central Coast Basin Plan		
III.A. Regional Water Quality Control Board Management Principles, General: 1. Land use practices should assure protection of beneficial water uses and aquatic environmental values. 2. There shall be no waste discharged into areas which possess unique or uncommon cultural, scenic, aesthetic, historical or scientific values. Such areas will be defined by the Regional Board. 3. Property owners are considered ultimately responsible for all activities and practices that could result in adverse affects on water quality from waste discharges and surface runoff.	The project would not result in the discharge of waste into areas that possess unique or uncommon cultural, scenic, historical, or scientific values, as defined by the RWQCB. Project design and recommended mitigation include measures to protect water quality.	Potentially Consistent
III.C. Discharge to Surface Waters: 1. All discharges to the aquatic environment shall be considered temporary unless it is demonstrated that no undesirable change will occur in the natural receiving water quality. 2. The quality of all surface waters of the basin shall be such as to permit unrestricted recreational use.	The proposed stormwater system would continue to discharge stormwater runoff onto the beach, assuming continued flow into the Pacific Ocean. The plan includes installation of a fossil filter, which would improve water quality, consistent with the intent of these measures.	Potentially Consistent
IV.A. Discharge Prohibitions, All Waters: Waste discharges shall not contain materials in concentrations which are hazardous to human, plant, animal, or aquatic life. The discharge of oil or any residual products of petroleum to the waters of the State, except in accordance with waste discharge requirements or other provisions of Division 7 of the California Water Code, is prohibited. Discharge of elevated temperature wastes into COLD intrastate waters is prohibited where it may cause the natural	The project would not result in the discharge of hazardous materials, oil, or petroleum products into surface waters, because project design (i.e. fossil filter on drainage inlet) and construction-related mitigation to prevent, contain, and control accidental spills or leaks would be implemented. The temperature of stormwater runoff would not be elevated by the project.	Potentially Consistent

Table 3-1. Consistency with Plans and Policies

Goals, Policies, Plans, Programs and Standards	Proposed Action	Determination
<p>temperature of the receiving water to exceed limits specified in Chapter Three [of the Basin Plan], Water Quality Objectives.</p>		
<p>V.G. Erosion and Sedimentation.</p> <ol style="list-style-type: none"> 1. Erosion from nonpoint pollution sources shall be minimized through implementation of BMP's (identified under "Management Principles" and described under "Land Disturbance Activities" in Chapter Four's "Nonpoint Source Measures" section. 2. All necessary control measures for minimizing erosion and sedimentation, whether structural or vegetal, shall be properly established prior to November 15 each year. 3. All structural and vegetal measures taken to control erosion and sedimentation shall be properly maintained. 4. A filter strip of appropriate width, and consisting of undisturbed soil and riparian vegetation or its equivalent, shall be maintained, wherever possible, between significant land disturbance activities and watercourses, lakes, bays, estuaries, marshes, and other water bodies. For construction activities, minimum width of the filter strip shall be thirty feet, wherever possible as measured along the ground surface to the highest anticipated water line. 5. Design and maintenance of erosion and sediment control structures, (e.g., debris and settling basins, drainage ditches, culverts, etc.) shall comply with accepted engineering practices. 6. Cover crops shall be established by seeding and/or mulching, or other equally effective measures, for all disturbed areas not otherwise protected from excessive erosion. 7. Land shall be developed in increments of workable size that can be completed during a single construction season. Graded slope length shall not be excessive and erosion and sediment control measures shall be coordinated with the sequence of grading, development, and construction operations. 8. Use of soil sterilants is discouraged and should be minimized. 	<p>The proposed project design and recommended mitigation measures including soil stabilization, protection of loose soil and sand during construction, and drainage control / low impact development measures are consistent with the Best Management Practices identified in the Basin Plan.</p>	<p>Potentially Consistent</p>

3.3 CUMULATIVE ANALYSIS

3.3.1 CEQA Requirements

Section 15355 of the CEQA Guidelines defines “cumulative impact” as two or more individual effects that, when considered together, are considerable or will compound other environmental impacts. Cumulative impacts are changes in the environment that result from the incremental impact of development of the proposed project and all other nearby “related” projects. For example, the traffic impacts of two projects in close proximity may be insignificant when analyzed separately, but could have a significant impact when the projects are analyzed together.

CEQA Guidelines require that cumulative impacts be discussed when they are significant. The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as much detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness. The CEQA Guidelines state the following:

“Cumulative impacts include either option:

- 1. A list of past, present, and probable future projects producing related or cumulative impacts, including those projects outside the control of the agency, or*
- 2. A summary of projections contained in an adopted general plan or related planning document or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency (§15130 (b)(1)).”*

3.3.2 Cumulative Development Scenario

For the purposes of this EIR a qualitative discussion of community buildout and its relationship to the impacts discussed in Chapter 4 is more relevant as the list of past, present, and reasonably anticipated future projects is limited. One exception to this is the Morro Bay to Cayucos Connector project proposed by the County Division of Parks and Recreation (County Parks), which does not have an anticipated construction date. The Morro Bay to Cayucos Connector would complete an important segment in the non-motorized transportation network along Highway 1. The project corridor would extend from Cloisters Park in the city of Morro Bay north to the site of Norma Rose Park in the community of Cayucos. The project is a completion of the bikeway network between these two locations. It would include signing existing bikeways where cyclists share the street with vehicles and development of a new dedicated bikeway and pedestrian corridor, completely separated from traffic where no bikeways currently exist.

The segment of the bikeway located adjacent to the project site is defined as Segment 5, and would extend from the south end of Studio Drive to the site of Norma Rose Park, a distance of approximately 1.25 miles. This segment includes the existing parking area located at the south end of Studio Drive. The proposed project would formalize this parking area (which may accommodate 13 spaces) by adding striping. A small amount of additional pavement may also be necessary at this location. According to the County’s Bikeway Plan, Studio Drive is an

existing Class III bikeway, although it is not currently signed as such. Segment 5 would follow Studio Drive to Old Creek Road where the segment would cross Highway 1 to another existing Class III bikeway on Ocean Boulevard. This crossing is considered the safest place to cross Highway 1, as it is currently signalized. From the intersection of Ocean Boulevard and Old Creek Road, the segment would head north to the site of the proposed Norma Rose Park where additional bikeways lead to downtown Cayucos via Ocean Boulevard and 13th Street. Alternatively, bikeway users could choose to remain on Studio Drive and reach the coastal access and parking lot at the north end of Studio Drive. No disturbance is proposed for Segment 5, other than signage and striping located on the south end of Studio Drive.

Potential cumulative impacts resulting from the cumulative development scenario are addressed in the individual issue area discussions in Chapter 4.

This page intentionally blank

CHAPTER 4

ENVIRONMENTAL IMPACT ANALYSIS

The Environmental Impact Analysis chapter of this EIR has been divided into sub sections, as follows:

- **Existing Conditions:** The description of the physical environmental conditions in the vicinity of the project, as they exist at the time the NOP is published (baseline physical conditions).
- **Regulatory Setting:** The regulations in force at the time the NOP is published. These are the applicable regulations governing each environmental topic, such as the Clean Air Act and its requirements for maintaining air quality. This is not an exhaustive analysis of the regulations, but rather information to assist the reader in understanding the potential impacts of the project from a regulatory perspective.
- **Thresholds of Significance:** The thresholds used to evaluate each environmental topic are usually based on Appendix G of the CEQA Guidelines, or are standard procedures related to existing regulations or are standards in the industry.
- **Impact Assessment and Methodology:** Methodology used to determine the impacts associated with the project, such as measurements or field investigative processes.
- **Project-Specific Impacts and Mitigation Measures:** These include the significant environmental effects of the proposed project, as further defined below. The impacts are identified and then are followed by the mitigation measures that can minimize significant impacts; mitigation measures must be enforceable and feasible. Where more than one mitigation measure could be used to reduce a significant effect, each should be discussed and rationale given for determining the preferable mitigation measure. In addition, there must be an essential nexus between the mitigation measure and a legitimate governmental interest, and the mitigation measure also must be “roughly proportional” to the impacts of the project.
- **Residual Impacts:** The statement of the level of impact, significant or insignificant, that is residual once mitigation is applied.
- **Cumulative Impacts:** The cumulative effects of the project when the project’s effect is cumulatively considerable.
- **Secondary Impacts:** If a mitigation measures would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure must be discussed but in less detail than the significant effects of the project as proposed. (*Stevens v. City of Glendale* (1981) 125 Cal.App.3d 986).

All residual impacts in the EIR have been classified according to the following criteria (note: CEQA does not recognize a beneficial effect as an impact):

- **Class I – Significant, unavoidable, adverse impacts:** Significant impacts that cannot be fully and effectively mitigated. No measures could be taken to avoid or reduce these adverse effects to insignificant or negligible levels.
- **Class II – Significant, but mitigable impacts:** These impacts are potentially similar in significance to those of Class I, but can be reduced or avoided by the implementation of mitigation measures.
- **Class III – Less than significant impacts:** Mitigation measures may still be required for these impacts as long as there is rough proportionality between the environmental impacts caused by the project and the mitigation measures imposed on the project.

The term “significance” is used throughout the EIR to characterize the magnitude of the projected impact. For the purpose of this EIR, a significant impact is a substantial or potentially substantial change to resources in the proposed project area or the area adjacent to the proposed project. In the discussions of each issue area, thresholds are identified that are used to distinguish between significant and insignificant impacts. To the extent feasible, distinctions are also made between local and regional significance and short-term versus long-term duration. Where possible, measures have been identified to reduce project impacts to less than significant levels. CEQA requires that public agencies should not approve projects as proposed if there are feasible mitigation measures available that would substantially lessen the environmental effects of such projects (CEQA Statute §21002). Included with each mitigation measure are the plan requirements needed to ensure that the mitigation is included in the plans and construction of the project and the required timing of the action (e.g., prior to development of final construction plans, prior to commencement of construction, prior to operation, etc.).

4.1 AESTHETIC RESOURCES

4.1.1 Existing Conditions

4.1.1.1 Project Setting

The community of Cayucos is located on a gently-sloped marine terrace situated between the Pacific Ocean and a series of low foothills rising up to the Santa Lucia Mountain Range. The diverse geologic features that characterize the region contribute to the high scenic quality of Cayucos and the coast. The most notable natural visual resources are Morro Rock near Morro Bay to the south, the fertile valleys and hills east of town, and unobscured views of the Pacific Ocean. The vegetation of the surrounding open space is predominately denuded grassland and scattered coyote brush, with natural stands of oak, sycamore, and pine trees at the lower elevations, primarily on the north- and east-facing slopes. Large windrows of eucalyptus trees can be seen in the regional landscape associated with ranches and old homesteads.

Cayucos is a compact community with well-defined edges, surrounded by the Pacific Ocean to the west and rural open space to the north, south, and east. Approximately 0.5 mile of open space separates the southern limit of Cayucos from its neighbor to the south, Morro Bay. Cayucos follows an overall linear form as it hugs the coast. Highway 1, a State Scenic Highway and National Scenic Byway, generally parallels the coastline through Cayucos. The majority of the town's northern portion is located between Highway 1 and the ocean; however, as the community stretches south along the coast, residential neighborhoods line the highway on both sides (refer to Figure 4.1-1 below).

Figure 4.1-1. Approaching Cayucos from the South on Highway 1



Cayucos is a beach community which retains a small-town visual character. Downtown Cayucos, located approximately 1.5 miles north of the project site, is defined largely by the Cayucos Pier, Cayucos State Beach, and Ocean Avenue, the main commercial street and local thoroughfare in town. Cayucos is a popular destination for visitors, due largely to the natural scenic variety and beauty of the surroundings, combined with the pedestrian scale, western-style, and eclectic architecture of the downtown area.

The residential neighborhoods that extend from the downtown area also contribute to the beach town aesthetic of the community. Older homes on small lots help preserve the small-town character of the area. Typical of an era, the buildings that greatly define the coastal community aesthetic tend to be one or two stories, with gable roofs and horizontal wood siding. Many mid-century residences are also seen with Modern style architecture, employing flat or shed rooflines with clerestory windows. Increasingly over time, many of the older structures have been remodeled or replaced. Some newer buildings maintain the appearance of the small beach town in terms of architecture and scale; however, a percentage of the newer structures are not consistent with the historic aesthetic character of the community. The trend toward utilizing maximum buildable envelopes, Mediterranean architecture, and contemporary materials and colors is changing the visual identity of Cayucos.

The Neighborhood

West of Highway 1

The neighborhood on the ocean side of Highway 1, adjacent to the project site, extends south from the project site along Studio Drive for approximately one mile. Many of the lots in this neighborhood front the Pacific Ocean and the houses in this area are mostly single-story and lower-profile to minimize effects on public ocean views. This neighborhood includes a range of architectural forms, styles, and age of structures (refer to Figures 4.1-2, 4.1-3, 4.1-4, and 4.1-5 below). No single type of architecture is dominant along Studio Drive, with a seemingly equal number of modern, post-modern, beach bungalow, and Mediterranean styles present. Common to the other neighborhoods in the community, the majority of homes along Studio Drive have gable or flat roofs. Landscaping is generally well-developed in this area, although few trees have been planted. Direct ocean views are available from homes along the bluff side of the street, while views to the ocean from many of the other homes in the neighborhood are obscured by the intervening houses and vegetation.

Figure 4.1-2. Studio Drive Neighborhood Adjacent to the Project



Figure 4.1-3. Studio Drive Neighborhood South of the Project



Figure 4.1-4. Bluff-top Homes along Studio Drive South of the Project



Figure 4.1-5. Pacific Avenue Neighborhood North of the Project



East of Highway 1

On the inland side of the highway across from the project site, houses can be seen as the landform rises up to the eastern hillside (refer to Figure 4.1-6 below). The homes in this neighborhood east of the highway are a mix of one- and two-story buildings. The forms and architectural styles of these houses vary greatly, which adds to the eclectic visual character of the neighborhood. Views of coastal resources from this neighborhood include the hillsides to the east and distant vistas of the Pacific Ocean and Morro Rock. The extent of ocean views increases as the homes to the east rise in elevation up the slope. Public roads in this area with elevated vantage points also have an increased access to ocean views.

Figure 4.1-6. Neighborhood East of the Project across Highway 1



Project Site

The project site is 3,445 square feet in size, and is bordered on its eastern boundary by Studio Drive. A single-family residence and the residential neighborhood that stretches south along Studio Drive are located immediately to the south. Morro Strand State Beach and the Pacific Ocean are located to the west of the project site (refer to Figure 4.1-7). Approximately 0.2 mile of open space is directly north of the project between Highway 1, Studio Drive, and the ocean. Within this open space, Old Creek crosses the beach from under Highway 1, continuing west to meet the ocean. Two unpaved parking and beach access areas are also within this open space north of the project site, one at the northern terminus of Studio Drive and the second north of Old Creek at the southern end of Pacific Avenue.

Figure 4.1-7. Project Site as seen from the Beach



The project site hugs the northwestern-most edge of the slope, at a location where the landform veers back to the east toward Studio Drive (refer to Figure 4.1-7). Project site elevations range from approximately 31 feet along the eastern and southern property lines to slightly less than 10 feet on the beach sand found at the northwest corner of the site. The general area surrounding the project site is characterized by coastal features, including beachfront adjacent to relatively low coastal and fluvial bluffs that range in elevation from approximately 30 to 50 feet. Small rock outcroppings are exposed along the edge of the beach sand, and an informal foot path runs from Studio Drive down to the beach along the north side of the parcel. Except for the rocky bluff areas, the site is mostly covered with non-native vegetation such as iceplant, statice, and other ornamental plants. One mature cypress tree is located adjacent to the southeast property boundary and one small pine tree is located at the southeast corner of the project site.

Because of intervening adjacent development to the south, coastal views from most of the project site are oriented to the northwest. Distant views of the Cayucos Pier can be seen, along with the northern portion of town and the coast as it extends to the northwest. Along the western-most side of the parcel, coastal views extend more toward the south.

4.1.2 Regulatory Setting

The project is located within the jurisdiction of the County of San Luis Obispo. The regulatory setting is defined in applicable planning policies and in the CEQA Guidelines. The regulatory setting pertaining to visual resources includes review of the proposed project's consistency with respect to the County's implementation of CEQA, the San Luis Obispo County General Plan Coastal Plan Policies, Conservation and Open Space Element, Estero-Coastal Area Plan, Title 23 County Coastal Zone Land Use Ordinance, San Luis Obispo County Design Guidelines, and other supporting documentation.

4.1.2.1 State Policies and Regulations

California Coastal Act

Implementation of the California Coastal Act (CCA) is delegated to the County through adoption of the County General Plan Local Coastal Plan (LCP).

Policy clarification regarding consideration of public views versus private views is provided by the California Coastal Commission concerning §30251 of the Coastal Act:

The primary concern under this section of the Act is the protection of ocean and coastal views from public areas such as highways, roads, beaches, parks, coastal trails and accessways, vista points, coastal streams and waters used for recreational purposes, and other public preserves rather than coastal views from private residences where no public vistas are involved.

4.1.2.2 Local Policies and Regulations

Local Coastal Program

The Local Coastal Program, Coastal Plan Policies, Chapter 10, Visual and Scenic Resources cites the CCA as follows:

30251 – Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of the surrounding areas, and where feasible, to restore and enhance visual quality in visually degraded areas.

30253 (5) – Where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses.

The Coastal Plan Policies Chapter 10 identifies “special communities and neighborhoods” along the coast. The project site is located along Studio Drive, a defined Community Small-Scale Design Neighborhood. The limits of special small-scale neighborhood designations are not specifically identified; however, the policies provide the following guidance regarding their selection criteria:

“Distinct from these visitor destination points are small-scale neighborhoods that have primary use by local residents and secondary use by the general public as access to the scenic shoreline.”

“Studio Drive (and Pacific Avenue) are residential neighborhoods characterized by 25 to 40 foot wide lots. Most of the structures are low profile and one story houses. The Studio Drive area is immediately adjacent to Highway 1, from which a view of the ocean is usually available.”

“Special coastal communities and neighborhoods are an integral part of the experience of the coast, and are often built on the most scenically-desirable areas. Coastal neighborhoods with distinctive qualities are a value to both local residents as well as visitors. Maintaining their present qualities will often require retaining the present scale and mix of development.”

“Within the urban areas defined as small-scale neighborhoods or special communities, new development shall be designed and sited to complement and be visually compatible with existing characteristics of the community which may include concerns for the scale of new structures, compatibility with unique or distinguished architectural historical style, or natural features that add to the overall attractiveness of the community.”

4.1.2.3 State and National Scenic Designations

In 1999, Highway 1 was designated by the State of California as an Officially Designated Scenic Highway. The County of San Luis Obispo promoted the designation based on the high level of existing visual quality along the corridor as well as the desire to protect its visual resources in the future. In 2003, Highway 1 was also bestowed the title of “All-American Road” in the National Scenic Byway program. This designation recognizes the visual characteristics of Highway 1 corridor as being among the highest quality in the nation. These designations illustrate the highest level of concern and sensitivity for the aesthetics within the project area and beyond. The state and national scenic designations for Highway 1 hinge on maintaining the high visual quality of the scenic corridor.

4.1.3 Thresholds of Significance

The determinations of significance of project impacts are based on applicable policies, regulations, goals, and guidelines defined by CEQA and the County. In addition to comparing the project to relevant policies and standards, the aesthetic resources assessment identified which specific criteria contribute most to the existing quality of each view and if change would occur to that criteria as a result of the project. If a change in visual criteria was identified, this change was analyzed for its potential effect on the existing scenic character. This analysis was combined with the potential number of viewers, their sensitivities, and viewing duration in order to determine the overall level of impacts. Specifically, the project would be considered to have a significant effect on the environment if the effects exceed the significance criteria described below.

4.1.3.1 County of San Luis Obispo

The significance of potential aesthetic resources impacts are based on thresholds identified by the County in accordance with within Appendix G of the CEQA Guidelines. Aesthetic impacts would be considered significant if the proposed project would:

Create an Aesthetically Incompatible Site Open to Public View

Visual contrast may be used as a measure of the potential impact that the project may have on the visual quality of the site. If a strong contrast occurred where project features or activities

attract attention and dominate the visual setting, this would be considered a potentially significant impact on visual character or quality of the site, and mitigation would be required.

Introduce a Use within a Scenic View Open to Public View

If the proposed project could significantly degrade the scenic landscape as viewed from public roads, or in particular designated scenic routes, or from other public or recreation areas, this would be considered a potentially significant impact on the scenic vista. The scenic landscape in this case includes views of the Pacific Ocean, the beach, the Cayucos Pier, Morro Rock, and the hillsides and ridges to the east. The degree of potential impact on scenic vistas would vary with factors such as viewing distance, duration, viewer sensitivity, and the visual context of the surrounding area.

The project would result in a significant impact if it had a substantial adverse effect on a scenic resource as seen from Highway 1. A scenic resource would be a specific feature or element with a high degree of memorability or landmark characteristics that contributed to the high visual quality of the corridor. From along Highway 1 in the project vicinity, Morro Rock, the Pacific Ocean, and the Cayucos Pier are considered Scenic Resources. The project would result in a significant impact if it were to have a substantial negative effect on views of any of those specific resources, from public vantage points.

Change the Visual Character of an Area

Project related actions would be considered to have a significant impact on the visual character of the setting if they altered the area in a way that substantially changed, detracted from, or degraded the visual quality for moderately sensitive viewers in the area and was inconsistent with defined policies regarding visual character. The degree to which proposed change reflects documented community values and meets users' and other viewers' aesthetic expectations is the basis for determining levels of significance. Visual contrast may be used as a measure of the potential impact that the project may have on the visual quality of the site.

Create Glare or Night Lighting, Which May Affect Surrounding Areas

The project would result in a significant impact if it subjected public viewing locations or adjacent residents to a substantial amount of point-source lighting visibility at night, or if the collective lumination of the project resulted in a noticeable spill-over effect into the nighttime sky, increasing the ambient light over the region. The degree of impact caused by night lighting would consider the type of lighting proposed by the project action along with the lighting reasonably expected to be generated by the future development. The placement of lighting, source of illumination, and fixture types combined with viewer locations, adjacent reflective elements, and atmospheric conditions can affect the degree of change to nighttime views. If the project results in direct visibility of a substantial number of lighting sources, or allows a substantial amount of light to project toward the sky, significant impacts on nighttime views and aesthetic character would result.

Impact Unique Geological or Physical Features

The project would result in a significant impact if it had a substantial adverse effect on public views of a unique physical or geological feature. To meet such a significance criteria, geological or physical features would be rare or special examples of their type, with a high degree of memorability or landmark characteristics. From public viewpoints in the project vicinity, Morro Rock and various rock outcroppings found on nearby hillsides are considered

unique geological or physical features. If the project would result in a significant impact if it were to have a substantial negative effect on public views of these specific resources.

4.1.4 Impact Assessment and Methodology

4.1.4.1 Analysis Methodology

The analysis considers the existing development as part of the visual baseline. This includes the neighborhoods immediately surrounding the project, as well as other areas of the community that define the overall character of Cayucos. The visual quality of the community has as much to do with the built environment as it does the natural setting. Patterns of development, architecture, scale, massing and vegetation define how the community is perceived by residents and visitors alike.

In determining levels of impact, this study also compares the proposed project to the specific visual resource goals of the County. When the stated goals demonstrate that a high degree of value is placed on the visual environment, the standards to which the project must be compared are equally high. As a result of the valued small-town beach setting, combined with an awareness of scenic quality as reflected in county planning policy, it is anticipated that community and viewer sensitivity to visual changes on this prominent site will be high.

In order to understand the type and extent of physical change expected by project implementation, the physical size and form of the building and other site features were created on-site through the use of story-poles and other markers. Locations of critical structure elements were identified based on site plan information and architectural elevations provided by the project applicant. These critical project features were surveyed and staked in the field, and corresponding horizontal and vertical location data was developed. The architectural appearance of the building for inclusion in the photo-simulations was based on information provided by the project architect. Poles and reference flags were positioned at each critical point. These flags were used as a visual scale reference for confirming structure height and massing, ensuring accuracy of photo-simulations, and for determining overall project visibility.

The story-poles were then viewed from all potential public viewer group locations on Highway 1 and local roads in Cayucos, and from recreational areas such as Morro Strand State Beach. Resulting from this initial review, representative viewpoints were determined for further analysis, based on dominance of the site within the view, duration of views, and expected sensitivity of the viewer group. Of those representative viewpoints, Key Viewing Areas were selected which would best illustrate the visual changes proposed by the project (refer to Figure 4.1-8). Photographs were taken from the Key Viewing Areas, and photo-simulations were prepared illustrating the appearance of the project as proposed by the applicant. Visibility of the surveyed reference flags was used to ensure accuracy of the photo-simulations. The completed simulations were used to quantify potential project visibility and to assess related impacts. The project site was then field-reviewed to assist in determining possible mitigation measures. Images of the existing views, along with photo-simulations of the proposed project can be seen in Figures 4.1-11 through 4.1-16.

Figure 4.1-8. Key Viewing Area (KVA) Location Map

Project Visibility

Field studies identified segments of Highway 1, Studio Drive, and Morro Strand State Beach as the main public areas from where the project would be seen.

Views from Highway 1

Views from the highway include the hillsides rising up to the east, residential areas along both sides of the highway, and occasional views of the Pacific Ocean to the west. Closer views of the shoreline are limited from much of this section of highway because of the residential neighborhood on the ocean side of the roadway. North of the project site ocean and coastal views can be seen through an approximately 0.2-mile gap in development. The neighborhood surrounding the project site contributes to the quality of the Highway 1 scenic corridor. The individual houses collectively define a visual quality typical of a small-town beach community. As seen from the highway, the houses appear mostly compact in form and sit close together on relatively small lots with little yard space. A mix of building styles and ages is noticeable, resulting in a diverse neighborhood aesthetic evolved over the years.

Highway 1 Southbound

Traveling along Highway 1 in the southbound direction (KVA-2), the project site is first visible at a viewing distance of approximately 0.2 mile. The viewing duration in the southbound lanes is approximately 11 seconds for vehicles traveling at the posted speed limit. Highway 1 is a popular bicycle route, and the viewing duration from bicycles would be longer. At its closest point, the project site is approximately 150 feet from the southbound lanes. For the southbound highway viewer, ocean views are blocked by landform or vegetation until a point immediately south of Old Creek. At that point, views of the ocean and beach are fully visible. The existing residences along Studio Drive can be seen to the southwest. Views of the project

are also available, although the lower portion of the residence would not be seen because of the project site's elevation somewhat below the highway (refer to Figure 4.1-9).

Figure 4.1-9. Project Site as seen from Southbound Highway 1 North of Studio Drive



From viewpoints along Highway 1 north of the project site, the proposed residence would have only a minor effect on ocean views. Existing ocean and beach views to the west would remain the same. Views toward the southwest are already substantially blocked by existing residences. By extending development further to the west, the proposed structure would add to the existing view blockage, however from most viewpoints along southbound Highway 1 the extent of blockage would be an insignificant percentage of the total available existing ocean view (refer to Figure 4.1-12). The proposed structure would be consistent with heights of the adjacent residences, as measured from Studio Drive.

Highway 1 Northbound

From northbound Highway 1 (KVA-3), the project site is visible for a total of 0.1 mile, with a potential viewing duration of approximately 5 seconds. Intervening development generally blocks northbound views of the project site until a spot approximately 500 feet south of the Studio Drive/ Highway 1 intersection. Because of the project site's elevation below Highway 1, only the uppermost portion of the residence would be visible.

This viewshed in the northbound direction is generally defined by the residential development along the highway corridor, open space hillsides inland, and the Pacific Ocean to the northwest. Refer to Figure 4.1-13 for the view from northbound Highway 1.

As seen from viewpoints east of the project along Highway 1, the project would partially block views of the ocean and the distant coastline to the northwest. This would appear as an extension of the view blockage caused by the existing residences.

Views from Studio Drive

The closest and most direct roadway views of the project are from Studio Drive (KVA-1). The project is visible along an approximately 800-foot section of Studio Drive. Traveling south

along Studio Drive, the project occupies the foreground view, and would be clearly visible as the northernmost development along the row of houses. The project site occupies a highly visible location along Studio Drive. This local roadway serves many bicyclists and pedestrians, whom would have relatively close vantage points. From Studio Drive, building details, materials and finishes of the project would be easily noticeable to the casual observer. Direct views of the Pacific Ocean and the beach are available from portions of Studio Drive. These existing views are mostly oriented to the west and northwest. The existing residences along Studio Drive preclude much of the ocean view to the southwest. Morro Rock, another scenic coastal resource, is not visible from Studio Drive in the immediate project vicinity.

From viewpoints along Studio Drive north of the project, the proposed residence would have only a minor effect on ocean views. Existing ocean and beach views to the west would remain the same. Views toward the southwest are already substantially blocked by existing residences. By extending development further to the north, the proposed structure would add to the existing view blockage, however from most viewpoints along southbound Studio Drive the extent of blockage would be an insignificant percentage of the total available existing ocean view (refer to Figure 4.1-11). The proposed structure would be consistent with heights of the adjacent residences. The project would block direct views of the ocean to the west as seen from viewpoints immediately adjacent to the project along an approximately 50-foot section of Studio Drive.

As seen from viewpoints south of the project along Studio Drive, the project would partially block views of the ocean, the beach, and the distant coastline to the northwest. This would appear as an extension of the view blockage caused by the existing residences, noticeable along an approximately 150-foot section of Studio Drive.

At the northern terminus of Studio Drive, a public parking area provides direct views of the project to the south. From this vantage point, approximately 300 feet from the project, the proposed residence would be seen almost directly from the side. Because of the viewing angle the silhouette of the new building would mostly fit within the silhouette of the existing residences behind it to the south. As a result the project would not block views of coastal resources as seen from this public parking area.

Views from Morro Strand State Beach

The project site is directly visible from an approximately 0.5-mile stretch of Morro Strand State Beach (KVA-4 and KVA-5). The project would be seen in a context that includes beach sand and bluffs in the foreground, residential areas in the fore and mid-ground, and from some areas, open space hills as a backdrop (refer to Figures 4.1-14 and 4.1-15). Viewing duration from this vantage point could be indefinite because of the passive and static nature of some beach activities. As seen from points on the beach southwest of the project, the existing residential development along the bluff top dominates views to the east. From these southwest viewpoints, the proposed residence would block a portion of the view to the hillside to the east and northeast of Highway 1. Much of this hillside view is already compromised by existing development east of the highway. Views of coastal resources from beach locations northwest of the project would not be affected because the new residence would generally fit with the silhouette of the existing development to the south. Because of the project's location, no views from the beach toward the ocean to the west, southwest or northwest would be affected by the project.

Views from other roads and neighborhoods

The project site is also visible to some degree from other public roads and neighborhoods in the area. The type and extent of views from these locations varies, depending mostly on viewing distance, intervening development and orientation.

The closest neighborhood other than the Studio Drive neighborhood is located east of Highway 1 (KVA-6). Portions of this residential area are directly across the highway from the project site. This area is at a higher elevation than the Studio Drive neighborhood and extends up the hill to the east. Because of this elevation difference, only the uppermost portion of the proposed residence would be visible. From a limited area in the vicinity of Obispo Avenue and Ocean Avenue, the project would block a small portion of the view of the ocean (refer to Figure 4.1-16). As seen from this viewpoint, the new residence would be visually consistent with the heights of the adjacent buildings along Studio Drive. As a result, where affected, views to the horizon line would still be maintained.

The project would also be seen from a portion of the neighborhood along Pacific Avenue north of the project, as well as from a public parking area at the southern terminus of Pacific Avenue and 24th Street (refer to Figure 4.1-10). These viewpoints are approximately 0.2 mile from the project, and because of that distance, noticeability of the project would be substantially reduced. From these western viewpoints the proposed building would be seen from the side, and its visual silhouette would fit within the general silhouette of the existing development immediately to the east.

Figure 4.1-10. Project Site as seen from the Parking Area near Pacific Avenue



4.1.5 Project-specific Impacts and Mitigation Measures

The project is proposed on a sensitive site in terms of community and highway corridor aesthetic character. The parcel is clearly visible from Highway 1, a Designated State Scenic Highway and National Scenic Byway, is within the Coastal Zone, and is within the foreground view of scenic coastal resources such as the Pacific Ocean and the beach.

4.1.5.1 Create an Aesthetically Incompatible Site Open to Public View

From surrounding viewing locations, the overall height of the project would appear visually consistent with the heights of existing houses lining Studio Drive (refer to Figures 4.1-11 through 4.1-16), and particularly the existing houses closest to the site. It is anticipated that as seen from most viewpoints, the height of the project would not be unexpected at this residential location.

The project proposes a building with a distinctly modern-style architecture and form. This style of architecture is seen regularly in the Studio Drive neighborhood and throughout the community (refer to Figures 4.1-2, 4.1-3, and 4.1-4). Although residential buildings often associated with the coastal community aesthetic tend to be beach bungalow style, modern style architecture is also part of the eclectic vernacular. These mid-century style buildings often employ simple forms, and flat rooflines with clerestory windows, similar to the proposed project.

Because of the existing residential setting, and the proposed structure's general consistency with the scale and architecture of the Studio Drive neighborhood, the project would be aesthetically compatible with the area, and potential impacts to public views is considered to be *less than significant* (CEQA Class III).

4.1.5.2 Introduce a Use within a Scenic View Open to Public View

Because of its location on the ocean bluff, the project would be visible from many public viewpoints and from many viewing directions. The project's proximity to the beach and Studio Drive allows for up-close viewing opportunities by the public. The greatest number of potential viewers would be traveling on Highway 1, from where the project would occupy a portion of the mid-ground view, with the Pacific Ocean in the background. From Highway 1, the project would be more noticeable from the southbound lanes, since views from the northbound lanes would be mostly blocked by adjacent development. As seen from all areas on Highway 1, the lowest portion of the building and associated retaining walls would have limited visibility. The upper part of the residence would block a portion of the existing ocean view, from both the northbound and southbound lanes of Highway 1. From the southbound lanes, blue-water ocean views and the horizon line would be blocked a minor amount (refer to Figure 4.1-12). As seen from the northbound lanes, blue-water views would also be briefly blocked, however views of the horizon and of the distant coastline hills would not be affected (refer to Figure 4.1-13).

Although the project would block a portion of the ocean, the effect on the viewing experience would be minor. As seen from the highway it is estimated that the project would only block an insignificant percentage of the existing available ocean view. No views of unique, historic, or singularly memorable coastal resources would be affected. The existing residential development along Studio Drive currently limits views of the ocean and beach from Highway 1. It is anticipated that to most viewers, the project's small incremental effect on the scenic vista would just appear as an extension of the existing neighborhood condition. The high quality of the scenic vista would not be affected, and the extent of view loss would be minor or even unnoticed in the context of the remaining scenic viewshed.

As seen from southbound Studio Drive, the visual effect of the project would be similar to that from Highway 1; only a small portion of the total available ocean view would be affected, and the majority of the project would be seen within the visual silhouette of the adjacent development (refer to Figure 4.1-11). From northbound Studio Drive south of the project, views

of the ocean are blocked by existing homes. From the northbound direction, coastal views begin to open up as the viewer approaches the project site and begins to see around the northernmost residence. With construction of the project, existing coastal view blockage in the northbound direction and directly in front of the project would be extended a distance of approximately 150 feet along the street frontage. Outside of this 150-foot section, northbound views along Studio Drive would not be affected. Because existing coastal views along the approximately one mile length of Studio Drive are currently blocked, and there is approximately 300 feet of protected ocean views to the north of the site and extending to the Old Creek parking area, the additional 150 feet of affected view would be minor. The visual affect as seen from a vehicle would be approximately one second. Because of the short length, viewing durations from pedestrian and bicyclist viewpoints would also be very brief. Similar to the views from Highway 1, the project's small incremental effect on the scenic vista would likely appear as an extension of the existing neighborhood condition. The high quality of the existing scenic vista would be unaffected, and the extent of view loss would be minor or even un-noticed in the context of the remaining scenic viewshed.

Viewpoints from the beach toward the project would be generally oriented inland and away from the ocean. From these viewing areas, scenic coastal resources such as the hills east of the highway are somewhat compromised by existing residential areas as well as the highway. The uppermost portions of the hills however are undeveloped and can be seen from much of the beach area. Because of the existing homes along the Studio Drive bluff, public viewers closer to the base of the bluff can see less of the hills across the highway to the east. From most beach viewpoints northwest of the project, the proposed residence would not extend beyond the visual silhouette of the adjacent development behind it (refer to Figure 4.1-15). As seen from certain viewpoints directly west and southwest of the project, the upper portion of the new building would block a portion of the hillside to the northeast. From some closer viewpoints, the residence would block brief views of the ridgeline as well (refer to Figure 4.1-14). Although a portion of the hillside views would be blocked by the project, the overall effect on the scenic vista would be minor. Views to the hills would not be blocked as seen from the majority of the beach area. No unique rock outcroppings or other memorable features are present within affected hillside areas. In addition, other hillside views would remain in the viewshed. The project and its subsequent effect on hillside views would appear to most viewers as an extension of the existing visual condition. Scenic ocean views from the neighborhood east of the highway would not be affected because the proposed residence would be consistent with the heights of the existing adjacent homes along Studio Drive.

Because the project would affect only a minor percentage of the available ocean and hillside views as seen from Highway 1 or from public roadways in the surrounding neighborhood or public beach, and because what would be affected would appear as an incremental extension of the existing visual condition along Studio Drive, the project's effect on scenic views is considered to be *less than significant* (CEQA Class III).

Specific Scenic Resources as Seen from the State Scenic Highway

As discussed in the previous section, the greatest number of potential viewers would be traveling on Highway 1, an Officially Designate State Scenic Highway and a National Scenic Byway. The upper part of the residence would block a portion of the existing ocean view, from both the northbound and southbound lanes of Highway 1. From the southbound lanes, blue-water ocean views and the horizon line would be blocked a minor amount (refer to Figure 4.1-12). As seen from the northbound lanes, blue-water views would also be briefly blocked, however views of the horizon and of the distant coastline hills would remain (refer to Figure 4.1-13).

Although the project would block a portion of the ocean, the effect on the viewing experience would be minor. As seen from the highway it is estimated that the project would only block an insignificant percentage of the existing available ocean view. No views of unique, historic, or singularly memorable coastal resources would be affected. The existing residential development along Studio Drive currently limits views of the ocean and beach from Highway 1. It is anticipated that to most viewers, the project's small incremental effect on the scenic vista would just appear as an extension of the existing neighborhood condition. The high quality of the scenic vista would not be affected, and the extent of view loss would be minor or even un-noticed in the context of the remaining scenic viewshed.

As a result, the project would have no adverse effect on scenic resources as seen from Officially Designated State Scenic Highway 1. Because the project would affect only a minor percentage of the available ocean and hillside views as seen from Highway 1 and because what would be affected would appear as an incremental extension of the existing visual condition along Studio Drive, the project's effect on scenic vistas is considered to be *less than significant* (CEQA Class III).

4.1.5.3 Change the Visual Character of an Area

The project site occupies one of the more visible residential locations in the community. The proximity to Highway 1 and Morro Strand State Beach greatly increases the potential number of viewers of the project. The volume of traffic on Highway 1 in the vicinity of the project averages approximately 11,000 vehicles per day (Caltrans 2008). Because of this large number of viewers and highly visible location, the appearance of the project would have an influence on the visual character of the neighborhood. Any development of the site would include an inherent alteration of visual character. The change in character brought about by this project would be most noticeable in terms of its height, form, and architecture.

