FINAL

Environmental Impact Report

for the
Busick Tract Map
S890232T; Tract 1789
Environmental Determination No. 90-061

SCH No. 1994041043

Prepared for

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

October 2007

MORRO GROUP, INC.
Environmental Services

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I. INTRODUCTION

The County of San Luis Obispo, Department of Planning and Building, serving as the lead agency under the California Environmental Quality Act (CEQA), has prepared this Environmental Impact Report (EIR) to assess the impacts that may result from the development of the proposed tract map. The applicant proposes to subdivide an existing 47.54-acre parcel into 16 residential lots within the San Luis Bay Planning Area in the County of San Luis Obispo.

The purpose of this EIR is to: identify the project's significant effects on the environment, indicate the manner in which such significant effects can be mitigated or avoided, and identify alternatives to the proposed project that avoid or reduce these impacts. This EIR is also intended to serve as an informational document for use by the County of San Luis Obispo, other agencies, the general public, and decision makers in their consideration and evaluation of the environmental consequences associated with the implementation of the proposed project. This document is provided to the general public, public agencies, and decision makers 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 for the analysis of the proposed project, as well as in the development and evaluation of alternatives to the proposed project.

A. PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

San Luis Obispo County requires a certified EIR in order to approve and record the proposed tract map. The EIR would also provide other permitting and responsible agencies with varying degrees of information they would require to exercise their jurisdictional responsibilities on the proposed project.

This EIR has been prepared in accordance with the state and county administrative guidelines established to comply with the California Environmental Quality Act of 1970, as amended. Section 15151 of the State CEQA guidelines provides the following standards for EIR adequacy:

> *"An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection; but for adequacy, completeness, and a good faith effort at full disclosure."*

B. EIR FORMAT AND CONTENTS

Contents of the EIR were determined from the results of an Initial Study (IS) prepared by the County of San Luis Obispo (refer to Appendix A). A Notice of Preparation (NOP) was prepared and sent to responsible and trustee agencies. There were no responses to the NOP.

Based on the findings of the IS/NOP, a determination was made that an EIR is required to address the potentially significant environmental effects of the proposed project. The scope of the EIR includes issues identified by the lead agency during the preparation of the IS/NOP for the proposed project, as well as environmental issues raised by agencies and the general public in response to the IS/NOP.

The EIR is divided into the following major sections:

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

Summary. Provides a brief summary of the project description, impacts and mitigation measures, alternatives, growth inducing impacts, and the monitoring program.

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. This section includes a summary of the project's consistency with applicable plans and policies and a cumulative list of projects. The cumulative list of projects (cumulative development scenario) includes subdivisions, residential developments, and commercial projects within the Arroyo Grande Fringe area within the County of San Luis Obispo and the City of Arroyo Grande.

Environmental Impacts and Mitigation Measures. Discusses the environmental setting as it relates to the various issue areas, regulatory setting, thresholds of significance, impact assessment and methodology, project-specific impacts and mitigation measures, cumulative impacts and residual impacts. The following are the potentially significant environmental effects identified during the preparation of the IS/NOP, which are addressed in this EIR:

- Geologic, Soils and Seismic Hazards
- Drainage and Erosion
- Biological Resources
- Visual Resources
- Traffic and Circulation
- Air Quality
- Agricultural Resources
- Fire Safety

Alternatives. Summarizes the environmental advantages and disadvantages associated with the proposed project and the alternatives. As required, the "No Action" alternative is included

among the alternatives considered. If the No Action alternative is the environmentally superior alternative, then an environmentally superior alternative is chosen from the other alternatives.

Other CEQA Concerns. Identifies growth inducing impacts, including the spatial, economic, and/or population growth impacts that may result from development of the proposed project. Discussion also includes irreversible environmental changes.

Mitigation Monitoring and Reporting Plan. This section contains a listing of all mitigation measures proposed as part of the EIR, the methods by which they would be implemented, and the method by which success criteria would be measured, and the remediation measures should success criteria not be met.

C. AGENCY USE OF THIS DOCUMENT

The County of San Luis Obispo, as the CEQA lead agency, is responsible for administering the preparation of the EIR and would be responsible for certifying the Final EIR. The lead agency would use the EIR as an informational document to assist in the decision-making process, ultimately resulting in the approval, denial, or assignment of conditions to the proposed project. The following jurisdictions may also use this EIR in reviewing and issuing their respective permits and authorizations (as applicable):

- California Department of Fish and Game
- Regional Water Quality Control Board
- U.S. Army Corps of Engineers

D. REVIEW OF THE DRAFT EIR AND RE-CIRCULATED DRAFT EIR

Pursuant to CEQA Guidelines Section 15088.5(a), recirculation of a Draft EIR is required if significant new information is added to the EIR after the close of the public comment period on the Draft EIR, but before certification of the Final EIR. The re-circulated Draft EIR is required to include a summary of the revisions made to the previously circulated Draft EIR (Section 15088.5(g)). A discussion explaining the reason for recirculation of this EIR is provided below.

1. Draft EIR Review

A Draft EIR for the proposed project was circulated for public comment in January 2004. Based on comments received from the City of Arroyo Grande and adjacent property owners, the Draft EIR has been revised and re-circulated for comment. The January 2004 Draft EIR identified potentially significant traffic impacts resulting from the generation of traffic trips affecting the El Campo Road and State Route 101 intersection, which currently operates at a Level of Service F. The Draft EIR adopted City recommended mitigation including payment of traffic impact fees to the City of Arroyo Grande to be used towards future studies associated with the proposed construction of El Campo Road and State Route 101 Interchange Project. The recommended mitigation measures arose during preparation of the Draft EIR. During this time, the City of Arroyo Grande Public Works Director was contacted to discuss potential mitigation options, and the traffic impact fee was determined to be a feasible mitigation measure to mitigate potentially significant impacts to the El Campo Road and State Route 101 intersection to a level of insignificance (Don Spagnolo; December 12, 2003).

a. El Campo and State Route 101 Interchange Project

The City of Arroyo Grande was in the position to recommend such mitigation because the City initiated the process to construct improvements to the existing El Campo Road and State Route 101 intersection, which is currently a sub-standard, at-grade intersection with significant traffic safety issues. The California Department of Transportation (Caltrans) will provide oversight review on the interchange project (Tom Houston; March 25, 2004). San Luis Obispo Council of Governments (SLOCOG) is also providing oversight and some funding for the project (James Worthley; March 25, 2004). The City prepared and submitted a Project Study Report (PSR) for the El Campo Road and State Route 101 Interchange Project. The PSR is a project initiation document that is used to program the project development support for State funding. The PSR describes the transportation problem, identifies the scope of the viable alternatives, and provides an estimate of the project development support resources required for the specific project. The City Public Works Director stated that developer-paid traffic mitigation fees provided a portion of the funding to prepare the PSR, and that he is currently seeking funds for the next stage of review (Don Spagnolo; March 25, 2004); that is why the El Campo mitigation was initially determined to be feasible. Caltrans approved the PSR, and the next step is the Project Approval/Environmental Document (PA/ED) phase. The PA/ED phase includes public meetings, determination of the preferred alternative, preparation of technical studies (e.g. biological, noise, cultural resource, visual resource, etc.) and the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) environmental review process.

b. Draft EIR Agency Comments

Based on comments received from the City of Arroyo Grande Community Development Director in response to the Draft EIR and the above referenced mitigation measure, the City stated that "the traffic and circulation impacts of the project on the deficient and unsafe El Campo intersection with State Route 101 are not mitigated by a 'fair share' contribution toward future improvement of the El Campo Interchange" and that "one access alternative that should be reconsidered is…the alternative primary access from the City of Arroyo Grande, by extension of Orchard Drive" (Rob Strong; March 9, 2004). Following circulation of the Draft EIR, the City stated that the proposed mitigation measure requiring the applicant to contribute traffic impact fees to the City would not fully mitigate impacts to the El Campo Road and State Route 101 intersection. The reason given by the City for this change in their position was that the City had postponed future studies and construction of the intersection improvements based on lack of funding (Rob Strong; March 23, 2004 and Don Spagnolo; March 25, 2004). The estimated timeframe for further study and construction of improvements is currently undetermined; therefore this mitigation was no longer considered feasible.

c. Access History

When the City of Arroyo Grande approved the adjacent residential tract development to the north, Vista Del Mar, the City requested a secondary access road to extend from Orchard Drive to Valley Road. A portion of the desired alignment would cross property owned by the Lucia Mar Unified School District and a private landowner. The property owned by the private landowner supports agricultural production. The easement was not granted, and the City did not require a secondary access road extending to Valley Road. The City did not identify any

significant, adverse, unavoidable impacts associated with the Vista Del Mar subdivision, and approved the project with a Mitigated Negative Declaration, but required that a one-foot easement and unlocked gate be placed along the property boundary between Vista Del Mar and the proposed project site. The one-foot easement blocks all access across the County/City property line. An unpaved emergency access road was constructed on the project site, connecting Castillo Del Mar Drive in Vista Del Mar with Coast View Drive in Falcon Ridge Estates. Only emergency vehicles are permitted to use the emergency access road.

The traffic study completed for the proposed project analyzed the traffic impacts associated with primary access to the south via Coast View Drive and Falcon Crest Road. The traffic study determined that the creation of sixteen residential lots would result in the generation of up to 12 A.M. peak hour trips and 16 P.M. peak hour trips (Higgins Associates; April 29, 2002). The traffic study concluded that the generation of these trips would not affect the existing level of service on any affected County roads or intersections (with the exception of El Campo Road and State Route 101, which currently operates at a deficient LOS F). Based on the City of Arroyo Grande *Traffic Model Update* (2001), the peak hour level of service for City intersections within the Traffic Way, Fair Oaks, Valley Road, Orchard Drive, and State Route 101 interchange ramps range from B to C. The City did not state whether or not the addition of 12 A.M. peak hour trips and 16 P.M. peak hour trips would reduce the level of service on any City roads or intersections or result in significant, adverse, traffic impacts.

d. Applicant Consideration of Redesign

Based on comments received from the City following public review of the Draft EIR for the proposed project, the applicant pursued consultation with the City regarding reconsideration of removing the one-foot easement so as to allow the proposed project to take access to the north and alleviate the Class I impact and associated traffic safety issues. During a meeting attended by County staff, City staff, school district staff, the private landowner, and the applicant, the City stated that access via Castillo Del Mar Drive and Orchard Street would be reconsidered by the City provided the applicant construct a secondary access road extending from Orchard Drive to Valley Road (Tony Ferrara; August 19, 2004). The secondary access road would extend from the western boundary of Vista Del Mar to Valley Road through property owned by the Lucia Mar Unified School District and a private landowner. A portion of the desired alignment would be located on land currently farmed by the private landowner. Based on personal communications with the school district and private landowner (who stated he would not grant an easement), it was unlikely that an easement would be granted to allow construction of the access road connection to Valley Road (August 19, 2004).

After the above approach failed, the applicant submitted a request to the City of Arroyo Grande for consideration of the access proposal, and proposed payment of fees to construct future improvements including an access road connector to Valley Road in exchange for removal of the one-foot easement and access via Castillo Del Mar Drive and Orchard Drive. The Arroyo Grande City Council considered and denied the applicant's request during a City Council meeting on September 14, 2004.

e. Revisions to the Draft EIR

Therefore, at the time of publication of the Revised Draft EIR, there were no other access options for the proposed project other than Coast View Drive to the south, which would result in the generation of 6 A.M. peak hour trips and 9 P.M. peak hour trips affecting the El Campo Road and State Route 101 intersection. Based on the above discussion, there were no mitigation options available to mitigate impacts to the El Campo Road and State Route 101 intersection, resulting in a Class I impact and the need to revise and re-circulate the Draft EIR.

Section V.E. (Traffic and Circulation) of the Draft EIR was revised to address new information from the City of Arroyo Grande regarding the El Campo Road and State Route 101 Interchange Project, including a revision to the traffic impact determination. The Revised Draft EIR stated that the proposed project would generate trips affecting the El Campo Road and State Route 101 intersection for an unknown period of time prior to the construction of physical improvements, and would result in a significant, adverse, unavoidable (Class I) traffic impact. Additional revisions to the Draft EIR in response to comments received during the public review period are noted in Section V.C. (Biological Resources), Section V.F. (Air Quality), and Section VI.A. (Alternatives).

2. Review of Re-circulated Draft EIR

The Re-circulated Draft EIR was distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interest parties, as well as all parties requesting a copy of the Re-circulated Draft EIR in accordance with Public Resources Code 21092(b)(3). The 45-day public review period for the Re-circulated Draft EIR started on **April 4, 2005** and during this period the Re-circulated Draft EIR, including technical appendices, was available for review at the following location:

County of San Luis Obispo
Department of Planning and Building
County Government Center Room 310
San Luis Obispo, CA 93408-2040

On behalf of the lead agency, comments on the Re-circulated Draft EIR were addressed to:

Ms. Julie Eliason, Environmental Resource Specialist
Division of Environmental and Resource Management
Department of Planning and Building
County Government Center, Room 310
San Luis Obispo, CA 93408

The 45-day public review period for the Revised Draft EIR ended on **May 23, 2005**. Written responses to all significant environmental issues raised in the Draft EIR have been prepared and are available for review in Appendix F. Responses to comments on the Re-circulated Draft EIR would be prepared and available for review at least 10 days prior to the public hearing before the County of San Luis Obispo when the lead agency would consider the certification of the Final EIR. The environmental comments and their responses to the Draft EIR and Re-circulated Draft

EIR would be included as part of the Final EIR and the environmental record for consideration by decision-makers for the project.

3. Final EIR

Based on comments received by the California Department of Forestry / County Fire Department (CAL FIRE) in response to the Revised Draft EIR, the proposed project design would result in an additional significant impact due to the lack of adequate secondary access (Rob Lewin, May 23, 2005). Following consultation with CAL FIRE, the applicant initiated additional negotiations with the City of Arroyo Grande, the Lucia Mar School District, and John Taylor (private property owner) to permit primary access via Castillo Del Mar Drive.

On May 4, 2006, a Memorandum of Understanding (MOU) was completed and signed by the City of Arroyo Grande, Lucia Mar School District, John Taylor, and project applicants. The MOU states that the City of Arroyo Grande agrees to lift the easement at the terminus of Castillo Del Mar Drive and allow the applicant to use Castillo Del Mar Drive for primary access. Additional components of the MOU require the applicant to: acquire 1.2 acres of prime agricultural land from John Taylor; deed the 1.2 acres of purchased land to the City; provide funding to the City of Arroyo Grande, which the City would use for the development of plans to extend Castillo Del Mar Drive to Valley Road and construction of the roadway; and, contribute to the "in-lieu" fee program to mitigate for the loss of prime farmland. Based on the MOU, the City would be responsible for development of engineering plans and construction of the Castillo Del Mar Drive extension to Valley Road, and would maintain the roadway. The City adopted a Mitigated Negative Declaration (General Plan Amendment Case No. 06-001, Development Code Amendment Case No. 06-001, and Tentative Parcel Map Case No. 06-004), which includes an analysis of the road extension to Valley Road on August 22, 2006.

In response to CAL FIRE comments, the applicant submitted revised plans showing a revised access plan. Primary access would be located at the western boundary of the parcel, and would be provided by Castillo Del Mar Drive. Secondary access would extend to the east, and would connect with Coast View Drive and Falcon Ridge Estates. Implementation of the proposed revised project would minimize the Class I Transportation and Circulation impact at the Highway 101/ El Campo Road intersection to less than significant (refer to Section V.E. Traffic and Circulation). The proposed project changes are incorporated into this Final EIR, which includes two additional resource sections, Agricultural Resources and Fire Safety.

Based on the revised project description and previously disclosed environmental effects (i.e., significant impacts identified in the City of Arroyo Grande MND adopted August 22, 2006), no new significant impacts would occur as a result of new information and project revisions disclosed in this Final EIR. Therefore, CEQA does not require re-circulation of another Draft EIR and a Final EIR has been prepared.

The Final EIR contains the comments received during the Draft EIR and Revised Draft EIR review periods and the responses to these comments. All changes to the EIR resulting from the responses to comments are marked by a vertical line in the left margin.

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II. SUMMARY

This Environmental Impact Report (EIR) assesses the environmental impacts associated with the Busick Tract Map project. Haythem Dawlett, Carlo Alfano, and John Scardino are the Applicants. This EIR is an informational document that is being used by the general public and governmental agencies to review and evaluate the proposed project. The reader should not rely exclusively on the Summary section as the sole basis for judgment of the proposed project and alternatives. The EIR in its entirety should be consulted for information about the project's environmental impacts and associated mitigation measures. The Summary section includes a set of Impact Summary Tables. These tables summarize the impacts and mitigation measures for each component of the proposed project. The impacts and mitigation measures are discussed in detail in Section V of the EIR. The Summary section also identifies the various alternatives analyzed as part of the EIR. The details of the alternatives analysis can be found in Section VI of the EIR.

The purposes of the Summary section and Impact Summary Tables are to provide the reader with a brief overview of the proposed project, the anticipated environmental effects, and the potential mitigation measures that could reduce the severity of the impacts associated with the project. This EIR was prepared in accordance with State and County of San Luis Obispo administrative guidelines established to comply with the California Environmental Quality Act (CEQA).

A number of Federal, State, and local governmental agencies require an environmental analysis of the proposed project consistent with the requirements of CEQA in order to act on the project. These agencies include the County of San Luis Obispo, U.S. Army Corps of Engineers (ACOE), California Department of Fish and Game (CDFG), Regional Water Quality Control Board (RWQCB), and the San Luis Obispo County Air Pollution Control District (SLOAPCD).

A. PROJECT LOCATION AND DESCRIPTION

1. Project Location

The project site is located at the northwestern end of Coast View Drive, approximately 700 feet northwest of Falcon Crest Drive, immediately southwest of State Route 101, south of the City of Arroyo Grande (refer to Figures III-1 through III-3). The site consists of an undeveloped parcel. A gated, unpaved, access road currently runs through the parcel connecting Castillo Del Mar Drive in the Vista Del Mar residential subdivision and Coast View Drive in Falcon Ridge Estates. The access road has an unlocked gate at the City-limit boundary and was historically conditioned for use as emergency access only (refer to Figure III-4).

2. Project Objectives

The objective of the proposed project is to provide residential housing to the southern portion of San Luis Obispo County.

3. Project Characteristics

The applicant is proposing to create sixteen (16) residential parcels in the San Luis Bay Planning Area at a density consistent with the San Luis Obispo County General Plan, retaining a portion

of the project site as non-buildable for future placement within an open space easement (refer to Figure III-5). The single-family residential lots would be sold to individual owners and developed independently. The applicant is proposing to develop project site infrastructure including one main access road, one internal road, drainage facilities, water supply facilities, and sewer connection lines.

As discussed in Chapter I (Introduction), the applicant submitted a revised plan following circulation of the Draft EIR. Based on the revised plan, primary access would be located at the northwestern boundary of the parcel, and would be provided by Castillo Del Mar Drive. Secondary access would extend to the southeast, and would connect with Coast View Drive and Falcon Ridge Estates. The revised plan is essentially the same as "Revised Access Alternative A" identified in the Draft EIR.

Implementation of the proposed revised project would minimize the Class I Transportation and Circulation impact at the Highway 101/ El Campo Road intersection to less than significant (refer to Section V.E. Traffic and Circulation). The proposed project changes are incorporated into this Final EIR, which includes two additional resource sections, Agricultural Resources and Fire Safety.

B. SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table II-1 on the following pages provides a summary of the potential impacts of the proposed project. This table identifies the resource analyzed, project impacts associated with the resource, the scope of impact (i.e., local or regional), proposed mitigation measures, and the residual impacts once the mitigation measures have been incorporated. In accordance with CEQA, the summary tables identify the following types of potential impacts, if any, associated with the proposed development.

Class I Impacts: Significant environmental impacts that cannot be fully mitigated or avoided. The decision maker must adopt a "Statement of Overriding Considerations" as required under CEQA Guidelines Section 15093 if the project is approved.

Class II Impacts: Significant environmental impacts that can be feasibly mitigated or avoided. The decision maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved.

Class III Impacts: Environmental impacts which are adverse but not significant for which the decision maker does not have to adopt "Findings" under CEQA.

TABLE II-1
Summary of Impacts and Mitigation Measures

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
DRAINAGE AND EROSION				
Drainage and Erosion	DE/Impact 2 Grading activities associated with tract improvements and individual lot development conducted during the wet season (October 15 through April 15) or during/immediately following a rain event would result in significant erosion and down-gradient sedimentation	Local	DE/mm-2 Prior to issuance of grading permits, the applicant and/or individual lot owner shall prepare and implement a Sedimentation and Erosion Control Plan per the requirements of LUO Section 22.52.090, which shall address both temporary and permanent measures to control erosion and reduce sedimentation. If vegetation is included as the means to stabilize the soils, it shall be planted at least 30 days before the beginning of the wet season, and watered regularly to ensure adequate root establishment. Otherwise, non-vegetative means shall be employed. DE/mm-3 Prior to issuance of grading and/or construction permits, the applicant shall prepare and implement a Stormwater Pollution Prevention Plan approved by the State Water Resources Control Board.	Insignificant
BIOLOGICAL RESOURCES				
Biological Resources	BR/Impact 1 Construction of the proposed access road, storm water improvements, and detention basin would result in direct disturbance of the ephemeral drainage and areas potentially qualifying as "Waters of the U.S.," including potential areas of wetland resulting in potentially significant impacts.	Local	BR/mm-1 Prior to issuance of construction permit relating to final design and construction of the proposed access road, storm water improvements, and detention basin, a wetland delineation and, if necessary, a jurisdictional determination shall be conducted to determine the presence and extent of "Waters of the U.S.", including wetlands. Results of the wetland delineation shall immediately be submitted to the County Division of Environmental and Resource Management and Army Corps of Engineers (Corps). The applicant shall be responsible for contacting	Insignificant

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			the Corps and California Department of Fish and Game (CDFG) prior to project implementation to determine specific permitting requirements and mitigation responsibilities associated with disturbance of the identified drainage, and any associated areas of wetland. BR/mm-2 Prior to recordation of the final map, the applicant shall obtain all appropriate authorizations and permits from affected resource agencies including, but not limited to a Section 404 permit from the Corps to discharge dredged or fill material into Waters of the U.S. and a 1600 California Department of Fish and Game Streambed Alteration Permit for disturbance of any portion of a channel located beneath the top of bank. If authorization and/or permits are not required, the applicant shall submit documentation from the applicable agency. If construction permits or approval of tract improvements are issued in phases, Corps authorization shall be obtained prior to approval of tract improvements or issuance of construction permit relating to construction of the detention basin or other activities that require ground disturbance within 100 feet of the identified drainage. BR/mm-3 If wetlands, including "Waters of the United States," are identified onsite, prior to approval of tract improvements or issuance of construction permit, the applicant shall submit a wetlands mitigation plan for the approval of the County Division of Environmental and Resource Management and California Department of Fish and Game. If Corps jurisdictional wetlands are present, the	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			plan shall also be submitted to the Corps. The mitigation plan shall be prepared as per the County's Guidelines for Mitigation/Monitoring Plans. The wetlands mitigation plan shall be implemented by the applicant and/or successors-in-interest (Homeowners Association). In addition to any measures and elements required by the Corps, the mitigation plan shall include the following elements: A) Quantification of temporarily and permanently impacted wetland areas; B) Identification of the wetland area to be restored at a mitigation ratio no less than 1:1; C) Methodology for restoration, including a planting site plan, inventory of plants for revegetation, installation of irrigation or other suitable watering method, and scheduling of maintenance activities; and, D) A description of a restoration monitoring plan, success criteria, reporting schedule, and cost estimate to implement the plan. If wetlands are present within the area proposed for construction of the access road and storm water management system, the applicant may minimize the permanently affected area by preparing and submitting a revised plan showing proposed access to parcels south of the proposed Castillo Del Mar extension. If the applicant chooses this option, the revised plan shall clearly demonstrate how the ephemeral drainage shall be restored, stabilized, and maintained to manage storm water flow in a non-erosive manner.	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			BR/mm-4 Prior to issuance of construction permits or approval of tract improvements, the applicant shall provide a cost estimate and set up a trust account to retain a County-approved qualified biological monitor to inspect implementation of County and resource agency conditions of approval. The frequency and duration of monitoring would be determined by the County Division of Environmental and Resource Management and specified within resource agency-issued conditions of approval. If a wetland mitigation plan is required, the biological monitor shall monitor the mitigation efforts for a minimum of three years or earlier or until the performance criteria are met. BR/mm-5 Prior to issuance of construction permit for the proposed storm water detention basin, the applicant shall implement an approved Erosion and Sedimentation Control Plan (required by the County of San Luis Obispo Land Use Ordinance). Implementation of the approved plan, and any necessary modifications in the field shall minimize the potential for indirect disturbance of sensitive aquatic habitats located downstream and off-site (e.g., Los Berros Creek, Arroyo Grande Creek) and shall include the installation of appropriate erosion control devices (i.e., hay bales, silt fences) down-slope of areas experiencing disturbance of the ground surface associated with both infrastructure and residential construction. The project applicant, and/or successors-in-interest (Homeowners Association), shall check erosion control devices on a daily basis to ensure proper function. The County-approved biological monitor shall inspect erosion control measures for a duration and frequency determined by the County and	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			resource agencies, if necessary. Additional measures recommended by the biological monitor, and approved by the County and affected resource agencies, shall be implemented in the field. BR/mm-6 Construction of the proposed storm water detention basin and associated drainage improvements within the ephemeral drainage shall not be allowed during the wet season (October 16 – April 15) or during or immediately prior to or following a rain event. The retained biological monitor shall verify compliance. BR/mm-7 Immediately following completion of construction of the detention basin and other infrastructure within the project site and prior to final inspection, the applicant and/or successors-in-interest (Homeowners Association) shall revegetate adjacent disturbed and barren areas with appropriate non-invasive native vegetation from the County's approved plant list to reduce the risk of on-site erosion. The applicant shall replant areas experiencing only temporary disturbance (a period greater than 30 days) with native species that occur in adjacent grassland and woodland communities. The applicant and/or successors-in-interest (Homeowners Association) shall submit a letter to the County Department of Planning and Building immediately following completion of revegetation activities and prior to final inspection. The vegetation shall be maintained and weeded for a period of three years.	
Biological Resources	BR/Impact 2 Proposed residential development, access driveway construction, creation of vegetation defensible space, and site improvements could result in direct removal, or	Local	BR/mm-8 Prior to issuance of construction permits for individual lot development, the landowner shall submit plans showing the location of existing oak trees, the diameter at	Insignificant

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
	inadvertent disturbance of up to thirteen coast live oak trees and up to 1.6 acres of oak woodland located within, or immediately adjacent to, the allowable buildable areas.		breast height, and if they will be removed or impacted (disturbance within the dripline including trimming) within 25 feet of project boundaries. Up to thirteen oak trees may be removed or impacted by the development and additional trees may be trimmed for fire prevention measures. BR/mm-9 Prior to recordation of final map, the applicant shall submit an Oak Tree Mitigation and Monitoring Plan to be reviewed and approved by the Environmental Coordinator. The Oak Tree Mitigation and Monitoring Plan shall be written as per the County's Mitigation and Monitoring Plan Guidelines. At a minimum the plan shall include goals, performance standards, and remedial measures to implement if the performance standards are not met. The plan shall provide for the replacement, in kind at a _4:1 ratio all oak trees removed as a result of the development of the project, and in addition, shall provide for the planting, in kind at a 2:1 ratio, of oak trees to mitigate for trees impacted but not removed. Tree removal shall not be permitted outside of the "building limit line." The Oak Tree Mitigation and Monitoring Plan shall include, but not be limited to, the following tree planting guidelines, which shall be printed on all applicable plans: INITIAL PLANTING Replanting shall be completed as soon as it is feasible (e.g. irrigation water is available, grading done in replant area). If possible, planting shall be completed in the late fall or winter months (October to January). If planting cannot occur during these optimal months, a landscape irrigation plan	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			shall be submitted prior to construction permit issuance showing how plants will be watered on a regular basis. If planting occurs outside of optimal months, a thorough watering will be completed at the time of planting. Replant areas shall either be either in native topsoil or areas where native topsoil has been reapplied. If the latter, top soil shall be carefully removed and stockpiled for spreading over graded areas to be replanted (setting aside enough for 6-12" layer for entire tree replant area). Stockpile areas shall be shown on al applicable grading and/or construction plans. Planting hole depths shall exceed container depths to sufficiently avoid roots from turning upwards. Soil returned around containers shall be compacted sufficiently to eliminate air pockets. To provide for greatest success for replacement oaks, planting stock should be either seedlings (preferred) or up to one-gallon container sizes. Small seedlings should be tubed. Clustering of seedings in groups of two to four is preferred (but would need to maintain the overall on-center plant average described below. Where possible, planting should be outside of, but as near as possible to, existing driplines of oak trees. Average tree planting densities shall be no greater than one tree every 20 feet and shall average no more than four planted trees per 2,000 square feet, unless it is shown to the county by a qualified biologist that existing average tree (with five-inch diameters or more) densities are greater. Where natural densities are shown to be greater than one tree every 2,000 square feet, planting densities (4:1) could match that density. This average planting density, and respective area needed, will be reflected on all applicable	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			construction plans. In the event that inadequate on-site area exists for replanting of replacement trees, a fee per equivalent tree removed shall be applied, pursuant to the County Guidelines for Tree Protection. Location of newly planted trees should adhere to the following, whenever possible: on the north side of and at the canopy/dripline edge of existing mature native trees; on north-facing slopes; close to drainage swales/gullies (except when riparian habitat present); where topsoil is present; at least 25 feet away from continuously wet areas (e.g. lawns, leach lines); random and clustered planting patterns to create natural appearance, and; planting locations away from known animal populations (e.g., squirrels, gophers). MAINTENANCE AND PROTECTION These newly planted trees shall be maintained until successfully established. The following planting and maintenance measures are necessary for successful establishment, and shall be included as part of monitoring efforts: provide and maintain protection (e.g. tree shelters, caging) from animals (e.g., deer, rodents); regular mulching and weeding (minimum of once early Fall and once early Spring) of at least a three foot radius out from plant; adequate watering (e.g., drip-irrigation system), and watering should be controlled so only enough is used to initially establish the tree, and reducing to zero over a three year period; avoidance of planting between April and September unless irrigation system with timer is provided, where trees are watered one gallon every four weeks (may	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			vary); application of standard planting procedures (e.g., planting tablets, initial deep watering, etc.), and; when planting with, or near, other landscaping, all landscape vegetation within the eventual mature oak tree root zone (25-foot radius of planted oak) will need to have similar water requirements as the oak (including no summer watering once established). Protection of newly planted trees shall include the following measures, and be shown on all applicable plans prior to issuance of construction permit for lot development: a. An above-ground shelter (e.g., tube, wire caging) shall be provided for each tree upon planting, and shall be of sturdy material that will provide protection from browsing animals for no less than seven years (unless determined successfully established by monitor). b. Caging to protect roots from burrowing animals shall be installed when the tree is planted, and be made of material that will last no less than seven years. c. Each shelter shall include the following, unless manufacture instructions recommend a more successful approach: 1. Shelter shall be secured with stake that will last seven years; 2. Height of shelter shall be no less than three (3) feet; 3. Base of shelter shall be buried into the ground; 4. Top of shelter shall be securely covered with plastic netting, or better, and last for no less than seven years; and,	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			5. If required planting is located in areas frequented by deer, tube/caging heights shall be increased to at least four feet or plantings shall be protected with deer fencing. To provide for adequate weed control around replacement trees, while still minimizing impacts to other existing sensitive vegetation, the following approach will be needed: 1) no use of herbicides (unless newly-planted tree is fully protected during application); and 2) either installation of a securely staked "weed mat" (covering at least a three-inch radius from center of plant), or hand removal of weeds (covering at least a three-inch radius from center of plant) will be completed for each plant (where hand removal weeding will be kept up on a regular basis (at least once in late spring [April] and once in early winter [December]). This should be done until tree is at least three feet tall. Use of weed-free mulch (at least three inches deep), with regular replenishment, may be substituted for weed mat. BR/mm-10 Prior to final inspection of individual residences, the landowner shall replace, at a 4:1 ratio, coast live oak trees to be removed and at a 2:1 ratio, the coast live oak trees that would be impacted as a result of grading and implementation of fore prevention measures including oak tree limb trimming. Replacement trees shall be located on the project parcel outside of the buildable area within existing oak woodland. BR/mm-11 To promote the success of the new trees, the applicant shall retain a qualified individual (e.g., arborist,	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			landscape architect/contractor, certified arborist, certified nurseryperson, botanist) to prepare a letter stating the required planting and protection measures have been completed. This verification letter shall be submitted to the Department of Planning and Building prior to final inspection of each residence. The letter shall specify the following: 1) when planted; 2) type and container size of vegetation planted; 3) approximate planting locations; and, 4) health of plants at the time of planting or when observed. GPS coordinates and photo-documentation shall be provided. The retained individual shall monitor the survivability and vigor of the planted trees until they are successfully established, and shall prepare annual monitoring reports for a minimum of seven years. The first monitoring report shall be submitted to the County Environmental Coordinator one year after the initial planting and thereafter on an annual basis until the monitor, in consultation with the County, has determined that the initially required vegetation is successfully established. Additional planting and monitoring will be necessary if initially-required vegetation is not considered successfully established. At a minimum, the monitoring report shall include: 1) reference and comparison to previous report, 2) approximate planting locations shown on map, 3) health and vigor of all plantings, 4) any problems associated with health of plants, and 5) any remedial measures needed to insure long-term health of all required plantings. The applicant, and successors-in-interest (individual lot owners), agrees to complete any necessary remedial measures identified in the report(s) to maintain the required population of initially-planted vegetation. Remedial work shall be completed by the	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			applicant, or successors-in-interest (individual lot owners), within 30 days of it being identified. BR/mm-12 Prior to issuance of construction permits for tract improvements and individual lot development, to avoid the potential for inadvertent disturbance of scattered oak trees not scheduled for removal or impact, the applicant shall retain a qualified individual (e.g., arborist, landscape architect/contractor, nurseryperson) to clearly mark the dripline area of each oak tree located outside of, but adjacent to the proposed development areas. The dripline of each tree shall be marked with highly visible flagging or construction fencing, immediately prior to construction. Grading, utility trenching, compaction of soil, material/ equipment storage, or placement of fill shall be avoided within fenced areas. Tree protection areas shall be identified with at least one weatherproof sign placed within each temporarily fenced area in the most visible location for construction crews that states "Tree Protection Area – Stay Out" (four inch letter size or greater). For larger fenced areas, multiple signs will be placed at 50-foot increments. All construction fencing and signage shall remain in place and kept in good working order until final inspection. BR/mm-13 To minimize impacts to the sensitive oak woodland understory habitat (e.g., coastal scrub), the applicant agrees to the following during tract improvements, individual lot construction activities, and for the life of the project: a. The applicant recognizes that trimming of oaks can be	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			detrimental in the following respects and agrees to minimize trimming of the remaining oaks: removal of larger lower branches should be minimized to 1) avoid making tree top heavy and more susceptible to "blow-overs," 2) reduce having larger limb cuts that take longer to heal and are much more susceptible to disease and infestation, 3) retain the wildlife that is found only in the lower branches, 4) retains shade to keep summer temperatures cooler (retains higher soil moisture, greater passive solar potential, provides better conditions for oak seedling volunteers), and 5) retain the natural shape of the tree. Limit the amount of trimming (roots or canopy) done in any one season as much as possible to limit tree stress/shock (10% or less is best, 25% maximum). Excessive and careless trimming not only reduces the potential life of the tree, but can also reduce property values if the tree dies prematurely or has an unnatural appearance. If trimming is necessary, the applicant agrees to either use a skilled arborist or apply accepted arborist's techniques when removing limbs. Unless a hazardous or unsafe situation exists, trimming shall be done only during the winter for deciduous species. Smaller trees (smaller than 5 inches in diameter at four feet above the ground) within the project area are considered to be of high importance, and when possible, shall be given a similar consideration as larger trees. b. All native vegetation removal shall be shown on all applicable grading/ construction or improvement plans, and reviewed/ approved by the County (Planning and Building Dept.) before any work begins.	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			c. Vegetation removal of native habitat shall be limited to what is shown on the county-approved grading/ construction /improvement plans. d. Vegetation clearance for fire safety purposes shall be limited to the minimum setbacks required by Cal Fire. Where feasible, all efforts will be made to retain as much of this vegetation within the setback as possible (e.g. remove/trim only enough vegetation to create non-contiguous islands of native vegetation). e. All allowed uses within the native habitat area shall be "passive," where the use will have either no or minimal impact on the habitat. f. Any CC&Rs created shall include the above provisions to protect the native habitat. BR/mm-14 Prior to issuance of construction permits for individual lot development, the applicant shall submit a cost estimate for planting, maintenance, and/or monitoring by qualified individuals. Qualified individuals shall show they are experienced and successful in planting, maintaining and/or monitoring native vegetation. The cost estimate shall include all critical elements to insure the success of any replanting efforts (e.g., plant materials, amendments, irrigation, regular maintenance, etc.). When cost estimates are required, the applicant shall either post a performance bond equal to the county-approved cost estimate, or establish a trust account with the county to administer implementation of one or more of these components, or a combination of the two. Where a county trust account is required, the work scope and selection of qualified individual(s) shall be approved or determined by the county.	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
Biological Resources	BR/Impact 3 Project implementation could result in direct disturbance of burrowing owl, if individuals of this species occupy annual grassland of the project site prior to or during construction.	Local	BR/mm-15 Prior to issuance of construction permits for tract, road, and infrastructure improvements and prior to issuance of construction permits for individual lot development, the applicant, or landowner as applicable, shall retain a County-qualified wildlife biologist to conduct a pre-activity survey for burrowing owl. The survey shall be conducted within 30-days prior to site disturbance. If ground disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be resurveyed. Results of the survey shall be documented in a report and shall include the date of the survey, methods of inspection, and findings. The report shall be submitted to the County Division of Environmental and Resource Management and the California Department of Fish and Game (CDFG). If no burrowing owls are found to occupy the site at that time, no further measures would be necessary unless burrowing owls are subsequently observed at the project site, in which case the following mitigation measure would be implemented. If burrowing owls are found within the project site, the applicant or successors-in-interest (individual lot owners) shall immediately contact CDFG and implement all measures identified in the CDFG staff report on burrowing owl mitigation, additional measures required by CDFG, and in the *Burrowing Owl Survey* report (McCormick; 1997) shall be implemented. Measures shall include but not be limited to: A) If feasible, burrowing owl burrows shall be avoided. No disturbance shall occur within 50 meters of occupied	Insignificant

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			burrowing owl burrows during the non-breeding season (September 1 through January 31) or within 75 meters during the breeding season (February 1 through August 31). A minimum of 6.5 acres of foraging habitat shall be permanently preserved contiguous with the occupied burrow sites for each pair of breeding burrowing owls or single unpaired resident owl. The configuration of the protected habitat shall be reviewed and approved by the Environmental Coordinator and California Department of Fish and Game. If avoidance of burrowing owl burrows is not feasible, the following measures shall apply, upon approval by the Environmental Coordinator and California Department of Fish and Game. 1. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFG verifies that either: 1) birds have not begun egg-laying and incubation: or 2) that juveniles from the occupied burrows are foraging independently and capable of independent survival. 2. A minimum of 6.5 acres of foraging habitat per pair or unpaired resident burrowing owl shall be acquired and permanently protected. The protected area shall be adjacent to occupied burrowing owl habitat and at a location approved by the California Department of Fish and Game. The protected habitat shall contribute to the long-	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			term conservation of the burrowing owl and the ecosystem(s) on which they depend. 3. When destruction of occupied burrows is unavoidable, a Burrowing Owl Habitat Replacement Management and Monitoring Plan shall be prepared by a County-approved biologist, and submitted to the Environmental Coordinator for review and approval. The plan shall identify the burrow affected by potential development, and demonstrate how existing unsuitable burrows shall be enlarged or cleared of debris or created (e.g., by installing artificial burrows) at a 1:1 ratio within a protected area. Mitigation success criteria shall be identified, and monitoring reports shall be prepared annually for a minimum of three years. Monitoring reports shall be submitted to the Environmental Coordinator and California Department of Fish and Game. 4. If owls must be moved away from the disturbance area, passive relocation techniques shall be used (i.e., use of artificial burrows and tunnels), and trapping shall be prohibited. A minimum of one week shall be required to accomplish relocation to allow owls to acclimate to alternative burrows.	
Biological Resources	BR/Impact 4 Project implementation could result in direct removal of individual oak trees located outside of designated open space areas, and potential take of active bird nests, including raptors.	Local	BR/mm-16 According to the CDFG Code 3503, "take" of the nest or eggs of any bird is prohibited, except upon approval from CDFG. To avoid take of active bird nests, any necessary tree removals shall be conducted between August 15 and March 15, outside of the typical breeding	Insignificant

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			season. If tree removals are determined necessary during the typical breeding season, a County-qualified biologist shall conduct a bird nest survey within 24 hours of proposed development activities. The results of the bird nest survey shall be submitted to the California Department of Fish and Game (CDFG) and County of San Luis Obispo Division of Environmental and Resource Management, via a letter report. The report shall include the date of the survey, methods of inspection, and findings. If the biologist determines that a tree slated for removal is being used for nesting at that time, no site disturbance or use of equipment shall be allowed within an appropriate buffer area to be determined by the biologist, based on bird species, topography, and type of activity until after the biologist has determined that the young have fledged from the nest and achieved independence. No construction or grading activity shall occur within the buffer area. If no nesting is found to occur, necessary tree removal could then proceed.	
Biological Resources	BR/Impact 5 If site disturbance and construction activities occur during the nesting season (March through August), project implementation could result in take of active bird nests located within annual grassland of the project site.	Local	BR/mm-17 Prior to issuance of construction permits for road and infrastructure construction and individual lot development, if construction and site disturbance activities occur during the typical songbird nesting season (March 15 through August 15), the applicant or successors-in-interest (individual lot owners) shall retain a County-qualified biologist to conduct a pre-construction survey for nesting songbirds. The survey shall be conducted within three days of proposed site disturbance and construction activities to determine presence/absence of nesting birds on the project site. If no breeding or nesting activities are detected within 100 feet of the proposed work areas, construction activities may proceed. If, however, active nests are found within	Insignificant

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			areas proposed for disturbance, after the biologist shall establish an appropriate buffer area based on the bird species, topography, and type of activity. No construction or grading activities shall occur within the buffer area until the biologist has determined that the young have fledged from the nest and achieved independence, or upon approval from CDFG.	
Biological Resources	BR/Impact 6 Project implementation could result in direct disturbance or take of Monterey dusky-footed woodrat, if individuals of these species occupy annual grassland of the project site prior to construction.	Local	BR/mm-18 Prior to issuance of construction permit, the applicant or successors-in-interest (individual lot owners) shall retain a County-qualified biologist to conduct a pre-activity survey for Monterey dusky-footed woodrat that may occupy the site. The survey shall be conducted within 30 days prior to proposed site disturbance and construction activities. Results of the survey shall immediately be submitted to the County Division of Environmental and Resource Management and CDFG as necessary. The survey report shall include the date of the survey, methods of inspection, and findings. If active burrows of woodrats are found within proposed development areas during the survey, the biologist shall establish an appropriate buffer area to protect the nest(s). No site disturbance shall occur within the buffer area until a Memorandum of Understanding (MOU) is obtained from CDFG. An alternative to a buffer area is to disassemble nests by hand outside of the nesting season (February through September) and allow the woodrats to leave the site.	Insignificant
Biological Resources	BR/Impact 7 Project implementation could result in direct disturbance or take of American badger, if individuals of these species occupy annual grassland of the project site prior to construction.	Local	BR/mm-19 Prior to issuance of construction permit, the applicant or successors-in-interest (individual lot owners) shall retain a County-qualified biologist to conduct a pre-activity survey for American badger that may occupy the site. The pre-construction survey shall be conducted within	Insignificant

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			30 days of beginning work on the project to identify if badgers are using the site. The results of the survey shall be sent to the project manager, CDFG, and the County of San Luis Obispo. If the pre-construction survey finds potential badger dens, they shall be inspected to determine whether they are occupied. The survey shall cover the entire property, and shall examine both old and new dens. If potential badger dens are too long to completely inspect from the entrance, a fiber optic scope shall be used to examine the den to the end. If a fiber optic scope is not available, occupation of the den can be determined by partially obscuring the den entrance with sticks and leaves to indicate animal passage into and out of the den and dusting the den entrance with a fine layer of dust or tracking material for three consecutive nights and examining the following mornings for footprints. Inactive dens may be excavated by hand with a shovel to prevent re-use of dens during construction. If badgers are found in dens on the property between February and July, nursing young may be present. To avoid disturbance and the possibility of direct take of adults and nursing young, and to prevent badgers form becoming trapped in burrows during construction activity, no grading shall occur within 100 feet of active badger dens between February and July. If badger dens are found on the property during the pre-construction survey, the CDFG wildlife biologist for the area shall be contacted to review current allowable management practices.	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
Biological Resources	BR/Impact-8 Proposed development on-site and within the surrounding area would result in increased losses of grassland and oak tree communities and potential disturbance of sensitive wildlife.	Local	To minimize disturbance of sensitive wildlife species that occupy grassland habitats within the region, the applicant shall implement BR/mm-15 through BR/mm-19, which consist of conducting pre-construction surveys for sensitive wildlife, implementing avoidance and habitat restoration measures for sensitive wildlife, consulting with the California Department of Fish and Game, and implementing protective measures during construction activities. In addition, pursuant to Visual Resources mitigation VR/mm-3, the applicant shall establish a permanent open space easement on Lots 1 through 6 (refer to Chapter V.D. Visual Resources of this document). This easement would protect oak woodland and a portion of grassland habitat located along the northern and eastern portion of the property and would minimize the project's contribution to the cumulative loss of grassland and oak woodland habitat in the region.	Insignificant
VISUAL RESOURCES				
Visual Resources	VR/Impact 1 As seen from the State Route 101 corridor, the upper portions of houses built on Lots 3, 4 and 5 would be visible and would be silhouetted above the natural horizon, resulting in long-term visual impacts.	Local	VR/mm–1 Prior to issuance of building permits for individual lot development, the following conditions shall apply to Lots 3, 4 and 5: A) Those portions of development on Lot 3 that are more than 100 feet from Coast View Drive shall not exceed an elevation of 25 feet above natural grade. B) The top of any development on Lot 4 shall not exceed an elevation of 290 feet above sea level (based on contour maps used in this document). C) The top of any development on Lot 5 shall not exceed an elevation of 295 feet above sea level (based on contour maps used in this document). D) No development shall exceed 35 feet above natural	Insignificant

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			grade. VR/mm-2 Prior to recordation of the final map, the following shall be included on the additional map sheet, and as applicable, prior to issuance of subsequent grading permits, incorporated into all future development: A) The applicant shall clearly delineate the height of new development on the project plans. All development on Lots 3 and 4 and 5 shall not exceed the heights shown above and as defined in the County of San Luis Obispo Land Use Ordinance, Section 22.10.090, as follows: "The height of a building or structure shall be measured as the vertical distance from the highest point of the structure to the average of the highest and lowest points where the vertical plane of the exterior walls would touch the natural grade level of the site" (see Figure V.D.-3 below). B) The applicant shall clearly delineate all fencing proposed for areas outside of the "Building Limit Line" on the project plans for Lots 3, 4, and 5. All fencing proposed for the areas outside of the "Building Limit Line" shall conform to the following: 1) No proposed fencing shall be constructed of solid, flat planes; 2) Fence colors shall be similar to surrounding natural colors and no brighter than 6 in chroma and value on the Munsell Color Scale on file in the County Department of Planning and Building; and, 3) White paint or other white materials shall be prohibited. C) Conditions, Covenants, and Restrictions (CC&Rs) shall be required that include items A and B above.	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			VR/mm–3 Prior to recordation of the final map, the following conditions shall apply to Lots 1 through 6: The applicant shall place the portion of the lot that is outside of the Building Limit Line into a permanent open space easement for the purpose of protecting the existing native trees on each subject parcel. No development (except for fences as specified in VR/mm-2 item B above) or uses shall be allowed within the open space easement that would change the natural appearance of this area. The specific language of the open space easement shall be subject to review and approval by the San Luis Obispo County Department of Planning and Building.	
Visual Resources	VR/Impact 2 As seen from portions of Los Berros Road, contrasting colors and reflectivity of the structures would increase visibility of the proposed development resulting in long-term visual impacts to the open space character of the site.	Local	VR/mm–4 Prior to issuance of construction permits for individual lot development, the applicant shall submit architectural elevations of all proposed structures to the Department of Planning and Building for review and approval. VR/mm-5 Prior to recordation of the final map, the following shall be included on the additional map sheet and incorporated into future development: The County Department of Planning and Building shall review of elevations and shall include the parameters specified below. The elevations shall show forms, dimensions, exterior finish materials and colors, as follows: A) Building colors shall be similar to surrounding natural colors and no brighter than 6 in chroma and value on the Munsell Color Scale on file in the County Department of Planning and Building.	Insignificant

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			B) Exterior wall colors shall be limited to muted earth tones and white paint shall be prohibited. C) Roof colors shall be limited to deep earth tones, deep muted reds, browns, and grays and no brighter than 6 in chroma and value on the Munsell Color Scale on file in the County Department of Planning and Building. Shiny metal roofs, bright orange, red, or blue shall be prohibited. D) Conditions, Covenants, and Restrictions (CC&Rs) shall be required specifying the above components.	
Visual Resources	VR/Impact 3 From Traffic Way in the City of Arroyo Grande, the upper portion of a house built on Lot 6 would be visible and would silhouette above the natural horizon, resulting in long-term visual impacts.	Local	VR/mm–6 Prior to recordation of the final map, the following shall be adopted and included on the additional map sheet: The height of new development for Lot 6 shall be clearly delineated on project plans, and shall not exceed an elevation of 295 feet above sea level, as shown for the tentative tract map contour mapping. Conditions, Covenants, and Restrictions (CC&Rs) shall be required that specify the above provision.	Insignificant
Visual Resources	VR/Impact 4 As seen from Los Berros Road and partially from State Route 101, the visibility of a water tank structure and related equipment facilities would increase the built character of the project, resulting in long-term visual disturbance.	Local	VR/mm-7 Prior to issuance of construction permits, the applicant shall submit architectural elevations of the water tank and related support facilities to the Department of Planning and Building for review and approval. The elevations shall show forms, dimensions, exterior finish materials and colors, as follows: A) Exterior colors shall be similar to surrounding natural colors and no brighter than 6 in chroma and value on the Munsell Color Scale on file in the County Department of Planning and Building.	Insignificant

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			B) Shiny metal components shall not be used. VR/mm-8 Prior to issuance of construction permits, the applicant shall submit landscape plans for the water tank site to the Department of Planning and Building for review and approval. The plans shall show oak trees and native shrubs planted on the southern, eastern and western sides of the water tank and pump facilities, with a goal of fully screening the tank and support equipment from KVAs. Revegetation monitoring shall be conducted until at least 75 percent screening is achieved.	
TRAFFIC AND CIRCULATION				
Traffic and Circulation	TR/Impact 1 Development of cumulative projects in the South County area, including the proposed project, would cause a reduction in the level of service on local roads and intersections in southern San Luis Obispo County.	Local	TR/mm-1 Prior to issuance of building permits for the development of each lot, individual lot owners shall contribute to the County of San Luis Obispo Traffic Impact Fee for the South County Benefit Area 2.	Insignificant
Traffic and Circulation	TR/Impact 2 Development of cumulative projects in and adjacent to the City of Arroyo Grande, including the proposed project, would cause a reduction in the level of service on local roads and intersections in the City.	Local	TR/mm-2 Prior to recordation of the final map, the applicant shall submit documentation to the County Environmental Coordinator demonstrating payment of City of Arroyo Grande traffic and signalization impact mitigation fees. The traffic impact fee is $1,378.00 per unit, and the traffic signalization fee is $505.00 per unit.	Insignificant
AIR QUALITY				
Air Quality	AQ/Impact-1 NO_X emissions resulting from construction activities would exceed the APCD pounds per day construction threshold.	Local	AQ/mm-1 Based on Table 6-3 of the APCD's 2003 CEQA Handbook, the estimated construction emissions for the project will exceed the thresholds requiring mitigation. The following measures shall be incorporated into the construction phase of the project and shown on all applicable plans prior to construction permit issuance:	Insignificant

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			Construction Equipment a. Maintain all construction equipment in proper tune according to manufacturer's specifications; b. Fuel all off-road and portable diesel powered equipment, including but not limited to bulldozers, graders, cranes, loaders, scrapers, backhoes, generator sets, compressors, auxiliary power units, with ARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road); c. Maximize to the extent feasible, the use of diesel construction equipment meeting the ARB's 1996 or newer certification standard for off-road heavy-duty diesel engines. *CBACT* a. Install diesel oxidation catalysts (DOC), catalyzed diesel particulate filters (CDPF) or other District approved emission reduction retrofit devices (determination of he appropriate CBACT control device(s) for the project must be performed in consultation with APCD staff). *Additional Construction Equipment Measures* a. Electrify equipment where possible. b. Substitute gasoline-powered for diesel-powered equipment, where feasible; c. Use alternatively fueled construction equipment on site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel; d. Use equipment that has Caterpillar pre-chamber diesel	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			engines; e. Implement activity management techniques as follows: i. Development of a comprehensive construction activity management plan designed to minimize the amount of large construction equipment operating during any given time period; ii. Schedule of construction truck trips during non-peak hours to reduce peak hour emissions; iii. Limit the length of the construction work-day period, if necessary; iv. Phase construction activities, if appropriate.	
Air Quality	AQ/Impact-2 PM10 emissions resulting from construction activities would impact air quality.	Local	AQ/mm-2 Based on Table 6-3 of the APCD's 2003 CEQA Handbook, the estimated construction emissions for the project will exceed the thresholds requiring mitigation. The following measures shall be incorporated into the construction phase of the project and shown on all applicable plans prior to construction permit issuance: *Fugitive PM10 Mitigation Measures* a. Reduce the amount of the disturbed area where possible. b. Use of 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 mph. Reclaimed (nonpotable) water should be used whenever possible. c. All dirt stock-pile areas should be sprayed daily as needed. d. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast-germinating native grass	Insignificant

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			seed and watered until vegetation is established. e. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD. f. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used. g. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site. h. All trucks hauling dirt, sand, or other loose materials are to be covered or should maintain at least two feet of free board (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114. i. Permanent dust control measures identified in the approved project revegetation and landscape plans shall be implemented as soon a possible following completion of any soil disturbing activities. j. Wheel washers shall be installed where vehicles enter and exit unpaved roads onto streets, or trucks and equipment leaving the site shall be washed off. k. Streets shall be swept at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed waster shall be used where feasible. l. All PM10 mitigation measures required shall be included on grading and building plans. In addition, the contractor or builder shall designate a person or	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			persons to monitor the dust control program and order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD prior to land use clearance for map recordation and land use clearance for finish grading of the structure. m. Naturally Occurring Asbestos (NOA) has been identified by the state Air Resources Board as a toxic air contaminant. Serpentine and ultramafic rocks are very common in the state and may contain naturally occurring asbestos. Under the State Air Resources Board Air Toxics Control Measure (ATCM) for Construction, Quarrying, and Surface Mining Operations, prior to any grading activities at the site, the project applicant shall ensure that a geologic evaluation is conducted to determine if naturally occurring asbestos is present within the area that will be disturbed. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations. These requirements may include, but are not limited to: 1) an Asbestos Dust Mitigation Plan, which must be approved by the APCD prior to construction, and 2) an Asbestos Health and Safety Program. If NOA is not present, the applicant shall file an exemption request with the APCD. Please refer to the APCD web page at http://www.slocleanair.org/business/asbestos.asp for more information regarding these requirements. If you	

Class II Impacts - Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" under CEQA Guidelines Section 15093 if the project is approved)				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			have any questions regarding these requirements, please contact Karen Brooks of the APCD Enforcement Division at 781-5912. n. Effective February 25, 2000, the APCD prohibited developmental burning of vegetative material within San Luis Obispo County. Under certain circumstances where no technically feasible alternatives are available, limited developmental burning under restrictions may be allowed. This requires prior application, payment of fee based on the size of the project, APCD approval, and issuance of a burn permit by the APCD and the local fire department authority. The applicant is required to furnish the APCD with the study of technical feasibility (which includes costs and other constraints) at the time of application. If you have any questions regarding these requirements, please contact Karen Brooks of the APCD Enforcement Division at 781-5912.	