The project site itself is mostly covered with non-native vegetation such as iceplant and ornamental plantings. The visual context of the site is one of a residential beach neighborhood. Although the site's topography provides some visual interest to the setting, it is not memorable or unique. The exposed rock area along western portion of the site is a relatively insignificant portion of a larger, continuous rock face extending south along the bluffs. As noted above, the height of the project would not be unexpected at this residential location and the proposed architecture is aesthetically compatible with the character of the existing residences in the Studio Drive neighborhood.

Because of the existing residential setting, and the proposed structure's general consistency with the scale and architecture of the Studio Drive neighborhood, the effect of the project on visual character and quality of the site is considered to be *less than significant* (CEQA Class III).

4.1.5.4 Create Glare or Night Lighting Affecting Surrounding Areas

The EIR analysis assumes that exterior lighting would be included as part of the project. Because of the project's configuration and its proximity to public roadways and the beach, night lighting would be seen from the surrounding area. Unshielded light sources or bright-lights reflected on exterior walls would result in potential impacts. Fog is a common atmospheric condition of the area and increases the "glow-effect" as potentially seen from great distances. Although existing night lighting can be seen in the adjacent neighborhood, the project would increase the visibility of night lighting in the area.

AES Impact 1 Visibility of night lighting would affect views resulting in a direct long-term impact.

AES/mm-1 Prior to issuance of the building permit, the applicant shall submit interior and exterior lighting plans to the Department of Planning and Building for review and approval consistent with the following:

- a. The point source of all exterior lighting shall be shielded from off-site views, including beach areas.*
- b. All required security lights shall utilize motion detector activation.*
- c. Light trespass from exterior lights shall be minimized by directing light downward and utilizing cut-off fixtures or shields.*
- d. Lumination from exterior lights shall be the lowest level allowed by public safety standards.*

Residual Impacts

With implementation of this mitigation measure, impacts due to night lighting would be considered *significant but mitigable* (CEQA Class II).

4.1.5.5 Impact Unique Geological or Physical Features

As mentioned previously, the visual context of the site is one of a residential beach neighborhood. The project site is mostly covered with non-native vegetation such as iceplant and ornamental plantings. Although the site's topography provides some visual interest to the setting, it is not memorable or unique. The exposed rock area along western portion of the site is a relatively insignificant portion of a larger, continuous rock face extending east along the bluffs. Furthermore, the project would not block or adversely affect views of any unique off-site geological or physical features. As a result, the effect of the project on unique geological or physical features is considered to be *less than significant* (CEQA Class III).

4.1.6 Cumulative Impacts

The discussion of cumulative impacts relates to the potential for the project to contribute to an aggregate change in visual quality from the surrounding public viewing areas, taking into consideration existing as well as proposed development. Cayucos has undergone a certain amount of visual change within the last several years due to new and reconstructed residential and commercial development. These changes have resulted in a slightly increased built-character throughout the community. Visual changes to the neighborhoods surrounding the project are mostly the result of new residential infill development and remodels. As existing residential structures age, new houses and reconstruction are expected to continue. Much of the new construction in Cayucos is not visible from Highway 1 because of intervening landform, existing development, or viewing distance.

The project would be consistent with the development patterns throughout Cayucos, and would not be an unexpected visual feature. Although the proposed residence would contribute to the built environment, it is considered in-fill and would merely add one more house on an existing legal lot of record, along a 1 mile long neighborhood of existing houses. As a result, and because the project would appear as a minor incremental extension of the existing visual condition along Studio Drive, the project's cumulative effect on the visual environment is considered to be *less than significant* (CEQA Class III).

Figure 4.1-11. Key Viewing Area 1 – Studio Drive Looking South



Figure 4.1-12. Key Viewing Area 2 – Highway 1 Looking Southbound



Figure 4.1-13. Key Viewing Area 3 – Highway 1 Looking Northbound



Figure 4.1-14. Key Viewing Area 4 – Morro Strand State Beach Looking Northeast



Figure 4.1-15. Key Viewing Area 5 – Morro Strand State Beach Looking Southeast



Figure 4.1-16. Key Viewing Area 6 – Obispo Avenue East of Highway 1 Looking West



This page intentionally left blank.

4.2 CULTURAL RESOURCES

This section summarizes the results of the cultural resources study and background research conducted for the project. The information in this section is based on an Archaeological Resources Survey and Impact Assessment study conducted by Central Coast Archaeology (Lee 2006), background research conducted by the Central Coast Information Center (CCIC) at the University of California, Santa Barbara, and a Sacred Lands File search from the California Native American Heritage Commission (NAHC). Due to the sensitive nature of archaeological sites and the potential for damage or destruction of these resources through uncontrolled public disclosure of information, specific locations are not disclosed in the EIR. The Archaeological Resources Survey and Impact Assessment study is available for review by qualified persons at the County of Department of Planning and Building.

4.2.1 Existing Conditions

4.2.1.1 Pre-Historic (Archaeological) Resources

The project corridor is within the territory historically occupied by the Obispeño Chumash, the northernmost of the Chumash Hoken speaking peoples of California. Pre-historic marriage patterns and post mission settlement patterns have also identified Salinan people living in the northern portions of San Luis Obispo County. Archaeological evidence has revealed that the ancestors of the Obispeño settled in San Luis Obispo County over 9,500 years ago.

Background Research

The results of the records search from CCIC revealed that five previously recorded cultural resources are located within 0.5 mile of the project site. None of these, however, is located adjacent to or within the project site. In addition, the search revealed that 39 cultural resources studies have been conducted within 0.5 mile of the project site, none of which included the subject property.

On December 22, 2010, SWCA sent a letter via facsimile to the NAHC requesting a search of the Sacred Lands File and a contact list of local Native American representatives. The response letter, dated December 28, 2010, from Ms. Katy Sanchez, states that a known prehistoric archaeological site, CA-SLO-129, is located within the vicinity of the project. A review of the records search conducted for the project by the CCIC, and previous NAHC consultation for a study conducted by SWCA in the vicinity, indicates that CA-SLO-129 is *not* located within the current project site (Dietler and Laurie 2010; Lee 2006). While exact locations of archaeological sites are not to be disseminated to the public, the resource is located well outside the project site, at a distance of approximately 0.5 mile. As such, the current project will have no adverse impact to CA-SLO-129.

A letter was sent to each of the 23 representatives provided by the NAHC on December 29, 2010. No responses were received.

Results of 2006 Archaeological Resources Survey and Impact Assessment Study

The Archaeological Resources Survey did not identify the presence of any prehistoric cultural remains on the surface of the project site (Lee 2006). As a result, Mr. Lee concluded that no additional cultural resources study was warranted at the time and that the proposed project would have no impacts to cultural resources.

Subsequent geotechnical studies included boring and trenching excavations within the project site (Cleath and Associates 2006; GSI Soils, Inc. 2007). Cleath and Associates identified the presence of marine shell, which is commonly associated with archaeological sites in the area, in the HA-3 boring (Cleath and Associates 2006). GSI Soils, Inc. (2007) identified the presence of marine shell in Trench T-2, which was placed adjacent to boring location HA-3. Marine shell was observed within a sandy soil matrix in both, at depths of approximately 56 feet below the ground surface. Cleath and Associates (2006) described the layer of sandy soils, in which the shell was observed, as fill soil.

In a response to a review of the project by county staff, Lee (2007) concluded that the marine shell observed during the geotechnical investigations did not constitute an intact archaeological deposit. He states that "(m)aterials associated with those of prehistoric midden remains (bone, lithic tools, chipping waste) were not present within the sand cortex where marine shell was noted" (Lee 2007:3). Shell fragments within fill soils do not, by themselves, constitute a significant cultural resource as described in the regulatory section below. A field survey was conducted by the EIR archaeologist during peer review of the reports provided by the project applicant. No cultural materials were observed.

4.2.1.2 Historic Resources

No built environment or historic structures are present within the project site.

4.2.1.3 Paleontological Resources

The underlying geologic formation is the Franciscan formation (U.S. Geological Survey [USGS] Map of California, San Luis Obispo Edition 1958). This formation is Jurassic in age (approximately 150 to 144 million years ago). Most of the Franciscan formation occurs as metamorphic rocks that have been deformed to a point that any fossils that may have been present are no longer recognizable. No paleontological resources are known to exist within the project site and vicinity.

4.2.2 Regulatory Setting

4.2.2.1 Federal Policies and Regulations

Authorized under the National Historic Preservation Act (NHPA) of 1966, the National Register of Historic Places (NRHP) is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. Properties listed in the NRHP include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The NRHP is administered by the National Park Service, which is part of the U.S. Department of the Interior.

4.2.2.2 State Policies and Regulations

California Environmental Quality Act

CEQA requires a lead agency to determine whether a project may have a significant effect on archaeological resources. Section 21083.2(g) describes a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Office of Historic Preservation

The Office of Historic Preservation (OHP) is the governmental agency primarily responsible for the statewide administration of the historic preservation program in California. The Mission of the OHP and the State Historical Resources Commission, in partnership with the people of California and governmental agencies, is to “preserve and enhance California's irreplaceable historic heritage as a matter of public interest so that its vital legacy of cultural, educational, recreational, aesthetic, economic, social, and environmental benefits will be maintained and enriched for present and future generations.”

The CCIC under contract to the OHP helps implement the California Historical Resources Information System (CHRIS). It integrates information on new resources and known resources into the CHRIS, supplies information on resources and surveys to government and supplies lists of consultants qualified to do historic preservation fieldwork within the area. The California Archaeological Site Inventory is the collection of Site Records, which has been acquired and managed by the Information Centers and the OHP since 1975.

Senate Bill 18 Consultation

Senate Bill 18 (SB 18) was signed into law in September 2004 (effective January 2005), and requires local governments (city and county) to consult with California Native American tribes to aid in the protection of traditional tribal cultural places through local land use planning. The State Tribal Consultation Guidelines (November 2005) states that the intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level land use decisions are made by a local government.

Local governments are required to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. Applicable planning decisions include the adoption and amendment of general plans and specific plans. The proposed project is not a general plan or specific plan amendment; however, due to the presence of significant archaeological resources in the region, significant consultation with Native American tribes was conducted (refer to Appendix A).

4.2.2.3 Local Policies and Regulations

County of San Luis Obispo Coastal Zone Land Use Ordinance

The CZLUO includes ordinance requirements for the protection of known cultural resources, and implementation of mitigation measures to minimize potential impacts to known and unknown resources.

Section 23.05.140 of the CZLUO states:

In the event archeological resources are unearthed or discovered during any construction activities, the following standards apply:

- a. *Construction activities shall cease, and the Environmental Coordinator and Planning Department shall be notified so that the extent and location of discovered materials may be recorded by a qualified archeologist, and disposition of artifacts may be accomplished in accordance with state and federal law.*
- b. *In the event archeological resources are found to include human remains, or in any other case when human remains are discovered during construction, the County Coroner is to be notified in addition to the Planning Department and Environmental Coordinator so that proper disposition may be accomplished.*

In addition to General Plan and ordinance requirements, Coastal Plan Policies address the protection of cultural resources consistent with the requirements of the CCA (1976). The project site is not located within the Archaeologically Sensitive (AS) combining designation, as mapped by the County Estero LUE and LCP.

4.2.3 Thresholds of Significance

CEQA directs lead agencies to protect and preserve resources with cultural, historic, scientific, or educational value. In accordance with §15064.5 (Determining the Significance of Impacts to Archaeological and Historical Resources) and Appendix G of the CEQA Guidelines, the County identified the following questions to determine a project's impact on cultural resources. Would the project:

1. Disturb pre-historic resources;
2. Disturb historic resources;
3. Disturb paleontological resources.

The significance of an historical resource is materially impaired when a project:

- a. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources (CRHR); or,
- b. Demolishes or materially alters in an adverse manner those physical characteristic that account for its inclusion in a local register of historical resources pursuant to PRC §5020.1(k) or its identification in an historical resources survey meeting the requirements of PRC §5024.1(g), unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- c. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for the purposes of CEQA.

Generally, intact cultural and historic deposits are considered significant. Severely disturbed or mixed deposits often are not considered significant but may have educational value. Human remains and associated goods are accorded special consideration, even when fragmentary and are considered significant.

4.2.4 Impact Assessment and Methodology

The impact assessment below is based on the results of the previously prepared cultural resources study, subsequent correspondence, and the study's conclusions and recommendations, which was prepared by a qualified cultural resources consultant.

In addition to a search of the CCIC's archives, the following sources of information, along with official maps and records were consulted:

- NRHP – Listed Properties (2006)
- CRHR (2006)
- California Inventory of Historical Resources (1976)
- California State Historical Landmarks (1996 and updates)
- California Points of Historical Interest (1992 and updates)
- OHP Historic Property Directory and Determinations of Eligibility (2006)
- NAHC Sacred Lands File

4.2.5 Project-specific Impacts and Mitigation Measures

4.2.5.1 Pre-historic Resources

The project site is located within a culturally sensitive region; however, the field studies and background research conducted by the applicant's consultant and EIR archaeologist did not identify the presence of any significant cultural resources within the project site. As with any ground disturbing activities, the potential for encountering previously undocumented cultural resources exists. In the event of inadvertent discovery, compliance with Section 23.05.140 of the CZLUO will be required. Potential impacts to pre-historic resources would be *less than significant* (Class III).

4.2.5.2 Historic Resources

No historic resources are located within the project site or within 0.5-mile. No impacts to historic resources are anticipated, therefore, no mitigation measures are required.

4.2.5.3 Paleontological Resources

The proposed project would be located within formations that are not known to contain significant paleontological resources. Impacts to paleontological resources would be *less than significant* (Class III). No mitigation is required.

4.2.6 Cumulative Impacts

The destruction of cultural resources can have the potential for significant cumulative impacts as they are inherently important to the descendants of native peoples and make the study of pre-historic and historic life unavailable for study by scientists. Given the prevalence of cultural resource sites in San Luis Obispo, and the number of construction activities that involve disturbance of archaeologically sensitive areas that are not regulated, it is likely that significant

pre-historic and historic resources are often not identified and are permanently lost. For the proposed project, no prehistoric archaeological resources were identified with the project site, and implementation of the proposed project would not contribute to the cumulative degradation of significant cultural resources in the County. Based on lack of significant resources at the project site, and compliance with the CZLUO, potential cumulative impacts resulting from the proposed project are considered *less than significant* (Class III). No additional mitigation is required.

4.3 GEOLOGY AND SOILS

This section of the EIR discusses existing geologic and soils related conditions and the natural and manmade drainage conditions within and in the vicinity of the project site. The section also identifies potential geologic impacts including exposure to the effects of ground-shaking, liquefaction, expansive soils, erosion, and changes to drainage patterns, and includes a summary of coastal hazards, including storm surge, wave runup, sea level rise over the next 100 years, and tsunami.

The section is based on the technical reports provided by the applicant including:

- Geologic Conditions at the Loperena Property, Studio Drive, Cayucos, California, Assessor's Parcel Number 064-253-07; Cleath and Associates, May 2, 2006
- Geotechnical Investigation, Proposed Residence, Lot 41, Studio Drive, Cayucos, California; GSI Soils, Inc., January 12, 2007
- Addendum to Report of Geologic Conditions at the Loperena Property, Studio Drive, Cayucos, California Assessor's Parcel Number 064-253-07 (Cleath and Associates, May 2, 2006); Cleath and Associates, January 12, 2007
- Memorandum: Summary of Conclusions and Recommendations of Cleath and Associates Study of Geologic Conditions at the Loperena Property, Studio Drive, Cayucos, California, Assessor's Parcel Number 064-253-007, May 2, 2006; Cleath and Associates, March 30, 2007
- Response to Comments Prepared by Mr. Michael R. Jencks on Loperena Engineering Geology Report; Cleath and Associates, September 26, 2007
- Updated Geotechnical Investigation Proposed Residence Lot 41 Studio Drive Cayucos, California; GSI Soils, Inc., December 27, 2011
- Engineering Evaluation Studio Drive Residence Cayucos APN 064-253-007 County of San Luis Obispo, CA; Shoreline Engineering, January 2012
- Updates to Engineering Geology Reports for the Proposed Loperena Residence, Lot 41, Studio Drive, Cayucos, California; Cleath-Harris Geologists, Inc., June 25, 2012
- Update #2 to Engineering Geology Reports for the Proposed Loperena Residence, Lot 41, Studio Drive, Cayucos, California; Cleath-Harris Geologists, Inc., September 19, 2012
- Loperena, County of San Luis Obispo Responses to Supplemental Geotechnical Peer Review for EIR Preparation, 8/21/12; Shoreline Engineering, September 20, 2012
- Response to Supplemental Geotechnical Peer Review, Loperena Residence Lot 41 Studio Drive Cayucos, California; GSI Soils, Inc., October 1, 2012
- Mean High Water Definition NW end of Studio Drive San Luis Obispo County, California Assessor's Parcel No. 064-253-007; Volbrecht Surveys, undated

Additional information reviewed during preparation of this EIR includes public and agency comments submitted to the County, and the following document prepared by the County Geologist:

- Memo from Brian Papurello, Review Geologist, Re: Loperena Residence – DRC 2005-00216, Studio Drive (APN 064-253-007), Cayucos Area of San Luis Obispo County, California, April 13, 2007.

These reports have been independently peer reviewed by a Registered Civil Engineer who specializes in coastal engineering, a Certified Engineering Geologist, and a Registered Geotechnical Engineer, as documented in the following:

- Discussion of Coastal Hazards and Wave Runup, Northwest and Immediately Adjacent to 2612 Studio Drive (APN 064-253-07), Cayucos, San Luis Obispo County, California; GeoSoils Inc., March 14, 2011
- Technical Report: Geotechnical and Coastal Hazards Review, Loperena Minor Use Permit/Coastal Development Permit APN 064-253-07, Studio Drive, Cayucos San Luis Obispo County, California; Cotton, Shires and Associates, Inc., May 2011
- Supplemental Geotechnical Peer Review for Environmental Impact Report Preparation; Cotton, Shires and Associates, Inc., August 21, 2012
- Second Supplemental Geotechnical Peer Review for Environmental Impact Report Preparation; Cotton, Shires and Associates, Inc., October 31, 2012

The reports are incorporated into this EIR by reference, and copies are available at the County Department of Planning and Building.

4.3.1 Existing Conditions

4.3.1.1 Regional Setting

Terrain

The general area surrounding the project site is characterized by coastal features, including beachfront adjacent to relatively low coastal and fluvial bluffs that range in elevation from approximately 30 to 50 feet. Nearby moderately to steeply sloping foothills northeast of Highway 1 rise to elevations ranging from 300 to 500 feet. The project site is unique in that it is situated near the broad mouth and alluvial valley of Old Creek, and the property appears to physically sit atop and/or straddle a bedrock remnant of the fluvial bluff that is now mostly buried by artificial fill materials. The elevation of the project site ranges from slightly less than 10 feet on the active beach to 26 feet along the southerly property line. Above the beach, a bedrock outcropping extends to approximately 17 feet in elevation where it is capped by soils, and slopes generally west to northwest at roughly a 2:1 gradient. The remainder of the property slopes northwest at 2.5:1 to 5:1 gradients. Within the County right-of-way along Studio Drive, an approximately 10-foot-high 2:1 gradient fill slope descends west-southwest from the pavement toward the east property line. Including the County right-of-way, the project site elevation reaches approximately 31 feet at Studio Drive.

Development History

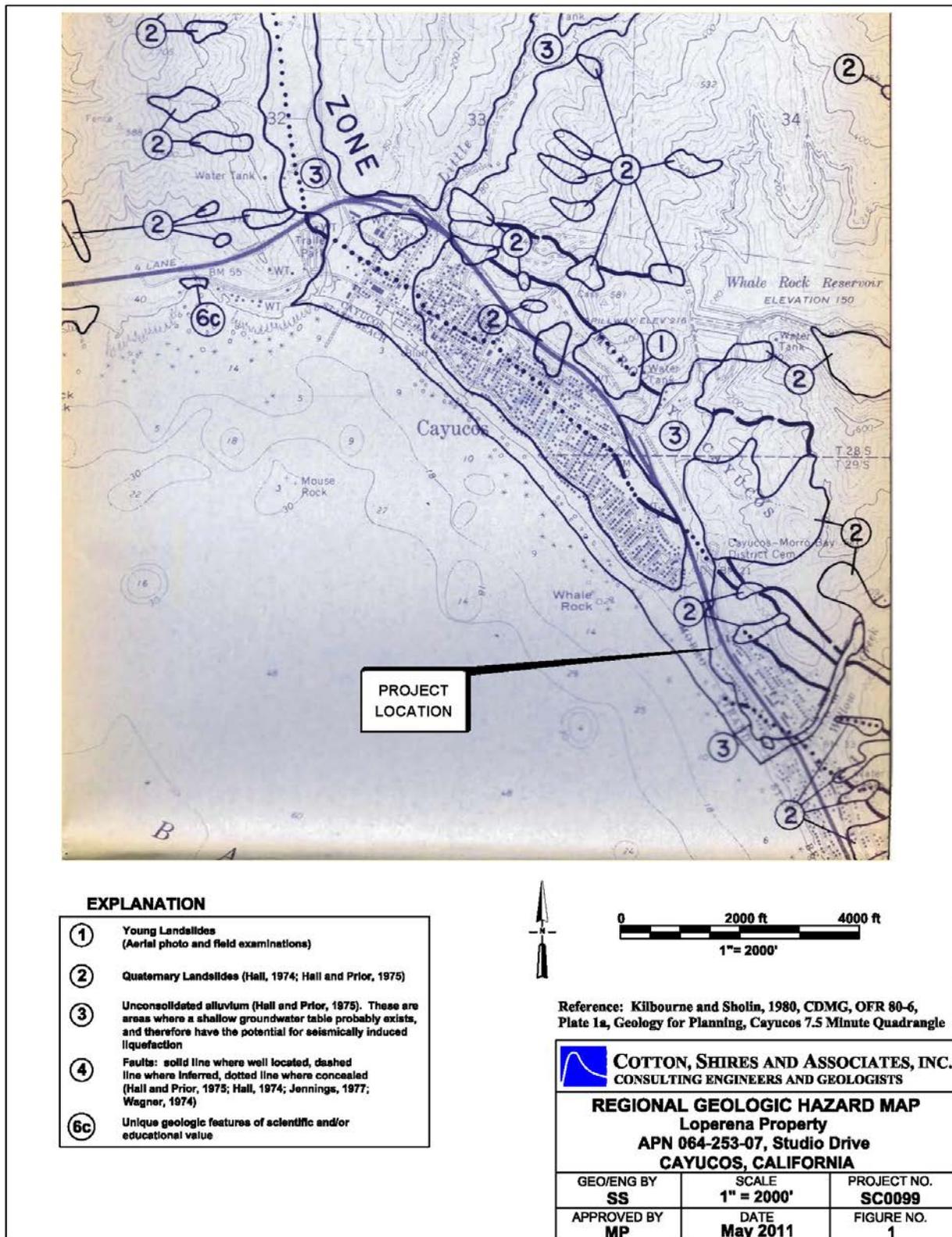
In 1937, Cabrillo Highway (currently Highway 1) was a primitive road located to the east of its present location, along what are now Ocean Boulevard and Cabrillo Avenue. Studio Drive ran parallel to the coastline but did not exist in the current location. It returned northeast back to the highway approximately 200 feet south of the present property frontage. Development in the area was very sparse. A northwest-, west-, and southwest-facing rock outcrop occupied the elevated portion of the project site, descending north to the slightly elevated alluvial plain of Old Creek, and descending west-southwest to the beach above the tidal zone. The northwest-facing portion of the outcrop faced the mouth of Old Creek, while the southwest portion faced the ocean as it does today. The lowland area immediately north of the project site appeared to contain alluvial sediments in the broad valley of Old Creek. The area between the project site and the active creek channel (in 1937), and inland of the active beach, contained a low, broad, slightly vegetated shore-parallel ridge (dune). By 1949, Cabrillo Highway had been realigned slightly west within the Old Creek drainage, including a new bridge over Old Creek. By 1959, most of the lots on the west side of Studio Drive were developed. Construction on Whale Rock Reservoir had commenced inland on Old Creek, and was reportedly completed in April 1961 (City of San Luis Obispo 1998).

Aerial photographs from 1963 document major changes, including the realignment and widening of Cabrillo Highway west toward Studio Drive, and the extension of Studio Drive approximately 450 feet northwest where it then returned back to the main highway. This construction resulted in significant fills being placed across the aforementioned rock outcropping to construct the Studio Drive extension, and significant fills built across the alluvium in the valley of Old Creek to support the highway. The northerly five ocean-ward properties on Studio Drive, including the project site and those at 2612 through 2618 Studio Drive, south of the project site, were still undeveloped in 1963; these properties were developed by 1972. A dirt parking lot was graded south of and adjacent to the active channel of Old Creek, near the beach. The property immediately south of the project site, at 2612 Studio Drive, was developed sometime between 1979 and 1986, based on review of aerial photos. Some fill may have been pushed north onto the project site during grading and construction of the adjacent properties to the south prior to 1986.

Geologic Setting

The project site is located on an active beach and adjacent terrace at the edge of the Pacific Ocean at Estero Bay just north of the Los Osos Valley. The elevated portion of the site sits atop or slightly straddles the buried edge of a fluvial bluff on the south side of the mouth of the Old Creek drainage. Elevations at the site (i.e., including the County right-of-way up to Studio Drive) range from slightly less than 10 feet to approximately 31 feet above present sea level, measured in North American Vertical Datum of 1988 (NAVD88). The site is located in the Southern Coast Ranges Geomorphic Province. This province is bounded on the east by the San Andreas Fault, on the south by the Santa Ynez Mountains (Western Transverse Ranges Geomorphic Province), on the west by the Continental Borderland offshore, and on the north by the Northern Coast Ranges. Lettis (2004) has defined the southern region of the Southern Coast Ranges along the coast (which includes the site) as the Los Osos Domain. This domain is characterized by west-northwest to north-northwest trending mountain ranges and valleys with parallel fault systems bounded on the south by the Santa Ynez River Fault (Western Transverse Ranges), on the north and east by the Oceanic-West Huasna Fault Zone (Santa Lucia Mountains and San Rafael Mountains of the Southern Coast Ranges), and on the west by the Hosgri Fault Zone (Offshore Santa Maria Domain within the Continental Borderland).

Figure 4.3-1. Regional Geologic Hazard Map



The mountains and valleys in the area of the site include the Santa Lucia Mountains, Los Osos Valley, and San Luis Mountains. The area is characterized by west-northwest trending reverse faults and tight, almost parallel folding of rocks assigned to Franciscan Melange (generally greywacke, shale, greenstone, and serpentine rock types). These rocks are typically chaotically fractured. Other geologic units in the area include Coast Range Ophiolite (Serpentine) found within the Franciscan Complex and Mesozoic Great Valley Sequence. Quaternary marine terrace and older alluvium deposits overlie these rocks along the coast in the vicinity of the site. These units are relatively thin where mapped at the subject site, and likely represent the last sea-level highstand (wave-cut platform at the base of the marine terrace deposits).

Landslides are present within the Franciscan Complex rocks in the area, including a massive deep-seated ancient landslide located approximately 2,000 feet up-canyon from the site, along Old Creek near the Cayucos Morro Bay Cemetery, and a large earthflow landslide, the toe of which occurs approximately 400 feet northeast of the site across Highway 1 (refer to Figure 4.3-1).

Seismic Setting

The project site is located within an area of high seismicity. The nearest and controlling faults, with respect to site ground shaking, are: Hosgri Fault, located approximately 8.1 miles west of the site; Los Osos Fault, located approximately 11.1 miles south of the site; and San Luis Range Fault, located approximately 14 miles east of the site. There are several northwest trending, parallel fault systems in the region, including the San Andreas Fault (refer to Figure 4.3-2). The closest is the Cambria Fault, which is mapped within 1 kilometer of the site and the trend of which projects near the site (Lettis 2004). Other faults near the site are the Hosgri-San Simeon Fault Zone, Los Osos Fault Zone, Edna Fault, San Miguelito Fault, Oceanic-West Huasna Fault, East Huasna Fault, and Rinconada Fault. The 6.5-magnitude San Simeon earthquake, which occurred on December 22, 2003, apparently caused a peak ground acceleration (expressed as “g”) of approximately 0.16g at the site (California Integrated Seismic Network). The Fault Location Map (refer to Figure 4.3-2) depicts the site location relative to the aforementioned faults.

The Oceanic Fault is the nearest fault to the site with documented evidence of recent seismic activity, including a 4.4-magnitude earthquake in June 2009 and the 6.5-magnitude San Simeon earthquake in December 2003 (Cleath-Harris Geologists 2012). The San Simeon earthquake was caused by reverse faulting, and was centered approximately 22 miles north of the project site. This fault is the northwestern segment of the Oceanic-West Huasna Fault zone that trends north-northwest approximately from the Santa Maria River to San Simeon for approximately 100 kilometers. The Oceanic Fault segment is located near the city of San Luis Obispo and extends north to San Simeon. The California Geologic Survey has not yet established a slip rate (distance of slip per year) for this fault. Based on the Probabilistic Seismic Hazard Analysis (PSHA) conducted to determine design-basis earthquake parameters for the project, the design-basis ground motion of the site is 0.29g (Cleath and Associates 2006).

Deterministic Analysis

Table 4.3-1, below, provides the results of the deterministic analysis conducted by Cotton, Shires and Associates, including the major earthquake sources, the distances from the sources to the site, the maximum moment magnitudes, and the peak horizontal ground accelerations (PGA) that are anticipated at the site.

Table 4.3-1. Seismic Deterministic Analysis Results for the Project Site

Fault Source	Distance (mi/km)	Moment Magnitude¹	Peak Horizontal Accelerations (g)²
Hosgri	8.0/12.8	7.5	0.352
Los Osos	9.1/14.6	7.0	0.348
San Luis Range	14.9/23.9	7.2	0.240

¹Based on "Probabilistic Seismic Hazard Assessment for the State of California" by CDMG, DMG Open-File Report 96-08.

²Based on attenuation relationships developed by Abrahamson and Silva, 1997, Horizontal - Rock as determined using the computer program EQFAULT by T.F. Blake (1989, and updated 2004).

Source: Cotton, Shires and Associates, 2011

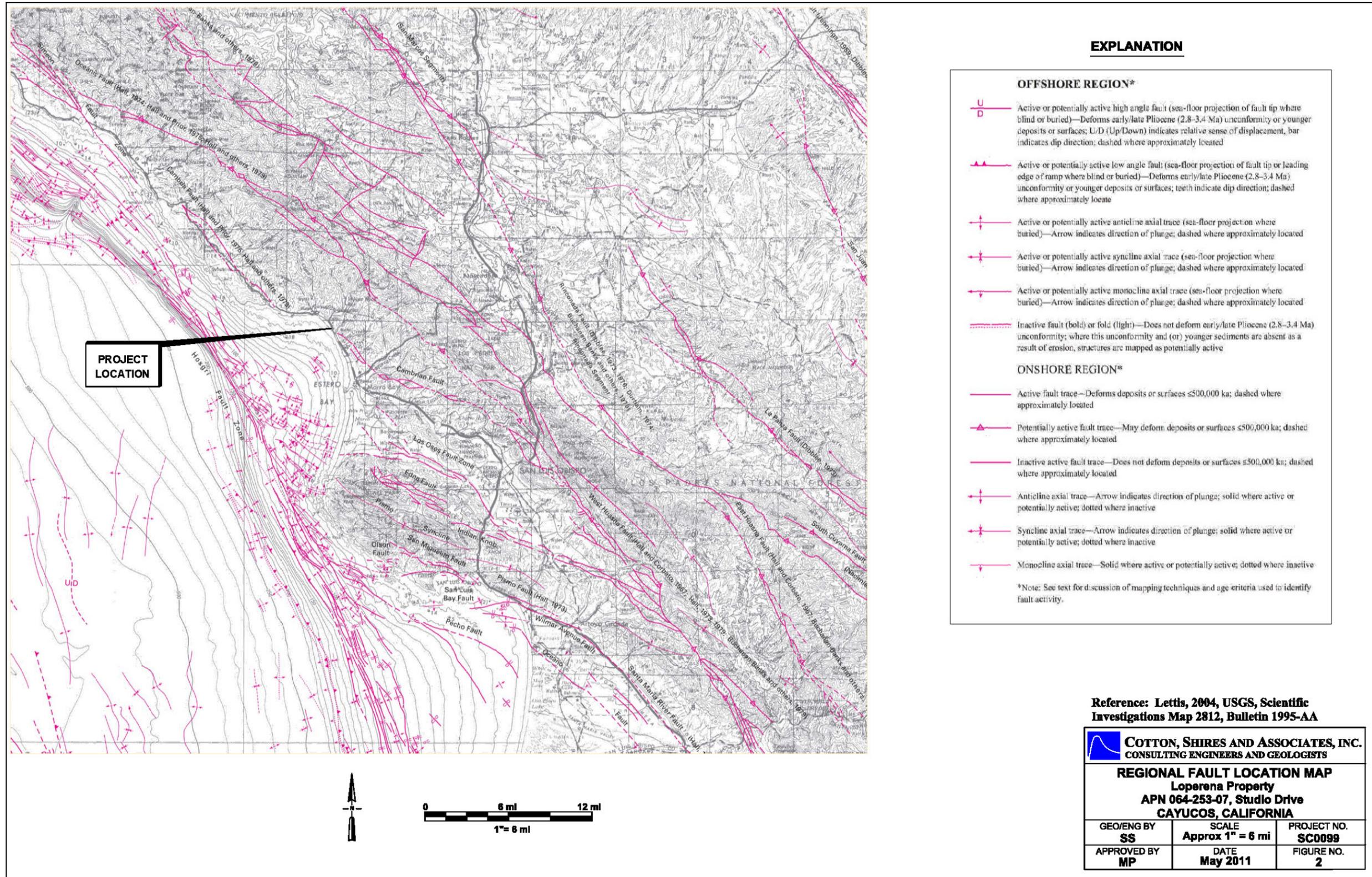
Probabilistic Analysis

A probabilistic analysis was performed by Cotton, Shires and Associates, Inc. using the computer program FRISKSP (T.F. Blake 1988, updated 2004) and incorporated moment magnitudes from the California Division of Mines and Geology (CDMG) publication "Probabilistic Seismic Hazard Assessment For The State of California" (DMG Open File Report 96-08) and attenuation relationships by Abrahamson and Silva (1997 – Horizontal Rock). The results of the probabilistic analysis indicate an appropriate Design Basis Earthquake (10% probability of exceedance in 50 years, or a 475-year return interval, which is generally used for residential and commercial buildings) PGA of 0.24g. This is lower than the 0.29g value reported in the applicant's submitted report (Cleath and Associates 2006), possibly due to differences in attenuation relationships used.

Taking into account the above earthquake moment magnitudes and the results of the deterministic and probabilistic approaches, the project area could experience a PGA as high as 0.35g (equal to the deterministic value calculated for an earthquake on the Hosgri Fault for the site).

For geotechnical hazard analyses (e.g., liquefaction and seismically-induced settlement) requiring ground motion estimates, the applicant's geotechnical engineering consultant conservatively utilized a PGA of 0.60g based on a magnitude 7.2 earthquake on the Hosgri Fault in their updated geotechnical investigation for the project (GSI Soils 2011).

Figure 4.3-2. Regional Fault Location Map



This page intentionally left blank.

4.3.1.2 Project Site Setting

Soil Conditions

The soil type mapped for the project site is Cropley clays, 2 to 9% Slopes (Soil Unit 128) (U.S. Department of Agriculture [USDA] 1984). This very deep, moderately drained, gently sloping to moderately sloping soil is found on alluvial fans and plains. It is formed in alluvium weathered from sedimentary rocks. Typically the surface layer is dark gray, very dark gray, and light brownish gray clay approximately 36 inches thick. When the soil is dry, large cracks extend to a depth of 40 inches or more. Permeability of the unit is slow, and the available water capacity is high. Surface water runoff is slow to medium, and the hazard of water erosion is slight to moderate. The Cropley clay has a high shrink-swell potential.

Surface Conditions

The project site is bounded by Studio Drive and the County right-of-way on the east, an existing residence (2612 Studio Drive) to the south, and Morro Strand State Beach to the north and west. An engineering geologic map (Appendix C, Plate 1) was prepared based upon site observations and document review, and illustrates the distribution of earth materials exposed at the ground surface. The western portion of the property contains beach sand. A bedrock outcropping consisting of greywacke sandstone with minor shale interbeds is exposed between approximate elevations of 10 and 17 feet in the center of the property. The greywacke sandstone bedrock is moderately weathered, hard to very hard, and closely fractured. The thin shale beds are soft, intensely fractured, and eroded out (forming indentations in the outcrop) relative to the adjacent resistant sandstone. Numerous joints and joint sets were mapped with joint spacings as narrow as 4 inches. Relict bedding planes mapped within the bedrock have strikes ranging from N58°W to N75°W and dips ranging from 85°NE to vertical. Landward of the bedrock outcropping, the site is covered by an apron of undocumented fill that is covered with extensive iceplant growth. The fill deposits appear to thin immediately north of the site, where they cap older alluvium sediments and possibly dune sediments. A fill slope ascends from the east property line up to the pavement of Studio Drive. An interpretation of the distribution of earth materials at the site is illustrated on Plate 1, Geologic Map (refer to Figure 4.3-3 and Appendix C). Generalized cross-sections (refer to Figures 4.3-4 and 4.3-5 and Appendix C) extending from Studio Drive through the beach was prepared to illustrate an interpretation of subsurface conditions based upon geologic mapping and review of the applicant's consultant's exploration data.

A narrow, natural drainage swale conveys runoff discharging from the existing concrete overside drain from Studio Drive. The overside drain collects drainage from the ocean-ward side of Studio Drive. This drainage swale trends around the northeast corner of the project site and descends toward the beach immediately to the north. Erosion in the swale appears to have been accelerated by foot traffic from people accessing the beach. A thin veneer of fill appears to cap older alluvial sediments in this area, based on observations of soils exposed in the swale. North of the swale, the older alluvial sediments may be overlain by thin dune deposits (the low shore-parallel ridge described in the aerial photograph review). Drainage on the landward side of Studio Drive is collected in a concrete drainage ditch located between the ocean-ward shoulder of Highway 1 and Studio Drive. The drainage ditch trends northwest and ties into a concrete pipe that runs beneath Studio Drive, outletting on the back-beach area north of the project site.