Class III Impacts – Environmental Impacts That Are Adverse But Not Significant				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
DRAINAGE AND EROSION				
Drainage and Erosion	DE/Impact 1 Long-tern capacity and function of the basin could be compromised by sedimentation and vegetation growth, resulting in a less than significant impact.		DE/mm-1 Prior to recordation of the final map, the Conditions, Covenants, and Restrictions (CC&Rs) shall include the following language: a. The Homeowners Association (or their designee) shall be responsible for retaining a qualified individual to conduct an annual inspection of the detention basin located within Lot 13, for the lifetime of the project. Maintenance activities recommended by the retained inspector shall be conducted by the Homeowners Association (or their designee), and shall be conducted in compliance with the County Code and all other required permits and regulations (I.e., Army Corps of Engineers authorization, Stormwater Pollution Prevention Plan.)	Insignificant
AIR QUALITY				
Air Quality	AQ/Impact 3 The use of woodstoves in future residences would contribute to PM10 pollution, and would be inconsistent with APCD policy.	Local	AQ/mm-3 Prior to issuance of building permits for individual lot development, in the instance wood burning stoves are proposed, the applicant shall submit building plans showing the use of APCD-approved wood burning devices limited to the following: a. All EPA-Certified Phase II wood burning devices; b. Catalytic wood burning devices that emit less than or equal to 4.1 grams per hour of particulate matter that are not EPA-Certified but have been verified by a nationally-recognized testing lab; c. Non-catalytic wood burning devices that limit less than or equal to 7.5 grams per hour of particulate matter that	Insignificant

Class III Impacts – Environmental Impacts That Are Adverse But Not Significant				
Resource	Description of Impact	Scope	Mitigation Measure Summary	Residual Impact
			are not EPA-Certified but have been verified by a nationally-recognized testing lab; d. Pellet-fueled woodheaters, and; e. Dedicated gas-fired fireplaces.	

C. SUMMARY OF ALTERNATIVES

Four project alternatives were selected for review in the EIR because of their potential to avoid or substantially lessen project impacts, or because they were required under CEQA Guidelines (e.g., the no project alternative). These alternatives include the following:

1. *No Project Alternative*—Analysis of this alternative includes the assumption that the project site would be left in its present undeveloped condition.

2. *Visual Resources Protection Alternative*— This alternative would consider a tract map proposing fewer parcels in a reconfigured manner that avoids and/or further mitigates identified significant visual resources impacts.

3. *Revised Access Alternative A*—This alternative would retain the proposed preliminary grading plan and lot configuration, but would redirect the primary access to avoid adverse, significant traffic and circulation impacts. This alternative proposes a primary access route to the north via Castillo Del Mar Drive and Orchard Drive in the City of Arroyo Grande.

   The applicant revised the project upon circulation of the Revised Draft EIR, and the revised project is now the Revised Access Alternative A.

4. *Mitigated Project Alternative*—This alternative would implement all of the EIR recommended mitigation measures intended to reduce significant environmental impacts. With the exception of traffic and circulation impacts, all impacts would be reduced to insignificance with implementation of mitigation measures.

The following two additional alternatives were considered and rejected because they are not reasonably feasible or would not reduce identified potentially significant impacts:

1. *Annexation to the City of Arroyo Grande*—This alternative considers annexation to the City of Arroyo Grande. This alternative was rejected because the project site is not located within the City's Sphere of Influence, and the City is not considering annexation.

2. *Revised Access Alternative B*—This alternative considers the construction of an access road off of El Campo extending northwest to the project site, parallel to State Route 101. This alternative was rejected because Class I impacts to the El Campo and State Route 101 interchange would not be avoided, and additional potentially significant impacts would occur, including increased site disturbance, soil erosion, and removal of oak trees within sensitive habitat areas.

The Alternatives section of the document provides qualitative analysis of the four alternatives selected for consideration and the level of impact that would result if they were to be implemented. Those alternatives that were determined to significantly reduce the environmental impacts associated with the proposed project and that were determined to be feasible were compared to the proposed project (refer to EIR Section VI).

Based on the alternatives analysis, Revised Access Alternative A is determined to be the Environmentally Superior Alternative because it accomplishes the basic objectives of the project, and avoids or substantially lessens almost all of the project-related significant environmental effects. Implementation of Revised Access Alternative A would provide an advantage over the proposed project, and would allow the identified impacts to be mitigated to a Class II level of insignificance. Implementation of this alternative depends on the approval of the City of Arroyo Grande, the Lucia Mar Unified School District, and a private landowner.

After circulation of the Revised Draft EIR, the applicant revised the project similar to Revised Access Alternative A. The revised primary and secondary access proposal was incorporated into the alternatives analysis in this Final EIR. Based on this revised project, and the alternatives analysis, the Visual Resources Protection Alternative is determined to be the Environmentally Superior Alternative because it accomplishes the basic objectives of the project, and avoids or substantially lessens almost all of the project-related significant environmental effects. This alternative incorporates the proposed access plan, reduces the number of proposed lots, and increases the size of the open space easement. This alternative would further reduce potential impacts to biological and visual resources, and would further reduce the project's contribution to cumulative traffic trip generation.

III. PROJECT DESCRIPTION

A. GENERAL BACKGROUND

Project Title:	Busick Tract Map
Property Owners / Project Agent:	Haythem Dawlett / Carlo Alfano / John Scardino 1525 B East Main Street Santa Maria, CA 93454 (805) 929-2453
County Case Nos.:	Tract Map 1789 (S890232T) ED90-061
Project Location:	The project site is located at the north end of Coast View Drive, approximately 700 feet northwest of Falcon Crest Drive, immediately southwest of State Route 101, southwest of the City of Arroyo Grande (refer to Figures III-1 through III-4). Off-site road improvements are proposed from the western terminus of Castillo Del Mar Drive to Valley Road, within the City of Arroyo Grande.
Parcel Size:	47.54 acres (subdivision) 1.2 acres (Castillo Del Mar Drive extension to Valley Road)
Assessor's Parcel Number:	075-021-026; 006-095-002
Legal Description:	Subdivision: Parcel A of Parcel Map AG AL85-376
Planning Area:	Subdivision: San Luis Bay (Inland) Off-site road improvements: City of Arroyo Grande
County Land Use Designation:	Residential Suburban
City Land Use Designation/Zoning:	Community Facility/Public Facilities

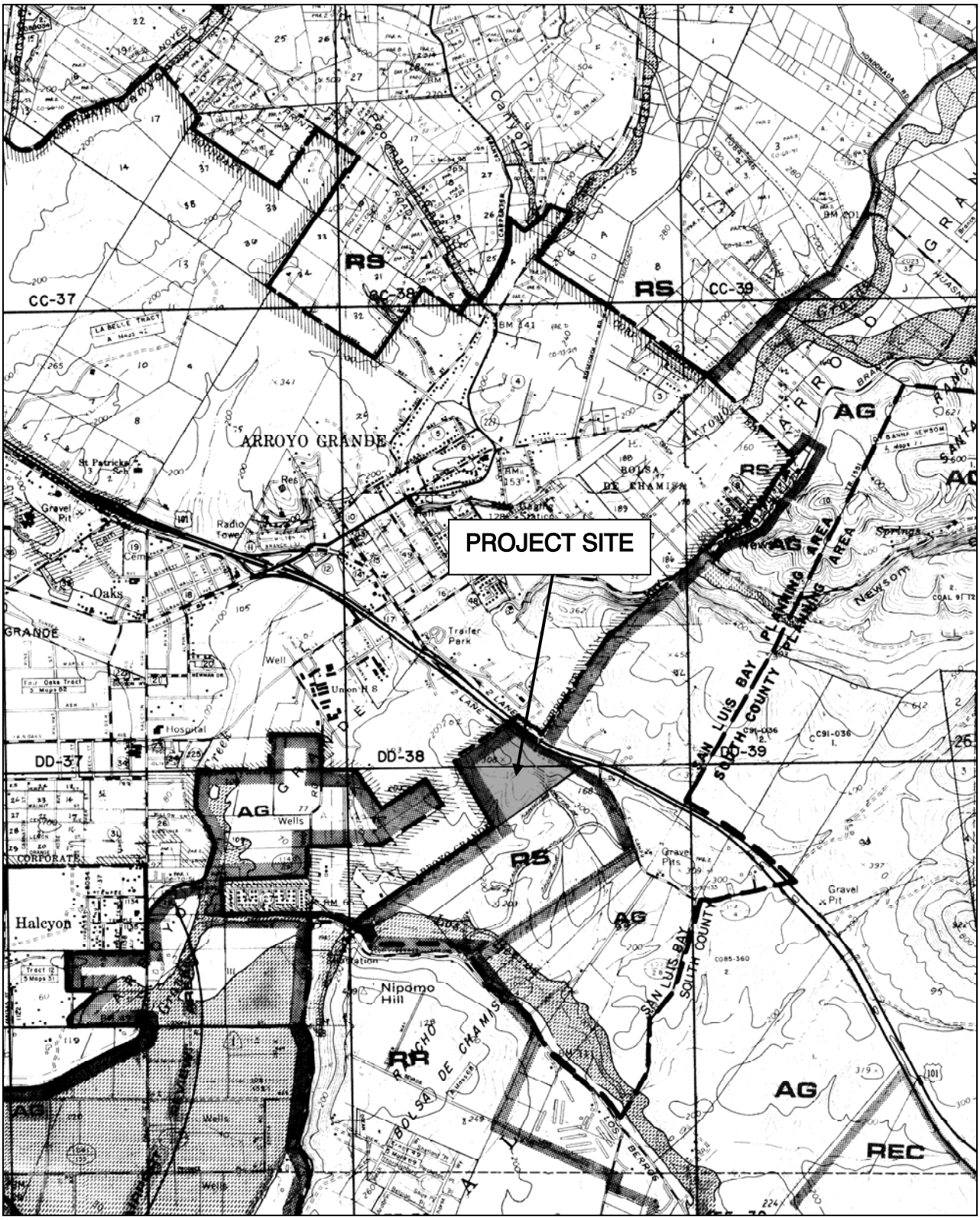
Source: Compass Maps

NORTH
Not to Scale

Vicinity Map
FIGURE III-1

NORTH
Not to Scale

Location Map
FIGURE III-2



Source: County of San Luis Obispo

NORTH
Not to Scale

Land Use Category Map
FIGURE III-3

NORTH
Not to Scale

Circulation System
FIGURE III-4

Back of NEW figure III-4

B. PROJECT OBJECTIVES

The applicant is proposing a tract map to create sixteen (16) residential parcels within the Residential Suburban land use category (refer to Figure III-3) at a density consistent with the San Luis Obispo County General Plan and Land Use Ordinance. Portions of the subject property would be placed within open space easements to protect certain environmental resources. The residential lots would be sold to individual owners and developed independently. The applicant is proposing to develop project site infrastructure including one main access road, one secondary road, drainage facilities, water supply facilities, and sewer connection lines.

C. PROJECT HISTORY

The following is a summary description of recent events associated with development of the project site, beginning with adoption of the County of San Luis Obispo Land Use Element and Land Use Ordinance by the Board of Supervisors in 1980 that resulted in designation of the project site for Residential Suburban uses.

In October of 1990, the County of San Luis Obispo Department of Planning and Building issued a Notice of Determination and Negative Declaration for subdivision of the project site. The City of Arroyo Grande then appealed the proposed Negative Declaration. The City stated the Negative Declaration did not adequately address a variety of impacts to the City, including traffic. The City withdrew their appeal of the Negative Declaration in July of 1991 as a result of efforts made by the County Board of Supervisors to consider and address the City's concerns.

In December of 1993, the County Planning Commission re-considered and approved subdivision of the project site. However, in March of 1994 the neighboring Falcon Ridge Estates Homeowners Association appealed the Planning Commission's decision. The adjacent Falcon Ridge Estates Homeowners Association stated primary reasons for their appeal as a lack of proposed mapped access on the proposed map, and increased traffic and drainage from the project site resulting in impacts to the Falcon Ridge subdivision. In addition, during this appeal period the City of Arroyo Grande expressed concerns regarding a potential access road extending from the project site north to Orchard Avenue. The County Board of Supervisors subsequently addressed the concerns of the Homeowners Association and the City in April 1994 by requiring the project applicant to prepare an Environmental Impact Report (EIR) in April 1994.

Initiation of the EIR began in 1996. The applicant originally proposed to utilize onsite septic and leach field systems for each residential lot. During the initial study process, the County's consultant, Morro Group, identified potentially adverse significant (Class I) wastewater impacts. Based on the results of this analysis, the proposed project was put on-hold by the applicant for several years until an alternative means of wastewater disposal was available. In April 2001, the applicant received an agreement for wastewater disposal service from the South San Luis Obispo County Sanitation District and the City of Arroyo Grande. In 2002, the applicant submitted revised plans to the County of San Luis Obispo, and Morro Group continued preparation of the EIR.

1. Circulation of Draft EIR

A Draft EIR for the proposed project was circulated for public comment in January 2004. Based on comments received from the City of Arroyo Grande and adjacent property owners, the Draft EIR has been revised and re-circulated for comment. The January 2004 Draft EIR identified potentially significant traffic impacts resulting from the generation of traffic trips affecting the El Campo Road and State Route 101 intersection, which currently operates at a Level of Service F. The Draft EIR adopted City recommended mitigation including payment of traffic impact fees to the City of Arroyo Grande to be used towards future studies associated with the proposed construction of El Campo Road and State Route 101 Interchange Project. Based on comments received from the City of Arroyo Grande Community Development Director in response to the Draft EIR and the above referenced mitigation measure, the City stated that "the traffic and circulation impacts of the project on the deficient and unsafe El Campo intersection with State Route 101 are not mitigated by a 'fair share' contribution toward future improvement of the El Campo Interchange" and that "one access alternative that should be reconsidered is…the alternative primary access from the City of Arroyo Grande, by extension of Orchard Drive" (Rob Strong; March 9, 2004).

When the City of Arroyo Grande approved the adjacent residential tract development to the northwest of the project site, Vista Del Mar, a one-foot easement and unlocked gate was placed along the property boundary between Vista Del Mar and the proposed project site. The one-foot easement blocked all access across the County/City property line. An unpaved emergency access road was constructed on the project site, connecting Castillo Del Mar Drive in Vista Del Mar with Coast View Drive in Falcon Ridge Estates. Only emergency vehicles were permitted to use the emergency access road.

Following circulation of the Draft EIR, the City stated that the proposed mitigation measure requiring the applicant to contribute traffic impact fees to the City would not fully mitigate impacts to the El Campo Road and State Route 101 intersection. The reason given by the City for this change in their position was that the City had postponed future studies and construction of the intersection improvements based on lack of funding (Rob Strong; March 23, 2004 and Don Spagnolo; March 25, 2004). The estimated timeframe for further study and construction of improvements is currently undetermined; therefore this mitigation was no longer considered feasible. At the time of circulation of the Revised Draft EIR, there were no mitigation options available to mitigate impacts to the El Campo Road and State Route 101 intersection, resulting in a Class I impact and the need to revise and re-circulate the Draft EIR in March 2005.

2. Circulation of Revised Draft EIR

Based on comments received from the City following public review of the January 2004 Draft EIR, the applicant pursued consultation with the City regarding reconsideration of removing the one-foot easement so as to allow the proposed project to take access to the north and alleviate the Class I impact and associated traffic safety issues at the El Campo Road and State Route 101 intersection. During a meeting attended by County staff, City staff, school district staff, the private landowner, and the applicant, the City stated that access via Castillo Del Mar Drive and Orchard Street would be reconsidered by the City provided the applicant construct an access road extending from Orchard Drive to Valley Road (Tony Ferrara; August 19, 2004). The access road

would extend from the western boundary of Vista Del Mar to Valley Road through property owned by the Lucia Mar Unified School District and a private landowner (refer to Figure III-4). A portion of the desired alignment would be located on land currently farmed by the private landowner. Based on personal communications with the school district and private landowner on August 19, 2004, it was unlikely that an easement would be granted to allow construction of the access road connection to Valley Road.

After the above approach failed, the applicant submitted a request to the City of Arroyo Grande for consideration of the access proposal, and proposed payment of fees to construct future improvements including an access road connector to Valley Road in exchange for removal of the one-foot easement and access via Castillo Del Mar Drive and Orchard Drive. The Arroyo Grande City Council considered and denied the applicant's request during a City Council meeting on September 14, 2004.

The revised Draft EIR was circulated for public comment in March 2005. Based on comments received by the California Department of Forestry / County Fire Department (Cal Fire), the proposed project design would result in an additional significant impact due to the lack of adequate secondary access (Rob Lewin, May 23, 2005). Following consultation with Cal Fire, the applicant initiated additional negotiations with the City of Arroyo Grande, the Lucia Mar School District, and John Taylor (private property owner) to permit primary access via Castillo Del Mar Drive.

On May 4, 2006, a Memorandum of Understanding (MOU) was completed and signed by the City of Arroyo Grande, Lucia Mar School District, John Taylor, and project applicants. The MOU states that the City of Arroyo Grande agrees to lift the easement at the terminus of Castillo Del Mar Drive and allow the applicant to use Castillo Del Mar Drive for primary access. Additional components of the MOU require the applicant to: acquire 1.2 acres of prime agricultural land from John Taylor; deed the 1.2 acres of purchased land to the City; provide funding to the City of Arroyo Grande for the development of plans to extend Castillo Del Mar Drive to Valley Road and the City's construction of the roadway, and contribute to the "in-lieu" fee program to mitigate for the loss of prime farmland. Based on the MOU, the City would be entirely responsible for development of engineering plans and construction of the Castillo Del Mar Drive extension to Valley Road, and would maintain the roadway. The City adopted a Mitigated Negative Declaration (General Plan Amendment Case No. 06-001, Development Code Amendment Case No. 06-001, and Tentative Parcel Map Case No. 06-004), which includes an analysis of the road extension to Valley Road on August 22, 2006.

3. Final EIR

The applicant submitted revised plans showing a revised access plan. Primary access would be located at the western boundary of the parcel, and would connect to Castillo Del Mar Drive. Secondary access would extend to the east, and would connect with Coast View Drive and Falcon Ridge Estates. Implementation of the proposed revised project would minimize the Class I Transportation and Circulation impact at the Highway 101/ El Campo Road intersection to less than significant. The proposed project changes are incorporated into this Final EIR, which includes two additional resource sections, Fire Hazards and Agricultural Resources. Based on the revised project description and previously disclosed environmental effects (i.e. impacts to

agricultural resources identified in the City of Arroyo Grande MND adopted August 22, 2006), no new significant impacts would occur as a result of new information and project revisions disclosed in this Final EIR.

D. PROJECT CHARACTERISTICS

The proposed project includes two components: 1) the proposed subdivision and development of 16 residential lots, and 2) the construction of an off-site road connecting Castillo Del Mar Drive to Valley Road within the City of Arroyo Grande.

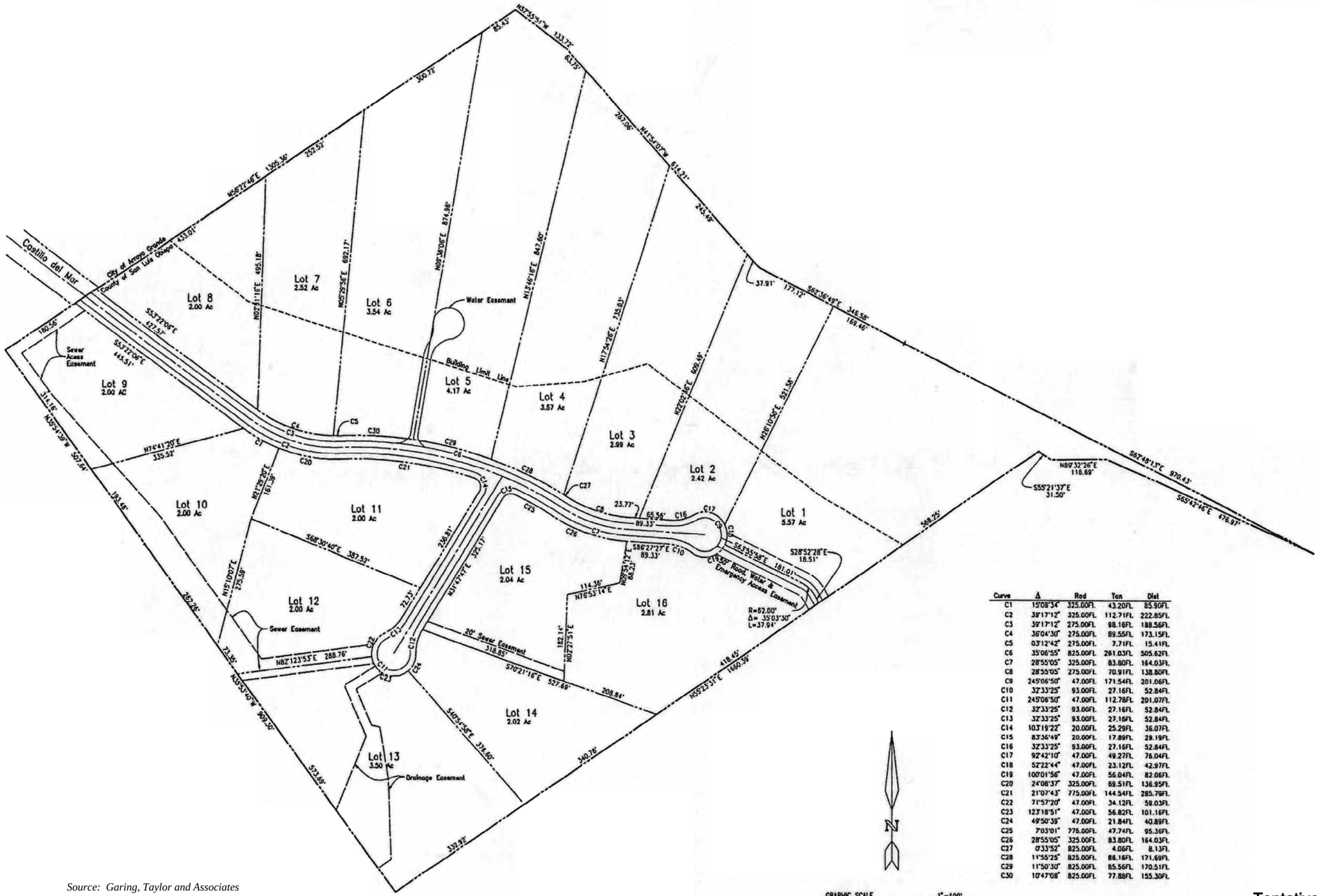
1. Residential Subdivision

a. Development Areas by Lot

The applicant is proposing to subdivide the 47.54-acre parcel into 16 lots varying in size from 2.0 acres to 5.3 acres (refer to Figure III-5). Table III-1 shows a breakdown of the proposed lots and land uses associated with the proposed project.

TABLE III-1
Proposed Lot Size and Land Use

Land Use	Acreage
Residential Lot 1	5.29
Residential Lot 2	2.38
Residential Lot 3	2.99
Residential Lot 4	3.57
Residential Lot 5	4.17
Residential Lot 6	3.54
Residential Lot 7	2.60
Residential Lot 8	2.11
Residential Lot 9	2.11
Residential Lot 10	2.00
Residential Lot 11	2.00
Residential Lot 12	2.00
Residential Lot 13	3.59
Residential Lot 14	2.02
Residential Lot 15	2.00
Residential Lot 16	2.95
Castillo Del Mar Drive Extension	1.41
Side Cul-de-sac Road	0.59
Secondary Access Road Extension (within Lots 1 and 16)	0.22
TOTAL	47.54



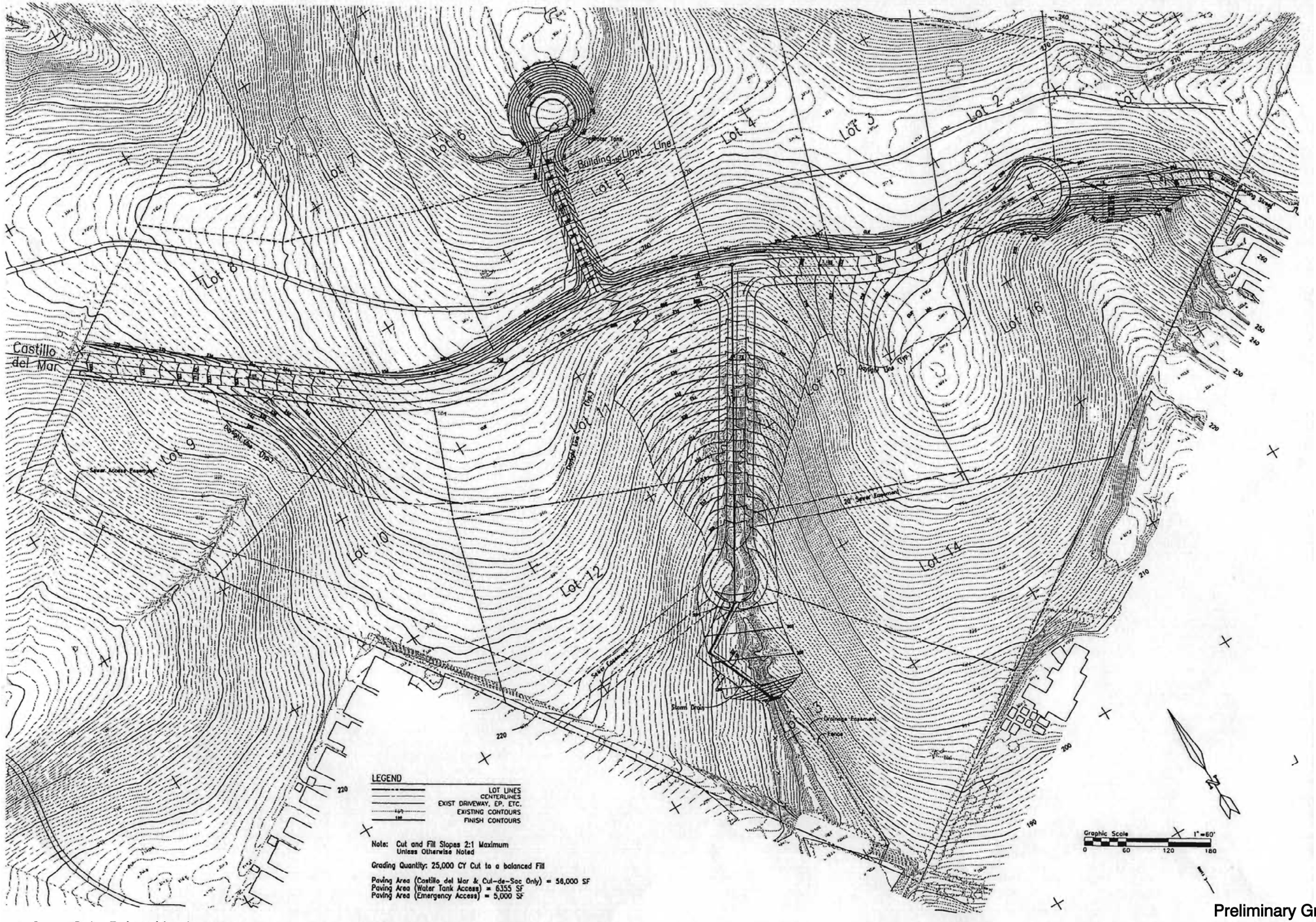
Curve	Δ	Rad	Tan	Dist
C1	15°08'34"	325.00Ft.	43.20Ft.	85.90Ft.
C2	39°17'12"	325.00Ft.	112.71Ft.	222.85Ft.
C3	39°17'12"	275.00Ft.	98.16Ft.	188.56Ft.
C4	36°04'30"	275.00Ft.	89.55Ft.	173.15Ft.
C5	03°12'42"	275.00Ft.	7.71Ft.	15.41Ft.
C6	35°06'55"	825.00Ft.	261.03Ft.	505.62Ft.
C7	28°55'05"	325.00Ft.	83.80Ft.	164.03Ft.
C8	28°55'05"	275.00Ft.	70.91Ft.	138.80Ft.
C9	245°06'50"	47.00Ft.	171.54Ft.	201.06Ft.
C10	32°33'25"	93.00Ft.	27.16Ft.	52.84Ft.
C11	245°06'50"	47.00Ft.	112.78Ft.	201.07Ft.
C12	32°33'25"	93.00Ft.	27.16Ft.	52.84Ft.
C13	32°33'25"	93.00Ft.	27.16Ft.	52.84Ft.
C14	103°19'22"	20.00Ft.	25.29Ft.	36.07Ft.
C15	83°36'49"	20.00Ft.	17.89Ft.	29.19Ft.
C16	32°33'25"	93.00Ft.	27.16Ft.	52.84Ft.
C17	92°42'10"	47.00Ft.	49.27Ft.	76.04Ft.
C18	52°22'44"	47.00Ft.	23.12Ft.	42.97Ft.
C19	100°01'56"	47.00Ft.	56.04Ft.	82.06Ft.
C20	24°08'37"	325.00Ft.	69.51Ft.	136.95Ft.
C21	21°07'43"	775.00Ft.	144.54Ft.	285.79Ft.
C22	71°57'20"	47.00Ft.	34.12Ft.	59.03Ft.
C23	123°18'51"	47.00Ft.	56.82Ft.	101.16Ft.
C24	49°50'39"	47.00Ft.	21.84Ft.	40.89Ft.
C25	7°03'01"	775.00Ft.	47.74Ft.	95.36Ft.
C26	28°55'05"	325.00Ft.	83.80Ft.	164.03Ft.
C27	0°33'52"	825.00Ft.	4.06Ft.	8.13Ft.
C28	11°55'25"	825.00Ft.	86.16Ft.	171.69Ft.
C29	11°50'30"	825.00Ft.	85.56Ft.	170.51Ft.
C30	10°47'08"	825.00Ft.	77.88Ft.	155.30Ft.

Source: Garing, Taylor and Associates

NORTH
Not to Scale

Tentative Tract Map
FIGURE III-5

Back of Figure III-5



NORTH
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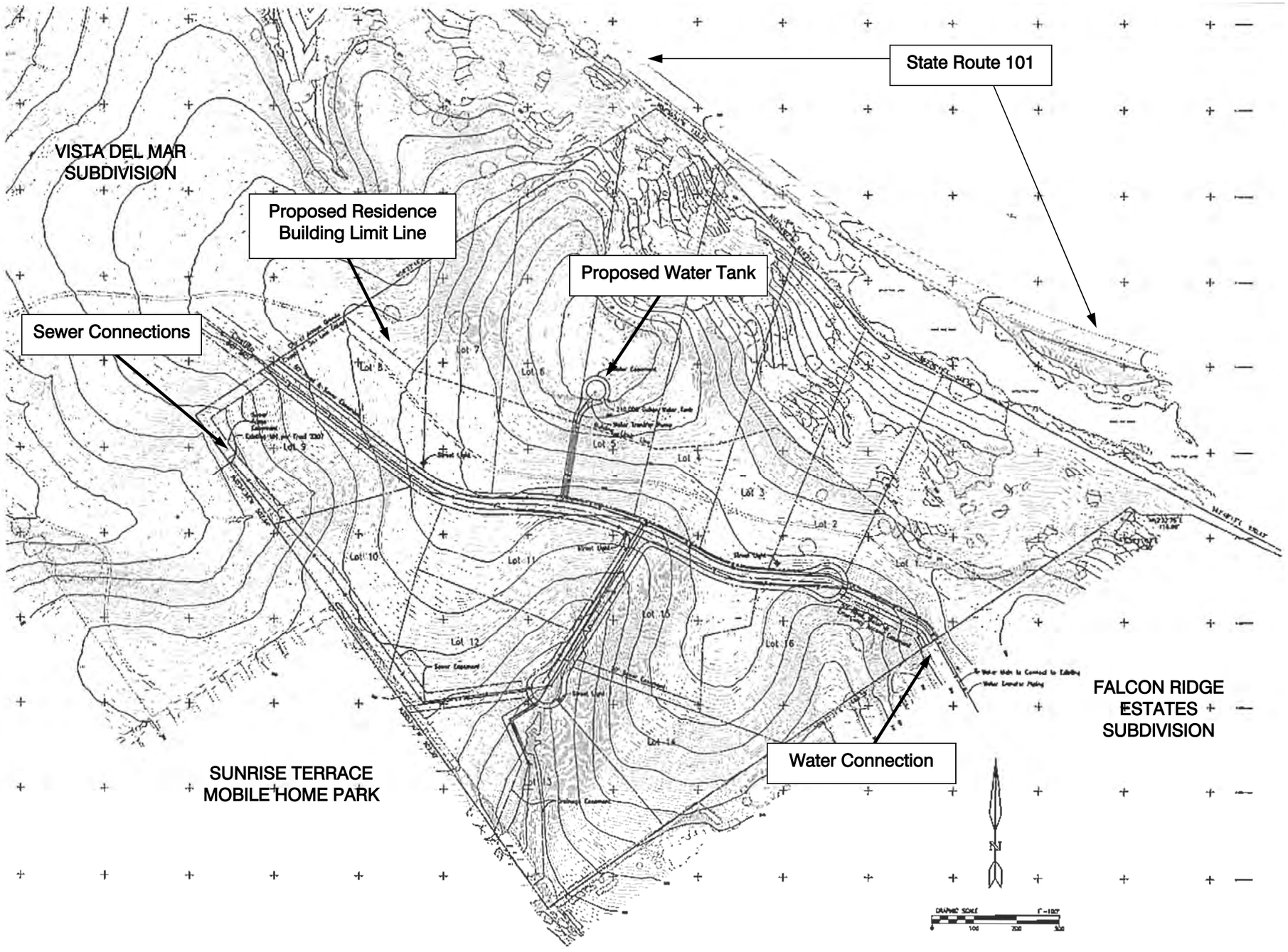
Source: Garing, Taylor and Associates

Preliminary Grading Plan
FIGURE III-6

Back of Figure III-6



Source: Garing, Taylor and Associates

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Access and Utilities Plan
FIGURE III-7

Back of Figure III-7

b. Access

There is an existing 20-foot wide unpaved emergency access road on a 25-foot wide emergency access easement extending across the project site from the terminus of Castillo Del Mar Drive in Vista del Mar (Tract 2207), located north of the project site to the terminus of Coast View Drive in Falcon Ridge Estates (Tract 1256), located south of the project site. This road was constructed to comply with a condition requiring secondary access for Tract 2207 within the City of Arroyo Grande and was authorized by the County of San Luis Obispo (Grading Permit B001027, issued July 27, 2001). During the approval process for Tract 2207, the City of Arroyo Grande City Council determined that primary access to the project site (Tract 1789) would not be allowed via Tract 2207. At the time, a one-foot wide access control easement was established at the juncture of Castillo Del Mar Drive and Tract 1789, precluding use by non-emergency vehicles. Following adoption of the MOU (May 4, 2006), the City lifted the easement restriction, allowing access from the project site into the City of Arroyo Grande.

The applicant is proposing to extend Castillo Del Mar Drive to provide primary access to the subdivision. The paved extension of Castillo Del Mar Drive would be located in the approximate area of the existing emergency access road, extending 1,500 feet to the northeast, and terminating in a cul-de-sac approximately 250 feet northwest of the southeast boundary of the project site, as shown in Figure III-5. Lots 1 through 11 and 15 through 16 would be accessed directly from Coast View Drive. Lots 12 through 14 would be accessed from a side cul-de-sac road that would extend southwest from the Coast View Drive extension. A narrow, one-lane paved road would be constructed between Lots 5 and 6 to provide access to the proposed water tank on Lot 5 (Figure III-5).

This road section between the cul-de-sac terminus of the Castillo Del Mar Drive extension and the terminus of Coast View Drive within the Falcon Ridge Estates private development would be paved to provide secondary access to the southeast. The applicant proposes to construct a "no-notice" gate at the eastern terminus of the Castillo Del Mar Drive extension, which would restrict access into the proposed subdivision, but would open upon approach of an automobile heading southeast, allowing unrestricted exit out of the subdivision onto Coast View Drive. The applicant proposes to place signage on the gate, notifying project residents that the access is to be used during emergencies only, and that the gate will open automatically upon automobile approach. The applicant proposes to install a Knox Box (a locked box to be opened by a combination or key held by emergency response agencies) on the gate to allow entrance of emergency vehicles from Coast View Drive. The existing gate at the northwestern property boundary, across Castillo Del Mar Drive, would be replaced with a "no-notice" gate, which would open by code upon approach of an automobile heading southeast into the project subdivision on Castillo Del Mar Drive, and would open upon approach of an automobile heading northwest exiting the subdivision on Castillo Del Mar Drive. This gate would be equipped with a Knox Box to allow entrance of emergency vehicles into the subdivision from Castillo Del Mar Drive.

c. Site Alteration

The proposed project would result in site alterations during the construction of the Castillo Del Mar Drive primary access road extension, the side cul-de-sac road, secondary access road

improvements, the water tank access road, installation of the water tank, detention basin, utility grading and installation, and drainage improvements (refer to Figure III-6). These roads and improvements would be located on areas ranging in topography from relatively level to steeply sloping (2 to 28 percent slopes). Grading activities would result in the cut and fill of approximately 25,000 cubic yards of soil. Finished cut and fill slopes would be at a maximum 2:1 grade.

Each proposed lot would be graded and developed by individual property owners. Future development would consist of grading for driveways and building pads, and the construction of single-family residences. Based on the character of adjacent development, it is likely the future homes would be large and require one to two acres of grading per lot.

d. Water Supply

The Rural Water Company (RWC) would provide water for the proposed project. The water line would connect to an existing water main located on Coast View Drive approximately 225 feet southeast from the tract boundary within Falcon Ridge Estates (refer to Figure III-7). RWC would require construction of a 210,000-gallon water storage tank with operational facilities to be placed on a 50 by 50-foot easement, located along the northern boundary of Lot 5, with the tank being placed near the 305-foot contour elevation. The water tank would be approximately 19 feet tall, with a 45-foot diameter. The water storage tank and operational facilities would be accessed by a paved utility easement off of Coast View Road, located between Lots 5 and 6. The proposed easement would be approximately 250 feet in length and 15 feet wide. Approximately 3,000 feet of four to six-inch diameter piping would be required to connect the proposed water storage tank to the existing water main.

e. Wastewater Disposal

Wastewater collection would be provided by the South San Luis Obispo County Sanitation District through an outside user agreement with J.H. Land Partnership, L.P. as approved by the Local Agency Formation Commission (LAFCO) Resolution No. 2001-04, recorded on April 23, 2001 and an agreement between the South San Luis Obispo County Sanitation District and the City of Arroyo Grande executed April 11, 2001 by the City and April 18, 2001 by the District. According to the *Annual Resource Summary Report* (County of San Luis Obispo; 2003), the District's wastewater treatment plant was at 57.6 percent capacity in 2002, and the Level of Service was determined to be adequate. The population served by the facility in 2003 was 36,768, and the estimated population at 100 percent capacity is predicted to be 63,204; therefore, the facility has the capacity to serve the proposed development. The proposed sewer would connect to the existing sewer line in the City of Arroyo Grande in two locations at the northwestern property boundary (refer to Figure III-7). The proposed sewer system would be gravity-fed, unless pumping is needed for Lots 10, 13, or 14.

f. Open Space Areas

The project site consists of varied terrain with moderately to very steeply sloping topography (15 to 30 percent slopes) (along the eastern and northern boundary of the site (i.e., eastern and northern portions of Lots 1 through 8), sloping downward to the State Route 101 right-of-way. This area is defined primarily by an east-west trending ridge with an oak woodland community

located on the ridge and on the east and north-facing slope extending down from the ridge. Based on the Visual Resources Assessment prepared for this EIR (refer to Section V.D.), a "building control line" has been established. The building control line constitutes the eastern and northernmost boundary where residential development (with the exception of the proposed water tank and water tank access road) should occur so as to prevent unavoidable significant adverse impacts to visual resources. The applicant has agreed to the implementation of the building control line and would place the portions of Lots 1 through 8 outside of the buildable areas in a permanent open space easement (refer to Figures III-4 and 5).

g. Drainage

The proposed project is located along the crest of a local ridge that trends northwest-southeast, parallel to State Route 101. Runoff from the northeasterly flank of the ridge at the site drains down the ridge to a local, unnamed creek adjacent to State Route 101, and continues in a northwesterly direction into developed portions of the City of Arroyo Grande and connects with Los Berros Creek, which is diverted west into Arroyo Grande Creek. Runoff from most of the southwesterly flank of the ridge at the site drains westerly and southwesterly into the new Vista Del Mar residential development and in a culvert under the Sunset Terrace Mobile Home Park in the City of Arroyo Grande and joins Los Berros Creek, and further west Arroyo Grande Creek. A smaller part of this runoff drains southwesterly and southerly into the Falcon Ridge Estates development. All of the site runoff ultimately flows to Arroyo Grande Creek.

The applicant is proposing to install a detention basin on Lot 13 in the far southern corner of the project site to hold storm water runoff and release it into the culvert at a metered rate (refer to Figure III-6). The basin would be designed to drain within 24 hours following a storm event. Storm water runoff would be collected and transferred along the proposed roadways into the basin. The design includes an overflow structure, which would direct storm water flow during 100-year storms into the existing drainage pipe.

2. Castillo Del Mar Drive Extension - Valley Road Connection

The Castillo Del Mar Drive extension to Valley Road conceptual plan was approved by the City of Arroyo Grande City Council on August 22, 2006 (refer to Figure III-8). The City required funds from the applicant for land acquisition costs to obtain the Valley Road connection right-of-way and to remove the access restriction easement at the existing northern terminus of Castillo Del Mar Drive. The City is responsible for preparation of the road design, construction plans, and the Mitigated Negative Declaration adopted for the project; the City will also implement construction of the access road and be responsible for road maintenance. The roadway would extend approximately 1,650 feet from the existing western terminus of Castillo Del Mar Drive to Valley Road. The roadway would be located along the south boundary of the Arroyo Grande High School campus, and would traverse the northern corner of a previously privately-owned agricultural parcel to connect with Valley Road. The road would be paved and 28 feet wide. Associated drainage improvements would include three 18-inch diameter corrugated metal pipe (CMP) culverts, an 18-inch diameter high-density polyethylene (HDPE) culvert, earthen berm, earthen swale, and grading features to guide stormwater to the proposed drain system.

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NORTH
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Source: Wallace Group

Castillo Del Mar to Valley Road Connection
Concept Plan
FIGURE III-8

Back of FIG III-8

IV. ENVIRONMENTAL SETTING

A. PHYSICAL SETTING AND EXISTING USES

The project site is located immediately southwest of State Route 101, at the northwestern terminus of Coast View Drive, immediately south of the City of Arroyo Grande. The project site consists of approximately 47.54 acres and is bounded on the northwest by Vista Del Mar in the City of Arroyo Grande, on the northeast by State Route 101, on the southwest by Sunrise Terrace Mobile Home Park, and on the southeast by Falcon Ridge Estates.

The project site is dominated by gently to steeply sloping topography. Vegetation on the project site includes grasses, scrub, and oak woodland. A graded, unimproved emergency access road extends through the project site from the terminus of Coast View Drive to a gate at the City of Arroyo Grande limits at the terminus of Castillo Del Mar Drive (refer to Figures III-4 and IV-1).

The access road to connect Castillo Del Mar Drive and Valley Road would be located roughly within the alignment of an existing unpaved access road, and would traverse the corner of an agricultural field. The topography is gently to moderately sloping, and vegetation is limited to disturbed grasses.

B. SURROUNDING LAND USES

Land uses surrounding the project site are predominantly residential (refer to Figure IV-1). The properties east and west of the project site are occupied by large-scale estate homes. A mobile home park occupies the property to the southwest of the project site. State Route 101 borders a portion of the property to the northeast. The properties north of State Route 101 are dominated by open space and scattered residences. The overall context of the project and surrounding land uses is residential suburban.

The access road to connect Castillo Del Mar Drive and Valley Road within the City of Arroyo Grande would extend from the Vista Del Mar residential subdivision adjacent to the Arroyo Grande High School fields and parking area to the east and north. The road would traverse an agricultural field and connect with Valley Road. An undeveloped hillside and agricultural fields are located to the west and south.

C. CONSISTENCY WITH PLANS AND POLICIES

Development on the project site is subject to ordinances required by the County of San Luis Obispo Land Use Ordinance (Title 22 of the County Code). Local planning standards and policies relevant to the project site are included in the San Luis Bay Area Plan.

CEQA *Guidelines*, subsection 15125(d) states, "the EIR shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans." This section provides general information as to the plans, policies and ordinances applicable to the proposed project actions as stated in the following listed documents. It is the responsibility of the Board of Supervisors to make the final decision regarding consistency issues. The following County land use plans and policies are applicable to the proposed tract map:

- County of San Luis Obispo Land Use Ordinance (Title 22)
- San Luis Bay Area Plan - Inland Land Use Element and Circulation Element

Other regional plans, such as the Clean Air Plan, are discussed within each applicable analysis section, such as the Air Quality section. The following consistency analysis describes applicable sections of these land use policy documents (printed in `Courier` type) followed by comments related to the proposed project's consistency.

1. County of San Luis Obispo Land Use Ordinance (Title 22)

The following excerpts of applicable ordinances are from the County of San Luis Obispo Land Use Ordinance Title 22 of the San Luis Obispo County Code, revised June 2007.

22.22.070 - Residential Suburban Category: The minimum parcel size for new parcels in the Residential Suburban category is based upon the terrain of the proposed lots, and the type of water and sewage disposal facilities to be used. Minimum parcel size is determined by applying the tests of this Section to the features of the parcels to be created. The allowable minimum size is the ***largest area*** obtained from any of the tests, except as provided for cluster divisions by Section 22.22.140.

A. Slope test: Site slope shall be measured as defined in Article 8(Definitions - Slope).

Average Slope	Minimum Parcel Size Outside GSA
Over 30%	3 Acres
16-30%	2 Acres
0-15%	1 Acre

B. Water and sewer test. The minimum parcel size shall be based upon the type of water supply and sewage disposal facilities to serve the proposed parcels, as follows:

Water Supply	Minimum Parcel Size with Community Sewer
Community Water	1 Acre

Consistency Analysis

Based on an average slope less than 30 percent and proposed use of community water and sewer, and the proposed minimum lot size of 2.0 acres, the proposed project appears to be potentially consistent with the above ordinance.

22.10.130 – Residential Density
A. Single-family dwellings. In land use categories where Section 22.06.030 (Allowable Land Uses and Permit Requirements) identifies single-family dwellings or mobile homes as permitted or conditional uses, the number of dwellings allowed on a single lot is as follows, provided that mobile homes shall also comply with Section 22.30.450 (Residential – Mobile Homes.)

Source: Golden State Aerial Surveys

NORTH
Not to Scale

Aerial of Project Site
FIGURE IV-1

Back of Figure IV-1

2. **Residential land use categories:** One for each parcel, except as follows:

D. Secondary dwellings. A secondary dwelling may be established in addition to the unit authorized by this Section, if allowed by Section 22.30.470 (Residential-Secondary Dwellings).

Consistency Analysis

The applicant anticipates that only one single-family residence would be constructed on each future lot; however secondary dwellings are allowed and if constructed would be potentially consistent with the above ordinance.

22.52.090 - Erosion and Sedimentation Control Plan Required:

B. Erosion and Sedimentation Control Plan Content. An erosion and sediment control plan shall address both TEMPORARY and FINAL measures. Measures shall be in place to control erosion and sedimentation prior to the commencement of grading and site disturbance activities unless the Director determines temporary measures to be unnecessary based upon location, site characteristics or time of year. Plans may be incorporated into and approved as part of a grading or drainage plan, but must be clearly identified as an erosion and sedimentation control plan. Erosion and sedimentation control plans are reviewed and approved by the Director. The plan shall be prepared by a certified sediment and erosion control specialist, a registered civil engineer, registered architect or landscape architect, certified California nurseryman, licensed landscape contractor, Resource Conservation District or USDA Natural Resource Conservation Service Specialist, or other qualified persons acceptable to the Department of Planning and Building with competence and experience in erosion control plan preparation and implementation.

The plan shall consist of graphic and narrative information of sufficient clarity to indicate the nature, extent, location and placement recommendations of the erosion and sedimentation control measures proposed and show in detail that they would conform to the provisions of this Chapter. The location of all practices, methods and devices shall be shown on the grading plan, or on a separate plan at the discretion of the Director. If separate, it shall be attached to the grading plan used in the field. The plan shall contain, but need not be limited to, all the following information unless some of the information is waived by the Director as not needed for the review of a particular site and its characteristics:

1. Grading limits shall be graphically defined on the plan and staked out before site disturbance begins.

2. Estimates of sediment yields before, during, and after construction of the project for a three-year period or until revegetation is established. (One acceptable method is the "Universal Soil Loss Equation" developed by the USDA Agricultural Research Service.)

3. Proposed methods and a description of the practices to be used to protect exposed erodible areas during construction, including temporary mulching, seeding, or other recognized surface stabilization measures.

4. Proposed temporary and final methods and a description of the practices to be used for cut or fill slopes to prevent erosive surface runoff, including earth or paved interceptors and diversions, energy absorbing structures, or devices and techniques to reduce the velocity of runoff water.

5. When revegetation is required for smaller disturbed areas near habitats identified at the state and/or federal levels as sensitive (e.g. near creeks or wetlands, coastal scrub), propose an alternative "native-friendly" mix of seeds and/or cuttings that are compatible with the sensitive habitat. The alternative mix to be used shall a) grow reasonably quick; b) be from locally-or commercially-available native seed or plant stock; c) be compatible with the surrounding native habitat and climate; and d) be free from noxious weed seed of local and statewide importance (as identified by the Agricultural Commissioner's Office). Larger areas to be reseeded should consult with a qualified botanist or other qualified expert of native plants to survey the site and determine the best mix of native species.

6. Proposed methods and description of the temporary and final practices to retain sediment on the site, including sediment basins and traps, vegetative filter strips, or other recognized measures, a schedule for their maintenance and upkeep and provisions for responsibility of maintenance. Include design criteria for the trapping efficiency and storage capacities of sediment basins for flows from a 10-year storm.

7. Proposed methods, application technique, seed and fertilizer rate, sequence, and description of final erosion control practices for revegetation of all surfaces disturbed by vegetation removal, grading, haul roads, or other construction activity, unless covered with impervious or other improved surfaces authorized by approved plans. A schedule for maintenance and upkeep of revegetated areas shall be included. Erosion control methods may include a combination of approved mechanical or vegetative measures, including those described in USDA Soil Conservation Service Bulletin 347 - Controlling Erosion on Construction Sites or the Drainage Improvement Guide for Unpaved Roads.

8. The type, location, and extent of pre-existing and undisturbed vegetation on the site.

9. An estimate of the cost of implementing and maintaining all erosion and sediment control practices where bonds or other financial assurances are proposed or required.

10. A statement by the individual preparing the plan that the plan represents the minimum site disturbance necessary to achieve erosion and sediment control.

11. Descriptions of proposed methods to limit access routes and stabilize all access points, and to delineate clearing limits, easements, setbacks, sensitive areas, buffer areas, and drainage courses.

12. Other additional plans, drawings, calculations, photographs, or other information which are necessary to adequately review, assess, and evaluate proposals and to show that they conform with the requirements of this chapter.

Consistency Analysis

The applicant shall submit and implement an erosion and sedimentation control plan including restoration measures for the review and approval of the County of San Luis Obispo pursuant to Drainage and Erosion mitigation measure DE/mm-1 (refer to Chapter V.B. Drainage and Erosion of this document). Based on the implementation of an approved plan, the proposed project would be potentially consistent with the above ordinance requirement.

2. San Luis Bay Area Plan - Inland

The following excerpts of applicable plans and polices are from the *San Luis Bay Planning Area* Planning Area Standards, revised June 2007.

22.106.020 - SAN LUIS BAY RURAL AREA STANDARDS

A. Areawide Standards. The following standards apply within the rural portions of the San Luis Bay Planning area that are not limited to a single land use category.

1. Planning Impact Areas. The following standards apply within the cities of Arroyo Grande and Grover Beach planning impact areas.

a. Application Referral. Applications for discretionary land use permits, land divisions or General Plan amendments within the planning impact areas for the cities of Grover Beach and Arroyo Grande shall be referred by the county to the appropriate city or cities for review and comment.

Consistency Analysis

The proposed project was referred to the City of Arroyo Grande during the Notice of Preparation period of the EIR process. Further consultation with the City occurred during preparation of the EIR. Based on the NOP referral, the proposed project is potentially consistent with the above planning area standard.

b. Development Impacts. The County shall address potential impacts, including cumulative impacts, that are associated with impacts to water quantity and quality, drainage, erosion and downstream sedimentation, and traffic and circulation as critical subjects for additional evaluation as part of the environmental review process.

Consistency Analysis

This EIR evaluates potential impacts, including cumulative impacts that the project may have on the environment. Based on the contents of this EIR, the proposed project is potentially consistent with the above planning area standard.

2. Circulation standards.

b. Driveways - New land divisions. Where possible, new land divisions shall be designed to combining driveways and private access roads serving proposed parcels wherever terrain and adequate sight distance on the public road allow.

Consistency Analysis

The proposed project design includes a design for one primary and one secondary road to provide access for all proposed parcels. Based on the proposed project infrastructure design, the proposed project appears to be potentially consistent with the above planning area standard.

c. Pedestrian and Bikeways - New land divisions. Provide for safe and site-sensitive pedestrian and bike circulation facilities in the design of roads for new subdivisions where feasible.

Consistency Analysis

The proposed project design would include sidewalks for safe pedestrian routes. The proposed width of the main access roads would provide adequate space for bicyclists and automobiles within the small subdivision. Pedestrian and bicycle access is available through both the Vista Del Mar and Falcon Ridge Estates residential subdivisions. Based on the proposed project design, the proposed project is potentially consistent with the above planning area standard.

d. Road Design and Construction - New land divisions.

(1) Site disturbance. Road alignments proposed in new land division applications are to be designed and constructed to minimize terrain disturbance consistent with safety and construction cost. Altered slopes are to be replanted with indigenous plants or protected by other appropriate erosion control measures.

Consistency Analysis

The applicant is proposing to construct the main access road within the approximate location of an existing unimproved emergency access road. The applicant shall submit and implement an erosion and sedimentation control plan including restoration measures for the review and approval of the County of San Luis Obispo, pursuant to Drainage and Erosion mitigation measure DE/mm-1 (refer to Chapter V.B. Drainage and Erosion of this document). Based on the

implementation of approved plan, the proposed project would be potentially consistent with the above planning area standard.

> (2) **Circulation.** New land divisions adjacent to the city limits of an incorporated city shall be designed to include offers-to-dedicate for roads connecting with the city such that the street right-of-way widths will reasonably correspond to those required under City standards. Appropriate transitions in road improvements shall be provided between City and County roads adjacent to the City limits. In addition, logical existing or future street connections to City streets shall be provided for in order to encourage an efficient circulation system.

Consistency Analysis

The applicant proposes to extend Castillo Del Mar Drive (within the City of Arroyo Grande) to provide primary access to and within the project site. Secondary access would extend to the southeast, and would connect with Coast View Drive. In addition, the applicant complied with the City's request to provide funding for an access road between Castillo Del Mar Drive and Valley Road, which would improve circulation in the immediate area within the City. Based on the implementation of this plan, the proposed project appears to be potentially consistent with the above planning area standard.

D. CUMULATIVE ANALYSIS

The California Environmental Quality Act (CEQA), in Section 15355 of the Guidelines, defines "cumulative impacts" as two or more individual effects that, when considered together, are considerable or will compound or increase other environmental impacts. Cumulative impacts are the changes in the environment that result from the incremental impact of development of the proposed project when added to other closely related past, present, or reasonably foreseeable, probable future 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.

Section 15130 of the CEQA *Guidelines* indicates that cumulative impacts shall be discussed when the project's incremental effect is cumulatively considerable. The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not be as detailed as required for the discussion of effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness.

According to the Guidelines, the following elements are necessary to an adequate discussion of significant cumulative impacts:

- A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, **or**

- A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document that has been adopted or certified, which described or evaluated regional or areawide 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.

The discussion shall also include a summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available, and a reasonable analysis of the cumulative impacts of the relevant projects. The EIR shall examine reasonable options for mitigating or avoiding any significant cumulative effects of a proposed project.

Cumulative impacts are assessed in Section V, Environmental Impacts and Mitigation Measures under each resource issue, where appropriate. The cumulative analysis for each of the appropriate issue areas is based on either a build-out modeling program (i.e., Traffic and Circulation) or a list of projects provided by the San Luis Obispo County Department of Planning and Building and the City of Arroyo Grande Community Development Department. The concurrent projects are in various stages of planning and development and are expected to contribute to cumulative impacts in the vicinity of the proposed development (refer to Table IV-1).

TABLE IV-1
Cumulative Development Scenario

Project Name		Status	Component/ Location
1	Sharp TTM 03-005	Approved	40 senior condominium units and *4 affordable units at The Pike and Elm Street in the City of Arroyo Grande*
2	Hunstad TTM 03-002	Approved	8 townhouse units and 2 *affordable units at 1180 Ash Street in the City of Arroyo Grande*
3	Wheeler TTM 03-001	Approved	12 townhouse units at 185 Brisco Road in the City of Arroyo Grande
4	McHaney TTM 02-005	Approved	15 lot subdivision of approximately 30 acres, including *4 affordable units on Grace Lane in the City of Arroyo Grande*
5	Mack TTM 02-002	Approved	65 lot subdivision of approximately 10 acres, including *21 affordable units on Farroll Avenue in the City of Arroyo Grande*
6	Mack TTM 02-001	Approved	47 lot subdivision of approximately 5 acres, including *17 affordable units at the corner of Ash and Courtland Streets in the City of Arroyo Grande*
7	McGowen TPM 03-008	Approved	Subdivision of one lot into two lots at 330 Tally Ho Road in the City of Arroyo Grande
8	Mack SPA 03-001	Pending	Amend Berry Gardens Specific Plan to allow a mix of uses on approximately 6 acres including 50,000 sq. ft. office/retail and 56 units at 1595 East Grand Avenue in the City of Arroyo Grande

Project Name		Status	Component/ Location
9	Union Local 12 CUP 04-003	Approved	1,545-square foot Operating Engineers Union office at the corner of Faeh Street and Halcyon Road in the City of Arroyo Grande
10	DB&M Property, LLC TTM 04-004 & PUD 04-001	Pending	Mixed-use development including 24 residential units and 12,000 square-feet of retail/office space at 415 East Branch Street in the City of Arroyo Grande
11	Castlerock Development VTTM 01-001 PUD	Pending	21 units in La Canada, in the City of Arroyo Grande
12	Le Point Investments TTM 04-003 & PUD 04-003	Approved	12 units at Le Point and Nevada Streets in the City of Arroyo Grande
13	Creekside Estates TTM 04-002 PUD 04-002 NP 04-001	Pending	88 new residential lots on 22 acres in two phases. Phase I is a 39 lot residential subdivision in a Planned Unit Development configuration for 9 of the 22 acres, located east of the Noguera Court subdivision, north of East Cherry Avenue extension, and bounded to the north and east by Arroyo Grande Creek in the City of Arroyo Grande
14	Timmons CUP 04-008	Pending	Development of 1,415 square feet of office/retail space on the first floor and 2 residential apartment units on the second floor at 136 Bridge Street in the City of Arroyo Grande
15	Sheppel TTM 04-005 PUD 04-005	Pending	Subdivision of 2 parcels into 6 and the construction of 22 apartments at the corner of Oak Park Road and James Way in the City of Arroyo Grande
16	Grant TTM 04-004 & PUD 04-004	Pending	Subdivision of 0.57 acre into 11 lots and the construction of 10 single-family residences, including 1 affordable unit on Barnett Street in the City of Arroyo Grande
17	White PRE 04-018	Pending	106-room Hampton Inn and 6,000 square-foot restaurant at Camino Mercado and West Branch Street in the City of Arroyo Grande
18	Poirier & David Architects PRE 04-017	Pending	33,200 square-foot retail addition to Five Cities Center (redesign of previously approved Building Pad "I") at 900 Rancho Parkway in the City of Arroyo Grande
19	Arroyo Grande Spanish Oaks, LLC PRE 04-019	Pending	Subdivision of a 1.1-acre site into 11 lots and construction of 11 single-family residences, including 1 affordable unit at South Elm and Maple Streets in the City of Arroyo Grande
20	Motter PRE 04-009	Pending	Mixed-use development consisting of an 80-unit residential complex, 6,590 square feet of office floor area, 24,255 square feet of low-density commercial floor area, and 11,250 square feet of high-density retail floor area at 143 Brisco Road in the City of Arroyo Grande
21	Summit Station Amendment	Approved	North of the community of Nipomo, in the unincorporated area of the County of San Luis Obispo
22	Laetitia Winery Agricultural Cluster	Pending	Adjacent to Highway 101, south of the City of Arroyo Grande, in the unincorporated area of the County of San Luis Obispo

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V. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

This section evaluates the potential environmental impacts associated with the proposed project and discusses how these impacts can be mitigated or avoided. The sections are divided based on potential impacts including: Geologic, Soils and Seismic Hazards, Drainage and Erosion, Biological Resources, Visual Resources, Traffic and Circulation, and Air Quality. These sections are further divided into Existing Conditions, Regulatory Setting, Thresholds of Significance, Impact Assessment Methodology, Project-specific Impacts and Mitigation Measures, and Cumulative Impacts. Each section was prepared based on technical studies submitted by the applicant and reviewed by the EIR consultant, and research and field surveys conducted by the EIR consultant.

The City of Arroyo Grande adopted a Mitigated Negative Declaration (MND) for General Plan Amendment Case No. 06-001, Development Code Amendment Case No. 06-001, and Tentative Parcel Map Case No. 06-004, which includes an analysis of the road extension to Valley Road on August 22, 2006. A copy of the MND is located in Appendix G of this Final EIR. The analysis of potential environmental effects identified in the MND is incorporated by reference.

Copies of the technical reports are available for review at the County of San Luis Obispo, County Government Center Room 200 in San Luis Obispo, California.

A. GEOLOGIC, SOILS AND SEISMIC HAZARDS

This section was prepared based on the *Geotechnical Study* (Earth Systems Consultants; 1996), *Geologic Fault Investigation* (Earth Systems Consultants; 1997), *Soils Engineering Investigation* (Pacific Geoscience, Inc.; 1988) and *Soils Engineering Report* (Pacific Geoscience, Inc.; 1989) prepared for the project site and areas adjacent to the project site. The EIR consultant, Mr. Don Asquith, reviewed these reports for adequacy and incorporated the findings into the below discussion.

In addition, the City of Arroyo Grande adopted a Mitigated Negative Declaration (General Plan Amendment Case No. 06-001, Development Code Amendment Case No. 06-001, and Tentative Parcel Map Case No. 06-004), which includes an analysis of the road extension to Valley Road on August 22, 2006. Applicable analysis is incorporated in the section below by reference, and a copy of the adopted MND is located in Appendix G of this Final EIR.

1. Existing Conditions

a. General Geologic Conditions

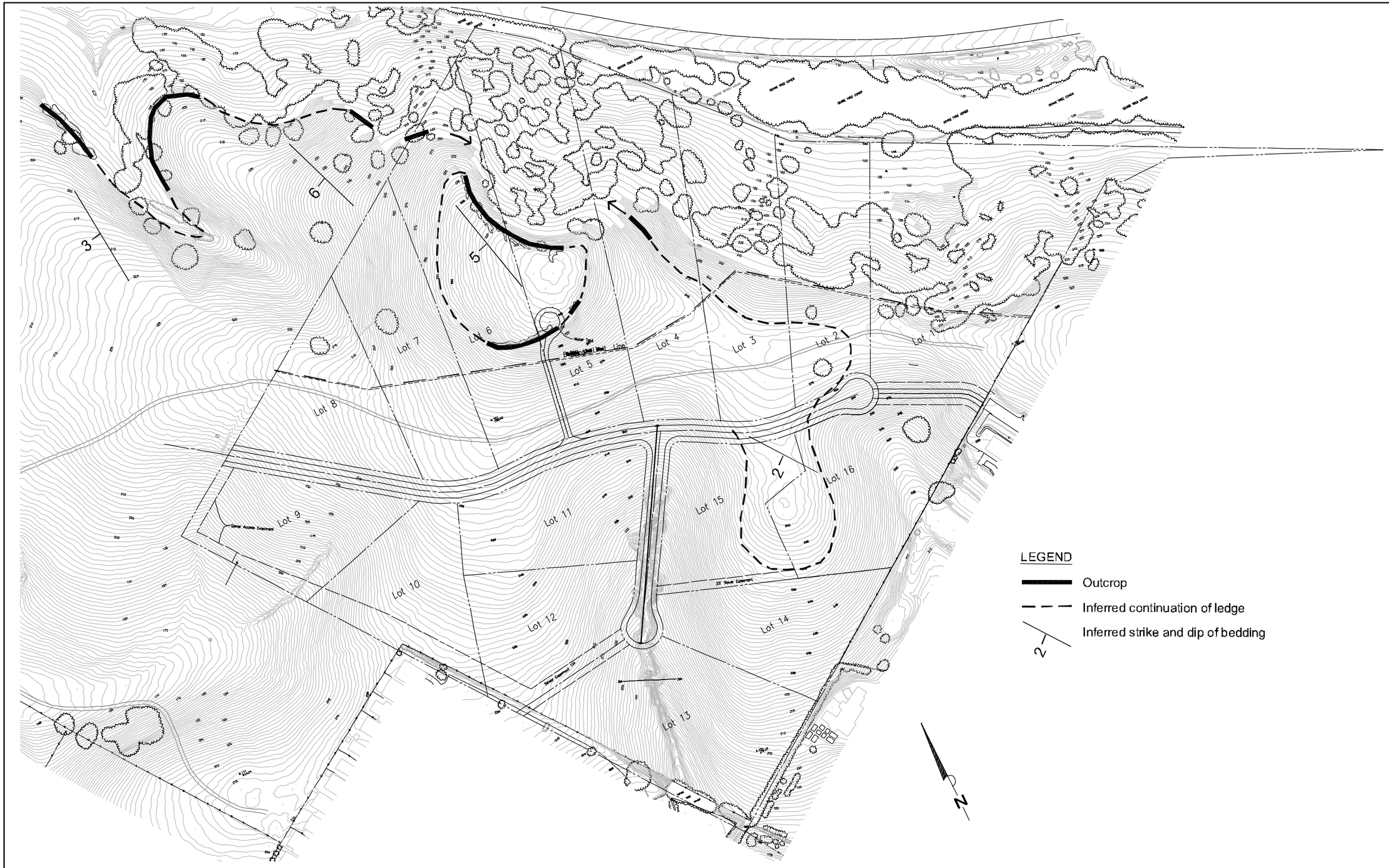
The project site is located on the southwest flank of a range of low to moderately high hills referenced in the geologic literature of the area as the San Luis Range. These hills range in elevation from 100 to 1,200 feet above sea level. The Irish Hills comprise the core of the range to the northwest, and Newsome Ridge and Temetate Ridge form the primary elements to the southeast. Complexly folded Tertiary rocks generally form the majority of the core of the range while younger rocks form the flanks.

b. Geologic Formations and Bedrock Units

Geologic formations underlying the project site consist of the Paso Robles Formation and the surficial soil units developed on it, including silty, clayey sandstones, mudstones and conglomerates (Hall; 1973). Rock outcrops present onsite are comprised of the more resistant conglomerate units. Two rock outcrops can be traced for some distance, as shown in Figure V.A.-1. The distributions of these outcrops on the site and on the fringe of the development on Vista Del Mar (Tract 2207) to the west indicate that the bedding within the Paso Robles is inclined (dips) to the west at approximately three to six degrees. A buried black clay soil layer exposed in a trench excavated in the northern section of the project site suggests a westerly dip of approximately ten degrees (Earth Systems Consultants; 1997). Based on geotechnical data gained from trenching investigations conducted on the project site, this appears to be a local steepening and the more gentle dip derived from the elevations of outcrops at the site are more generally applicable.

c. Surficial and Soil Units

Pacific Geoscience, Inc. conducted soils engineering investigations within Vista Del Mar (Tract 2207) to the north of the project site and on the project site itself in 1988 and 1989, respectively. The investigations were conducted to assess the potential for differential settlement due to non-uniform density in the upper two feet of the soil profile, and the variable thickness of soil development as opposed to "shallow bedrock." The soils were determined to have very low expansion characteristics, and no special measures were deemed necessary. Trenching for



SHEET: 1 OF 1 SCALE: 1" = 200'	MORRO GROUP, INC. Environmental Services	BUSICK EIR Tract 1789 - San Luis Obispo County, California	LEDGE-FORMING OUTCROPS
CADD FILE: 01-636 Busick EIR\FIG-geo/figVA-1			
DATE: 7-14-03 BY: dh REV. 07/19/07			FIGURE V.A.-1

Back of Figure V.A.-1

potential faults of concern within Vista Del Mar and the project site revealed that infiltrating runoff was slow to penetrate the bedrock, and free water tended to concentrate at the soil/bedrock interface. This concentration of free water at the base of the surficial soil may result in temporary shallow instabilities on steeper natural slopes (greater than 20 percent) during wet periods.

d. Slope Failure Potential

Bedding in the Paso Robles Formation on the project site is inclined to the west, and there is some indication that the bedding has been undercut in local areas on the westerly slopes. These are conditions that could contribute to potential slope failure, if there were natural slip surfaces within the bedding. There are no indications of such surfaces or natural failures on this slope. The angle of dip is low (three to six degrees) and bedding is poorly developed, both of which naturally mitigate against slope failure. The steep slopes along the northeastern property boundary show significant indications of surficial instability. These slopes are outside the proposed "building limit line," and no development is proposed on these slopes. Based on the characteristics observed onsite, and the proposed location of future development, the potential for slope failure in the buildable area is low.

e. Seismicity and Faulting

Geologic investigations conducted for PG&E in 1988, and published by Nichman and Slemmons (1994) and Hanson et al (1994), indicate that the Wilmar Avenue Fault may be active where it crosses the sea cliff in the City of Pismo Beach, and that it may extend to the southeast generally along State Route 101 to and beyond the City of Arroyo Grande. Locations where the lineations suggest the presence of active faulting that deviate from under State Route 101 are the project site and Vista Del Mar.

The first trenching investigation to confirm or deny the presence of faulting along this feature was conducted by Earth Systems Consultants in 1996 within Vista Del Mar, immediately adjacent to the proposed project site. The Earth Systems Consultants geologist, the EIR geology consultant, and the geological consultant to PG&E who first identified this feature evaluated the trench and determined that there was no evidence of faulting in the trench.

A second round of trenching was recommended by the EIR geology consultant, and conducted by Earth Systems Consultants in 1997 to check for faulting in the gully to the east of the trench excavated within Vista Del Mar. The same geologists that examined the trench within Vista Del Mar in 1996 examined these trenches, and it was agreed that there was no evidence of faulting on the project site. Based on these investigations, the potential for a hazard due to active faulting at the project site is not significant.

f. Liquefaction

Groundwater was not encountered during soils and geologic investigations at the proposed project site, and the rock formations encountered below the surface soils are very firm. Based on the existing soil conditions, the potential for liquefaction at the site is essentially zero.

g. Tsunami

The portion of the project site proposed for development is located at elevations generally in excess of 200 feet above sea level, and the potential for tsunami, a seismically generated sea wave, is very low.

h. Surface Water and Springs

No subsurface water or springs were observed or encountered during field visits or subsurface investigations conducted on the project site. The characteristics of the rocks encountered in the soils and geologic investigations indicate that discovery is unlikely.

2. Regulatory Setting

a. Public Resources Code, Section 2621, et. seq.

The *Alquist-Priolo Special Studies Act of 1972* establishes criteria and policies at the state level to assist cities, counties, and state agencies in the exercise of their responsibility to prohibit the location of development and structures for human occupancy across the trace of active faults as defined by the State Mining and Geology Board.

3. Thresholds of Significance

Based on Appendix G, Section VI of the CEQA Guidelines, the threshold of a significant geologic or seismic impact is that which would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

  i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map...or based on other substantial evidence of a known fault
  ii) Strong seismic ground shaking
  iii) Seismic-related ground failure, including liquefaction
  iv) Landslides.

- Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

4. Impact Assessment Methodology

The assessment of potential impacts resulting from geologic, soils, and seismic hazards was based on review of the applicable literature, soils reports prepared for the site and the tract to the north, and the reports of fault trenching on the site and the tract to the north. The EIR consultant

conducted an engineering geologic reconnaissance of the site and observed the fault trenching conducted at the site and on the tract to the north. The determination of the significance of impacts is based on a comparison of the information obtained in this way with the thresholds of significance described above.

5. Project-specific Impacts and Mitigation Measures

Based on the geologic studies and reports prepared for the proposed project, review of these reports by the EIR consultant, and thresholds of significance described above, no potentially significant impacts related to geologic, soils, or seismic hazards have been identified, and no mitigation measures are required beyond standard building regulations required by the County of San Luis Obispo and City of Arroyo Grande.

6. Cumulative Impacts

Geologic, soils, and seismic hazards are site-specific, and hazards from different sites or projects do not combine to generate cumulative impacts.

B. DRAINAGE AND EROSION

This section was prepared based on the *Preliminary Drainage Report* (January 16, 2003) prepared by Garing Taylor and Associates, a supplemental letter (January 31, 2005) prepared by Garing Taylor and Associates, and the *Soils Engineering Investigation* (December 14, 1988) prepared by Pacific Geoscience, Inc. These reports are incorporated into this document by reference. The *Preliminary Drainage Report* and supplemental letter are available for review in Appendix B of this document.

In addition, the City of Arroyo Grande adopted a Mitigated Negative Declaration (General Plan Amendment Case No. 06-001, Development Code Amendment Case No. 06-001, and Tentative Parcel Map Case No. 06-004), which includes an analysis of the road extension to Valley Road on August 22, 2006. Applicable analysis is incorporated in the section below by reference, and a copy of the adopted MND is located in Appendix G of this Final EIR.

1. Existing Conditions

a. Drainage

1) Subdivision

The project site is located along the crest of a local ridgeline that trends northwest to southeast, parallel to State Route 101, as shown in Figure V.B.-1. Currently, seven drainage areas and five exit drainage points are present on the project site, as shown in Figure V.B.-2.

Runoff from most of the southwestern flank of the ridge on the project site (Areas 1A, 1B, and 1C) currently drains west to southwest into the Vista Del Mar (Tract 2207) residential development in the City of Arroyo Grande (Points C, D, and E). Drainage from the south-central portion of the project site (Area 2) flows into an ephemeral drainage and continues into an existing culvert located under the Sunrise Terrace Mobile Home Park in the City of Arroyo Grande (Point B). A majority of the southeastern portion of the project site (Areas 3A and 3B) currently drains into the Falcon Ridge Estates (Tract 1256) residential development (Point A); a small portion of Area 3B currently drains into Point B. Runoff from the northern flank of the ridgeline on the project site (Area 4) drains northeast down the ridge to an unnamed tributary to Los Berros Creek adjacent to State Route 101 and continues northwest into developed portions of the City of Arroyo Grande. All of the site runoff ultimately flows into Arroyo Grande Creek, located approximately 0.5 mile west of the project site.

2) Castillo Del Mar Drive – Valley Road Connection

In the vicinity of the Castillo Del Mar Drive and Valley Road connection, stormwater runoff generally flows to the northwest. A drainage ditch traverses the school sports fields located north of the alignment, and crosses the existing unpaved roadway approximately 340 feet southeast of Valley Road. The drainage ditch continues south through the adjacent agricultural fields to the south; the ditch was historically cleared by the agricultural operator and does not support native vegetation within or adjacent to the area proposed for the roadway. The drainage continues south through agricultural fields and residential development before flowing into Los Berros Creek.

b. Erosion and Sedimentation

1) Subdivision

Based on the Natural Resources Conservation Service (NRCS) Soil Survey, the soil types mapped for the project site include Chamise shaly loam and Chamise shaly sand clay loam (refer to Figure V.B.-3). The NRCS Soil Survey documents these soils as moderately to highly erodible. Pacific Geoscience, Inc. reports that "the soils at the site are erodible and would become more so when disturbed during [grading] and construction" (1989). Based on the EIR consultant's review of the topographic map of the site and site reconnaissance, areas where evidence of significant erosion in the development area occur are limited to the gully present in the center of Drainage Area 2 (refer to Figure V.B.-2).

2) Castillo Del Mar Drive – Valley Road Connection

Based on the NRCS Soil Survey, the soil types within the proposed road alignment include Chamise shaly sandy clay loam, Marimel silty clay loam, and Salinas silty clay loam (refer to Figure V.B.-3). The NRCS Soil Survey documents these soils ranging from slightly to highly erodible.

2. Regulatory Setting

a. Section 404, Federal Clean Water Act

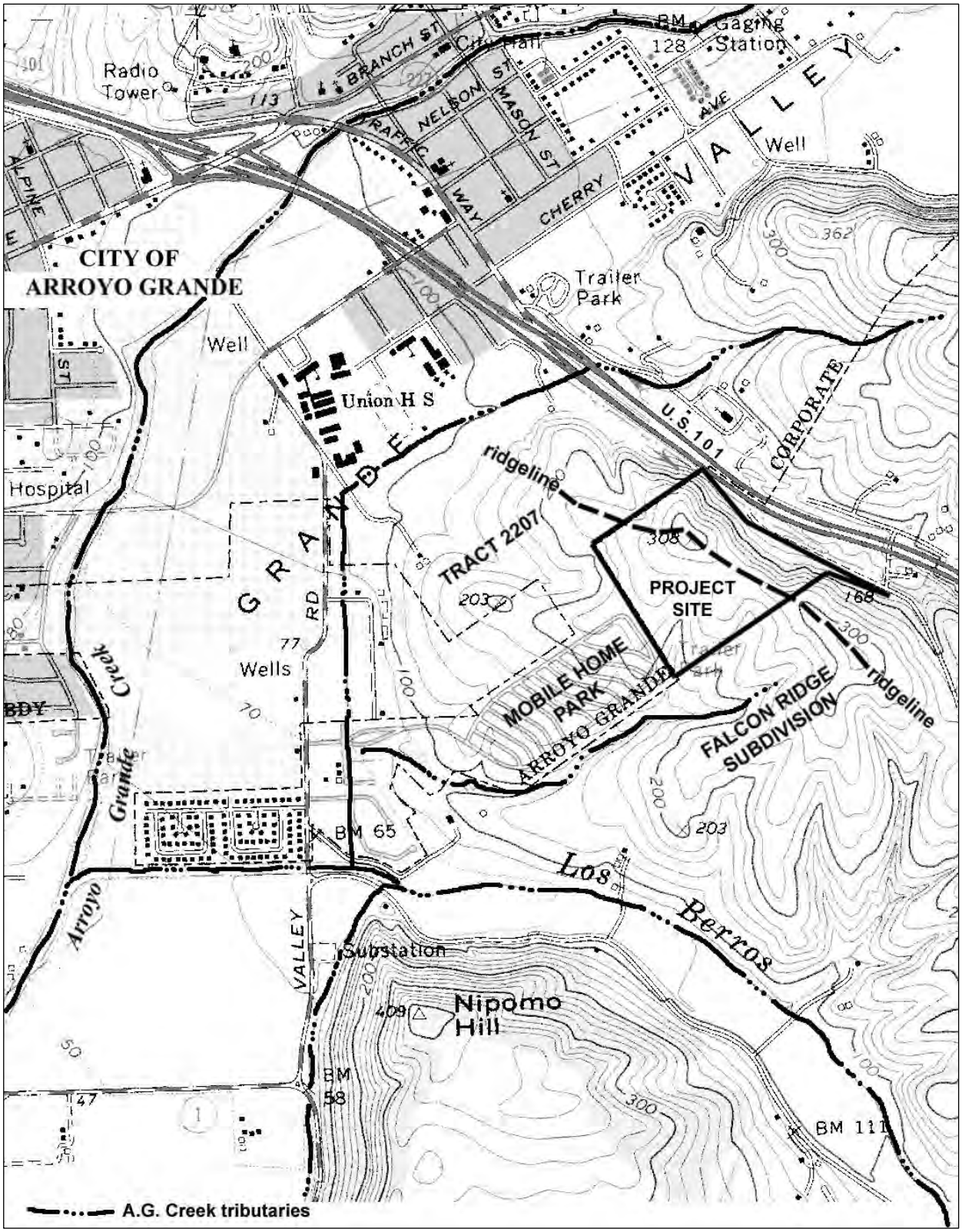
Section 404 of the Federal Clean Water Act authorizes the Environmental Protection Agency and the U.S. Army Corps of Engineers to regulate water quality through the restriction of discharges, including sediment, organic, and chemical pollutants.

b. Regional Water Quality Basin Plans

Local regulation of surface and ground water quality is authorized under the Porter-Cologne Act and enforced by the Regional Water Quality Control Board. The Regional Water Quality Control Board enforces a statewide policy mandating preparation of a Stormwater Pollution Prevention Plan for construction activities that disturb greater than one acre of land.

c. San Luis Obispo County Land Use Ordinance

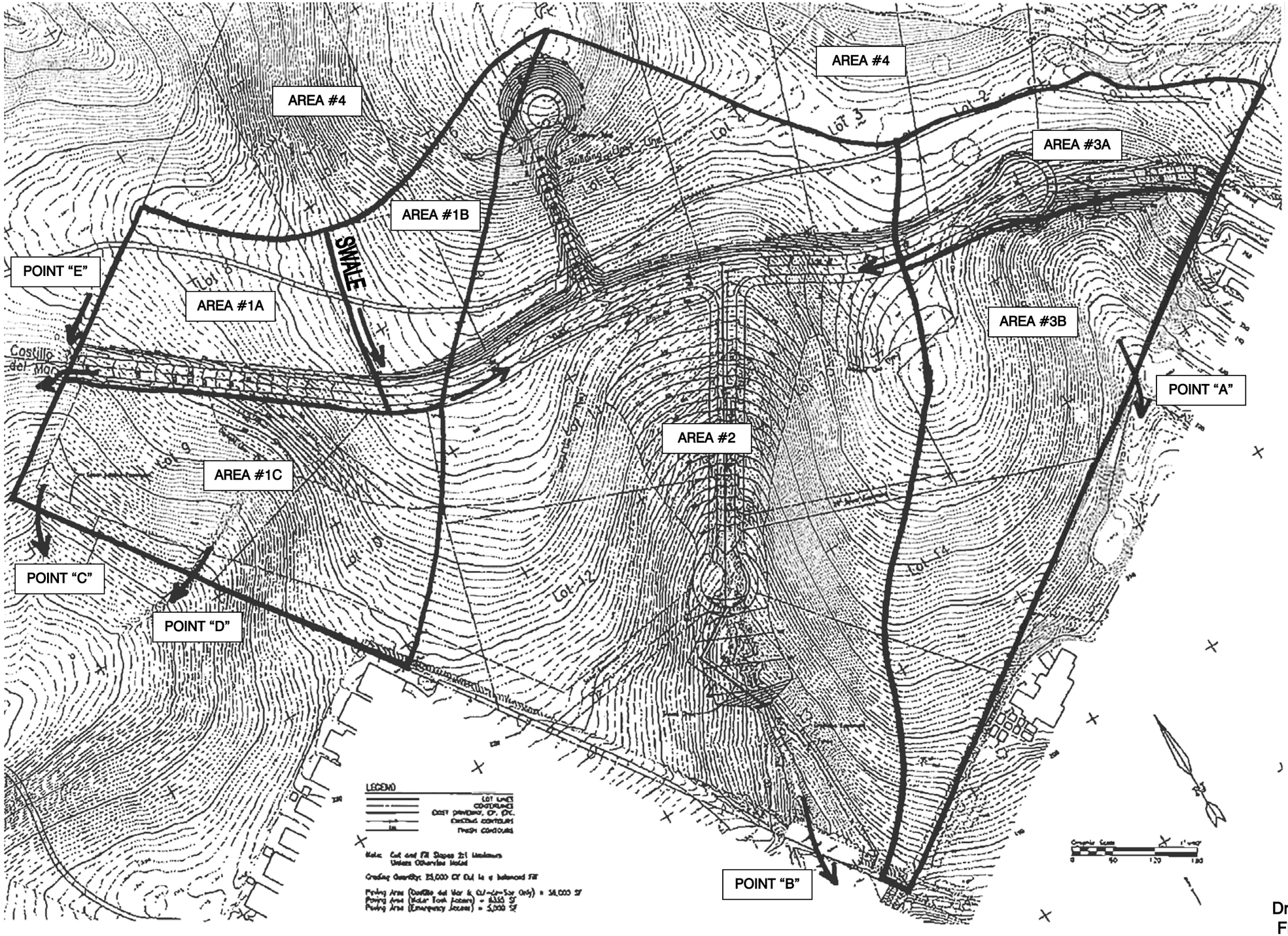
The San Luis Obispo County Land Use Ordinance states that a drainage plan and a sedimentation and erosion control plan are required prior to issuance of a major grading permit (Section 22.52.080 and 22.52.090). The drainage plan is required to show how storm water runoff would be detained or retained on the project site such that peak-flows with the completed project do not exceed the peak-flows in the undeveloped condition. The sedimentation and erosion control plan is required to show how disturbed soils would be protected and retained onsite to avoid down-gradient sedimentation during and following proposed construction activities. The plans must be prepared, approved and implemented according to the guidelines set forth under the County Land Use Ordinance.



Source: USGS Oceano quadrangle

NORTH
1"=1500' approx.

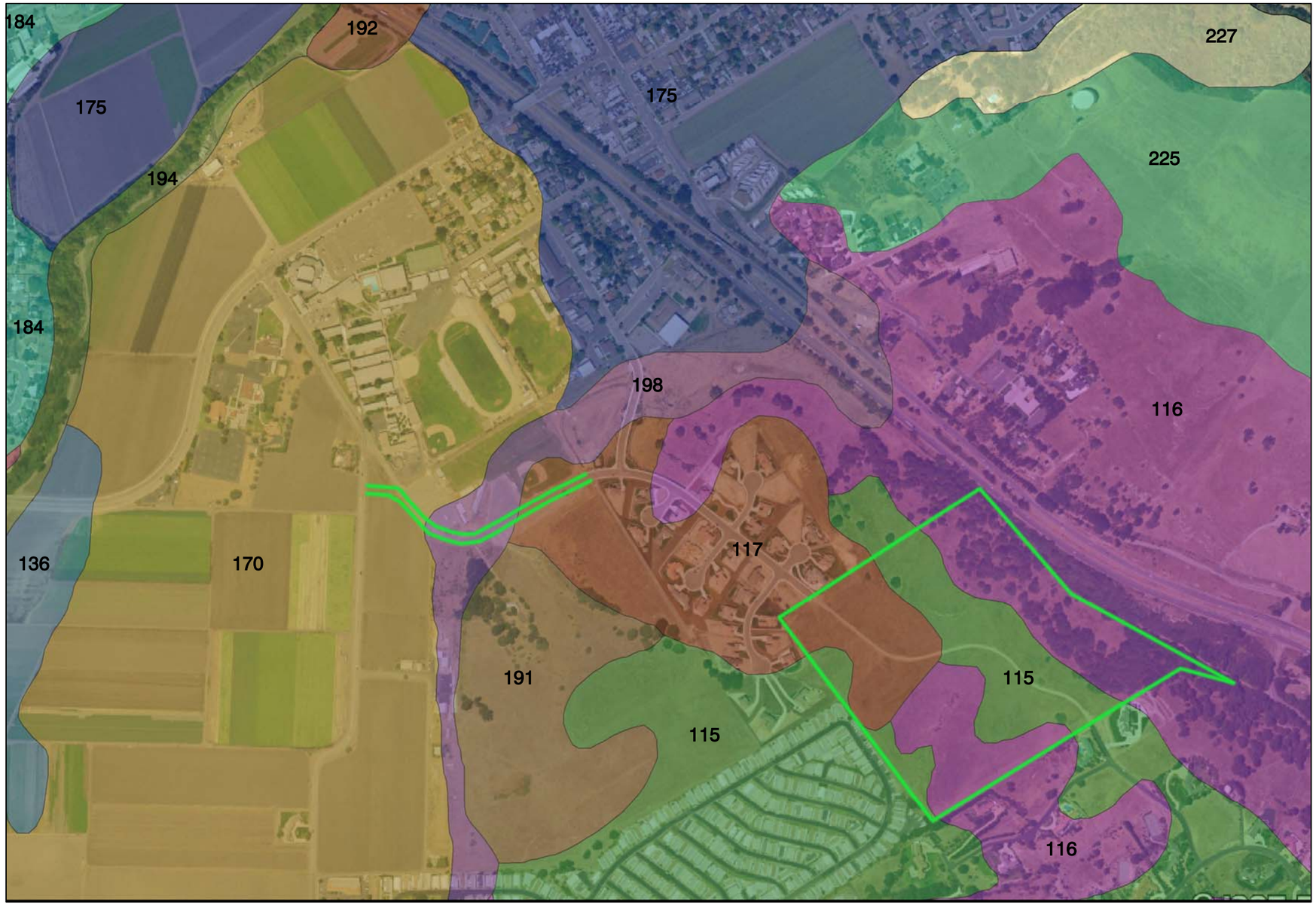
Ridgeline
FIGURE V.B.-1



Source: Garing, Taylor and Associates

Drainage Areas
FIGURE V.B.-2

Back of Figure V.B.-2



- Chamise shaly loam, 9-15% slope
- Chamise shaly loam, 15-30% slope
- Chamise shaly sand clay loam
- Elder sandy loam
- Marimel silty clay loam, drained
- Mocho silty clay loam
- Oceano sand
- Pismo Tierra complex
- Psaments and fluvents, occasionally flooded
- Riverwash
- Salinas silty clay loam
- Zaca clay, 15 – 30% slope
- Zaca clay, 50 – 75% slope

Source : County of San Luis Obispo, SLO DataFinder

NORTH
Not to Scale

Soils Map
FIGURE V.B.-3

Back of Figure V.B.-3

3. Thresholds of Significance

Based on Appendix G, Section VIII of the CEQA Guidelines, the threshold of a significant drainage or flooding impact is that which would:

- Result in substantial soil erosion or loss of topsoil.
- Create or contribute runoff water exceeding the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

4. Impact Assessment and Methodology

Review of existing literature, soils reports, and Natural Resource Conservation Service (NRCS) soil mapping information was conducted to determine the existing soil and drainage conditions on the proposed project site. A field reconnaissance was conducted to determine drainage conditions. The assessment of potential impacts resulting from drainage conditions is based on review of the applicable literature and soils reports prepared for the site and the tract to the north. The EIR consultant conducted a reconnaissance of the site and observed drainage conditions.

5. Project Specific Impacts and Mitigation Measures

a. Drainage

1) Subdivision

Implementation of the proposed project would result in an increase of impervious surfaces (e.g., roads, roofs, patios, walkways, etc.), which would result in increased runoff and an increase in the rate of concentration, both of which would increase the peak storm water flow from the project site. The solution to this problem is to detain or retain a portion of the runoff on the site such that the peak flow in the developed condition does not exceed that in the pre-development condition. The applicant is proposing to install a detention basin on Lot 13 to hold storm water runoff and release it into the culvert at a metered rate (refer to Figure III-6). Storm water runoff would be collected and transferred along the proposed roadways into the basin. A preliminary drainage report and supplemental documentation was prepared by the applicant's engineer, Garing Taylor and Associates, to verify that the proposed drainage system and detention basin would not result in an increase of peak flow offsite (see report in Appendix B). The basic points in this analysis are as follows:

- A detention basin would be provided at Point "B" at the rear of Lot 13 as shown on Figure V.B-2. A large part of the site (Area 2) naturally drains to this point.
- Construction of the Castillo Del Mar extension and secondary access connection to Coast View Drive would intercept runoff from Area 1B and 3A which now drains to adjacent properties and convey it to the proposed detention basin. A portion of runoff would continue to drain offsite at Point "E," however, runoff from hardscape areas would be directed into the proposed strormwater system within Castillo Del Mar

Drive. The reduction in runoff to adjacent properties as a result of these interceptions would exceed the increased runoff to these properties as a result of development.

- The size of the basin necessary to detain the total runoff from the proposed development can be accommodated at the proposed location. The detention basin would be constructed to manage 100-year storms and completely drain within 24 hours.

The rates of infiltration were extensively studied when on-site disposal of wastewater was proposed for this project, and these rates were found to be prohibitively low (Geosolutions, LLC; March 13, 1998 and April 20, 1998). Low infiltration characteristics indicate high runoff, and the analysis of increased runoff by the applicant's engineer is considered conservative. Based on this analysis, the rates of peak run-off in significant storms would not increase, and no significant impacts due to drainage are expected. Long-term capacity and function of the basin could be compromised by sedimentation and vegetation growth, resulting in a ***less than significant impact (Class III Impact)***.

DE/Impact 1 Long-term capacity and function of the basin could be compromised by sedimentation and vegetation growth, resulting in a less than significant impact**.**

DE/mm-1 Prior to recordation of the final map, the Conditions, Covenants, and Restrictions (CC&Rs) shall include the following language:

a. The Homeowners Association (or their designee) shall be responsible for retaining a qualified individual to conduct an annual inspection of the detention basin located within Lot 13, for the lifetime of the project. Maintenance activities recommended by the retained inspector shall be conducted by the Homeowners Association (or their designee), and shall be conducted in compliance with the County Code and all other required permits and regulations (i.e., Army Corps of Engineers authorization, Stormwater Pollution Prevention Plan).

Residual Impacts

Following implementation of appropriate mitigation measures, this impact would be considered ***less than significant (Class III Impact).***

2) Castillo Del Mar Drive – Valley Road Connection

An approximate 150-foot segment of the access road would traverse the vicinity of the existing drainage ditch. Implementation of the proposed access road would require construction of drainage improvements including three 18-inch diameter corrugated metal pipe (CMP) culverts, an 18-inch diameter high-density polyethylene (HDPE) culvert, earthen berm, earthen swale, and grading features to guide stormwater to the proposed drain system.

Implementation of the proposed plan would maintain existing drainage patterns. Based on implementation of standard regulations required by the City of Arroyo Grande, no significant drainage impacts would occur.

b. Erosion and Sedimentation

1) Subdivision

The applicant is proposing to grade approximately 70,000 square feet and 25,000 cubic yards of material to construct infrastructure improvements including one main access road, a side cul-de-sac road, a water tank access road, installation of a water tank, installation of a detention basin, trenching for water, sewer, and utility lines, and related drainage improvements. Implementation of the proposed project would result in the disturbance of over one acre; therefore, the State Water Resources Control Board would require a Stormwater Pollution Prevention Plan (SWPPP) prior to site disturbance. The SWPPP would include measures to avoid or minimize discharge of sediment and pollutants into the stormwater system. Anticipated grading activities associated with future development of the proposed project would include placement of fill in the large gully in Drainage Area 2 and the provision of a non-erosive mechanism to convey concentrated runoff to the detention basin. Implementation of proposed drainage improvements is anticipated to minimize the existing erosion problem on the site following road and drainage improvements. The soils engineer identified that "the soils at the site are erodible and would become more so when disturbed during [grading] and construction"; therefore, erosion and down-gradient sedimentation are likely to result if site disturbance activities occur immediately prior to or during the rainy season or a rain event.

DE/Impact 2 **Grading activities associated with tract improvements and individual lot development conducted during the wet season (October 15 through April 15) or during/immediately following a rain event would result in significant erosion and down-gradient sedimentation.**

DE/mm-2 Prior to issuance of grading and/or construction permits, the applicant and/or individual lot owner shall prepare and implement a Sedimentation and Erosion Control Plan per the requirements of LUO Section 22.52.090, which shall address both temporary and permanent measures to control erosion and reduce sedimentation. If vegetation is included as the means to stabilize the soils, it shall be planted at least 30 days before the beginning of the wet season, and watered regularly to ensure adequate root establishment. Otherwise, non-vegetative means shall be employed.

DE/mm-3 Prior to issuance of grading and/or construction permits, the applicant shall prepare and implement a Stormwater Pollution Prevention Plan approved by the State Water Resources Control Board.

Residual Impacts

Following implementation of appropriate mitigation measures, this impact would be considered ***significant but mitigable (Class II Impact).***

2) Castillo Del Mar Drive – Valley Road Connection

Construction of the access road would require the disturbance of approximately one acre. Based on the adopted MND for the approved project, soil disturbance within and in the immediate vicinity of the proposed construction area may result in erosion and down-gradient sedimentation (refer to Appendix G). Implementation of the access road requires a SWPPP prior to site disturbance. In addition, upon adoption of the Mitigated Negative Declaration for the project, the City of Arroyo Grande requires implementation of temporary and permanent drainage, erosion, and sedimentation control measures including: construction limited to the dry season; installation of a temporary siltation and drainage control basin during construction; revegetation and restoration of disturbed soils; management of temporary fill; avoiding pollution of the drainage ditch; implementation of an erosion control program, and; compliance with the City Grading Ordinance (refer to Appendix G for a complete list of required measures).

Implementation of these measures, which were required as conditions of approval, would mitigate potential erosion and sedimentation impacts to less than significant, and no additional measures are necessary.

6. Cumulative Impacts

Implementation of the proposed project, the required SWPPP, and County and City-approved drainage, erosion, and sedimentation plans would minimize the potential for cumulative drainage and erosion impacts.

C. BIOLOGICAL RESOURCES

This section was prepared based on a *Botanical Survey* (Holland; 1989), *Pismo Clarkia Survey Report* (Morro Group, Inc.; 2003), and *Burrowing Owl Survey* (McCormick; 1997) [see Appendix C].

In addition, the City of Arroyo Grande adopted a Mitigated Negative Declaration (General Plan Amendment Case No. 06-001, Development Code Amendment Case No. 06-001, and Tentative Parcel Map Case No. 06-004), which includes an analysis of the road extension to Valley Road on August 22, 2006. Applicable analysis is incorporated in the section below by reference, and a copy of the adopted MND is located in Appendix G of this Final EIR.

1. Existing Conditions

The project site is comprised of annual grassland covering a majority of the project site, and moderately dense coast live oak woodland (*Quercus agrifolia*) located near the northeastern property boundary. Rock outcrops occur within grassland in the north-central portion of the site. Topography on the project site includes moderately sloping hills, with steeper slopes located along northeast-facing slopes, immediately southwest of State Route 101. Elevations range between 185 and 310 feet above mean sea level.

Onsite surface runoff is collected in a narrow gully (ephemeral drainage) that is highly degraded and contains a large amount of old trash and debris. Based on the absence of surface water at the time of the field surveys and the limited watershed area, flow is only expected to occur within the drainage for very short periods of time, immediately following significant storm events.

The approved access road to connect Castillo Del Mar Drive and Valley Road would be located in disturbed areas, including the alignment of an unpaved emergency access road and an agricultural field. Vegetation is limited to disturbed grassland. A maintained drainage ditch would traverse the access road; flow within the drainage ditch will be limited to seasonal rain events.

a. Plant Communities and Wildlife Habitats

Three major plant associations and habitat types were identified within the project site including annual grassland, coast live oak woodland, and ephemeral drainage (refer to Figure V.C.-1). Characteristic plant species identified and species of wildlife that are expected to either occupy or frequent a particular habitat type are discussed in the sections below.