Figure 4.3-3. Engineering Geologic Map

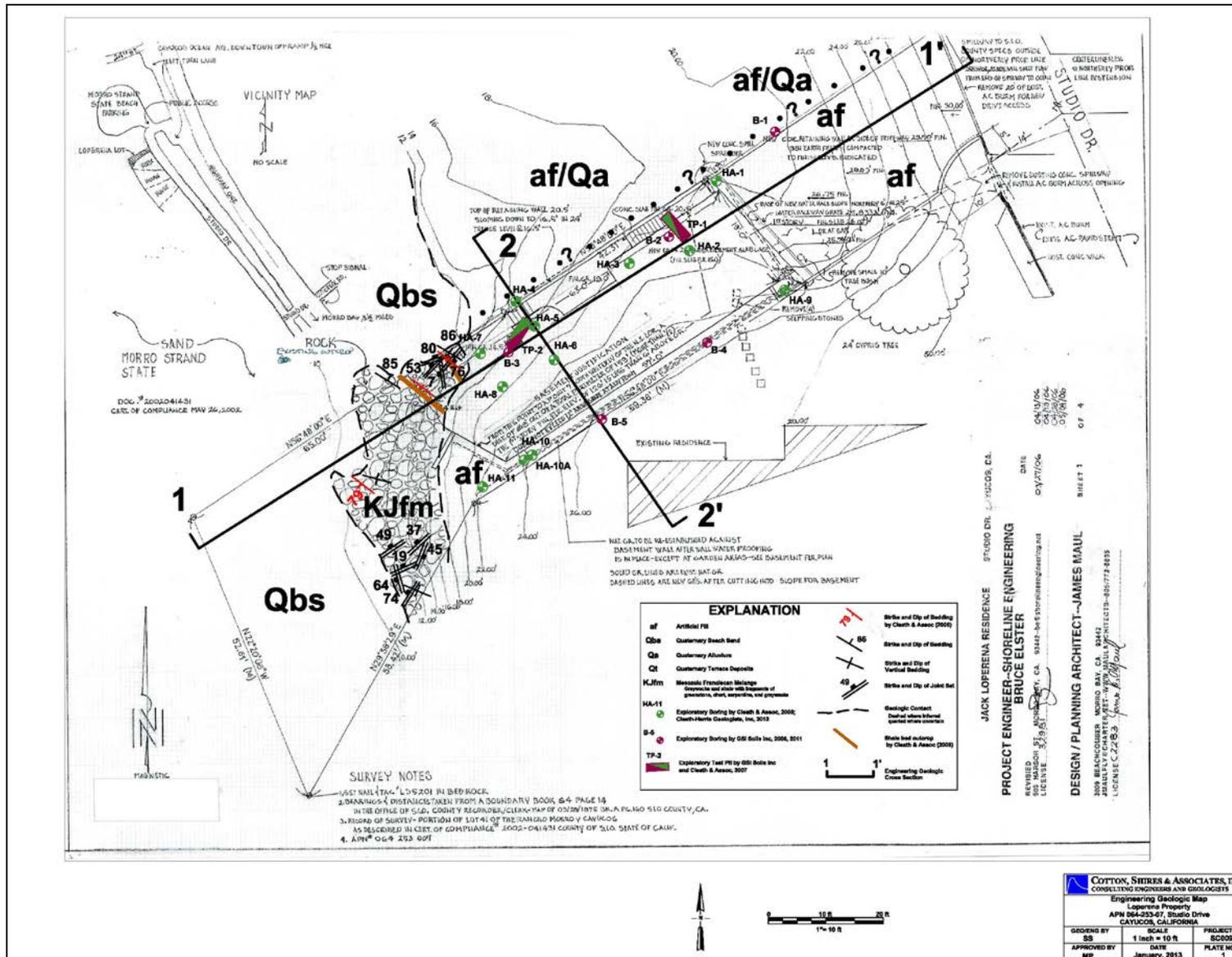
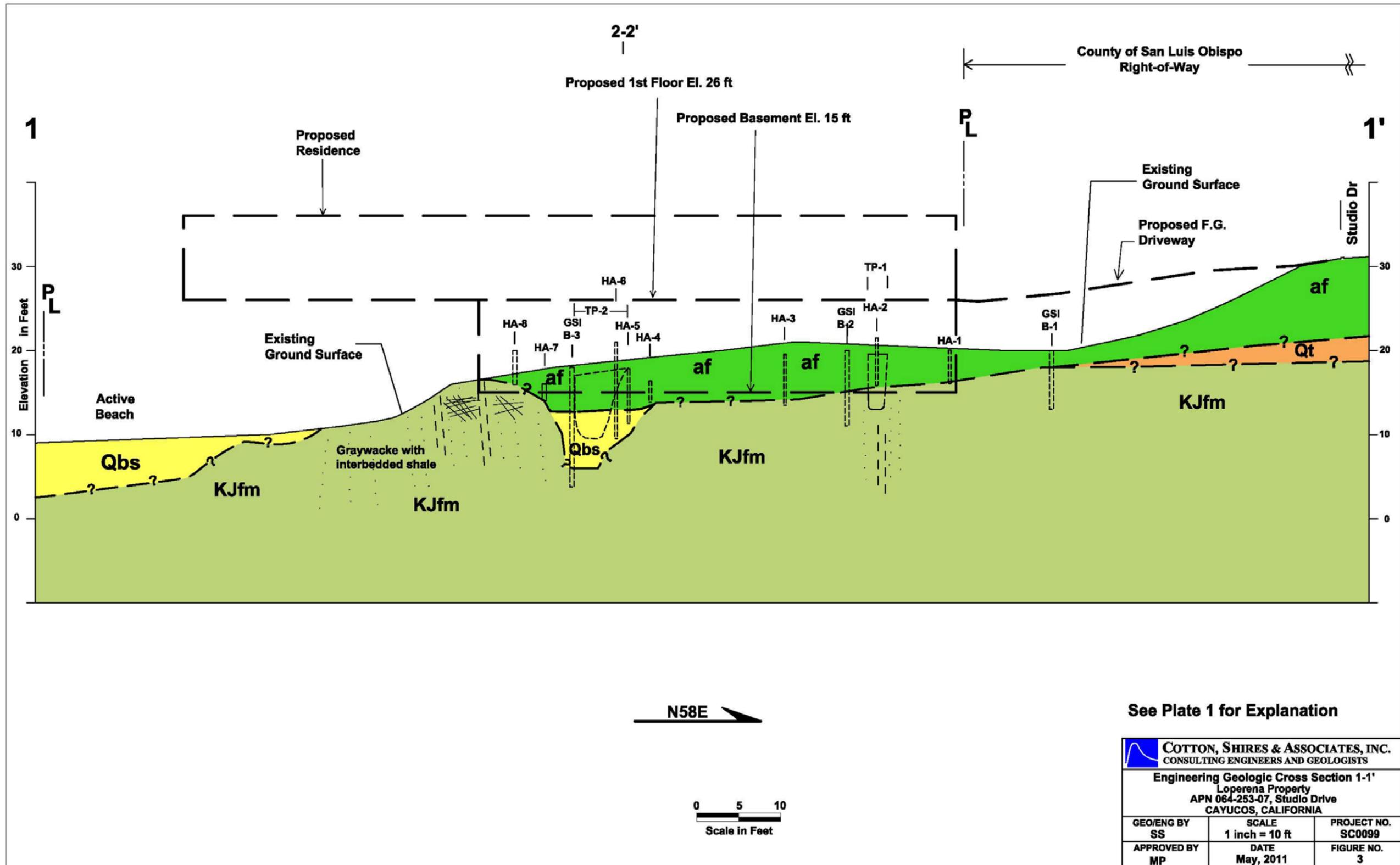
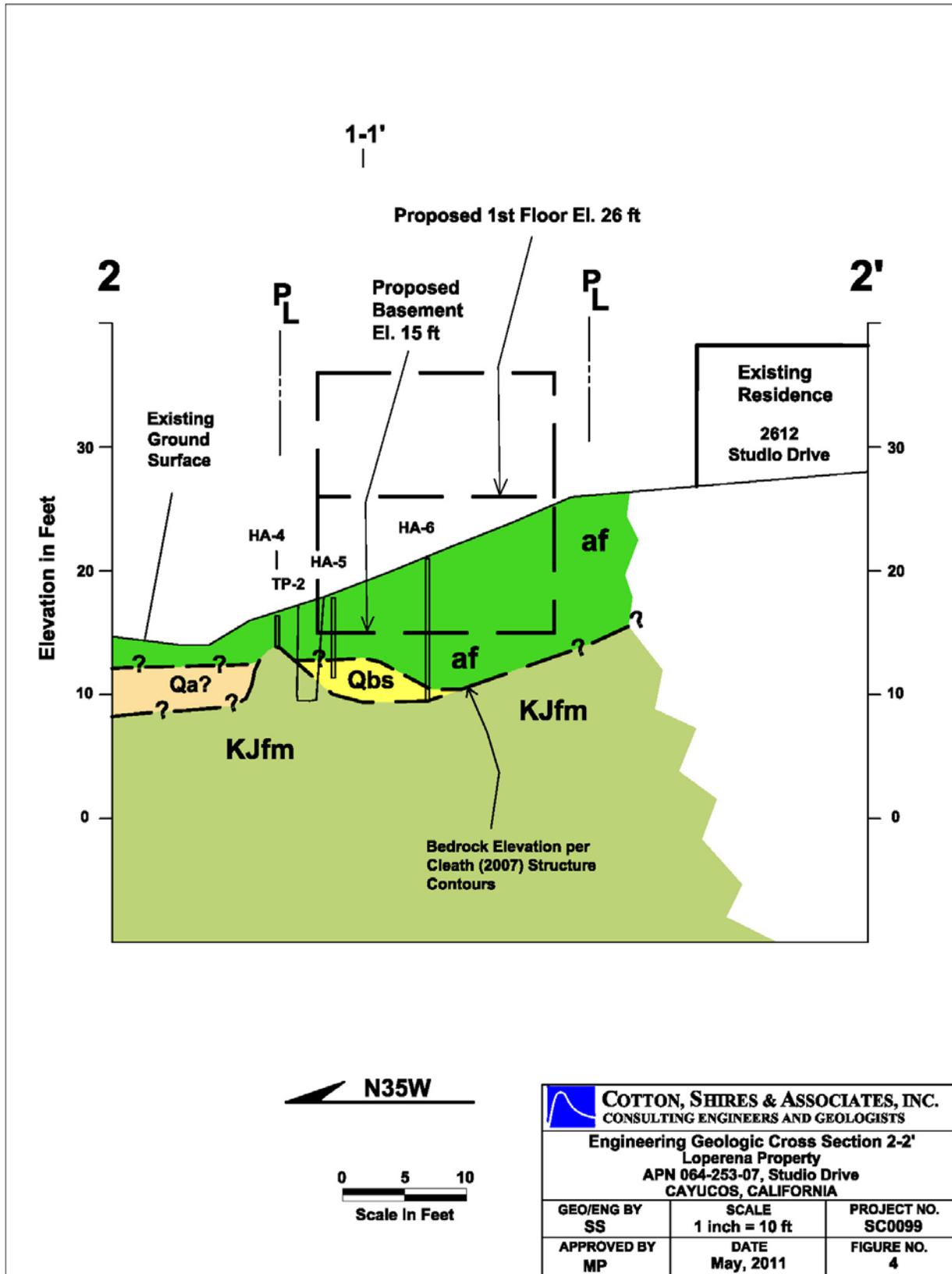


Figure 4.3-4. Engineering Geologic Cross Section 1-1'



This page intentionally left blank.

Figure 4.3-5. Engineering Geologic Cross Section 2-2'



Subsurface Conditions

Much of the landward portion of the site is underlain by one or two generations of undocumented artificial fill deposits in the near surface. These materials range in thickness from 4.5 to 10.5 feet and consist of sandy clays, clayey sands, and silty sands in a generally loose condition. Debris consisting of trash, plastic, woodchips, and roots was common in the upper 3 to 5 feet. Loose beach sand was encountered beneath the fill in Cleath Borings HA-5 and HA-6, Cleath/GSI Borings TP-2, and GSI Boring B-3 in what appears to be a narrow remnant “cove” that is open to the north (refer to Appendix C). A horizon of dense clayey sand to very stiff sandy clay was encountered beneath the fill in GSI Borings B-1 and B-2. The sandy clay horizon in B-2 is likely weathered mudstone bedrock. The clayey sand horizon in B-1 may be either a terrace deposit or weathered bedrock. Bedrock consisting of hard/indurated greywacke sandstone with thin soft shale interbeds underlies the undocumented fill and possible terrace deposits, but was barely penetrated by the subsurface exploration.

Based on borings conducted along the southern property boundary, fill materials were observed to: 4.5 feet in depth in GSI Boring B-4 (sandy clay), 5 feet in depth in GSI Boring B-5 (sandy clay), 5 feet in depth in Cleath-Harris Boring HA-9 (silt, sand, and gravel), 3 feet in Cleath-Harris Borings HA-10 and HA-10A (mostly sandy clay to clay), and 4.5 feet in depth in Cleath-Harris Boring HA-11 (sandy clay to clay). Clayey gray to dark brown angular sandstone clasts were observed beneath the fill material. These sandstones were interpreted to make up a thin, weathered, and broken veneer at the top of resistant sandstone bedrock. The depth of refusal was interpreted to be the top of or very near the top of the sandstone bedrock. In GSI Borings B-4 and B-5, 2 feet and 1.5 feet of very dense olive brown clayey sandstone (bedrock) was penetrated, respectively.

Groundwater Conditions

Groundwater was not encountered during subsurface investigations; however, perched water conditions in the upper 5 feet above dense bedrock are anticipated during wet winter months. It is anticipated that groundwater is present in the beach sand at or very slightly above sea level. Groundwater may also occur within terrace deposits, which are mapped capping bedrock along Studio Drive on a regional geologic map (Hall, et al. 1975), but which appear to pinch out at or near the site. Based on further subsurface investigation, terrace deposits were not encountered within the site (Cleath-Harris Geologists 2012).

Fluctuations in groundwater levels typically occur from variations in rainfall, irrigation, flooding, and other factors, and groundwater levels may be different at other times and locations than the exploration performed at the subject site. The most critical groundwater concerns for the project include potential perched groundwater within surficial soils capping the bedrock, and the potential for encountering groundwater in drilled shafts for the proposed pier foundations during construction.

4.3.1.3 Coastal Bluff Interpretation

Based upon review of available data and a sequence of aerial photographs dating back to 1937, from a geological perspective, the landward portion of the site sits atop or slightly straddles a bedrock remnant of a fluvial bluff that is now mostly buried by artificial fill materials. As noted above, 1937 aerial photographs show a northwest-, west-, and southwest-facing rock outcrop occupied the elevated portion of the project site, descending north to the slightly elevated alluvial plain of Old Creek, and descending west-southwest to the beach above the tidal zone. The northwest-facing portion of the rock outcrop is approximately perpendicular to

the general trend (approximately N40°W) of the shoreline at the mouth of Old Creek. This outcropping extended inland approximately 300 feet (beneath the present alignment of Highway 1), before turning to an approximate N15°W trend (refer to Figure 4.3-6). This feature extending 300 feet inland represents the northerly edge of a wavecut platform that is present throughout Cayucos, including both sides of the Old Creek drainage. The platform would continue north, were it not for the presence of Old Creek meeting the ocean at this location. As such, it is reasonable to conclude this portion of the outcropping was formed by fluvial erosion processes (and possibly mass-wasting processes) from the ancestral flow of Old Creek at a time when the creek was entrenched along the southerly side of the creek valley. Evidence for southerly entrenchment in the creek valley includes the massive ancient landslide 2,000 feet up-canyon that displaced the creek approximately 400 feet west—hence the southerly entrenched creek likely removed lateral support in the paleocanyon of Old Creek (i.e., during the last late-Pleistocene glacial stage when eustatic sea level was lower), triggering the landslide. Therefore, the top of the 300-foot-long outcropping, which is oriented perpendicular to the shoreline, is considered to be an inland bluff in the geomorphic sense.

The site topography and aerial photographs indicate that the ocean-ward remainder of the rock outcropping gradually curves to face west and ultimately slightly southwest at the southerly property line of the project site. The west- to southwest-facing portion of the rock outcropping, which is at about a 45° angle to the active shoreline, represents a transition between fluvial bluff-forming/erosion processes and coastal bluff-forming/erosion processes. Along this segment, fluvial processes, and possibly mass-wasting processes, were more influential in the geologic past, when the active channel of Old Creek was entrenched on the southern side of the valley, and/or when the creek was topographically lower during a lower stand of eustatic sea level. Coastal erosion processes are more prevalent today, as it is clear that wave action does reach the outcropping in storm surf conditions. This “transition” section of the rock outcropping extends south of the project site approximately 100 feet, to a point on the property at 2614 Studio Drive. Beyond this point, the landform generally trends about S47°E and appears wholly influenced by coastal erosion processes and represents true “coastal” bluff in the geomorphic sense.

The California Code of Regulations (CCR) Title 14, Section 13577 (h)(2) is the only part of the Coastal Act that defines what a bluff edge is. The last part of this code section deals with termination of a coastal bluff line versus a canyon or inland bluff line. Specifically, the section states:

“The termini of the bluff line, or edge along the seaward face of the bluff, shall be defined as a point reached by bisecting the angle formed by a line coinciding with the general trend of the bluff line along the seaward face of the bluff, and a line coinciding with the general trend of the bluff line along the inland facing portion of the bluff. Five hundred feet shall be the minimum length of bluff line or edge to be used in making these determinations.”

The 500-foot rule was inserted to ensure that a reasonable length of bluff was used to differentiate between a coastal bluff and an inland facing bluff (Mark Johnsson 2011, pers. comm.). The difficulty in applying these criteria to the project site rests with establishing the general trend of the fluvial/inland bluff along a distance of 500 feet. As noted above, the northwest-facing portion of the rock outcropping is seen in the 1937 photograph extending at least 300 feet inland from its ocean-ward end on the project site, along a trend of approximately N50°E, which is perpendicular to the shoreline. Beyond this point the inland bluff turns to an approximate N15°W trend following what is now Cabrillo Avenue (refer to

Figures 4.3-6 and 4.3-7). Any reasonable interpretation of a “general trend” for the inland bluff, following the Coastal Commission’s guidelines (whether it be the aforementioned 300-foot segment from the ocean-ward tip of the rock outcropping, or an average trend of the first 500 lineal feet extending inland from the ocean-ward tip of the rock outcropping) will all result in a determination of the coastal bluff terminus being located southeast of the project site. In this particular case, the 300-foot segment of inland bluff is sufficient for differentiation insofar as it is perpendicular to the shoreline and is thus inland-facing.

In summary, based on our interpretation and application of the California Coastal Commission guidelines for 14 CCR 13577, the project site is not located on a coastal bluff.

Alternate Interpretation

During preparation of the Initial Study for the project, the County received correspondence including an alternate interpretation and delineation of the “coastal bluff”, including the following:

- Haro, Kasunich and Associates, Inc., November 12, 2007, Review of Residential Development On Coastal Bluff and Supporting Geologic and Geotechnical Reports Prepared for Development, Loperena Property, APN 064-253-007, Lot 41, Studio Drive, Cayucos, San Luis Obispo County, California; *contained as Exhibit A in* Sinsheimer Juhnke Lebens & Mclvor, LLP, April 16, 2009, Letter Re: Loperena MUP/CDP: DRC2005-00216 – Attachment to Request for Review of Proposed Amended Mitigated Negative Declaration and Notice of Determination;
- Earth Design, April 16, 2009, Letter RE: April 2, 2009 Amended Initial Study-Loperena Minor Use Permit; *contained as Exhibit C in* Sinsheimer Juhnke Lebens & Mclvor, LLP, April 16, 2009, Letter Re: Loperena MUP/CDP: DRC2005-00216 – Attachment to Request for Review of Proposed Amended Mitigated Negative Declaration and Notice of Determination; and
- Haro, Kasunich and Associates, Inc., March 13, 2012, Review of Additional Documents, Residential Development on Coastal Bluff, Loperena Property, APN 064-253-007, Lot 41, Studio Drive, Cayucos, San Luis Obispo County, California; *enclosure in* Sinsheimer Juhnke Mclvor & Stroh, LLP, Letter Re: Loperena Environmental Impact Report, Studio Drive, Cayucos, APN 064-253-007, ED06-317, DRC 2005-00216.

A significant underlying basis for the code and policy compliance issues cited by Haro, Kasunich and Associates, Inc. (HKA) in their 2007 and 2012 reviews, is their opinion that the project site is located on a coastal bluff. This opinion appears to be based on their interpretation of coastal bluff termini presented in Figure 1, “Coastal Bluff Line”, of their 2007 and 2012 correspondence, presented on a 2007-era photograph. CSA reviewed the “Coastal Bluff Line” interpretation presented in HKA’s Figure 1 (2007, 2012) and determined that HKA’s interpretation is inappropriate because their “Seaward Facing Bluff Line” drawn through the project site and extending hundreds of feet north, is drawn along an artificial fill slope constructed pre-1963 for the extension of Studio Drive. Furthermore, their “Inland Bluff” is drawn along an artificial fill slope constructed across the alluvial valley of Old Creek pre-1963 for the expansion and realignment of Old Cabrillo Highway (CA-1). We believe it is inappropriate to consider that manmade features such as artificial fill prisms graded for roadway developments comprise “bluffs”. An analysis to determine the terminus of a natural feature, such as a coastal bluff, should not be based upon manmade topographic features.

Furthermore, it should be clear upon review of the inland bluff feature delineated on Figures 4.3-6 and 4.3-7, that these artificial fill prisms constructed circa 1960 were not present in 1937. HKA (2007, page 1) stated that: "Where a coastal bluff curves landward to become a canyon bluff, the terminus of the coastal bluff line is the location where the seaward facing portion of the bluff turns and faces inland." This statement is consistent with CSA's coastal bluff interpretation, which is based in part on an inland bluff location that is now concealed both beneath and northeast of the property. Following the Coastal Commission's guidelines, CSA determined through analysis that the coastal bluff terminates immediately south of the project site.

CSA's detailed analysis of this topic (CSA, 2011, Section 3.4 Coastal Bluff Interpretation) is incorporated into this EIR analysis. This work included review of historic aerial photographs dating back to 1937 (see CSA, 2011, Section 2.2 Development History), and included consultation with the California Coastal Commission staff, review of their guidelines for CCR Title 14, Section 13577, and conducting an independent analysis to determine the terminus of the coastal bluff. CSA found, based on their interpretation and application of the CCC guidelines for CCR Title 14, Section 13577, that the project site is not located on a coastal bluff.

4.3.1.4 Flooding and Drainage

Flooding and Drainage

Since the completion of Whale Rock Dam and Reservoir in April 1961, the potential flood hazard on Old Creek has been substantially reduced. The dam captures water from a 20.6-square-mile watershed. Between 1961 and 1998, Whale Rock dam spilled eight times (City of San Luis Obispo 1998), but it is apparent that none of these events resulted in flood inundation at the project site. The site is located within the flood inundation zone in the event of failure of Whale Rock Dam (County of San Luis Obispo, Safety Element Dam Inundation Maps 2000); however, this factor is not a restriction to development.

The project site is not located within a 100-year flood hazard zone according to the San Luis Obispo Local Hazard Mitigation Plan (November 2005, Revision 1). Based on review of the current Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Cayucos, the area proposed for development is located above and outside the AE/VE hazard zone. The AE zone is defined as "areas subject to inundation by the 1-percent-annual-chance flood event" and the VE zone is defined as "areas subject to inundation by the 1-percent-annual-chance flood event with additional hazards due to storm-induced velocity wave action. Properties within the AE and VE zone are subject to flood insurance purchase requirements and floodplain management standards (FEMA 2012). On the project site, the AE/VE zone is approximately equivalent to elevation 12.92 feet NAVD88. The proposed basement finish floor elevation of 15 feet NAVD88 is approximately 2.08 feet higher than the AE/VE flood elevation.

With regard to local drainage conditions, runoff from the ocean-ward side of Studio Drive, drains down a concrete overside drain and discharges at the toe of the fill slope supporting Studio Drive. This discharge, as well as any runoff from incidental rainfall within the County right-of-way, reaches a natural drainage swale that flows around the northeast corner of the project site and ultimately discharges on the beach.

Figure 4.3-6. 1937 Aerial Photo Features

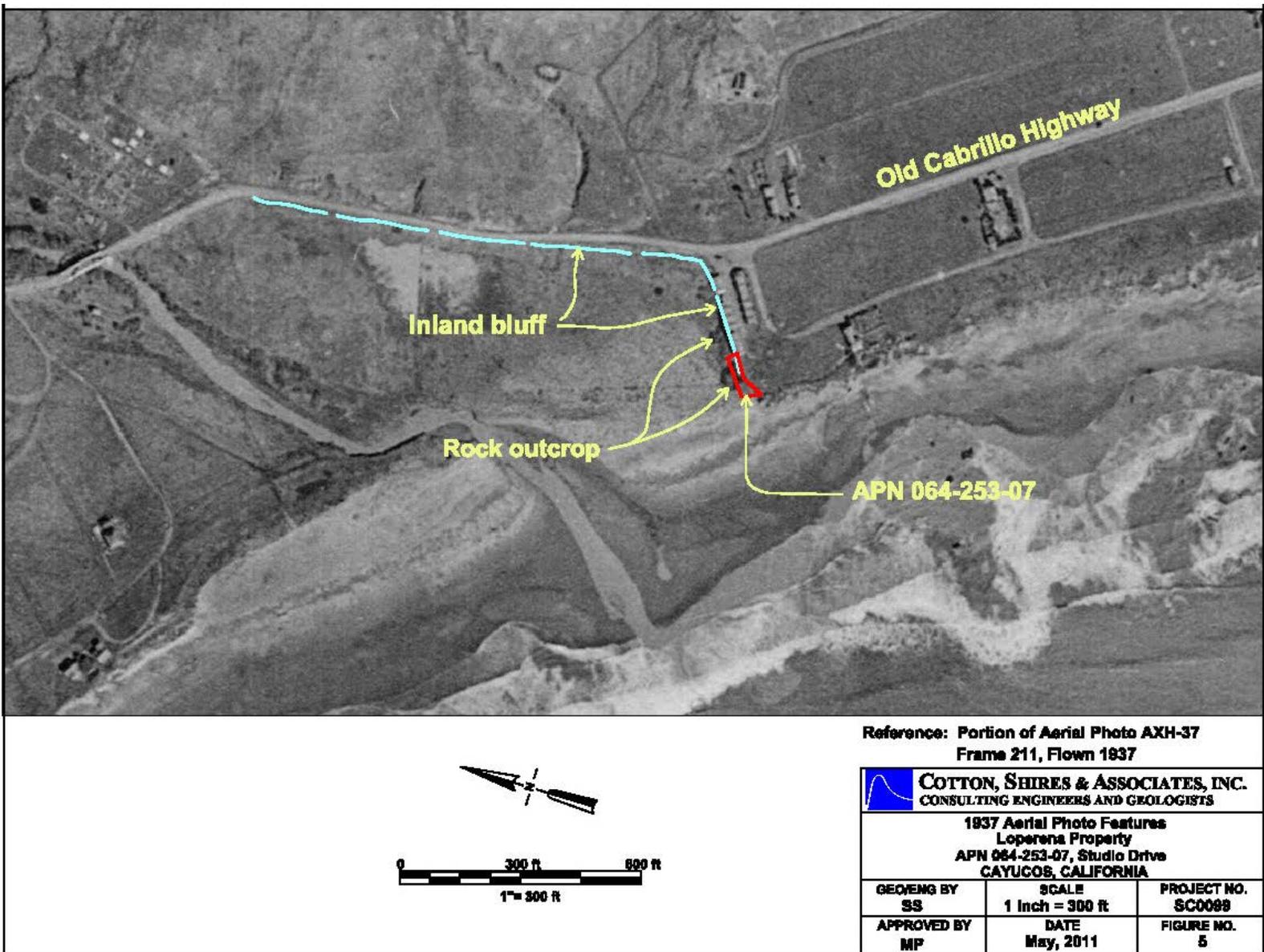
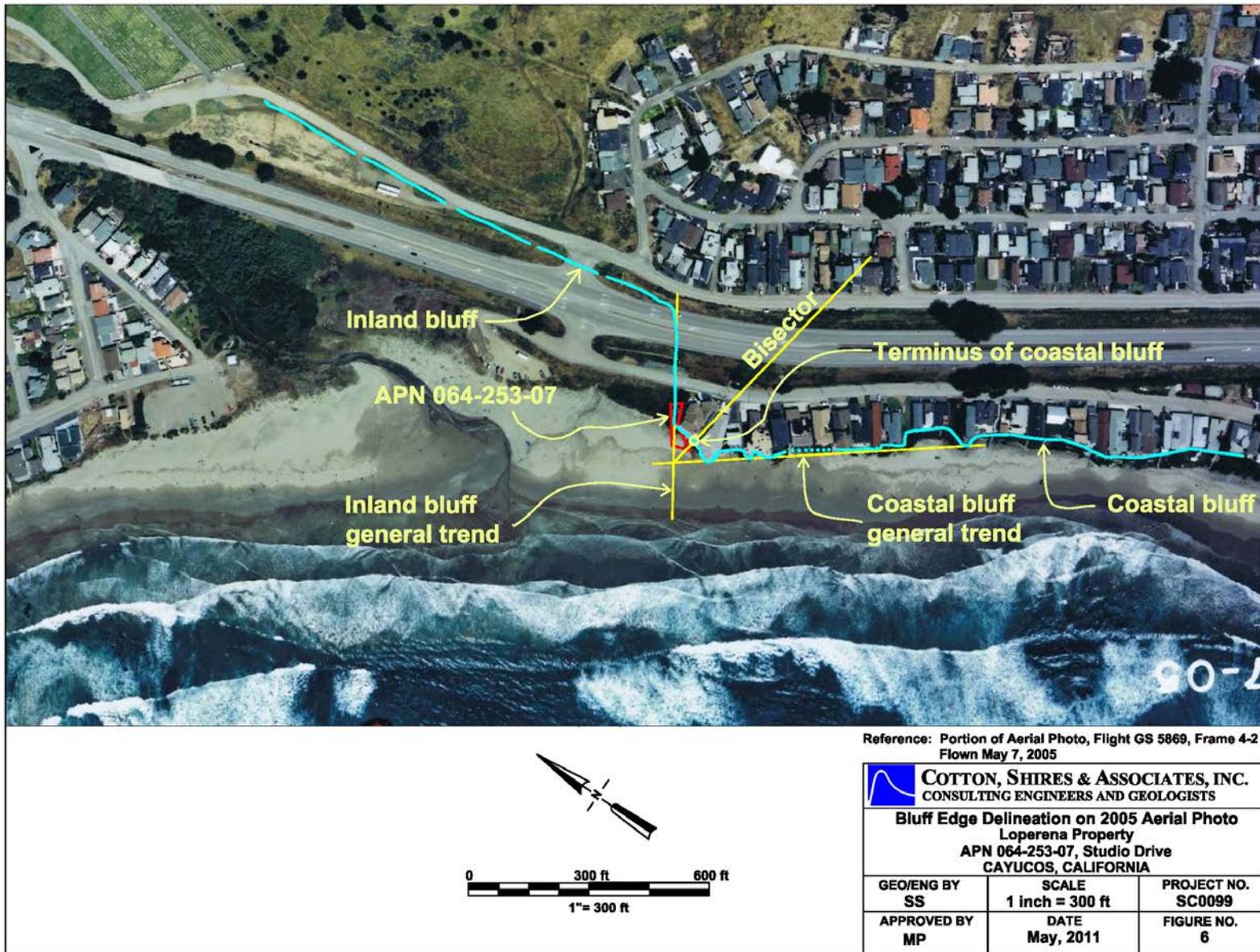


Figure 4.3-7. Bluff Edge Delineation



Reference: Portion of Aerial Photo, Flight GS 5869, Frame 4-2 Flown May 7, 2005

 COTTON, SHIRES & ASSOCIATES, INC. CONSULTING ENGINEERS AND GEOLOGISTS		
Bluff Edge Delineation on 2005 Aerial Photo Loperena Property APN 064-253-07, Studio Drive CAYUCOS, CALIFORNIA		
GEO/ENG BY SS	SCALE 1 inch = 300 ft	PROJECT NO. SC0099
APPROVED BY MP	DATE May, 2011	FIGURE NO. 6

Coastal Hazards

The documents submitted by the project applicant that address coastal hazards for the project include reports by Cleath and Associates (2006, 2007b), and other information submitted by the applicant including Table 2, Summary of Elevations from the FEMA Flood Insurance Study for San Luis Obispo County, California (revised February 4, 2004). These documents present the following information with regard to coastal hazards:

- The greywacke sandstone outcrop forms a buttress providing protection from wave action for the landward portion of the site (Cleath and Associates 2006).
- Wave runup is expected to reach the sandstone outcrop during spring tides and high tides associated with storm surf conditions (Cleath and Associates 2006).
- A site specific study in 1981 estimated a coastal erosion rate of 0.6 in/year for the sandstone materials exposed in the outcrop (Cleath and Associates 2006).
- The 100-year and 500-year tsunami runup elevations are 9.5 feet and 24.2 feet respectively based on regional information (County of San Luis Obispo Safety Element 1998; Cleath and Associates 2006, 2007b). We presume these elevations are NGVD29, because the basis for the elevations is a study conducted in 1978.
- Cleath and Associates (2007b) indicated that a storm surge of 4.5 meters (~14.5 feet) is the design runup factor that should be used in reference to flooding and inundation standards in the County Code. Cleath-Harris Geologists (2011, pers. comm.) indicated the basis for this information was Houston and Garcia (1978) and Kilbourne and Mualchin (1980).
- The portion of the 2004 FEMA Flood Insurance Study submitted by the applicant identifies the nearest calculated wave runup elevations, at Cayucos Creek and Little Cayucos Creek, as being 11.4 feet and 20.0 feet for 100-year and 500-year events, respectively.

Following peer review of the above documents, a site-specific coastal hazards study was prepared by David W. Skelly, Professional Engineer (PE) (GeoSoils, Inc. 2011, 2013), and is included in Appendix C of this EIR. The report includes a worst-case analysis of wave runup conditions incorporating a potential sea level rise of 2.5 feet over the next 100 years. The report evaluates four different potential oceanographic hazards at the project site: shoreline erosion, flooding hazard due to water level changes in the ocean, breaking wave elevation, and wave runup.

As noted above, the elevation within the project parcel ranges from about +10 feet on the beach area to +30 feet at Studio Drive. The majority of the parcel is at or above +20 feet in elevation. The site is fronted by a bedrock outcropping (graywacke sandstone) from about elevation +17 feet NAVD88 to the beach at about elevation +10 feet NAVD88, which serves as a form of natural shore protection.

Waves and Water Levels

Waves of all periods approach the Cayucos shoreline; however, almost all of the energy is contained in the medium and long period waves (approximately 5 to +20 seconds). These waves can approach from the north, the west, and south. As waves travel into shallower and shallower water, the wave crest is bent and becomes nearly parallel to shore, and the wave heights are modified depending on whether waves are being focused or de-focused at a particular location along the shoreline. This process is called refraction and it is dependent upon the bathymetry (underwater terrain), and the wave height, period, and direction.

The California Department of Boating and Waterways in partnership with the U.S. Army Corps of Engineers (USACE) maintain wave recording buoys throughout the central California coast in the Coast Data Information Program (CDIP). The closest long term continuous wave recording buoys to the site are CDIP Buoy 076 located near Diablo Canyon and CDIP Buoy 157 at Point Sur. The record of extreme waves for this region from these buoys covers as far back as 1978 with extreme waves in excess of 35 feet and with periods in excess of 20 seconds recorded during the 1982-83 El Niño winter. The National Oceanographic and Atmospheric Administration (NOAA) National Ocean Survey (NOAA 2011) operational tidal data station closest to Cayucos is located at Port San Luis (Station 9412110). The tidal datum elevations for 1983-2001 are shown in Table 4.3-2 below.

Table 4.3-2. Tidal Datum Elevations

Tidal Description	Elevation (feet)
Highest Water January 18, 1973	7.57
Mean Higher High Water	5.25
Mean High Water	4.54
NGVD29	2.93
Mean Low Water	0.96
NAVD88	0.0
Mean Lower Low Water	-0.08

Source: GeoSoils, 2011; NOAA 2011

Oceanographic Design Parameters

There are several factors that are important to the analysis of the vulnerability of a residence along the shoreline. Some of the factors are based upon the existing topography/bathymetry and elevation of the proposed structure at the site. The site is within Estero Bay with relatively slight slopes to deep water (GeoSoils 2011). The offshore elevations range from 0.0 to approximately -60 feet NAVD88, and are relatively flat at 1/100 (vertical/horizontal). The beach fronting the site is relatively flat and the rock outcropping fronting the site rises from +10 feet to about +17 feet NAVD88 in about 15 feet horizontal distance. Other factors are based upon extreme oceanographic conditions or the coincidence of several extreme conditions. In order to determine design wave characteristics for the runup and breaking wave elevation analysis,

GeoSoils determined the design water level, which accounts for the future rise in sea level over the life of the structure (75 to 100 years).

In order to estimate sea level rise at the project location, GeoSoils considered a range of estimates identified by the California Ocean Protection Council (COPC), California Coastal Conservancy, and U.S. Army Corps of Engineers (USACE). A reasonably conservative estimate of sea level rise over the next 100 years is 2.5 feet (GeoSoils, 2013). The highest recorded water elevation on record in the vicinity of Cayucos (Port San Luis) is 7.57 feet NAVD88. This actual high water record covers the 1982-83 severe El Niño. This elevation includes all oceanographic effects (short-term) on sea level except the long-term sea level rise prediction. If 2.5 feet is added to this +7.6 feet NAVD88 elevation, the future design maximum sea level is 10.1 feet NAVD88.

The coastal hazards study identified the maximum scour depth at the toe of the outcropping, which enables determination of the actual water depth at the toe of the outcropping and breaking wave elevation under the design water level conditions. The design scour elevation is estimated based upon the erodibility of the materials at the shoreline. A conservative estimate of the scour elevation at the toe of the rock outcropping is about 3.1 feet NAVD88. This is reasonable based upon the visual presence of bedrock at the back shore area. Using the maximum still water elevation and the maximum scour of 3.1 feet NAVD88 yields a total water depth of about 7.0 feet at the eroded beach toe (the rock outcropping). This represents the worst possible wave runup conditions reaching the site over the next 100 years.

Waves from distant storms have pounded the coastline of Cayucos several times within the last few centuries. However, these extreme waves break further offshore and lose a significant portion of their energy before they reach the shoreline. Once a wave reaches a water depth that is about 1.28 times the wave height, the wave breaks and runs up onto the shore. The design wave height is the maximum unbroken wave at the toe of the rock outcropping. The total water depth would be 7.0 feet, which would yield a design wave height of about 5.5 feet.

As waves approach the shoreline and the site, they break and water rushes up the rock outcropping, and towards the proposed development. Wave runup is defined as the vertical height above the still water level to which a wave will rise on a structure (the rock outcropping) of infinite height. Overtopping is the flow rate of water over the crest of the outcropping (about elevation +17 feet NAVD88) as a result of wave runup. Wave runup and overtopping for an extreme tsunami event is calculated using the USACE Automated Coastal Engineering System (ACES). The overtopping estimates provided in the coastal hazards study are corrected for the effect of onshore winds (refer to Appendix C). The wave, wind, and water level data used as input to the wave runup and overtopping application will be the extreme wave height of 5.5 feet, a period of 18 seconds, with the water level at highest recorded water level, corrected for future sea level rise.

There are three different potential oceanographic hazards identified at this site: shoreline erosion, flooding, and waves.

Erosion Hazard

In an effort to determine typical changes in the shoreline position, aerial photographs from the early 1970s to 2010 were reviewed. Due to the hard rock nature of the shoreline material, there has been very little erosion or retreat of the shoreline over the last four decades. In 2006, the USGS prepared the National Assessment of Shoreline Change Part 3: Historical Shoreline

Change and Associated Coastal Land Loss along Sandy Shorelines of the California Coast, which concluded that the shoreline in front of this site was relatively stable over the long term.

The HKA 2007 and 2012 letters cite USGS Open-File Report 2007-1133 and state that it indicates that cliff retreat rates in the vicinity of the proposed project site are 0.5 to 0.9 feet per year. HKA opines that the site is subject to coastal erosion. Review of cliff retreat rates vs. distance along shore presented in Figure 27 of USGS OFR 2007-1133 indicates that, at a minimum, the scale at which the cliff retreat data is presented does not allow for interpretation of a cliff retreat rate over the extremely narrow (25 feet) width of the site. Furthermore, CSA determined through analysis that the project site is not located on a coastal bluff; rather, the property is situated atop a bedrock remnant of the inland bluff adjacent to the mouth of Old Creek. The property is clearly set back significantly landward of the general trend of the coastal bluff, which terminates immediately southeast of the subject property. In terms of the cliff retreat rate cited, this was likely determined at properties south of the subject property that actually are situated atop a coastal bluff. The topic of coastal erosion hazard, including the effects of sea level rise is addressed in the EIR analysis.