1) Annual Grassland and Rock Outcrops

Approximately 35 acres of annual grassland dominate the project site, as shown in Figure V.C.-1. Grassland integrates with coast live oak woodland in the northeastern portion of the site, toward the top of the ridgeline. Many of the herbaceous species considered typical of grassland habitats extend into adjacent coast live oak woodland and occur as part of the understory. Non-serpentine rock outcrops occur within the annual grassland community in the north-central portion of the site, and exhibit many of the same vegetative conditions as surrounding grassland areas (Holland; 1989).

The annual grassland on the project site is mainly comprised of a mixture of non-native grasses and weedy annual forbs, due in part to previous livestock grazing activities. Characteristic plant species observed throughout this habitat type included slender wild oats *(Avena barbata)*, wild oats *(Avena fatua*), ripgut brome (*Bromus diandrus*), soft chess brome (*Bromus mollis*), vetch (*Vicia* sp.), filaree (*Erodium* spp.), bur-clover (*Medicago polymorpha*), dock (*Rumex* sp.), and mustard (*Brassica* sp.). A few scattered specimens of coyote brush *(Baccharis pilularis*) also occur as part of annual grassland located throughout the site.

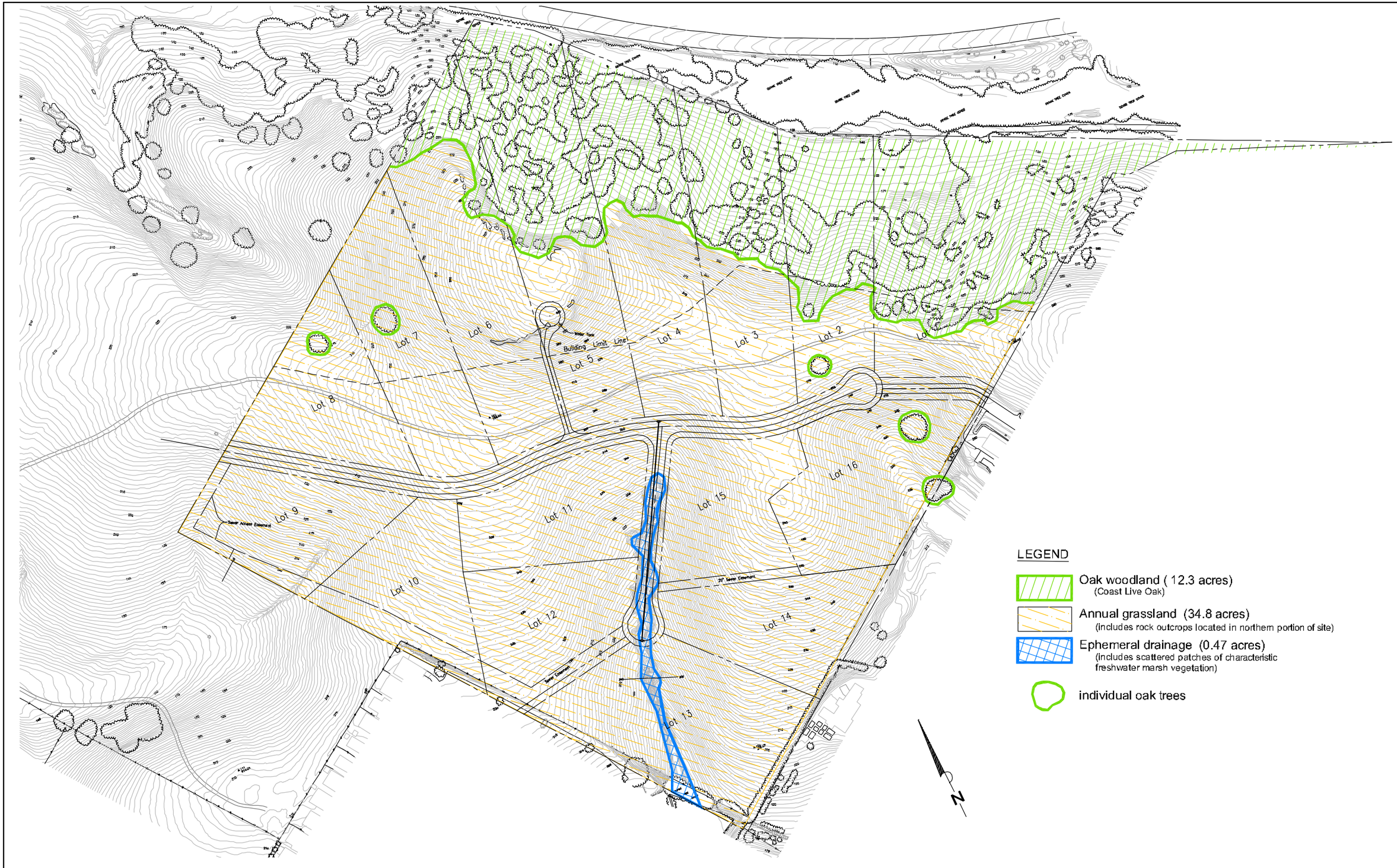
Minimal differences occur between vegetation within the rock outcrop areas and surrounding grassland community. As indicated in the *Botanical Survey* (Holland; 1989), and as observed during the February and March 2002 and June 2003 surveys conducted by the EIR biological consultant, the rock surfaces were devoid of vegetation, with the exception of the occurrence of a few lichens. Plants found in the vicinities of the rock outcrops included filaree, ripgut brome, soft chess brome, wild oats, foxtail barley (*Hordeum leporinum*), moustail fescue (*Vulpia myuros*), soap plant (*Chlorogalum pomeridianum*), johnny-jump-up (*Viola pedunculata*), and blue hyacinth (*Dichelostema capitatum*).

Grasslands often provide important habitat features for a variety of wildlife species. Raptors, such as red-tailed hawk (*Buteo jamaicensis*), white-tailed kite (*Elanus leucurus*), barn owl (*Tyto alba*), and American kestrel (*Falco sparverius*) commonly use open grassland areas extensively for foraging purposes, while other birds such as western meadowlark (*Sturnella neglecta*) and Brewer's blackbird (*Euphagus cyanocephalus*) use open grassland areas for nesting. Reptiles that commonly occur within grassland habitats include western fence lizard (*Sceloporus occidentalis*) and gopher snake (*Pituophis melanoleucus*). Western rattlesnake (*Crotalus viridis*) may occur in portions of annual grassland located near rock outcrops or in areas with a large number of mammal burrows. Mammals known to occur in or frequent grassland habitats on the project site include blacktail deer (*Odocoileus hemionus*), coyote (*Canis latrans*), Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), and brush rabbit (*Sylvilagus bachmani*) (Holland; 1989). Various species of bats may also forage on a nocturnal basis within this habitat type.

2) Coast Live Oak Woodland

Approximately 12.3 acres of coast live oak woodland is present on the northeastern-facing slope located just south of State Route 101, as shown in Figure V.C.-1. This habitat type integrates toward the southwest with large areas of annual grassland. Just outside of the northeastern property boundary, coast live oak woodland merges into riparian woodland associated with an unnamed tributary to Los Berros Creek. Four coast live oak trees are scattered within the annual grassland habitat area in the northern and western portion of the project site.

Within the project site, the overstory of this habitat type consists of dense stands to scattered individuals of the evergreen coast live oak and several toyon trees (*Heteromeles arbutifolia*). Many of the coast live oaks are multi-stemmed trees with a sparse understory consisting of a thick layer of litter along with scattered, shade tolerant shrubs and herbs such as gooseberry (*Ribes* sp.), poison oak (*Toxicodendron diversilobum*), nightshade (*Solanum xanti*), coffeeberry (*Rhamnus californica*), hummingbird sage (*Salvia spathacea*), and bush monkey flower (*Mimulus aurantiacus*) (Holland; 1989). Understory in more open areas of this community is



SHEET: 1 OF 1 SCALE: 1" = 200'	MORRO GROUP, INC. Environmental Services	BUSICK EIR Tract 1789 - San Luis Obispo County, California	HABITAT MAP
CADD FILE: 01-636 Busick EIR\habitats/figVC-1			FIGURE V.C.-1
DATE: 06-25-03 BY: dh REV. 07/19/07			

Back of habitat map V.C.-1

mainly comprised of species that are characteristic of grassland located along the fringe of woodland habitats.

Oak woodland communities are important for wildlife cover providing both vertical and horizontal structure, nesting sites for birds, and shelter for numerous mammals. Woodland areas also support numerous insects and small mammals that are important food sources for other vertebrates in the area. Snags provide excellent roosts for bats, and provide nesting cavities for owls, kestrels, woodpeckers, nuthatches, wrens, chickadees, and bluebirds. Fallen logs become homes for invertebrates that are important food sources for numerous vertebrate species including mice, lizards, snakes, and birds. Environmental conditions are moderated by woodland vegetation, thereby reducing wind and temperature variation, more so than in grassland and coastal scrub communities.

The coast live oak woodland portion of the project site is expected to support a wide diversity of wildlife due to the availability of important habitat features such as nesting sites, escape and thermal cover, and food. Mammals that are likely to occur within oak woodland habitat of the project site include western gray squirrel (*Sciurus griseus*), deer, gray fox (*Urocyon cinereoargenteus*), raccoon (*Procyon lotor)*, striped skunk (*Mephitis mephitis*), and coyote. Birds that commonly occur within these habitats include, plain titmouse (*Parus inornatus*), mourning dove (*Zenaida macroura*), northern flicker (*Colaptes auratus*), acorn woodpecker (*Melanerpes formicivorous*), California towhee (*Pipilo crissalis*), Stellar's jay (*Cyanocitta stelleri*), western bluebird (*Sialia mexicana*), red-tailed hawk, and great-horned owl (*Bubo virginianus*). Other birds that may occur within oak woodland on a regular basis include western screech-owl (*Otus kennicottii*), red-shouldered hawk *(Buteo lineatus)*, and common barn owl. Reptiles that may occur within woodland habitats include gopher snake, western fence lizard, and common kingsnake (*Lampropeltis sirtalis*).

3) Ephemeral Drainage and Freshwater Marsh

Surface runoff from most of the project site is collected within an ephemeral drainage located in the southern corner of the project site (refer to Figure V.C.-1). This drainage can be characterized as an erosional gully with a deeply incised channel. A large amount of debris has been dumped over time within the drainage, including various types of trash and old car bodies. It is expected that this drainage conveys flow for only short periods of time, during and immediately following storm events, due to the limited watershed area and steep gradient. Any surface water collected during the rainy season exits the project site via a culvert located in the southern corner, is carried under the Sunrise Terrace Mobile Home Park, and eventually flows to a tributary to Los Berros Creek (located to the southwest). Los Berros Creek flows into Arroyo Grande Creek approximately 0.5 mile west of the project site.

Embankments of the ephemeral drainage are primarily covered with characteristic upland species including grasses and scattered specimens of coyote brush (*Baccharis pilularis*). The bottom of the channel contained a mixture of characteristic upland and ruderal species, including Italian thistle (*Carduus pycnocephalus*), dock *(Rumex* sp.), wild radish (*Raphanus sativus*), and nightshade. Scattered non-native ornamental species, such as calla lily (*Zantedeschia aethiopica*), were also observed within the drainage. Plants such as these either escaped cultivation from the nearby residences or were previously planted on site.

The drainage was primarily dry at the time of the field surveys associated with this study, however, a few plants considered typical of seasonal freshwater marsh habitats occurred in scattered patches within the channel. Characteristic freshwater marsh vegetation observed within the ephemeral drainage was primarily limited to a few species of rush (*Juncus* spp.) and rabbitsfoot grass (*Polypogon monspeliensis*).

Due to the absence of standing water throughout most of the year, including much of the rainy season, the ephemeral drainage is not expected to support a wide diversity of wildlife species. Species expected to occur in or frequent the drainage and scattered patches of seasonal freshwater marsh vegetation would likely be limited to those wildlife species that typically occupy surrounding grassland habitat. Amphibians that may occur in or frequent portions of the ephemeral drainage containing standing water for short periods of time, or that retain moist substrates, include Pacific chorus frog (*Psuedacris regilla*) and western toad (*Bufo boreas*). A variety of small birds and mammals are also expected to forage within this habitat type, and periodically use the limited cover available within the channel.

A drainage ditch traverses the school sports fields located north of the approved road alignment to connect Castillo Del Mar Drive and Valley Road. The ditch crosses the existing unpaved roadway approximately 340 feet southeast of Valley Road. The drainage ditch continues south through the adjacent agricultural fields to the south; the ditch was historically cleared by the agricultural operator and does not support native vegetation within or adjacent to the area proposed for the roadway. The drainage continues south through agricultural fields and residential development before flowing into Los Berros Creek.

b. Sensitive Species

Sensitive Species are defined by the state of California and federal government as:

- Species afforded protection under the Federal Endangered Species Act (FESA) and/or California Endangered Species Act (CESA);
- Species proposed for listing under the FESA and/or CESA;
- Species afforded protection under sections of the California Fish and Game Code;
- Birds afforded protection under the Migratory Bird Treaty Act of 1918;
- Species considered either Federal Special Concern species or California Special Concern species;
- Species that meet the definitions of rare or endangered species under CEQA;
- Plants considered sensitive by the California Native Plant Society, or;
- Species considered sensitive by local resource groups/agencies or the scientific community.

The California Natural Diversity Database (CNDDB; 2003a, 2003b, 2007a, 2007b) lists 24 sensitive plants and 13 sensitive wildlife species documented within a five-mile radius of the project site. The occurrence of tiger salamander (*Ambystoma tigrinum*) is anticipated within

portions of San Luis Obispo County, although the species is not yet documented on the CNDDB. In addition, eight special-status wildlife species have been observed, or have the potential to exist, on or within five miles of the project site.

A list of species documented, and potentially occurring, within five miles of the project site is located in Appendix C for reference. The majority of these species occur southwest and south of the project site in association with the Pismo Dunes Natural Preserve, the Pismo Dunes State Vehicular Recreation Area, and the Nipomo Mesa. Fourteen species listed on the CNDDB were determined to have a reasonable potential for occurring in the general vicinity of the proposed project site, based on proximity to known populations and the natural characteristics of the region. Six additional wildlife species, not listed on the CNDDB, were also determined to have a reasonable chance of occurring in the vicinity. The name, legal status, description of habitat, and determination of habitat absence or presence of each of these species are identified in Tables V.C-1 and V.C.-2, and the potential for occurrence within the project site is discussed in Appendix C. The following sections include discussions of special-status species and/or their habitat observed on the project site.

1) Special-status Plant Species

Six rare plants identified by the CNDDB were determined to have a reasonable potential for occurrence within, or in the general vicinity of the project site. These six plants include Hoover's bent grass, Wells's manzanita, San Luis mariposa lily, Obispo Indian paintbrush, Pismo clarkia, leafy tarplant, dune larkspur, San Luis Obispo County lupine, and San Bernardino aster (refer to Table V.C.-1). The potential for occurrence of each species within the project site was evaluated based on habitat requirements and site surveys. Hoover's bent grass, Obispo Indian paintbrush, Pismo clarkia, leafy tarplant, San Luis Obispo County lupine, and San Bernardino aster would have the potential for presence based on the habitat characteristics of the project site.

A previous botanical survey conducted by V.L. Holland in 1989 yielded no observations, or evidence of occurrence, of rare and/or endangered plants within the project site. This initial survey was conducted outside of the typical flowering periods for rare annual species known from the region; therefore the EIR consultant conducted a second survey during the flowering season to determine the presence or absence of any special-status plant species. Based on these surveys, no special-status plant species are present onsite.

(a) Special Status Plant Species Survey

Pismo clarkia occurs in cismontane woodland, valley foothill grasslands, and in openings and along the margins of chaparral habitats (Tibor; 2001). The typical flowering period for this annual herb is May through June. The closest documented occurrence of Pismo clarkia is less than two miles northwest of the proposed project site in the City of Arroyo Grande. A comprehensive botanical survey (Sloan, Morro Group, Inc.) with a focus on Pismo clarkia was conducted on June 27, 2003 (refer to Appendix C). Prior to the survey, Mr. Sloan inspected a known Pismo clarkia habitat area in the vicinity of the project site to determine the life stage of the species. The Pismo clarkia within the known habitat area was in full bloom and easily detectible. During the survey of the proposed project site, no Pismo clarkia or any other special-status plant species was observed within or adjacent to the project site; therefore, impacts to

special-status plant species including Pismo clarkia are unlikely to occur as a result of the proposed project.

2) Special-status Wildlife Species

The following six special-status wildlife species are documented by the CNDDB (2007a, 2207b) as occurring in the general vicinity of the project site: monarch butterfly (over-wintering), southern steelhead, California red-legged frog, Western spadefoot toad, southwestern pond turtle, and American badger. In addition, the following special-status species have the potential to occur on or in the vicinity of the project site: Cooper's hawk (nesting), burrowing owl (burrowing sites), northern harrier (nesting), white-tailed kite (nesting), and Monterey dusky-footed woodrat (refer to Table V.C.-2). Four of the species are highly aquatic, and are known or expected to occur within streams or scattered ponds located outside of the project site. The preferred habitat of each species and the potential for occurrence within proposed project site are discussed in Appendix C and Table V.C.-2.

TABLE V.C.-1
Special-status Plants with the Potential to Occur In the Vicinity of the Project Site

Common Name	Scientific Name	Status Federal/State/CNPS Status & Threat Code	General Habitat Description	Habitat Present/ Absent	Rationale
Hoover's bent grass	*Agrostis hooveri*	-- / -- / 1B.2	Chaparral, cismontane woodland, and valley and foothill grassland habitats on usually sandy soil.	P	• Known to occur approximately one mile northwest of the project site. • Botanical surveys did not identify species within project site.
Wells's manzanita	*Arctostaphylos wellsii*	--/--/1B.1	Closed cone coniferous forests and chaparral, primarily on sandstone.	A	• Known to occur approximately 1 mile northeast of the project site. • Closed cone coniferous forests and chaparral does not exist within the project site. • Botanical surveys did not identify species within project site.
San Luis mariposa lily	*Calochortus obispoensis*	--/--/1B.2	Chaparral, coastal scrub and grassland communities on serpentine soils.	A	• Known to occur approximately 3 miles northwest of the project site. • Botanical surveys did not identify species within project site. • No suitable habitat exists within the project site.
Obispo Indian paintbrush	*Castilleja densiflora ssp. obispoensis*	-- / -- / 1B.2	Valley and foothill grassland habitat.	P	• Known to occur approximately two miles northwest of the project site. • Botanical survey did not identify species within project site.

Common Name	Scientific Name	Status Federal/State/CNPS Status & Threat Code	General Habitat Description	Habitat Present/ Absent	Rationale
Pismo clarkia	*Clarkia speciosa* ssp. *immaculata*	FE/SR/1B.1	Cismontane woodland, valley foothill grasslands, and in openings along the margins of chaparral habitats.	P	• Known to occur approximately 1.3 miles northwest of the project site. • Botanical survey did not identify species within project site.
Leafy tarplant	*Deinandra increscens ssp. foliosa*	-- / -- / 1B.2	Valley and foothill grasslands.	P	• Known to occur approximately 4.75 miles southeast of the project site. • Botanical survey did not identify species within project site.
Dune larkspur	*Delphinium parryi* ssp. *blochmaniae*	FSC/--/1B.2	Maritime chaparral and coastal dune habitats.	A	• Known to occur approximately 1.5 miles southeast of the project site. • Botanical survey did not identify species within project site. • No suitable habitat exists within the project site.
San Luis Obispo County lupine	*Lupinus ludovicianus*	-- / -- / 1B.2	Chaparral and cismontane woodland habitats; sandstone or sandy soils.	P	• Known to occur 3.5 miles north of the project site. • Botanical survey did not identify species within project site.
San Bernardino aster	*Symphyotrichum defoliatum*	-- / -- / 1B.2	Cismontane woodland, coastal scrub coniferous forest, meadows and seeps, marshes and swamps, grasslands / near ditches, streams, springs.	P	• Known to occur two miles southwest of the project site. • Botanical survey did not identify this species within the project site.

Common Name	Scientific Name	Status Federal/State/CNPS Status & Threat Code	General Habitat Description	Habitat Present/ Absent	Rationale

Status Codes:

Federal:
FC = Federal Candidate species
FT = Federally-listed Threatened
FE = Federally-listed Endangered

State of California:
SE = State-listed Endangered
ST = State-listed Threatened
SR = State-listed Rare

Habitat: Presence/Absence
Absent [A] means no further work needed. Present [P] means general habitat is present and species may be present. Critical Habitat [CH] means that the project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

California Native Plant Society (CNPS):
List 1B = rare, threatened, or endangered in California and elsewhere.
List 2 = rare, threatened, or endangered in California, but more common elsewhere.

Threat Code:
.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 = Fairly endangered in California (20-80% occurrences threatened)
.3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)

TABLE V.C.-2
Special-status Wildlife With Potential to Occur In the Vicinity of the Project Site

Common Name	Scientific Name	Status Federal/ State/CDFG	General Habitat Description	Habitat Present /Absent	Rationale
Invertebrates					
Monarch Butterfly	*Danaus plexippus* (wintering sites)	--/--/ SA	Coastal eucalyptus and Monterey pine stands.	A	• Several roosting sites occur within the Arroyo Grande region, approximately 1.4 miles west of the project site. • Preferred over-wintering habitat is not present within the vicinity of the project site.
Fish					
Steelhead	*Oncorhynchus mykiss irideus*	FT/ -- /CSC	Optimally, clear, cool water with abundant instream cover, well-vegetated stream margins, relatively stable water flow, and a 1:1 pool-to-riffle ratio.	A	• Known to occur approximately 1 mile to the west within Arroyo Grande Creek. • Wildlife survey did not identify species within project site. • No suitable habitat exists within the project site.
Amphibians					
California red-legged frog	*Rana aurora draytonii*	FT/ --/ CSC	Aquatic habitats with little or no flow, the presence of surface water to at least early June, surface water depths to at least 2.3 feet, and the presence of fairly sturdy underwater supports such as cattails.	A	• Known to occur approximately 1 mile north and southeast of the project site • The lack of surface water and riparian vegetation in the ephemeral drainage onsite during the rainy season indicates that suitable habitat is not present onsite.

Common Name	Scientific Name	Status Federal/ State/CDFG	General Habitat Description	Habitat Present /Absent	Rationale
Western spadefoot toad	*Scaphiopus hammondii*	-- /-- /SSC	Annual grassland habitats, open sandy floodplains, and alluvial terraces.	A	• Closest documented occurrence is from the Santa Maria Valley, approximately 9 miles south of the project site. • The lack of surface water in the ephemeral drainage onsite during the rainy season indicates that suitable habitat is not present onsite.
Reptiles					
Southwestern pond turtle	*Clemmys marmorata pallida*	-- /-- /CSC	Quiet waters of ponds, lakes, streams, and marshes. Typically in the deepest parts with an abundance of basking sites.	A	• Suitable habitat exists within portions of Arroyo Grande Creek and Los Berros Creek located 1 mile west and southwest of the project site. • The lack of ponds and preferred basking sites on the project site indicates that suitable habitat is not present onsite.
Birds					
Cooper's Hawk (nesting)	*Accipiter cooperi*	MBTA / -- /CSC	Nests in dense stands of coast live oak, riparian forest, or other woodland habitat near water.	P	• Suitable breeding and nesting habitat occurs within the oak woodland along the northeastern property boundary and in riparian forest habitat located just outside of the northeastern property boundary.
Burrowing owl (burrowing sites)	*Athene cunicularia*	MBTA / -- /CSC	Extensive grassland habitats and agricultural areas.	P	• Suitable grassland burrowing habitat is present onsite. • An individual species was observed onsite during a preliminary field visit.

Common Name	Scientific Name	Status Federal/ State/CDFG	General Habitat Description	Habitat Present /Absent	Rationale
Northern harrier (nesting)	*Circus cyaneus*	MBTA / -- /CSC	Nests on the ground near freshwater and salt marshes.	P	• Nesting habitat is not present onsite. • An individual species was observed foraging onsite during a wildlife survey.
White-tailed kite (nesting)	*Elanus leucurus*	MBTA /FP/--	Nests in treetops within dense foliage located in coastal and valley lowlands, usually associated with agricultural lands and open fields.	P	• Suitable nesting habitat is present within larger oak trees along the northeastern property boundary. • Individuals of the species were observed foraging onsite during wildlife surveys.
Mammals					
Monterey dusky-footed woodrat	*Neotoma fuscipes luciana*	--/ --/CSC	Moderate vegetative canopy, such as oak woodland, with brushy understory.	P	• Suitable habitat present within oak woodland located along the northeastern property boundary.
American badger	*Taxidea taxus*	--/ --/CSC	Open grasslands and scrub habitats.	P	• Known occurrence approximately 2 miles northwest of the project site. • Suitable habitat present onsite in the grassland and oak woodland habitat areas.

Common Name	Scientific Name	Status Federal/ State/CDFG	General Habitat Description	Habitat Present /Absent	Rationale
Status Codes: *Federal:* FE = Federal-listed Endangered FT = Federal-listed Threatened FC = Federal Candidate species MBTA = Protected by Federal Migratory Bird Treaty Act *State of California:* SE = State-listed Endangered ST = State-listed Threatened FP = Fully Protected			*California Department of Fish and Game* CSC = California Special Concern Species SA = Special Animal and considered to be a "threatened phenomenon" *Habitat: Presence/Absence* Absent [A] means no further work needed. Present [P] means general habitat is present and species may be present. Critical Habitat [CH] means that the project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present		

(b) Cooper's Hawk (Nesting)

The Cooper's hawk is considered sensitive primarily due to the loss of riparian nesting habitat throughout California. Preferred nesting habitat consists of dense stands of coast live oak, riparian forest, or other woodland habitat near water. Hunting for small birds and mammals occurs in open woodlands and edge habitats. This species is an uncommon transient and winter visitor throughout most of San Luis Obispo County (Audubon Society; 1985). Suitable foraging and nesting habitat for Cooper's hawk occurs within coast live oak woodland located along the northeastern property boundary, and in riparian forest habitat located just outside of the northeastern property boundary. Cooper's hawk was not observed during site visits; however, it is expected that this species could nest in the woodland habitat area in the northern section of the project site.

(c) Burrowing Owl (Burrowing Sites)

The burrowing owl is documented as an uncommon to common permanent resident of the interior valleys and plains of San Luis Obispo County, and an uncommon winter visitor to the coastal regions of the county (Audubon Society; 1985). This species is primarily associated with extensive grassland habitats and agricultural areas, and frequently occupies California ground squirrel burrows (Zeiner; et al. 1990). Distinctive burrow characteristics for burrowing owl are not known. However, given the size of burrowing owl, burrow entrances were expected to be at least 7 cm in diameter. Circumstantial evidence of burrowing owl occurrence within an area typically consists of the presence of molted feathers, cast pellets, prey remains, or excrement near a burrow entrance.

The CNDDB does not identify any occurrences of this species within five miles of the project site; however, suitable burrowing owl habitat consisting of annual grassland does occur throughout the project site. A previous observation of this species within the project site in 1996 by County Staff (Weir) led to a focused survey for burrowing owls in June 1997 (McCormick; 1997). The surveys yielded no observations of resident or breeding burrowing owls within the proposed project site. The *Burrowing Owl Survey* report indicated that despite the absence of direct observation of the species during the 1997 survey, the potential exists for individuals to use the site for foraging, and potentially occupy burrows on site in the future (McCormick; 1997).

(d) Northern Harrier (Nesting)

The northern harrier is a common transient and winter bird species visitor within much of San Luis Obispo County (Audubon Society; 1985). This species nests on the ground near freshwater and salt marshes. Open areas, such as grasslands and coastal scrub, provide foraging habitat for this species. Annual grassland on the project site provides suitable foraging habitat for the species. During the February 2002 site visit, one northern harrier was observed foraging over grassland in the western portion of the site. Suitable nesting habitat for this species does not occur within the project site.

(e) White-tailed Kite (Nesting)

The white-tailed kite is a bird species that occurs in coastal and valley lowlands, usually associated with agricultural lands and open fields. Nests are constructed in treetops with dense

foliage. This species is considered an uncommon resident of most of San Luis Obispo County. Suitable nesting habitat may occur in association with larger oaks located along the northeastern property boundary. In addition, individuals of this species were observed foraging within the annual grassland habitat area on the project site during site surveys conducted in February and March of 2002.

(f) Monterey Dusky-footed Woodrat

The Monterey dusky-footed woodrat is a subspecies of woodrat that occurs in central coastal California. This subspecies prefers habitats that exhibit a moderate vegetative canopy, with a brushy understory. Woodrat houses are built of sticks and leaves at the base of or in a tree, around a shrub, or at the base of a hill, and may measure up to approximately 8 feet in height and 8 feet in diameter. This nocturnal species forages on the ground and primarily feeds on woody plants, but also eats fungi, flowers, grasses, and acorns (Zeiner; et al. 1990). No evidence of Monterey dusky-footed woodrat was observed during any site visits; however, suitable habitat for Monterey dusky-footed woodrat occurs within oak woodland located along the northeastern boundary of the project site.

(g) American Badger

The American badger occurs primarily in open grassland and scrub habitats. Typical dimensions for American badger burrows range from 20 to 30 centimeters in width, and are generally elliptical in shape (Murie; 1974). The CNDDB (2007a, 2007b) identifies an occurrence of this species approximately two miles northwest of the project site. No evidence of the occurrence of American badger was observed during the field survey portion of this study; however, the absence of direct observation of this species does not preclude its occurrence from grassland and woodland habitats of the project site.

c. Sensitive Habitats

For purposes of this study, important or sensitive habitats include Waters of the U.S. and wetlands, as defined by the U.S. Army Corps of Engineers (Corps) (Environmental Laboratory; 1987) and Cowardin et al. (1987), those habitats noted by either the CNDDB or the CDFG (R. Holland; 1986) as sufficiently rare or unknown as to merit protection and further study, and habitat types determined to be sensitive by the County of San Luis Obispo.

No sensitive plant communities, as defined by either R. Holland (1986) or the CNDDB (2007a, 2007b) are located on the 47.54-acre project site; however the County of San Luis Obispo considers oak woodland a sensitive native vegetative community. Countywide policy requires the protection of oak woodland and individual oak trees.

The small, ephemeral drainage located in the southern portion of the project site may qualify as "Waters of the U.S.," and be subject to regulation by the Corps, per Section 404 of the Clean Water Act. Ephemeral drainages such as this are often referred to as "Other Waters." All areas located within the respective Ordinary High Water Marks (OHWM) of an identified drainage, are typically subject to regulation by the Corps and CDFG.

The ephemeral drainage located onsite is characterized as an erosional gully that collects surface runoff from the western side of the project site, and conveys it off-site (via a culvert) to a tributary of Los Berros Creek. Based on the steep gradient and limited watershed area, it is expected that flow is only present within the channel of the drainage during or immediately following significant storm events.

A wetland delineation was not performed as part of the site surveys associated with this study; however, a few plants were observed within the channel of the drainage that are considered characteristic of wetlands including rush and rabbitsfoot grass. Wetlands are defined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory; 1987) as:

> "*Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.*"

Wetlands that may be associated with the ephemeral drainage would also qualify as "Waters of the U.S." and be subject to regulation by the Corps.

As documented in the MND adopted by the City, the access road connecting Castillo Del Mar Drive to Valley Road would traverse a seasonal drainage ditch, which was historically maintained and cleared by the agricultural operator. The road would cross the ditch within an agricultural field, and the MND documents that no evidence of native vegetation is present within the ditch or area proposed for the road alignment. Based on the adopted MND, no significant impacts to sensitive habitats would occur as a result of the approved road construction (refer to Appendix G).

d. Wildlife Movement Corridors

Wildlife movement corridors are connections between habitat areas that allow for physical and genetic exchange between animal populations. These connections may be local, such as between foraging and nesting or denning areas, or regional in nature. As undisturbed habitats become surrounded by urban development, they become isolated from neighboring areas. Movement corridors provide critical linkage between islands of open space, isolated foraging and breeding habitats, and other important wildlife use areas. Drainage courses and adjacent upland habitats typically function as migration corridors providing some water and cover for wildlife.

Within the project site, wildlife movement corridors are limited to the area of oak woodland located along the northeastern property boundary. This area of oak woodland is linked to other woodland habitats located off-site, including adjacent riparian woodland, and may provide important cover opportunities for wildlife moving between habitat types.

2. Regulatory Setting

a. Clean Water Act of 1977

Regulatory protection of water resources throughout the United States is under the jurisdiction of the Army Corps of Engineers (Corps). 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 Corps. Waters of the U.S. include marine waters, tidal areas, stream channels, and associated wetlands. Wetlands often include freshwater marshes, vernal pools, freshwater seeps, and riparian areas. The U.S. Fish and Wildlife Service assesses impacts to biological resources during the permit process. Policies relating to the loss of wetlands generally stress the need to compensate for wetland acreage losses by creating wetlands from non-wetland habitat on at least an acre-for-acre basis.

One area that may qualify as "Waters of the U.S." consists of an ephemeral drainage located in the southern portion of the site. This drainage is highly degraded and contains a minimal amount of vegetation that is considered characteristic of wetlands including rush and rabbitsfoot grass. A formal delineation was not conducted as part of this study; therefore, the precise locations of the OHWM and potential areas of wetland located within the drainage were not determined.

Project plans indicate that the identified drainage would be modified as a result of construction of a storm water detention basin. This would result in direct disturbance of areas that may qualify as "Waters of the U.S.," including areas that have potential to qualify as jurisdictional wetland.

b. Section 7 or Section 10 of the United States Endangered Species Act

The Federal Endangered Species Act (FESA) 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 to consult the Untied States Fish and Wildlife Service (USWFS). Section 7 of the FESA requires that all federal agencies must, in consultation with the USFWS or National Marine Fisheries Service (NMFS), ensure that its (the agency's) actions do not jeopardize the continue existence of a listed species, or destroy or adversely modify the listed species' "critical habitat". Section 10 consists of the process by which take permits are issued by USFWS/NMFS for take incidental to an otherwise lawful activity. Formal consultations must take place with the USFWS pursuant to Section 10(a)(1)(B), with the USFWS then making a determination as to the extent of impact to a particular species. If the USFWS determines that impacts to a species would likely occur, alternatives and measures to avoid or reduce impacts must be identified through preparation of a Habitat Conservation Plan (HCP), prior to issuance of the take permit. No federal listed animals are known from the immediate vicinity of the project site.

c. State of California Endangered Species Act

The State of 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 also lists "Species of Special Concern" based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Under State law, the California Department of Fish and Game is empowered to review projects for their potential

to impact state-listed species and Species of Special Concern, and their habitats. Impacts to the state-listed species would be evaluated and identification of mitigation measures would likely be required. No state or federal-listed plant species were observed on the project site.

The project site has the potential to directly affect two California Special Concern (CSC) species, Cooper's hawk and burrowing owl. The CSC designation applies to the nesting and burrowing lifestage, respectively. Impacts to these species can be avoided by implementing protective measures. Monterey dusky-footed woodrat is not expected to be disturbed by project implementation, due to potential habitat being located outside of the proposed development area. Northern harrier (CSC, nesting) was observed within the project site during recent field surveys; however, suitable nesting habitat is not present on site. Project implementation would therefore not affect the nesting lifestage of this species.

d. California Department of Fish and Game Code

California Fish and Game Code governs state-designated wetlands, including riparian and stream habitat, and mandates that mitigation be implemented to replace wetland extent and value lost to development. Sections 1600-1607 of the California Fish and Game Code regulate activities that would alter the flow, bed, channel, or bank of streams and lakes. Activities that affect these areas, as well as associated riparian habitats, would require a Streambed Alteration Permit from the CDFG.

The proposed project is expected to result in direct disturbance of the small ephemeral drainage located in the southern portion of the site. A 1600 authorization may be required prior to project implementation.

e. 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 CDFG. Information on these species can be found within section 3511 (birds), section 4700 (mammals), section 5050 (reptiles and amphibians), and section 5515 (fish) of the Fish and Game Code. In addition, Section 3503 of the California Fish and Game Code prohibits impacts to actively nesting birds, their nests, or their eggs.

The only Fully Protected species that was determined to have a reasonable potential for occurring at the project site is white-tailed kite. This species was observed foraging in annual grassland of the project site during field surveys conducted in February and March 2002 (Tupen; Morro Group). Nesting of this species could also occur in larger oak trees located in the northeastern portion of the site. The proposed project is not expected to adversely impact the nesting lifestage of this species provided that appropriate protective measures are implemented.

f. State Water Quality Control Board Water Quality Control Plan – Central Coast Region

As established through the California Porter-Cologne Water Quality Control Act (1969), the State Water Quality Control Board was created and directed to formulate what is known as the Water Quality Control Plan (Central Coast Region). This plan provides management guidelines for maintaining water quality and associated beneficial uses of steams and rivers within the

central coast region of California. General water quality objectives are set forth to facilitate the maintenance of optimum habitat for various aquatic species.

3. Thresholds of Significance

Impacts to biological resources were evaluated by determining the sensitivity, significance, or rarity of each resource that would be adversely affected (either directly or indirectly) by the proposed project, and by using thresholds of significance to determine if the impact constitutes a significant impact. The significance threshold may be different for each habitat or species and is based upon the rarity or sensitivity of the resource and the level of impact that would result from the proposed project. Guidance for determining significance thresholds is based on Appendix G of the State CEQA Guidelines and local/regional general plans and ordinances. Using these guidelines, implementation of the proposed project would have a significant impact on biological resources if it would:

- Adversely and substantially affect a sensitive species, as defined previously;
- Have a substantial adverse effect on any important or sensitive habitat;
- Interfere substantially with the movement of any resident or migratory species of wildlife or with established native resident or migratory wildlife corridors;
- Conflict with any local policies or ordinances protecting biological resources; or,
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Based on these guidelines, as well as pertinent state and federal policies and regulations, the following thresholds of significance would be applied to project-related impacts to biological resources within the proposed project site.

- Loss of individuals or habitat for sensitive species;
- Project related loss of wetland habitat or riverine habitat associated with the ephemeral drainage;
- Introduction of invasive/exotic species at the project site, or into sensitive aquatic habitats located downstream via the ephemeral drainage and culvert; or,
- Degradation of water quality of sensitive aquatic habitats located downstream and off-site (i.e., Los Berros Creek, Arroyo Grande Creek).

4. Impact Assessment and Methodology

A search of the California Department of Fish and Game's (CDFG) California Natural Diversity Data Base (CNDDB) was conducted to identify reported occurrences of special-status plant and animal species and sensitive habitats (CDFG 2003a, 2003b, 2007a, 2007b) within the Oceano and Arroyo Grande NE (CNDDB; 2007a, 2007b) U.S.G.S. 7.5-minute quadrangles. The results of the CNDDB search were then reviewed to evaluate the potential for occurrence of special-

status species within or near the project site. The California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Plants of California* (Tibor; 2001) was also reviewed to provide information on rare plants that were expected to occur in the area. Vegetation/habitat types were classified based on CDFG's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (R. Holland; 1986), and modified as necessary to reflect specific characteristics of on-site communities.

Other documents reviewed as part of this study included the *Burrowing Owl Survey for the Busick/Gearing Tract Map* (1997) prepared by Randi L. McCormick, the *Botanical Survey of Vista Pacifica, Tract 1789* (1989) prepared by V.L. Holland, and the *Pismo Clarkia Survey Report* (2003) prepared by Morro Group, Inc.

Morro Group biologists conducted site visits during February and March 2002 and June 2003 to gather and verify information on the location and extent of plant communities, sensitive habitats, and the potential for occurrence of sensitive plant and wildlife species within the project site. A focused survey for rare plants including Pismo clarkia during the blooming season was conducted as part of these additional studies.

5. Project-specific Impacts and Mitigation Measures

a. Sensitive Habitats

1) Direct Disturbance of Waters of the U.S./Wetlands

Within the project site, "Waters of the U.S." may occur within the small, ephemeral drainage located in the southern property corner. Construction of the proposed access road, storm water management system, and detention basin would require disturbance of all or a portion of the ephemeral drainage, resulting in direct impacts to areas potentially qualifying as "Waters of the U.S." including areas that may qualify as jurisdictional wetland as defined by both the U.S. Army Corps of Engineers (Corps) and California Department of Fish and Game. Disturbance of "Waters of the U.S.," as defined by the U.S. Army Corps of Engineers (Corps), through direct placement of fill during project construction would require a permit from the Corps prior to commencement of construction activities. In addition, a 1600 authorization may be required from the California Department of Fish and Game (CDFG) prior to initiation of proposed development activities.

BR/Impact 1 **Construction of the proposed access road, storm water improvements, and detention basin would result in direct disturbance of the ephemeral drainage and areas potentially qualifying as "Waters of the U.S.", including potential areas of wetland resulting in potentially significant impacts.**

BR/mm-1 Prior to issuance of construction permit relating to final design and construction of the proposed access road, storm water improvements, and detention basin, a wetland delineation, and if necessary, a jurisdictional determination shall be conducted to determine the presence and extent of "Waters of the U.S.", including wetlands. Results of the wetland delineation shall immediately be submitted to the County Division of Environmental and

Resource Management and Army Corps of Engineers (Corps). The applicant shall be responsible for contacting the Corps and California Department of Fish and Game (CDFG) prior to project implementation to determine specific permitting requirements and mitigation responsibilities associated with disturbance of the identified drainage, and any associated areas of wetland.

BR/mm-2 Prior to recordation of the final map, the applicant shall obtain all appropriate authorizations and permits from affected resource agencies including, but not limited to a Section 404 permit from the Corps to discharge dredged or fill material into Waters of the U.S. and a 1600 California Department of Fish and Game Streambed Alteration Permit for disturbance of any portion of a channel located beneath the top of bank. If authorization and/or permits are not required, the applicant shall submit documentation from the applicable agency.

If construction permits or approval of tract improvements are issued in phases, Corps authorization shall be obtained prior to approval of tract improvements or issuance of construction permit relating to construction of the detention basin or other activities that require ground disturbance within 100 feet of the identified drainage.

BR/mm-3 If wetlands, including "Waters of the United States," are identified onsite, prior to approval of tract improvements or issuance of construction permit, the applicant shall submit a wetlands mitigation plan for the approval of the County Division of Environmental and Resource Management and California Department of Fish and Game. If Corps jurisdictional wetlands are present, the plan shall also be submitted to the Corps. The mitigation plan shall be prepared as per the County's Guidelines for Mitigation/Monitoring Plans. The wetlands mitigation plan shall be implemented by the applicant and/or successors-in-interest (Homeowners Association). In addition to any measures and elements required by the Corps, the mitigation plan shall include the following elements:

A) Quantification of temporarily and permanently impacted wetland areas;
B) Identification of the wetland area to be restored at a mitigation ratio no less than 1:1;
C) Methodology for restoration, including a planting site plan, inventory of plants for revegetation, installation of irrigation or other suitable watering method, and scheduling of maintenance activities; and,
D) A description of a restoration monitoring plan, success criteria, reporting schedule, and cost estimate to implement the plan.

If wetlands are present within the area proposed for construction of the access road and storm water management system, the applicant may minimize the permanently affected area by preparing and submitting a revised plan showing proposed access to parcels south of the proposed Castillo Del Mar Drive

extension. If the applicant chooses this option, the revised plan shall clearly demonstrate how the ephemeral drainage shall be restored, stabilized, and maintained to manage storm water flow in a non-erosive manner.

BR/mm-4 Prior to issuance of construction permits or approval of tract improvements, the applicant shall provide a cost estimate and set up a trust account to retain a County-approved qualified biological monitor to inspect implementation of County and resource agency conditions of approval. The frequency and duration of monitoring would be determined by the County Division of Environmental and Resource Management and specified within resource agency-issued conditions of approval. If a wetland mitigation plan is required, the biological monitor shall monitor the mitigation efforts for a minimum of three years or until the performance criteria are met.

BR/mm-5 Prior to issuance of construction permit for the proposed storm water detention basin, the applicant shall implement an approved Erosion and Sedimentation Control Plan (required by the County of San Luis Obispo Land Use Ordinance). Implementation of the approved plan, and any necessary modifications in the field shall minimize the potential for indirect disturbance of sensitive aquatic habitats located downstream and off-site (e.g., Los Berros Creek, Arroyo Grande Creek) and shall include the installation of appropriate erosion control devices (i.e., hay bales, silt fences) down-slope of areas experiencing disturbance of the ground surface associated with both infrastructure and residential construction. The project applicant, and/or successors-in-interest (Homeowners Association) shall check erosion control devices on a daily basis to ensure proper function. The County-approved biological monitor shall inspect erosion control measures for a duration and frequency determined by the County and resource agencies, if necessary. Additional measures recommended by the biological monitor, and approved by the County and affected resource agencies, shall be implemented in the field.

BR/mm-6 Construction of the proposed storm water detention basin and associated drainage improvements within the ephemeral drainage shall not be allowed during the wet season (October 16 – April 15) or during or immediately prior to or following a rain event. The retained biological monitor shall verify compliance.

BR/mm-7 Immediately following completion of construction of the detention basin and other infrastructure within the project site and prior to final inspection, the applicant and/or successors-in-interest (Homeowners Association) shall revegetate adjacent disturbed and barren areas with appropriate non-invasive native vegetation from the County's approved plant list to reduce the risk of on-site erosion. The applicant shall replant areas experiencing only temporary disturbance (a period greater than 30 days) with native species that occur in adjacent grassland and woodland communities. The applicant and/or

successors-in-interest (Homeowners Association) shall submit a letter to the County Department of Planning and Building immediately following completion of revegetation activities and prior to final inspection. The vegetation shall be maintained and weeded for a period of three years.

Residual Impacts

Following implementation of appropriate mitigation measures, this impact would be considered ***significant but mitigable (Class II Impact).***

2) Loss or Disturbance of Individual Oak Trees

The applicant is proposing to preserve approximately 18.7 acres of coast live oak woodland along the northeastern property boundary. Thirteen coast live oak trees are located within or immediately adjacent to potentially buildable areas in the northeastern corner of the parcel. Seven out of these thirteen trees could be removed to accommodate access driveways and residential development. The remaining six trees located immediately adjacent to the building limit line may be impacted if the trees' dripline areas are compromised by filling, excavation, or compaction during construction. Grading, cutting, or trenching within the trees' dripline could damage the root system and result in detrimental effects. Oak trees remaining after residential development could also be adversely affected by landscaping and irrigation activities implemented on site. Over-watering in the vicinities of native oaks can lead to increased risk of root disease and result in decay and mortality of individual trees on site.

Up to 1.6 acres of oak woodland may be affected by fuel modification activities required by Cal Fire. Based on *Residential Fire Safety Plan Requirements* (Cal Fire, February 1, 2006), all structures are required to have a minimum 100 feet of vegetation defensible space (i.e., mowing flammable grasses, trimming lower tree limbs).

BR/Impact 2 **Proposed residential development, access driveway construction, creation of vegetation defensible space, and site improvements could result in direct removal, or inadvertent disturbance of up to thirteen coast live oak trees and up to 1.6 acres of oak woodland located within, or immediately adjacent to, the allowable buildable areas.**

BR/mm-8 Prior to issuance of construction permits for individual lot development, the landowner shall submit plans showing the location of existing oak trees, the diameter at breast height, and if they will be removed or impacted (disturbance within the dripline including trimming) within 25 feet of project boundaries. Up to thirteen oak trees may be removed or impacted by the development and additional trees may be trimmed for fire prevention measures.

BR/mm-9 Prior to recordation of final map, the applicant shall submit an Oak Tree Mitigation and Monitoring Plan to be reviewed and approved by the Environmental Coordinator. The Oak Tree Mitigation and Monitoring Plan

shall be written as per the County's Mitigation and Monitoring Plan Guidelines. At a minimum the plan shall include goals, performance standards, and remedial measures to implement if the performance standards are not met. The plan shall provide for the replacement, in kind at a 4:1 ratio all oak trees removed as a result of the development of the project, and in addition, shall provide for the planting, in kind at a 2:1 ratio, of oak trees to mitigate for trees impacted but not removed. Tree removal shall not be permitted outside of the "building limit line." The Oak Tree Mitigation and Monitoring Plan shall include, but not be limited to, the following tree planting guidelines, which shall be printed on all applicable plans:

INITIAL PLANTING

Replanting shall be completed as soon as it is feasible (e.g. irrigation water is available, grading done in replant area). If possible, planting shall be completed in the late fall or winter months (October to January). If planting cannot occur during these optimal months, a landscape irrigation plan shall be submitted prior to construction permit issuance showing how plants will be watered on a regular basis. If planting occurs outside of optimal months, a thorough watering will be completed at the time of planting. Replant areas shall either be either in native topsoil or areas where native topsoil has been reapplied. If the latter, top soil shall be carefully removed and stockpiled for spreading over graded areas to be replanted (setting aside enough for 6-12" layer for entire tree replant area). Stockpile areas shall be shown on al applicable grading and/or construction plans. Planting hole depths shall exceed container depths to sufficiently avoid roots from turning upwards. Soil returned around containers shall be compacted sufficiently to eliminate air pockets. To provide for greatest success for replacement oaks, planting stock should be either seedlings (preferred) or up to one-gallon container sizes. Small seedlings should be tubed. Clustering of seedings in groups of two to four is preferred (but would need to maintain the overall on-center plant average described below. Where possible, planting should be outside of, but as near as possible to, existing driplines of oak trees.

Average tree planting densities shall be no greater than one tree every 20 feet and shall average no more than four planted trees per 2,000 square feet, unless it is shown to the county by a qualified biologist that existing average tree (with five-inch diameters or more) densities are greater. Where natural densities are shown to be greater than one tree every 2,000 square feet, planting densities (4:1) could match that density. This average planting density, and respective area needed, will be reflected on all applicable construction plans. In the event that inadequate on-site area exists for replanting of replacement trees, a fee per equivalent tree removed shall be applied, pursuant to the County Guidelines for Tree Protection.

Location of newly planted trees should adhere to the following, whenever possible: on the north side of and at the canopy/dripline edge of existing mature native trees; on north-facing slopes; close to drainage swales/gullies (except when riparian habitat present); where topsoil is present; at least 25 feet away from continuously wet areas (e.g. lawns, leach lines); random and clustered planting patterns to create natural appearance, and; planting locations away from known animal populations (e.g., squirrels, gophers).

MAINTENANCE AND PROTECTION

These newly planted trees shall be maintained until successfully established. The following planting and maintenance measures are necessary for successful establishment, and shall be included as part of monitoring efforts: provide and maintain protection (e.g. tree shelters, caging) from animals (e.g., deer, rodents); regular mulching and weeding (minimum of once early Fall and once early Spring) of at least a three foot radius out from plant; adequate watering (e.g., drip-irrigation system), and watering should be controlled so only enough is used to initially establish the tree, and reducing to zero over a three year period; avoidance of planting between April and September unless irrigation system with timer is provided, where trees are watered one gallon every four weeks (may vary); application of standard planting procedures (e.g., planting tablets, initial deep watering, etc.), and; when planting with, or near, other landscaping, all landscape vegetation within the eventual mature oak tree root zone (25-foot radius of planted oak) will need to have similar water requirements as the oak (including no summer watering once established).

Protection of newly planted trees shall include the following measures, and be shown on all applicable plans prior to issuance of construction permit for lot development:

d. An above-ground shelter (e.g., tube, wire caging) shall be provided for each tree upon planting, and shall be of sturdy material that will provide protection from browsing animals for no less than seven years (unless determined successfully established by monitor).
e. Caging to protect roots from burrowing animals shall be installed when the tree is planted, and be made of material that will last no less than seven years.
f. Each shelter shall include the following, unless manufacture instructions recommend a more successful approach:
    1. Shelter shall be secured with stake that will last seven years;
    2. Height of shelter shall be no less than three (3) feet;
    3. Base of shelter shall be buried into the ground;
    4. Top of shelter shall be securely covered with plastic netting, or better, and last for no less than seven years; and,

5. If required planting is located in areas frequented by deer, tube/caging heights shall be increased to at least four feet or plantings shall be protected with deer fencing.

To provide for adequate weed control around replacement trees, while still minimizing impacts to other existing sensitive vegetation, the following approach will be needed: 1) no use of herbicides (unless newly-planted tree is fully protected during application); and 2) either installation of a securely staked "weed mat" (covering at least a three-inch radius from center of plant), or hand removal of weeds (covering at least a three-inch radius from center of plant) will be completed for each plant (where hand removal weeding will be kept up on a regular basis (at least once in late spring [April] and once in early winter [December]). This should be done until tree is at least three feet tall. Use of weed-free mulch (at least three inches deep), with regular replenishment, may be substituted for weed mat.

BR/mm-10 Prior to final inspection of individual residences, the landowner shall replace, at a 4:1 ratio, coast live oak trees to be removed and at a 2:1 ratio, the coast live oak trees that would be impacted as a result of grading and implementation of fire prevention measures including oak tree limb trimming. Replacement, maintenance, and monitoring shall occur pursuant to the approved Oak Tree Mitigation and Monitoring Plan.

BR/mm-11 To promote the success of the new trees, the applicant shall retain a qualified individual (e.g., arborist, landscape architect/contractor, certified arborist, certified nurseryperson, botanist) to prepare a letter stating the required planting and protection measures have been completed. This verification letter shall be submitted to the Department of Planning and Building prior to final inspection of each residence. The letter shall specify the following: 1) when planted; 2) type and container size of vegetation planted ; 3) approximate planting locations; and 4) health of plants at the time of planting or when observed. GPS coordinates and photo-documentation shall be provided. The retained individual shall monitor the survivability and vigor of the planted trees until they are successfully established, and shall prepare annual monitoring reports for a minimum of seven years. The first monitoring report shall be submitted to the County Environmental Coordinator one year after the initial planting and thereafter on an annual basis until the monitor, in consultation with the County, has determined that the initially-required vegetation is successfully established. Additional planting and monitoring will be necessary if initially-required vegetation is not considered successfully established. At a minimum, the monitoring report shall include: 1) reference and comparison to previous report, 2) approximate planting locations shown on map, 3) health and vigor of all plantings, 4) any problems associated with health of plants, and 5) any remedial measures needed to insure long-term health of all required plantings. The applicant, and successors-in-interest (individual lot owners), agrees to complete any necessary remedial measures

identified in the report (s) to maintain the required population of initially-planted vegetation. Remedial work shall be completed by the applicant, or successors-in-interest (individual lot owners), within 30 days of it being identified.

BR/mm-12 Prior to issuance of construction permits for tract improvements and individual lot development, to avoid the potential for inadvertent disturbance of scattered oak trees not scheduled for removal or impact, the applicant shall retain a qualified individual (e.g., arborist, landscape architect/contractor, nurseryperson) to clearly mark the dripline area of each oak tree located outside of, but adjacent to the proposed development areas. The dripline of each tree shall be marked with highly visible flagging or construction fencing, immediately prior to construction. Grading, utility trenching, compaction of soil, material/equipment storage, or placement of fill shall be avoided within fenced areas. Tree protection areas shall be identified with at least one weatherproof sign placed within each temporarily fenced area in the most visible location for construction crews that states "Tree Protection Area – Stay Out" (four inch letter size or greater). For larger fenced areas, multiple signs will be placed at 50-foot increments. All construction fencing and signage shall remain in place and kept in good working order until final inspection.

BR/mm-13 To minimize impacts to the sensitive oak woodland understory habitat (e.g., coastal scrub), the applicant agrees to the following during tract improvements, individual lot construction activities, and for the life of the project:

a. The applicant recognizes that trimming of oaks can be detrimental in the following respects and agrees to minimize trimming of the remaining oaks: removal of larger lower branches should be minimized to 1) avoid making tree top heavy and more susceptible to "blow-overs", 2) reduce having larger limb cuts that take longer to heal and are much more susceptible to disease and infestation, 3) retain the wildlife that is found only in the lower branches, 4) retains shade to keep summer temperatures cooler (retains higher soil moisture, greater passive solar potential, provides better conditions for oak seedling volunteers) and 5) retain the natural shape of the tree. Limit the amount of trimming (roots or canopy) done in any one season as much as possible to limit tree stress/shock (10% or less is best, 25% maximum). Excessive and careless trimming not only reduces the potential life of the tree, but can also reduce property values if the tree dies prematurely or has an unnatural appearance. If trimming is necessary, the applicant agrees to either use a skilled arborist or apply accepted arborist's techniques when removing limbs. Unless a hazardous or unsafe situation exists, trimming shall be done only during the winter for deciduous species. Smaller trees (smaller than 5 inches in diameter at four feet above the ground) within the project area are considered to be of

high importance, and when possible, shall be given similar consideration as larger trees.

b. All native vegetation removal shall be shown on all applicable grading/ construction or improvement plans, and reviewed/ approved by the County (Planning and Building Dept.) before any work begins.

c. Vegetation removal of native habitat shall be limited to what is shown on the county-approved grading/ construction /improvement plans.

d. Vegetation clearance for fire safety purposes shall be limited to the minimum setbacks required by Cal Fire. Where feasible, all efforts will be made to retain as much of this vegetation within the setback as possible (e.g. remove/trim only enough vegetation to create non-contiguous islands of native vegetation).

e. All allowed uses within the native habitat area shall be "passive," where the use will have either no or minimal impact on the habitat.

f. Any CC&Rs created shall include the above provisions to protect the native habitat.

BR/mm-14 Prior to issuance of construction permits for individual lot development, the applicant shall submit a cost estimate for planting, maintenance, and/or monitoring by qualified individuals. Qualified individuals shall show they are experienced and successful in planting, maintaining and/or monitoring native vegetation. The cost estimate shall include all critical elements to insure the success of any replanting efforts (e.g., plant materials, amendments, irrigation, regular maintenance, etc.). When cost estimates are required, the applicant shall either post a performance bond equal to the county-approved cost estimate, or establish a trust account with the county to administer implementation of one or more of these components, or a combination of the two. Where a county trust account is required, the work scope and selection of qualified individual(s) shall be approved or determined by the county.

Residual Impacts

Following implementation of appropriate mitigation measures, this impact would be considered ***significant but mitigable (Class II Impact).***

b. Special-status Species

Five sensitive wildlife species were determined through the literature review and site surveys as having potential to occur within proposed residential development areas located on site. These include burrowing owl, Cooper's hawk, Northern harrier, white-tailed kite, and American badger. Nesting habitat for Cooper's hawk and white-tailed kite is present within the oak woodland habitat along the eastern portion of the project site, and potential burrowing sites for burrowing owl are located throughout the grassland portion of the project site.

An individual burrowing owl was documented onsite. Nesting habitat for Northern harrier is not present onsite; therefore project implementation is not expected to adversely impact the nesting

lifestage of this species. Individuals of Northern harrier and white-tailed kite were observed foraging within the grassland area of the project site.

Implementation of the proposed project would result in a loss of grassland and foraging habitat for burrowing owl, Cooper's hawk, Northern harrier, and white-tailed kite. Implementation of the proposed project would force these species to forage elsewhere in the region. The project site is a pocket of currently undeveloped grassland, and is surrounded by urban development, and was not observed to provide foraging habitat for a significant number of bird species. Based on the presence of urban development surrounding the project site, the loss of foraging habitat would not be significant because only a small number of birds would be affected, and these species are not listed as Threatened or Endangered by the state or federal government (the special-status designation applies to nesting or burrowing life stages only). Potential impacts to potential nesting or burrowing bird species, Monterey dusky-footed woodrat, and American badger are identified below, along with recommended avoidance measures.

1) Disturbance of Burrowing Owl

A burrowing owl was observed on the project site in 1996 by County staff, but winter evidence of occurrence of burrowing owl was observed within the project site during focused surveys conducted by Randi McCormick in 1997; however, this species could potentially occur within the project site due to the presence of suitable habitat, and due to the site occurring within the known range of the species. In the event that burrowing owls occupy proposed development areas prior to initiation of construction, direct impacts to individuals of this species could occur. Take of this species could result from grading activities initiated throughout open grassland habitat of the project site.

BR/Impact 3 **Project implementation could result in direct disturbance of burrowing owl, if individuals of this species occupy annual grassland of the project site prior to or during construction.**

BR/mm-15 Prior to issuance of construction permits for tract, road, and infrastructure improvements and prior to issuance of construction permits for individual lot development, the applicant, or landowner as applicable, shall retain a County-qualified wildlife biologist to conduct a pre-activity survey for burrowing owl. The survey shall be conducted within 30-days prior to site disturbance. If ground disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be resurveyed. Results of the survey shall be documented in a report and shall include the date of the survey, methods of inspection, and findings. The report shall be submitted to the County Division of Environmental and Resource Management and the California Department of Fish and Game (CDFG). If no burrowing owls are found to occupy the site at that time, no further measures would be necessary unless burrowing owls are subsequently observed at the project site, in which case the following mitigation measure would be implemented.

If burrowing owls are found within the project site, the applicant or successors-in-interest (individual lot owners) shall immediately contact the

CDFG and implement all measures identified in the CDFG staff report on burrowing owl mitigation, additional measures required by CDFG, and measures described in the *Burrowing Owl Survey* report (McCormick; 1997) shall be implemented. Measures shall include, but not be limited to, the following:

A) If feasible, burrowing owl burrows shall be avoided. No disturbance shall occur within 50 meters of occupied burrowing owl burrows during the non-breeding season (September 1 through January 31) or within 75 meters during the breeding season (February 1 through August 31). A minimum of 6.5 acres of foraging habitat shall be permanently preserved contiguous with the occupied burrow sites for each pair of breeding burrowing owls or single unpaired resident owl. The configuration of the protected habitat shall be reviewed and approved by the Environmental Coordinator and California Department of Fish and Game.

If avoidance of burrowing owl burrows is not feasible, the following measures shall apply, upon approval by the Environmental Coordinator and California Department of Fish and Game.

1. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFG verifies that either: 1) birds have not begun egg-laying and incubation: or 2) that juveniles from the occupied burrows are foraging independently and capable of independent survival.

2. A minimum of 6.5 acres of foraging habitat per pair or unpaired resident burrowing owl shall be acquired and permanently protected within an open space easement. The protected area shall be adjacent to occupied burrowing owl habitat and at a location approved by the California Department of Fish and Game. The protected habitat shall contribute to the long-term conservation of the burrowing owl and the ecosystem(s) on which they depend.

3. When destruction of occupied burrows is unavoidable, a Burrowing Owl Habitat Replacement Management and Monitoring Plan shall be prepared as per the County's Guidelines for Mitigation/Monitoring Plans by a County-approved biologist, and submitted to the Environmental Coordinator for review and approval. The plan shall include success criteria, remedial measures, identify the burrow(s) affected by potential development, and demonstrate how existing unsuitable burrows shall be enlarged or cleared of debris or created (e.g., by installing artificial burrows) at a 1:1 ratio within a protected area. Mitigation success criteria shall be identified, and monitoring reports shall be prepared annually for a minimum of three years.

Monitoring reports shall be submitted to the Environmental Coordinator and California Department of Fish and Game.

4. If owls must be moved away from the disturbance area, passive relocation techniques shall be used (i.e., use of artificial burrows and tunnels), and trapping shall be prohibited. A minimum of one week shall be required to accomplish relocation to allow owls to acclimate to alternative burrows.

Residual Impacts

Following implementation of appropriate mitigation measures, this impact would be considered ***significant but mitigable (Class II Impact).***

2) Disturbance of Nesting Raptors and Other Tree-nesting Bird Species

Coast live oak woodland located along the northeastern project site boundary would be preserved as open space; however, up to seven scattered coast live oak trees would potentially be removed and up to six additional coast live oak trees may be disturbed during proposed project construction activities, including individual lot development. These thirteen coast live oak trees located within and adjacent to proposed building areas provide appropriate seasonal nesting habitat for various raptors including white-tailed kite, Cooper's hawk, red-shouldered hawk (*Buteo lineatus*), and red-tailed hawk (*Buteo jamaicensis*), and other tree-nesting bird species. If project-related tree removals were to occur at any time during the typical bird breeding season (mid-February through mid-September breeding season), take of active bird nests could occur. Take of any active bird nest due to proposed development activities is prohibited under Fish and Game Code Section 3503.5.

BR/Impact 4 **Project implementation could result in direct removal of individual oak trees located outside of designated open space areas, and potential take of active bird nests, including raptors.**

BR/mm-16 According to the CDFG Code 3503, "take" of the nest or eggs of any bird is prohibited, except upon approval from CDFG. To avoid take of active bird nests, any necessary tree removals shall be conducted between August 15 and March 15, outside of the typical breeding season. If tree removals are determined necessary during the typical breeding season, a County-qualified biologist shall conduct a bird nest survey within 24 hours of proposed development activities. The results of the bird nest survey shall be submitted to the California Department of Fish and Game (CDFG) and County of San Luis Obispo Division of Environmental and Resource Management, via a letter report. The report shall include the date of the survey, methods of inspection, and findings. If the biologist determines that a tree slated for removal is being used for nesting at that time, no site disturbance or use of equipment shall be allowed within an appropriate buffer area to be determined by the biologist, based on bird species, topography, and type of activity until

after the biologist has determined that the young have fledged from the nest and achieved independence. No construction or grading activity shall occur within the buffer area. If no nesting is found to occur, necessary tree removal could then proceed.

Residual Impacts

Following implementation of appropriate mitigation measures, this impact would be considered ***significant but mitigable (Class II Impact).***

3) Disturbance of Nesting Songbirds

If proposed development activities are scheduled to occur during the nesting season for ground-nesting songbirds (March through August), disturbance of breeding and nesting activities of resident and migratory bird species could occur. Disturbance of active nests of birds occupying annual grassland can be avoided during construction activities, through appropriate measures identified below.

BR/Impact 5 **If site disturbance and construction activities occur during the nesting season (March through August), project implementation could result in take of active bird nests located within annual grassland of the project site.**

BR/mm-17 Prior to issuance of construction permits for road and infrastructure construction and individual lot development, if construction and site disturbance activities occur during the typical songbird nesting season (March 15 through August 15), the applicant or successors-in-interest (individual lot owners) shall retain a County-qualified biologist to conduct a pre-construction survey for nesting songbirds. The survey shall be conducted within three days of proposed site disturbance and construction activities to determine presence/absence of nesting birds on the project site. If no breeding or nesting activities are detected within 100 feet of the proposed work areas, construction activities may proceed. If, however, active nests are found within areas proposed for disturbance, after the biologist shall establish an appropriate buffer area based on the bird species, topography, and type of activity. No construction or grading activities shall occur within the buffer area until the biologist has determined that the young have fledged from the nest and achieved independence, or upon approval from CDFG.

Residual Impacts

Following implementation of appropriate mitigation measures, this impact would be ***considered significant but mitigable (Class II Impact).***

4) Disturbance of Monterey Dusky-footed Woodrat

No evidence of occurrence of Monterey dusky-footed woodrat was observed within the project site during associated field surveys; however, it is expected that woodrats could occur in grassland habitats of the project site in the future. The applicant proposes an open space easement within the oak woodland habitat area, including a portion of the grassland habitat area within the eastern portion of the project site. Implementation of the open space easement would preserve the preferable habitat area for the woodrat. In the event that Monterey dusky-footed woodrat occupies proposed development areas prior to initiation of construction, direct impacts to individuals of this species could occur. Take of these species could result from grading activities initiated throughout open grassland and fringes of oak woodland.

BR/Impact 6 **Project implementation could result in direct disturbance or take of Monterey dusky-footed woodrat, if individuals of these species occupy annual grassland of the project site prior to construction.**

BR/mm-18 Prior to issuance of construction permit, the applicant or successors-in-interest (individual lot owners) shall retain a County-qualified biologist to conduct a pre-activity survey for Monterey dusky-footed woodrat that may occupy the site. The survey shall be conducted within 30 days prior to proposed site disturbance and construction activities. Results of the survey shall immediately be submitted to the County Division of Environmental and Resource Management and CDFG as necessary. The survey report shall include the date of the survey, methods of inspection, and findings. If active burrows of woodrats are found within proposed development areas during the survey, the biologist shall establish an appropriate buffer area to protect the nest(s). No site disturbance shall occur within the buffer area until a Memorandum of Understanding (MOU) is obtained from CDFG. An alternative to buffer area is to disassemble nests by hand outside of the nesting season (February through September) and allow the woodrats to leave the site.

Residual Impacts

Following implementation of appropriate mitigation measures, this impact would be ***considered significant but mitigable (Class II Impact).***

5) Disturbance of American Badger

No evidence of occurrence of American badger was observed within the project site during associated field surveys; however, it is expected that badgers could forage or burrow within grassland habitats on the project site in the future. The applicant proposes an open space easement within the oak woodland habitat area, including a portion of the grassland habitat area within the northwestern portion of the project site. Implementation of the open space easement would preserve a portion of the preferable habitat area for this species. In the event that American badger occupies proposed development areas prior to initiation of construction, direct impacts to individuals of this species could occur. Take of these species could result from grading activities initiated throughout open grassland and fringes of oak woodland.

BR/Impact 7 Project implementation could result in direct disturbance or take of American badger, if individuals of these species occupy annual grassland of the project site prior to construction.

BR/mm-19 Prior to issuance of construction permit, the applicant or successors-in-interest (individual lot owners) shall retain a County-qualified biologist to conduct a pre-activity survey for American badger that may occupy the site. The pre-construction survey shall be conducted within 30 days of beginning work on the project to identify if badgers are using the site. The results of the survey shall be sent to the project manager, CDFG, and the County of San Luis Obispo.

If the pre-construction survey finds potential badger dens, they shall be inspected to determine whether they are occupied. The survey shall cover the entire property, and shall examine both old and new dens. If potential badger dens are too long to completely inspect from the entrance, a fiber optic scope shall be used to examine the den to the end. If a fiber optic scope is not available, occupation of the den can be determined by partially obscuring the den entrance with sticks and leaves to indicate animal passage into and out of the den and dusting the den entrance with a fine layer of dust or tracking material for three consecutive nights and examining the following mornings for footprints. Inactive dens may be excavated by hand with a shovel to prevent re-use of dens during construction. If badgers are found in dens on the property between February and July, nursing young may be present. To avoid disturbance and the possibility of direct take of adults and nursing young, and to prevent badgers form becoming trapped in burrows during construction activity, no grading shall occur within 100 feet of active badger dens between February and July. If badger dens are found on the property during the pre-construction survey, the CDFG wildlife biologist for the area shall be contacted to review current allowable management practices.

Residual Impacts

Following implementation of appropriate mitigation measures, this impact would be ***considered significant but mitigable (Class II Impact).***

c. Wildlife Movement Corridors

Proposed residential development would be confined to open grassland located southeast of woodland habitats, therefore impacts to potential wildlife movement corridors are not expected to occur. Surrounding urban development, including residential neighborhoods, a mobile home park, and highway decrease the overall value of this parcel as a wildlife movement corridor.

6. Cumulative Impacts

Development associated with the proposed project and continued development of the surrounding area, would result in permanent loss and modification of annual grassland throughout the region. Cumulative effects of ongoing loss of annual grassland could contribute to a regional decline in important habitat for a variety of wildlife species, including burrowing owl, northern harrier, and American badger. Brush clearance required for fire safety may affect Monterey dusky-footed woodrat. Cumulative losses of grassland and sensitive wildlife habitats, and disturbance of sensitive wildlife would result in *significant, but mitigable impacts* (Class II).

BR/Impact 8 **Proposed development on-site and within the surrounding area would result in increased losses of grassland and oak tree communities and potential disturbance of sensitive wildlife.**

To minimize disturbance of sensitive wildlife species that occupy grassland habitats within the region, the applicant shall implement BR/mm-15 through BR/mm-19, which consist of conducting pre-construction surveys for sensitive wildlife, implementing avoidance and habitat restoration measures for sensitive wildlife, consulting with the California Department of Fish and Game, and implementing protective measures during construction activities. In addition, pursuant to Visual Resources mitigation VR/mm-3, the applicant shall establish a permanent open space easement on Lots 1 through 6 (refer to Chapter V.D. Visual Resources of this document). This easement would protect oak woodland and a portion of grassland habitat located along the northern and eastern portion of the property and would minimize the project's contribution to the cumulative loss of grassland and oak woodland habitat in the region.

Residual Impacts

Following implementation of the identified mitigation measure, this impact would be ***considered significant but mitigable (Class II Impact).***

D. VISUAL RESOURCES

This section was prepared by Robert Carr, a California licensed Landscape Architect and Visual Resource Specialist. This section assesses visual impacts that may result from implementation of the proposed project.

In addition, the City of Arroyo Grande adopted a Mitigated Negative Declaration (General Plan Amendment Case No. 06-001, Development Code Amendment Case No. 06-001, and Tentative Parcel Map Case No. 06-004), which includes an analysis of the road extension to Valley Road on August 22, 2006. Applicable analysis is incorporated in the section below by reference, and a copy of the adopted MND is located in Appendix G of this Final EIR.

1. Existing Conditions

a. Subdivision

The proposed project site is located on 47.54 acres of gently rolling to moderately steep hillsides that rise up from the coastal Arroyo Grande valley, immediately south of the City of Arroyo Grande city limits. The project site is generally a transitional landscape, located on the southeast perimeter of the valley where flatter topography approaches the foothills of the coastal mountain range. The landscape of the region is typified by rolling hills with moderately steep-sided drainages flattening out as they meet the coastal terrace and valley. The project site itself ranges in elevation from approximately 185 to 310 feet above sea level. Slopes vary from the 15 to 28 percent range throughout most of the site to 30 percent along the northeast portion of the property adjacent to State Route 101. The Pacific Ocean can be seen in the distance from much of the project site.

The natural vegetation patterns of this transitional landscape are predominantly oak woodland and oak savanna, with riparian plant communities seen in the drainages. Grazing practices over the years have resulted in conversion of much of the understory to annual grasses. Typical of much of the region, the proposed project site is mainly grassland, with oak woodland on the northern and eastern slopes. The natural drainage swales within the project limits support little vegetation other than annual grasses and forbs.

The most visible land use of the region outside of the city limits has historically been agriculture, primarily cattle grazing and crop production. Ranch houses and farm-support buildings can be seen throughout the region. Within the past 10 to 15 years, residential development has increased substantially in the area, with a tendency toward large-size residential structures visible on the surrounding hillsides. The southern-most commercial retail center of Arroyo Grande is located approximately one mile north of the project and can be seen from the site. State Route 101, the major regional transportation corridor through San Luis Obispo County is located adjacent to the project site to the northeast. Beyond the freeway to the north and east are rolling hills, currently serving as grazing land, oak savanna and vineyards. The project site is bounded on the southwest by an established mobile home park, and on two other sides by newer residential developments. To the southeast is the Falcon Ridge Estates residential subdivision. The residences of Falcon Ridge Estates are generally large in size, estimated in the 3,000 to 5,000-square foot range. To the northwest the new Vista Del Mar residential neighborhood is currently under development. These homes are in the 2,000 to 3,000-square foot range.

b. Castillo Del Mar Drive – Valley Road Connection

The proposed roadway would be located roughly within the boundary of an existing unpaved emergency road, and within an agricultural field, within the City of Arroyo Grande. The topography is gently to moderately sloping, and supports disturbed grasses and an agricultural field. Valley Road and agricultural fields are located to the west, Arroyo Grande High School is located to the north of the road, and residences and undeveloped land is located to the east and south.

2. Regulatory Setting

The proposed development is located within the jurisdiction of the County of San Luis Obispo, adjacent to the City of Arroyo Grande. The regulatory setting pertaining to visual resources includes review of the proposed development's consistency with the County of San Luis Obispo General Plan (Land Use Element, Circulation Element, Agriculture and Open Space Element), and the County of San Luis Obispo Land Use Ordinance, in addition to the review of findings made in this EIR pursuant to CEQA Guidelines.

a. San Luis Obispo County General Plan – Agriculture and Open Space Element

The project would be visible from State Route 101, a "Scenic Road" candidate as defined in the San Luis Obispo County General Plan, Agriculture and Open Space Element. The Open Space Policy proposes the protection of scenic vistas and states the following regarding the development of lands within scenic corridors:

- Locate structures, roads, and grading on portions of a site that minimize visual impact.
- Locate structures below prominent ridgelines and hilltops so they are not silhouetted against the sky.
- Use natural landforms and vegetation to screen development. Where that cannot be done, it is preferred to screen development with native vegetation that is compatible with the scenic resource being protected and does not obstruct public vistas.
- Design structures with colors that are taken from the natural landscape.
- Minimize the visibility of utilities from public view corridors and place them underground where feasible.

b. San Luis Obispo County Design Guidelines

Prepared by the San Luis Obispo County Department of Planning and Building, this document consists of "design objectives, guidelines, and examples that would help retain and enhance the unique character of the unincorporated communities and rural areas of San Luis Obispo County." The following design objectives apply to the project site:

RU-1: New residential subdivisions should locate building envelopes where the visibility of new buildings from public roadways and adjoining properties would be minimized.

RU-6: Water tanks….and other similar infrastructure that supports rural residences should be located or painted to reduce their visibility.

RC-7a: Where possible, large cuts and graded pads should be avoided with foundations being stepped to minimize the alteration of natural contours.

RC-7b: Building masses should generally follow contours. On sloping sites, buildings should have multiple levels**.**

RC-7e: Artificial slopes that are visible to the public should match the natural contours in the immediate vicinity.

c. City of Arroyo Grande General Plan – Agriculture, Conservation, and Open Space Element

The City's General Plan defines scenic resources as "agricultural land, open spaces, hillsides, ridgelines, canyons, valleys, landmark trees, woodlands, wetlands, streambeds and banks, as well as aspects of the built environment that are of a historic nature, unique to the City, or contribute to the rural, small town character of the City" (Policy C/OS1-1, Agriculture, Conservation, and Open Space Element). As noted in the adopted MND for the road extension to Valley Road, the City has not officially recognized the project area as a sensitive scenic resource (refer to Appendix G).

d. State Scenic Route Designation

In addition to the policy documents listed above, it should be noted that State Route 101, adjacent to the northeast boundary of the project is identified as "Eligible" in the California Scenic Highway System. Although no specific preservation measures are associated with "Eligible" status, the designation serves as an indicator of intrinsic visual quality of the route. "Eligible" status is the first step in designating a route as an Official Scenic Highway. Pursuant to Caltrans Scenic Highway Guidelines, visual intrusions such as unsightly or excessive development along a corridor may prevent the route from obtaining full Scenic Highway status.

e. Highway Corridor Design Standards

The South County planning area, which begins approximately 0.5 mile to the south of the subject property, includes Highway Corridor Design Standards that apply to development within view of the freeway. These standards were added during the last major General Plan update for that planning area to preserve public views of ridgelines, significant stands of trees and wildflowers, historical buildings, and pastoral settings as seen from State Route 101. The proposed project site is located within the San Luis Bay planning area, which has not had a major update since 1980, and does not include Highway Corridor Design Standards.

3. Thresholds of Significance

The determination of Significance for this project would be based on applicable policies, regulations, goals, and guidelines defined by CEQA and the County of San Luis Obispo.

a. CEQA Thresholds

Section 15064.7 of CEQA states that each public agency is encouraged to develop thresholds that the agency uses in the determination of the significance of environmental effects. The section further states that "A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect would normally be determined to be significant by the agency and compliance with which means the effect normally would be determined to be less than significant".

According to Section 15382 of the *Guidelines for Implementation of the California Environmental Quality Act* (CEQA), an effect on the environment is considered to be significant if it is a substantial, or potentially substantial adverse change in any of the physical conditions within the area being studied, "including…objects of aesthetic significance." Appendix G of the CEQA Guidelines defines a project as having a significant visual effect on the environment if it would "have a substantial, demonstrable, negative aesthetic effect."

b. County of San Luis Obispo Thresholds

County of San Luis Obispo planning documents do not contain specific criteria for determining thresholds of significance regarding visual resources; however, the *Land Use Element* and *Agriculture and Open Space Elements of the General Plan* contain several policies and goals defining the County's standards regarding the value and preservation of visual resources. In addition, the *San Luis Obispo County Design Guidelines*, although intended for application in the unincorporated areas of the county, addresses specific design issues, and is relevant for understanding the aesthetic and architectural goals of the County.

The Highway Corridor Design Standards applicable to property located approximately 0.5 mile south of the project site require that ridge-top development is avoided, the minimum height limitation is 25 feet above natural grade, and landscaping is required to minimize incompatibility of development. Although these standards do not specifically apply to the project site, these requirements provide a context for viewer expectations along this section of State Route 101 south of the City of Arroyo Grande.

4. Impact Assessment Methodology

The focus of this analysis is to determine the proposed project's impacts on views from public areas such as the State Route 101 corridor as well as other potentially critical locations. This analysis identifies the existing visual resources such as ridgelines, landforms and vegetative groupings that contribute to the scenic quality of the area.

Field studies were conducted to identify locations from where the proposed project could be reasonably seen. Of these viewing locations, Key Viewing Areas (KVAs) were identified for further analysis that would most effectively represent the project and its potential impacts, if any, on the visual environment. KVA selection is based on the number of potential viewers, viewer exposure, viewing duration and distance, and expected sensitivity to visual change.

The project site was viewed from each Key Viewing Area (KVA), and an inventory of on-site scenic resources was developed. The existing visual resource inventory was compared with the

proposed project components, and any potential conflicts or impacts to existing visual resources were identified. Such impacts include the possibility of residential and water tank structure visibility, significant grading, night lighting, and overall change of aesthetic character.

Potential conflicts between project components and visual resources were identified by two separate methods. Sight-line studies were conducted using scaled maps and topographic cross-sections. Given the known viewpoint and site elevations, along with viewing distance, the limits of project visibility were determined. In addition, each of the sixteen proposed building lots was individually field-checked using a vertical and horizontal reference system of pylons and flags to confirm the findings of the sight-line study.

Photographs were taken from each of the Key Viewing Areas and used as the basis for documenting the findings and further analyzing the potential affects of the project. Photo-simulations based on the sight-line studies and pylon placement illustrate the potential impacts of the project as well as any changes in the area's visual character. Photo-simulations were further developed to test the effectiveness of mitigation measures.

Specific project impacts are determined by evaluating the physical changes proposed by the project in the surrounding landscape setting, as seen from representative viewing locations. Project impact determinations are made in the context of community scenic values as identified in applicable planning documents. This study also considers the specific potential impacts of each of the individual project components in order to evaluate and quantify their cumulative affect.

Each of the proposed parcels would be designed and developed individually with one single-family residence and potentially one secondary residence; therefore, this visual resources section uses a "reasonable worst-case scenario" to assess potential impacts. In this analysis, the following assumptions are made:

a. Building Location Within Lot

The applicant is proposing specific building limit lines within Lots 1 through 8 to reduce visibility of structures as seen from the State Route 101 corridor and preserve oak woodland. It is reasonable to assume that the desire to maximize outward views would result in structure placement on the highest elevation possible within the buildable confines of each lot. The result may contribute to the visibility of structures as seen from off-site locations.

b. Building Heights

The desire to raise the upper floors to gain a better view would put the roofs at the maximum height of 35 feet above average natural grade. The result would be to increase exposure of the structure to view. Determination of building heights are defined in the County of San Luis Obispo Land Use Ordinance, Section 22.04.122, as: "the vertical distance from the highest point of the structure to the average of the highest and lowest points where the vertical plane of the exterior walls would touch the natural grade level of the site."

c. Unit Size

It is likely, based on recent development trends and houses built on similar scale subdivisions, that individual homeowners would desire larger houses, in the 3,000 to 5,000-square foot range. These larger units would be more visible.

d. Unit Character

Units designed for individual owners have the potential for using materials and forms that are highly visible (i.e., large reflective glass panes, bright color exteriors and non-compatible shapes).

e. Oak Tree Removal

During the construction of individual residences or through actions of the individual homeowner after occupancy, up to seven coast live oak trees may be removed or thinned to obtain better views from the parcel. The residence or related development would then be more visible should this tree removal or thinning occur.

f. Water Tank Appearance

Water storage tanks with 210,000-gallon capacity are available as pre-manufactured units, with typical dimensions of approximately 19 feet tall by 45 feet in diameter. Support equipment would be adjacent to the tank and is expected to be within a fenced security enclosure.

g. Project Visibility and Key Viewing Areas (KVAs)

1) Project Visibility

Field visits were conducted to determine where the project site and future development would be seen from public locations. Because of the site's elevation, and the many viewing opportunities afforded by the site's proximity to the nearby city and highway, several views of the project site were identified and designated as key viewing areas (refer to Figure V.D.-1). The extent and quality of views to the project site varies with each viewing location, and can be seen from some locations as an open space ridgeline, and from other areas as an extension of a developed hillside. Project visibility from several important locations is discussed below.

(a) Urbanized Area of the City of Arroyo Grande

From the urbanized areas of the City of Arroyo Grande, including the Old Town district as well as other commercial zones along Grand Avenue and the residential neighborhoods to the west, glimpses of the project site can be seen. From these viewing areas, the visual prominence of the project site is reduced due to the viewing distance and the partial screening caused by existing development and vegetation located in the foreground landscape. In addition, from these more distant viewing areas, the visual context in which the project will be seen is largely defined by the existing residential development on the hillsides adjacent to the project. Along southbound Traffic Way, views of the northernmost portion of the project site lay directly ahead of the viewer as a prominent ridgeline backdrop.

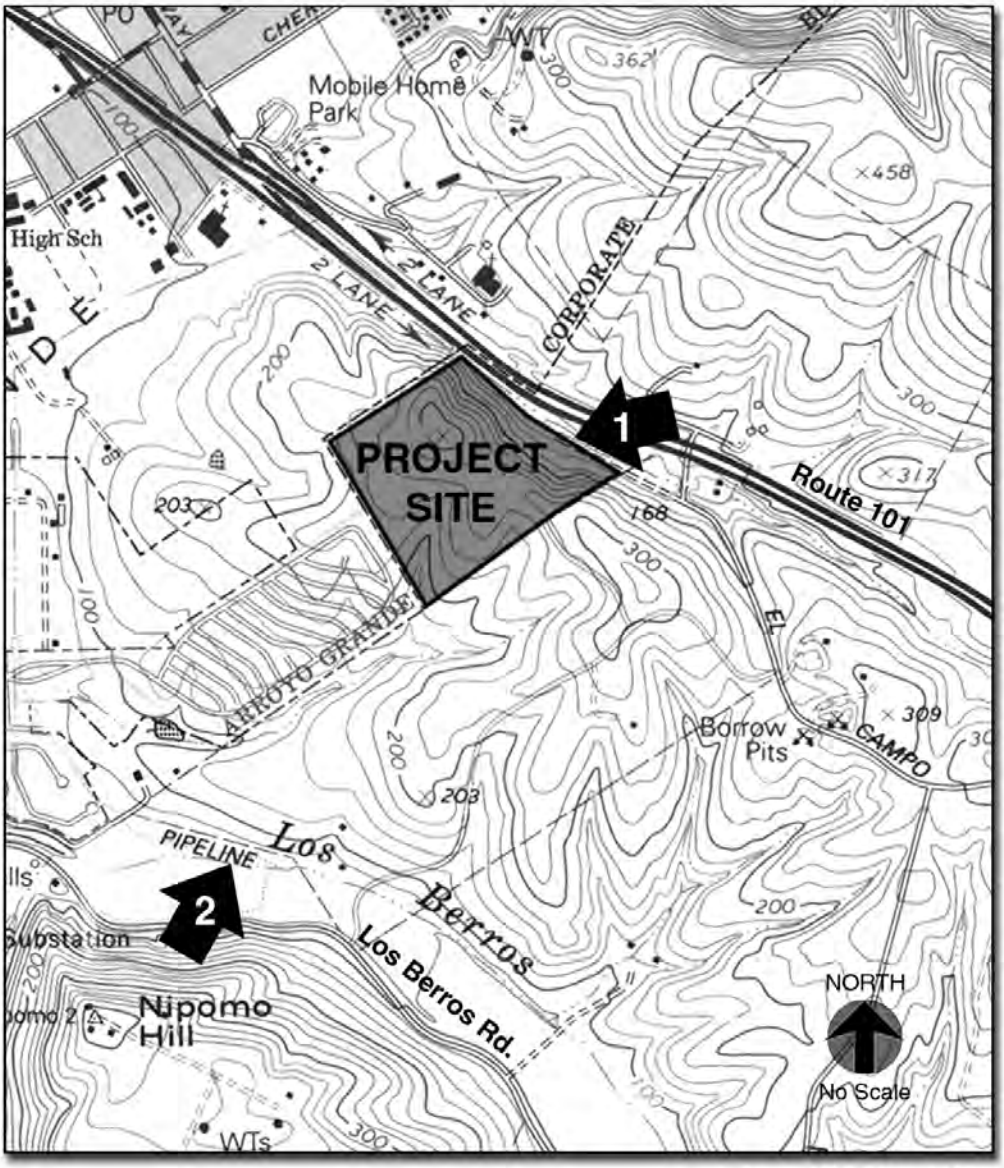
(b) State Route 1, Los Berros Road, Valley Road, Halcyon Road, and Fair Oaks Avenue

These more heavily traveled local public roads all provide some degree of visibility to the project site. In most instances, field analysis shows that viewing distance, and intervening topography or development reduces the site's noticeability in the landscape. The existing adjacent hillside development is generally visible and establishes a somewhat built visual character from these viewpoints. It is expected that where visible, the proposed project as seen from these areas would appear as an extension of the existing adjacent development. From an approximately 0.3 mile section of Los Berros Road the project site is quite visible and appears as an open space ridgeline to the north. Due to the visibility of the site and its ridgeline characteristic, Los Berros Road is identified as a Key Viewing Area and is discussed in a subsequent section.

The proposed access road between Castillo Del Mar Drive and Valley Road would be visible from Valley Road, Arroyo Grande High School, and the immediate area. The southern extension of the road would be located adjacent to the existing school parking area, and would appear as an extension of the existing road and emergency road. Approximately 100 linear feet of the road would traverse an agricultural field before connecting with Valley Road.

(c) State Route 101

The State Route 101 corridor offers some of the most available views of the project site. More than 50,000 vehicles per day on average use this highway (Caltrans; 2001). Vehicle occupants heading south on State Route 101 can see the project site intermittently for approximately 10 seconds. Highway roadside landscaping blocks much of the view of the site from the southbound direction, however at brief locations, the project site appears directly ahead of the windshield at a distance of approximately 0.75 to 0.5 mile. From this viewing area, the landform of the project site defines the horizon line to the south. Views to the project site from the south along the northbound lanes are of a much longer duration and of a much longer duration and are unobstructed much of the time. Views from northbound State Route 101 are considered important due to the great number of potential viewers and the high visibility of portions of the site. Northbound Route 101 is identified as a Key Viewing area and addressed further in greater detail below.



Direction and number of Key Viewing Area (KVA)

KEY VIEWING AREA LOCATION MAP

Exhibit A

NORTH
Not to Scale

Key Viewing Area Location Map
FIGURE V.D.-1

5. Project-specific Impacts and Mitigation Measures

a. Impacts from State Route 101

Based on reference pylon placement and cross section analysis (see Impact Assessment Methodology discussion in this section), residences on Lots 3, 4 and 5 would be visible and would silhouette above the natural ridgeline as seen from State Route 101. The visibility of Lots 3 and 4 are shown in Figure V.D.-2. This silhouetting would occur along an approximately 0.8 mile section of State Route 101. These proposed homes would be visible from a variety of angles and distances, and would be within the viewer's primary cone of vision along much of this viewing area. Ridgeline interruption would occur for approximately thirty seconds as seen from the northbound direction. Other existing residential development is visible on hillsides in the vicinity that detracts from the otherwise high quality views of the area. The ridgeline that the proposed project would occupy is visually prominent and plays an important role in defining the open space character south of Arroyo Grande.

The majority of the houses proposed for construction on lots closest to the ridgeline would interrupt the horizon line to some degree from one or more locations along the State Route 101 corridor. The "Building Limit Line" proposed for Lots 1 through 8 is an effective measure to reduce the majority of structure visibility above the skyline, however some view of the structures may remain, depending on building height and placement. The remaining visibility of rooftops above the ridgeline landform and existing tree masses would have a substantial effect on the aesthetics of the skyline. In addition, a loss of rural character would be caused by the visibility of built structures and related development such as out-buildings, fences, and landscaping. At the more distant viewing locations on State Route 101, specific project components would be less distinguishable. The combined effect of these visible built features would be perceived as an overall change in landscape character.

VR/Impact 1 **As seen from the State Route 101 corridor, the upper portions of houses built on Lots 3, 4 and 5 would be visible and would be silhouetted above the natural horizon, resulting in long-term visual impacts.**

VR/mm–1 Prior to issuance of building permits for individual lot development, the following conditions shall apply to Lots 3, 4 and 5**:**

A) Those portions of development on Lot 3 that are more than 100 feet from Coast View Drive shall not exceed an elevation of 25 feet above natural grade.
B) The top of any development on Lot 4 shall not exceed an elevation of 290 feet above sea level (based on contour maps used in this document).
C) The top of any development on Lot 5 shall not exceed an elevation of 295 feet above sea level (based on contour maps used in this document).
D) No development shall exceed 35 feet above natural grade.

Figure 1 (V.D-2) COLOR 8.5 X 11

Back of Figure V.D.-2

VR/mm-2 Prior to recordation of the final map, the following shall be included on the additional map sheet, and as applicable, prior to issuance of subsequent grading permits, incorporated into all future development:

A) The applicant shall clearly delineate the height of new development on the project plans. All development on Lots 3 and 4 and 5 shall not exceed the heights shown above and as defined in the County of San Luis Obispo Land Use Ordinance, Section 22.10.090, as follows: "The height of a building or structure shall be measured as the vertical distance from the highest point of the structure to the average of the highest and lowest points where the vertical plane of the exterior walls would touch the natural grade level of the site" (see Figure V.D.-3 below).

B) The applicant shall clearly delineate all fencing proposed for areas outside of the "Building Limit Line" on the project plans for Lots 3, 4, and 5. All fencing proposed for the areas outside of the "Building Limit Line" shall conform to the following: 1) No proposed fencing shall be constructed of solid, flat planes; 2) Fence colors shall be similar to surrounding natural colors and no brighter than 6 in chroma and value on the Munsell Color Scale on file in the County Department of Planning and Building; and, 3) White paint or other white materials shall be prohibited.

C) Conditions, Covenants, and Restrictions (CC&Rs) shall be required that include items A and B above.

FIGURE V.D.-3
Measurement of Height

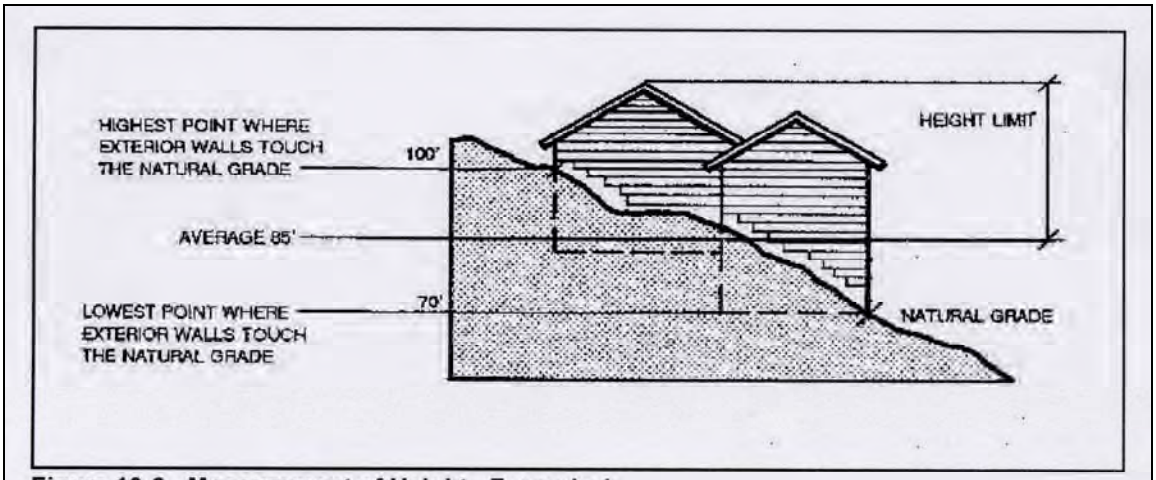


Figure 10-2 - Measurement of Height - Example 1

Source: County of San Luis Obispo Title 22 Land Use Ordinance; January 1, 2003

VR/mm–3 Prior to recordation of the final map, the following conditions shall apply to Lots 1 through 6: The applicant shall place the portion of the lot that is outside of the Building Limit Line into a permanent open space easement for the purpose of protecting the existing native trees on each subject parcel. No development (except for fences as specified in VR/mm-2 item B above) or uses shall be allowed within the open space easement that would change the natural appearance of this area. The specific language of the open space easement shall be subject to review and approval by the San Luis Obispo County Department of Planning and Building.

Residual Impacts

Implementation of the above mitigation measures would result in the reduction of visual impacts caused by the construction of residences on Lots 3 through 5 to ***significant but mitigable (Class II Impact).***

b. Impacts from Los Berros Road

As seen from Los Berros Road, the project would be visible above the existing development to the south, as shown in Figure V.D.-4. Currently, as seen from this viewing area, the open space of the project site contributes to a valued rural aesthetic defined in community planning documents. From Los Berros Road, the residences proposed for Lots 1 through 6 would be seen above the ridgeline. Based on the viewing distance and the amount of residential development that currently exists within the view, the interruption of the ridgeline would not be inconsistent with viewers' expectations.

In spite of the existing development within view, the added visibility of approximately sixteen new structures and related amenities built on the hillside would further reduce the remaining open space character as seen from Los Berros Road, and would potentially result in significant impacts including long-term modification of the existing open space character of the project site.

VR/Impact 2 **As seen from portions of Los Berros Road, contrasting colors and reflectivity of the structures would increase visibility of the proposed development resulting in long-term visual impacts to the open space character of the site.**

VR/mm–4 Prior to issuance of construction permits for individual lot development, the applicant shall submit architectural elevations of all proposed structures to the Department of Planning and Building for review and approval.

Figure 2 (V.D.-4) COLOR 8.5 X 11

Back of Figure V.D.-4

VR/mm-5 Prior to recordation of the final map, the following shall be included on the additional map sheet and incorporated into future development:

The County Department of Planning and Building shall review of elevations and shall include the parameters specified below. The elevations shall show forms, dimensions, exterior finish materials and colors, as follows:

A) Building colors shall be similar to surrounding natural colors and no brighter than 6 in chroma and value on the Munsell Color Scale on file in the County Department of Planning and Building.
B) Exterior wall colors shall be limited to muted earth tones and white paint shall be prohibited.
C) Roof colors shall be limited to deep earth tones, deep muted reds, browns and grays and no brighter than 6 in chroma and value on the Munsell Color Scale on file in the County Department of Planning and Building. Shiny metal roofs, bright orange, red, or blue shall be prohibited.
D) Conditions, Covenants, and Restrictions (CC&Rs) shall be required specifying the above components.

Residual Impacts

Implementation of the above mitigation measures would result in the reduction of visual impacts caused by increased project visibility and loss of open space character to ***significant but mitigable (Class II Impact).***

c. Impacts from Traffic Way

As seen from southbound Traffic Way, the northern portion of Lot 6 lies directly ahead of the viewer as a prominent ridgeline to the south. A 35-foot high structure placed at the highest allowable location within the "Building Limit Line" of Lot 6 would result in the visual disruption of the ridgeline. The visibility of the structure would be increased because of the structure's location in the viewer's primary cone of vision.

VR/Impact 3 **From Traffic Way in the City of Arroyo Grande, the upper portion of a house built on Lot 6 would be visible and would silhouette above the natural horizon, resulting in long-term visual impacts.**

VR/mm–6 Prior to recordation of the final map, the following shall be adopted and included on the additional map sheet:

The height of new development for Lot 6 shall be clearly delineated on project plans, and shall not exceed an elevation of 295 feet above sea level, as shown for the tentative tract map contour mapping. Conditions, Covenants, and Restrictions (CC&Rs) shall be required that specify the above provision.

Residual Impacts

Implementation of the above mitigation measures would result in the reduction of visual impacts caused by silhouetting of a structure on Lot 6 to ***significant but mitigable (Class II Impact).***

d. Impacts From Valley Road

As seen from Valley Road, the access road connecting Castillo Del Mar Drive to Valley Road would appear as an extension of the existing road and emergency road. Based on the existing built environment and visual context, short-term and long-term visual impacts resulting from the road extension would be less than significant. To further mitigate potential visual impacts by minimizing ground disturbance during construction activities, the City required a protective fence or silt barrier on each side of the road alignment (refer to Appendix G).

e. Water Tank Impacts

The applicant is proposing to grade for and install a minimum 210,000-gallon water tank on Lot 5. The water tank is proposed to be approximately 19 feet in height and 45 feet in diameter. An equipment area is also proposed at the site. A portion of the site would be excavated approximately ten feet below existing grade to accommodate the tank. As proposed, the water tank is not expected to substantially silhouette above the ridgeline as seen from either State Route 101 or Los Berros Road. The tank would be visible from Los Berros Road (Figure V.D.-4), and would contribute to the adverse change in visual character from that viewpoint.

VR/Impact 4 **As seen from Los Berros Road and partially from State Route 101, the visibility of a water tank structure and related equipment facilities would increase the built character of the project, resulting in long-term visual disturbance.**

VR/mm-7 Prior to issuance of construction permits, the applicant shall submit architectural elevations of the water tank and related support facilities to the Department of Planning and Building for review and approval. The elevations shall show forms, dimensions, exterior finish materials and colors, as follows:

A) Exterior colors shall be similar to surrounding natural colors and no brighter than 6 in chroma and value on the Munsell Color Scale on file in the County Department of Planning and Building.
B) Shiny metal components shall not be used.

VR/mm-8 Prior to issuance of construction permits, the applicant shall submit landscape plans for the water tank site to the Department of Planning and Building for review and approval. The plans shall show oak trees and native shrubs planted on the southern, eastern and western sides of the water tank and pump facilities, with a goal of fully screening the tank and support equipment from KVAs. Revegetation monitoring shall be conducted until at least 75 percent screening is achieved.

Residual Impacts

Implementation of the above mitigation measures would result in the reduction of visual impacts caused by the construction of the water tank and operational facilities to ***significant but mitigable (Class II Impact).***

6. Cumulative Impacts

The discussion of cumulative impacts relates to the potential for this proposed project to contribute to an aggregate change in visual quality of the area. The State Route 101 corridor through southern San Luis Obispo County has undergone visual changes within the last several years with new residential and commercial development. These changes have resulted in an increased built-character through the corridor. The visibility of the built components of this proposed residential development has the potential to further contribute to that character change.

VR/Impact 5 **The increased visibility of the components of the proposed residential project combined with the continuing development of the State Route 101 corridor would result in cumulative adverse visual impacts.**

Implementation of measures VR/mm-1 through VR/mm-8 would mitigate potentially adverse cumulative visual impacts to a level of insignificance.