Flooding Hazard

The flooding hazard discussed in this specific section is due to water level changes in the ocean. The primary hazard due to flooding from ocean waters would be due to a super-elevation of the ocean (storm surge). The NOAA National Ocean Survey (NOAA 2011) operational tidal data station closest to Cayucos is located at Port San Luis (Station 9412110). As noted above, the future design maximum sea level is 10.1 feet NAVD88. This would be considered in excess of a 100-year recurrence interval water level.

Wave Runup

Wave runup may reach elevation +15 feet NAVD88 over the next 100 years under infrequent, extreme design oceanographic conditions. Wave runup will actually be a pulse of water and not a continuous or sustained flow over time. An extreme tsunami may also reach this elevation.

4.3.2 Regulatory Setting

4.3.2.1 Federal and State Regulations

The Alquist-Priolo Earthquake Fault Zoning Act was developed by the State to regulate development near active faults and mitigate the surface fault rupture potential and other hazards. The Act identifies active earthquake fault zones and restricts building habitable structures over known active or potentially active faults.

Water quality protection is regulated by the Federal National Pollutant Discharge Elimination System (NPDES) Program established by the Clean Water Act. The EPA establishes stormwater permit requirements based on compliance with a NPDES permit. Discharges of stormwater associated with construction activity that results in a disturbance of one acre or more of total land area requires a NPDES General Permit for Discharges of Stormwater Associated with Construction Activity. This permit requires developers to implement best management practices (BMPs) to prevent the discharge of sediment-laden or otherwise contaminated water offsite. The site-specific plan to implement BMPs is called the Stormwater Pollution Prevention Plan (SWPPP). The plan must include a description of soil stabilization and sediment load control methods that would be implemented to minimize erosion and sediment loading during construction of the project. The SWPPP also includes descriptions of

post-construction BMPs. The State administers stormwater permits through the SWRCB and its local RWQCB (Central Coast Region). The proposed project would disturb less than one acre; therefore a SWPPP will not be required.

4.3.2.2 Local Regulations

County of San Luis Obispo Estero Area Plan

Shoreline development standards in the Estero Area Plan include the following (Areawide Standard I-4):

Bluff Setbacks. *The bluff setback is to be determined by the engineering geology analysis required in I.1.a. above adequate to withstand bluff erosion and wave action for a period of 100 years. In no case shall bluff setbacks be less than 25 feet. Alteration or additions to existing development that is non-conforming with respect to bluff setbacks that equals or exceeds 50 percent of the size of the existing structure, on a cumulative basis beginning July 10, 2008, shall not be authorized unless the entire structure is brought into conformance with this setback requirement and all other policies and standards of the Local Coastal Plan. On parcels with legally established shoreline protective devices, the setback distance may account for the additional stability provided by the permitted seawall, based on its existing design, condition, and routine repair and maintenance that maintain the seawall's approved design life. Expansion and/or other alteration to the seawall shall not be factored into setback calculations.*

As noted above, the project site is not located on a coastal bluff.

In the event the artificial fill material was considered to be a coastal bluff, the 25-foot setback line would be located approximately 40 feet from the northeast property line (along Studio Drive) leaving approximately 1,000 square feet for development (not including the driveway within County road right-of-way). The footprint of the proposed structure including the basement would extend beyond this point by approximately 28 feet. The intent of the bluff setback is to ensure that a proposed structure could withstand erosion for a minimum timeframe of 100 years without shoreline protection. As proposed, the project would not require shoreline protection, meeting the intent of the measure.

County of San Luis Obispo Coastal Zone Land Use Ordinance

Specific CZLUO sections pertaining to Geology, Soils, and Drainage are described below. The project would be required to comply with these sections.

Blufftop Setbacks

Section 23.04.118 of the CZLUO requires that new development or expansion of existing uses on blufftops be designed and set back from the bluff edge a distance sufficient to assure stability and structural integrity and to withstand bluff erosion and wave action for a period of 75 years without construction of shoreline protection structures that would, in the opinion of the Planning Director, require substantial alterations to the natural landforms along bluffs and cliffs. A site stability evaluation report shall be prepared and submitted by a certified engineering geologist based upon an onsite evaluation that indicates that the bluff setback is adequate to allow for bluff erosion over the 75 year period according to County established

standards. This language is superseded by the Estero Area Plan, Shoreline Development standard. As noted above, the project site is not located on a coastal bluff.

In the event the artificial fill was considered to be a coastal bluff, the project as proposed would not meet the setbacks identified in the CZLUO and Estero Area Plan, and a Variance would be considered pursuant to Section 23.01.045 of the CZLUO. Approval of a Variance requires adoption of the following findings, which could be supported by the EIR analysis and existing supportive evidence in the record:

- (i) *The variance authorized does not constitute a grant of special privileges inconsistent with the limitations upon other properties in the vicinity and land use category in which such property is situated; and*
- (ii) *There are special circumstances applicable to the property, related only to size, shape, topography, location, or surroundings, and because of these circumstances, the strict application of this title would deprive the property of privileges enjoyed by other property in the vicinity that is in the same land use category; and*
- (iii) *The variance does not authorize a use that is not otherwise authorized in the land use category; and*
- (iv) *The variance is consistent with the provisions of the Local Coastal Program; and*
- (v) *The granting of such application does not, under the circumstances and conditions applied in the particular case, adversely affect public health or safety, is not materially detrimental to the public welfare, nor injurious to nearby property or improvements.*

Grading Standards

Sections 23.05.022 through 23.05.039 of the CZLUO establish standards for grading and excavation activities to minimize hazards to life and property; protect against erosion and the sedimentation of watercourses; and protect the safety, use, and stability of public rights-of-way and drainage channels. Additional standards for grading within a Sensitive Resource Area (SRA) are in § 23.07.160 et seq. The project site is not located within a SRA.

Erosion and Sedimentation Control Plan

Section 23.05.036 of the CZLUO addresses methods to minimize erosion and sedimentation impacts. When required, the plan is prepared by a civil engineer to address both temporary and long-term impacts.

Drainage Control

Section 23.05.040 et seq., of the CZLUO contains the County's standards for the control of drainage and drainage facilities to minimize the harmful effects of storm water runoff and to protect neighboring and downstream properties from drainage problems resulting from new development. These standards include:

- Requirements pertaining to the design and construction of drainage systems;
- Requirements pertaining to the maintenance of offsite natural drainage patterns;
- Requirements pertaining to location of development in the coastal area; and,
- Restrictions on development in areas subject to flood hazards.

4.3.3 Thresholds of Significance

The County thresholds of significance are based on the criteria set forth in Appendix G of the CEQA Guidelines. According to those criteria, a project would result in a significant geology, soils, or drainage-related impact if it would:

1. Result in exposure to or production of unstable earth conditions, such as landslides, earthquakes, liquefaction, ground failure, land subsidence or other similar hazards.
2. Be within a California Geological Survey “Alquist-Priolo” Earthquake Fault Zone.
3. Result in soil erosion, topographic changes, loss of topsoil or unstable soil conditions from project-related improvements, such as vegetation removal, grading, excavation or fill.
4. Change rates of soil absorption, or amount or direction of surface runoff.
5. Include structures located on expansive soils.
6. Change the drainage patterns where substantial on- or offsite sedimentation/erosion or flooding may occur.
7. Involve activities within the 100-year flood zone.
8. Be inconsistent with the goals and policies of the County’s Safety Element relating to Geologic and Seismic Hazards.
9. Preclude the future extraction of valuable mineral resources.

4.3.4 Impact Assessment and Methodology

Potential geologic, soils, and drainage impacts were evaluated based upon review of project plans, a peer review of the engineering geologic and geotechnical engineering reports prepared by the applicant’s consultants, an independent technical report prepared by Cotton, Shires and Associates, a coastal hazards and wave runup study prepared by GeoSoils, Inc. and field review of the project site.

4.3.5 Project-specific Impacts and Mitigation Measures

4.3.5.1 Exposure to or Production of Unstable Earth Conditions

Seismic ground shaking associated with a large earthquake on one of several nearby and regional faults (the Oceanic, Hosgri, Los Osos, and San Luis Range faults) is considered to be a high potential hazard for the project area. Peak ground accelerations up to 0.35g could potentially affect structures at the site in the future. The project site was positioned on the USGS Seismic Hazard Maps for a 2% probability of exceedance in 50 years to determine the maximum considered earthquake spectral response accelerations. The Code-required design acceleration coefficients for short periods (SDS) and at one-second (SD1) would be 0.980g and 0.491g, respectively; therefore, a site class C is recommended for structure design (GSI Soils, Inc. 2011).

Mitigation of seismic hazards due to strong ground motion is addressed through proper structural design in accordance with the applicable building codes (presently the 2009

International Building Code [IBC] and 2010 California Building Code [CBC] documents related to Earthquake Loads) at the time of building permit application. Seismically-induced ground failure mechanisms include: landsliding, liquefaction, lurching, differential compaction, lateral spreading, and dry sand settlement.

Landslides

The central coast region of California has not yet been mapped by the California Geological Survey under the Seismic Hazards Mapping Act program. No landslides have been mapped or found on the property. A large earthflow landslide terminates approximately 400 feet northeast of the site across Highway 1. The landslide and the project site are separated by over 400 feet of very low gradient topography that is overall flatter than 15:1 (horizontal:vertical). Significant portions of that horizontal distance are nearly level (e.g., the width of Highway 1). Consequently the potential for risk of landslides adversely impacting the site is considered to be low. Potential impacts related to landslides are less than significant (Class III), and no mitigation measures are necessary.

Earthquakes

As noted in Section 4.3.1.1 Existing Conditions, Regional Setting, Geologic Setting, fault systems are present in the region; however, no known active faults trend through the property. No topographic anomalies in the area are suggestive of faulting, and the potential for surface faulting and ground rupture at the site to be low. Therefore, potential impacts would be less than significant (Class III), and no mitigation measures beyond compliance with the CBC are necessary.

Earthquake-Induced Landsliding

The only significant slope that would exist at the site upon completion of the project is the fill slope descending from Studio Drive to the property; however, the plans indicate this slope will be filled over and supported by retaining walls; hence we consider the potential for seismically-induced landsliding to be low. Therefore, potential impacts would be less than significant (Class III), and no mitigation measures are necessary.

Liquefaction

Soil liquefaction is a phenomenon in which a saturated, cohesionless, near-surface soil layer loses strength during cyclic loading (such as typically generated by earthquakes). During the loss of strength, the soil acquires "mobility" sufficient to permit both horizontal and vertical ground movements. Soils that are most susceptible to liquefaction are clean, loose, saturated, uniformly graded, fine-grained sands that are generally located within 50 feet depth beneath the ground surface. Gravels with similar characteristics and non-plastic clays and silts have also been shown to be susceptible to liquefaction. Based on the potential presence of perched water conditions during wet winter months in the upper 5 feet of soils above the dense bedrock materials, the current potential for liquefaction is moderate to high.

This potentially significant impact can be successfully addressed and mitigated via implementation of typical geotechnical recommendations for site processing, grading, and/or foundation design. Therefore, the resulting liquefaction potential at the project site would be low, and would generally result in minor to cosmetic damage to the proposed structure, and total settlements would be approximately 0.5 inch (GSI Soils, Inc. 2012). This amount of settlement is considered tolerable for the proposed project, and is indicative of liquefaction in

the negligible category. Therefore, potential impacts can be mitigated to a *less than significant* level (Class II).

GS Impact 1 The proposed residence would be exposed to the effects of liquefaction during a ground-shaking event.

GS/mm-1 Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which incorporate the recommendations identified in the Engineering Evaluation (Shoreline Engineering 2012) and Updated Geotechnical Investigation (GSI Soils, Inc.) dated December 27, 2011, specifically the recommendations identified in Section 5.2 – Preparation of the Building Pad, Section 5.3 – Structural Fill, Section 5.4 – Drilled Piers, Section 5.5 – Conventional Deepened Foundation, Section 5.6 – Slab Construction, and Section 5.9 – Surface and Subsurface Drainage.

Residual Impact

In addition to compliance with existing building regulations identified in the CBC and County Ordinance, the applicant would comply with recommendations identified in the project-specific geotechnical report. Therefore, potential long-term impacts related to liquefaction hazard would be mitigated to a *less than significant* level (Class II).

Ground Lurching and Differential Compaction

The potential for lurching and differential compaction (densification) of the existing undocumented fill is considered to be high due to the generally loose nature of the soil. This potential impact can be mitigated by removal and/or removal and backfilling as structural fill (GSI Soils, Inc. 2011). Based on compliance with these project-specific recommendations, potential impacts can be mitigated to *less than significant* (Class II).

GS Impact 2 The proposed residence would be exposed to the effects of ground lurching and differential compaction during a ground-shaking event.

GS/mm-2 Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which incorporate the recommendations identified in the Updated Geotechnical Investigation (GSI Soils, Inc.) dated December 27, 2011, and specifically the following:

- a. All surface and subsurface deleterious materials shall be removed from the proposed building area and disposed of offsite. This includes, but is not limited to, any buried utility lines, loose fills, debris, building materials, and any other surface and subsurface structures.*
- b. Voids left from site clearing shall be cleaned and backfilled as recommended for structural fill.*
- c. Once the site has been cleared, the exposed ground surface shall be stripped to remove surface vegetation and organic soil*

Residual Impact

In addition to compliance with existing building regulations identified in the CBC and County Ordinance, the applicant would comply with recommendations identified in the project-specific geotechnical report. Therefore, potential impacts related to ground lurching and differential compaction would be mitigated to a *less than significant* level (Class II).

Lateral Spreading

Conditions that typically induce lateral spreading include liquefaction of a subsurface layer or layers of soil, and site topography that contains an open topographic face which exposes the soil profile overlying the liquefiable layer(s). Both conditions potentially exist at the site but require further review by the project applicant's consultants. Based on the proposed foundation design, site grading, and confined condition of the sands near the center of the building pad, the potential for lateral spreading displacements would be negligible (GSI Soils, Inc. 2011). Therefore, based on the design of the project, potential impacts would be less than significant (Class III), and no mitigation beyond compliance with the CBC is necessary.

Dry Sand Settlement

Due to the limited depth of sand (approximately 6 feet) within the building pad area, dry settlements of these sands during seismic ground shaking is expected to be less than 0.5 inch. With the proposed grading, these settlements are anticipated to be less than 0.25 inch (GSI Soils, Inc. 2011). Therefore, potential impacts would be less than significant (Class III), and no mitigation beyond compliance with the CBC is necessary.

Land Subsidence

Land subsidence occurs when large amounts of groundwater have been excessively withdrawn from an aquifer. Water supply in Cayucos is provided by the Whale Rock Reservoir and Nacimiento Water Project. There is no identified Level of Severity for water supply in the Cayucos area (County of San Luis Obispo 2012), and the project site is not located within a designated groundwater basin. There is no evidence of land subsidence on or in the vicinity of the project site, and implementation of the project would not create a demand for water supply that would result in land subsidence. Therefore, no significant impact would occur.

4.3.5.2 "Alquist-Priolo" Earthquake Fault Zone

The project site is not located within an Alquist-Priolo Earthquake Fault Zone as defined by maps prepared by the California Geological Survey. Therefore, no significant impact would occur.

4.3.5.3 Soil Erosion, Topographic Changes, Loss of Topsoil, and InstabilitySoil Erosion

Short Term. Implementation of the project will require grading and removal of sand, soil, and vegetation. Grading activities would disturb approximately 3,000 square feet of the 3,445-square-foot parcel, including 400 cubic yards of cut (foundation) and 150 cubic yards of fill (driveway). The average depth of cut would be 5 feet (minimum 1 foot, maximum 12 feet). Approximately 250 cubic yards of soil would be exported offsite. During construction, exposed soils may result in erosion during rain events, or wave runup. Compliance with the County CZLUO and implementation of project-specific erosion-control measures are necessary to retain soils onsite and avoid down-gradient sedimentation into the Pacific Ocean. Based on

compliance with existing regulations, and recommended mitigation measures, potential short-term impacts would be mitigated to a *less than significant* level (Class II).

GS Impact 3 Grading and excavation required for the construction of the project would result in significant, short-term, adverse impacts related to erosion and down-gradient sedimentation.

Implement BIO/mm-4, BIO/mm-5, and BIO/mm-6.

Residual Impact

In addition to compliance with the CZLUO, the applicant would comply with recommendations identified in the project-specific geotechnical report and mitigation specific to ground disturbance and onsite erosion control. Therefore, potential impacts related to erosion would be mitigated to a *less than significant* level (Class II).

Long Term. In the long term, the project would not create any changes that would result in significant soil erosion. The proposed drainage plan includes stormwater diffusers to slow down runoff during rain events and minimize the potential for storm-related beach erosion. Therefore, potential long-term impacts would be less than significant (Class III), and no mitigation beyond compliance with existing regulations is necessary. Long-term erosion related to sea level rise and wave runup is discussed below under Coastal Hazards.

Slope Stability

Short Term. Construction cuts for basement retaining walls may exceed 12 feet in depth on the south and east sides of the proposed residence. The potential for instability of temporary (construction) slopes is a significant concern, and there is a moderate to high potential for temporary slope instability impacting the project site and the adjacent property. To address this issue, the applicant proposes to retain temporary slopes with a shoring system consisting of soldier piles and steel plate lagging. The shoring system would be removed following permanent stabilization of the slope. Based on implementation of this strategy, and compliance with the recommendations presented in the *Updated Geotechnical Investigation* (GSI Soils, Inc. 2011), potential short-term impacts would be *less than significant* (Class II).

GS Impact 4 The creation of steep cut slopes during site preparation and grading associated with construction of the proposed residence would result in short-term slope instability.

GS/mm-3 Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which incorporate the following: recommendations for slope stability identified in the Updated Geotechnical Investigation (GSI Soils, Inc.), dated December 27, 2011, specifically the recommendations identified in Section 5.10 – Temporary Excavations and Slopes; and Shoring Detail prepared by Shoreline Engineering (January 2012, updated September 20, 2012).

Residual Impact

In addition to compliance with existing building regulations identified in the CBC and County Ordinance, the applicant would comply with recommendations identified in the project-specific geotechnical report. Therefore, potential short-term slope stability impacts would be mitigated to a *less than significant* level (Class II).

Long Term. Construction of the proposed driveway will result in structural fill placement against the existing 2:1 gradient fill slope of Studio Drive, with the fill being supported by retaining walls. Upon completion of the project, no significant slopes will exist that could pose a slope instability hazard to the property. Significant scour of beach sand due to heavy surf may temporarily create a steep bedrock slope ocean-ward of the existing bedrock outcropping. Provided the proposed residence is constructed on deepened pier foundations as proposed, temporary beach scour should not pose a slope instability hazard to the residence.

GS Impact 5 Beach sand scour caused by heavy surf may periodically and temporarily create unstable slopes adjacent to the proposed residence.

GS/mm-4 Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which include the use of deepened pier foundations identified in the Engineering Evaluation (Shoreline Engineering, Inc.), dated January 2012, and Updated Geotechnical Investigation (GSI Soils, Inc.), dated December 27, 2011, specifically the recommendations identified in Section 5.2 – Preparation of Building Pad, Section 5.4 – Drilled Piers, and Section 5.5 – Conventional Deepened Foundation.

Residual Impact

In addition to compliance with existing building regulations identified in the CBC and County Ordinance, the applicant would comply with recommendations identified in the project-specific geotechnical report. Therefore, potential long-term slope stability impacts would be mitigated to a *less than significant* level (Class II).

4.3.5.4 Change Rates of Soil Absorption or Runoff

As noted above, the project includes a drainage plan that would replace the existing County drain pipe with a new stormwater system. This system would change the direction of surface runoff from the street onto the beach, but would not be significantly different than the current situation. The project would create additional area of impervious surface, and includes a rain barrel and stormwater management system, consistent with the County's regulations and policies for Low Impact Development (LID). Based on the location, size, and design of the project, it would not significantly change the rates of soil absorption or amount and direction of surface runoff. Therefore, potential impacts would be *less than significant* (Class III), and no mitigation beyond compliance with existing regulations is necessary.

4.3.5.5 Expansive Soils

A single expansion index test was conducted by GSI Soils, Inc. (2007) on a sandy clay sample from Boring B-2 at 6 feet. The reported expansion index was 92, which indicates a high expansion potential. The material in B-2 at this depth is likely weathered mudstone bedrock. Based on the geotechnical report, onsite sand soils free of organic and deleterious material are suitable for use as non-structural fill below the select fill cap. Structural fill using onsite inorganic soil or approved imported soil should be placed in layers, conditioned, and compacted, pursuant to engineer's specifications. Therefore, potentially significant impacts related to expansive soil can be mitigated to *less than significant* (Class II).

GS Impact 6 The proposed residence would be constructed on soils with a high expansion potential, resulting in a potentially significant long-term impact.

GS/mm-5 *Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which incorporate the recommendations identified in the Updated Geotechnical Investigation (GSI Soils, Inc.), dated December 27, 2011, specifically the recommendations identified in Section 5.1 – Clearing and Stripping, Section 5.2 – Preparation of Building Pad, and Section 5.3 – Structural Fill.*

Residual Impact

In addition to compliance with existing building regulations identified in the CBC and County Ordinance, the applicant would comply with recommendations identified in the project-specific geotechnical report. Therefore, potential long-term impacts related to expansive soil would be mitigated to a *less than significant* level (Class II).

4.3.5.6 Drainage-related Sedimentation/Erosion or Flooding

The applicant's proposed site drainage improvements would convey both Studio Drive runoff and driveway runoff to a drainage exit structure, which would outlet into a natural drainage swale. The natural drainage channel consists of highly erodible sands, and erosion in the channel has been accelerated by foot traffic from people accessing Morro Strand State Beach from Studio Drive. The swale would incorporate bollard style energy dissipators and a gravel/cobble invert, which are intended to reduce stormwater flow velocity and erosion potential. Rainfall from the residence roof is proposed to be collected by a roof gutter system and held in a cistern for gray water use and landscape irrigation.

Construction of the proposed impermeable concrete driveway would result in an increase in surface runoff onsite, which increases the potential for erosion in the natural drainage swale. This impact can be mitigated through appropriate civil engineering drainage design. CZLUO §23.05.050 requires a Drainage Plan for development located on a site adjacent to any coastal bluff, or if the project may change the offsite drainage pattern. Based on the location of the project on the beach-side of Studio Drive, and proposed changes to the existing stormwater system, a Drainage Plan would be required, which would be based on the preliminary drainage plan summarized above. The proposed project would not result in substantial onsite or offsite flooding, because stormwater would continue to flow west towards the Pacific Ocean (similar to existing conditions, which do not result in flooding), and would be filtered and dissipated by the proposed system. Based on review of the preliminary drainage plan, compliance with the CZLUO, and incorporation of mitigation identified below, potential long-term impacts would be mitigated to a *less than significant* level (Class II).

GS Impact 7 **The proposed stormwater drainage plan may result in erosion down-gradient of the proposed drain outlet.**

GS/mm-6 *Prior to issuance of grading and construction permits, the applicant shall submit a drainage plan for review and approval by the County Department of Public Works. The drainage plan shall be coordinated with the sedimentation and erosion control plan, be consistent with CZLUO §23.050.036 and 040, and specifically include engineered energy dissipators and controls that would limit peak runoff to pre-development levels.*

Residual Impact

In addition to compliance with the County Ordinance, the applicant would comply with recommendations identified in the project-specific geotechnical report and mitigation identified above. Therefore, potential long-term impacts related to drainage would be mitigated to a *less than significant* level (Class II).

4.3.5.7 100-year Flood Zone

The project site is not located within a 100-year flood hazard zone, and the area proposed for development is located above and outside the AE/VE hazard zone which has a 100-year flood elevation of 10 feet (NGVD29), which is approximately equivalent to elevation 12.92 feet NAVD88. The proposed basement finish floor elevation of 15 feet NAVD88 is approximately 2.08 feet higher than the AE/VE flood elevation. Therefore, no significant impact would occur.

4.3.5.8 County's Safety Element Consistency

Applicable geology and soils-related goals and policies identified in the County's Safety Element include the following:

Geologic and Seismic Hazards, Goal S-5: Minimize the potential for loss of life and property resulting from geologic and seismic hazards.

Based on compliance with the CBC, County Code, and incorporation of recommendations identified in the *Updated Geotechnical Investigation* (GSI Soils, Inc.), dated December 27, 2011, and *Engineering Evaluation* (Shoreline Engineering), dated January 2012, the project would be consistent with this goal.

Geologic and Seismic Hazards, Policy S-21: Slope Instability. The County acknowledges that areas of known landslide activity are generally not suitable for residential development. The County will avoid development in areas of known slope instability or high landslide risk when possible, and continue to encourage that developments on sloping ground use design and construction techniques appropriate for those areas.

The project site is not located within an area of high landslide risk; however, short-term slope instability may occur during construction. Based on incorporation of recommendations identified in the *Updated Geotechnical Investigation* and *Engineering Evaluation*, which include use of a temporary shoring system to stabilize cut slopes during excavation and construction, the project would be consistent with this policy.

Geologic and Seismic Hazards, Implementation Measures, Standard S-56: For developments in areas of known slope instability, landslides, or slopes steeper than 20 percent, the stability of slopes shall be addressed by registered professionals practicing in their respective fields of expertise.

The applicant submitted technical reports and plans completed by registered engineers, and independently peer reviewed during the EIR analysis, consistent with this implementation measure.

Geologic and Seismic Hazards, Implementation Measures, Standard S-59: Development proposals will be required to mitigate the impacts that their projects contribute to landslides and slope instability hazards on neighboring

property, and appurtenant structures, utilities, and roads; such as emergency ingress and egress to the property, and loss of water, power or other lifeline facilities.

Based on incorporation of recommendations identified in the *Updated Geotechnical Investigation and Engineering Evaluation*, which include use of a temporary shoring system to stabilize cut slopes during excavation and construction, the project would be consistent with this implementation measure and would not destabilize areas adjacent to Studio Drive and the neighboring developed property to the south.

Geologic and Seismic Hazards, Implementation Measures, Standard S-60:
Enforce current building code requirements and applicable ordinances and sections of the General Plan that pertain to development on sloping ground.

The County requires compliance with the CBC, Estero Area LUE and LCP, and CZLUO, consistent with this implementation measure. Based on the technical reports peer reviewed and incorporated by reference into this EIR analysis, the project would be consistent with the Safety Element, and no significant impacts would occur.

4.3.5.9 Valuable Mineral Resources

The project site is not located in an area designated for mineral extraction, and no valuable minerals are known to occur onsite. Therefore, no significant impacts would occur.

4.3.5.10 Coastal Hazards

The potential coastal hazards associated with the proposed residential development include shoreline erosion, wave runup, and coastal flooding.

Erosion Hazard

The shoreline in front of the subject property has been relatively stable over the long term (USGS 2006). On the basis of the USGS study, aerial photograph review spanning 39 years, the elevation of the proposed development, and the presence of hard rock material between the shoreline and the proposed residence:

- there has been very little erosion or retreat of the shoreline over the last four decades;
- a 2.5-foot rise in sea level will likely not result in a significant impact on the erosion rate or the proposed residence; and,
- there is no potential significant marine erosion hazard at the site over the next 100 years.

Therefore, the potential for significant erosion due to sea level rise would not be significant in this location.

Oceanographic Flooding Hazard

The primary hazard due to flooding from ocean waters is storm surge. The highest recorded water elevation on record in the vicinity of Cayucos (Port San Luis) is 7.57 feet NAVD88 and includes all oceanographic effects on sea level except for long-term sea level rise predictions (NOAA 2011). Incorporating a potential sea level rise of 2.5 feet in the next 100 years, the

future design maximum sea level would be 10.1 feet NAVD88, which is considered to be in excess of a 100-year recurrence interval water level. The proposed residence would be located at and above an elevation of 15.0 feet NAVD88; therefore, the site would not be adversely affected by flooding from the ocean over the next 100 years.

Breaking Wave Elevation

The project incorporates a cantilevered design. The proposed first floor would be located at elevation +26 feet NAVD88, and will extend a significant distance ocean-ward beyond the basement floor; therefore, the Coastal Hazards and Wave Runup report (GeoSoils, Inc. 2011, 2012) evaluated the potential maximum breaking wave crest elevation. The breaking wave elevation analysis calculated that the maximum wave crest elevation at the project site is approximately +14.5 feet NAVD88, which is well below the proposed cantilevered first floor elevation of +26 feet NAVD88. Therefore, the cantilevered portion of the structure would not be adversely affected by breaking wave forces.

Wave Runup Hazard

A wave runup analysis was performed under extreme (worst-case) design oceanographic conditions including storm surge, sea level rise of 2.5 feet over the next 100 years, and scour of the beach in front of the rock outcropping down to elevation 3.1 feet NAVD88, utilizing a design wave height of 5.5 feet. In this worst-case scenario, the maximum wave runup would be at elevation +22.7 feet NAVD88, and may reach the basement of the proposed residence at +15.0 feet NAVD88 over the next 100 years (GeoSoils, Inc. 2011). However, the runup is characterized as a pulse of water reaching the basement wall rather than a continuous or sustained flow over time. Based on calculations, the depth of the water overtopping the rock outcrop and reaching the residence would be approximately 0.14 foot deep. The runup analysis indicates that the velocity of the wave runup bore will not be sufficient to cause damage to the structure, assuming the basement wall is constructed of steel-reinforced concrete; however, the structure will be subject to spray and splash from wave runup striking the rock outcropping. The rock outcropping at its average elevation of 17 feet NAVD88 would be overtopped by the design wave (5.5 feet) at a rate of about 0.27 cubic feet/second-foot. Based on this low height of water (0.14 foot) and relatively low velocity, the proposed project would not be adversely affected. In addition, based the initial low velocity, and reduction in wave height and velocity following potential contact with the proposed basement wall, any wave refraction would not adversely affect the adjacent property.

In addition to wave runup, the analysis considered exposure to tsunamis. Based upon review of historical data and tsunami forecast modeling by the University of Southern California Tsunami Research Center, a 6.5-foot-high tsunami wave occurring at the project site would be a 500-year recurrence interval event. The wave runup analysis used a design wave height of 5.5 feet, which also represents a suitable site-specific tsunami runup at the site.

As proposed, the basement would be located at elevation 15 feet NAVD88, and basement concrete would be reinforced with steel; therefore, wave runup will not adversely impact the proposed residence over the next 100 years. An extreme tsunami may reach as high as the basement, but, for the reasons stated above, a tsunami will not adversely impact the residence. Based on the analysis presented above, and incorporated by reference from the coastal hazards and wave runup analysis report (GeoSoils, Inc. 2011, 2012), no significant impacts related to coastal hazards, including sea level rise, shoreline erosion, wave runup, and coastal flooding would occur, and the proposed residence would neither create nor contribute to erosion, geologic instability, or destruction of the site or adjacent area.

4.3.6 Cumulative Impacts

Implementation of the pending and approved projects listed in the cumulative development scenario would increase development in the immediate area. No projects requiring grading or construction would occur in the immediate vicinity of the project, and no existing adverse geologic or drainage conditions are present on or adjacent to the project site.

Additional development, including the proposed project, would increase the number of people and structures exposed to a variety of geologic and soils hazards within the County, including liquefaction, ground shaking, and temporary exposure to sea level rise and storm surge. Potential impacts related to geologic, soils, and seismic hazards are all site-specific, and mitigation measures are applied to each project to minimize the potential for significant geologic impacts. All development projects are required to comply with State and local regulations regarding grading and construction; therefore, no cumulative impacts related to these issues have been identified. Implementation of mitigation measures identified above, and compliance with existing regulations would mitigate impacts to *less than significant* (Class III), and no additional measures are necessary.

4.4 ISSUE AREAS WITH LESS THAN SIGNIFICANT IMPACTS

The Initial Study and further environmental review through the EIR process have evaluated the proposed project and determined that the project would result in less than significant impacts to the following resource areas: agricultural resources, biological resources, hazards and hazardous materials, noise, population and housing, public services and utilities, recreation, transportation/circulation, wastewater, water, and land use. These issues are briefly described in the following sections, limited mitigation is recommended, and an explanation as to why impacts were determined to be less than significant after mitigation (if any) for the given resource is provided.

4.4.1 Agricultural Resources

4.4.1.1 Existing Conditions

San Luis Obispo County was the 18th largest agriculture producing county in California in 2010 (down from 16th in 2009) (California Department of Food and Agriculture 2011). The leading commodities included wine grapes, strawberries, broccoli, cattle and calves, and vegetables. According to the County's 2011 Crop Report, overall crop values increased to \$739,208,000 in 2011, representing a 3% increase compared to 2010. Strawberries produced in the county in 2011 constituted 24% of San Luis Obispo County's total agricultural value, at \$179,012,000 (County Department of Agriculture 2012). Wine grape production declined due to freezing temperatures experienced in April 2011, which reduced countywide yields by 34% compared to 2010. The gross value of wine grapes was \$129,738,000, down 25% from 2010. The animal industry experienced an increase in overall value, coming in at \$71,479,000, including a cattle value of \$66,825,000.

While adjacent to agricultural and grazing lands, the community of Cayucos is entirely non-agricultural, with no lands within the urban reserve line boundaries designated for agricultural use. There are no agricultural activities occurring on the proposed project site or in the vicinity. The closest parcel subject to a Williamson Act contract is located approximately 1.3 miles east/northeast of the project site. The project site is designated RSF and is one of the last undeveloped residential parcels located along Studio Drive. Onsite soils consist of Beaches and Cropley clay (2-9% slopes), a deep, moderately well drained, and gently to moderately sloping soil formed in alluvium weathered from sedimentary rocks (USDA Natural Resources Conservation Service [NRCS] 2011). While Cropley clay is considered an Important Agricultural Soil of San Luis Obispo County (Prime Farmland and Highly Productive Rangeland Soil) (County of San Luis Obispo 2010a), the site is located within a residential neighborhood adjacent to a public beach area, with limited opportunity for production agriculture.

4.4.1.2 Regulatory Setting

Several state laws and regional plans have been enacted to support agricultural production and conservation of agricultural resources and lands, including the California Land Conservation Act (Williamson Act) and County Agriculture Element. These regulations are not directly applicable to the proposed project because no agricultural lands or Williamson Act lands are present onsite or in the project vicinity and because the project location is not well suited/situated to support future agricultural activities.

4.4.1.3 Thresholds of Significance

The significance of potential agricultural impacts is based on thresholds identified within Appendix G of the CEQA Guidelines and the County Initial Study Checklist, which provide the following thresholds for determining impact significance with respect to agricultural resources. Agricultural impacts would be considered significant if the proposed project would:

- Convert prime agricultural land to non-agricultural use;
- Impair agricultural use of other property or result in conversion to other uses;
- Conflict with existing zoning or Williamson Act program.

4.4.1.4 Impact Assessment and Methodology

Impacts to agricultural resources were assessed by utilizing data and maps published by the USDA, NRCS, California Department of Conservation (DOC), and County Agriculture Department, including soil information, farmland mapping, and economic data. The project was analyzed for potential conversion of important farmland, loss of productive agricultural soils, incompatible land uses, and inconsistencies with regulations and policies intended to preserve agricultural resources.

4.4.1.5 Project-specific Impacts and Mitigation Measures

Convert Prime Agricultural Land to Non-Agricultural Use

The project is located in a non-agricultural area with no agricultural activities occurring at or adjacent to the project site. The project site is classified as Urban and Built-Up Land by the DOC, Division of Land Resource Protection's Farmland Monitoring and Mapping Program (DOC 2008). No important farmland would be converted to non-agricultural use; therefore, there would be no impact.

Impair Agricultural Use of Other Property or Result in Conversion to Other Uses

No agricultural uses occur in the immediate vicinity of the project site. Based on the location of the project, it would not impair agricultural use of other properties in the region or result in conversion to non-agricultural uses. Therefore, there would be no impact.

Conflict with Existing Zoning or Williamson Act Program

The project site is within the residential land use category, and is not under Williamson Act contract. No parcels in the project vicinity are within the agricultural land use category or are subject to a Williamson Act contracts. No significant impacts to agricultural resources would occur.

4.4.1.6 Cumulative Impacts

The project is located within an urban area and would not affect agricultural resources in the vicinity. Therefore, it would not cumulatively contribute to any impacts on county agricultural resources.

4.4.2 Air Quality and Climate Change

4.4.2.1 Existing Conditions

San Luis Obispo County constitutes a land area of approximately 3,316 square miles with varied vegetation, topography, and climate. From a geographical and meteorological standpoint, the County can be divided into three general regions: the Coastal Plateau, the Upper Salinas River Valley, and the East County Plain. Air quality in each of these regions is characteristically different, although the physical features that divide them provide only limited barriers to the transport of pollutants between regions. Approximately 75% of the County population and a corresponding portion of the commercial and industrial facilities are located within the Coastal Plateau. Due to higher population density and closer spacing of urban areas, emissions of air pollutants per unit area are generally higher in this region than in other regions of the County. The project location is located within the Coastal Plateau.

The County's air quality is measured by multiple ambient air quality monitoring stations: four SLOAPCD-operated permanent stations, two state-operated permanent stations, two special stations, and one station operated by Tosco Oil Refinery for monitoring sulfur dioxide (SO₂) emissions. The significance of a given pollutant can be evaluated by comparing its atmospheric concentration to state and federal air quality standards, which are presented in Table 4.4-1, below. These standards represent allowable atmospheric contaminant concentrations at which the public health and welfare are protected, and include a factor of safety. In San Luis Obispo County, ozone and PM₁₀ (respirable particulate matter) are the pollutants of main concern, since exceedances of state health-based standards for those pollutants are experienced here in most years. For this reason, the county has been designated as a non-attainment area for the state ozone and PM₁₀ standards (SLOAPCD 2010). The county is in attainment for all other standards.

Table 4.4-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ¹	Federal Standards ²	
		Concentration ³	Primary ^{3,4}	Secondary ^{3,5}
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	-----	Same as Primary Standard
	8 Hour	0.07 ppm (137 µg/m ³)	0.075 ppm (147 µg/m ³)	
Fine Particulate Matter (PM _{2.5})	24 Hour	No California Standards	65 µg/m ³	Same as Primary Standard
	Annual arithmetic mean	12 µg/m ³	35 µg/m ³	
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m ³	150 µg/m ³	
	Annual arithmetic mean	20 µg/m ³	-----	
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	-----
	1 Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	
Nitrogen Dioxide (NO ₂)	Annual arithmetic mean	0.030 ppm (57 µg/m ³)	53 ppm (100 µg/m ³) ⁶	Same as Primary Standard
	1 Hour	0.18 ppm (339 µg/m ³)	100 ppm (188 µg/m ³) ⁶	-----
Lead ⁸	30 day average	1.5 µg/m ³	-----	Same as Primary Standard
	Calendar quarter	-----	1.5 µg/m ³	
	Rolling 3-Month Average ⁹	-----	.15 µg/m ³	
Sulfur Dioxide (SO ₂)	24 Hour	0.04 ppm (105 µg/m ³)	-----	-----
	3 Hour	-----	-----	0.5 ppm (1300 µg/m ³) ⁷
	1 Hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³) ⁷	-----

Pollutant	Averaging Time	California Standards ¹	Federal Standards ²	
		Concentration ³	Primary ^{3,4}	Secondary ^{3,5}
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer – visibility of 10 miles or more (0.07 – 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70%.	No Federal Standards	
Sulfates	24 Hour	25 $\mu\text{g}/\text{m}^3$		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 $\mu\text{g}/\text{m}^3$)		
Vinyl Chloride ⁸	24 Hour	0.01 ppm (26 $\mu\text{g}/\text{m}^3$)		

Notes: for additional information on Notes, please refer to the website: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>

Source: California Air Resources Board 2010.