Residual Impacts

Implementation of the above mitigation measures would result in the reduction of cumulative adverse visual impacts caused by construction of the proposed development to ***significant but mitigable (Class II Impact).***

E. TRAFFIC AND CIRCULATION

This section was prepared based on the traffic analysis reports prepared by Higgins Associates and Associated Transportation Engineers (ATE) in 2002 and 2004, peer review of the traffic analysis report and Draft EIR by the County Public Works Department, and consultation with the City of Arroyo Grande Department of Public Works, City of Arroyo Grande Department of Community Development, California Department of Transportation, and San Luis Obispo Council of Governments. The findings of the report and additional information obtained from responsible and affected agencies have been incorporated into this Final EIR. The *Busick Tract Map (Tract 1789) Traffic Analysis Report* (April 29, 2002), the *Traffic Analysis Alternative Access for Tentative Tract Map 1789 – Arroyo Grande, California* (August 17, 2004), and correspondence from the City of Arroyo Grande, California Department of Transportation, and San Luis Obispo Council of Governments is available for review in Appendix D and Appendix F of this document. Documentation of personal communications is referenced within the document, and in Section IX.

In addition, the City of Arroyo Grande adopted a Mitigated Negative Declaration (General Plan Amendment Case No. 06-001, Development Code Amendment Case No. 06-001, and Tentative Parcel Map Case No. 06-004), which includes an analysis of the road extension to Valley Road on August 22, 2006. Applicable analysis is incorporated in the section below by reference, and a copy of the adopted MND is located in Appendix G of this Final EIR.

1. Existing Conditions

a. Street Network

The project site is currently undeveloped, with the exception of an existing, unimproved emergency access road extending from the paved terminus of Coast View Drive within Falcon Ridge Estates to the paved terminus of Castillo Del Mar Drive within Vista Del Mar at the Arroyo Grande city limit boundary. This road was constructed to comply with a condition requiring secondary access for Tract 2207 within the City of Arroyo Grande and was authorized by the County of San Luis Obispo (Grading Permit B001027, issued July 27, 2001). During the approval process for Tract 2207, the City of Arroyo Grande City Council determined that primary access to the project site (Tract 1789) would not be allowed via Tract 2207 and established a one-foot wide access control easement at the juncture of Castillo Del Mar Drive and Tract 1789, precluding use by non-emergency vehicles. As a result of the MOU agreed upon and signed by the City of Arroyo Grande, the project applicant, Lucia Mar School District, and John Taylor, the City has lifted the one-foot easement, allowing for the proposed project to utilize Castillo Del Mar Drive as primary access to the project site (refer to Figure V.E-1 and Section III.C.2). Secondary access to the project site would be provided by Coast View Drive and Falcon Crest Drive, which are maintained by the Falcon Ridge Estates Homeowners Association as private roads.

The project site and surrounding residential developments including Falcon Ridge Estates and Vista Del Mar are served by a circulation system comprised of public and private residential streets, rural roadways, and State Route 101. The major components of the existing street network are State Route 101, Castillo Del Mar Drive, Valley Road, Orchard Street, Fair Oaks

Avenue, California Street, West Cherry Avenue, El Campo Road, Los Berros Road, Falcon Crest Drive, and Coast View Drive (refer to Figure III-4).

1) State Route 101

State Route 101 is a multi-lane freeway that serves as a major arterial within the City of Arroyo Grande and is the principal inter-city route along the central coast of California. Within the project study area, State Route 101 is a four-lane freeway generally following a northwest-southeast alignment.

2) Castillo Del Mar Drive

Castillo Del Mar Drive is a two-lane public residential roadway that begins at the western border of Tract 2207 and terminates at the southern border of Tract 2207 and the northwestern border of the project site. The City of Arroyo Grande has approved an extension of Castillo Del Mar Drive from its current terminus at the western border of Tract 2207, west along the southern border of Arroyo Grande High School to Valley Road. Castillo Del Mar Drive currently provides primary access from Orchard Street to the residents of Tract 2207. A "no-notice" gate would be installed on the project site across Castillo Del Mar Drive at the City limit, which would open upon approach of westbound automobiles. The gate would open by code for eastbound automobiles accessing the project site. A "Knox Box" (i.e., a locked box that can only be opened through use of a combination or a key in the possession of public safety agencies such as Cal Fire) would be installed on this gate to allow entrance of eastbound emergency vehicles entering the project site from the City.

3) Valley Road

Valley Road is a north-south trending, two-lane, arterial that extends through the Los Berros Valley from its intersection with Fair Oaks Avenue at the north to the intersection with Highway 1 at the south. This road is located west of the project site and serves as an arterial.

4) Orchard Street

Orchard Street is a two-lane public residential roadway located northwest of the project site. Orchard Street extends from Fair Oaks Avenue to the north, intersects with West Cherry Avenue at its mid-point, and terminates at Castillo Del Mar Drive to the south. Orchard Street currently provides direct access to the immediate residential area, Lucia Mar School District administrative offices, and the Arroyo Grande High School. Orchard Street would provide direct access to the project site.

5) Fair Oaks Avenue

Fair Oaks Avenue is a southeast-northwest trending, four-lane, arterial roadway located northwest of the project site. Fair Oaks Avenue extends southeast from Elm Street in the City of Grover Beach across State Route 101 to Traffic Way in the City of Arroyo Grande.

6) California Street

California Street is a northwest-southeast trending, two-lane, public residential roadway located north of the project site. California Street extends northwest from West Cherry Avenue to Fair

Oaks Avenue and provides direct access to the Lucia Mar School District administrative offices and Arroyo Grande High School.

7) West Cherry Avenue

West Cherry Avenue is an northeast-southwest trending, two-lane, public residential roadway located northwest of the project site. West Cherry Avenue extends northeast from California Street to State Route 101, terminating in a cul-de-sac.

8) El Campo Road

El Campo Road is a two-lane collector that starts from the at-grade intersection with State Route 101 and continues south approximately 3.5 miles into the Palo Mesa village area. This road serves as a collector road.

9) Los Berros Road

Los Berros Road is a two-lane arterial that extends through the Los Berros Valley from Valley Road to State Route 101 west of the community of Nipomo, where it becomes Thompson Road. Los Berros Road has a posted speed limit of 45 miles per hour east of Falcon Crest Drive and 35 miles per hour west of Falcon Crest Drive.

10) Falcon Crest Drive

Falcon Crest Drive is a two-lane private residential street that extends between El Campo Road and Los Berros Road. The road provides primary access to residential units within the private, gated Falcon Ridge Estates subdivision, and would also provide secondary access to the project site.

11) Coast View Drive

Coast View Drive is a private residential street that extends northwest from Falcon Crest Drive to the project site property line. The applicant is proposing to extend Coast View Drive to the northwest to serve future development on the project site as a secondary access point. A "no-notice" gate would be installed on the project site at the terminus of Castillo Del Mar Drive, which would open upon approach of southeast-bound automobiles. A "Knox Box" would be installed on this gate to allow entrance of northwest-bound emergency vehicles entering the project site from Coast View Drive and the Falcon Ridge residential development.

b. Project Access

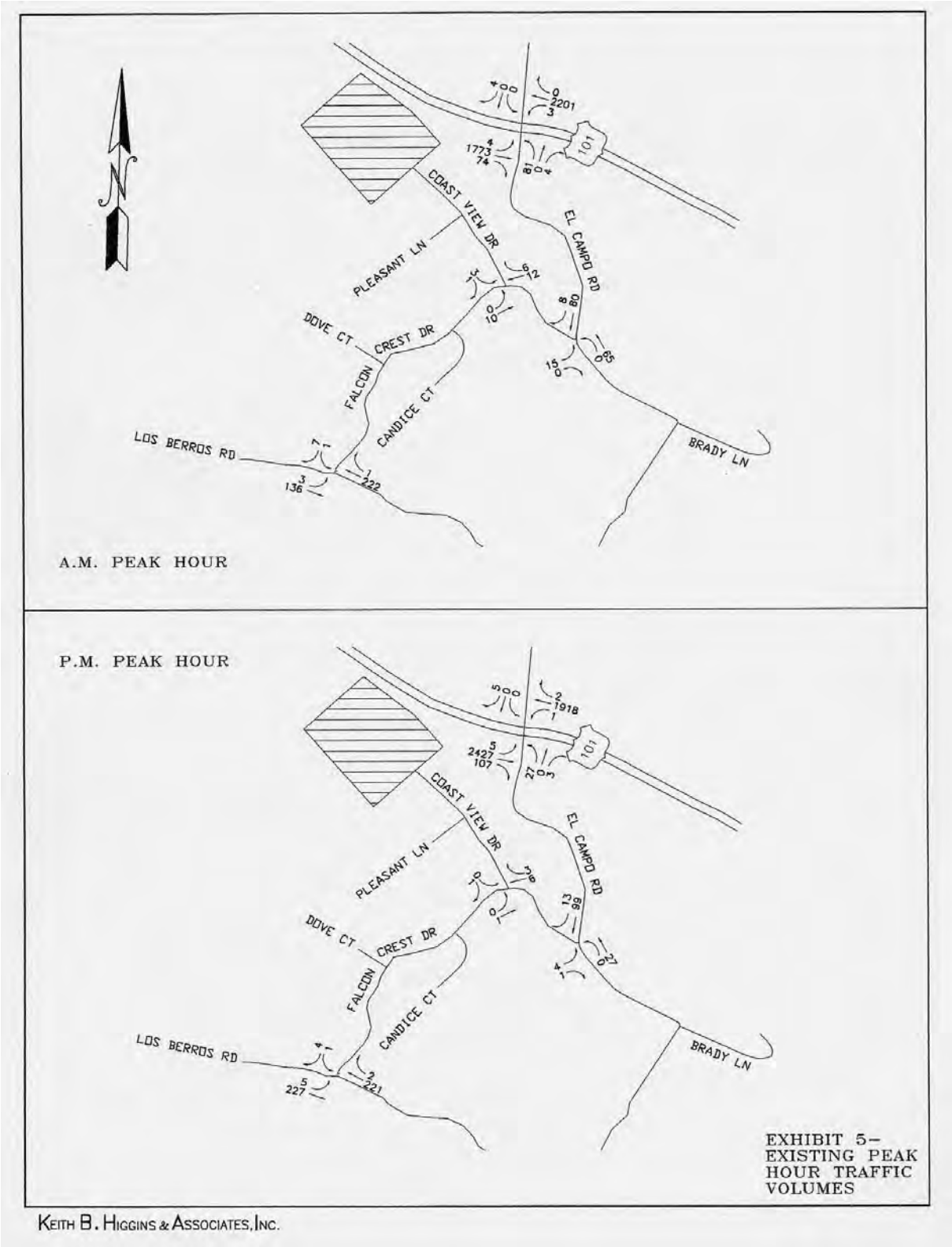
Currently, there is an existing 20-foot wide unpaved emergency access road on a 25-foot wide emergency access easement extending across the project site from the terminus of Castillo Del Mar Drive in Vista del Mar (Tract 2207), located west of the project site to the terminus of Coast View Drive in Falcon Ridge Estates (Tract 1256), located south of the project site. This road was constructed to comply with a condition requiring secondary access for Tract 2207 within the City of Arroyo Grande and was authorized by the County of San Luis Obispo (Grading Permit B001027, issued July 27, 2001).

The applicant is proposing to extend Castillo Del Mar Drive from Tract 2207 in a southeasterly direction to provide primary access to the subdivision. The applicant has obtained an easement from the Falcon Ridge Homeowners Association to allow secondary access out of the proposed project site via Coast View Drive and Falcon Crest Drive. The paved extension of Castillo Del Mar Drive would be located along the approximate alignment of the existing emergency access road, terminating in a cul-de-sac approximately 250 feet north of the eastern border of the project site and the Falcon Ridge Estates residential development (refer to Figure III-5). The road section between the cul-de-sac terminus of the Castillo Del Mar Drive extension and the Falcon Ridge Estates residential development would be gated, paved, and used as secondary access during emergencies.

c. Intersection Operations

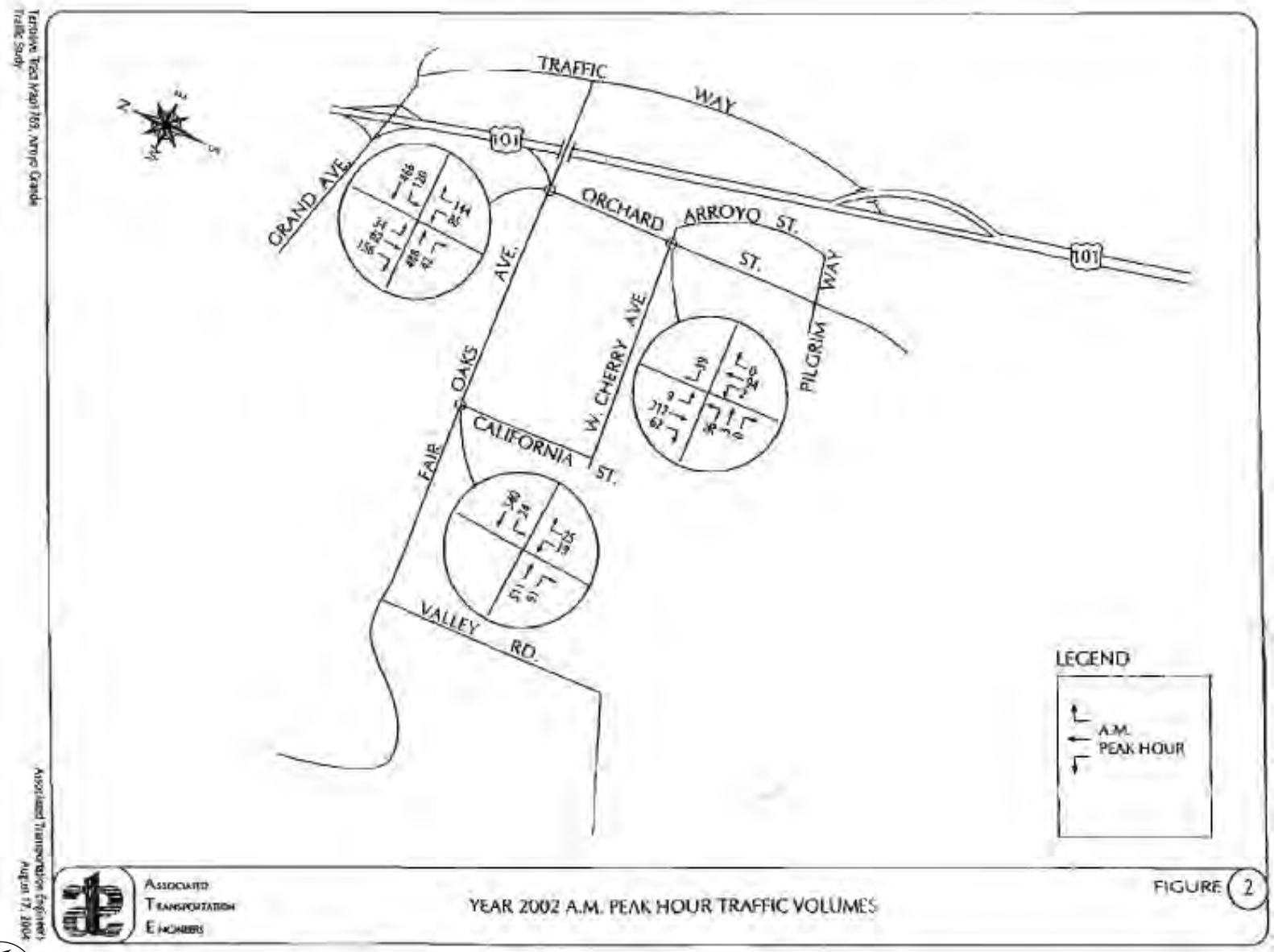
All intersections within the project road network are at-grade and unsignalized. The existing road network and current AM and PM peak hour turning volumes are shown below in Figures V.E.-2 and V.E.-3 for the following intersections in the immediate vicinity of the project site: Fair Oaks Avenue and State Route 101 Southbound Off-ramp; Fair Oaks Avenue and California Street; Orchard Street and West Cherry Avenue; El Campo Road and State Route 101; El Campo Road and Falcon Crest Drive; Coast View Drive and Falcon Crest Drive, and; Falcon Crest Drive and Los Berros Road.

The AM and P.M. peak hour turning volumes for the study-area intersections were tabulated by Higgins Associates and ATE in 2002 and 2004, respectively. The results of the traffic counts are shown in Figures V.E.-2 and V.E.-3 below. Associated Levels of Service (LOS) for the study-area intersections were calculated using the signalized operational methodology outlined in the 2000 Highway Capacity Manual (HCM). The LOS calculation worksheets are located in the appendices of the referenced traffic reports. The level of service data presented in Table V.E.-1 show that the study area intersections currently operate at LOS A for the A.M. and PM peak hours, with the exceptions of the State Route 101 Southbound Off-ramp and Fair Oaks Avenue (LOS C); the northbound approach of El Campo Road to State Route 101 (LOS F), and the southbound approach of Falcon Crest Drive to Los Berros Road (LOS B).



NORTH
Not to Scale

Existing Peak Hour Traffic Volumes
FIGURE V.E.-1



Source: ATE Traffic Study, 2004.

NORTH
Not to Scale

Year 2002 A.M. Peak Hour Traffic Volumes
FIGURE V.E.-2

A Project Study Report (PSR) prepared by the City of Arroyo Grande has been prepared for the State Route 101 and El Campo Road intersection to evaluate alternative interchange designs that would mitigate the existing deficient condition at this intersection. The PSR has been approved by the California Department of Transportation (Caltrans); however a preferred alternative has not yet been chosen.

Right turn channelization warrants were evaluated for the southbound State Route 101 approach to El Campo Road and the westbound Los Berros Road approach to Falcon Crest Drive (Higgins Associates; April 29, 2002). Based on existing conditions, a right turn lane is warranted on the southbound State Route 101 approach to El Campo Road. Installation of a right turn lane on the westbound Los Berros approach to Falcon Crest Drive is not warranted.

Left turn lane channelization is provided on both State Route 101 approaches to El Campo Road and on the eastbound Los Berros Road approach to Falcon Crest Drive. Left turn lane channelization warrants were evaluated for the northbound El Campo Road approach to Falcon Crest Drive. At the current time, a left turn lane is not warranted on the intersection approach. Given the low traffic volumes and slow travel speeds on Coast View Drive and Falcon Crest Drive, left and right turn lane channelization at the intersection of Coast View Drive and Falcon Crest Drive is not warranted.

TABLE V.E.-1
Existing Intersection Levels of Service

Intersection*	Approach	AM Peak Hour		P.M. Peak Hour	
		Delay	LOS	Delay	LOS
State Route 101 SB Off-ramp/Fair Oaks Avenue	Southbound	20.3 sec.	LOS C	n/a	n/a
Fair Oaks Avenue/California Street	Overall	0.8 sec.	LOS A	n/a	n/a
Orchard Street/West Cherry Avenue	Overall	9.3 sec.	LOS A	n/a	n/a
El Campo Road/State Route 101	Overall	20.5 sec.	LOS C	5.2 sec.	LOS A
	Northbound	~~	LOS F	~~	LOS F
El Campo Road/Falcon Crest Drive	Overall	0.8 sec.	LOS A	0.3 sec.	LOS A
	Eastbound	9.5 sec.	LOS A	9.3 sec.	LOS A
Coast View Drive/Falcon Crest Drive	Overall	1.5 sec.	LOS A	0.9 sec.	LOS A
	Southbound	8.5 sec.	LOS A	8.4 sec.	LOS A
Falcon Crest Drive/Los Berros Road	Overall	0.3 sec.	LOS A	0.1 sec.	LOS A
	Southbound	10.0 sec.	LOS A	10.0 sec.	LOS A

*All intersections are currently un-signalized
~~ Delay exceeds 200 seconds per vehicle
n/a: Not provided as part of ATE Report

2. Regulatory Setting

The *Circulation Element of the General Plan* does not specify policies or traffic safety standards. The County Department of Public Works reviews and approves proposed projects and traffic study reports.

3. Thresholds of Significance

The *County of San Luis Obispo General Plan* was used to determine the significance of project traffic impacts to roadways and intersections located in the project area. To determine the impact of increased traffic on the neighborhood street system including Falcon Crest Drive and Coast View Drive, level of service (LOS) thresholds representing quality-of-life thresholds recommend by the Institute of Traffic Engineers were utilized and are shown in Table V.E.-2 below. San Luis Obispo County has established a LOS C as a goal for rural roadways, County roads, intersections, and State Route 101. The California Department of Transportation strives to maintain a target LOS on State highways including State Route 101 at the transition between LOS C and D. The threshold utilized in this analysis is LOS C.

TABLE V.E.-2
Neighborhood Traffic Impact Threshold Criteria

Road Segment Level of Service	Average Daily Traffic Volume
LOS A	1,200
LOS B	1,400
LOS C	1,600
LOS D	1,800
LOS E	2,000
LOS F	>2,000

Source: Higgins Associates

Mitigation would be required for project-caused operations at LOS D or worse, and the following conditions:

1) Addition of project traffic to a road segment exceeds the thresholds for LOS C.

2) The project's access to a major street requires an access that would create an unsafe situation or require traffic signal and or major revisions to an existing traffic signal.

3) The project adds traffic to a street with design features that may cause potential safety problems with the addition of project traffic.

4) The addition of project or project-plus-cumulative traffic to an unsignalized intersection increases the seconds of delay per vehicle ratio by the thresholds listed in Table V.E.-3.

5) The addition of project, or project plus cumulative, traffic to an unsignalized intersection increases the level of service to an unacceptable level. The Highway Capacity Manual shall determine level of service at unsignalized intersections.

4. Impact Assessment and Methodology

The traffic analysis reports (Higgins Associates; 2002 and ATE; 2004) were prepared to evaluate the existing traffic safety conditions and LOS of local roads that would be potentially affected by future development of the project site. Intersection and road segment levels of service were analyzed for A.M. and P.M. peak hour traffic conditions.

The "Synchro" traffic analysis software was used to review the operations of the study-area intersections. "Synchro" implements the operations method of the *2000 Highway Capacity Manual* for two-way stop controlled intersections to determine the delay in seconds for each vehicle at the intersection. Delay times are used to determine the LOS of each intersection, as shown in Table V.E.-3.

TABLE V.E.-3
Two-Way Stop Controlled Intersection Level of Service Criteria

Level of Service	Control Delay (seconds/vehicle)
LOS A	0-10
LOS B	>10-15
LOS C	>15-25
LOS D	>25-35
LOS E	>35-50
LOS F	>50

*Source: Highway Capacity Manual, 2000

5. Project-Specific Impacts and Mitigation Measures

a. Trip Generation

The average daily A.M. and P.M. peak hour trip generation numbers used for the proposed project are shown below in Table V.E.-4. These estimates are based on those published in the Institute of Transportation Engineers *Trip Generation Manual (6th Edition)* for residential homes, which assumes that approximately 9.6 daily trips are generated by one single-family residence. The data presented below indicates that the proposed project would generate 154 average daily trips including 12 A.M. peak hour and 16 P.M. peak hour trips.

1) Existing Intersection Impacts

The El Campo Road and State Route 101 northbound intersection operates at LOS F under existing conditions. A *Project Study Report* (PSR) was prepared by the City of Arroyo Grande to evaluate alternative interchange designs for this intersection. The PSR was approved by

Caltrans, however, further study has been postponed based on lack of funding (Don Spagnolo; March 25, 2004).

TABLE V.E.-4
Estimated Peak Hour Trip Generation

Land Use	Size	Daily Traffic Generation	A.M. Peak Hour			P.M. Peak Hour		
			In	Out	Total	In	Out	Total
Single-family Residential	16 homes	154	3	9	12	10	6	16
Secondary Residence	16 homes	154	3	9	12	10	6	16
Percent of daily trips:			A.M. Peak Hour: 8%			P.M. Peak Hour: 10%		

2) Existing and Proposed Project Intersection Impacts

LOS for the study area intersections was analyzed assuming existing and proposed project-generated traffic turning volumes as shown on Figures V.E.-4 and V.E.-5. Table V.E.-5 lists A.M. and P.M. peak hour LOS for the study area intersections with the incorporation of anticipated project-generated trips. The delay times shown in Table V.E.-5 represent the difference between the existing delay experienced at these intersections and the estimated delay with incorporation of project related traffic. Based on the results of the analysis, implementation of the proposed project would not reduce the LOS at any intersection and increases delays in only minor amounts. The southbound State Route 101 approach to El Campo Road operates at LOS F under existing conditions. The daily traffic generated by the proposed project would increase the right-turning volume by approximately five percent, and would cumulatively contribute to an existing deficient condition.

In the Residential Suburban land use category, the County Land Use Ordinance would allow one primary and one secondary residence on each proposed lot. Based on the trend of development in the immediate area, it is likely that one approximately 2,000 to 5,000-square foot primary residence would be constructed on each proposed lot. If individual lot owners chose to construct both a primary and secondary residence, the trip generation would increase by 9.6 daily trips per secondary residence. Based on the size of the proposed subdivision (16 lots), implementation of the proposed project, including the construction of secondary residences, would not reduce the LOS at any intersection or increase intersection delays above thresholds requiring mitigation (Richard Marshall; December 15, 2003 and June 14, 2007).

Based on the results of the traffic analysis reports (Higgins Associates; April 29, 2002 and ATE; August 17, 2004) and review by the County Department of Public Works (Richard Marshall; March 22, 2004 and June 14, 2007), the addition of approximately 154 daily trips on Castillo Del Mar Drive and Orchard Street would not result in a decrease in LOS or result in any potentially significant impacts on any road or intersection.

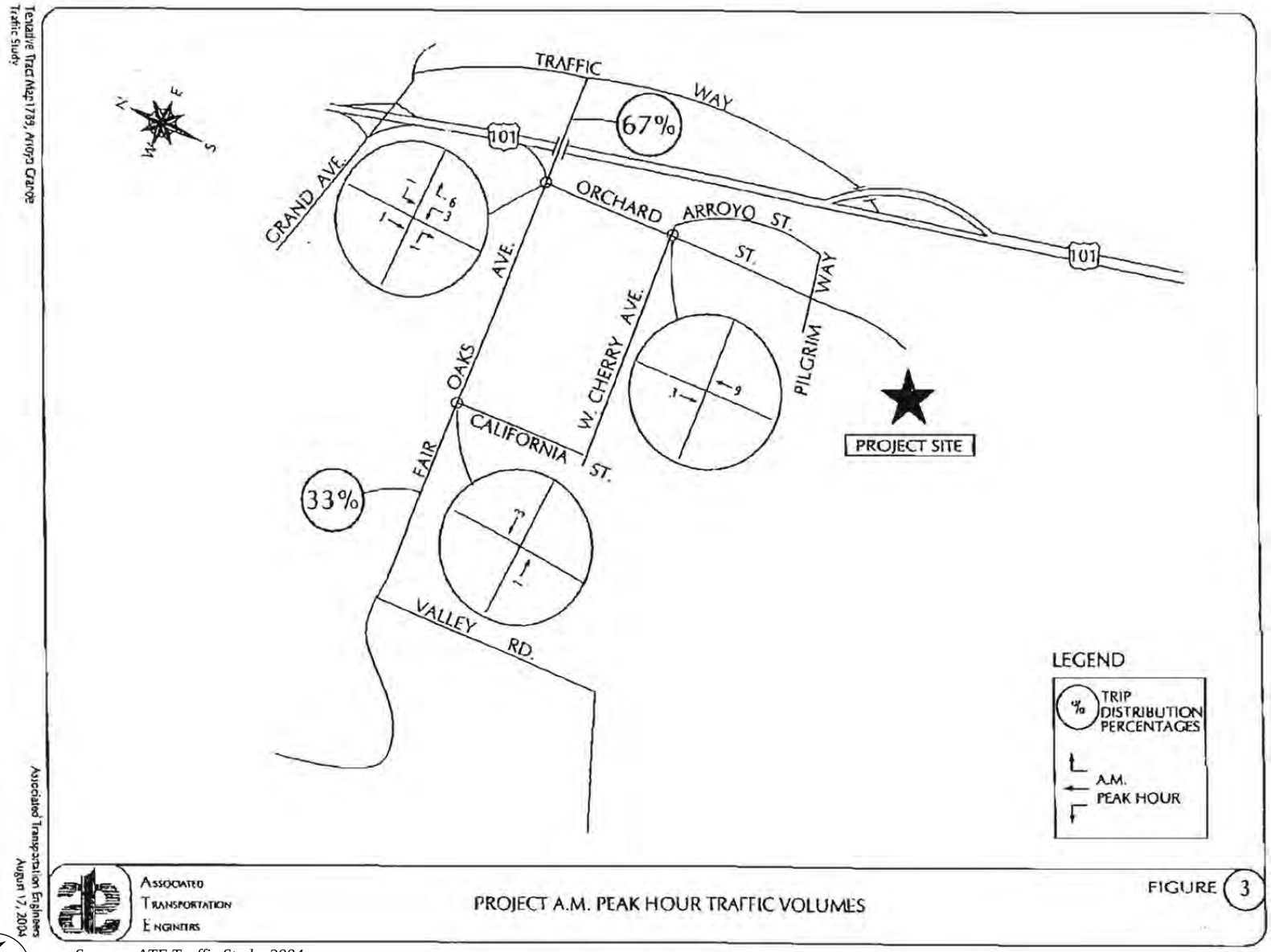
The City of Arroyo Grande analyzed the effects of the approved Castillo Del Mar Drive / Valley Road access connection in the adopted MND (refer to Appendix G). The intent of the access connection is to improve circulation in the area. No significant traffic impacts were identified in the adopted MND. Mitigation measures specific to road design were adopted by the City, including restrictions on parking and sidewalks on the northern side of the road, and inclusion of a Class II bike lane.

El Campo Road and State Route 101 Intersection

The El Campo Road/State Route 101 (northbound turning movement) is considered to be at a LOS F due to an existing deficient and potentially hazardous condition. Based on the State Route 101 / El Campo Road Project Study Report (PSR), thirteen accidents occurred at the El Campo Road/State Route 101 intersection during a four-year period, which is considered an "above-average" collision rate. Implementation of the proposed project would route a significant percentage of project-related traffic from the project site north to Castillo Del Mar Drive and Orchard Street, thereby minimizing routing of vehicle trips to the south onto Coast View Drive and El Campo. Per Cal Fire access requirements, the proposed project would retain a secondary access connection to the southeast onto Coast View Drive and through Falcon Ridge Estates. This secondary access would include a "no-notice" gate that would be installed on the project site at the terminus of Castillo Del Mar Drive which would open upon approach of eastbound automobiles. A "Knox Box" (i.e., a locked box that can only be opened through use of a combination or a key in the possession of public safety agencies such as Cal Fire) would be installed on this gate to allow entrance of westbound emergency vehicles entering the project site from Coast View Drive and the Falcon Crest residential development. The County Department of Public Works has reviewed this emergency access configuration and has stated the following:

> *"the project will have primary access through Orchard Street, the travel path with minimum travel time for northbound traffic from the new homes would be in that direction. The trip distribution model would not assign any of the new traffic to the impacted movement at El Campo/101, even though there would exist a physical connection as described above."*

Therefore, the proposed project would not result in significant impacts at the existing impacted intersection of El Campo Road and State Route 101.



Source: ATE Traffic Study, 2004.

NORTH
Not to Scale

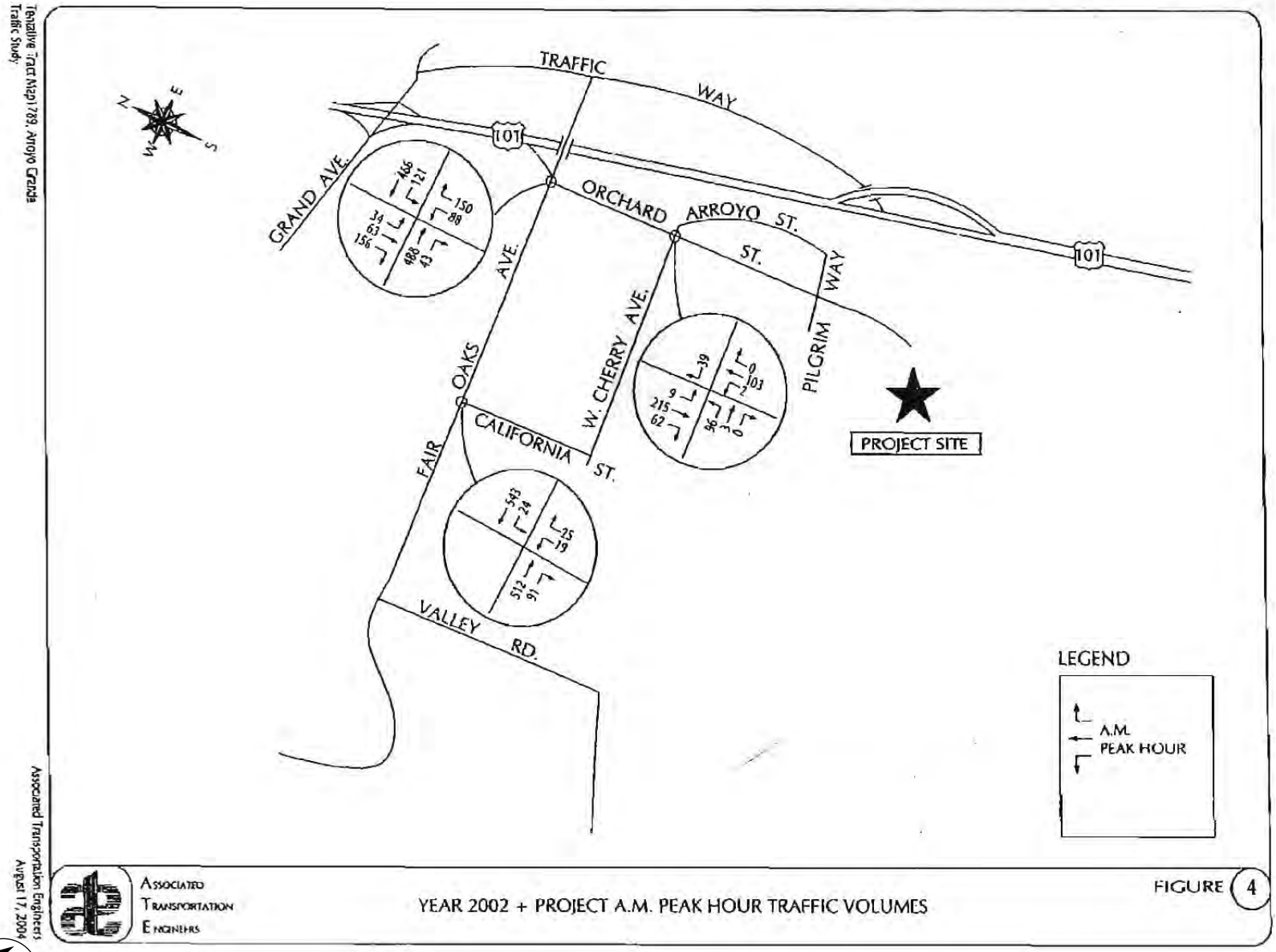
Project A.M. Peak Hour Traffic Volumes
FIGURE V.E.-3

TABLE V.E.-5
Estimated Project Intersection Levels of Service

Intersection*	Approach	AM Peak Hour		P.M. Peak Hour	
		Added Delay	LOS	Delay	LOS
State Route 101 SB Off-ramp/Fair Oaks Avenue	Overall	20.6 sec.	LOS C	n/a	n/a
Orchard Street/West Cherry Avenue	Overall	0.8 sec.	LOS A	n/a	n/a
Fair Oaks Avenue/California Street	Overall	9.3 sec.	LOS A	n/a	n/a
El Campo Road/State Route 101	Overall	1.7sec.	LOS C	0.5 sec.	LOS A
	Northbound	~~	LOS F	~~	LOS F
El Campo Road/Falcon Crest Drive	Overall	0.3 sec.	LOS A	0.3 sec.	LOS A
	Eastbound	§	LOS A	§	LOS A
Coast View Drive/Falcon Crest Drive	Overall	4.1 sec.	LOS A	2.1 sec.	LOS A
	Southbound	0.1 sec.	LOS A	0.1 sec.	LOS A
Falcon Crest Drive/Los Berros Road	Overall	0.1 sec.	LOS A	0.2 sec.	LOS A
	Southbound	§	LOS A	- 0.1 sec.	LOS A

*All intersections are currently unsignalized § No change from existing condition

~~ Unknown, delay exceeds 200 seconds per vehicle n/a: Not provided as part of ATE Report



Source: ATE Traffic Study, 2004.

NORTH
Not to Scale

Year 2002 + Project A.M. Peak Hour Traffic Volumes
FIGURE V.E.-4

6. Cumulative Impacts

a. Cumulative Impacts to County Roads and Intersections

The cumulative plus project scenario analyzed in this study is based on the approved/pending projects in the area, as provided in the *South County Circulation Study*. The timeframe for cumulative impacts includes traffic demands in the vicinity of the project site up to the year 2030. The projected turning volumes under cumulative conditions are shown in Figure V.E.-3.

As shown in Table V.E.-6 below, under cumulative conditions, the southbound Falcon Crest Drive/Los Berros Road intersection would decrease from LOS A to LOS C. Impact fees have been established by the County of San Luis Obispo for the southern portion of San Luis Obispo County to fund roadway needs that are attributable to new development within the area. Needed improvements were determined for the likely types of development that are projected to occur in the South County area over the next 50 years. The fees calculated by the County of San Luis Obispo are based on the amount of traffic generated during the weekday evening peak hour by each type of new development, including both primary and secondary residences. The fees are required prior to issuance of building permits; therefore, each individual lot owner would be responsible for each residence constructed on each lot.

TABLE V.E.-6
Cumulative Intersection Levels of Service

Intersection*	Approach	AM Peak Hour		P.M. Peak Hour	
		Delay	LOS	Delay	LOS
El Campo Road/State Route 101	Overall	~~	LOS F	~~	LOS F
	Northbound	~~	LOS F	~~	LOS F
El Campo Road/Falcon Crest Drive	Overall	0.4 sec.	LOS A	0.2 sec.	LOS A
	Eastbound	16.2 sec.	LOS C	13.9	LOS B
Coast View Drive/Falcon Crest Drive	Overall	5.6 sec.	LOS A	2.9 sec.	LOS A
	Southbound	8.5 sec.	LOS A	8.5 sec.	LOS A
Falcon Crest Drive/Los Berros Road	Overall	8.2 sec.	LOS A	0.2 sec.	LOS A
	Southbound	16.0 sec.	LOS C	17.9 sec.	LOS C

*All intersections are currently unsignalized
~~ Unknown, delay exceeds 200 seconds per vehicle

Under cumulative conditions, the State Route 101 and El Campo Road intersection would operate at LOS F during the A.M. and P.M. peak hours. The significant change in intersection operations would result from the addition of trips from planned development on the north side of State Route 101 near the El Campo Road intersection. A grade-separated interchange would be required to serve the traffic demand projected for the cumulative condition, and the approved Project Study Report (PSR) prepared by the City of Arroyo Grande evaluates alternatives for construction of this interchange. The other three study intersections would continue to operate at acceptable levels of service during the A.M. and P.M. peak hours under the cumulative condition, as shown in Table V.E.-6.

TR/Impact 1 **Development of cumulative projects in the South County area, including the proposed project, would cause a reduction in the level of service on local roads and intersections in southern San Luis Obispo County.**

TR/mm-1 Prior to issuance of building permits for the development of each lot, individual lot owners shall contribute to the County of San Luis Obispo Traffic Impact Fee for the South County Benefit Area 2.

Residual Impacts

Implementation of the above mitigation measure would reduce potentially significant cumulative impacts to ***significant but mitigable (Class II Impact).***

b. Cumulative Impacts to City Roads and Intersections

The proposed project's primary access point would be to the west on Castillo Del Mar Drive and on to a number of City streets and intersections. These would include a distribution of trips onto either Orchard Street or the Castillo Del Mar Drive extension/Valley Road connection. The project applicant has provided funding for the acquisition of the property and design of the Castillo Del Mar Drive extension/Valley Road connection. The implementation of this connector would provide residents of the proposed project an additional route to the north in accessing the City roadway network.

An additional consideration relating to the cumulative impact to city roads and intersection scenario is the reduction in vehicle trips that have occurred as a result of re-assigning students from Arroyo Grande High School to the Nipomo High School. This reduction in vehicle trips far exceeds the increase in peak hour vehicle trips that would be generated by the proposed project

Implementation of the proposed project would not result in project-specific impacts to the City's circulation system, but would contribute to the cumulative reduction in level of service. Therefore, the following mitigation measure is recommended.

TR/Impact 2 **Development of cumulative projects in and adjacent to the City of Arroyo Grande, including the proposed project, would cause a reduction in the level of service on local roads and intersections in the City.**

TR/mm-2 Prior to recordation of the final map, the applicant shall submit documentation to the County Environmental Coordinator demonstrating payment of City of Arroyo Grande traffic and signalization impact mitigation fees. The traffic impact fee is $1,378.00 per unit, and the traffic signalization fee is $505.00 per unit.

Residual Impacts

Implementation of the above mitigation measure would reduce potentially significant cumulative impacts to ***significant but mitigable (Class II Impact).***

F. AIR QUALITY

This section was prepared based on information provided by the San Luis Obispo County Air Pollution Control District (APCD) and modeling of vehicle emissions using the computer program URBEMIS 2001 provided by the California Air Resources Board (CARB). Emissions calculations are available at the end of this document in Appendix E.

In addition, the City of Arroyo Grande adopted a Mitigated Negative Declaration (General Plan Amendment Case No. 06-001, Development Code Amendment Case No. 06-001, and Tentative Parcel Map Case No. 06-004), which includes an analysis of the road extension to Valley Road on August 22, 2006. Applicable analysis is incorporated in the section below by reference, and a copy of the adopted MND is located in Appendix G of this Final EIR.

1. Existing Conditions

a. Local and Regional Meteorology

The climate of San Luis Obispo County can be generally characterized as Mediterranean, with warm, dry summers and cooler, relatively damp winters. Along the coast, mild temperatures are the rule throughout the year due to the moderating influence of the Pacific Ocean. This effect is diminished inland in proportion to distance from the ocean or by major intervening terrain features, such as the coastal mountain ranges. As a result, a considerably wider range of temperature conditions characterizes inland areas. Maximum summertime temperatures average about 70 degrees Fahrenheit near the coast, while inland valleys are often in the high 90's. Average minimum winter temperatures range from the low 30's along the coast to the low 20's inland.

Regional meteorology is largely dominated by a persistent high-pressure area that commonly resides over the eastern Pacific Ocean. Seasonal variations in the strength and position of this pressure cell cause seasonal changes in the weather patterns of the area. The Pacific "high" remains generally fixed several hundred miles offshore from May through September, enhancing onshore winds and opposing offshore winds. During spring and early summer, as the onshore breezes pass over the cool water of the ocean, fog and low clouds often form in the marine air layer along the coast. Surface heating in the interior valleys dissipates the marine layer as it moves inland.

From November through April the Pacific High tends to migrate southward, allowing northern storms to move across the County. Approximately 90% of the total annual rainfall is received during this period. Winter conditions are usually mild, with intermittent periods of precipitation followed by mostly clear days. Rainfall amounts can vary considerably among different regions in the County. In the Coastal Plain, annual rainfall averages 16 to 28 inches, while the Upper Salinas River Valley generally receives about 12 to 20 inches of rain. The Carrizo Plain is the driest area of the County with less than 12 inches of rain in a typical year.

Airflow around the County plays an important role in the movement and dispersion of pollutants. The speed and direction of local winds are controlled by the location and strength of the Pacific High pressure system and other global patterns, by topographical factors, and by circulation patterns resulting from temperature differences between the land and sea. In spring and summer

months, when the Pacific High attains its greatest strength, onshore winds from the northwest generally prevail during the day. At night, as the sea breeze dies, weak drainage winds flow down the coastal mountains and valleys to form a light, easterly land breeze. In the fall, onshore surface winds decline and the marine layer grows shallow, allowing an occasional reversal to a weak offshore flow. This, along with the diurnal alteration of land-sea breeze circulation, can sometimes produce a "sloshing" effect. Under these conditions, pollutants may accumulate over the ocean for a period of one or more days and are subsequently carried back onshore with the return of the sea breeze. Strong inversions can form at this time, "trapping" pollutants near the surface.

This effect is intensified when the Pacific Highs weakens or moved inland to the east. This may produce a "Santa Ana" condition in which air, often pollutant-laden, is transported into the County from the east and southeast. This can occur over a period of several days until the high-pressure system returns to its normal location, breaking the pattern. The breakup of this condition may result in relatively stagnant conditions and a buildup of pollutants offshore. The onset of the typical daytime sea breeze can bring these pollutants back onshore, where they combine with local emissions to cause high pollutant concentrations. Not all occurrences of the "post Santa Ana" condition lead to high ambient pollutant levels, but it does play an important role in the air pollution meteorology of the County.

b. Atmospheric Stability and Dispersion

Air pollutant concentrations are primarily determined by the amount of pollutant emissions in an area and the degree to which these pollutants are dispersed in the atmosphere. The stability of the atmosphere is one of the key factors affecting pollutant dispersion. Atmospheric stability regulates the amount of vertical and horizontal air exchange, or mixing, that can occur within a given air basin. Restricted mixing and low wind speeds are generally associated with a high degree of stability in the atmosphere. These conditions are characteristic of temperature inversions.

In the atmosphere, air temperatures normally decrease as altitude increases. At varying distances above the earth's surface, however, a reversal of this gradient can occur. This condition, termed an inversion, is simply a warm layer of air above a layer of cooler air and it has the effect of limiting the vertical dispersion on pollutants. The height of the inversion determines the size of the mixing volume trapped below. Inversion strength or intensity is measured by the thickness of the layer and the difference in temperature between the base and the top of the inversion. The strength of the inversion determines how easily it can be broken by winds or solar heating.

Several types of inversions are common to this area. Weak, surface inversions are caused by radiational cooling of air in contact with the cold surface of the earth at night. In valleys and low-lying areas, this condition is intensified by the addition of cold air flowing downslope from the hills and pooling on the valley floor. Surface inversions are a common occurrence throughout the County during the winter, particularly on cold mornings when the inversion is strongest. As the morning sun warms the earth and the air near the ground, the inversion lifts, gradually dissipating as the day progresses.

During the late spring and early summer months, cool air over the ocean can intrude under the relatively warmer air over land, causing a marine inversion. These inversions can restrict dispersion along the coast, but they are typically shallow and would dissipate with surface heating.

In contrast, in the summertime the presence of the Pacific high-pressure cell can cause the air mass aloft to sink. As the air descends, compressional heating warms it to a temperature higher than the air below. This highly stable atmospheric condition, termed a subsidence inversion, is common to all of coastal California and can act as a nearly impenetrable lid to the vertical mixing of pollutants. The base of the inversion typically ranges from 1,000 to 2,500 feet above sea level. However, levels as low as 250 feet, amount the lowest anywhere in the state, have been recorded on the coastal plateau in San Luis Obispo County. The strength of these inversions makes them difficult to disrupt. Consequently, they can persist for one or more days, causing air stagnation and the buildup of pollutants. Highest or worst-case ozone levels are often associated with the presence of this type of inversion.

c. Existing Air Quality

The air quality in a given location is described by the concentration of various pollutants in the atmosphere, expressed in units of parts per million (ppm), parts per hundred million (pphm), or micrograms of pollutant per cubic meter of air (µg/m). The significance of a given pollutant level can be evaluated by comparing its atmospheric concentration to state and national air quality standards, which are presented in Appendix E, Table 1. These standards represent allowable atmospheric contaminant levels at which the public health and welfare are protected, and include a margin of safety.

The primary factors affecting air quality in a given area are the quantity, type and location of pollutant emissions, the topographic and geographic features of the region, and the prevailing meteorological conditions. An emission rate represents the amount of pollutant released into the atmosphere by a given source over a specified time period; it is generally expressed in units such as pounds per hour (lb/hr) and tons per year (ton/yr). Local and regional meteorological conditions govern the transport and diffusion of emissions in the atmosphere. Wind speed, wind direction, atmospheric stability, temperature, and the presence or absence of inversions are some of the key parameters that affect pollutant dispersion.

Ambient air monitoring has been conducted at a variety of stations in the County. Table 2 in Appendix E presents the highest pollutant concentrations measured over the most recent 10-year period available for all of the monitoring stations in San Luis Obispo County. Monitoring stations are located in San Luis Obispo, Nipomo, Grover Beach, Morro Bay, Paso Robles, and Atascadero.

The California Clean Air Act, adopted in 1988, requires that all APCDs and Air Quality Management Districts (AQMDs) 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, San Luis Obispo County has adopted (May 1998) a Clean Air Plan (CAP, formally known as the Air Quality Attainment and Maintenance Plan) to demonstrate attainment of the state standards by the earliest practicable date. The CAP is a comprehensive planning document

intended to provide guidance to the APCD, the County, and other local agencies on how to attain and maintain the state standard for ozone (O_3). The CAP presents a detailed description of the sources and pollutants that impact the County, 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.

In 1989, the State Air Resources Board designated San Luis Obispo County a non attainment area for exceeding the State's air quality standards set for ozone and dust (small particulate matter or PM10). In 2003, the State ARB determined that the county was in attainment for ozone. The District has been designated a nonattainment area for fine particulate matter (PM_{10}) standards and is required to reduce emissions of nonattainment pollutants (or their precursors) by at least five percent per year until the standards are achieved. State law requires that emissions of nonattainment pollutants countywide be decreased by at least 40 percent from the 1987 levels in order to meet clean air standards. The District does not currently have set thresholds for fine particulate matter generated by diesel exhaust ($PM_{2.5}$). Ozone and particulate matter are considered pollutants of concern.

The local concentrations of inert, or non-reactive, pollutants (carbon monoxide (CO), O_3, and PM_{10}) are primarily influenced by nearby sources of emissions, and thus, vary considerably between monitoring stations; the sulfur dioxide (SO_2) levels on the Nipomo Mesa are a good example of this. On a regional basis, ozone is the pollutant of greatest concern in the County, particularly within the coastal plateau. Naturally occurring ozone found in the stratosphere, a stable layer of air extending upward from an altitude of approximately 8 to 30 miles above the Earth's surface, plays a crucial role as a barrier to harmful ultraviolet radiation from the sun. Ozone created in the troposphere, the layer of air extending from the Earth's surface to the stratosphere, is a secondary pollutant, formed in the atmosphere by complex photochemical reactions involving precursor pollutants and sunlight. The amount of ozone formed is dependant upon both the ambient concentration of chemical precursors and the intensity and duration of sunlight. Consequently, ambient ozone concentration tends to vary seasonally with the weather. Reactive organic gases (ROG), also called reactive hydrocarbons (RHC), and nitrogen oxides (NO_X) are the primary precursors to ozone formation. NO_X emissions result primarily from the combustion of fossil fuels; ROG emissions are also generated by fossil fuel combustion and through the evaporation of petroleum products.

d. Existing Emissions

The most recent emission inventory for San Luis Obispo County is shown in Appendix E, Table 3. Emissions of ROG and NO_X are fairly equally divided between mobile and stationary sources, with the Duke Morro Bay power plant being the largest, single stationary source of NO_X emissions in the County. Automobiles and electrical generation produce the majority of NO_X emissions. Industrial sources, in particular the Unocal complex on the Nipomo Mesa, generate nearly all of the SO_2 emissions in the County.

2. Regulatory Setting

a. Federal Policies and Regulations

Air quality protection at the national level is provided through the federal Clean Air Act Amendments (CAAA). These amendments represent the fifth major effort by the U.S. Congress to improve air quality. The 1990 CAAA is generally less stringent than the California Clean Air Act. However, unlike the California law, the CAAA sets statutory deadlines for attaining federal standards.

b. State Policies and Regulations

The California Clean Air Act, adopted in 1988, 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, San Luis Obispo County APCD adopted a Clean Air Plan (CAP) for their jurisdiction. The CAP is a comprehensive planning document intended to provide guidance to the Air Pollution Control District, the County, and other local agencies on how to attain and maintain the state standard for ozone. 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.

3. Thresholds of Significance

California and the federal Environmental Protection Agency (EPA) have adopted air quality standards for pollutants of primary public health concern. Pollutants for which National standards have been set include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, fine particulate matter and lead, a specific particulate pollutant. California standards tend to be more restrictive and health-protective than National standards. San Luis Obispo County is in attainment for all federal air quality standards. The County is also in attainment for state air quality standards with the exception of PM_{10} emissions.