Greenhouse Gas Emissions and Climate Change

Climate change refers to any significant change in measures of climate such as temperature, precipitation, or wind, lasting for decades or longer (EPA 2007). Climate change may result from:

- Natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun;
- Natural processes within the climate system (e.g., changes in ocean circulation); or,
- Human activities that change the atmosphere's composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification, etc.).

Human activities, such as fossil fuel combustion and land use changes release carbon dioxide (CO₂) and other compounds, cumulatively termed GHG emissions. GHGs are effective in trapping infra-red radiation which otherwise would have escaped the atmosphere, thereby warming the atmosphere, the oceans, and earth's surface (EPA 2007).

GHGs are any gas that absorbs infrared radiation in the atmosphere (EPA 2007). GHGs, as defined in Assembly Bill 32 (AB 32), include the following gases: CO₂, methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). A brief summary of each GHG is summarized below (EPA 2007).

A series of reports issued by the United Nations Intergovernmental Panel on Climate Change (UNIPCC) have synthesized recent scientific studies of climate change (UNIPCC 2007a, 2007b, 2000c). Key findings of these reports include the following:

- Global atmospheric concentrations of CO₂, CH₄, and N₂O have increased markedly as a result of human activities since 1750, and now are at about double pre-industrial levels. Global increases in CO₂ concentration are due primarily to fossil fuel use and land use change, and global increases in CH₄ and N₂O are due primarily to agriculture.
- Warming of the global climate due to GHGs is unequivocal, as evidenced by increases in air and water temperatures, widespread melting of snow and ice, and rising global average sea level. Most of the increase in global average temperatures since the mid-

20th century is very likely due to increases in GHGs from human activities. GHG emissions increased 70% between 1970 and 2004.

- Numerous long-term climate changes observed have included changes in arctic temperatures and ice, precipitation, ocean salinity, wind pattern, and the frequency of extreme weather events such as droughts, heavy precipitation, heat waves, and tropical cyclone intensity.
- Continued GHG emissions at current rates would cause further warming and climate change during the 21st century that would very likely be larger than that observed in the 20th century.
- Climate change is expected to have adverse impacts on water resources, ecosystems, food and forest products, coastal systems and low-lying areas, urban areas, and public health. These impacts will vary regionally, and may be very expensive for agriculture and human activities. In some areas sea level rise may completely inundate now inhabited areas (e.g., river deltas, Pacific Islands).

In California, the main sources of GHG emissions are from the transportation and energy sectors. According to the California Air Resources Board (CARB) draft GHG emission inventory for the year 2004, 39% of GHG emissions result from transportation and 25% of GHG emissions result from electricity generation. California produced 497 million metric tons of CO₂ equivalent (MMtCO₂e) in 2004 (CARB 2007). California produces about 2% of the world's GHG emissions, with about 0.55% of the population.

The potential effects of future climate change on California resources include:

- Air temperature: Increases of 3 to 10.4 degrees Fahrenheit (°F) by the end of the century, depending on aggressiveness of GHG emissions mitigation.
- Sea level rise: 6 to 30 inches by the end of the century, depending on aggressiveness of GHG emissions mitigation.
- Water resources: Reduced Sierra snowpack, reduced water supplies, increased water demands, changed flood hydrology.
- Forests: Changed forest composition, geographic range, and forest health and productivity; increased destructive wild fires.
- Ecosystems: Changed habitats, increased threats to certain endangered species.
- Agriculture: Changed crop yields, increased irrigation demands, increased impacts from tropospheric ozone.
- Public health: Increased smog and commensurate respiratory illness and weather-related mortality (California Climate Change Portal [CCCCP] 2007).

4.4.2.2 Regulatory Setting

Federal Policies and Regulations

Air quality protection at the national level is provided through the Federal Clean Air Act (Federal CAA) and subsequent Federal CAA Amendments. The current version was signed into law on November 15, 1990. These amendments represent the fifth major effort by the U.S. Congress to improve air quality. The 1990 Federal CAA standards are generally less stringent than the California Clean Air Act (California CAA). However, unlike the California law, the Federal CAA set statutory deadlines for attaining federal standards. The 1990 Federal CAA added several new sections to the law, including requirements for the control of toxic air contaminants, reductions in pollutants responsible for acid deposition, development of a national strategy for stratospheric ozone and global climate protection, and requirements for a national permitting system for major pollution sources.

State Policies and Regulations

The California CAA was signed into law in September of 1988. It requires all areas of the state to achieve and maintain the California ambient air quality standards by the earliest practicable date. These standards are generally more stringent than the Federal CAA standards; thus, emission controls to comply with the State law will generally be sufficient to comply with the Federal standards as well. The California CAA requires that all APCDs adopt and enforce regulations to achieve and maintain the state ambient air quality standards for the area under its jurisdiction. Pursuant to the requirements of the law, the SLOAPCD has adopted the CAP for San Luis Obispo County, which undergoes subsequent updates as required.

The California Global Warming Solutions Act of 2006 (AB 32, Health and Safety Code §38500 et seq.) requires the CARB to design and implement emission limits, regulations, and other measures. These will reduce, by 2020, statewide GHG emissions in a technologically feasible and cost-effective manner to 1990 levels (representing a 25% reduction). The following summarizes the process and schedule for implementing AB 32:

- June 30, 2007: CARB publishes a list of discrete early action GHG emission reduction measures that can be implemented prior to the measures and limits to be adopted to meet the 2020 limit.
- September 7, 2007: CARB released a list of additional early action measures and discrete early actions.
- January 1, 2008: CARB determines what the statewide GHG emissions level was in 1990 and approves a statewide GHG limit that is equivalent to that level.
- January 1, 2008: CARB adopts regulations requiring the reporting and verification of statewide GHG emissions.
- January 1, 2009: CARB adopts a scoping plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources of GHGs by 2020.
- January 1, 2010: CARB adopts and enforces regulations to implement the GHG emission reduction measures identified on the early action list in 2007.

- January 1, 2011: CARB adopts regulations to achieve the required reduction of GHG emissions to 1990 levels by 2020.
- January 1, 2012: GHG emission limits and emission reduction measures adopted by January 1, 2011, become enforceable.

SB 1368 (Public Utilities Code §8340 et seq.) is an AB 32 companion bill that was signed into law in 2006. It requires the California Public Utilities Commission (CPUC) to establish a GHG performance standard for base load generation from investor-owned utilities, and the California Energy Commission (CEC) to establish a similar standard for publicly-owned utilities. These standards may not exceed the GHG emission rate from a base load combined-cycle natural gas fired plant. The bill also requires all imported electricity provided to California to be generated from plants meeting CPUC and CEC standards.

By enacting SB 97 in 2007, California's lawmakers expressly recognized the need to analyze GHG emissions as a part of the CEQA process. SB 97 required the California Office of Planning and Research to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of GHG emissions. Those CEQA Guidelines amendments clarified several points, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects, and must reach a conclusion regarding the significance of those emissions. (See CEQA Guidelines §15064.4.)
- When a project's GHG emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions. (See CEQA Guidelines §15126.4(c).)
- Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change. (See CEQA Guidelines §15126.2(a).)
- Lead agencies may significantly streamline the analysis of GHGs on a project level by using a programmatic GHG emissions reduction plan meeting certain criteria. (See CEQA Guidelines §15183.5(b).)
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives. (See CEQA Guidelines, Appendix F.)

As part of the administrative rulemaking process, the Natural Resources Agency developed a Final Statement of Reasons explaining the legal and factual bases, intent, and purpose of the CEQA Guidelines amendments. Other rulemaking documents can be accessed on the Natural Resources Agency's rulemaking website (<http://ceres.ca.gov/ceqa/guidelines/>). The amendments to the CEQA Guidelines implementing SB 97 became effective on March 18, 2010 (State of California 2011).

Local Policies and Regulations

The 2001 San Luis Obispo County CAP is used by the SLOAPCD to address attainment of national and State fugitive dust (PM₁₀) and ozone standards for the entire county. The CAP is

a comprehensive planning document intended to provide guidance to the SLOAPCD and other local agencies, including the County of San Luis Obispo, on how to attain and maintain the state standards for ozone and PM₁₀. The CAP presents a detailed description of the sources and pollutants which impact the jurisdiction, future air quality impacts to be expected under current growth trends, and an appropriate control strategy for reducing ozone precursor emissions, thereby improving air quality.

Local efforts to quantify and reduce GHG emissions have primarily been undertaken by the SLOAPCD. Many of the programs currently implemented by SLOAPCD to reduce emissions and exposure to criteria and toxic air pollutants may also reduce GHG emissions. The following is a brief summary of these programs:

- Rules and Regulations: Numerous rules adopted by the County Board of Supervisors and implemented by SLOAPCD to address criteria pollutant emissions also have the side benefit of reducing GHGs. For instance, several SLOAPCD rules address conventional emissions from combustion sources such as boilers, heaters, and engines that often result in equipment modifications or replacement that improves the energy efficiency of those units and reduces fossil fuel use. Similarly, rules that regulate or prohibit open burning activities reduce CO₂ emissions from that activity. SLOAPCD Rule 426 regulates landfill emissions of methane.
- Clean Fuels: SLOAPCD is actively involved in and supports the efforts of the Central Coast Clean Cities Coalition (C5), a local nonprofit coalition which promotes the use of cleaner alternative fuel technologies. With over 40% of the GHG emissions coming from mobile sources, these efforts are an essential tool in reducing fossil fuel use and associated CO₂ emissions.
- Development Review: Through the CEQA review process, SLOAPCD evaluates impacts from land use development projects and recommends measures to reduce emissions. Mitigation measures focus on reducing emissions from motor vehicles and improving energy efficiency, both of which directly reduce criteria pollutants and GHGs. Such strategies include incorporation of energy efficiency measures (increased insulation, high efficiency appliances and lighting, passive and active solar systems, etc.) that go beyond current building standards, and including Smart Growth principles into the project design to reduce vehicle trips and increase the viability of alternative transportation.
- Grant Programs: Many emission reduction projects funded through the various grant programs administered by SLOAPCD result in replacement or retrofit of older, high emission engines with cleaner and more efficient engines that simultaneously reduce fuel use, thus reducing CO₂ emissions. Conversion of stationary and mobile diesel engines to natural gas or electric motors also serves to reduce CO₂ emissions.
- Transportation Choices Program: In partnership with San Luis Obispo Regional Rideshare, Ride-On, and SLOAPCD, the Transportation Choices Program (TCP) is a free program offered to businesses and organizations throughout San Luis Obispo County to reduce employee and student commute trips and promote the use of alternative transportation.
- Pollution Prevention: The Pollution Prevention Program promotes the use of, and publicly recognizes small businesses which successfully employ, pollution prevention

and emission reduction techniques as part of routine operating procedures. Many of the businesses so recognized have incorporated operational changes that reduce their emissions through efficiency improvements that also reduce fuel and product use and save energy.

- **Public Outreach:** SLOAPCD implements a number of outreach campaigns to promote a variety of clean air programs, including backyard burning reduction programs, clean car awareness, pollution prevention, energy efficiency, and transportation alternatives, all of which promote community consciousness and lifestyle choices that can help reduce our impacts on climate change.”

The County has prepared an EnergyWise Plan (Climate Action Plan) – Designing Energy and Climate Solutions for the Future. This plan identifies strategies to reduce the county’s GHG emissions by 15% below the baseline year of 2006 by the year 2020. This goal is consistent with AB 32. The plan includes the following:

- Scientific and regulatory framework for addressing climate change and GHGs at the local level.
- Identifies sources of GHG emissions from sources within the unincorporated county and estimates how these emissions may change over time.
- Forecasts emissions to reflect the County’s desired growth projections without regulatory or technical intervention to reduce GHG emissions and provides an emissions reduction target consistent with AB 32 and the County’s General Plan.
- Provides energy use, transportation, land use, water use, and solid waste strategies to reduce San Luis Obispo County’s GHG emissions and quantifies the potential emissions reductions that will be achieved by implementing each strategy.
- Identifies existing and proposed strategies to reduce emissions from County operations and facilities.
- Addresses adaptation to climate change – climate adaptation is an adjustment in natural or human systems in response to actual or expected climatic change and its effects.
- Presents an implementation program to assist with monitoring and prioritization of the reduction strategies through 2020.

4.4.2.3 Thresholds of Significance

The significance of potential air quality impacts is based on thresholds identified within Appendix G of the CEQA Guidelines, the San Luis Obispo County Initial Study Checklist, and standards established within the SLO APCD CEQA Air Quality Handbook. The specifics of these guidelines are defined below.

CEQA Guidelines and San Luis Obispo County Initial Study Checklist

The significance of potential impacts is based on thresholds identified within Appendix G of the CEQA Guidelines and the County Initial Study Checklist, which provide the following

thresholds for determining impact significance with respect to air quality and climate change. Impacts would be considered significant if the proposed project would:

- Violate any state or federal ambient air quality standard, or exceed air quality emission thresholds as established by County APCD.
- Expose any sensitive receptor to substantial air pollutant concentrations.
- Create or subject individuals to objectionable odors.
- Be inconsistent with the District's CAP.
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

SLOAPCD 2012 CEQA Air Quality Handbook

According to the April 2012 CEQA Air Quality Handbook, project impacts may be considered significant if one or more of the following special conditions apply:

- If the project has the ability to emit hazardous or toxic air pollutants in proximity of sensitive receptors, such that an increased cancer risk affects the population.
- If the project has the potential to emit diesel particulate matter in an area of human exposure, even if overall emissions are low.
- Remodeling or demolition operations where asbestos-containing materials will be encountered.
- If naturally occurring asbestos has been identified in the project area.
- If project has the ability to emit hazardous or toxic air pollutants in proximity of sensitive receptors, such as schools, churches, hospitals, etc.

The CEQA Air Quality Handbook defines thresholds for long-term operational emissions and short-term construction-related emissions. Depending on the level of exceedance of a defined threshold, the APCD has established varying levels of mitigation. Tables 4.4-2 and 4.4-3 summarize the thresholds for long-term operational emissions and short-term construction-related emissions requiring mitigation.

GHG and Climate Change

In March 2012, the San Luis Obispo County Air Pollution Control District (APCD) approved thresholds for GHG emission impacts, and these thresholds have been incorporated the APCD's CEQA Air Quality Handbook. APCD determined that a tiered process for residential / commercial land use projects was the most appropriate and effective approach for assessing the GHG emission impacts. The tiered approach includes three methods, any of which can be used for any given project:

1. Qualitative GHG Reduction Strategies (e.g. Climate Action Plans): A qualitative threshold that is consistent with AB 32 Scoping Plan measures and goals; or,
2. Bright-Line Threshold: Numerical value to determine the significance of a project's annual GHG emissions; or,
3. Efficiency-Based Threshold: Assesses the GHG impacts of a project on an emissions per capita basis.

For most projects the Bright-Line Threshold of 1,150 Metric Tons CO₂/year (MT CO₂e/yr) will be the most applicable threshold. In addition to the residential/commercial threshold options proposed above, a bright-line numerical value threshold of 10,000 MT CO₂e/yr was adopted for stationary source (industrial) projects.

It should be noted that projects that generate less than the above mentioned thresholds will also participate in emission reductions because air emissions, including GHGs, are under the purview of the California Air Resources Board (or other regulatory agencies) and will be “regulated” either by CARB, the Federal Government, or other entities. For example, new vehicles will be subject to increased fuel economy standards and emission reductions, large and small appliances will be subject to more strict emissions standards, and energy delivered to consumers will increasingly come from renewable sources. Other programs that are intended to reduce the overall GHG emissions include Low Carbon Fuel Standards, Renewable Portfolio standards and the Clean Car standards. As a result, even the emissions that result from projects that produce fewer emissions than the threshold will be subject to emission reductions.

Under CEQA, an individual project's GHG emissions will generally not result in direct significant impacts. This is because the climate change issue is global in nature. However, an individual project could be found to contribute to a potentially significant cumulative impact. Projects that have GHG emissions above the noted thresholds may be considered cumulatively considerable and require mitigation.

Table 4.4-2. SLOAPCD Thresholds of Significance for Operational Emissions

Pollutant	Threshold ¹	
	Daily (pounds/day)	Annual (tons/year)
Ozone Precursors (ROG*+NOx**)²	25	25
Diesel Particulate Matter (DPM)²	1.25	n/a
Fugitive Particulate Matter (PM ₁₀), Dust	25	25
CO	550	n/a
Greenhouse Gases (CO ₂ , CH ₄)	Consistency with Qualified Greenhouse Gas Reduction Plan OR 1,150 MT CO ₂ e/year OR 4.9 CO ₂ e/SP/year (residents + employees)	

1. Daily and annual emission thresholds are based on the California Health & Safety Code Division 26, Part 3, Chapter 10, §40918, and the CARB Carl Moyer Guidelines for DPM.
2. CalEEMod – use winter operational emission data to compare to operational thresholds.

Source: SLOAPCD 2012 CEQA Air Quality Handbook.

Table 4.4-3. Thresholds of Significance for Construction Operations

Pollutant	Threshold ¹		
	Daily (pounds)	Quarterly Tier 1 (tons)	Quarterly Tier 2 (tons)
ROG+NOx (Combined)	137	2.5	6.3
Diesel Particulate Matter (DPM)	7	0.13	0.32
Fugitive Particulate Matter (PM ₁₀), Dust ²	n/a	2.5	n/a
Greenhouse Gases (CO ₂ , CH ₄ , N ₂ O, HFC, CFC, F ₆ S)	Amortized and Combined with Operational Emissions		

1. Daily and quarterly emission thresholds are based on the California Health & Safety Code and the CARB Carl Moyer Guidelines.
2. Any project with a grading area greater than 4.0 acres of worked area can exceed the 2.5-ton PM₁₀ quarterly threshold.

Source: SLOAPCD 2012 CEQA Air Quality Handbook.

4.4.2.4 Impact Assessment and Methodology

The APCD has established four separate categories of evaluation for determining the significance of air quality emissions. Full disclosure of the potential air pollutant and/or toxic air emissions from a project is needed for these evaluations, as required by CEQA. The evaluation categories include:

- Comparison of calculated project emissions to APCD emission thresholds;
- Consistency with the most recent Clean Air Plan;
- Comparison of predicted ambient pollutant concentrations resulting from the project to federal and state health standards, where applicable; and,
- The evaluation of special conditions that apply to certain projects.

Emission estimates for the proposed project have been determined through review of the SLOAPCD 2012 CEQA Air Quality Handbook and SLOAPCD CAP.

4.4.2.5 Project-specific Impacts and Mitigation Measures

Violate Air Quality Standard or Exceed Emission Threshold

As proposed, the project would result in the disturbance of approximately 3,000 square feet, including driveways, walkways, the residential structure coverage, and landscaping. This would result in the creation of construction dust, as well as short-term vehicle emissions. Long-term operational impacts would include an increase in vehicle emissions on surrounding roads. Based on the CEQA Air Quality Handbook, the project would result in less than 10 pounds per day of pollutants, which is below the threshold warranting mitigation. Therefore, potential impacts would be *less than significant* (Class III).

Expose any Sensitive Receptor to Substantial Air Pollutant Concentrations

The project is located in proximity to sensitive surrounding land uses, and homeowners in the vicinity of the proposed project have expressed concern related to the impacts construction activities would have on surrounding properties. Construction activities can generate fugitive dust, which could be a nuisance to residents and businesses in proximity to the project site. Dust complaints could result in a violation of the APCD's 402 Nuisance Rule. In addition, operation of construction equipment, including equipment idling, generates diesel particulate matter, which can have an adverse effect on sensitive receptors.

AQ Impact 1 Construction of the proposed project would generate fugitive dust, which could become a nuisance to local residents and businesses in proximity to the construction site.

AQ/mm-1 Prior to initiation of construction, the project applicant shall implement the following dust control measures:

- a. Reduce the amount of the disturbed area where possible;*
- b. Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15 miles per hour. Reclaimed (non-potable) water should be used whenever possible;*
- c. All dirt stockpile areas should be sprayed daily as needed; and*
- d. All roadways, driveways, sidewalks, etc., to be paved should be completed as soon as possible, and building pads should be lain as soon as possible after grading unless seeding or soil binders are used.*

Residual Impact

Implementation of this measure would reduce impacts associated with short-term construction-related emissions to be *less than significant with mitigation* (Class II).

AQ Impact 2 Use of construction equipment would generate diesel particulate matter, potentially resulting in an adverse effect to sensitive receptors within 1,000 feet of the project site.

AQ/mm-2 Prior to issuance of construction permits, the applicant shall include the following measures on applicable grading and building plans:

Idling Restrictions near Sensitive Receptors for Both On and off-Road Equipment

- a. Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;*
- b. Diesel idling within 1,000 feet of sensitive receptors is not permitted;*

- c. *Use of alternative fueled equipment is recommended whenever possible; and,*
- d. *Signs that specify the no idling requirements must be posted and enforced at the construction site.*

Idling Restrictions for On-road Vehicles

- a. *Section 2485 of Title 13, the California Code of Regulations limits diesel-fueled commercial motor vehicles that operate in the State of California with gross vehicular weight ratings of greater than 10,000 pounds and licensed for operation on highways. It applies to California and non-California based vehicles. In general, the regulation specifies that drivers of said vehicles:*
 - 1. *Shall not idle the vehicle's primary diesel engine for greater than 5 minutes at any location, except as noted in Subsection (d) of the regulation; and,*
 - 2. *Shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5.0 minutes at any location when within 100 feet of a restricted area, except as noted in Subsection (d) of the regulation.*

Signs must be posted in the designated queuing areas and job sites to remind drivers of the 5 minute idling limit. The specific requirements and exceptions in the regulation can be reviewed at the following web site: www.arb.ca.gov/msprog/truck-idling/2485.pdf.

Idling Restrictions for off-Road Equipment

- a. *Off-road diesel equipment shall comply with the 5 minute idling restriction identified in Section 2449(d)(3) of the California Air Resources Board's In-Use off-Road Diesel regulation: www.arb.ca.gov/regact/2007/ordiesl07/frooal.pdf.*
- b. *Signs shall be posted in the designated queuing areas and job sites to remind off-road equipment operators of the 5 minute idling limit.*

Residual Impact

Implementation of this measure would reduce impacts associated with short-term construction-related emissions to be *less than significant with mitigation* (Class II).

Create or Subject Individuals to Objectionable Odors

The project consists of a residence, which will not require the storage or use of any materials or equipment that would generate objectionable odors. Therefore, potential impacts would be *less than significant* (Class III).

Clean Air Plan Consistency

The project is consistent with the general level of development anticipated and projected in the CAP, including promotion of residential infill in proximity to essential services and alternative transportation services. Therefore, potential impacts would be *less than significant* (Class III).

Generate GHG Emissions

The proposed project would result in an increased use of vehicles and electricity, each of which generate small amounts of CO₂, N₂O, and HFCs. The APCD provided comments on the project that indicated through URBEMIS modeling that the project would result in approximately 84 pounds per day of CO₂ in the summer and 102 pounds per day in the winter (APCD Comment Letter dated December 23, 2008).

Based on *Table 1-1: Operational Screening Criteria for Project Air Quality Analysis* (SLOAPCD 2012), construction and operation of one single-family residence would not exceed 1,150 MT of CO₂e/year threshold. In addition, the project includes elements that will reduce GHG emissions, including compliance with current Title 24 Energy requirements (electricity reduction for cooling/heating), use of solar panels to reduce demand from GHG-emitting power plants, location within a garbage service area that is recycling over 50% of its wastes (electricity reduction), and requirement to recycle at least 50% of its construction wastes.

Because the project proposes only one single-family residence in an existing residential neighborhood, and is consistent with land use components necessary to meet the goals of AB32 and set forth in the Clean Air Plan, this increase in GHGs is not considered significant. Therefore, no significant adverse GHG impacts would occur as a result of the proposed project, and no mitigation measures are necessary (Class III).

Conflict with Applicable Plan, Policy, or Regulation

The proposed project is consistent with the APCD's CEQA Handbook and County's EnergyWise Plan because it consists of a residential development within an urban area, in proximity to recreational resources and opportunities for alternative transportation, such as walking and bicycling. As noted above, the project includes energy-efficiency measures, including incorporation of solar energy. Potential impacts would be *less than significant* (Class III).

4.4.2.6 Cumulative Impacts

The cumulative study area for air quality impacts is the South Central Coast Air Basin (SCCAB). The project would contribute criteria pollutants during project construction and long-term operational use, including ozone precursors and particulate matter. No major projects are proposed in the immediate vicinity of the project site; however, a number of large development projects are currently under review by the County, and cities within the county, including mixed-use, residential, commercial, and solar energy projects. These projects may be under construction simultaneously with the project and, in the long term, would be generating similar air emissions due to use of construction equipment, increased traffic trips, and energy use.

Depending on construction schedules and actual implementation of projects in the air basin, generation of fugitive dust and pollutant emissions during construction could result in short-term increases in air pollutants. Analysis conducted specifically for this project concluded that implementation of the proposed project would not significantly contribute to cumulative long-term operational air quality impacts because it would not exceed the daily ROG+NO_x threshold. GHG impacts, including those described above, all contribute cumulatively with those produced worldwide, to affect climate change. Compliance with identified air quality, energy efficiency, and water conservation mitigation measures would reduce the project's contribution to cumulative GHG emissions, and subsequent climate change. Cumulative effects would be *less than significant* (Class III).

4.4.3 Biological Resources

4.4.3.1 Existing Conditions

The project site consists of a residential lot located on the west side of Highway 1 and Studio Drive. In the Cayucos area, lands west of Highway 1 consist of disturbed coastal bluffs that support grasslands and sporadic occurrences of coastal bluff scrub. Sand dunes and the beach are located just below the bluffs. The bluffs, dunes, and beach have been disturbed by passive recreational use. The northeastern portion of the project site is dominated by ice plant (*Carpobrotus chilensis*) and some grasses. The southwestern portion of the project site consists of beach sands and sea rocket (*Cakile maritima*), an invasive weed. A mature Monterey cypress (*Cupressus macrocarpa*), long-leaf pine (*Pinus palustris*), and ornamental bush are located along the southern property line.

Wildlife use of the upper portion of project site is expected to be low because it provides little vegetative diversity and cover for wildlife species. The sandy beach habitat is located within the southwestern portion of the site, and adjacent to the property boundary. Common and special-status shorebirds including long-billed curlew (*Numenius americanus*) and California brown pelican (*Pelecanus occidentalis californicus*) frequently forage and roost on sandy beach habitats. Sandy beaches also provide habitat for the western snowy plover and numerous invertebrates.

Sensitive biological resources include Environmentally Sensitive Habitat Areas (ESHAs), special-status plants, and special-status wildlife. The California Coastal Act defines ESHAs as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments." Under this definition, unique plant habitats, rare and endangered animal habitats, wetlands, coastal streams, rocky points, intertidal areas, and kelp beds are typically considered ESHAs.

The project site does not support any designated ESHAs. The closest ESHA is Old Creek, located approximately 600 feet northwest of the project site. The creek flows under Highway 1 and into the Pacific Ocean.

Special-status Plant Species

Based on the California Natural Diversity Database (CNDDDB) records search and SWCA's knowledge of the area, nine special-status plant species are documented in the project area (Cayucos Quadrangle). Red sand verbena (*Abronia maritima*), Cambria morning-glory (*Calystegia subacaulis* ssp. *episcopalism*), San Luis Obispo owl's clover (*Castilleja densiflora* ssp. *obispoensis*), and California seablite (*Suaeda californica*) have known occurrences in the

area. The existing conditions onsite do not support habitat conditions for these species, and the site is covered with iceplant and sea rocket. Table B-1 in Appendix B provides SWCA's rationale for determining whether or not the project site provides suitable conditions for a particular species.

Special-status Animal Species

The CNDDDB records search identified nine special-status wildlife species that have known occurrences in the reviewed quadrangle. The existing conditions in the project area provide suitable conditions for two of the listed wildlife species (refer to Table B-2 in Appendix B). Western snowy plover (*Charadrius alexandrinus nivosus*) (foraging habitat) and coast horned lizard (*Phrynosoma coronatum*) have known occurrences in the project area and warrant special considerations during project design and implementation. Impacts to these species and recommended mitigation measures are presented in this section.

4.4.3.2 Regulatory Setting

Federal Policies and Regulations

Section 404 of the Clean Water Act of 1977

Pursuant to Section 404 of the Clean Water Act (33 United States Code 1344), the USACE is responsible for the issuance of permits for the placement of dredged or fill material into "waters of the U.S." As defined by USACE at 33 CFR 328.3(a)(parts 1-6), the following summarizes waters of the U.S.:

"Those waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; tributaries and impoundments to such waters; all interstate waters including interstate wetlands; and territorial seas."

Waters of the U.S. are typically identified by the presence of an ordinary high water mark and connectivity to traditional navigable waters or other jurisdictional features. If a project would result in dredge or fill of USACE jurisdictional waters, the project would be subject to USACE review under Section 404 of the Clean Water Act.

Section 401 of the Clean Water Act of 1977

Section 401 of the Clean Water Act and its provisions ensure that federally permitted activities comply with the federal Clean Water Act and state water quality laws. Section 401 is implemented through a review process that is conducted by the RWQCB, and is triggered by the Section 404 permitting process. The RWQCB certifies via the Section 401 process that a proposed project complies with applicable effluent limitations, water quality standards, and other conditions of California law. Evaluating the effects of the proposed project on both water quality and quantity falls under the jurisdiction of the RWQCB. Proposed project activities that have the potential to result in impacts to water quality and quantity would require certification by the RWQCB.

Federal Endangered Species Act of 1973

The Federal Endangered Species Act (ESA) provides legislation to protect federally listed plant and animal species. Impacts to listed species resulting from the implementation of a project would require the responsible agency or individual to formally consult with the U.S.

Fish and Wildlife Service (USFWS) or NOAA National Marine Fisheries Service (NOAA Fisheries) to determine the extent of impact to a particular species. If USFWS or NOAA Fisheries determine that impacts to a species would likely occur, alternatives and measures to avoid or reduce impacts must be identified. USFWS and NOAA Fisheries also regulate activities conducted in federal critical habitat, which are geographic units designated as areas that support primary habitat constituent elements for listed species.

Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (MBTA) protects all migratory birds, including their eggs, nests, and feathers. The MBTA was originally drafted to put an end to the commercial trade in bird feathers, popular in the latter part of the 1800's. The MBTA is enforced by the USFWS, and potential impacts to species protected under the MBTA are evaluated by the USFWS in consultation with other federal agencies. Several migratory bird species were present in the project corridor. If ground disturbing activities were implemented during the nesting bird season, pre-disturbance nesting bird surveys would need to be conducted to avoid impacts to migratory birds.

State Policies and Regulations

California Endangered Species Act

The California Endangered Species Act (CESA) ensures legal protection for plants listed as rare or endangered, and species of wildlife formally listed as endangered or threatened. The state law also lists California Special Concern species based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Under state law, the California Department of Fish and Wildlife (CDFW) is empowered to review projects for their potential to impact state-listed species and California Special Concern species, and their habitats.

Section 1602 of the Fish and Game Code

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the law requires any person, state or local government agency, or public utility proposing a project that may impact a river, stream, or lake to notify the CDFW before beginning the project. If the CDFW determines that the proposed project may adversely affect existing fish and wildlife resources, a Lake or Streambed Alteration Agreement is required. A Streambed Alteration Agreement lists the CDFW conditions of approval relative to the proposed project, and serves as an agreement between an applicant and the CDFW for a term of not more than five years for the performance of activities subject to this section. A Streambed Alteration Agreement from the CDFW would be required prior to any direct or indirect impact to streambeds, banks, channels or associated riparian resources.

Other Sections of the Fish and Game Code

"Fully Protected" species may not be taken or possessed without a permit from the Fish and Game Commission and/or the CDFW. Information on these species can be found within California Fish and Game Code §3511 (birds), §4700 (mammals), §5050 (reptiles and amphibians), and §5515 (fish) of the Fish and Game Code.

California Coastal Act

The CCA was enacted in 1976 to provide long-term protection of California's coastal resources. The Act's coastal resources management policies are based on recommendations contained in the California Coastal Plan. One such policy includes:

“Protection, enhancement and restoration of environmentally sensitive habitats, including intertidal and nearshore waters, wetlands, bays and estuaries, riparian habitat, certain wood and grasslands, streams, lakes, and habitat for rare or endangered plants or animals.”

The California Coastal Commission must evaluate proposed impacts to wetlands. For wetland delineations in the Coastal Zone, the California Coastal Commission utilizes a single-parameter definition (in addition to the USACE three-parameter methodology). Delineations performed using the California Coastal Commission definition generally results in larger wetland areas than a corresponding USACE delineation of the same site. This is due to the difference in identifying criteria between methods.

4.4.3.3 Thresholds of Significance

The significance of potential biological impacts is based on County of San Luis Obispo thresholds, in accordance with Appendix G of the CEQA Guidelines. Biological impacts would be considered significant if the proposed project would:

- Result in a loss of unique or special status species or their habitats;
- Reduce the extent, diversity, or quality of native or other important vegetation;
- Impact wetland or riparian habitat;
- Introduce barriers to movement of resident or migratory fish or wildlife species, or factors, which could hinder the normal activities of wildlife.

4.4.3.4 Impact Assessment and Methodology

The impact assessment focused on identifying potential project-related impacts associated with implementation of the project, and was based on details presented within the project description. Potential impacts were expected to occur where proposed construction or development activities would result in temporary or permanent modification of sensitive communities or habitats occupied by special-status species. Impacts to biological resources were evaluated by determining the sensitivity, significance, or rarity of each resource that would be adversely affected by the proposed project, and thresholds of significance were applied to determine if the impact constituted a significant impact. The significance threshold may be different for each habitat or species and is based on the resource's rarity or sensitivity and the level of impact that would result from the proposed project. Where potential project-related impacts to sensitive resources were identified, measures for avoiding or minimizing adverse effects to these resources were recommended.

4.4.3.5 Project-specific Impacts and Mitigation Measures

Unique or Special-Status Species or their Habitats

The project site is located on beach-front property, immediately west of Studio Drive. The site is covered with common iceplant on the upper slope, and sea rocket (invasive weed) on the beach sands. The site does not include any features suitable for aquatic species. The sandy

beach area provides foraging habitat for a variety of birds, including western snowy plover (*Charadrius alexandrinus*), California black rail (*Laterallus jamaicensis coturniculus*), California brown pelican (*Pelecanus occidentalis*), and California least tern (*Sterna antillarum browni*). The mature cypress tree (to remain) and adjacent pine (to be removed) along the southern property boundary may provide tree nesting opportunities for birds. Due to the location of the project site and presence of suitable habitat in the area, precautionary measures are recommended to ensure impacts to snowy plover and other bird species are avoided.

The project site provides suitable habitat for coast horned lizard and other common reptiles. Grading activities could result in direct take of coast horned lizard and other reptiles if present. Direct take may include being struck by equipment, entrapped in stockpiled materials or trenches, or trampled or collected by construction personnel.

Old Creek provides habitat for a variety of special-status species noted above. The project is located approximately 600 feet from the creek, and would not directly affect the ESHA or special-status species within the creek. Inadvertent impacts to special-status species may occur including use of equipment and storage of materials outside the property boundary, and leaks, spills, and debris adversely affecting the beach areas surrounding the parcel. Degradation of habitat would have an adverse effect on special-status species, and other wildlife in the area.

BR Impact 1 Construction of the project may have an adverse impact on special-status species and their habitats, including off-site use of equipment, storage of materials, and inadvertent transport of debris or discharge of oils, fuels, and other pollutants into the beach area.

BR/mm-1 Prior to issuance of construction permits, the applicant shall submit documentation verifying designation of a qualified environmental monitor for all measures requiring environmental mitigation to ensure compliance with Conditions of Approval and EIR mitigation measures. The monitor shall be responsible for: (1) ensuring that procedures for verifying compliance with environmental mitigations are followed; (2) lines of communication and reporting methods; (3) daily and weekly compliance reporting; (4) construction crew training regarding environmentally sensitive areas; (5) authority to stop work; and (6) action to be taken in the event of non-compliance. Monitoring shall be at a frequency and duration determined by the affected natural resource agencies (e.g., USACE, CDFW, RWQCB, California Coastal Commission, USFWS, and the County).

BR/mm-2 Prior to the initiation of construction, the environmental monitor shall conduct environmental awareness training for all construction personnel. The environmental awareness training shall include discussions of sensitive habitats and animal species in the immediate area. Topics of discussion shall include: general provisions and protections afforded by the Endangered Species Act; measures implemented to protect special-status species; review of the project boundaries and special conditions; the monitor's role in project activities; lines of communications; and procedures to be implemented in the event a special-status species is observed in the work area.

- BR/mm-3 At the time of application for construction permits all grading plans shall clearly show the location of project delineation fencing, including protection fencing surrounding the Monterey cypress tree on the southern property boundary.*
- BR/mm-4 Prior to the initiation of construction, the applicant's contractors and the environmental monitor shall coordinate the placement of project delineation fencing throughout the work areas. The environmental monitor shall field fit the placement of the project delineation fencing to minimize impacts to sensitive resources. The project delineation fencing shall remain in place and functional throughout the duration of the project. During construction, no project related work activities shall occur outside of the delineated work area.*
- BR/mm-5 At the time of application for grading permits, all applicable plans shall clearly show stockpile and staging areas. Stockpiles and staging areas shall not be placed in areas that have potential to experience significant runoff during the rainy season. All project-related spills of hazardous materials within or adjacent to project sites shall be cleaned up immediately. Spill prevention and cleanup materials shall be on-site at all times during construction. The staging areas shall conform to standard BMPs applicable to attaining zero discharge of storm water runoff. At a minimum, all equipment and vehicles shall be checked and maintained on a daily basis to ensure proper operation and to avoid potential leaks or spills. Maintenance, cleaning, and refueling of equipment and vehicles shall not be permitted onsite, within adjacent beach areas, or on Studio Drive.*
- BR/mm-6 Prior to issuance of construction permits, the applicant shall submit a detailed sediment and erosion control plan for approval, which shall address both temporary and permanent measures to control erosion and reduce sedimentation. Erosion and soil protection shall be provided on all cut and fill slopes. Revegetation shall be facilitated by mulching, hydro-seeding or other methods, and shall be initiated as soon as possible after completion of grading, and prior to the onset of the rainy season (October 15). Permanent revegetation and landscaping shall emphasize native shrubs, and trees, to improve the probability of slope and soil stabilization without adverse impacts to slope stability due to irrigation infiltration and long-term root development. All plans shall show that sedimentation and erosion control measures are installed prior to any other ground disturbing work.*

Residual Impact

Due to the project's proximity to beach tidal areas and sensitive habitats, mitigation is recommended to contain disturbance to the project site. Compliance with these measures, and verification by an environmental monitor, will ensure these measures are enforced during construction. Upon completion of the project, no long-term impacts would occur. Potential short-term impacts would be *less than significant with mitigation* (Class II).

BR Impact 2 Construction activities conducted during the nesting season (March through September) could directly or indirectly impact nesting western snowy plover and other bird and bat species.

BR/mm-7

Upon application for construction permits, the following measure shall be included on all applicable plans: The applicant shall avoid ground disturbing activities conducted during the snowy plover nesting season to the extent feasible. If work activities must occur during the nesting season the following measures shall be taken:

- a. Prior to installation of the project delineation fencing and the commencement of site grading, a qualified biologist shall conduct a series of pre-construction nesting bird surveys for western snowy plover. Surveys shall be conducted every other day for two weeks prior to any project related disturbances.*
- b. Surveys for snowy plovers shall include walking through all potential nesting and foraging habitat within 300 feet of the site on each survey day. The survey area shall include all available snowy plover nesting habitat within 300 feet of anticipated project activities.*
- c. The number of snowy plover individuals observed and their activities (e.g. nesting, foraging, resting, etc.) shall be documented. All documented occurrences would be reported to USFWS and documented on the CNDDDB.*
- d. If nesting activity is identified, all project activities within 300 feet of the nest shall be delayed until the nesting activity has ceased.*
- e. During construction, the environmental monitor shall conduct snowy plover surveys twice a week (preferably two to three days apart).*

BR/mm-8

Upon application for construction permits, the following measure shall be included on all applicable plans: If commencement of construction begins between March and September, the environmental monitor shall conduct pre-construction nesting bird surveys. If nesting activity is identified, the following measures shall be implemented:

- a. If active nest of common passerine or shorebird species' are observed in the work area or within 100 feet of the work area, construction activities shall be modified and or delayed as necessary to avoid direct take or indirect disturbance of the nests, eggs, or young.*
- b. If active nest sites of raptors or other special-status species are observed within the work area or 300 feet of the work area, the environmental monitor shall establish a suitable buffer around the nest site. Construction activities in the buffer zone shall be prohibited until the young have fledged the nest and achieved independence.*
- c. Active raptor or special-status species nests should be documented by a qualified biologist and a letter report should be submitted to the County, USFWS, and CDFW, documenting project compliance with the MBTA and applicable project mitigation measures.*

Residual Impact

Due to the project's proximity to beach tidal areas and areas used by snowy plover for nesting habitat, mitigation is recommended to ensure and verify avoidance of western snowy plover. Although unlikely, nesting birds may occupy vegetation along the southern property line. Implementation of pre-construction surveys will ensure avoidance. Compliance with these measures, and verification by an environmental monitor, will ensure these measures are enforced during construction. Upon completion of the project, no long-term impacts would occur. Potential short-term impacts would be *less than significant with mitigation* (Class II).

BR Impact 3 The proposed project could result in direct take of coast horned lizard during project grading and construction.

BR/mm-9 Upon application for construction permits, the following measure shall be included on all applicable plans: Prior to site grading, the environmental monitor shall conduct a survey for coast horned lizard and other reptiles. The surveyor shall utilize hand search methods in areas of disturbance where coast horned-lizards are expected to be found (e.g., under shrubs, other vegetation, or debris). Any lizards located during this survey should be safely removed from the construction area and placed in suitable habitat.

Residual Impact

Short-term impacts resulting from this project to coast horned lizard would be *less than significant with mitigation* (Class II).

Native or Other Important Vegetation

One cypress tree is located adjacent to the project site, which is considered an important native species along the California coastline. This tree would remain. One small pine tree would be removed; however, this species is not considered native or important vegetation in this location. No other native or important vegetation would be directly affected by the project. Mitigation is recommended to ensure protection of the cypress tree.

BR Impact 4 Construction of the project may impact the root zone or result in inadvertent disturbance of a mature cypress tree.

Implement BR/mm-3 and BR/mm-4.

Residual Impact

Short-term impacts resulting from this project to native or other important vegetation would be *less than significant with mitigation* (Class II).

Wetland or Riparian Habitat

No wetland or riparian habitat is present onsite. As noted above, Old Creek is located approximately 600 feet north of the site. Based on the location of the project, impacts to wetland or riparian habitat would not occur.

Barriers to Movement of Resident Species / Wildlife Activity

During construction of the project, noise would be generated during daytime hours, which may deter bird species from using nearby tidal areas for foraging. The project site is small and located in an area that experiences high levels of recreation activity along an extensive stretch

of coastline. The project site is not located within a migration corridor or immediately adjacent to an ESHA, riparian area, or estuary. Therefore, this effect is temporary and would have no significant short or long-term impacts on resident and migratory species.

4.4.3.6 Cumulative Impacts

No major projects are scheduled to be constructed during a similar timeframe as the project. The closest known project is the Morro Bay to Cayucos Connector, which would run along Studio Drive adjacent to the project site, within the paved area. The timing for construction of that project is currently undetermined. Based on the location and size of the project, and implementation of recommended mitigation measures, the project would not have any significant residual direct or indirect adverse impacts to sensitive biological resources, including special-status species, habitats, and wildlife. The site is not within a designated ESHA. The project would not significantly contribute to the loss of species or sensitive habitat. Therefore, potential cumulative impacts would be *less than significant* (Class III).

4.4.4 Hazards and Hazardous Materials

4.4.4.1 Existing Conditions

According to the San Luis Obispo County Safety Element Maps (Maps 7 and 8), the project site lies within the Medium Fire Hazard Zone and the 15-Minute Response Zone (County of San Luis Obispo 2000). The Cayucos Fire Station, Station 11, is located at 2250 Chaney Street, approximately 1 mile southeast of the project site. The project location is not within any airport review area and is not located within an area of known hazardous material contamination.

The Hazardous Waste and Substances Sites List (commonly referred to as the “Cortese List”) is a planning document that provides information about the location of hazardous materials release sites developed annually by the California EPA (CalEPA) Department of Toxic Substances Control (DTSC) and stored in the EnviroStor database. No properties within Cayucos are listed on the Cortese List. The only three properties in San Luis Obispo County listed are: (1) the Baywood Park Training Area, a former military firing range located in Montaña de Oro State Park and surrounding areas; (2) Camp San Luis Obispo, a former military firing range located approximately 7 miles east of Morro Bay along Highway 1; and (3) the Buena Vista and Klau mercury mines located approximately 12 miles northwest of the city of Paso Robles. Cleanup at all three sites is ongoing. The nearest site is the Baywood Park Training Area, located 9 miles south of the project site.

The SWRCB’s GeoTracker database provides a list of leaking underground storage tank sites and that list has identified the Mobil Estero Marine Terminal site at the intersection of Highway 1 and Studio Drive (located approximately 300 feet northeast of the project site) as a cleanup program site. Crude oil was detected in the soil during a pipeline decommissioning/abandonment done by Chevron in 2003. Approximately 1 cubic yard of soil was treated, and the above ground tank and facility decommissioning was overseen by County Environmental Health. The cleanup status of the site is completed, and the case is closed.

No properties within the community of Cayucos are listed on the California EPA’s list of solid waste disposal sites with waste constituents above hazardous waste levels or list of parcels with active Cease and Desist Orders (CDOs) or Cleanup and Abatement Orders (CAOs) issued by the SWRCB.

Based on a review of County maps and documents, the following hazards were identified in the project vicinity.

Whale Rock Reservoir

The project site is within the Whale Rock Reservoir inundation area along with many other residences in the Cayucos area. At full capacity, Whale Rock Reservoir contains 40,600 acre-feet of water behind an earth-filled dam constructed in 1960 (County of San Luis Obispo 2008). In the event of a complete dam failure at Whale Rock, water is expected to flow in a southwesterly direction along Old Creek (approximately 1,000 feet in each direction of the centerline of the creek) down to the community of Cayucos at 13th Street and Ocean Avenue. At 13th Street and Ocean Avenue, the flooding area is expected to widen to include 3rd Street to the north and Willow Creek (Montecito Road) to the south until flood waters dissipate into the Pacific Ocean. Major impacts to life and property to approximately one-third of the community of Cayucos could occur. Approximately 1,500 residential, recreational, and small business occupants could be affected and major roads flooded may include portions of Highway 1. No special facilities would be affected by a dam failure (County of San Luis Obispo 2008).

The County has adopted the “Dam and Levee Failure Evacuation Plan” as part of its Emergency Operations Plan (revised July 2008) in the event of a facility failure. “The primary purpose of this plan is to establish and define emergency management procedures and organizational response for overall coordination of public protective public actions that may be needed in the event of [dam] failure.” In the very unlikely event of a catastrophic failure at Whale Rock Reservoir, the County is equipped with a plan and resources designed to reduce loss of life and property to the greatest extent feasible.

Old Creek

Old Creek is located approximately 600 feet northwest of the project site and the Pacific Ocean lies immediately to the west. Per the County Department of Public Works and the County’s flood maps, the project site is not located within a flood hazard area associated with either Old Creek or the Pacific Ocean. Project site elevations range from approximately 10 to 30 feet. Due to the construction of Whale Rock dam, the potential for damage from 100-year storm events are substantially reduced because of the dam’s capacity to absorb substantial runoff before reaching the top of the dam. A drainage plan is required prior to the issuance of any construction permits for the project, which is subject to review and approval by the County Department of Public Works. All finished floor elevations are located above/outside the 100-year flood hazard elevation.

Diablo Canyon Nuclear Power Plant

The Diablo Canyon Nuclear Power Plant is located on the coast approximately 19 miles south of the proposed project site. The project site is located within the Diablo Canyon Emergency Planning zone, specifically within Protective Active Zone 9. The plant contains two operational power generating units, each of which is a pressurized water-type reactor having an electric power generating capacity in excess of 1,000 megawatts (County of San Luis Obispo 2006). As with any other industrial facility, an accident is always possible when a nuclear power plant is operated. The Diablo Canyon plant is designed to use slightly enriched uranium dioxide (UO₂) as a fuel. This fuel poses no major concern in its un-irradiated state as it has very low radioactivity. However, after being in the core during operation of the reactor, the fuel becomes highly radioactive from fission by-products. These highly radioactive by-products are the main

hazard in a nuclear plant accident. Spent fuel from the reactors is stored in spent fuel water pools under at least 20 feet of water, which provides adequate shielding from radiation for anyone near the pool.

The principal deterrent to a nuclear accident is prevention through correct design, construction and operation, including redundant safety systems, which assures that the integrity of the reactor and related systems are maintained (County of San Luis Obispo 2006). Protective systems are installed and are automatically activated to counteract the resulting effects when any part of the reactor system fails. The County has adopted the San Luis Obispo County/Cities Nuclear Power Plant Emergency Response Plan (revised October 2006), which is made up of three parts: (1) the Administrative Plan, which provides an overview of all three parts of the plan; (2) reference materials such as maps and charts; and (3) a compilation of 53 Standard Operating Procedures (SOPs) that provide emergency response guidelines for individual agencies, jurisdictions, or specific roles related to nuclear power plant emergency response. The SOPs are stand-alone response guides and Part 3 of the plan includes SOPs for the California Highway Patrol, County Fire Department, Caltrans, the Sheriff's Department, the County Emergency Services Director, procedures for emergency public information, and procedures for emergency worker monitoring, among others. This plan recognizes the need for emergency response for urban and non-urban development within the Diablo Canyon Emergency Planning Zone, and mitigates the potential for loss of life during a catastrophic event.

Tsunami Hazard Area

The project site is within the potential tsunami inundation area as identified on the County of San Luis Obispo Department of Planning and Building Interactive Geographic Information System (GIS) Mapping System. A tsunami is an ocean wave generated by vertical displacement of the sea floor during an earthquake, a large-scale submarine slope failure, or volcanic eruption. In deep ocean water, tsunamis may travel as fast as 600 miles per hour. Upon entering the shallower waters of the coastline, the velocity of the waves decreases but wave height increases. Tsunamis can crest to heights of 100 feet or more (County of San Luis Obispo 1999). Several small tsunami events have been recorded in San Luis Obispo County; however, previous studies have predicted a maximum tsunami wave run-up of approximately 9.5 feet above sea level for a 100-year event or 24.2 feet for a 500-year storm event. A tsunami during a storm surge could add an additional 14.5 feet of wave runup. Therefore, the County has decided to utilize an inundation of 50 feet above mean sea level for emergency planning purposes (County of San Luis Obispo 2005).

Coastal developments most vulnerable to tsunami hazards are those located near mouths of streams that drain into the Pacific Ocean, such as Cayucos Creek, Little Cayucos Creek, Old Creek, and Willow Creek in Cayucos (County of San Luis Obispo 2005). Based on the estimated worst case scenario of tsunami wave run-up of 50 feet, the tsunami hazard is greatest for that portion of the community below elevations of 50 feet above mean sea level; this includes the project site and a majority of the community of Cayucos.

The tsunami hazard for San Luis Obispo County is reported in the *County Safety Element* (1999) and the *Tsunami Emergency Response Plan* (October 2005). Tsunamis are not a common occurrence along the central coast, but there is always the possibility of one occurring. Most recently, numerous areas along the California coastline, including the coastal area of Morro Bay and Cayucos, experienced moderate to powerful tsunami waves resulting from the 9.0 earthquake that struck offshore Japan on March 11, 2011.

The Alaska Warning Center is responsible for issuing California tsunami warnings to the California State Warning Center, which in turn, notifies affected counties. As part of the County Emergency Operations Plan, the Tsunami Response Plan is in place to ensure preparedness for protection of life and property in the event of a tsunami. The primary purpose of the plan is to establish and define emergency management procedures, organizational response and coordination related to receipt of a tsunami advisory, warning, or the occurrence of an actual tsunami along the San Luis Obispo County coastline. The Tsunami Response Plan is reviewed at least annually and after every emergency incident in which the plan is used, which ensures that the plan remains as current as possible.

4.4.4.2 Regulatory Setting

Hazards and hazardous material management is subject to multiple laws, policies, and regulations at all levels of government. The agencies responsible for enforcing applicable laws and regulations develop and enforce standards for the handling and clean-up of specific materials determined to pose a risk to human health or the environment. The enforcing agency at the local level for the proposed project area is the County Public Health Department, Division of Environmental Health. Enforcement agencies at the State level include two branches of CalEPA, DTSC, and RWQCB.

Federal Regulation

The EPA is the Federal agency responsible for enforcement and implementation of Federal laws and regulations pertaining to hazardous materials. In addition, the EPA provides oversight and supervision for some site investigation/remediation projects. For disposal of certain hazardous wastes, the EPA has developed land disposal restrictions and treatment standards.

State Regulation

The project site is located within the jurisdiction of the Central Coast RWQCB. The RWQCB is authorized by the California Porter-Cologne Water Quality Act of 1969 (“the Porter-Cologne Act”), to implement water quality protection laws. When the quality of the groundwater or the surface waters of the State is threatened, the RWQCB has the authority to require investigations and remedial actions. In addition, the Central Coast RWQCB is the State regulatory agency that oversees the local Leaking Underground Fuel Tank (LUFT) program, which was established to regulate underground fuel tanks. Under the LUFT program, local implementing agencies are required to permit, inspect, and oversee monitoring programs to detect leakage of hazardous materials. The RWQCB has been involved with the regulation of the Marine Terminal Remediation activities.

In California, the DTSC, a branch of CalEPA, works in conjunction with, or in lieu of, the EPA to enforce and implement specific hazardous materials laws and regulations. California has enacted its own legislation pertaining to the management of hazardous materials. The Hazardous Waste Control Act created the state hazardous waste management program, which is similar to, but more stringent than, the federal Resource Conservation and Recovery Act program. The act is implemented by regulations contained in CCR Title 26, which describes required aspects for the proper management of hazardous waste. California has also developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies under the Emergency Services Act. Rapid response to incidents involving hazardous materials or hazardous waste is an important part of the plan, which is administered by the California Office of Emergency Services. The office coordinates

the responses of other agencies, including EPA, the California Highway Patrol, regional water quality control boards, air quality management districts, and county disaster response offices.

Local Regulation

The County Office of Emergency Services (OES) is an emergency management agency with responsibilities that include coordination of emergency and disaster preparedness planning, response, and recovery with and between local, state, and federal agencies. The OES is responsible for reviewing and implementing the Dam and Levee Failure Evacuation Plan, Cities Nuclear Power Plant Emergency Response Plan, and Tsunami Response Plan. The County OES is committed to serving the public before, during and after times of emergency and disaster by promoting effective coordination between agencies, and encouraging emergency preparedness of the public and organizations involved in emergency response. Pursuant to State law and local ordinance, the County's Environmental Health Services Division conducts inspections to ensure proper handling, storage, and disposal of hazardous materials and proper remediation of contaminated sites.

4.4.4.3 Thresholds of Significance

The significance of potential impacts is based on thresholds identified within Appendix G of the CEQA Guidelines and the County Initial Study Checklist, which provide the following thresholds for determining impact significance with respect to hazards and hazardous materials. Impacts would be considered significant if the proposed project would:

- Result in a risk of explosion or release of hazardous substances (e.g. oil, pesticides, chemicals, radiation) or exposure of people to hazardous substances.
- Interfere with an emergency response or evacuation plan.
- Expose people to safety risks associated with airport flight patterns.
- Increase fire hazard risk or expose people or structures to high fire hazard conditions.
- Create any other health hazard or potential hazard.

4.4.4.4 Impact Assessment and Methodology

The EIR impact analysis focuses on potential safety and health risks associated with the proposed project, particularly from surrounding land uses that could create considerable health and safety risks in a catastrophic event. Methodology for assessing the proposed project includes a review of existing resources, including the County Safety Element, County Emergency Operations Plan, Tsunami Response Plan, and Dam and Levee Failure Evacuation Plan, as well as review of the lists of known potential sources of hazardous contamination prepared by the California Environmental Protection Agency, Department of Toxic Substances Control. Significant impacts would result if the project would interfere with an emergency response or evacuation plan, or increase the likelihood that hazardous materials or conditions would be encountered or created during project implementation due to existing conditions such as leaking underground storage tanks, or the characteristics of the proposed project.

4.4.4.5 Project-specific Impacts and Mitigation Measures

Risk of Explosion, Release, or Exposure to Hazardous Substances

The project does not propose the use or storage of hazardous materials; therefore, the risk of explosion or release of hazardous substances is not likely. The project would not result in the routine transport, use, or disposal of hazardous materials and does not create the potential for the release of hazardous materials through upset and/or accident conditions. Therefore, no hazards associated with the handling of hazardous materials would result. The project site is not located within 0.25 mile of an existing or proposed school, and is not included on the Cortese List or any other list of hazardous materials sites and would not create associated risks to the public or environment.

Interfere with Emergency Response or Evacuation Plan

Although it places residential uses within an area covered by the Dam and Levee Failure Evacuation Plan, Cities Nuclear Power Plant Emergency Response Plan, and Tsunami Response Plan, the proposed use is suitable for the location and within the general level of development projected in the response plans. The proposed project would not inhibit emergency alert, evacuation or response actions and would not conflict with any regional evacuation plan, because it is located with an existing residential lot, on a paved roadway (Studio Drive).

Airport Flight Patterns

The project site is not located within any airport review area and would not expose people to safety risks associated with airport flight patterns.

High Fire Risk

The project is not located within a high fire hazard zone and does not present a significant fire safety risk.

Other Hazards

The project proposes a single-family residence in an existing neighborhood and would not create any health or other potential hazard.

The County Office of Emergency Services prepares for catastrophic (though highly unlikely) worst case scenario events that would include a 50 foot tsunami wave run-up. However, based on review by the County Geologist and the project consultant geologist, a 9.5 foot wave run-up is considered more appropriate for a 100-year tsunami event. The project has been designed and conditioned to avoid impacts from a 100-year tsunami event and potential impacts related to wave run-up and tsunami hazards for the proposed development will be taken into account through the foundation design and finished floor elevations of the proposed residence.

An in depth analysis of tsunami and/or wave run-up hazards associated with the proposed project is included in Section 4.3, Geology and Soils. Refer to that section for additional information. No other significant adverse impacts would occur as a result of the proposed project, and no mitigation measures are necessary.

4.4.4.6 Cumulative Impacts

Due to the type of project proposed, and lack of hazards or hazardous materials within or near the project site, construction and operation of the project would not contribute to environmental impacts related to hazards. Cumulative impacts would be *less than significant (Class III)*. No additional mitigation is required.

4.4.5 Noise

4.4.5.1 Existing Conditions

Noise, as used herein, is defined as unwanted sound. Noise is a complex physical phenomenon that varies with time, geographic location, proximity to the source, and duration of the noise event. The effects of noise are generally considered in two ways: 1) how a proposed project may increase existing noise levels and potentially affect surrounding land uses; and 2) how a proposed land use may be affected by noise from existing and surrounding land uses. Since instruments that detect small changes in atmospheric pressure that are perceived as sound cannot distinguish between that which is wanted (e.g., birds singing, waves on a beach, etc.) and that which is not (e.g., traffic or railroad noise), measurements of “noise” are more accurately described as measurements of sound pressure.

Noise sources and sound intensities can vary significantly from one area of the project site to another. Variables that affect how noise is perceived include vehicular and equipment volume and activities, proximity to the noise source, time of day, speed, roadway configuration, and the acoustical and topographical characteristics of the site. For example, Highway 1 traffic noise could be substantial at a given location if the noise measurement is taken during peak hour traffic at a short distance from the highway. Given the same conditions, the same noise measured at a distance of 1,000 feet away would be perceived as barely noticeable. Sound is measured in decibels (dB), and A-weighted decibels (dBA) are an expression of the relative loudness of sounds in air as perceived by the human ear. Generally, a 1 dBA increase in the noise level is the minimum perceptible change the human ear can detect. A 3 dBA change is readily noticeable by most people, and a 10 dBA change would be perceived as twice as loud or approximately a doubling of the noise level.

Motor vehicles are typically the primary noise source in California cities, but noise sources and intensities can vary significantly over fairly small areas. Certain land uses are considered more sensitive to ambient noise levels than others, due to the amount of noise exposure and the types of activities involved; noise sensitive land uses include residential uses. The effects of noise are considered in two ways: how a proposed project may increase existing noise levels and affect surrounding land uses, and how a proposed land use may be affected by noise from existing and surrounding land uses. The project is proposed in the vicinity of several noise sensitive uses, including residences along Studio Drive and Ocean Boulevard and the outdoor sports and recreation uses associated with adjacent State Park land and the beach.

4.4.5.2 Regulatory Setting

Noise is regulated predominantly at the state and local levels through regulations, policies, and local ordinances. The Federal Noise Control Act of 1972 recognized that noise control protects the health and welfare of the population; however, it gave responsibility for controlling noise sources to state and local governments. The federal law does provide standards for interstate commerce projects (i.e., airports), and the federal government also provides uniform procedures to evaluate highway noise and implement abatement measures through the

Federal Highway Administration (FHWA), 23 CFR 772. These standards are commonly adapted for state and local use based on prevailing local conditions or special requirements.

The California Government Code, in its State General Plan Guidelines, requires that local governments identify major noise sources and areas containing noise sensitive land uses. Noise must be quantified by preparing generalized noise exposure contours for current and projected conditions. Noise contours for San Luis Obispo County are located in the Noise Element of the County General Plan.

4.4.5.3 Thresholds of Significance

The significance of potential impacts is based on thresholds identified within Appendix G of the CEQA Guidelines and the County Initial Study Checklist, which provide the following thresholds for determining impact significance with respect to noise. Impacts would be considered significant if the proposed project would:

- Expose people to noise levels that exceed the County Noise Element thresholds.
- Generate increases in the ambient noise levels for adjoining areas.
- Expose people to severe noise or vibration.

4.4.5.4 Impact Assessment and Methodology

The EIR impact analysis focuses on potential impacts associated with vehicle noise on Highway 1. The prediction of noise levels and the subsequent estimation of impacts at the project site were conducted through a review of existing resources, including the County Noise Element, Land Use Ordinance, and Building Code. Significant impacts would result if the project would expose people to noise levels that exceed County Noise Element thresholds or expose people to severe noise or vibration.

4.4.5.5 Project-specific Impacts and Mitigation Measures

Exposure to Noise

The project proposes a noise sensitive use within the vicinity of Highway 1. Per the County Noise Element, 60 dBA is considered the maximum acceptable exterior noise exposure level for residential uses and 45 dBA is the maximum acceptable exposure level for interior uses. Uses within this range will not require mitigation. The eastern boundary of the project site is located approximately 160 feet from the centerline of Highway 1. The topography between the highway and the site consist of generally flat areas to Studio Drive, and then the property slopes down several feet (approximately 5 to 8 feet) from Studio Drive to the beach. According to the County Noise Element contour maps, the 65 dBA range extends from the centerline of the highway 209 feet west. Therefore the easternmost 50 feet of the project site are located within the 65 dBA range, and the remainder is located within the 60 dBA range.

The project has been designed to provide a noise buffer between Highway 1 and the proposed living space. The project proposes a driveway and parking garage on the eastern portion of the site, which are not considered outdoor uses subject to the 60 dBA limit. The living area is also proposed below the grade of the highway by approximately 8 to 10 feet. Because the topography of the subject lot is below the street elevation, the ground will buffer most of the noise from Highway 1, thereby allowing for a minimal impact from noise to the livable areas of the home. In addition, the project would conform to the latest edition of the Uniform Building Code (UBC); normal construction practices in the Code would provide a noise level reduction

of approximately 15 dBA (County of San Luis Obispo 1992), potentially bringing resultant noise levels within the interior 45 dBA threshold.

However, because a portion of the project site is located in an area that currently exceeds Noise Element thresholds, and normal construction practices and natural buffers may be insufficient to bring noise levels within acceptable ranges, some mitigation may be necessary. The County Noise Element recommends the following standardized mitigation measures for reducing interior noise levels in the 60-65 dBA range.

N Impact 1 Construction of the proposed project would potentially expose people to transportation-related noise levels that exceed the County Noise Element thresholds.

N/mm-1 Upon application for building permits, the project applicant shall include in the project design the following standard mitigation measures for interior noise mitigation provided in the Noise Element for levels in the 60-65 dBA range:

- a. Air conditioning or a mechanical ventilation system;*
- b. Windows and sliding glass doors mounted in low air infiltration rate frames (0.5 cubic feet per minute or less, per American National Standards Institute [ANSI] specifications); and,*
- c. Solid core exterior doors with perimeter weather stripping and threshold seals.*

Residual Impact

These standards, along with compliance to the UBC, would provide a noise reduction level of 20 dBA (County of San Luis Obispo 1992). Implementation of this measure would bring noise levels to acceptable ranges and reduce impacts to a *less than significant* level (Class II).

Generate Increases in the Ambient Noise Level

The project proposes construction of one single-family residence in an existing neighborhood. The project would result in the addition of some vehicle trips on local roads (approximately 9.6 per day), but the traffic noise associated with a single residence is not considered significant. Therefore, the project would not generate significant increases in the ambient noise levels for adjoining areas.

The project would also generate construction-related noise and vibration associated with construction and development of the structure. However, the project does not propose any significant sources of man-made vibration (i.e., sonic booms, blasting, pile driving, pavement breaking, and demolition). Per the County's Land Use Ordinance, §23.06.042d, construction noise between the hours of 7:00 a.m. and 9:00 p.m. on Mondays through Fridays, and 8:00 a.m. and 5:00 p.m. on Saturdays and Sundays, is exempt from control or mitigation. This type of noise is considered a short term impact and *less than significant* (Class III). Therefore, the project is not expected to expose people to severe noise or vibration, or to result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity.

Severe Noise or Vibration

The proposed project is not located within any airport land use plan or two miles of a public or private airstrip, and would not expose people to excessive noise levels.

4.4.5.6 Cumulative Impacts

Construction activities are not considered cumulatively significant due to their short-term nature, and development of one single-family residence within an existing developed neighborhood would not contribute significantly to existing noise levels. Therefore, no cumulative noise impacts would occur.

4.4.6 Population and Housing

4.4.6.1 Existing Conditions

Cayucos is considered a “bedroom community”, since an estimated 85-90% of its workers commute to jobs in other communities. The growth rate of the Estero planning area was among the highest in the county until the 1980s. Since that time growth has slowed, largely because of building limitations due to concerns about water supply in Cayucos and sewage disposal in Los Osos (County of San Luis Obispo 2009). The population of Cayucos increased from 1,770 to 2,301 between 1970 and 1980, an increase of about 30%. By 1990, the population had increased to 2,960, an increase of about 29%, and has changed little since that time. 2000 U.S. Census data lists the population of Cayucos at 2,943 (County of San Luis Obispo 2009).

Cayucos has a larger proportion of senior citizens than the county as a whole (33.2% compared to 23% countywide). The community also has a generally higher educational level than residents in the county as a whole, with a high percentage of residents age 25 and over holding bachelor’s, master’s, and doctorate degrees. In Cayucos, there is an average of 2.09 persons per household (compared to a county average of 2.66). The housing vacancy rate is also very high in Cayucos, about 38%, compared to approximately 9% in the county as a whole. This is largely due to the high level of seasonal use of housing.

The population of Cayucos is expected to grow to 4,050 by the year 2015 and to 4,530 by the year 2020. Projected build-out of 4,765 is expected to occur in 2022 (County of San Luis Obispo 2009).

The San Luis Obispo Council of Governments (SLOCOG) adopted the Regional Housing Needs Plan for the period of August 31, 2009 to June 30, 2014, which designated 1,295 new housing units for the San Luis Obispo County region. The County of San Luis Obispo was able to identify adequate sites to accommodate the unincorporated County’s share of the regional housing need in the Housing Element (2009-2014). Housing needs were assessed in the Cayucos area, and the Housing Element found that no concerns were identified in relation to roads and sewer and that the water supply was adequate and the mutual water companies do not plan to add to their supply. However, the median home price in Cayucos in late 2008 was \$750,000, and residential development is limited. In the Housing Element, the County recommends encouraging development of multi-family housing on the few sites available for new development.

4.4.6.2 Regulatory Setting

California's Housing Element Law (Government Code §65580 through 65589.8) recognized that the availability of housing was of vital statewide importance, and that early attainment of decent housing and a suitable living environment for every Californian is a high state priority. The law was enacted to ensure that counties and cities recognize their responsibilities in contributing to the attainment of state housing goals, to establish the requirement that all counties and cities adopt housing elements to help meet state goals, to recognize that each locality is best capable of determining what efforts it is required to take to contribute to attainment of state housing needs, and to encourage and facilitate cooperation between local governments to address regional housing needs.

The San Luis Obispo County General Plan serves as the County's guide for land use and development. The plan analyzes issues of importance to the community, sets forth policies for conservation and development, and outlines specific programs for implementing these policies. The Housing Element is one of seven mandated elements of the local General Plan. The purpose of the Housing Element is to identify the community's housing needs, state the community's goals and objectives with regard to housing production, rehabilitation and conservation to meet those needs, and define the policies and programs that the community will implement to achieve the stated goals and objectives.

The CPUC regulates intrastate and local natural gas and electrical distribution facilities and services, natural gas procurement, water utilities, pipelines, and production and gathering. Regulations related to natural gas services at the local level include the CBC, California Health and Safety Code, and California Fire Code.

4.4.6.3 Thresholds of Significance

The significance of potential impacts is based on thresholds identified within Appendix G of the CEQA Guidelines and the County Initial Study Checklist, which provide the following thresholds for determining impact significance with respect to population and housing. Impacts would be considered significant if the proposed project would:

- Induce substantial growth in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure).
- Displace existing housing or people, requiring construction of replacement housing elsewhere.
- Create the need for substantial new housing in the area.
- Use substantial amounts of fuel or energy.

4.4.6.4 Impact Assessment and Methodology

The prediction of population levels and housing and the subsequent estimation of impacts at the project site were conducted through a review of existing resources, including the County Housing Element and Estero Area Plan. Significant impacts would result if the project would induce substantial growth in the area, displace existing housing or create the need for substantial new housing in the area.

4.4.6.5 Project-specific Impacts and Mitigation Measures

Growth Inducement

The project proposes one single-family residence on one of the few remaining undeveloped lots in an existing developed neighborhood, and would therefore, not induce substantial growth in the area.

Displace Housing or People

No existing housing would be displaced as a result of the proposed project and the construction of replacement housing would not be required elsewhere.

Create Need for New Housing

The construction needs of the project would be temporary and likely filled by the local workforce; therefore, no need for substantial new housing in the area would result.

Use of Fuel or Energy

The project would contain a photovoltaic system to support the electricity for the entire house, including 1,400 square feet of solar panels located on the south-facing slopes of the roof. Light tubes would be installed to allow outside light to filter through to the basement. Therefore, the project would not use substantial amounts of fuel or energy. No significant adverse impacts to population or housing would occur as a result of the proposed project, and no mitigation measures are necessary.

4.4.6.6 Cumulative Impacts

The project proposes one single-family residence within a developed residential area and would not create significant impacts on existing housing or population levels. The proposed residential use is consistent with the County's Housing Element and land use designation. Therefore, no cumulatively significant impact would occur.

4.4.7 Public Services and Utilities

4.4.7.1 Existing Conditions

Emergency Protection

The project area is served by the San Luis Obispo County Sheriff's Department and Cayucos Fire Protection District. The Cayucos Fire Station, Station 11, is located at 2250 Chaney Street, approximately one mile southeast of the project site. The Cayucos Fire Station is staffed 24 hours a day with a minimum of one fire captain and one firefighter. During peak fire season, the station is staffed by a crew of four. Response times within the Cayucos Fire Protection District are generally two to three minutes. The closest Sheriff's station, the Coast Station, is located in the community of Los Osos, approximately 12 miles south of the project site. The Coast Station patrols from Avila Beach to San Simeon and from the Pacific Ocean to the Los Padres mountain range. The Sheriff's Office has identified a ratio of one deputy per 750 residents as providing an adequate level of service. For San Luis Obispo County, the ratio in 2002 was roughly one deputy for 1,000 residents (County of San Luis Obispo 2009).

Ambulance services in the Cayucos area are provided by contract with a privately-owned company, San Luis Ambulance, which has stations in Morro Bay and San Luis Obispo to service this planning area. There is no hospital in the Estero planning area. The closest

medical facilities are the privately-owned French Medical Center and Sierra Vista Regional Medical Center, in San Luis Obispo.

Schools

The project is located in the Cayucos Elementary School District and the Coast Unified School District. Cayucos School currently has 14 teachers that serve 208 students in kindergarten through eighth grade (Cayucos Elementary School District 2010). Permanent capacity of the Cayucos Elementary School District is 240 students. While the Estero Area Plan shows over-capacity conditions existing at Cayucos School between 1993 and 2002, the 2010 information provided in the School Accountability Report Card shows the school operating at approximately 87% capacity.

San Luis Coastal Unified School District (SLCUSD) has 15 pre-kindergarten through 12th grade schools with 425 teachers, 320 support staff and 36 management staff serving nearly 7,200 students. Coast Union High School and Leffingwell Continuation High School, both in Cambria, serve the entire North Coast area, including Cayucos. The 2002 high school enrollment was 375 students, including 28 at Leffingwell. Approximately 34% of the high school enrollment is from Cayucos. Enrollment for the 1993 to 2001 period was approximately 65-74% of capacity.

More than two-thirds of the high school classrooms are portable classrooms, many in need of replacement. In 1998, voters within the Coast Union High School attendance area approved a bond measure for construction of 12 new classrooms that will replace many of the older portables.

Roads

The project site will be accessed by Studio Drive and Highway 1. Travel in the area is characterized by high seasonal peaks, as the entire coastal region is a major attraction for tourists during the summer months. Because the City of San Luis Obispo continues to serve as the major employment center, travel demands are heavily concentrated along Highway 1 between Cambria and San Luis Obispo. All major streets in Cayucos, including Studio Drive, are operating at acceptable levels of service (County of San Luis Obispo 2009).

Solid Waste

The project site would be served by Mission Country Disposal. The Cayucos Sanitary District has entered into an exclusive franchise agreement with Mission Country Disposal for collection and disposal of solid waste, as well as the collection, processing and marketing of recyclable materials. The waste is disposed of at the Cold Canyon landfill south of San Luis Obispo. The projected service life of Cold Canyon extends to about 2012. However, the County has undertaken the environmental review process for an expansion of the landfill. The Chicago Grade landfill, east of Templeton, is an alternative disposal site that is expected to reach capacity by about 2024.

Parks

The San Luis Obispo County Parks and Recreation Element (2006) identifies several neighborhood and community parks and special places (natural areas, coastal accessways, historic sites) in Cayucos, including Hardie Park (4 acres), Paul Andrew Park (1 acre), Cayucos Beach (14 acres), and the proposed Norma Rose Park (1.5 acres, undeveloped). The project site lies directly adjacent to State Parks' property associated with the beach and a

parking area providing public vertical access to the beach. The project proposes to provide lateral access across the project parcel to the adjacent beach areas.

The Estero Area Plan estimates that existing facilities are meeting only about 50% of the estimated current need for neighborhood and community park acreage. According to the National Recreation and Park Association recommended guidelines, a community the size of Cayucos needs about 18 acres of neighborhood and community parks. However, while the beach is not a considered a “neighborhood” park, it provides a wealth of recreational opportunities to Cayucos residents not available to most communities. Total recreational acreage in Cayucos, taking into account Cayucos Beach and the proposed Norma Rose Park, exceeds 20 acres.

Water

Water supplies in the Estero planning area consist of surface and sub-surface flow in several coastal streams, the groundwater basins associated with those streams, and Whale Rock Reservoir. Total estimated water supplies currently available to water users within the Estero planning area include about 600 acre-feet per year (afy) from Whale Rock Reservoir, 1,313 afy from the State Water Project in the city of Morro Bay, and 645 afy from the Morro Bay desalination plant.

Whale Rock Reservoir has a storage capacity of 50,000 acre-feet. This capacity is reserved for use by the city of San Luis Obispo, the California Men’s Colony, Cal Poly University, and Cayucos, which has an allocation of 600 afy. Cayucos water customers receive the Whale Rock water through three separate water service districts (County Service Area [CSA] 10, Paso Robles Beach Water Association, and Morro Rock Mutual Water Company), that have collaborated to form the Cayucos Area Water Organization. Water is piped from the reservoir to a water treatment plant and then to the distribution systems of the three purveyors. The project site is within CSA 10, which is allocated 190 afy of the Whale Rock Reservoir supplies.

Over the last 10 years, total water production in the community has remained fairly constant at roughly 400 afy. Water conservation programs have kept Cayucos within its allocation without the need for rationing. To provide sufficient water for the future buildout population, CSA 10A and the Morro Rock View Mutual Water Company are interested in obtaining supplemental water through the Lake Nacimiento Water Project. The total amount of supplemental water being requested is 160 afy (this amount includes supplemental water requested by the Lewis C. Pollard Family Trust for an area on the west end of Cayucos). The actual amount of water needed for buildout will vary depending upon factors such as actual water usage, exact number of vacant parcels, and occupancy rates.

In Cayucos, projected water supply (including 160 afy in connection with the Lake Nacimiento Water Project) would be sufficient to accommodate projected demand at buildout, assuming an increasing percentage of residential occupancy over time (County of San Luis Obispo 2009). Implementation of water conservation measures may also significantly reduce water demand.

Wastewater

Wastewater generated in Cayucos and the City of Morro Bay is collected in a conventional underground community sewer system of laterals and sewer mains for transport to the City of Morro Bay sewage treatment plant. Current plant capacity is 2.06 million gallons per day (mgd; average dry weather flow). In 2006, average dry weather flows were approximately 1.209 mgd

from Morro Bay and 0.283 mgd from Cayucos, for a total of 1.492 mgd (County of San Luis Obispo 2009). Thus, the treatment plant was operating at roughly 72% capacity.

If it is assumed that the amount of wastewater flow has a fairly constant relationship to water demand, future flow can be estimated using estimates of water demand. Using this methodology, Cayucos's average dry weather wastewater flow at buildout would range from about 0.318 mgd to 0.401 mgd, and Morro Bay's projected flows at buildout would be approximately 1.42 mgd, for a total projected flow of 1.738 to 1.821 mgd. Therefore, the treatment plant's existing 2.06 mgd capacity is sufficient to handle the combined projected flows from Morro Bay and Cayucos at buildout. Cayucos would be well within its entitlement to the treatment capacity provided for in a Joint Powers Agreement with the Cayucos Sanitary District, but at buildout, Morro Bay could be close to its entitlement. An upgrade to the treatment plant is planned to be completed by 2015 (County of San Luis Obispo 2009).

4.4.7.2 Regulatory Setting

The County-adopted Public Facilities Fee Ordinance (Title 18 of the County Code) provides for the collection of a fair share amount fee from new development to help mitigate for cumulative impacts on public facilities. The funds collected help fund capital improvement projects, including libraries, fire services, general government, parks and recreation, and sheriff's patrol.