Thresholds of significance for determining air quality impacts are established by the APCD. Table V.F.-1 represents the APCD Thresholds of Significance for Operational Emissions Impacts. Tiers 1 through 3 represent the threshold levels for determining the appropriate environmental document necessary to analyze air quality impacts based on calculated emission rates for regulated pollutants. Table V.F.-2 represents the Level of Construction Activity Requiring Mitigation. These thresholds are discussed or are shown in the following impact analysis sections and comparisons to actual impacts are given where applicable.

TABLE V.F.-1
APCD Thresholds of Significance
For Operational Emissions Impacts

Pollutant	Threshold	Tier 1	Tier 2	Tier 3
ROG, NO_X, SO_2, PM_{10}	<10 lbs/day	10 lbs/day	25 lbs/day	25 tons/yr
CO	<550 lbs/day	<550 lbs/day	550 lbs/day	550 lbs/day
Level of Significance	Insignificant	Potentially Significant	Significant	Significant
Environmental Document	ND	MND	MND or EIR	EIR

Source: County of San Luis Obispo APCD CEQA Air Quality Handbook, 2003

TABLE V.F.-2
Level of Construction Activity Requiring Mitigation

Pollutant of Concern	Emissions		Amount of Material Moved	
	Tons/Qtr	Lbs/day	Cu. Yds/Qtr	Cu. Yds/Day
ROG	2.5	185	247,000	9,100
	6.0	185	593,000	9,100
NO_X	2.5	185	53,500	2,000
	6.0	185	129,000	2,000
PM_{10}	2.5		Any project with a grading area greater than 4.0 acres of continuously worked area would exceed the 2.5-ton PM_{10} quarterly threshold.	
(All calculations assume working conditions of 8 hours per day, 5 days per week, for a total of 65 days per quarter.)				

Source: County of San Luis Obispo APCD CEQA Air Quality Handbook, 2003

4. Impact Assessment and Methodology

Emission estimates for the proposed project have been determined through use of the following:

- Consultation with the County of San Luis Obispo APCD;
- Use of the County of San Luis Obispo APCD CEQA Air Quality Handbook, April 2003;
- Use of the County of San Luis Obispo APCD Clean Air Plan, May 1998 and December 2001; and,
- Incorporation of the Traffic and Circulation Study prepared for the proposed project.

Subsequent to the determination of emission estimates for the proposed project, the emissions are analyzed in accordance to the thresholds of significance put in place by the County of San Luis Obispo APCD. This analysis provides the basis for the determination of the level of significance in association to APCD tiered thresholds.

5. Project-specific Impacts and Mitigation Measures

a. Short-term Project-specific Emissions

1) Subdivision

Use of heavy equipment and earth-moving operations during project construction can generate fugitive dust and combustion emissions that may have substantial temporary impacts on local air quality. Fugitive dust emissions result from land clearing, demolition, ground excavation, cut and fill operations, and equipment traffic over temporary roads at the construction site. Combustion emissions, primarily NOx, are most significant when using large, diesel-fueled scrapers, loaders, bulldozers, haul trucks, compressors, generators and other heavy equipment. Emissions can vary substantially from day to day depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

Screening emission rates for construction operations provided by the APCD were used to determine construction emissions. Air quality emissions generated by construction activities are shown in Table V.F.-3 and calculations for these emissions are included in Appendix E. Not all construction activities would occur at the same time; therefore, this estimate should consider a "worse-case" scenario. The bolded numbers represent emission estimates that exceed the APCD threshold for construction activities.

TABLE V.F.-3
Short-term Construction Emissions

Short-Term Emissions	Emission Estimates (lbs/day)				Emission Estimates (tons/qtr)			
	ROG	NO_X	CO	PM_{10}	ROG	NO_X	CO	PM_{10}
Proposed Project	24.69	189.20	49.40	21.61	0.15	1.18	0.31	0.14
APCD Thresholds	185	185	n/a	n/a	2.5 - 6.0	2.5 - 6.0	n/a	2.5

The critical pollutant in the evaluation of the significance of construction emission is oxides of nitrogen because of the high output of this pollutant by heavy diesel equipment normally used in grading operations and their role as ozone precursors. The total output of NO_X emissions to construct the project is estimated above at 189.20 pounds per day, exceeding APCD thresholds.

A total of 25,000 cubic yards of cut and fill is estimated to result from proposed construction activities. There would be a maximum of 2,000 cubic yards of material moved per day for grading activities required for the project. In addition, grading activities would take place for approximately thirteen days for 8 hours per day.

Any project with a grading area greater than 4.0 acres of continuously worked area would exceed the 2.5-ton PM_{10} quarterly threshold. The applicant is proposing to grade an area greater than 4.0 acres; therefore, all standard APCD dust control mitigation measures are required during the construction phase of the proposed project to reduce the potential to generate nuisance problems and maintain PM_{10} emissions below the APCD's mitigation threshold.

AQ/Impact 1 **NO_X emissions resulting from construction activities would exceed the APCD pounds per day construction threshold.**

AQ/mm-1 Based on Table 6-3 of the APCD's 2003 CEQA Handbook, the estimated construction emissions for the project will exceed the thresholds requiring mitigation. The following measures shall be incorporated into the construction phase of the project and shown on all applicable plans prior to construction permit issuance:

Construction Equipment

a. Maintain all construction equipment in proper tune according to manufacturer's specifications;

b. Fuel all off-road and portable diesel powered equipment, including but not limited to bulldozers, graders, cranes, loaders, scrapers, backhoes, generator sets, compressors, auxiliary power units, with ARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);

c. Maximize to the extent feasible, the use of diesel construction equipment meeting the ARBs 1996 or newer certification standard for off-road heavy-duty diesel engines;

CBACT

a. Install diesel oxidation catalysts (DOC), catalyzed diesel particulate filters (CDPF) or other District approved emission reduction retrofit devices (determination of he appropriate CBACT control device(s) for the project must be performed in consultation with APCD staff).

Additional Construction Equipment Measures

a. Electrify equipment where possible.

b. Substitute gasoline-powered for diesel-powered equipment, where feasible;

c. Use alternatively fueled construction equipment on site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel;

d. Use equipment that has Caterpillar pre-chamber diesel engines;

e. Implement activity management techniques as follows:

   i. Development of a comprehensive construction activity management plan designed to minimize the amount of large construction equipment operating during any given time period;

ii. Schedule of construction truck trips during non-peak hours to reduce peak hour emissions;
iii. Limit the length of the construction work-day period, if necessary;
iv. Phase construction activities, if appropriate.

Residual Impacts

After mitigation, this impact would be considered ***significant but mitigable (Class II Impact).***

AQ/Impact 2 **PM_{10} emissions resulting from construction activities would impact air quality.**

AQ/mm-2 Based on Table 6-3 of the APCD's 2003 CEQA Handbook, the estimated construction emissions for the project will exceed the thresholds requiring mitigation. The following measures shall be incorporated into the construction phase of the project and shown on all applicable plans prior to construction permit issuance:

Fugitive PM_{10} Mitigation Measures

a. Reduce the amount of the disturbed area where possible.

b. Use of 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 mph. Reclaimed (nonpotable) water should be used whenever possible.

c. All dirt stock-pile areas should be sprayed daily as needed.

d. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast-germinating native grass seed and watered until vegetation is established.

e. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD.

f. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.

g. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.

h. All trucks hauling dirt, sand, or other loose materials are to be covered or should maintain at least two feet of free board (minimum vertical distance

between top of load and top of trailer) in accordance with CVC Section 23114.

i. Permanent dust control measures identified in the approved project revegetation and landscape plans shall be implemented as soon a possible following completion of any soil disturbing activities.

j. Wheel washers shall be installed where vehicles enter and exit unpaved roads onto streets, or trucks and equipment leaving the site shall be washed off.

k. Streets shall be swept at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed waster shall be used where feasible.

l. All PM_{10} mitigation measures required shall be included on grading and building plans. In addition, the contractor or builder shall designate a person or persons to monitor the dust control program and order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD prior to land use clearance for map recordation and land use clearance for finish grading of the structure.

m. Naturally Occurring Asbestos (NOA) has been identified by the state Air Resources Board as a toxic air contaminant. Serpentine and ultramafic rocks are very common in the state and may contain naturally occurring asbestos. Under the State Air Resources Board Air Toxics Control Measure (ATCM) for Construction, Quarrying, and Surface Mining Operations, prior to any grading activities at the site, the project applicant shall ensure that a geologic evaluation is conducted to determine if naturally occurring asbestos is present within the area that will be disturbed. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations. These requirements may include, but are not limited to: 1) an Asbestos Dust Mitigation Plan, which must be approved by the APCD prior to construction, and 2) an Asbestos Health and Safety Program. If NOA is not present, the applicant shall file an exemption request with the APCD. Please refer to the APCD web page at http://www.slocleanair.org/business/asbestos.asp for more information regarding these requirements. If you have any questions regarding these requirements, please contact Karen Brooks of the APCD Enforcement Division at 781-5912.

n. Effective February 25, 2000, the APCD prohibited developmental burning of vegetative material within San Luis Obispo County. Under certain

circumstances where no technically feasible alternatives are available, limited developmental burning under restrictions may be allowed. This requires prior application, payment of fee based on the size of the project, APCD approval, and issuance of a burn permit by the APCD and the local fire department authority. The applicant is required to furnish the APCD with the study of technical feasibility (which includes costs and other constraints) at the time of application. If you have any questions regarding these requirements, please contact Karen Brooks of the APCD Enforcement Division at 781-5912.

Residual Impacts

After mitigation, this impact would be considered ***significant but mitigable (Class II Impact).***

2) Castillo Del Mar Drive - Valley Road Connection

Based on the adopted MND for the Castillo Del Mar Drive / Valley Road connection access road project, short-term construction impacts resulting from grading activities (i.e. generation of fugitive dust) would occur. Adopted mitigation measures include standard APCD dust control measures, and use of California Air Resources Board (ARB) approved fuel and equipment. Implementation of these measures would mitigate potential air quality impacts to less than significant (refer to Appendix G).

b. Long-term Operational Emissions

Long-term operational emissions result from the combination of vehicle emissions and area source emissions. The two components of operational emissions were determined through the use of the URBEMIS 2001 software program (refer to Appendix E for URBEMIS Emission Estimates). Trip rates were determined from the Higgins and Associates Traffic and Circulation Study for the project. Long-term construction emission estimates are shown in Table V.F.-4 and the URBEMIS data sheets are included in Appendix E.

TABLE V.F.-4
Long-term Operational Emissions

Long-Term Operational Emissions	Emission Estimates (lbs/day)				Emission Estimates (tons/yr)			
	ROG	NO_X	CO	PM_{10}	ROG	NO_X	CO	PM_{10}
Vehicle Emissions	2.78	3.22	35.75	0.15	0.52	0.67	6.55	0.03
Area Source Emissions	0.83	0.20	0.31	0.00	0.15	0.04	0.04	0.00
Total	*3.61*	*3.42*	*36.06*	*0.15*	*0.67*	*0.71*	*6.59*	*0.03*
APCD Tier I Thresholds	10	10	50	10				
APCD Tier II Thresholds	25	25	550	25				
APCD Tier III Thresholds					25	25	25	25

Vehicle and area source emissions are below the APCD's Tier I Threshold for long-term operational emissions for all criteria pollutants. Pollutant emissions within the Tier I level do not require mitigation; therefore, long-term operational emissions resulting from the proposed project do not require mitigation. In the event proposed structures include wood burning devices, operation of the residences would generate particulate matter, contributing to the generation of particulate dust in the area. This impact is not considered significant; however, the following measure is recommended to maintain consistency with the APCD policy.

AQ/Impact 3 The use of woodstoves in future residences would contribute to PM10 pollution, and would be inconsistent with APCD policy, resulting in a Class III (adverse but not significant) impact.

AQ/mm-3 Prior to issuance of building permits for individual lot development, in the instance wood burning stoves are proposed, the applicant shall submit building plans showing the use of APCD-approved wood burning devices limited to the following:

a. All EPA-Certified Phase II wood burning devices;
b. Catalytic wood burning devices that emit less than or equal to 4.1 grams per hour of particulate matter that are not EPA-Certified but have been verified by a nationally-recognized testing lab;
c. Non-catalytic wood burning devices that limit less than or equal to 7.5 grams per hour of particulate matter that are not EPA-Certified but have been verified by a nationally-recognized testing lab;
d. Pellet-fueled woodheaters, and;
e. Dedicated gas-fired fireplaces.

Residual Impacts

This impact is considered insignificant, and no significant residual impacts would occur.

c. Consistency with Clean Air Plan

The APCD notes that the proposed project is inconsistent with the "Planning Compact Communities" strategy of the Clean Air Plan, which encourages increasing development densities within urban areas over increasing densities in rural areas, and could contribute to existing stresses on air quality (Melissa Guise, APCD; May 23, 2005). The APCD does not support this type of development. Increasing densities in rural areas results in longer single-occupant vehicle trips and increases emissions. In this instance, this inconsistency is not considered to result in significant impacts for the following reasons: 1) the proposed density of this subdivision is still consistent with what was assumed in the last update of the Clean Air Plan, which, based in part on this density, approved the necessary control measures to achieve acceptable air quality attainment in the future; 2) the proposed project site is located adjacent to the City of Arroyo Grande urban area, and; 3) standard forecast modeling (e.g., ARB URBEMIS) identifies that vehicles in the near future will produce substantially lower emissions (e.g., use of electric, hybrid and advanced technology vehicles). Based on the above discussion,

and implementation of standard air quality mitigation measures described in the previous section, given the smaller number of potential new residences, both individual and cumulative impacts are expected to be less than significant as it relates to the Clean Air Plan land use strategies.

6. Cumulative Impacts

Short-term emissions resulting from construction activities within San Luis Obispo County would result in temporary impacts to air quality and are not considered a cumulative impact. Long-term emissions resulting from the residential development would result in insignificant air quality impacts and are not considered to result in potentially significant cumulative impacts.

In 1994, the South County Area Plan was adopted and associated EIR certified. As a part of that analysis, a cumulative assessment of the buildout impacts of the planning area was completed, which included the ultimate breakdown of the subject property as is currently proposed. While cumulative impacts to air quality was identified in the South County Area Plan Update EIR as potentially significant and unavoidable, the findings recognized that the existing cumulative air quality mitigation program, combined with a slight improvement over the previous Area Plan buildout would offset some of these impacts.

Each new residence, including the residences that would be built within the proposed subdivision, will be subject to the South County Air Quality Mitigation fee, which is intended to partially mitigate the cumulative effects of new residential development within the South County planning area. This program funds several strategies within the South County to improve air quality and reduce single-occupant vehicles, by: attracting transit ridership through regional bus stop improvements; encouraging carpooling through park-and-ride lot improvements and ridesharing advertising; promoting the use of bicycles through bike lane installation; reducing dust through limited road paving of several unpaved roads; and by providing electronic information/services locally to reduce vehicle trip lengths.

Residual Impacts

No cumulative residual impacts would occur as a result of the proposed project.

G. AGRICULTURAL RESOURCES

This section was prepared based on the City of Arroyo Grande adopted Mitigated Negative Declaration (General Plan Amendment Case No. 06-001, Development Code Amendment Case No. 06-001, and Tentative Parcel Map Case No. 06-004), which includes an analysis of the Castillo Del Mar Drive / Valley Road access road connection, which was adopted on August 22, 2006. The intent of this section in the Final EIR is to disclose the impacts and mitigation measures identified by the City in the adopted MND. A copy of the adopted MND is located in Appendix G of this Final EIR.

1. Existing Setting

Based on the City's approval of General Amendment Case No. 06-001 on August 22, 2006, the parcel proposed for the Castillo Del Mar Drive / Valley Road connection was amended from Agriculture to Community Facilities/Public Facilities. The underlying soil type within the road alignment includes Marimel silty clay loam and Salinas silty clay loam, which are considered prime agricultural land.

2. Regulatory Setting

The City of Arroyo Grande General Plan Agricultural, Conservation, and Open Space Element includes objectives and policies to preserve and protect agricultural resources. Policies guide development on agricultural land, and note that loss of productive soils by development or conversion by land use and zoning designation amendments would result in a significant impact. Mitigation options including payment of in-lieu fees and establishment of conservation easements are recommended to minimize potential impacts.

3. Thresholds of Significance

The significance of potential agricultural impacts are based on thresholds identified within Appendix G of the CEQA *Guidelines* and City of Arroyo Grande's Initial Study Checklist, which provides 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 a Williamson Act program.

4. Impact Assessment and Methodology

The impact discussion below is based on the Mitigated Negative Declaration adopted for the road extension from Castillo Del Mar Drive to Valley Road. A copy of the adopted MND is located in Appendix G of this Final EIR.

5. Impacts and Mitigation Measures

Implementation of the approved road project would segregate a 1.2-acre, triangular piece of land from an existing agricultural field. Based on the location of the road project, the City determined that the conversion would not fragment or impair other agricultural lands in the area. Construction of the road would convert approximately one acre of agricultural land, and would render the remaining 0.2-acre piece un-farmable. The City determined that conversion of the prime agricultural land would result in a potentially significant impact.

As noted in the MND, the City's General Plan requires the permanent protection of prime farmland soils at a minimum ratio of 1:1, which can be satisfied by payment of in-lieu fees. The City's Development Code suggests up to a 2:1 mitigation ratio. In-lieu fees are used by the City to acquire farmland conservation easements and farmland deed restrictions on agricultural land. The project applicant paid the in-lieu fee at a 2:1 ratio to the City, fully mitigating the identified impact to agricultural resources.

6. Cumulative Impacts

Based on implementation of mitigation measures required by the City of Arroyo Grande's adoption of the MND for the Castillo Del Mar Drive / Valley Road access road connection project, cumulative impacts would be less than significant.

H. FIRE SAFETY

This section is included in the Final EIR in response to comments received on the Revised Draft EIR from the California Department of Forestry and Fire Protection/County Fire (Cal Fire).

1. Existing Setting

The project site is located in a predominantly urban setting, within a medium fire hazard area. The project site is located within the County of San Luis Obispo, adjacent to the City of Arroyo Grande, and is primarily served by Cal Fire for fire protection. Cal Fire has a mutual aid agreement with the City of Arroyo Grande Fire Department. This aid agreement improves fire and emergency response by providing additional personnel and equipment in emergency situations. The closest Cal Fire station is the Mesa Fire Station, located at 2391 Willow Road, approximately seven miles (15 minutes) from the project site.

2. Regulatory Setting

The California Public Resources Code (PRC) defines hazardous fire areas, restrictions on fire use, and minimum fire protection requirements for the state. The Code is administered by the California Department of Forestry (Cal Fire). The PRC also sets forth provisions for the reduction of fire hazards around buildings located on land that is covered with flammable material. A firebreak of at least thirty feet is required to be maintained around buildings by removing all flammable vegetation or combustible growth. Wider firebreaks may be required under extra-hazardous conditions. Firebreak clearance is also required around electrical transmission poles and towers.

In addition to the PRC, several local ordinances direct fire prevention activities within San Luis Obispo County. Chapter 22.50 of the County Land Use Ordinance is devoted entirely to Fire Safety and includes standards pertaining to the preparation and review of fire safety plans, fire safety standards, site access, and driveway requirements.

3. Thresholds of Significance

As defined in the *CEQA Guidelines*, Appendix G, and the County of San Luis Obispo Initial Study Checklist, fire hazard impacts would be considered significant if the project would:

- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.
- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection.

4. Impact Assessment and Methodology

The EIR impact analysis focuses on potential fire hazard associated with the proposed project. Methodology for assessing the proposed project includes a review of existing regulatory plans and policies to determine the proposed project's consistency with these documents.

5. Impacts and Mitigation Measures

Appropriate response times for fire protection services vary with the degree of urbanization. Appropriate response times for urban areas are up to six minutes, for suburban areas up to seven minutes, and rural areas up to 12 minutes. Response times exceeding 15 minutes for structure fires provide little possibility of saving the structure, and 60 minutes or more could mean fires approaching disaster levels. For structure fires, Cal Fire has mutual aid agreements with all fire protection agencies in the County.

Based on Cal Fire *Residential Fire Safety Requirements* (February 1, 2006), and consultation with Cal Fire (Robert Lewin, May 23, 2005, January 10, 2006), the proposed subdivision is required to include both primary and secondary access. The applicant revised the proposed project, which currently complies with Cal Fire access requirements. Primary access would be provided via Castillo Del Mar Drive to the west, and secondary access would be provided via Coast View Drive to the east. The applicant proposes to install a gate on Castillo Del Mar Drive and Coast View Drive at the western and eastern property boundaries; each gate would open automatically upon automobile approach to allow exit from the project site. The eastern gate on Coast View Drive would restrict entry into the subdivision (with the exception of emergency vehicles via use of a KNOX box), and the applicant proposes to install signage on the gate for future residents noting that use of the secondary access road shall be limited to emergency situations only, and shall also include instructions regarding use of the gate (e.g., drive forward slowly until gate opens). The western gate on Castillo Del Mar Drive would include a coded entry system in addition to a KNOX box for emergency vehicles.

Cal Fire reviewed and approved the applicant's access plan and gate and signage proposal (Robert Lewin, June 13, 2007). Additional standard requirements for individual lot development will include, but not be limited to: a minimum 30-foot setback from property lines; creation of a minimum 100-foot vegetation clearance around each structure; visible address markers; 10 feet wide (minimum), all-weather surface driveways; minimum 10-foot fuel modification zone on each side of the driveway, and; installation of residential fire sprinklers (for structures exceeding 5,000 square feet). Compliance with these standards would be verified pursuant to the County Land Use Ordinance, which requires approval of a Residential Fire Safety Plan and final inspection of residences by Cal Fire.

Based on Cal Fire's review and approval of the proposed subdivision, and compliance with existing standard requirements, implementation of the proposed project would result in less than significant fire safety impacts (Class III). No mitigation measures are required.

6. Cumulative Impacts

This project, along with others in the area, will have a cumulative effect on fire protection. The project's direct and cumulative impacts are within or below the general assumptions of allowed use for the subject property that was used to estimate existing public facility fees; therefore no significant cumulative impacts are expected, and no mitigation measures are required.

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VI. ALTERNATIVES

CEQA Guidelines Section 15126.6 provides direction for the discussion of alternatives to the proposed project. This section requires:

- Description of "...a range of reasonable alternatives to the project, or to the location of a project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." [15126.6(a)]

- 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 substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR." [15126.6(f)(2)(B)]

- Identification of any alternatives considered but rejected by the Lead Agency as infeasible and a brief explanation of the reasons for their exclusion [15126.6(c)].

Given the CEQA mandates listed above, this section of the EIR (1) describes the range of reasonable alternatives to the project, including alternative locations; (2) examines and evaluates resource issue areas where significant adverse environmental effects have been identified, compares the impacts of the alternatives to those of the proposed project, determines if the alternatives would substantially avoid or lessen at least one of the significant environmental effect of the project, (3) discusses alternatives considered and rejected, and (4) identifies the environmentally superior project.

A. SUMMARY OF ALTERNATIVES CONSIDERED

The applicant's objective is to subdivide the project site into 16 lots for future residential development. The applicant would construct infrastructure including a main access road (Castillo Del Mar Drive extension), improve a secondary access road segment to extend from the terminus of Coast View Drive to Castillo Del Mar Drive, construct a side cul-de-sac road to provide access to parcels in the southern portion of the project site, install a water tank and construct an access road to the water tank, construct a detention basin and associated storm water drainage improvements, and install utility improvements including water and sewer lines. Each of the lots would be sold for individual development. The proposed project, including future grading and future residential development on each of the lots, would result in significant but mitigable impacts in the following issue areas: drainage and erosion, biological resources, visual resources, and air quality (refer to Table II-1 in Section II of this document for a summary of the

impacts and mitigation measures). Significant, adverse, unavoidable traffic impacts would occur as a result of the proposed project. No significant geologic, soils, seismic, or fire hazards were identified.

The County of San Luis Obispo Land Use Ordinance requires that the minimum parcel size for new lots in the Residential Suburban land use category be based upon the terrain of the proposed lots and the type of water and sewage disposal facilities to be used. The limiting factor for the project site is the gently to steeply sloping topography. Section 22.22.070 of the County Land Use Ordinance states that if the average slope is between 0 and 15 percent, the minimum parcel size is 1 acre. If the average slope is between 16 and 30 percent, the minimum parcel size is 2 acres, and if the average slope is over 30 percent, the minimum parcel size is 3 acres. These restrictions were taken in to consideration when developing alternatives for the proposed project.

The alternatives discussed below have been selected because of their potential to avoid or substantially lessen project impacts, or are required under CEQA Guidelines (e.g., the no project alternative). These alternatives include the following:

- No Project Alternative;
- Visual Resources Protection Alternative;
- Revised Access Alternative A; and,
- Mitigated Project Alternative.

The following is a discussion and a qualitative analysis of the four alternatives, the level of impact that would result if they were to be implemented and how they compare to the proposed project.

1. No Project Alternative

CEQA requires that the "no project" alternative be included as one of the alternatives considered. With this alternative, the project site would be left in its present undeveloped condition. Implementation of the "no project" alternative would avoid potentially significant, but mitigable impacts for biological resources, visual resources, and air quality and significant, adverse, unavoidable traffic impacts that would otherwise result from the alteration of the physical condition of the project site. The "no project" alternative would not result in the construction and operation of a residential development. Impacts related to biological resources, drainage, soil erosion and sedimentation, visual resources, traffic and circulation, and air quality would be avoided.

Given the project's location between three existing residential neighborhoods and the site's Residential Suburban land use category, it is likely that pressure to subdivide and develop the project site into residential development would continue. Implementation of this alternative may postpone, rather than preclude, use of the project site for more intensive land uses. Based on the physical features of the project site (i.e. moderately steep slopes, presence of sensitive oak woodland and wildlife, visibility from public roadways, etc.), any future development would likely have similar impacts as the proposed project.

2. Visual Resources Protection

The "Visual Resources Protection" alternative is defined as an alternative proposing fewer parcels in a reconfigured manner that avoids and/or further mitigates identified significant visual resources impacts. The EIR consultant designed the concept for this alternative (refer to Figure VI-1). This alternative eliminates residential lots in the northeastern section of the parcel (originally proposed Lots 1 through 7) to avoid visual resources impacts as seen from State Route 101. The remaining area was divided into 11 residential lots and one non-buildable open space parcel (versus the proposed project's 16 residential lots) varying from approximately one acre to over three acres in size, depending on the average slope of the parcel pursuant to the County Land Use Ordinance. The access improvements, side cul-de-sac road and site drainage improvements would be similar to the applicant's proposed project, as revised and incorporating primary access from the west and secondary access from the east.

a. Geologic, Soils and Seismic

No potentially significant geologic, soils, or seismic hazards would occur as a result of this alternative.

b. Drainage and Erosion

A reduction in proposed residential lots would reduce the number of building pads graded on the project site; however, a substantial amount of grading would be required for the Castillo Del Mar Drive road extension, side cul-de-sac road, and drainage improvements. Drainage and erosion impacts potentially resulting from this alternative would be similar to impacts potentially resulting from the applicant's proposed project and are significant but mitigable.

c. Biological Resources

Implementation of the Visual Resources Protection Alternative would have similar impacts as the applicant's proposed project including proposed alterations to the ephemeral drainage located in the southern corner of the project parcel. Due to the alternative lot design, impacts to six oak trees would be avoided. Potential impacts to sensitive wildlife would be similar to impacts resulting from the applicant's proposed project and are significant but mitigable.

d. Visual Resources

Preventing development on applicant-proposed Lots 1 through 7 would allow the more visually sensitive portion of the project site to remain undeveloped and avoid or minimize potentially significant visual impacts as seen from State Route 101 and Los Berros Road. Visual impacts avoided or minimized by this alternative include silhouetting of future residences above the ridgeline, significant change in visual character, and increased glare. The water tank location would be the same as the applicant-proposed project, and similar mitigation would be required to mitigate visual impacts to a level of insignificance.

e. Traffic and Circulation

Implementation of this alternative would reduce the number of daily traffic trips from 154 to 106. Similar mitigation, including payment of County and City cumulative traffic impact fees, would be required for this alternative as required for the applicant's proposed project. This

alternative incorporates the applicant's revised access proposal, with primary access on Castillo Del Mar Drive to the west and secondary access on Coast View Drive to the east. Therefore, the Class I impact identified in the Revised Draft EIR would be avoided, similar to the proposed revised project.

f. Air Quality

Implementation of this alternative would result in similar air quality impacts as the applicant's proposed project, including exceeding APCD thresholds for NOx emissions and the generation of PM_{10} emissions. Similar mitigation would be required for this alternative as required for the applicant's proposed project.

3. Revised Access Alternative A

The "Revised Access Alternative A" is defined as an alternative designed to avoid the Class I impact associated with the addition of trips to the existing deficient El Campo Road and State Route 101 intersection by revising the primary access route. The proposed project includes a primary access route to the south including Coast View Drive, Falcon Crest Drive, and El Campo Road (refer to Figure VI-2). Future residents would likely use El Campo Road to access State Route 101, which results in a significant, adverse, unavoidable impact. This alternative proposes a primary access route to the north via Castillo Del Mar Drive and Orchard Drive. The applicant pursued this access option with the City of Arroyo Grande following receipt of comments to the original Draft EIR (refer to Introduction section of the EIR for additional discussion). Access to State Route 101 would be via Fair Oaks Boulevard. Implementation of this alternative would require the City of Arroyo Grande to remove the one-foot easement at the City/County boundary adjacent to the northern boundary of the project site, and includes the extension of a 420-foot section of Castillo Del Mar Drive. The internal road system and lot configuration would be similar to the proposed project.

Following circulation of the Revised Draft EIR, the applicant revised the proposed project to the "Revised Access Alternative A." The previously described "Revised Access Alternative A" is now the proposed project. The off-site access road connection between Castillo Del Mar Drive and Valley Road, within the City of Arroyo Grande has been approved by the City with a City-adopted Mitigated Negative Declaration.

a. Geologic, Soils and Seismic

No potentially significant geologic, soils, or seismic hazards would occur as a result of this alternative.

b. Drainage and Erosion

Based on the similar topography of the project site and current location of the existing emergency access road extending from Castillo Del Mar Drive to Coast View Drive, implementation of the Revised Access Alternative A would result in similar drainage and erosion impacts as the proposed project.

INSERT FIGURE VI-1
VISUAL RESOURCES PROTECTION ALTERNATIVE 11X17

Back of VI-1

INSERT FIGURE VI-2 – Revised Access Alternative A 11x17 Color

Back of Figure VI-2

c. Biological Resources

Implementation of the Revised Access Alternative A would have similar impacts as the applicant's proposed project including proposed alterations to the ephemeral drainage. Potential impacts to sensitive wildlife would be similar to impacts resulting from the applicant's proposed project and are significant but mitigable.

d. Visual Resources

Implementation of the Revised Access Alternative A would not affect the proposed lot configuration and location of building control lines. Potential impacts to visual resources would be similar to impacts resulting from the applicant's proposed project and are significant but mitigable.

e. Traffic and Circulation

Implementation of this alternative would avoid the Class I impact to the El Campo Road and State Route 101 intersection by redirecting access northwest through the City of Arroyo Grande via Castillo Del Mar Drive and Orchard Avenue. Implementation of this alternative is contingent on the City of Arroyo Grande's agreement to remove the one-foot easement along the City/County boundary, adjacent to the northern boundary of the project site. The applicant pursued consultation with the City regarding removal of the one-foot easement. Based on personal communications between the City and the applicant, access via Castillo Del Mar Drive and Orchard Street would be reconsidered by the City provided the applicant construct a secondary access road extending from Orchard Drive to Valley Road (Tony Ferrara; August 19, 2004).

The City had requested the secondary access road prior to the approval of Vista Del Mar, the subdivision adjacent to the project site. At that time, the school district and private landowner did not grant an easement for the secondary access road, and the City approved the residential development without secondary access. The City did not identify any significant, adverse, unavoidable traffic impacts associated with the development, and adopted a Mitigated Negative Declaration. The City has not identified any significant, adverse, unavoidable impacts associated with the removal of the one-foot easement and the addition of 154 daily trips affecting Castillo Del Mar Drive, Orchard Drive, Traffic Way, Fair Oaks Boulevard, or the Fair Oaks Boulevard and State Route 101 interchange.

The Valley Road connection would be considered secondary access leading to the proposed project site and adjacent residential neighborhoods. The secondary access road would extend from the western boundary of Vista Del Mar to Valley Road through properties owned by the Lucia Mar Unified School District and a private landowner. A portion of the desired alignment would be located on land currently farmed by the private landowner. The applicant discussed the potential secondary access with the school district and the landowner. The school district was not ready to make a decision at that time, and had no estimated timeframe, regarding the sale or use of the portion of property that would be affected by the secondary access road, and the landowner stated that he would not grant an easement (August 19, 2004).

In 2004, the applicant submitted a request to the City of Arroyo Grande for consideration of the access proposal, and proposed payment of fees towards future improvements including a secondary access road connector to Valley Road. The City considered and denied the applicant's request during a City Council meeting on September 14, 2004. The City stated that they would remove the one-foot easement and allow primary access via Castillo Del Mar Drive and Orchard Drive if the applicant constructed the secondary access road; therefore, the easement is removable if the conditions of the City are met.

As described throughout the EIR (refer to Chapter I, Introduction, Chapter III, Project Description, and Section V.E., Traffic and Circulation) the applicant obtained authorization for primary access through the City via Castillo Del Mar Drive. Secondary access to the subdivision would be via Coast View Drive. The City of Arroyo Grande required that the applicant submit funds for the removal of the access easement restriction, and the City's construction of the Castillo Del Mar/Valley Road connection. Section V.E. of this Final EIR includes a full analysis of the potential impacts to traffic and circulation.

f. Air Quality

Implementation of this alternative would result in similar air quality impacts as the applicant's proposed project, including exceeding APCD thresholds for NOx emissions and the generation of PM_{10} emissions. Similar mitigation would be required for this alternative as required for the applicant's proposed project.

4. Mitigated Project Alternative

The "Mitigated Project Alternative" is defined as an alternative to the proposed project that successfully incorporates mitigation measures identified during preparation of the EIR. This alternative would result in increased erosion and sediment control, protection of down-stream riparian and aquatic resources, minimized impacts to individual oak trees and complete protection of oak woodland, and reduced visual impacts. Implementation of this alternative would result in successful mitigation of impacts identified as having Class II impacts, to a level of insignificance. Implementation of this alternative incorporates the applicant's revised access proposal, which would avoid Class I traffic impacts associated with the use of the primary use of the El Campo Road and State Route 101 intersection.

a. Geologic, Soils and Seismic Hazards

No potentially significant geologic, soils, or seismic hazards would occur as a result of the proposed project, and no mitigation is required.

b. Drainage and Erosion

Implementation of this alternative would result in potentially significant impacts resulting from erosion and down-gradient sedimentation. This impact would be mitigated to a level of insignificance by implementation of a site-specific erosion and sedimentation control plan.

c. Biological Resources

Implementation of this alternative would result in potentially significant impacts to biological resources including oak trees and an ephemeral drainage. Impacts to oak trees can be minimized by implementation of tree protection measures including installation of fencing and replacement mitigation at a ratio of 2:1 for impacted trees and 4:1 for removed trees. Impacts to off-site riparian and aquatic resources during proposed improvements within the ephemeral drainage can be mitigated by limiting construction activities within the drainage area to the dry season, implementation of site-specific erosion and sedimentation control and pollution prevention plans, and the presence of a qualified biological monitor. Impacts to sensitive wildlife would be reduced by the requirement for sensitive species pre-construction surveys. All potentially significant biological resource impacts resulting from this alternative would be less than significant.

d. Visual Resources

Implementation of this alternative would result in potentially significant impacts to visual resources as seen from State Route 101, Los Berros Road, and Traffic Way including silhouetting of structures into the skyline, potentially contrasting exterior building colors, and the cumulative visual degradation along the State Route 101 corridor. Incorporation of all visual resource mitigation measures including height restrictions and color limitations would reduce the silhouetting effect of future residences on proposed Lots 1 through 6, and minimize the overall visual effect of the development as seen from State Route 101, Los Berros Road, and Traffic Way. All potentially significant visual impacts resulting from this alternative would be less than significant.

e. Traffic and Circulation

Implementation of this alternative incorporates the applicant's revised access proposal, which would avoid Class I traffic impacts associated with the use of the primary use of the El Campo Road and State Route 101 intersection.

f. Air Quality

Implementation of this alternative would result in significant but mitigable short-term air quality impacts resulting from construction emissions from combustion of diesel and unleaded fuels by heavy construction equipment, and from fugitive dust from earthmoving operations. No off-site impacts would result from this alternative due to implementation of dust control mitigation measures. Impacts would be considered significant but mitigable.

5. Alternatives Considered and Rejected

The CEQA Guidelines state that EIRs should identify any alternatives considered by the Lead Agency but were rejected as infeasible and briefly explain the reasons for their exclusion. Alternatives may be eliminated from detailed consideration in the EIR if the fail to meet most of the basic project objectives, are infeasible, or do not avoid any significant environmental effects [15126.6(c)]. The general definition of feasibility according to CEQA is as follows: "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors" [15364]. The

following alternatives were considered by the County and rejected because they are not reasonably feasible or would not reduce identified potentially significant impacts.

a. Annexation to the City of Arroyo Grande

One of the alternatives recommended for consideration by the Board of Supervisors included annexation of the project site into the City of Arroyo Grande. This alternative was rejected for consideration because the project site is not located within the City's Sphere of Influence (SOI), and the City is not considering annexation of the project site.

b. Revised Access Alternative B

"Revised Access Alternative B" considers the construction of an access road off of El Campo extending northwest to the project site, parallel to State Route 101. The new road would provide primary access to the project site. This alternative was rejected in the Revised Draft EIR because Class I traffic impacts to El Campo would not be avoided, and additional potentially significant impacts resulting from increased site disturbance and soil erosion, removal of oak trees, and visual impacts as seen from State Route 101 would likely occur.

6. Environmentally Superior Alternative

CEQA Section 15126(d) states that the alternative section shall "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project." Section 15126(d)(4) continues by stating "if the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

Based on the above discussion, the No Project Alternative would be considered the environmentally superior alternative. If the environmentally superior alternative is the no project alternative, CEQA requires that the EIR identify another environmentally superior alternative (CEQA Guidelines Section 15126.6e). Based on the applicant's revised project, which would include primary access via Castillo Del Mar Drive to the west and secondary access via Coast View Drive to the east, the Class I impact identified in the Revised Draft EIR would be avoided. Based on the applicant's submittal of a revised access plan, the environmentally superior alternative is the "Visual Resources Protection Alternative." This alternative incorporates the proposed access plan, reduces the number of proposed lots, and increases the size of the open space easement. This alternative would further reduce potential impacts to biological and visual resources, and would further reduce the project's contribution to cumulative traffic trip generation.

VII. OTHER CEQA CONCERNS

A. GROWTH INDUCING IMPACTS

Pursuant to §15126.2(d) of the State CEQA Guidelines, an EIR must address whether a project would directly or indirectly foster growth. Section 15126.2(d) reads as follows:

> "An EIR shall discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects, which would remove obstacles to population growth (a major expansion of wastewater treatment plant, might, for example, allow for more construction in service areas). Increases in the population may further tax existing community service facilities so consideration must be given to this impact. Also discuss the characteristic of some projects, which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

The project site is located outside of the Urban Reserve Line (URL) of the City of Arroyo Grande and consists of land designated under the Residential Suburban land use category (refer to Figure III-3).

The proposed project would result in the creation of additional lots in the midst of existing residential development. The extension of services including water and sewer lines would extend into an area currently surrounded by development. Based on the City of Arroyo Grande's adopted MND for the Castillo Del Mar Drive / Valley Road access road connection, construction of the access road would improve public circulation and would serve existing development in the immediate area. The road would connect two existing roads with the City limits. Implementation of the proposed project would not result in significant physical impacts or growth beyond the capacity of the area to accommodate it. Based on the size and location of the proposed project, growth inducing impacts are not expected to occur.

B. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(c) of the CEQA Guidelines states that significant irreversible environmental changes caused by a proposed project need to be discussed. These changes may include the following:

- Use of non-renewable resources during the initial and continued phases of the project that may be irreversible if a large commitment of these resources makes their removal, indirect removal, or non-use thereafter unlikely;
- Primary impacts, and, particularly, secondary impacts which commit future generations to similar uses; and,
- Irreversible damage, which may result from environmental accidents associated with the project.

1. Use of Non-Renewable Resources

The project's primary use of non-renewable would be that of fossil fuel for the equipment used to construct the project, the vehicles used in the operation of the project, and the generation of energy used in heating, cooling and lighting of the residences. The quantity of fossil fuel required for the proposed project would not be considered large enough such that non-use or removal would thereafter be unlikely.

2. Irreversible and Irretrievable Commitments of Resources

Implementation of the proposed project would include the development of nine primary residential dwelling units. Other components of the project would include development of an access road and upgrades to utilities. Overall, the proposed project would commit the project site to urban development. Construction and operation of the proposed project would contribute to the incremental depletion of resources, including renewable and non-renewable resources. Consumption of energy resources and increased vehicle travel by future residents would use resources for heating, cooling, lighting, operation of appliances, and vehicle transportation. Use of non-renewable materials such as metals and petroleum-derived products would effect the environment.

3. Irreversible Damage Resulting from Environmental Accidents

Based on the proposed residential usage of the property, the likelihood of the proposed project resulting in irreversible damage due to environmental accidents is considered extremely low.

VIII. MITIGATION MONITORING PROGRAM

A. INTRODUCTION

The following mitigation measures have been recommended in this EIR. Requirements of Measure, Applicant Responsibilities, Party Responsible for Verification, Method of Verification, and Verification Timing are included for each mitigation measure, as shown in Table VIII-1 on the following pages.

B. MITIGATION MEASURES

Table VIII-1 on the following pages 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 founding the analysis section of this EIR (refer to Section V).

TABLE VIII-1
Mitigation Monitoring Program

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
DRAINAGE AND EROSION					
DE/mm-1	The Condition, Covenants, and Restrictions (CC&Rs) shall include the following language: a. The Homeowners Association (or their designee) shall be responsible for retaining a qualified individual to conduct an annual inspection of the detention basin located within Lot 13, for the lifetime of the project. Maintenance activities recommended by the retained inspector shall be conducted by the Homeowners Association (or their designee), and shall be conducted in compliance with the County Code and all other required permits and regulations (i.e., Army Corps of Engineers authorization, Stormwater Pollution Prevention Plan).	Submit and implement required plans.	County of San Luis Obispo.	Compliance shall be verified by the County Department of Planning and Building during plan check.	Prior to recordation of the final map.
DE/mm-2	The applicant and/or individual lot owner shall prepare and implement a Sedimentation and Erosion Control Plan per the requirements of LUO Section 22.52.090, which shall address both temporary and permanent measures to control erosion and reduce sedimentation. If vegetation is included as the means to stabilize the soils, it shall be planted at least 30 days before the beginning of the wet season, and watered regularly to ensure adequate root establishment. Otherwise, non-vegetative means shall be employed.	Submit and implement the required plan.	County of San Luis Obispo	The County Building Division, in consultation with the Division of Environmental and Resource Management, shall verify receipt, approval, and proper implementation of the proposed plan.	Prior to issuance of grading permits and during grading activities.
DE/mm-3	The applicant shall prepare and implement a Stormwater Pollution Prevention Plan approved	Submit and implement the required plan.	State Water Resources Control	The County Building Division, in	Prior to issuance of grading and/or

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	by the State Water Resources Control Board.		Board, County of San Luis Obispo	consultation with the Division of Environmental and Resource Management, shall verify receipt, approval, and proper implementation of the proposed plan.	construction permits and during grading activities.
		BIOLOGICAL RESOURCES			
BR/mm-1	A wetland delineation and, if necessary, a jurisdictional determination shall be conducted to determine the presence and extent of "Waters of the U.S.," including wetlands. Results of the wetland delineation shall immediately be submitted to the County Division of Environmental and Resource Management and Army Corps of Engineers (Corps). The applicant shall be responsible for contacting the Corps and California Department of Fish and Game (CDFG) prior to project implementation to determine specific permitting requirements and mitigation responsibilities associated with disturbance of the identified drainage, and any associated areas of wetland.	Submit and implement the required report.	U.S. Army Corps of Engineers, County of San Luis Obispo.	The applicant shall submit the jurisdictional determination to the County Division of Environmental and Resource Management and U.S. Army Corps of Engineers for review and approval.	Prior to issuance of construction permit relating to final design and construction of the proposed access road, storm water improvements, and detention basin.
BR/mm-2	The applicant shall obtain all appropriate authorizations and permits from affected resource agencies including, but not limited to a Section 404 permit from the Corps to discharge dredged or fill material into Waters of the U.S. and a 1600 California Department of Fish and Game Streambed Alteration Permit for disturbance of any portion of a channel located	Obtain all required permits from affected resource agencies.	U.S. Army Corps of Engineers, California Department of Fish and Game, Regional Water Quality Control Board, County of San Luis Obispo.	The applicant shall submit copies of all required resource agency permits/ authorizations or documentation from the resource agency that the	Prior to recordation of the final map and issuance of grading permits.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	beneath the top of bank. If authorization and/or permits are not required, the applicant shall submit documentation from the applicable agency. If construction permits or approval of tract improvements are issued in phases, Corps authorization shall be obtained prior to approval of tract improvements or issuance of construction permit relating to construction of the detention basin or other activities that require ground disturbance within 100 feet of the identified drainage.			permit/authorization is not needed to the County Division of Environmental and Resource Management.	
BR/mm-3	If wetlands, including "Waters of the United States," are identified onsite, the applicant shall submit a wetlands mitigation plan approved by the Corps for the approval of the County Division of Environmental and Resource Management and California Department of Fish and Game. If Corps jurisdictional wetlands are present, the plan shall also be submitted to the Corps. The mitigation plan shall be prepared as per the County's Guidelines for Mitigation/Monitoring Plans. The wetlands mitigation plan shall be implemented by the applicant and/or successors-in-interest (Homeowners Association). In addition to any measures and elements required by the Corps, the mitigation plan shall include the following elements: A) Quantification of temporarily and permanently impacted wetland areas; B) Identification of the wetland area to be	Submit and implement the required plan.	U.S. Army Corps of Engineers, California Department of Fish and Game, Regional Water Quality Control Board, County of San Luis Obispo.	The applicant shall submit the wetlands mitigation plan to the Corps and County Division of Environmental and Resource Management for review and approval. The applicant shall comply with all mitigation-monitoring requirements detailed in the approved plan.	Prior to approval of tract improvements or issuance of construction permit.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	restored at a mitigation ratio no less than 1:1; C) Methodology for restoration, including a planting site plan, inventory of plants for revegetation, installation of irrigation or other suitable watering method, and scheduling of maintenance activities; and, D) A description of a restoration monitoring plan, success criteria, reporting schedule, and cost estimate to implement the plan. If wetlands are present within the area proposed for construction of the access road and storm water management system, the applicant may minimize the permanently affected area by preparing and submitting a revised plan showing proposed access to parcels south of the proposed Castillo Del Mar Drive extension. If the applicant chooses this option, the revised plan shall clearly demonstrate how the ephemeral drainage shall be restored, stabilized, and maintained to manage storm water flow in a non-erosive manner.				
BR/mm-4	The applicant shall provide a cost estimate and set up a trust account to retain a County-approved qualified biological monitor to inspect implementation of County and resource agency conditions of approval. The frequency and duration of monitoring would be determined by the County Division of Environmental and Resource Management and specified within resource agency-issued conditions of approval. If a wetland mitigation plan is required, the biological monitor shall monitor the mitigation	Submit cost estimate and funding.	County of San Luis Obispo.	The applicant shall submit a letter prepared by the County-approved qualified biological monitor stating that he/she has been retained, and monies shall be deposited into a County trust account.	Prior to issuance of construction permits or approval of tract improvements.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	efforts for a minimum of three years or until the performance criteria are met.				
BR/mm-5	The applicant shall implement an approved Erosion and Sedimentation Control Plan (required by the County of San Luis Obispo Land Use Ordinance). Implementation of the approved plan, and any necessary modifications in the field shall minimize the potential for indirect disturbance of sensitive aquatic habitats located downstream and off-site (e.g., Los Berros Creek, Arroyo Grande Creek) and shall include the installation of appropriate erosion control devices (i.e., hay bales, silt fences) down-slope of areas experiencing disturbance of the ground surface associated with both infrastructure and residential construction. The project applicant, and/or the successors-in-interest (Homeowners Association), shall check erosion control devices on a daily basis to ensure proper function. The County-approved biological monitor shall inspect erosion control measures for a duration and frequency determined by the County and resource agencies, if necessary. Additional measures recommended by the biological monitor, and approved by the County and affected resource agencies, shall be implemented in the field.	Implement and maintain required plan.	County of San Luis Obispo, biological monitor.	The retained biological monitor or County Staff shall verify that approved erosion control measures have been implemented.	Prior to issuance of construction permit for the proposed storm water detention basin.
BR/mm-6	Construction of the proposed storm water detention basin and associated drainage improvements within the ephemeral drainage shall not be allowed during the wet season (October 16 – April 15) or during or immediately prior to or following a rain event. The retained	Comply with timing limitations.	County of San Luis Obispo, biological monitor.	The retained biological monitor or County Staff shall verify compliance with required timing of construction activities.	During grading and construction.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	biological monitor shall verify compliance.				
BR/mm-7	The applicant and/or successors-in-interest (Homeowners Association) shall revegetate adjacent disturbed and barren areas with appropriate non-invasive native vegetation from the County's approved plant list to reduce the risk of on-site erosion. The applicant shall replant areas experiencing only temporary disturbance (a period greater than 30 days) with native species that occur in adjacent grassland and woodland communities. The applicant and/or successors-in-interest (Homeowners Association) shall submit a letter to the County Department of Planning and Building immediately following completion of revegetation activities and prior to final inspection. The vegetation shall be maintained and weeded for a period of three years.	Implementation of revegetation and restoration activities and submittal of completion letter.	County of San Luis Obispo, biological monitor.	The retained biological monitor or County Staff shall verify that approved measures have been implemented.	Immediately following completion of construction of the detention basin and other infrastructure within the project site and prior to final inspection.
BR/mm-8	The landowner shall submit plans showing the location of existing oak trees, the diameter at breast height, and if they will be removed or impacted (disturbance within the dripline including trimming) within 25 feet of project boundaries. Up to thirteen oak trees may be removed or impacted by the development and additional trees may be trimmed for fire prevention measures.	Submit and implement required plan.	County of San Luis Obispo, biological monitor.	Trees to be removed or impacted shall be noted on plans for verification in the field by the retained biological monitor or County Staff.	Prior to issuance of construction permits for individual lot development.
BR/mm-9	The applicant shall submit an Oak Tree Mitigation and Monitoring Plan to be reviewed and approved by the Environmental Coordinator. The Oak Tree Mitigation and Monitoring Plan shall be written as per the County's Mitigation and Monitoring Plan Guidelines. At a minimum	Submit Oak Tree Mitigation and Monitoring Plan as specified.	County of San Luis Obispo..	The County shall review and approve the map. Implementation shall be verified by retained biological monitor.	Prior to recordation of final map.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	the plan shall include goals, performance standards, and remedial measures to implement if the performance standards are not met. The plan shall provide for the replacement, in kind at a _4:1 ratio all oak trees removed as a result of the development of the project, and in addition, shall provide for the planting, in kind at a 2:1 ratio, of oak trees to mitigate for trees impacted but not removed. Tree removal shall not be permitted outside of the "building limit line." The Oak Tree Mitigation and Monitoring Plan shall include, but not be limited to, the following tree planting guidelines, which shall be printed on all applicable plans: INITIAL PLANTING Replanting shall be completed as soon as it is feasible (e.g. irrigation water is available, grading done in replant area). If possible, planting shall be completed in the late fall or winter months (October to January). If planting cannot occur during these optimal months, a landscape irrigation plan shall be submitted prior to construction permit issuance showing how plants will be watered on a regular basis. If planting occurs outside of optimal months, a thorough watering will be completed at the time of planting. Replant areas shall either be either in native topsoil or areas where native topsoil has been reapplied. If the latter, top soil shall be carefully removed and stockpiled for spreading over graded areas to be replanted (setting aside				

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	enough for 6-12" layer for entire tree replant area). Stockpile areas shall be shown on al applicable grading and/or construction plans. Planting hole depths shall exceed container depths to sufficiently avoid roots from turning upwards. Soil returned around containers shall be compacted sufficiently to eliminate air pockets. To provide for greatest success for replacement oaks, planting stock should be either seedlings (preferred) or up to one-gallon container sizes. Small seedlings should be tubed. Clustering of seedings in groups of two to four is preferred (but would need to maintain the overall on-center plant average described below. Where possible, planting should be outside of, but as near as possible to, existing driplines of oak trees. Average tree planting densities shall be no greater than one tree every 20 feet and shall average no more than four planted trees per 2,000 square feet, unless it is shown to the county by a qualified biologist that existing average tree (with five-inch diameters or more) densities are greater. Where natural densities are shown to be greater than one tree every 2,000 square feet, planting densities (4:1) could match that density. This average planting density, and respective area needed, will be reflected on all applicable construction plans. In the event that inadequate on-site area exists for replanting of replacement trees, a fee per equivalent tree removed shall be applied,				

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	pursuant to the County Guidelines for Tree Protection. Location of newly planted trees should adhere to the following, whenever possible: on the north side of and at the canopy/dripline edge of existing mature native trees; on north-facing slopes; close to drainage swales/gullies (except when riparian habitat present); where topsoil is present; at least 25 feet away from continuously wet areas (e.g. lawns, leach lines); random and clustered planting patterns to create natural appearance, and; planting locations away from known animal populations (e.g., squirrels, gophers). MAINTENANCE AND PROTECTION These newly planted trees shall be maintained until successfully established. The following planting and maintenance measures are necessary for successful establishment, and shall be included as part of monitoring efforts: provide and maintain protection (e.g. tree shelters, caging) from animals (e.g., deer, rodents); regular mulching and weeding (minimum of once early Fall and once early Spring) of at least a three foot radius out from plant; adequate watering (e.g., drip-irrigation system), and watering should be controlled so only enough is used to initially establish the tree, and reducing to zero over a three year period; avoidance of planting between April and				

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	September unless irrigation system with timer is provided, where trees are watered one gallon every four weeks (may vary); application of standard planting procedures (e.g., planting tablets, initial deep watering, etc.), and; when planting with, or near, other landscaping, all landscape vegetation within the eventual mature oak tree root zone (25-foot radius of planted oak) will need to have similar water requirements as the oak (including no summer watering once established). Protection of newly planted trees shall include the following measures, and be shown on all applicable plans prior to issuance of construction permit for lot development: a. An above-ground shelter (e.g., tube, wire caging) shall be provided for each tree upon planting, and shall be of sturdy material that will provide protection from browsing animals for no less than seven years (unless determined successfully established by monitor). b. Caging to protect roots from burrowing animals shall be installed when the tree is planted, and be made of material that will last no less than seven years. c. Each shelter shall include the following, unless manufacture instructions recommend a more successful approach: 1. Shelter shall be secured with stake that will last seven years;				

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	2. Height of shelter shall be no less than three (3) feet; 3. Base of shelter shall be buried into the ground; 4. Top of shelter shall be securely covered with plastic netting, or better, and last for no less than seven years; and, 5. If required planting is located in areas frequented by deer, tube/caging heights shall be increased to at least four feet or plantings shall be protected with deer fencing. To provide for adequate weed control around replacement trees, while still minimizing impacts to other existing sensitive vegetation, the following approach will be needed: 1) no use of herbicides (unless newly-planted tree is fully protected during application); and 2) either installation of a securely staked "weed mat" (covering at least a three-inch radius from center of plant), or hand removal of weeds (covering at least a three-inch radius from center of plant) will be completed for each plant (where hand removal weeding will be kept up on a regular basis (at least once in late spring [April] and once in early winter [December]). This should be done until tree is at least three feet tall. Use of weed-free mulch (at least three inches deep), with regular replenishment, may be substituted for weed mat.				