The California Department of Water Resources (CDWR) manages California's water resources. The regulations overseen by CDWR regarding water service availability include the Urban Water Management Planning Act and Senate Bills 221 and 610. Solid waste disposal in California is regulated at the state level by CCR Title 14, Division 7, Chapter 3 (Minimum Standards for Solid Waste Handling and Disposal) and in PRC §40100 et. seq. The California Integrated Waste Management Act (PRC §40000 et seq.) requires municipalities to divert 25% of their solid waste from landfills to recycling facilities by 1995 and 50% of their solid waste by 2000. Government Code §51178 specifies that the Director of California Department of Forestry and Fire Protection shall identify areas in the state as very high fire hazard severity zones based on consistent statewide criteria and based on the severity of fire hazard that is expected to prevail in those areas.

4.4.7.3 Thresholds of Significance

The significance of potential impacts is based on thresholds identified within Appendix G of the CEQA Guidelines and the County Initial Study Checklist, which provide the following thresholds for determining impact significance with respect to public services and utilities. Impacts would be considered significant if the proposed project would:

- Have an effect upon, or result in the need for new or altered public services in any of the following areas:
 - Fire protection
 - Police protection
 - Schools
 - Roads
 - Solid waste
 - Parks
 - Water
 - Wastewater
 - Other public facilities.

4.4.7.4 Impact Assessment and Methodology

The analysis of public services and utilities and the subsequent estimation of impacts at the project site were conducted through a review of existing resources, including the Estero Area Plan and County General Plan Safety Element. Significant impacts would result if the project would have a significant effect on, or result in the need for new or altered police, fire, school, road, solid waste, park, water, or wastewater facilities.

4.4.7.5 Project-specific Impacts and Mitigation Measures

Effect or Result in the Need for New/Altered Public Services

The proposed project would potentially result in additional demand on public services, including emergency protection, schools, roads, solid waste disposal, parks, water supply and wastewater treatment systems. However, development is limited to one single-family residence and it is not likely that any public service or utility would be significantly impacted by the slight increase in service demand. The project applicant would pay all applicable school and public facility fees.

The proposed project is not located within a high fire severity zone, and response times are generally two to three minutes. Although the Cayucos Fire Protection District and County Sheriff's Office are considered understaffed for the populations they serve, the addition of a single residence within an existing neighborhood would not have a significant effect upon fire or police protection, and no new or altered emergency services would be required. Area schools, roads and parks are operating at acceptable levels of service, and the project will be served by private solid waste disposal, water, and wastewater systems, all of which have sufficient capacity to accommodate the proposed residential use. Therefore, no significant impact on these services would result from the project.

All stormwater would be handled onsite, either collected and used as gray water for toilet flushing and landscaping or directed westward onto the beach. Therefore, no new stormwater drainage facilities or expansion of existing facilities would be required. County landfills have sufficient permitted capacity to accommodate the small increase in solid waste resulting from the proposed project. Applicable water service providers and wastewater treatment facilities are capable of supporting the proposed development and no new entitlements, new facilities or expansion of existing facilities would be required. The project would comply with all statutes and regulations related to solid waste. The project would not adversely affect a community water service provider or community wastewater service provider.

Wastewater

The project would connect to the existing sewer system managed by the Cayucos Sanitary District, and would not require an onsite system subject to the Central Coast Basin Plan. The Cayucos Sanitary District is currently operating at acceptable levels and can accommodate the proposed project (one residence).

No significant adverse impacts would occur as a result of the proposed project, and no mitigation measures are necessary.

4.4.7.6 Cumulative Impacts

As with any new residential development, the project will have a cumulative effect on police and fire protection, as well as add demand on public schools, roads, waste disposal, and water

and wastewater systems. However, the project's cumulative impacts are within the general assumptions of allowed use for the subject property. Adequate public facility and school fee programs have been adopted to address these impacts. Impacts to the area schools, roads, and service systems will be mitigated through the payment of appropriate fees prior to issuance of a building permit for the proposed project.

4.4.8 Recreation

4.4.8.1 Existing Conditions

There are roughly 23 parks, three golf courses, and eight "special places" operated by County Parks. Urban Regional Parks account for 644 acres, Rural Regional Parks for 11,398 acres, and mini, neighborhood, and community parks for 214 acres (County of San Luis Obispo 2006). The Cayucos area is served by approximately 20.5 acres of total park lands, including Hardie Park (4 acres), Paul Andrew Park (1 acre), Cayucos Beach (14 acres), and the proposed Norma Rose Park (1.5 acres, undeveloped). In addition, parks are also provided by state and federal agencies. These parks tend to be passive in nature, and provide important areas for nature appreciation and coastal access. Morro Bay Golf Course, Dairy Creek Golf Course, and El Chorro Regional Park are all located entirely or partially within the Estero planning area.

The project site lies directly adjacent to State Parks' property associated with the beach and a parking area providing public vertical access to the beach. Therefore, coastal access is provided adjacent to the project site; the project proposes to provide lateral access across the project parcel to the adjacent beach areas. The County Trails Plan does not show that the California Coastal Trail is within the vicinity of the proposed project.

The County is also in the process of planning a new dedicated bikeway and pedestrian connector path from Cloisters Park in northern Morro Bay to the future site of the Norma Rose Park in Cayucos. This path would extend along Studio Drive and one northern terminus would be located at the coastal access point and parking lot just north of the proposed project site. According to the County's Bikeway Plan, Studio Drive is an existing Class III bikeway, although it is not currently signed as such. The connector path project would formalize the parking north of the proposed project site by adding striping and would include a signage plan for identifying the bikeway.

The Estero Area Plan estimates that existing facilities are meeting only about 50% of the estimated current need for neighborhood and community park acreage in Cayucos. In particular, Cayucos needs more opportunities for "active" recreation, such as ballparks, children's play equipment, recreational programs, etc. Application of 1983 National Recreation and Park Association Standards refers to a national standard of 5 to 8 acres of community parkland per 1,000 residents. However, the San Luis Obispo County 2006 Public Facilities Fee Financing Plan indicates that the County is providing less than 2 acres of neighborhood and community parkland per 1,000 residents. The County Parks and Recreation Element identifies a reasonable goal for the near future to achieve a minimum of 3 acres of such parkland per 1,000 residents in each of the County's unincorporated communities. Currently, there are approximately 1.7 acres of parkland per 1,000 residents in Cayucos (this number increases to 2.2 acres if the proposed Norma Rose Park is included). These calculations increase to over 6.9 acres per 1,000 residents (or 4.3 acres per 1,000 residents at buildout population) if Cayucos Beach is included, which, although not a typical "community" park, provides substantial recreational opportunities in immediate proximity for residents of Cayucos. In addition, the Estero Area Plan includes a policy to explore ways to finance expansion of the

Veteran's Memorial Building for multiple purposes, such as recreation, public assembly, and the arts.

4.4.8.2 Regulatory Setting

In San Luis Obispo County, standard development fees include Public Facility Fees. These fees are assessed on new residential development. Quimby fees are collected when new residential lots are created through a subdivision, and can only be used to expand, acquire, rehabilitate, or develop community-serving parks. Public Facility Fees are collected upon construction of a new residential unit, and these fees can only be used to expand, acquire, or develop community-serving parks.

4.4.8.3 Thresholds of Significance

The significance of potential impacts is based on thresholds identified within Appendix G of the CEQA Guidelines and the County Initial Study Checklist, which provide the following thresholds for determining impact significance with respect to recreation. Impacts would be considered significant if the proposed project would:

- Increase the use or demand for parks or other recreation opportunities.
- Affect the access to trails, parks or other recreational opportunities.

4.4.8.4 Impact Assessment and Methodology

The analysis of recreational resources and the subsequent estimation of impacts at the project site were conducted through a review of existing resources, including the County General Plan Parks and Recreation Element, County Bikeways Plan, and County Trails Plan. Significant impacts would result if the project would affect onsite or nearby recreational resources, or increase the use or demand for parks and recreation opportunities.

4.4.8.5 Project-specific Impacts and Mitigation Measures

Increase Use of Recreational Resources

The project proposes the development of one single-family residence in an existing developed residential area, and would not create a significant increase in the use or demand of recreational areas or facilities. The project applicant will pay all applicable public facility fees to address increased demand on area recreational facilities. Therefore, potential impacts would be *less than significant* (Class III).

Affect Access to Recreation

Beach access is provided directly adjacent to the project site, and lateral access would be provided on the sandy portion of the lot. Access to trails, parks or other recreational opportunities would not be impacted by the proposed development. The future Morro Bay to Cayucos connector bike path would be located along Studio Drive, and development of the project would not affect this project, because it is limited to the existing residential parcel boundaries. The project does not include any components for the development of recreational facilities that may have an adverse physical effect on the environment. No significant adverse impacts would occur as a result of the proposed project, and no mitigation measures are necessary.

4.4.8.6 Cumulative Impacts

As with any new residential development, the project has the potential to result in a cumulative effect on recreational resources, by adding demand on public parks, trails, and recreational areas. However, the project's cumulative impacts are within the general assumptions of allowed use for the subject property. Adequate public facility fee programs have been adopted to address these impacts. Impacts to the area recreational resources and facilities will be mitigated through the payment of appropriate fees prior to issuance of a building permit for the proposed project. The future Morro Bay to Cayucos connector bike path is proposed to run along Studio Drive directly adjacent to the project site, which will create a beneficial impact on recreational resources by providing additional pedestrian and biking trails in the project vicinity and connecting other recreational opportunities in the city of Morro Bay and community of Cayucos.

4.4.9 Transportation and Circulation

4.4.9.1 Existing Conditions

The project site is served by the un-signalized intersection at Studio Drive and Highway 1. Therefore, the circulation system relevant to the proposed project consists of Highway 1 and Studio Drive in Cayucos. Highway 1 is a principle arterial street within the jurisdiction of Caltrans. It has been officially designated as a State Scenic Highway by the California Scenic Highway Mapping System, the only road so designated in the County (Caltrans 2011). Studio Drive is a collector street under the County's jurisdiction. Road classifications are generally defined as follows in the County Transportation Element:

- Principal Arterial Streets: interstate thoroughfares connecting major population centers; carry high traffic volumes of long trip lengths.
- Arterial Streets: continuation of intercommunity links within urban areas providing high level of service.
- Collector Streets: channel traffic from local streets to arterials; penetrate identifiable neighborhoods.
- Local Streets: directly serve residential uses and businesses; channel traffic to collector and arterial streets; handle only limited traffic.

Based on an analysis of roadway capacities, the Estero Area Plan Circulation Element indicated that all major streets in Cayucos currently operate at acceptable levels of service. The Estero Area Plan Circulation Element identifies deficiencies along Highway 1 related to limited passing opportunities along the two-lane portion of the highway just north of Cayucos. This section is required by statute to remain as a two-lane, scenic route. Other identified deficiencies were based on public opinion and related to narrow streets and a lack of parking on busy holidays and weekends. However, no improvements are recommended for Highway 1 or any collector streets in Cayucos in the Estero Area Plan Circulation Element.

Highway 1 received recognition as one of the nation's premiere roadways in 2003 when it was designated as an "All-American Road" by the FHWA's National Scenic Byway's Program. The designation, received by only 27 roads, is the highest scenic highway designation in the country (SLOCOG 2010). The Circulation Element estimates a marginal level of service along Highway 1 in the future; however, no serious capacity deficiencies are predicted.

The County Bikeways Plan states that, as of 2001, the County Bikeways Ordinance includes 82 miles of Class I and Class II bikeways, and the County also has 33.9 miles of Class III bikeways installed. The current bicycle network in the vicinity of the project site includes a mix of Class II and Class III bikeways. Several Cayucos roads have been designated as bikeways in the San Luis Obispo County Bikeways Plan (2010), including portions of Studio Drive (Class III). Highway 1 is designated as a “suggested route”. The Morro Bay to Cayucos connector bike path proposes additional Class I, II, and III bikeways along this area.

4.4.9.2 Regulatory Setting

Transportation system requirements for unincorporated areas of the County are subject to the policies and plans of the County Department of Public Works. They outline policies and standards regarding use of public roads in the Circulation Element of the County’s General Plan. The policies and standards provide guidance in defining whether proposed projects are consistent with established roadway capacity levels and intersection levels of service (LOS), and where transportation improvement projects are needed to address new development.

The applicable County regulations and standards for future development can be found in the County Circulation Element of the General Plan, SLOCOG Regional Transportation Plan, Local Coastal Plan (Estero Area Plan), and CZLUO.

4.4.9.3 Thresholds of Significance

The significance of potential impacts is based on thresholds identified within Appendix G of the CEQA Guidelines and the County Initial Study Checklist, which provide the following thresholds for determining impact significance with respect to transportation and circulation. Impacts would be considered significant if the proposed project would:

- Increase vehicle trips to local or areawide circulation system.
- Reduce existing “Levels of Service” on public roadways.
- Create unsafe conditions on public roadways (e.g., limited access, design features, sight distance, slow vehicles).
- Fail to provide for adequate emergency access.
- Result in inadequate parking capacity.
- Result in inadequate internal traffic circulation.
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., pedestrian access, bus turnouts, bicycle racks, etc.).
- Result in a change in air traffic patterns that may result in substantial safety risks.

4.4.9.4 Impact Assessment and Methodology

The impact assessment is based on existing traffic, circulation and parking data, and anticipated increased use of transportation facilities as a result of the proposed project. Existing levels of service were qualified based on applicable county and regional plans and reports, and a significant increase in area traffic is not anticipated as a result of the proposed project. Neighborhood, pedestrian and bicycle-related impacts were assessed by identifying neighborhood areas and facilities currently affected by visitor use and determining the need for additional facilities or services.

4.4.9.5 Project-specific Impacts and Mitigation Measures

Increase Vehicle Trips / Level of Service

The project proposes one single-family residence within an existing residential area with all roads operating at acceptable levels. While the project would add trips to the local circulation system (approximately 9.6 per day), all roads in the area are operating at acceptable levels and are capable of accommodating the small increase in trips. A referral was sent to the County Department of Public Works requesting their review of the project. They had no comments related to traffic concerns associated with the proposed project other than that an encroachment permit would be required for the new driveway. Therefore, no significant increase to local or areawide circulation systems is anticipated, and potential impacts would be *less than significant* (Class III).

Unsafe Conditions

The project includes a private driveway, which would connect to Studio Drive. Based on review by the County Department of Public Works, a standard Encroachment Permit will be required. The project does not include any features that would result in unsafe traffic conditions; therefore, potential impacts would be *less than significant* (Class III).

Emergency Access

The project consists of a single-family residence on an existing lot. The site is accessible to emergency services by Studio Drive, which connects to Highway 1, and occupants have clear access out of the area. Potential impacts related to emergency access would be *less than significant* (Class III).

Parking Capacity

Sufficient parking for the proposed residential development is proposed at the project site, including a private driveway, carport, and garage. Therefore, potential impacts related to parking capacity would be *less than significant* (Class III).

Internal Traffic Circulation

The project is a single-family residence; therefore this threshold does not apply and no impact would occur.

Alternative Transportation Policies, Plans, and Programs

Transportation and circulation policies relevant to the proposed project exist in local and state documents. These documents generally encourage the development of alternative transportation as a means to reduce traffic congestion and increase safety, among other things. The policy documents reviewed as part of this EIR section include the County's Estero Area Plan and Bikeways Plan. The proposed project is *consistent* with these plans because it consists of a single-family residence located within an existing residential neighborhood, with access to pedestrian and bicycle paths.

Air Traffic Patterns

The project is not located within two miles of a public or private airport or airstrip, and is not located at an elevation that would affect air traffic patterns. Modern solar panel technology incorporates anti-glare coatings that absorb, rather than reflect, sunlight. Therefore, the project would not affect air traffic, and potential impacts would be *less than significant* (Class III).

4.4.9.6 Cumulative Impacts

Population and tourism in the areas surrounding the proposed project are expected to slowly and steadily increase in the future, resulting in a corresponding steady increase in traffic, parking demands, and safety conflicts in the Cayucos area. The proposed project would contribute to cumulative traffic volumes in the area; however, because it is not resulting in an increase in residential density, the increase would be minor, and at a level anticipated in by the Estero Area Circulation Element. Therefore, potential cumulative impacts would be *less than significant* (Class III).

4.4.10 Water

4.4.10.1 Existing Conditions

Water Supply

Cayucos obtains its water from Whale Rock Reservoir located east of Highway 1 and the community. Cayucos is served by three small water purveyors: the Morro Rock Mutual Water Company (MRMWC), the Paso Robles Beach Water Association (PRBWA), and CSA 10A. The three water purveyors rely on an approximately 600-acre-foot entitlement from Whale Rock reservoir. The project site is served by CSA 10A, which receives an additional 25 acre-feet of water from the Lake Nacimiento Water Project. Total water use in Cayucos ranged from 403-431afy between the year 2000 to 2010 (County of San Luis Obispo 2011). Out of this, CSA 10A used 122 to 134 afy during this timeframe. Based on the County's Resource Management System *Annual Summary Report* for 2009-2010, there is an identified level of severity for water supply, indicating that the available supply is able to meet the demand.

Water Quality

The project site is located on the west side of Studio Drive, immediately east of the Pacific Ocean. Old Creek is located approximately 600 feet to the northwest.

4.4.10.2 Regulatory Setting

Federal Policies and Regulations

The Clean Water Act controls the discharge of toxic material into surface water bodies. Under this act, states are required to identify water segments impaired by pollutants and develop control strategy/management plans to reduce pollution and meet certain water quality standards.

Regulatory protection for water resources throughout the United States is under the jurisdiction of the USACE. Section 404 of the Clean Water Act prohibits the discharge of dredged or fill material into "waters of the U.S." without formal consent from the USACE. Waters of the U.S. include marine waters, tidal areas, stream channels, and associated wetlands. Wetlands include freshwater marshes, vernal pools, freshwater seeps, and riparian areas. Under Section 404, activities in waters of the U.S. may be subject to either an individual permit or a general permit, or may be exempt from regulatory requirements. Some activities have been given blanket authorization under the provisions of a general permit through the Nationwide Permit system. Individual Permits require the applicant to prepare and submit an alternatives analysis of the project.

Section 401 of the Clean Water Act and its provisions ensure that federally permitted activities comply with the federal Clean Water Act and state water quality laws. Section 401 is

implemented through a review process conducted by the RWQCB, and is usually triggered by the Section 404 permitting process. Specifically, the RWQCB certifies via Section 401 that the proposed project complies with applicable effluent limitations, water quality standards, and other conditions of California law. If the RWQCB denies certification, the lead federal agency must deny the federal permit application.

State Policies and Regulations

The establishment and enforcement of water quality standards for the discharge into and maintenance of water throughout California is managed by the SWRCB and its RWQCBs. The SWRCB enforces the federal Clean Water Act on behalf of the EPA. Most of the quantitative objectives are based on the CCR, Title 22 – State Drinking Water Standards. Other considerations include the Porter-Cologne Water Quality Control Act, and the RWQCB's Non-degradation Policy. San Luis Obispo County lies entirely within Region 3, the Central Coast RWQCB. The RWQCB is the primary State agency ensuring that the quality of potable water supplies is protected from harmful effects by man.

The California Department of Health Services (DHS) is responsible for overseeing the quality of water once it is in storage and distribution systems. DHS oversees the self-monitoring and reporting program implemented by all water purveyors, performs inspections, and assists with financing water system improvements for the purpose of providing safer and more reliable service.

Section 10910 of the California Water Code (CWC) requires the County to identify the agency or entity responsible for providing water service to the area and to request that the agency determine whether the project was included within the current Urban Water Management Plan maintained by that water agency.

Section 13260(a) of the CWC requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system, that could affect the quality of the waters of the State, file a Waste Discharge Report (WDR). All WDRs must implement the applicable water quality control plan (Basin Plan) for the Region affected by the discharge. Therefore, WDRs require the project to comply with all applicable Basin Plan provisions, including any prohibitions and water quality objectives, governing the discharge. The siting, design, construction, operation, maintenance, and monitoring of all small domestic systems must comply with all of the applicable provisions of the RWQCB's Basin Plan. The project shall not discharge waste in excess of the maximum design and disposal capacity of the small domestic system. The discharger must comply with any more stringent standards in the Basin Plan. In the event of a conflict between the provisions of RWQCB Order No. 97-10-DWQ and the Basin Plan, the more stringent provision prevails.

The Porter-Cologne Water Quality Control Act provides the authority and method for the State of California to implement its water management program. The act establishes waste discharge requirements for both point and non-point source discharges affecting surface water and groundwater.

CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. California law requires any person, agency, or public utility proposing a project that may impact a river, stream, or lake to notify the CDFW before beginning the project. If the CDFW determines that the project may adversely affect existing fish and wildlife resources, a Lake or Streambed Alteration Agreement is required. This Agreement lists the

CDFW conditions of approval for the proposed project, and serves as an agreement between applicants and the CDFW.

SBx7-7 (SB 7) was enacted in November 2009, requiring all water suppliers to increase water use efficiency (CDWR 2011). The bill also requires, among other things, that the CDWR, in consultation with other state agencies, develop a single standardized water use reporting form, which would be used by both urban and agricultural water agencies. The legislation sets an overall goal of reducing per capita urban water use by 20% by December 31, 2020. The state shall make incremental progress towards this goal by reducing per capita water use by at least 10% by December 31, 2015.

- Each urban retail water supplier shall develop water use targets and an interim water use target by July 1, 2011.
- An urban retail water supplier shall include in its water management plan due July 2011 the baseline daily per capita water use, water use target, interim water use target, and compliance daily per capita water use. CDWR, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part
- CDWR shall adopt regulations for implementation of the provisions relating to process water.
- A Commercial, Institutional, Industrial (CII) task force is to be established that will develop and implement urban best management practices for statewide water savings.
- Effective 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans.

Local Policies and Regulations

Chapter 5 of the County CZLUO (Title 23 of the County Code) contains site development standards for the county, including drainage, grading, erosion, and sedimentation control. Section 23.05.020 states that the County's standards for grading and excavation are intended to minimize hazards to life and property, protect against erosion and the sedimentation of water courses, and to protect the safety, use, and stability of public rights of way and drainage channels.

Erosion and sedimentation control to protect damaging effects on-site and on adjoining properties is discussed in §23.05.036 of the CZLUO. A sedimentation and erosion control plan would be required for future developments, and shall include temporary and final measures including:

- Slope surface stabilization including temporary mulching or other stabilization measures to protect exposed areas of high erosion potential during construction and interceptors and diversions at the top of slopes to redirect runoff;
- Erosion and sedimentation control devices such as absorbing structures or devices to reduce the velocity of runoff;
- Final erosion control measures including mechanical or vegetative measures.

Section 23.05.040 of the CZLUO states that standards for the control of drainage and drainage facilities are designed to minimize harmful effects of stormwater runoff and resulting inundation and erosion on proposed projects, and to protect neighboring and downstream properties from drainage problems resulting from new development.

4.4.10.3 Thresholds of Significance

The significance of potential impacts is based on thresholds identified within Appendix G of the CEQA Guidelines and the County Initial Study Checklist, which provide the following thresholds for determining impact significance with respect to water quality. Impacts would be considered significant if the proposed project would:

- Violate any water quality standards.
- Discharge into surface waters or otherwise alter surface water quality (e.g., turbidity, temperature, dissolved oxygen, etc.).
- Change the quality of surface or groundwater (e.g., saltwater intrusion, nitrogen-loading, daylighting, etc.).
- Change the quantity or movement of available surface or groundwater.
- Adversely affect community water service provider.

4.4.10.4 Impact Assessment and Methodology

Significant water supply and infrastructure impacts would occur if the demands placed on the area from this development exceeded the available water supply. Regarding water quality, an impact would occur if the proposed project results in the discharge of pollutants into surface waters, including the Pacific Ocean. Impacts to the movement of water may occur if the project would affect stormwater runoff, including existing County drainage infrastructure, resulting in flooding, erosion, and sedimentation. Potential impacts are assessed based on site topography, the proposed layout and elevations of potential project components, the erodibility of soils, existing drainage patterns, and the regulatory framework applicable to the project.

4.4.10.5 Project-specific Impacts and Mitigation Measures

Violate Water Quality Standards / Discharge into Surface Waters

The Clean Water Act has established a regulatory system for the management of storm water discharges from construction, industrial and municipal sources. The SWRCB has adopted a NPDES Storm Water General Permit, which requires the implementation of a SWPPP for discharges regulated under the SWRCB program. Currently, construction sites of 1 acre and greater may need to prepare and implement a SWPPP that focuses on controlling storm water runoff. The RWQCB, the local extension of the SWRCB, currently monitors these SWPPPs. Based on review by the RWQCB, the applicant will be required to obtain a stormwater construction permit due to the project's proximity to surface waters (Pacific Ocean).

Proposed grading activities would disturb soil and sand, and potentially result in off-site sedimentation. Standard erosion and sedimentation control measures would be required, including staking or flagging the development footprint; use of fiber rolls and silt fencing to retain soil and sand on-site; covering soil stockpiles; and restoration and revegetation of

disturbed soils. Implementation of these measures would ensure avoidance of adverse effects to water quality.

The project includes removal of the existing County storm drain, and construction of a new storm water management system, including an inlet with a filter and outlet with energy dissipaters. Stormwater would continue to flow onto the beach area to the northwest. Discharge of sediment, hydrocarbons, and other pollutants from the roadway into stormwater and drainage infrastructure (which eventually discharge into surface waters) would affect water quality. Implementation of BMPs and Low Impact Design (LID) techniques consistent with CZLUO §23.05.050.e(1) (Water Runoff, Best Management Practices – Residential development) would avoid or minimize the project's contribution to water quality issues affecting the Pacific Ocean. Additional mitigation is included under the Biological Resources analysis, including BR/mm-5 (stockpile and staging areas, management of hazardous materials, and implementation of BMPs) and BR/mm-6 (erosion and sedimentation control). In addition, an environmental monitor would be present to verify and document compliance with mitigation measures related to the protection of biological resources, including aquatic habitat and surface waters (BR/mm-1).

The project includes a preliminary drainage plan, which has been reviewed and approved by the County Department of Public Works. In the long-term, the project would not result in any significant impacts to water quality, because the proposed stormwater system includes energy dissipaters that would allow stormwater to continue flowing onto the beach in a non-erosive manner.

WAT Impact 1 The project would include construction activities that would require ground disturbance and use of heavy equipment, which may result in the discharge of sediment and other pollutants, potentially affecting surface water quality.

WAT/mm-1 Upon application for construction permits, the applicant shall submit grading and construction plans showing BMPs, and shall implement BMPs during grading and construction activities. BMPs shall include, but not be limited to, the following:

- a. Erosion control barriers shall be applied, such as silt fences, hay bales, drain inlet protection, and gravel bags;*
- b. Disturbed areas shall be stabilized with vegetation or hard surface treatments upon completion of construction in any specific area.*
- c. All inactive disturbed soil areas are required to be stabilized with both sediment and temporary erosion control prior to the onset of the rainy season (October 15 to April 15).*

WAT/mm-2 Prior to issuance of grading and construction permits, the applicant shall submit a copy of the RWQCB-issued stormwater construction permit. The permit shall be on-site during all major grading and construction activities.

Implement BR/mm-1, BR/mm-5, and BR/mm-6.

Residual Impact

Vegetation removal and ground disturbance prior to or during a rain event creates the potential for erosion and down-gradient sedimentation. Proper planning and implementation of BMPs reduces the potential for off-site transport of sediments and other pollutants that may affect water quality, either directly or indirectly. Based on implementation of mitigation measures, potential construction-related impacts to water quality would be *less than significant with mitigation* (Class II), and no significant long-term impacts would occur.

Change the Quality of Groundwater

The project site is not located in an area where development would affect the quality of groundwater resources; therefore, no impact would occur.

Change the Quantity or Movement of Surface or Groundwater

The project would not create a demand of water exceeding the capacity of the water service provider, and would not require a significant level of additional groundwater pumping by the provider to serve the project. Therefore, the project would not change the quantity or movement of groundwater.

As noted above, the project includes improvements to the existing stormwater drain onsite. The project has been reviewed by the County Department of Public Works, and the proposed plan has been approved at a preliminary level by County staff. Stormwater currently flows into a County drain, and onto the beach via the stormwater system or surface flow. The proposed system would direct water through the project site and onto the beach. Energy dissipaters are included to slow down storm water flow and minimize the potential for erosion at the outlet. Based on the proposed plan, and compliance with existing regulations identified in the County CZLUO, potential impacts would be *less than significant* (Class III).

Adversely Affect Community Water Service Provider

Long-term use of a single-family residence is expected to require approximately 0.270 afy, or 4,375.8 gallons/month (City of Santa Barbara 1989; County of San Luis Obispo 2011). As noted above, the project would be served by CSA 10A, which has adequate water supply to serve the project. A preliminary will-serve letter was issued for the project in 2006. Therefore, potential impacts would be *less than significant* (Class III).

4.4.10.6 Cumulative Impacts

Water demand for the proposed use represents a small percentage of total water demand in the Cayucos area, and the boundaries of CSA 10A (approximately 0.6%). As previously discussed, CSA 10A has available water to serve this project, in addition to others within the service area. Therefore, potential cumulative impacts would be *less than significant* (Class III).

4.4.11 Land Use

4.4.11.1 Existing Conditions

The proposed project is located within the community of Cayucos in the unincorporated area of San Luis Obispo County. The project site consists of one approximately 0.34-acre parcel in the RSF land use category and the Estero planning area. All of portions of the project site are within the Coastal Zone, County GSA – Landslide Risk, County Tsunami Inundation Area, and

County Supervisorial District 2. The GSA is applied to areas within the urban or village reserve lines subject to “moderately high to high” landslide risk or liquefaction potential.

A beach access point and public parking area for approximately 30 vehicles is located approximately 300 feet north of the project site. Other adjacent County land use categories and uses are listed in Table 4.4-4, below.

Table 4.4-4. Surrounding Land Use Categories/Uses

Direction	Land Use Category	Existing Land Use
North	Recreation	Undeveloped State Park land associated with Cayucos Beach
South	Residential Single Family	Large single-family beachfront residences on small lots along Studio Drive
East	Unclassified	Highway 1 right-of-way under Caltrans’s jurisdiction
	Residential Multi Family	Single-family and multi-family residences on small lots along Ocean Blvd.
West	Recreation	Undeveloped State Park land associated with Cayucos Beach

Source: San Luis Obispo County Department of Planning and Building, Interactive GIS Mapping System

4.4.11.2 Regulatory Setting

The proposed project is located in the California Coastal Zone and County of San Luis Obispo jurisdictions. Development of the project would require compliance with the CCA and Local Coastal Plan, County CZLUO and Combining Designation Standards, Estero Area Plan, County of San Luis Obispo General Plan, Central Coast Basin Plan, and San Luis Obispo County CAP. These plans, as well as relevant policies and guidelines applicable to the proposed project, are discussed in Chapter 3, Environmental Setting.

4.4.11.3 Thresholds of Significance

The significance of potential impacts is based on thresholds identified within Appendix G of the CEQA Guidelines and the County Initial Study Checklist, which provide the following thresholds for determining impact significance with respect to land use. Impacts would be considered significant if the proposed project would:

- Be potentially inconsistent with land use, policy/regulation (e.g., general plan [county land use element and ordinance], local coastal plan, specific plan, Clean Air Plan, etc.) adopted to avoid or mitigate for environmental effects.
- Be potentially inconsistent with any habitat or community conservation plan.
- Be potentially inconsistent with adopted agency environmental plans or policies with jurisdiction over the project.
- Be potentially inconsistent with surrounding land uses.
- Physically divide an established community.

4.4.11.4 Impact Assessment and Methodology

The impact assessment in the Land Use section is conducted qualitatively. The potential impacts resulting from implementation of the proposed project were analyzed against the proposed policies whose purpose it is to avoid or minimize those impacts, using the thresholds listed above.

4.4.11.5 Project-specific Impacts and Mitigation Measures

Plan Consistency

The proposed project was reviewed for consistency with policy and regulatory documents relating to the environment and appropriate land use. Referrals were made to outside agencies to review for policy consistencies (i.e., Cayucos Fire Department, SLOAPCD, Central Coast RWQCB, etc.). The project was found to be generally consistent with relevant plans and policies, including the Cayucos Small Scale Neighborhood design standards of the Estero Area Plan (refer to Chapter 3, Environmental Setting).

Habitat, Community Conservation, and Environmental Plans

The project is not proposed within or adjacent to a Habitat Conservation Plan area or inconsistent with any adopted agency environmental plans with jurisdiction over the project.

Consistency with Surrounding Land Uses

The project proposes residential uses within an existing neighborhood. As discussed further in Section 4.1, Aesthetic Resources, the design of the project is modern and includes a cantilevered deck. This type of design is not uncommon in Cayucos beachfront residential areas, which consists of a mix of styles, ranging from modern to classic beach bungalow. The long-term use of the site is consistent with the residential neighborhood.

Divide Established Community

The proposed development would not divide an established community, because it is located within an existing residential lot.

No significant adverse impacts would occur as a result of the proposed project, and no mitigation measures are necessary.

4.4.11.6 Cumulative Impacts

The project proposes one single-family residential use within an existing developed neighborhood and is consistent with surrounding land uses. The project is consistent with the general level of development anticipated for this parcel and within the Studio Drive neighborhood. The project would not contribute to any land use effects and no cumulative impacts would occur.

CHAPTER 5

ALTERNATIVES ANALYSIS

5.1 INTRODUCTION

CEQA Guidelines §15126.6(a) requires an EIR to “describe a reasonable range of alternatives to a project, or to the location of a project, which could feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project”. The CEQA Guidelines provide direction for the discussion of alternatives to the proposed project. This section also requires:

- A setting forth of alternatives that “...shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project”. [§15126.6(f)]
- Discussion of the "No Project" alternative, and “...If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives”. [§15126.6(e)(2)]
- Discussion and analysis of alternative locations “...that would avoid or substantially lessen any of the significant effects of the project”; only these need to be considered for inclusion in the EIR. [§15126.6(f)(2)(A)]

Given the CEQA mandates listed above, this section (1) describes the range of reasonable alternatives to the project; (2) examines and evaluates resource issue areas where significant adverse environmental effects have been identified and compares the impacts of the alternatives to those of the proposed project; and, (3) identifies the Environmentally Superior Alternative.

5.2 PROJECT ALTERNATIVES

In defining feasibility of alternatives, the CEQA Guidelines state:

“Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site”.

Through the scoping process, if an alternative was found to be infeasible, as defined above, then it was dropped from further consideration. In addition, CEQA states that alternatives should “...attain most of the basic objectives of the project...”

5.2.1 Significant Impacts Resulting from the Proposed Project

Generally, the alternatives analysis considers alternatives that would avoid or reduce, to the maximum extent feasible, the identified unavoidable impacts. However it was determined that the proposed project would not result in any unavoidable impacts. Therefore the considered alternatives focused on avoiding or reducing the significant impacts which require the most intensive mitigation measures. They include:

1. **Biological Resources.** Impacts to sensitive wildlife and potential for pollutant discharge into the beach area and Pacific Ocean during construction.
2. **Geology and Soils.** Exposure to geologic hazards including liquefaction, expansive soils, and beach scour, and the creation of potential hazards including short-term slope instability and erosion during storm events.

No significant aesthetic resource impacts were identified; however, the Cayucos Land Use Committee and the adjacent neighbors identified concerns with the modern design of the structure, including the cantilevered main floor, flat roofs, basement, and side wall visible from Studio Drive. Therefore, some design options are considered in the feasible range of alternatives identified below.

5.3 ALTERNATIVES ANALYSIS

Potential alternatives to the proposed project are limited due to the small project area, project land use category, and project objectives to construct a single-family residence. Criteria used to develop potential alternatives included the potential of the project to avoid impacts to sensitive resources and the human environment, whether or not it could generally meet the project objectives, and costs. Specific consideration was given to potential alternatives that appeared to avoid or minimize impacts to natural resources and the human environment.

Identified alternatives include the No Project (No Action) Alternative, Design Alternative A – Reduced Project, Pilings, Design Alternative B – Reduced Project, Traditional Design, and Design Alternative C – Vegetation and Articulation.

5.4 ALTERNATIVES IMPACTS ANALYSIS

5.4.1 No Project Alternative

The No Project Alternative would include none of the components of the proposed project. If a project is not built at this time, a residential project may be proposed in the future.

Aesthetics

Under the No Project Alternative, no physical improvements would occur. This alternative would not result in adverse impacts.

Air Quality and Climate Change

The No Project Alternative would not include any construction activities or long-term trip generation and, therefore, would not result in any adverse effects to air quality. This alternative would not result in greenhouse gas emissions or require the use of energy as nothing would be constructed.

Biological Resources

Biological resources would not be impacted by the No Project Alternative. The site would continue to support iceplant, and public trespass would likely continue to occur as visitors traverse downslope from Studio Drive. The site would continue to provide marginal habitat for coastal birds and wildlife.

Cultural Resources

No evidence of cultural resources was documented on the project site. Because this alternative would not include any ground disturbance, the No Project alternative would not result in any unanticipated impacts to cultural resources.

Geology and Soils

This alternative would not result in the construction of a residence or any other structure on the project site. The development of any other structure in this location would be affected by existing geologic and coastal conditions related to the underlying soil and Pacific Ocean, and would require engineered mitigation, similar to the proposed project. The existing overdrain would continue to discharge stormwater from Studio Drive onto the beach.

Hazards and Hazardous Materials

This alternative would not require the use of hazardous materials, and no structure would be exposed to any potentially hazardous conditions including fire. No significant impacts would result.

Water and Hydrology

The No Project Alternative would not include the increased impervious surface associated with the proposed project; however, it would also not include improvements to the existing County of San Luis Obispo stormwater system, including installation of a pollutant filter and energy dissipation features.

Land Use

The No Project Alternative would not change land use designations or types and, therefore, would not conflict with any applicable policies. No impact to land use would result.

Transportation and Circulation

The No Project Alternative would not result in short- or long-term trip generation, and would not result in any significant impacts.

5.4.2 Design Alternative A – Reduced Project, Pilings

The project site is located on the beachside of Studio Drive, and would be exposed to coastal hazards including sea level rise, wave-up, and storm surge. Independently, these conditions would not adversely affect the proposed structure; under extreme conditions, ocean water may reach the 22.2-foot elevation, and may overtop the existing rock outcrop and splash against the basement wall.

An alternative to this would be to eliminate the basement and construct the residence on steel-reinforced concrete pilings. This would allow ocean water to flow under the structure entirely before receding back. Under this alternative, the main floor and mezzanine, including the cantilevered portion, would remain.

This alternative consists of an approximately 1,857-square-foot residence including:

- 1,097 square feet of main floor living space
- 338-square-foot mezzanine

- 242-square-foot garage and 200-square-foot carport
- 180-square-foot covered deck
- Solar panels installed on the south-facing slopes of the roof

The residence would consist of one main floor supported on pilings. The maximum width of the structure would be 18 feet, and the maximum length would be 95 feet. A paved driveway would provide access from Studio Drive. The maximum height of the residence would be 15 feet above the centerline elevation of Studio Drive. It is expected that retaining walls would be necessary adjacent to Studio Drive, and along a portion of the southern and northern sides of the residence, with continuous footings extending into the underlying bedrock materials.

Aesthetics

From a visual resources perspective, this alternative may appear to be less massive than the proposed project because the basement would be eliminated and the pilings would provide differentiation in the style as seen from Studio Drive and the beach area. The pilings would be similar in design to the structure to the south.

Air Quality and Climate Change

This alternative would require less construction; however, it would still include the majority of the earthwork described previously for the proposed project. Impacts and mitigation measures would be similar to the proposed project.

Biological Resources

This alternative would result in similar impacts to biological resources, primarily due to the location of the project. Mitigation identified for the proposed project would apply to this alternative.

Cultural Resources

No significant impacts to cultural resources would occur if this alternative is implemented, similar to the proposed project.

Geology and Soils

This alternative addresses potential coastal hazards, including sea level rise, wave runup, and coastal flooding. Under extreme conditions, waves would overtop the rock outcrop and travel under the residence and between the pilings, approaching the 22-foot elevation below Studio Drive. Site-specific engineering would be required for this alternative, similar to the proposed project, including slope stabilization, use of steel-reinforced concrete, removal and replacement of suitable fill, and stormwater drainage improvements. Implementation of this alternative would result in significant but mitigable impacts, similar to the proposed project.

Hazards and Hazardous Materials

This alternative is located within the same project area and, therefore, potential impacts would be less than significant, similar to the proposed project.

Water and Hydrology

Implementation of this alternative would result in similar water and hydrology impacts as the proposed project, and would require best management practices and short- and long-term management of stormwater runoff to protect surface waters.

Land Use

This alternative would be consistent with land use plans and policies and would not result in any significant land use impacts, similar to the proposed project. As noted under Aesthetics, the overall size of the structure would be less than the project due to elimination of the basement, which would reduce the massing, and would provide additional visual articulation consistent with planning area standards.

Transportation and Circulation

This alternative would result in the same number of traffic trips and would not result in any significant impacts, similar to the proposed project.

5.4.3 Design Alternative B – Reduced Project, Traditional Design

This design alternative incorporates a more traditional design, as opposed to the modern structure proposed by the applicant. It does not include the extended cantilevered main floor, or a substantial reduction in the extension, and provides sloped roofs. This alternative is considered a reduced design option, and consists of an approximately 2,572-square-foot residence including:

- 772 square feet of main floor living space
- 1,040-square-foot basement
- 338-square-foot mezzanine
- 242-square-foot garage and 200-square-foot carport
- 180-square-foot covered deck
- Solar panels installed on the south-facing slopes of the roof

The residence would consist of one main floor and a basement. The footprint of the house would be 1,040 square feet. The maximum width of the structure would be 18 feet, and the maximum length would be 70 feet. A paved driveway would provide access from Studio Drive. The maximum height of the residence would be 15 feet above the centerline elevation of Studio Drive. The basement would be located below the elevation of Studio Drive.

The exterior walls of the structure would be concrete and would retain soils along the southern, eastern, and northern sides of the residence. Retaining walls will also be constructed adjacent to Studio Drive with continuous footings extending into the underlying bedrock materials.

Aesthetics

Allowing for a less modern design may appear more consistent with the older homes along Studio Drive. Similar to the proposed project, this design style would be consistent with required standards and would not result in any significant impacts.

Air Quality and Climate Change

This alternative would result in similar impacts as the proposed project, and identified mitigation measures would be required.

Biological Resources

This alternative would result in similar impacts to biological resources, primarily due to the location of the project. Mitigation identified for the proposed project would apply to this alternative.

Cultural Resources

No significant impacts to cultural resources would occur if this alternative is implemented, similar to the proposed project.

Geology and Soils

This alternative would be affected by similar geologic and coastal hazards identified for the proposed project. Site-specific engineering would be required to address identified hazards and conditions over the next 100 years. It is anticipated that the mitigation would be similar, but tailored specific to the structure design and foundation.

Hazards and Hazardous Materials

This alternative is located within the same project area and, therefore, potential impacts would be less than significant, similar to the proposed project.

Water and Hydrology

Implementation of this alternative would result in similar water and hydrology impacts as the proposed project, and would require best management practices and short- and long-term management of stormwater runoff to protect surface waters.

Land Use

This alternative would be consistent with land use plans and policies and would not result in any significant land use impacts, similar to the proposed project. As noted under Aesthetics, the project would be more similar to the older residences along Studio Drive (as opposed to the newer developments) and would provide additional visual articulation consistent with planning area standards.

Transportation and Circulation

This alternative would result in the same number of traffic trips and would not result in any significant impacts, similar to the proposed project.

5.4.4 Design Alternative C – Vegetation and Articulation

As noted above, no significant aesthetic resource impacts were identified; however, a reasonable alternative to the project includes additional features to articulate the design and blend it into the beach landscape. This includes incorporation of native, low-growing shrubs and vegetation along the northern and western aspects, and the use of native (or simulated native) rocks along the driveway retaining wall. This alternative would consist of the same size, footprint, width, and height, as the proposed project.

Aesthetics

Incorporating low-growing, native vegetation along the northern and western aspects of the structure would provide some screening of the lower walls, consistent with design standards identified for the Studio Drive neighborhood. Use of materials, including natural rock, within the retaining walls would also provide some additional visual articulation, consistent with the coastal environment. Similar to the proposed project, this design style would be consistent with required standards and would not result in any significant impacts.

Air Quality and Climate Change

This alternative would result in similar impacts as the proposed project, and identified mitigation measures would be required.

Biological Resources

This alternative would result in similar impacts to biological resources, primarily due to the location of the project. Mitigation identified for the proposed project would apply to this alternative.

Cultural Resources

No significant impacts to cultural resources would occur if this alternative is implemented, similar to the proposed project.

Geology and Soils

This alternative would be affected by similar geologic and coastal hazards identified for the proposed project. Site-specific engineering would be required to address identified hazards and conditions over the next 100 years. Incorporation of vegetation and natural rock along the perimeter of the structure would be consistent with Low Impact Development (LID) strategies by slowing down stormwater runoff and diffusing wave runup during extreme conditions. The use of vegetation may also limit beach scour during these extreme events.

Hazards and Hazardous Materials

This alternative is located within the same project area and, therefore, potential impacts would be less than significant, similar to the proposed project.

Water and Hydrology

Aside from additional water demand for the establishment of native vegetation, implementation of this alternative would result in similar water and hydrology impacts as the proposed project, and would require best management practices and short- and long-term management of stormwater runoff to protect surface waters.

Land Use

This alternative would be consistent with land use plans and policies and would not result in any significant land use impacts, similar to the proposed project. As noted under Aesthetics, the project design would incorporate additional visual articulation consistent with planning area standards.

Transportation and Circulation

This alternative would result in the same number of traffic trips and would not result in any significant impacts, similar to the proposed project.

5.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the alternatives section of an EIR to describe a reasonable range of alternatives to the project that avoid or substantially lessen any of the significant effects identified in the EIR analysis while still attaining most of the basic project objectives. The alternative that most effectively reduces impacts while meeting project objectives should be considered the “environmentally superior alternative.” In the event that the No Project Alternative is considered the environmentally superior alternative, the EIR should identify an environmentally superior alternative among the other alternatives.

In this EIR, the No Project Alternative results in the fewest environmental impacts, although it does not meet any of the project objectives, including the primary objective to build a single-family residence.

As proposed, and with incorporation of recommended mitigation measures, the proposed project would not result in any significant, unavoidable environmental effects, and would meet project objectives. All proposed alternatives would meet the project objectives, and would not result in any significant, adverse, and unavoidable (Class I) impacts upon implementation of mitigation measures similar to those identified for the proposed project.

The proposed Reduced Project and Design Alternatives (A, B, and C) provide some variation in size and project design in response to public comment, and include alternatives to the proposed basement, cantilevered living space, and exterior design elements. Design Alternative A – Reduced Project, Pilings, would marginally reduce the intensity of identified geology and soils impacts, primarily related to coastal hazards, and would still require substantial engineered design and incorporation of design-specific mitigation measures. Design Alternative B – Reduced Project, Traditional Design does not include the cantilevered portion of the residence, which may be more consistent with Small Scale Neighborhood Standards. Alternatives A, B, and C (Vegetation and Articulation) may reduce the perceived mass of the structure as seen from Studio Drive and the beach area, and may be more consistent with County Plans and Policies related to visual resources.

Based strictly on an analysis of the relative environmental impacts, the proposed project, with adoption and incorporation of recommended mitigation measures, is considered the Environmentally Superior Alternative. The decision-making body will consider the whole of the record when considering the approved project including, but not limited to, public comment and testimony related to the size and design of the residence. The decision-making body may select the project as proposed, an Alternative, or a specified combination of particular elements identified in the Alternatives, as the approved project. In all scenarios, the Mitigation and Monitoring Program (MMRP) would be applied to the approved project.

CHAPTER 6

OTHER CEQA CONSIDERATIONS

6.1 GROWTH INDUCING IMPACTS

CEQA Guidelines §15126.2(d) requires an EIR to discuss the growth inducing impacts of a proposed project, including the ways in which the project would foster economic or population growth, encourage the construction of additional housing, or remove an obstacle to population growth in the surrounding environment, either directly or indirectly. The goal of the growth inducing impacts section of the EIR is to address the effects the proposed project may have on surrounding facilities and activities by assessing the ways in which a project could encourage population or economic growth, increase employment opportunities or employment growth in support of an industry, or stimulate the construction of new housing or service facilities.

Based on the CEQA Guidelines criteria outlined above, the proposed project was evaluated in order to determine if any part of the project demonstrates the potential to result in growth inducing impacts. The project proposes one single-family residence on one of the few undeveloped lots in an existing developed neighborhood. The use is consistent with the general level of development currently existing along Studio Drive and anticipated under the RSF land use designation. Other than temporary employment associated with construction of the residence, the project would not create new jobs or facilitate employment growth. Given its small scale and limited function, the project would not induce population or economic growth in the area. Impacts would be *less than significant*.

6.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines §15126.2(c) states that an EIR should include a discussion of any significant irreversible environmental changes which would be caused by the proposed project should it be implemented. As discussed in the Aesthetic Resources section, the project would result in permanent changes to a highly visible and visually sensitive site along Studio Drive. Also, irreversible damage could result from environmental accidents associated with the project.

Although located in a visually sensitive area, because of site design and existing surroundings, the project would not substantially block views of the Pacific Ocean from any location other than from the area directly adjacent to the project along an approximately 50-foot section of Studio Drive. Views from other surrounding areas would generally be seen as an extension of the view blockage caused by the existing residences. Because the use or storage of hazardous materials is not proposed, the threat of environmental accidents is also limited. Therefore, due to the limited scale of the project, impacts would be *less than significant*.

6.2.1 Irreversible Commitment of Non-Renewable Resources

CEQA Guidelines §15126.2(c) states that use of nonrenewable resources during the initial and continued phases of a proposed project may constitute an irreversible environmental change if a large commitment of such resources makes their removal or re-use thereafter unlikely. Nonrenewable resources such as natural gas, petroleum products, asphalt, steel, copper and other metals, and sand and gravel are considered to be commodities which are available in a finite supply. Increases in population will directly result in the demand for additional nonrenewable resources; therefore, the demand for all such resources is expected to increase regardless of whether or not the project is developed.

The proposed project is of limited scale and its contribution to this loss is limited; therefore, impacts would be *less than significant*.

CHAPTER 7

MITIGATION MONITORING AND REPORTING PROGRAM

7.1 STATUTORY REQUIREMENT

When a Lead Agency makes findings on significant environmental effects identified in an EIR, the agency must also adopt a “reporting or monitoring program for the changes to the project which it has adopted or made a condition of approval in order to mitigate or avoid significant effects on the environment” (Public Resources Code §21081.6(a) and CEQA Guidelines §15091(d) and §15097). The Mitigation Monitoring and Reporting Program (MMRP) is implemented to ensure that the mitigation measures and project revisions identified in the EIR are implemented. Therefore, the MMRP must include all changes in the proposed project either adopted by the project proponent or made conditions of approval by the Lead or Responsible Agency.

7.2 ADMINISTRATION OF THE MITIGATION MONITORING AND REPORTING PROGRAM

San Luis Obispo County is the Lead Agency responsible for the adoption of the MMRP. The applicant, Mr. Jack Loperena, is responsible for implementation of the MMRP, in coordination with the County and other identified agencies. As the Lead Agency, the County is responsible for verifying and documenting compliance with the MMRP. According to CEQA Guidelines §15097(a), a public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity that accepts the delegation. However, until mitigation measures have been completed, the Lead Agency remains responsible for ensuring that the implementation of the measure occurs in accordance with the program.

7.3 MITIGATION MEASURES AND REPORTING PROGRAM

Table 7-1 is structured to enable quick reference to mitigation measures and the associated monitoring program based on the environmental resource. The numbering of mitigation measures correlates with numbering of measures found in the Environmental Impact Analysis chapter of this EIR (refer to Chapter 4).

Table 7-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
<i>Aesthetic Resources</i>				
AES/mm-1	<p>Prior to issuance of the building permit, the applicant shall submit interior and exterior lighting plans to the Department of Planning and Building for review and approval consistent with the following:</p> <ol style="list-style-type: none"> The point source of all exterior lighting shall be shielded from off-site views, including beach areas. All required security lights shall utilize motion detector activation. Light trespass from exterior lights shall be minimized by directing light downward and utilizing cut-off fixtures or shields. Lumination from exterior lights shall be the lowest level allowed by public safety standards. 	Review and approval of plans	Prior to issuance of building permit; during final inspection of building permit	Applicant, Contractor, County Planning and Building Department
<i>Air Quality</i>				
AQ/mm-1	<p>Prior to initiation of construction, the project applicant shall implement the following dust control measures:</p> <ol style="list-style-type: none"> Reduce the amount of the disturbed area where possible; Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15 miles per hour. Reclaimed (non-potable) water should be used whenever possible; All dirt stockpile areas should be sprayed daily as needed; and, All roadways, driveways, sidewalks, etc., to be paved should be completed as soon as possible, and building pads should be laid as soon as possible after grading unless seeding or soil binders are used. 	Include measure on grading and construction plans, review and approval of plans, field inspection	Prior to ground disturbance; during grading activities	Applicant, Contractor, County Planning and Building Department, San Luis Obispo APCD

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
AQ/mm-2	<p>Prior to issuance of construction permits, the applicant shall include the following measures on applicable grading and building plans:</p> <p><u>Idling Restrictions Near Sensitive Receptors for Both On and off-Road Equipment</u></p> <ul style="list-style-type: none"> a. Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors; b. Diesel idling within 1,000 feet of sensitive receptors is not permitted; c. Use of alternative fueled equipment is recommended whenever possible; and, d. Signs that specify the no idling requirements must be posted and enforced at the construction site. <p><u>Idling Restrictions for On-road Vehicles</u></p> <ul style="list-style-type: none"> a. Section 2485 of Title 13, the California Code of Regulations limits diesel-fueled commercial motor vehicles that operate in the State of California with gross vehicular weight ratings of greater than 10,000 pounds and licensed for operation on highways. It applies to California and non-California based vehicles. In general, the regulation specifies that drivers of said vehicles: <ul style="list-style-type: none"> 1. Shall not idle the vehicle's primary diesel engine for greater than 5 minutes at any location, except as noted in Subsection (d) of the regulation; and, 2. Shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5.0 minutes at any location when within 100 feet of a restricted area, except as noted in Subsection (d) of the regulation. <p>Signs must be posted in the designated queuing areas and job sites to remind drivers of the 5 minute idling limit. The specific requirements and exceptions in the regulation can be reviewed at the following web site: www.arb.ca.gov/msprog/truck-idling/2485.pdf.</p> <p><u>Idling Restrictions for off-Road Equipment</u></p>	<p>Include measure on grading and construction plans, review and approval of plans, field inspection</p>	<p>Prior to issuance of construction permits, during construction</p>	<p>Applicant, Contractor, County Planning and Building Department, San Luis Obispo APCD</p>

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
	<p>a. Off-road diesel equipment shall comply with the 5 minute idling restriction identified in Section 2449(d)(3) of the California Air Resources Board's In-Use off-Road Diesel regulation: www.arb.ca.gov/regact/2007/ordiesl07/frooal.pdf.</p> <p>b. Signs shall be posted in the designated queuing areas and job sites to remind off-road equipment operators of the 5 minute idling limit.</p>			
Biological Resources				
BR/mm-1	<p>Prior to issuance of construction permits, the applicant shall submit documentation verifying designation of a qualified environmental monitor for all measures requiring environmental mitigation to ensure compliance with Conditions of Approval and EIR mitigation measures. The monitor shall be responsible for: (1) ensuring that procedures for verifying compliance with environmental mitigations are followed; (2) lines of communication and reporting methods; (3) daily and weekly compliance reporting; (4) construction crew training regarding environmentally sensitive areas; (5) authority to stop work; and (6) action to be taken in the event of non-compliance. Monitoring shall be at a frequency and duration determined by the affected natural resource agencies (e.g., USACE, CDFW, RWQCB, California Coastal Commission, USFWS, and the County).</p>	<p>Review and approval of documentation, submittal of monitoring reports</p>	<p>Prior to issuance of construction permits; prior to and during construction</p>	<p>Applicant, Biological Monitor, County Planning and Building Department</p>
BR/mm-2	<p>Prior to the initiation of construction, the environmental monitor shall conduct environmental awareness training for all construction personnel. The environmental awareness training shall include discussions of sensitive habitats and animal species in the immediate area. Topics of discussion shall include: general provisions and protections afforded by the Endangered Species Act; measures implemented to protect special-status species; review of the project boundaries and special conditions; the monitor's role in project activities; lines of communications; and procedures to be implemented in the event a special-status species is observed in the work area.</p>	<p>Submittal of awareness training sign-in sheet</p>	<p>Prior to initiation of construction; during construction as necessary with new crew members</p>	<p>Applicant, Biological Monitor, County Planning and Building Department</p>

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
BR/mm-3	At the time of application for construction permits all grading plans shall clearly show the location of project delineation fencing, including protection fencing surrounding the Monterey cypress tree on the southern property boundary.	Review and approval of plans	Upon application for construction permits	Applicant, County Planning and Building Department
BR/mm-4	Prior to the initiation of construction, the applicant's contractors and the environmental monitor shall coordinate the placement of project delineation fencing throughout the work areas. The environmental monitor shall field fit the placement of the project delineation fencing to minimize impacts to sensitive resources. The project delineation fencing shall remain in place and functional throughout the duration of the project. During construction, no project related work activities shall occur outside of the delineated work area.	Submittal of monitoring reports	Prior to and during construction	Applicant, Contractor, Biological Monitor, County Department of Planning and Building
BR/mm-5	At the time of application for grading permits, all applicable plans shall clearly show stockpile and staging areas. Stockpiles and staging areas shall not be placed in areas that have potential to experience significant runoff during the rainy season. All project-related spills of hazardous materials within or adjacent to project sites shall be cleaned up immediately. Spill prevention and cleanup materials shall be on-site at all times during construction. The staging areas shall conform to standard BMPs applicable to attaining zero discharge of storm water runoff. At a minimum, all equipment and vehicles shall be checked and maintained on a daily basis to ensure proper operation and to avoid potential leaks or spills. Maintenance, cleaning, and refueling of equipment and vehicles shall not be permitted onsite, within adjacent beach areas, or on Studio Drive.	Review and approval of plan, submittal of monitoring reports	Upon application for grading permits, prior to and during construction	Applicant, Contractor, Biological Monitor, County Department of Planning and Building
BR/mm-6	Prior to issuance of construction permits, the applicant shall submit a detailed sediment and erosion control plan for approval, which shall address both temporary and permanent measures to control erosion and reduce sedimentation. Erosion and soil protection shall be provided on all cut and fill slopes. Revegetation shall be facilitated by mulching, hydro-seeding or other methods, and shall be initiated as soon as possible after completion of grading, and prior to the onset of the rainy season	Review and approval of plan, submittal of monitoring reports	Prior to issuance of construction permits, prior to and during construction	Applicant, Contractor, Biological Monitor, County Department of Planning and Building

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
	(October 15). Permanent revegetation and landscaping shall emphasize native shrubs, and trees, to improve the probability of slope and soil stabilization without adverse impacts to slope stability due to irrigation infiltration and long-term root development. All plans shall show that sedimentation and erosion control measures are installed prior to any other ground disturbing work.			
BR/mm-7	<p>Upon application for construction permits, the following measure shall be included on all applicable plans: The applicant shall avoid ground disturbing activities conducted during the snowy plover nesting season to the extent feasible. If work activities must occur during the nesting season the following measures shall be taken:</p> <ol style="list-style-type: none"> a. Prior to installation of the project delineation fencing and the commencement of site grading, a qualified biologist shall conduct a series of pre-construction nesting bird surveys for western snowy plover. Surveys shall be conducted every other day for two weeks prior to any project related disturbances. b. Surveys for snowy plovers shall include walking through all potential nesting and foraging habitat within 300 feet of the site on each survey day. The survey area shall include all available snowy plover nesting habitat within 300 feet of anticipated project activities. c. The number of snowy plover individuals observed and their activities (e.g. nesting, foraging, resting, etc.) shall be documented. All documented occurrences would be reported to USFWS and documented on the CNDDDB. d. If nesting activity is identified, all project activities within 300 feet of the nest shall be delayed until the nesting activity has ceased. e. During construction, the environmental monitor shall conduct snowy plover surveys twice a week (preferably two to three days apart). 	Review and approval of plan, submittal of monitoring reports	Upon application for construction permits, prior to and during construction	Applicant, Contractor, Biological Monitor, County Department of Planning and Building

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
BR/mm-8	<p>Upon application for construction permits, the following measure shall be included on all applicable plans: If commencement of construction begins between March and September, the environmental monitor shall conduct pre-construction nesting bird surveys. If nesting activity is identified, the following measures shall be implemented:</p> <ol style="list-style-type: none"> If active nest of common passerine or shorebird species' are observed in the work area or within 100 feet of the work area, construction activities shall be modified and or delayed as necessary to avoid direct take or indirect disturbance of the nests, eggs, or young. If active nest sites of raptors or other special-status species are observed within the work area or 300 feet of the work area, the environmental monitor shall establish a suitable buffer around the nest site. Construction activities in the buffer zone shall be prohibited until the young have fledged the nest and achieved independence. Active raptor or special-status species nests should be documented by a qualified biologist and a letter report should be submitted to the County, USFWS, and CDFW, documenting project compliance with the MBTA and applicable project mitigation measures. □ 	Review and approval of plan, submittal of monitoring reports	Upon application for construction permits, prior to ground disturbance and construction as specified	Applicant, Biological Monitor, County Department of Planning and Building
BR/mm-9	<p>Upon application for construction permits, the following measure shall be included on all applicable plans: Prior to site grading, the environmental monitor shall conduct a survey for coast horned lizard and other reptiles. The surveyor shall utilize hand search methods in areas of disturbance where coast horned-lizards are expected to be found (e.g., under shrubs, other vegetation, or debris). Any lizards located during this survey should be safely removed from the construction area and placed in suitable habitat.</p>	Review and approval of plans, submittal of monitoring report	Upon application for construction permits, prior to ground disturbance	Applicant, Contractor, Biological Monitor, County Department of Planning and Building
Geology and Soils				
GS/mm-1	<p>Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which incorporate the recommendations identified in the Engineering Evaluation</p>	Review and approval of plans, building inspections	Prior to issuance of construction permits, during building	Applicant, Contractor, Engineer of Record, County Department of

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
	(Shoreline Engineering 2012) and Updated Geotechnical Investigation (GSI Soils, Inc.) dated December 27, 2011, specifically the recommendations identified in Section 5.2 – Preparation of the Building Pad, Section 5.3 – Structural Fill, Section 5.4 – Drilled Piers, Section 5.5 – Conventional Deepened Foundation, Section 5.6 – Slab Construction, and Section 5.9 – Surface and Subsurface Drainage.		inspections	Planning and Building
GS/mm-2	<p>Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which incorporate the recommendations identified in the Updated Geotechnical Investigation (GSI Soils, Inc.) dated December 27, 2011, and specifically the following:</p> <ul style="list-style-type: none"> a. All surface and subsurface deleterious materials shall be removed from the proposed building area and disposed of offsite. This includes, but is not limited to, any buried utility lines, loose fills, debris, building materials, and any other surface and subsurface structures. b. Voids left from site clearing shall be cleaned and backfilled as recommended for structural fill. c. Once the site has been cleared, the exposed ground surface shall be stripped to remove surface vegetation and organic soil. 	Review and approval of plans, building inspections	Prior to issuance of construction permits, during building inspections	Applicant, Contractor, Engineer of Record, County Department of Planning and Building
GS/mm-3	Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which incorporate the following: recommendations for slope stability identified in the Updated Geotechnical Investigation (GSI Soils, Inc.), dated December 27, 2011, specifically the recommendations identified in Section 5.10 – Temporary Excavations and Slopes; and Shoring Detail prepared by Shoreline Engineering (January 2012, updated September 20, 2012).	Review and approval of plans, building inspections	Prior to issuance of construction permits, during building inspections	Applicant, Contractor, Engineer of Record, County Department of Planning and Building
GS/mm-4	Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which include the use of deepened pier foundations identified in the Engineering Evaluation (Shoreline Engineering, Inc.), dated January 2012, and Updated Geotechnical Investigation (GSI Soils, Inc.), dated December 27, 2011, specifically the recommendations	Review and approval of plans, building inspections	Prior to issuance of construction permits, during building inspections	Applicant, Contractor, Engineer of Record, County Department of Planning and Building

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
	identified in Section 5.2 – Preparation of Building Pad, Section 5.4 – Drilled Piers, and Section 5.5 – Conventional Deepened Foundation.			
GS/mm-5	Prior to issuance of a construction permit, the applicant shall submit grading and construction plans, which incorporate the recommendations identified in the Updated Geotechnical Investigation (GSI Soils, Inc.), dated December 27, 2011, specifically the recommendations identified in Section 5.1 – Clearing and Stripping, Section 5.2 – Preparation of Building Pad, and Section 5.3 – Structural Fill.	Review and approval of plans, building inspections	Prior to issuance of construction permits, during building inspections	Applicant, Contractor, Engineer of Record, County Department of Planning and Building
GS/mm-6	Prior to issuance of grading and construction permits, the applicant shall submit a drainage plan for review and approval by the County Department of Public Works. The drainage plan shall be coordinated with the sedimentation and erosion control plan, be consistent with CZLUO §23.050.036 and 040, and specifically include engineered energy dissipators and controls that would limit peak runoff to pre-development levels.	Review and approval of plans, building inspections	Prior to issuance of construction permits, during building inspections	Applicant, Contractor, Engineer of Record, County Department of Planning and Building, County Department of Public Works
Noise				
N/mm-1	<p>Upon application for building permits, the project applicant shall include in the project design the following standard mitigation measures for interior noise mitigation provided in the Noise Element for levels in the 60-65 dBA range:</p> <ul style="list-style-type: none"> a. Air conditioning or a mechanical ventilation system; b. Windows and sliding glass doors mounted in low air infiltration rate frames (0.5 cubic feet per minute or less, per American National Standards Institute [ANSI] specifications); and, c. Solid core exterior doors with perimeter weather stripping and threshold seals. 	Review and approval of plans, final inspection	Upon application for building permits, final inspection	Applicant, Contractor, County Department of Planning and Building

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
<i>Water</i>				
WAT/mm-1	<p>Upon application for construction permits, the applicant shall submit grading and construction plans showing BMPs, and shall implement BMPs during grading and construction activities. BMPs shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> a. Erosion control barriers shall be applied, such as silt fences, hay bales, drain inlet protection, and gravel bags; b. Disturbed areas shall be stabilized with vegetation or hard surface treatments upon completion of construction in any specific area. c. All inactive disturbed soil areas are required to be stabilized with both sediment and temporary erosion control prior to the onset of the rainy season (October 15 to April 15). 	Review and approve plans, field inspection	Upon application for construction permits, prior to and during construction	Applicant, Contractor, County Department of Planning and Building
WAT/mm-2	Prior to issuance of grading and construction permits, the applicant shall submit a copy of the RWQCB-issued stormwater construction permit. The permit shall be on-site during all major grading and construction activities.	Confirm receipt of stormwater construction permit	Prior to issuance of grading and construction permits, during construction	Applicant, Contractor, County Department of Planning and Building

CHAPTER 8

REFERENCES AND REPORT PREPARATION

8.1 REFERENCES

8.1.1 Aesthetic Resources

County of San Luis Obispo Department of Planning and Building
2007 *Coastal Plan Policies – Local Coastal Program Policy Document.*

State of California
2013 Public Resources Code Division 20 California Coastal Act.

8.1.2 Cultural Resources

Cleath and Associates

2006 *Geologic Conditions at the Loperena Property, Studio Drive, Cayucos, California, Assessor's Parcel Number 064-253-007.* On file with the County of San Luis Obispo Planning and Building Department.

Dietler, John and Leroy Laurie

2010 *Extended Phase I Study of CA-SLO-879 for the Morro Bay to Cayucos Connector Project, City of Morro Bay and the Town of Cayucos, San Luis Obispo County, California.* Submitted to the County of San Luis Obispo General Services Agency.

GSI Soils, Inc.

2007 *Geotechnical Investigation, Proposed Residence, Lot 41 Studio Drive, Cayucos, California, Project No. 6-4210.* On file with the County of San Luis Obispo Planning and Building Department.

Lee, Sean

2006 *Archaeological resources survey and impact assessment for the Loperena Property, APN 064-253-007, in the Town of Cayucos, San Luis Obispo County, California.* On file with the County of San Luis Obispo Planning and Building Department.

2007 *Response to the Request for Review of the Environmental Document-Loperena Project MUP/CDP DRC2005-00216.* On file with the County of San Luis Obispo Planning and Building Department.

8.1.3 Geology and Soils

Cleath & Associates

2006 *Geologic Conditions at the Loperena Property, Studio Drive, Cayucos, California, Assessor's Parcel Number 064-253-07*

2007a *Addendum to Report of Geologic Conditions at the Loperena Property, Studio Drive, Cayucos, California Assessor's Parcel Number 064-253-07 (Cleath & Associates, May 2, 2006)*

2007b *Memorandum: Summary of Conclusions and Recommendations of Cleath & Associates Study of Geologic Conditions at the Loperena Property, Studio Drive, Cayucos, California, Assessor's Parcel Number 064-253-007, May 2, 2006*

2007c *Response to Comments Prepared by Mr. Michael R. Jencks on Loperena Engineering Geology Report*

Cleath-Harris Geologists

2012a *Updates to Engineering Geology Reports for the Proposed Loperena Residence, Lot 41, Studio Drive, Cayucos, California*

2012b *Update #2 to Engineering Geology Reports for the Proposed Loperena Residence, Lot 41, Studio Drive, Cayucos, California*

Cotton Shires Associates

2011 *Technical Report: Geotechnical and Coastal Hazards Review, Loperena Minor Use Permit/Coastal Development Permit APN 064-253-07, Studio Drive, Cayucos San Luis Obispo County, California*

2012a *Supplemental Geotechnical Peer Review for Environmental Impact Report Preparation*

2012b *Second Supplemental Geotechnical Peer Review for Environmental Impact Report Preparation*

2013 *Additional Geotechnical and Coastal Engineering Review and Response Technical Comments*

GeoSoils, Inc.

2011 *Discussion of Coastal Hazards and Wave Runup, Northwest and Immediately Adjacent to 2612 Studio Drive (APN 064-253-07), Cayucos, San Luis Obispo County, California*

2013 *Supplemental Discussion of Coastal Hazards and Wave Runup, APN 064-253-07, Cayucos, San Luis Obispo County, California*

GSI Soils, Inc.

2007 *Geotechnical Investigation, Proposed Residence, Lot 41, Studio Drive, Cayucos, California*

2011 *Updated Geotechnical Investigation Proposed Residence Lot 41 Studio Drive Cayucos, California*

2012 *Response to Supplemental Geotechnical Peer Review, Loperena Residence Lot 41 Studio Drive Cayucos, California*

National Oceanographic and Atmospheric Administration (NOAA).

2011 *National Ocean Survey, Operational Tidal Station Port San Luis.*

Shoreline Engineering

2012a *Engineering Evaluation Studio Drive Residence Cayucos APN 064-253-007 County of San Luis Obispo, CA*

2012b *Loperena, County of San Luis Obispo Responses to Supplemental Geotechnical Peer Review for EIR Preparation, 8/21/12*

Volbrecht Surveys

Undated *Mean High Water Definition NW end of Studio Drive San Luis Obispo County, California Assessor's Parcel No. 064-253-007; Volbrecht Surveys*

U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS)

1984 *Soil Survey of San Luis Obispo County, California Coastal Part.*

U.S. Geological Survey (USGS)

2006 *National Assessment of Shoreline Change Part 3: Historical Shoreline Change and Associated Coastal Land Loss Along Sandy Shorelines of the California Coast.*

8.1.4 Issue Areas with Less than Significant Impacts**8.1.4.1 Agricultural Resources**

California Department of Conservation, Division of Land Resource Protection

2008 *Farmland Mapping and Monitoring Program – San Luis Obispo County Maps.* Available at: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2008/slo08.pdf>. Accessed March 31, 2011.

California Department of Food and Agriculture

2011 *California Agricultural Statistics Review 2011-2012.*

County of San Luis Obispo Department of Agriculture/Weights and Measures

2010 *Weeding Out Our Pests, 2009 Annual Report.*

County of San Luis Obispo Department of Planning and Building

2010a *San Luis Obispo County General Plan – Conservation and Open Space Element.*

2010b *San Luis Obispo County General Plan – Agriculture Element.*

United States Department of Agriculture, Natural Resources Conservation Service

2011 *Custom Soil Resource Report.* United States Department of Agriculture, National Cooperative Soil Survey.

United States Department of Agriculture, Soil Conservation Service

1984 *Soil Survey of San Luis Obispo County, California – Coastal Part.* United States Department of Agriculture, National Cooperative Soil Survey.

8.1.4.2 Air Quality and Climate Change

California Environmental Protection Agency, California Air Resources Board

2005 *Air Quality and Land Use Handbook: A Community Health Perspective.*

2010 *Ambient Air Quality Standards.*

County of San Luis Obispo Air Pollution Control District

2009 *CEQA Air Quality Handbook, A Guide for Assessing the Air Quality Impacts for Projects Subject to CEQA Review.*

2001 *2001 Clean Air Plan, San Luis Obispo County.*

8.1.4.3 Biological Resources

County of San Luis Obispo Department of Planning and Building

2007 *Coastal Plan Policies – Local Coastal Program Policy Document.*

2010 *Morro Bay to Cayucos Connector Final Environmental Impact Report.*

California Department of Fish and Game (CDFG).

2000 *Guidelines for assessing the effects of proposed projects on rare, threatened, and endangered plants and natural communities. State of California, The Resources Agency.*

2009 *California Department of Fish and Game (CDFG). CDFG Species Accounts, Life History Accounts for Species in the California Wildlife Habitat Relationships System.*

California Natural Diversity Data Base (CNDDB)

2012 *Morro Bay North, Morro Bay South, Cayucos, San Luis Obispo, Atascadero, Templeton, York Mountain, and Cypress Mountain, USGS 7.5- minute quadrangle overlays. California Department of Fish and Game. Sacramento, California.*

California Native Plant Society (CNPS)

2001 *Inventory of rare and endangered plants of California, 6th ed. Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society, Sacramento, CA. x+388pp.*

2012 *California Native Plant Society online inventory of rare and endangered plants. Online: <http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>. Accessed November 15, 2012.*

Hickman, J. Ed.

1993 *The Jepson manual: higher plants of California.* University of California Press. Berkeley, California.

Holland, V.L. and D.J. Keil.

1995 *California Vegetation.* Kendall/Hunt Publishing, Iowa.

Holland, Robert F.

1986 *Preliminary descriptions of the terrestrial natural communities of California.* California Department of Fish and Game. Sacramento, California.

Hoover, Robert F.

- 1970 *The vascular plants of San Luis Obispo County, California*. University of California Press. Berkeley, California.

Reed, Porter B. Jr.

- 1988 *National list of plant species that occur in wetlands: California (Region 0)*. National Ecology Research Center, U.S. Fish and Wildlife Service, St. Petersburg, Florida.

Natural Resources Soil Conservation Service (NRCS)

- 1984 *Soil survey of San Luis Obispo County, California, Coastal Part*. United States Department of Agriculture, Washington, D.C.

United States Geological Survey (USGS)

- 1994 7.5 minute series quadrangle for Morro Bay North

United States Fish and Wildlife Service (USFWS)

- 2007 *Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (Charadrius alexandrinus nivosus)*. In 2 volumes. Sacramento, California.

8.1.4.4 Hazards and Hazardous Materials

California Department of Transportation

2011. *California Scenic Highway Mapping System*. Available at: http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm. Accessed: April 11, 2011.

County of San Luis Obispo Department of Planning and Building

- 1999 *San Luis Obispo County General Plan – Safety Element*.

County of San Luis Obispo Office of Emergency Services

- 2008 *San Luis Obispo County Emergency Operations Plan*.

- 2006 *San Luis Obispo County/Cities Nuclear Power Plan Emergency Response Plan*.

- 2005 *Tsunami Emergency Response Plan*.

8.1.4.5 Noise

County of San Luis Obispo Department of Planning and Building

- 1992 *San Luis Obispo County General Plan – Noise Element*.

8.1.4.6 Population and Housing

County of San Luis Obispo Department of Planning and Building

- 2009 *Estero Area Plan*.

- 2009 *San Luis Obispo County General Plan – Housing Element*.

8.1.4.7 Public Services and Utilities

California State Water Resources Control Board, Regional Water Quality Control Board, Central Coast Region

2010 *Regional Water Quality Control Board, Central Coast Region – Basin Plan.*

Cayucos Elementary School District School Board

2010 *2009-2010 School Accountability Report Card.*

County of San Luis Obispo Department of Planning and Building

2009 *Estero Area Plan.*

8.1.4.8 Recreation

County of San Luis Obispo Department of Planning and Building

2006 *San Luis Obispo County General Plan – Parks and Recreation Element.*

County of San Luis Obispo Bicycle Advisory Committee and Department of Public Works (Transportation Division)

2010 *County Bikeways Plan – 2010 Update.*

County of San Luis Obispo Council of Governments, Regional Rideshare

2010 *San Luis Obispo County Bike Map – North County.* Available at: <http://rideshare.org/BikeMaps.aspx>. Accessed April 11, 2011.

8.1.4.9 Transportation and Circulation

County of San Luis Obispo Council of Governments

2010 *Regional Transportation Plan – Preliminary Sustainable Communities Strategy.*

County of San Luis Obispo Department of Planning and Building

1979 *Transportation Plan – Circulation Element.*

2009 *Coastal Zone Framework for Planning – Transportation Element.*

2009 *Estero Area Plan.*

8.1.4.10 Water

County of San Luis Obispo Department of Planning and Building

2011 *2009-2010 Annual Resource Summary Report San Luis Obispo County General Plan.*

8.1.4.11 Land Use

California State Water Resources Control Board, Regional Water Quality Control Board, Central Coast Region

2010 *Regional Water Quality Control Board, Central Coast Region – Basin Plan.*

County of San Luis Obispo Air Pollution Control District

2001 *2001 Clean Air Plan.*

County of San Luis Obispo Department of Planning and Building

2007 *Coastal Plan Policies – Local Coastal Program Policy Document.*

2009 *Estero Area Plan.*

2009 *San Luis Obispo County General Plan - Framework for Planning, Coastal Zone.*

2010 *Coastal Zone Land Use Ordinance.*

8.2 EIR PREPARERS

This EIR has been prepared by SWCA Environmental Consultants, in association with the County of San Luis Obispo. Project Director for the EIR was Bill Henry, and Project Manager was Shawna Scott. The following is a list of individuals responsible for preparation of the EIR.

Responsibilities	EIR Preparer
Project Description Alternatives Analysis	Shawna Scott, SWCA
Environmental Setting Growth Inducing Impacts Issue Areas with Less than Significant Impacts	Emily Creel, SWCA
Aesthetic Resources	Bob Carr, Landscape Architect
Cultural Resources	Leroy Laurie, SWCA
Geology and Soils	Cotton, Shires, and Associates
Document Graphics	Adriana Neal, SWCA
Technical Editing	Jaimie Jones, SWCA