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
BR/mm-10	The landowner shall replace, at a 4:1 ratio, coast live oak trees to be removed and at a 2:1 ratio, the coast live oak trees that would be impacted as a result of grading and implementation of fire prevention measures including oak tree limb trimming. Replacement trees shall be located on the project parcel outside of the buildable area within existing oak woodland.	Implement oak tree revegetation activities.	County of San Luis Obispo, biological monitor.	Trees to be removed or impacted shall be noted on plans for verification in the field by the retained biological monitor or County Staff.	Prior to final inspection of individual residences.
BR/mm-11	To promote the success of the new trees, the applicant shall retain a qualified individual (e.g., arborist, landscape architect/contractor, certified arborist, certified nursery person, botanist) to prepare a letter stating the required planting and protection measures have been completed. This verification letter shall be submitted to the Department of Planning and Building prior to final inspection of each residence. The letter shall specify the following: 1) when planted; 2) type and container size of vegetation planted; 3) approximate planting locations; and, 4) health of plants at the time of planting or when observed. GPS coordinates and photo-documentation shall be provided. The retained individual shall monitor the survivability and vigor of the planted trees until they are successfully established, and shall prepare annual monitoring reports for a minimum of seven years. The first monitoring report shall be submitted to the County Environmental Coordinator one year after the initial planting and thereafter on an annual basis until the monitor, in consultation with the County, has determined that the initially-required vegetation is successfully established. Additional	Retain qualified individual to monitor oak tree revegetation.	County of San Luis Obispo, oak tree revegetation monitor.	The County Division of Environmental and Resource Management shall verify receipt of annual monitoring reports.	Upon initial planting, annual, and for up to seven years following completion of revegetation.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	planting and monitoring will be necessary if initially-required vegetation is not considered successfully established. At a minimum, the monitoring report shall include: 1) reference and comparison to previous reports, 2) approximate planting locations shown on map, 3) health and vigor of all plantings, 4) any problems associated with health of plants, and 5) any remedial measures needed to insure long-term health of all required plantings. The applicant, and successors-in-interest, agrees to complete any necessary remedial measures identified in the report(s) to maintain the required population of initially-planted vegetation. Remedial work shall be completed by the applicant, or successors-in-interest (individual lot owners), within 30 days of it being identified.				
BR/mm-12	To avoid the potential for inadvertent disturbance of scattered oak trees not scheduled for removal or impact, the applicant shall retain a qualified individual (e.g., arborist, landscape architect/contractor, nurseryperson) to clearly mark the dripline area of each oak tree located outside of, but adjacent to the proposed development areas. The dripline of each tree shall be marked with highly visible flagging or construction fencing, immediately prior to construction. Grading, utility trenching, compaction of soil, material/equipment storage, or placement of fill shall be avoided within fenced areas. Tree protection areas shall be identified with at least one weatherproof sign placed within each temporarily fenced area in the most visible	Retain qualified individual to install oak tree protection measures.	County of San Luis Obispo, oak tree revegetation monitor.	The retained biological monitor or County Staff shall ensure that protection measures are installed in the field.	Prior to issuance of construction permits for tract improvements and individual lot development.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	location for construction crews that states "Tree Protection Area – Stay Out" (four inch letter size or greater). For larger fenced areas, multiple signs will be placed at 50-foot increments. All construction fencing and signage shall remain in place and kept in good working order until final inspection.				
BR/mm-13	To minimize impacts to the sensitive oak woodland understory habitat (e.g., coastal scrub), the applicant agrees to the following during tract improvements, individual lot construction activities, and for the life of the project: a. The applicant recognizes that trimming of oaks can be detrimental in the following respects and agrees to minimize trimming of the remaining oaks: removal of larger lower branches should be minimized to 1) avoid making tree top heavy and more susceptible to "blow-overs", 2) reduce having larger limb cuts that take longer to heal and are much more susceptible to disease and infestation, 3) retain the wildlife that is found only in the lower branches, 4) retains shade to keep summer temperatures cooler (retains higher soil moisture, greater passive solar potential, provides better conditions for oak seedling volunteers) and 5) retain the natural shape of the tree. Limit the amount of trimming (roots or canopy) done in anyone season as much as possible to limit tree stress/shock (10% or less is best, 25% maximum). Excessive and	Retain qualified individual to implement trimming and vegetation maintenance measures.	County of San Luis Obispo, oak tree revegetation monitor, Homeowners Association.	The retained biological monitor or County Staff shall ensure compliance during development; Homeowners Association shall verify compliance during long-term maintenance.	For the life of the project.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	careless trimming not only reduces the potential life of the tree, but can also reduce property values if the tree dies prematurely or has an unnatural appearance. If trimming is necessary, the applicant agrees to either use a skilled arborist or apply accepted arborist's techniques when removing limbs. Unless a hazardous or unsafe situation exists, trimming shall be done only during the winter for deciduous species. Smaller trees (smaller than 5 inches in diameter at four feet above the ground) within the project area are considered to be of high importance, and when possible, shall be given similar consideration as larger trees. b. All native vegetation removal shall be shown on all applicable grading/ construction or improvement plans, and reviewed/ approved by the County (Planning and Building Dept.) before any work begins. c. Vegetation removal of native habitat shall be limited to what is shown on the county-approved grading/ construction /improvement plans. d. Vegetation clearance for fire safety purposes shall be limited to the minimum setbacks required by Cal Fire. Where feasible, all efforts will be made to retain as much of this vegetation within the setback as possible (e.g. remove/trim only enough vegetation to create non-contiguous islands of native vegetation). e. All allowed uses within the native habitat				

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	area shall be "passive," where the use will have either no or minimal impact on the habitat. f. Any CC&Rs created shall include the above provisions to protect the native habitat.				
BR/mm-14	The applicant shall submit a cost estimate for planting, maintenance, and/or monitoring by qualified individuals. Qualified individuals shall show they are experienced and successful in planting, maintaining and/or monitoring native vegetation. The cost estimate shall include all critical elements to insure the success of any replanting efforts (e.g., plant materials, amendments, irrigation, regular maintenance, etc.). When cost estimates are required, the applicant shall either post a performance bond equal to the county-approved cost estimate, or establish a trust account with the county to administer implementation of one or more of these components, or a combination of the two. Where a county trust account is required, the work scope and selection of qualified individual(s) shall be approved or determined by the county.	Submit cost estimate.	County of San Luis Obispo.	Submittal of cost estimate and funds required prior to issuance of construction permits.	Prior to issuance of construction permits.
BR/mm-15	The applicant, or landowner as applicable, shall retain a County-qualified wildlife biologist to conduct a pre-activity survey for burrowing owl. The survey shall be conducted within 30-days prior to site disturbance. If ground disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be reserved. Results of the survey shall be documented in a report and shall include	Retain qualified wildlife biologist, and ensure submittal of pre-construction survey report(s). CDFG shall be contacted if necessary.	County of San Luis Obispo, California Department of Fish and Game, retained biologist.	The County Division of Environmental and Resource Management shall verify receipt of pre-construction survey reports. The retained biological monitor shall submit monitoring	Prior to issuance of tract improvements or construction permits for road and infrastructure improvements and prior to issuance of construction permits for individual lot

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	the date of the survey, methods of inspection, and findings. The report shall be submitted to the County Division of Environmental and Resource Management and the California Department of Fish and Game (CDFG). If no burrowing owls are found to occupy the site at that time, no further measures would be necessary unless burrowing owls are subsequently observed at the project site, in which case the following mitigation measure would be implemented. If burrowing owls are found within the project site, the applicant or successors-in-interest (individual lot owners) shall immediately contact the CDFG and implement all measures identified in the CDFG staff report on burrowing owl mitigation, additional measures required by CDFG, and measures described in the *Burrowing Owl Survey* report (McCormick; 1997) shall be implemented. Measures shall include, but not be limited to, the following: A) If feasible, burrowing owl burrows shall be avoided. No disturbance shall occur within 50 meters of occupied burrowing owl burrows during the non-breeding season (September 1 through January 31) or within 75 meters during the breeding season (February 1 through August 31). A minimum of 6.5 acres of foraging habitat shall be permanently preserved contiguous with the occupied burrow sites for each pair of			reports to the County Division of Environmental and Resource Management (if necessary).	development.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	breeding burrowing owls or single unpaired resident owl. The configuration of the protected habitat shall be reviewed and approved by the Environmental Coordinator and California Department of Fish and Game. If avoidance of burrowing owl burrows is not feasible, the following measures shall apply, upon approval by the Environmental Coordinator and California Department of Fish and Game. 1. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFG verifies that either: 1) birds have not begun egg-laying and incubation: or 2) that juveniles from the occupied burrows are foraging independently and capable of independent survival. 2. A minimum of 6.5 acres of foraging habitat per pair or unpaired resident burrowing owl shall be acquired and permanently protected. The protected area shall be adjacent to occupied burrowing owl habitat and at a location approved by the California Department of Fish and Game. The protected habitat shall contribute to the long-term conservation of the burrowing owl and				

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	the ecosystem(s) on which they depend. 3. When destruction of occupied burrows is unavoidable, a Burrowing Owl Habitat Replacement Management and Monitoring Plan shall be prepared by a County-approved biologist, and submitted to the Environmental Coordinator for review and approval. The plan shall identify the burrow affected by potential development, and demonstrate how existing unsuitable burrows shall be enlarged or cleared of debris or created (e.g., by installing artificial burrows) at a 1:1 ratio within a protected area. Mitigation success criteria shall be identified, and monitoring reports shall be prepared annually for a minimum of three years. Monitoring reports shall be submitted to the Environmental Coordinator and California Department of Fish and Game. 4. If owls must be moved away from the disturbance area, passive relocation techniques shall be used (i.e., use of artificial burrows and tunnels), and trapping shall be prohibited. A minimum of one week shall be required to accomplish relocation to allow owls to acclimate to alternative burrows.				

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
BR/mm-16	According to the CDFG Code 3503, "take" of the nest or eggs of any bird is prohibited, except upon approval from CDFG. To avoid take of active bird nests, any necessary tree removals shall be conducted between August 15 and March 15, outside of the typical breeding season. If tree removals are determined necessary during the typical breeding season, a County-qualified biologist shall conduct a bird nest survey within 24 hours of proposed development activities. The results of the bird nest survey shall be submitted to the California Department of Fish and Game (CDFG) and County of San Luis Obispo Division of Environmental and Resource Management, via a letter report. The report shall include the date of the survey, methods of inspection, and findings. If the biologist determines that a tree slated for removal is being used for nesting at that time, no site disturbance or use of equipment shall be allowed within an appropriate buffer area to be determined by the biologist, based on bird species, topography, and type of activity until after the biologist has determined that the young have fledged from the nest and achieved independence. No construction or grading activity shall occur within the buffer area. If no nesting is found to occur, necessary tree removal could then proceed.	Comply with protection measures and ensure submittal of required report(s).	County of San Luis Obispo, California Department of Fish and Game, retained biologist.	The County Division of Environmental and Resource Management shall verify receipt of pre-construction survey reports. The retained biological monitor shall submit monitoring reports to the County Division of Environmental and Resource Management (if necessary).	24 hours prior to tree removals between February 16 and September 14.
BR/mm-17	The applicant shall retain a County-qualified biologist to conduct a pre-construction survey for nesting songbirds. The survey shall be conducted within three days of proposed site disturbance and construction activities to	Comply with protection measures and ensure submittal of required report(s).	County of San Luis Obispo, California Department of Fish and Game, retained biologist.	The County Division of Environmental and Resource Management shall verify receipt of pre-	Prior to issuance of construction permits for road and infrastructure construction and

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	determine presence/absence of nesting birds on the project site. If no breeding or nesting activities are detected within 100 feet of the proposed work areas, construction activities may proceed. If, however, active nests are found within areas proposed for disturbance, after the biologist shall establish an appropriate buffer area based on the bird species, topography, and type of activity. No construction or grading activities shall occur within the buffer area until the biologist has determined that the young have fledged from the nest and achieved independence, or upon approval from CDFG.			construction survey reports. The retained biological monitor shall submit monitoring reports to the County Division of Environmental and Resource Management (if necessary).	individual lot development, if construction and site disturbance activities occur during the typical songbird nesting season (March through August).
BR/mm-18	The applicant or successors-in-interest (individual lot owners) shall retain a County-qualified biologist to conduct a pre-activity survey for Monterey dusky-footed woodrat that may occupy the site. The survey shall be conducted within 30 days prior to proposed site disturbance and construction activities. Results of the survey shall immediately be submitted to the County Division of Environmental and Resource Management and CDFG as necessary. The survey report shall include the date of the survey, methods of inspection, and findings. If active burrows of woodrats are found within proposed development areas during the survey, the biologist shall establish an appropriate buffer area to protect the nest(s). No site disturbance shall occur within the buffer area until a Memorandum of Understanding (MOU) is obtained from CDFG. An alternative to a buffer area is to disassemble nests by hand outside of	Comply with protection measures and ensure submittal of required report(s).	County of San Luis Obispo, California Department of Fish and Game, retained biologist.	The County Division of Environmental and Resource Management shall verify receipt of pre-construction survey reports. The retained biological monitor shall submit monitoring reports to the County Division of Environmental and Resource Management (if necessary).	Prior to issuance of construction permit for tract improvements or individual lot development.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	the nesting season (February through September) and allow the woodrats to leave the site.				
BR/mm-19	The applicant or successors-in-interest (individual lot owners) shall retain a County-qualified biologist to conduct a pre-activity survey for American badger that may occupy the site. The pre-construction survey shall be conducted within 30 days of beginning work on the project to identify if badgers are using the site. The results of the survey shall be sent to the project manager, CDFG, and the County of San Luis Obispo. If the pre-construction survey finds potential badger dens, they shall be inspected to determine whether they are occupied. The survey shall cover the entire property, and shall examine both old and new dens. If potential badger dens are too long to completely inspect from the entrance, a fiber optic scope shall be used to examine the den to the end. If a fiber optic scope is not available, occupation of the den can be determined by partially obscuring the den entrance with sticks and leaves to indicate animal passage into and out of the den and dusting the den entrance with a fine layer of dust or tracking material for three consecutive nights and examining the following mornings for footprints. Inactive dens may be excavated by hand with a shovel to prevent re-use of dens during construction. If badgers are found in dens on the property between February and July,	Comply with protection measures and ensure submittal of required report(s).	County of San Luis Obispo, California Department of Fish and Game, retained biologist.	The County Division of Environmental and Resource Management shall verify receipt of pre-construction survey reports. The retained biological monitor shall submit monitoring reports to the County Division of Environmental and Resource Management (if necessary).	Prior to issuance of construction permit for tract improvements or individual lot development.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	nursing young may be present. To avoid disturbance and the possibility of direct take of adults and nursing young, and to prevent badgers form becoming trapped in burrows during construction activity, no grading shall occur within 100 feet of active badger dens between February and July. If badger dens are found on the property during the pre-construction survey, the CDFG wildlife biologist for the area shall be contacted to review current allowable management practices.				
		VISUAL RESOURCES			
VR/mm–1	The following conditions shall apply to Lots 3, 4 and 5: A) Those portions of development on Lot 3 that are more than 100 feet from Coast View Drive shall not exceed an elevation of 25 feet above natural grade. B) The top of any development on Lot 4 shall not exceed an elevation of 290 feet above sea level (based on contour maps used in this document). C) The top of any development on Lot 5 shall not exceed an elevation of 295 feet above sea level (based on contour maps used in this document). D) No development shall exceed 35 feet above natural grade.	Submit and implement required plans.	County of San Luis Obispo.	The County Department of Planning and Building shall verify compliance with required standards.	Prior to issuance of building permits for individual lot development.
VR/mm–2	The following shall be included on the additional map sheet, and as applicable, prior to issuance of subsequent grading permits, incorporated into all future development: A) The applicant shall clearly delineate the	Submit and implement required plans.	County of San Luis Obispo.	Compliance shall be verified by the County Department of Planning and Building during plan check and	Prior to recordation of the final map.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	height of new development on the project plans. All development on Lots 3 and 4 and 5 shall not exceed the heights shown above and as defined in the County of San Luis Obispo Land Use Ordinance, Section 22.10.090, as follows: "The height of a building or structure shall be measured as the vertical distance from the highest point of the structure to the average of the highest and lowest points where the vertical plane of the exterior walls would touch the natural grade level of the site" (see Figure V.D.-3 below). B) The applicant shall clearly delineate all fencing proposed for areas outside of the "Building Limit Line" on the project plans for Lots 3, 4, and 5. All fencing proposed for the areas outside of the "Building Limit Line" shall conform to the following: 1) No proposed fencing shall be constructed of solid, flat planes; 2) Fence colors shall be similar to surrounding natural colors and no brighter than 6 in chroma and value on the Munsell Color Scale on file in the County Department of Planning and Building; and, 3) White paint or other white materials shall be prohibited. C) Conditions, Covenants, and Restrictions (CC&Rs) shall be required that include items A and B above.			site inspections for individual lot development.	
VR/mm-3	The following conditions shall apply to Lots 1 through 6: The applicant shall place the portion of the lot that is outside of the Building Limit Line	Submit and implement required plans.	County of San Luis Obispo.	Prior to recordation of final map, compliance shall be verified by the	Prior to recordation of the final map.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	into a permanent open space easement for the purpose of protecting the existing native trees on each subject parcel. No development (except for fences as specified in VR/mm-2 item B above) or uses shall be allowed within the open space easement that would change the natural appearance of this area. The specific language of the open space easement shall be subject to review and approval by the San Luis Obispo County Department of Planning and Building.			County Department of Planning and Building during plan check and site inspections for individual lot development.	
VR/mm-4	The applicant shall submit architectural elevations of all proposed structures to the Department of Planning and Building for review and approval.	Submit and implement required plans.	County of San Luis Obispo.	The County Department of Planning and Building shall verify compliance.	Prior to issuance of construction permits for individual lot development.
VR/mm–5	The following shall be included on the additional map sheet and incorporated into future development: The County Department of Planning and Building shall review of elevations and shall include the parameters specified below. The elevations shall show forms, dimensions, exterior finish materials and colors, as follows: A) Building colors shall be similar to surrounding natural colors and no brighter than 6 in chroma and value on the Munsell Color Scale on file in the County Department of Planning and Building. B) Exterior wall colors shall be limited to muted earth tones and white paint shall be prohibited. C) Roof colors shall be limited to deep earth	Submit and implement required plans.	County of San Luis Obispo.	Compliance shall be verified by the County Department of Planning and Building during plan check and site inspections for individual lot development.	Prior to recordation of the final map.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	tones, deep muted reds, browns and grays and no brighter than 6 in chroma and value on the Munsell Color Scale on file in the County Department of Planning and Building. Shiny metal roofs, bright orange, red, or blue shall be prohibited. D) Conditions, Covenants, and Restrictions (CC&Rs) shall be required specifying the above components.				
VR/mm-6	The following shall be adopted and included on the additional map sheet: The height of new development for Lot 6 shall be clearly delineated on project plans, and shall not exceed an elevation of 295 feet above sea level, as shown for the tentative tract map contour mapping. Conditions, Covenants, and Restrictions (CC&Rs) shall be required that specify the above provision.	Submit and implement required plans.	County of San Luis Obispo.	Compliance shall be verified by the County Department of Planning and Building during plan check and site inspections for individual lot development.	Prior to recordation of the final map.
VR/mm-7	The applicant shall submit architectural elevations of the water tank and related support facilities to the Department of Planning and Building for review and approval. The elevations shall show forms, dimensions, exterior finish materials and colors, as follows: A) Exterior colors shall be similar to surrounding natural colors and no brighter than 6 in chroma and value on the Munsell Color Scale on file in the County Department of Planning and Building. B) Shiny metal components shall not be used.	Submit and implement required plans.	County of San Luis Obispo.	Compliance shall be verified by the County Department of Planning and Building during plan check and site inspections for individual lot development.	Prior to issuance of construction permits.
VR/mm-8	The applicant shall submit landscape plans for the water tank site to the Department of Planning	Submit and implement required plans.	County of San Luis Obispo.	Compliance shall be verified by the County	Prior to issuance of construction permits.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	and Building for review and approval. The plans shall show oak trees and native shrubs planted on the southern, eastern and western sides of the water tank and pump facilities, with a goal of fully screening the tank and support equipment from KVAs. Revegetation monitoring shall be conducted until at least 75 percent screening is achieved.			Department of Planning and Building during plan check and site inspections for individual lot development.	
		TRAFFIC AND CIRCULATION			
TR/mm-1	Individual lot owners shall contribute to the County of San Luis Obispo Traffic Impact Fee for the South County Benefit Area 2.	Submit required fees.	County of San Luis Obispo.	The County Department of Planning and Building shall verify that the applicant has contributed to the South County Benefit Area 2 fee program.	Prior to issuance of building permits for the development of each lot.
TR/mm-2	The applicant shall submit documentation to the County Environmental Coordinator demonstrating payment of City of Arroyo Grande traffic and signalization impact mitigation fees. The traffic impact fee is $1,378.00 per unit, and the traffic signalization fee is $505.00 per unit.	Submit documentation of fee payment.	City of Arroyo Grande, County of San Luis Obispo.	The applicant shall submit documentation to the San Luis Obispo County verifying that the appropriate fees have been paid to the City of Arroyo Grande.	Prior to recordation of the final map.
		AIR QUALITY			
AQ/mm-1	Based on Table 6-3 of the APCD's 2003 CEQA Handbook, the estimated construction emissions for the project will exceed the thresholds requiring mitigation. The following measures shall be incorporated into the construction phase of the project and shown on all applicable plans: *Construction Equipment* a. Maintain all construction equipment in proper	Submit and implement required plans.	County of San Luis Obispo, Air Pollution Control District.	The applicant shall include the above measures on all grading and construction plans for Tract infrastructure and individual lot development. the	Prior to issuance of grading and construction permits.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	tune according to manufacturer's specifications; b. Fuel all off-road and portable diesel powered equipment, including but not limited to bulldozers, graders, cranes, loaders, scrapers, backhoes, generator sets, compressors, auxiliary power units, with ARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road); c. Maximize to the extent feasible, the use of diesel construction equipment meeting the ARB's 1996 or newer certification standard for off-road heavy-duty diesel engines; *CBACT* d. Install diesel oxidation catalysts (DOC), catalyzed diesel particulate filters (CDPF) or other District approved emission reduction retrofit devices (determination of he appropriate CBACT control device(s) for the project must be performed in consultation with APCD staff). *Additional Construction Equipment Measures* e. Electrify equipment where possible. f. Substitute gasoline-powered for diesel-powered equipment, where feasible; g. Use alternatively fueled construction equipment on site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel; h. Use equipment that has Caterpillar pre-chamber diesel engines;			County Department of Planning and Building, in consultation with the Air Pollution Control District (APCD) shall verify compliance.	

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	i. Implement activity management techniques as follows: i. Development of a comprehensive construction activity management plan designed to minimize the amount of large construction equipment operating during any given time period; ii. Schedule of construction truck trips during non-peak hours to reduce peak hour emissions; iii. Limit the length of the construction work-day period, if necessary; iv. Phase construction activities, if appropriate.				
AQ/mm-2	Based on Table 6-3 of the APCD's 2003 CEQA Handbook, the estimated construction emissions for the project will exceed the thresholds requiring mitigation. The following measures shall be incorporated into the construction phase of the project and shown on all applicable plans: *Fugitive PM_{10} Mitigation Measures* a. Reduce the amount of the disturbed area where possible. b. Use of 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 mph. Reclaimed (nonpotable) water should be used whenever possible. c. All dirt stock-pile areas should be sprayed daily as needed.	Submit and implement required plans.	County of San Luis Obispo, Air Pollution Control District.	The applicant shall include the above measures on all grading and construction plans for Tract infrastructure and individual lot development. The County Department of Planning and Building, in consultation with the Air Pollution Control District (APCD) shall verify compliance.	Prior to issuance of grading and construction permits.

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	d. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast-germinating native grass seed and watered until vegetation is established. e. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD. f. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used. g. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site. h. All trucks hauling dirt, sand, or other loose materials are to be covered or should maintain at least two feet of free board (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114. i. Permanent dust control measures identified in the approved project revegetation and landscape plans shall be implemented as soon a possible following completion of any soil disturbing activities. j. Wheel washers shall be installed where vehicles enter and exit unpaved roads onto streets, or trucks and equipment leaving the				

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	site shall be washed off. k. Streets shall be swept at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed waster shall be used where feasible. l. All PM10 mitigation measures required shall be included on grading and building plans. In addition, the contractor or builder shall designate a person or persons to monitor the dust control program and order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD prior to land use clearance for map recordation and land use clearance for finish grading of the structure. m. Naturally Occurring Asbestos (NOA) has been identified by the state Air Resources Board as a toxic air contaminant. Serpentine and ultramafic rocks are very common in the state and may contain naturally occurring asbestos. Under the State Air Resources Board Air Toxics Control Measure (ATCM) for Construction, Quarrying, and Surface Mining Operations, prior to any grading activities at the site, the project applicant shall ensure that a geologic evaluation is conducted to determine if naturally occurring asbestos is present within the area that will be disturbed. If NOA is found at the site, the				

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	applicant must comply with all requirements outlined in the Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations. These requirements may include, but are not limited to: 1) an Asbestos Dust Mitigation Plan, which must be approved by the APCD prior to construction, and 2) an Asbestos Health and Safety Program. If NOA is not present, the applicant shall file an exemption request with the APCD. Please refer to the APCD web page at http://www.slocleanair.org/business/asbestos.asp for more information regarding these requirements. If you have any questions regarding these requirements, please contact Karen Brooks of the APCD Enforcement Division at 781-5912. n. Effective February 25, 2000, the APCD prohibited developmental burning of vegetative material within San Luis Obispo County. Under certain circumstances where no technically feasible alternatives are available, limited developmental burning under restrictions may be allowed. This requires prior application, payment of fee based on the size of the project, APCD approval, and issuance of a burn permit by the APCD and the local fire department authority. The applicant is required to furnish the APCD with the study of technical feasibility (which includes costs and other constraints) at the time of application. If you				

Mitigation Measure	Requirements of Measure	Applicant Responsibilities	Party Responsible for Verification	Method of Verification	Verification Timing
	have any questions regarding these requirements, please contact Karen Brooks of the APCD Enforcement Division at 781-5912.				
AQ/mm-3	In the instance wood burning stoves are proposed, the applicant shall submit building plans showing the use of APCD-approved wood burning devices limited to the following: a. All EPA-Certified Phase II wood burning devices; b. Catalytic wood burning devices that emit less than or equal to 4.1 grams per hour of particulate matter that are not EPA-Certified but have been verified by a nationally-recognized testing lab; c. Non-catalytic wood burning devices that limit less than or equal to 7.5 grams per hour of particulate matter that are not EPA-Certified but have been verified by a nationally-recognized testing lab; d. Pellet-fueled woodheaters, and; e. Dedicated gas-fired fireplaces.	Submit and implement required plans.	County of San Luis Obispo, Air Pollution Control District.	The applicant shall include the above measures on all grading and construction plans for individual lot development. The County Department of Planning and Building, in consultation with the Air Pollution Control District (APCD) shall verify compliance.	Prior to issuance of building permits for individual lot development.

IX. REFERENCES AND PREPARATION OF REPORT

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B. EIR PREPARERS

This EIR has been prepared by Morro Group, Inc., a San Luis Obispo based Corporation. The project manager was Mr. Bill Henry, AICP, principal of the firm. The following persons were responsible for preparing the noted sections:

TABLE IX-1
List of EIR Preparers

Preparer	Education	Years of Experience
Project Management		
Bill Henry, AICP, Morro Group, Inc.	B.S., Natural Resources Management M.C.R.P.; City and Regional Planning	15
Shawna Scott, Morro Group, Inc.	B.S., Natural Resources Management	6
Biological Resources		
Gaylene Tupen, Biologist	B.S., Environmental and Systematic Biology.	12
Geology, Drainage and Soils		
Don Asquith, Geologist	B.S.; Geology M.S., Geology Ph.D., Geology	32
Visual/Aesthetic Resources		
Bob Carr, Visual Resources Consultant	B.S., Landscape Architecture	15
Traffic and Circulation		
Keith Higgins and Associates	N/A	22
Air Quality		
Crystahl Handel, Morro Group, Inc.	B.S., Natural Resources Management	6

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X. RESPONSE TO COMMENTS

A. LIST OF COMMENTS RECEIVED

The following agencies and members of the public have prepared comments on the March 2005 Draft EIR:

Federal, State and Local Agencies	
City of Arroyo Grande **City Manager's Office** Letter of April 28, 2005	P.O. Box 550 214 East Branch Street Arroyo Grande, CA 93421 Contact: Steven Adams, City Manager
California Department of Forestry **San Luis Obispo County Fire Department** Letter of May 23, 2005	635 N. Santa Rosa Street San Luis Obispo, CA 93405 Contact: Robert Lewin, Fire Marshall Battalion Chief
San Luis Obispo County **Air Pollution Control District** Letter of May 23, 2005	3433 Roberto Court San Luis Obispo, CA 93401 Contact: Melissa Guise, Air Quality Specialist
San Luis Obispo County **Department of Public Works** Letter of May 16, 2005	County Government Center Room 207 San Luis Obispo, CA 93408 Contact: Richard Marshall, Development Services Engineer

Applicant/Agent	
Adamski Moroski Madden & Green, LLP Letter of May 23, 2005	444 Higuera Street Suite 300 San Luis Obispo, CA 93401 Contact: Thomas D. Green
Adamski Moroski Madden & Green, LLP Letter of May 24, 2005	444 Higuera Street Suite 300 San Luis Obispo, CA 93401 Contact: Thomas D. Green

General Public and Private Organizations	
Andre, Morris & Buttery Email of May 27, 2005	jstmartin@amblaw.com Contact: Jean St. Martin, Attorney
Falcon Ridge Estates Homeowners Association Letter of May 23, 2005	275 Candice Court Arroyo Grande, CA 93420 Contact: Janis Dreyer
Law Office of Babak Naficy Letter of May 25, 2005	1204 Nipomo Street San Luis Obispo, CA 93401 Contact: Babak Naficy

General Public and Private Organizations	
Bob and Kelly Kimball Letter of May 19, 2005	270 Pleasant Lane Arroyo Grande, CA 93420
Martin and Jane Line Letter of May 23, 2005	265 Pleasant Lane Arroyo Grande, CA 93420
Olaf and Anne Shipstead Letter of June 10, 2005	260 Falcon Crest Drive Arroyo Grande, CA 93420
James R. Talbot Mary L. Talbot Letter of May 21, 2005	230 Dove Court Arroyo Grande, CA 93420

The letters of comment are given in the above order with the responses following the individual letters. Letters of comment are reproduced in total, and numerical annotation has been added as appropriate to delineate and reference the responses to those comments. The pages of the letters have been re-numbered to conform to the page sequence of this section.

City of
Arroyo Grande
CITY MANAGER'S OFFICE

P.O. Box 550
214 East Branch Street
Arroyo Grande, CA 93421
Phone: (805) 473-5404
FAX: (805) 473-0386
E-Mail: agcity@arroyogrande.org

RECEIVED
APR 2 2005
S.L.O. CO. PLANNING DEPT.

April 28, 2005

Ms. Julie Eliason, Environmental Division
County Planning and Building Department
County of San Luis Obispo
Courthouse, County Government Center, Room 310
San Luis Obispo, CA 93408-2040

SUBJECT: Recirculated Draft EIR, Busick Tract map
ED 90-061, S8902321, SCH #1994041043

Dear Ms. Eliason,

On behalf of the City of Arroyo Grande, we would like to again express our concerns regarding the impacts of the Busick Tract project as proposed. The most serious impact is traffic circulation. The project would contribute trips to the El Campo Road intersection with State Route 101, which is currently unsafe and Level of Service "F". Traffic impact fees currently collected by the County do not include the potential construction of a much needed interchange or improvements to El Campo Road between 101 and Los Berros Road. Additionally, small contributions from residential suburban subdivisions will not be sufficient to mitigate the circulation deficiency. The recirculated DEIR correctly concludes that the traffic impacts of this project are Class I, significant, adverse and unavoidable, requiring findings and statement of overriding considerations for approval. 1.1

Other impacts, including inadequate public facilities and services such as fire protection are also adverse and only partially mitigated by measures outlined in the recirculated DEIR. While these are potentially Class II if mitigated, they are not resolved by fee payments alone. Neither the January 2004 Draft nor the March 2005 Recirculated DEIR address the lack of safe fire response time provided to the project area. The nearest CDF station in Nipomo is probably more than ten minutes away and even the City Fire Department may be more than six minutes. At minimum, the City fire impact fees should be collected, but the burden of City service to County development is inequitable. 1.2 1.3 1.4

Therefore, until necessary circulation, infrastructure and service improvements can be properly coordinated, the City does not believe there exists sufficient justification for a 1.5

statement of overriding considerations. Thank you for your inclusion and consideration of our concerns in the process. 1.5 (cont'd)

Sincerely,

Steven Adams
City Manager

cc. City Council

1. City of Arroyo Grande City Manager's Office

1.1 As noted in the EIR, the City of Arroyo Grande is the lead agency for future improvements to the El Campo Road/Highway 101 intersection. Based on this, the County does not include improvements to this intersection in the list of projects for the South County Circulation Fee Program. As noted in the EIR, the City of Arroyo Grande does not currently have a fee program associated with the El Campo Road/Highway 101 Interchange Project. The applicant has revised the project to avoid the Class I impact at the El Campo Road/Highway 101 intersection by obtaining primary access through the City via Castillo Del Mar Drive (refer to Chapter III, Project Description). The Final EIR incorporates this project revision, including revisions to the Traffic and Circulation section (refer to Section V.E. of the Final EIR).

1.2 The proposed project is a 16-lot residential subdivision and would not result in project specific significant impacts to any public services. The County Board of Supervisors adopted public facility and school fee programs to address cumulative impacts to public services. No changes to the EIR are necessary.

1.3 Based on the County Safety Element of the General Plan, the project site is located within a 10-minute emergency response time zone, which does not constitute a significant impact. The revised project was reviewed by the California Department of Forestry/County Fire (Cal Fire) and no significant fire safety impacts were identified (refer to Section V.H., Fire Safety).

1.4 Cal Fire has a mutual aid agreement and automatic aid agreement with the City of Arroyo Grande Fire Department. Based on this agreement, the County will respond to fires within the City, and the City will respond to fires within the County, as necessary. Based on this agreement, the County does not apply fees to City projects, and the City does not apply fees to County projects, therefore, no additional fees are necessary (refer to Section V.H., Fire Safety).

1.5 These issues have been addressed in the EIR. Based on the applicant's redesign of the project, potentially significant impacts would be mitigated to less than significant, and adoption of overriding considerations is not necessary. The Final EIR incorporates this project revision.

RECEIVED
MAY 2005

CDF/San Luis Obispo County
Fire Department

635 N. Santa Rosa • San Luis Obispo • California 93405

May 23, 2005

Julie Eliason, Environmental Resource Specialist
Dept. of Planning and Building
County Government Center
San Luis Obispo, CA 934408

Subject: Busick Tract Map – Draft EIR ED90-061, S890232T

Dear Ms. Eliason,

I have reviewed the Draft EIR for the Busick Tract Map. A concern we have identified with this project is with the proposed emergency access road. The road should be designed as a secondary access road which must meet CDF road standards. The road should have no obstructions and remain open to through traffic in both directions. Roads that are obstructed by gates or bollards most often fall into disrepair, are unknown to the residences that would use the road in the event of an emergency, residence are unable to open the obstruction without fire personnel at scene delaying their evacuation, and often times these roads become obstructed with parked vehicles. Therefore we request that the road be required to fully meet the CDF road requirements for access without any obstructions. 2.1

Sincerely,

Robert Lewin, Fire Marshal
Battalion Chief

Cc: Dan Anderson, Battalion Chief
file

2. California Department of Forestry/San Luis Obispo County Fire Department

2.1 The applicant has revised the project to include primary access via Castillo Del Mar Drive and secondary access via Coast View Drive. The Final EIR has been revised to include this project description change, and an additional resource section (fire safety) has been added to the analysis chapter (refer to Chapter I, Introduction; Chapter III, Project Description; and Section V.H., Fire Safety). The proposed project revisions, including the proposal for a gate located at both the primary and secondary access locations, were reviewed and approved by Cal Fire (Rob Lewin, June 13, 2007). Based on implementation of project changes, the proposed project would meet Cal Fire regulations and no significant fire safety impacts would occur (refer to Section V.H., Fire Safety).

AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN LUIS OBISPO

MAY 2 3 2005

DATE: May 23, 2005

TO: Julie Eliason, Environmental Resource Specialist
San Luis Obispo County Department of Planning and Building

FROM: Melissa Guise, Air Quality Specialist
San Luis Obispo County Air Pollution Control District

SUBJECT: Busick Tract Map - Draft Environmental Impact Report (DEIR); ED90-061, S890Z3ZT, SCH#1994041043

Thank you for including the APCD in the environmental review process. We have completed our review of the above referenced project. The project as proposed would subdivide an existing 47.54 acre parcel into 16 residential lots (ranging from 2.0 to 5.3 acres each). The proposed project is within the Residential Suburban land use category and is located at the north end of Coast View Drive, approximately 700 feet northwest of Falcon Crest Drive in Arroyo Grande. The District submitted comments on this project when the original Draft Environmental Impact Report was circulated in January 2004. Many of the comments we had at that time have been incorporated into the current DEIR dated March 2005. We have the following comments regarding this project.

General Comments

In our first comment letter dated March 11, 2004 the District indicted the project will promote additional development in areas **outside** of the urban and village reserve lines (URL/VRL). This is inconsistent with the goals and objectives of the Clean Air Plan (CAP) and could contribute to existing stresses on air quality, circulation and other resources that are not sustainable or easily mitigated. **3.1**

Growth inducing impacts were discussed in the DEIR dated March 2005, in Section VII, page VII-1 and in the Appendix F Comment Letters page 19. It was noted that the project is located immediately adjacent to Arroyo Grande city limits and is bordered on one property line by State Highway 101 and surrounded on three property lines by existing residential development including single family residence and a mobile home park. The conclusion in the Growth Inducing Impact Analysis section of the EIR and the response to previous comments was the proposed project is considered infill and would not promote urban sprawl. **3.2**

District staff does not consider development outside the URL to be infill. The fact that this site borders the URL and is surrounded by other developments, some of which is also outside the URL will only encourage more development of this sort outside the URL, resulting in additional sprawl development. **We do not support this type of development**.

3433 Roberto Court • San Luis Obispo, CA 93401 • 805-781-5912 • FAX: 805-781-1002
info@slocleanair.org • www.slocleanair.org

printed on recycled paper

Busick Tract Map - EIR
May 23, 2005
Page 2 of 2

Specific Comments

Section V.F Air Quality, page V-74

On page V-74 the statement is made that "on a regional basis, ozone is the pollutant of great concern in the County, particularly within the coastal plateau." Even though San Luis Obispo County has been designated an attainment area for ozone, it is true that it is still a pollutant of concern, but since the County is non attainment for PM, PM is also considered a pollutant of concern. 3.3

Section II, pages 21, Section V.F Air Quality, pages V-80; and Section VIII, page VIII-19 - AQmm-2

An additional mitigation measure was added to AQmm-2 to address Naturally Occurring Asbestos. It should be noted that if NOA is not present, an exemption request must be filed with the District. A copy of this form is included as Attachment 1. 3.4

Appendix E, Air Quality, Table 1

It should be noted that the California standard for PM2.5, Annual Arithmetic Mean is 12 $\mu g/m^3$ and the Annual Arithmetic Mean for PM10 is 20 $\mu g/m^3$. It appears these changes did not get incorporated into Table 1 in Appendix E. 3.5

Again, thank you for the opportunity to comment on this proposal. If you have any questions or comments, feel free to contact me at 781-4667.

MAG/sll

cc: Tim Fuhs, SLOAPCD Enforcement Division
Karen Brooks, SLOAPCD Enforcement Division

Enclosure: Attachment 1, Naturally Occurring Asbestos

h:\ois\plan\response\2833-2.doc

ATTACHMENT 1

Attachment 1

Naturally Occurring Asbestos – Construction & Grading Project – Exemption Request Form

Send To:

San Luis Obispo County Air Pollution Control District
3433 Roberto Court
San Luis Obispo, CA 93401

Fax: (805) 781-1002

Applicant Information/ Property Owner		**Project Name**	
Address		**Project Address and /or Assessors Parcel Number**	
City, State, Zip		**City, State, Zip**	
Phone Number	**Date Submitted**	**Agent**	**Phone Number**

The District may provide an exemption from Section 93105 of the California Code of Regulations - Asbestos Airborne Toxic Control Measure For Construction, Grading, Quarrying, And Surface Mining Operations for any property that has any portion of the area to be disturbed located in a geographic ultramafic rock unit; if a registered geologist has conducted a geologic evaluation of the property and determined that no serpentine or ultramafic rock is likely to be found in the area to be disturbed. Before an exemption can be granted, the owner/operator must provide a copy of a report detailing the geologic evaluation to the District for consideration. The District will approve or deny the exemption within 90 days. An outline of the required geological evaluation is provided in the District handout **"ASBESTOS AIRBORNE TOXIC CONTROL MEASURES FOR CONSTRUCTION, GRADING, QUARRYING, AND SURFACE MINING OPERATIONS – Geological Evaluation Requirements".**

APPLICANT MUST SIGN BELOW:
I request the San Luis Obispo Air Pollution Control District grant this project exemption from the requirements of the ATCM based on the attached geological evaluation.
Legal Declaration/Authorized Signature:
Date:

OFFICE USE ONLY - APCD Required Element – Geological Evaluation			
APCD Staff:		Intake Date:	OIS Tracking Number:
Approved	Not Approved	APCD Staff:	Date Reviewed:
Comments:			

3. San Luis Obispo County Air Pollution Control District

3.1 The EIR has been revised to reflect APCD's statement that the proposed project is inconsistent with the Clean Air Plan (refer to Section V.F.5.c, page V-101). The EIR notes that this inconsistency would not result in significant impacts because: 1) the proposed density of this subdivision is still consistent with what was assumed in the last update of the Clean Air Plan, which, based in part on this density, approved the necessary control measures to achieve acceptable air quality attainment in the future; 2) the proposed project site is located adjacent to the City of Arroyo Grande urban area, and; 3) standard forecast modeling (e.g., ARB URBEMIS) identifies that vehicles in the near future will produce substantially lower emissions (e.g., use of electric, hybrid and advanced technology vehicles). Based on the size of the project and implementation of standard air quality mitigation measures described in the previous section, both individual and cumulative impacts are expected to be less than significant as it relates to the Clean Air Plan land use strategies.

3.2 As noted in the EIR (Chapter VII, Other CEQA Concerns), the project site is surrounded by residential and urban development, and is located adjacent to the Arroyo Grande City Limit line. The applicant is proposing a subdivision consistent with the underlying land use category, similar to surrounding development. The EIR has been revised to remove the description of the proposed project as "in fill" (refer to Section VII.A, page VII-1). The EIR has been revised to note that APCD does not support this type of development (refer to Section V.F.5.c., page V-101).

3.3 Please refer to Section V.F.1.c. of the EIR, pages V-92 and V-93. A statement has been added to this section noting that ozone and particulate matter are considered pollutants of concern.

3.4 AQ/mm-2 has been revised to include the language: "If NOA is not present, the applicant shall file an exemption request with the APCD" (refer to Table II-1, and page V-99).

3.5 Please refer to Appendix E, Table 1. Previously requested changes were completed prior to publication of the Revised Draft EIR. No changes to the EIR are necessary.

SAN LUIS OBISPO COUNTY
DEPARTMENT OF PUBLIC WORKS
Noel King, Director
County Government Center, Room 207 • San Luis Obispo CA 93408 • (805) 781-5252
Fax (805) 781-1229 email address: pwd@co.slo.ca.us

May 16, 2005

MAY 18 2005

MEMORANDUM

TO: Julie Eliason, Environmental Specialist

FROM: Richard Marshall, Development Services Engineer RCM

SUBJECT: Busick Tract 1789 – Re-Circulated Draft EIR

Thank you for the opportunity to review the Re-Circulated Draft EIR for the Busick Tract. I have the following comments:

On page V-66, section TR/Impact 1 identifies traffic at the intersection of El Campo Road and Highway 101 as a Class I (significant and unavoidable) impact. This intersection is an at-grade crossing, and is already operating at Level of Service (LOS) F, as noted earlier in the report. As such, the addition of project traffic to this facility constitutes a significant impact. **4.1**

The specific intersection movement of greatest concern is left turns from El Campo Road to go northbound on the highway. A secondary concern would be left turns from northbound 101 to go onto El Campo Road. Both of these movements are highly constrained by having to wait for acceptable length gaps in the southbound traffic on the highway. While there is some long-term potential for modifying this location into a grade-separated interchange, it is not reasonably related to the impact of the proposed 16 lots of this tract to require this developer to construct such an improvement. Short of requiring construction by this applicant, there is no mechanism in place for collecting a proportional-share financial contribution. Thus, it has been concluded that there is no improvement or other measure which adequately mitigates the identified significant impact. **4.2**

Alternative mitigation to consider. I would like to suggest an alternative which might mitigate the impact in a different way: eliminate the left-turning movements at this intersection. Those who wish to go north from El Campo could either go south on the highway and turn back at either the Laetitia Vineyard access or the Los Berros interchange, or they could go south on El Campo and use Los Berros Road to head back northerly. Similarly, those wishing to turn left onto El Campo from northbound 101 would **4.3**

be able to use alternate routes that are not substantially out of the way. 4.3 (cont'd)

Re-routing traffic with such a turn-movement restriction could result in adverse impacts at other locations. The traffic consultant should evaluate this proposal to determine whether this would be the case. If there are no adverse impacts, then I suggest that a mitigation measure could be worded like this: 4.4

> *Prior to recordation of the final map, the applicant shall modify the El Campo/Route 101 intersection to eliminate left-turn movements, under an encroachment permit from the California Department of Transportation.*

I have no other comments on the Draft EIR. Please call me at 781-5280 if you have questions or need additional information.

c: Rob Strong, City of Arroyo Grande
James Kilmer, Caltrans District 5
Higgins Associates

File: Tract 1789

L:\DEVELOP\MAY05\ELIASON-2.MMO.wpd.REM:CAH

Richard Marshall
02/07/2005 04:40 PM

To: Julie Eliason/Planning/COSLO@Wings
cc:
Subject: Busick Tract 1789 - Revised Admin. Draft EIR

I have reviewed the subject report and have just a couple suggestions regarding items that are new or changed from the previous version: **4.5**

1. Page V-66, the paragraph entitled "Mitigation" under TR/Impact 1: Previously, it was suggested to contribute to a funding mechanism we thought the City of Arroyo Grande had, for improving the El Campo interchange. Since the City doesn't have such a mechanism, it's understandable that this paragraph now says, "because the City of Arroyo Grande does not have a traffic impact fee mitigation program in place ..." However, now that this will stand alone in the revised EIR, it might be a more complete discussion to say, "because neither the County of San Luis Obispo, nor the City of Arroyo Grande has a traffic impact fee program in place ..." Because that's really what the problem is -- no one has a mechanism for collecting funds from this development, and no agency has this as a high priority to change that situation.

2. Page V-70, Mitigation TR/mm-2: Currently reads, "... the applicant shall contribute to the City of Arroyo Grande Capital Improvement Program." I think it would be more clear to make reference to this payment mechanism by whatever the City calls it. A Capital Improvement Program is a term for a spending plan, not for a revenue plan. In his March 9, 2004 letter, Rob Strong suggests that this (and other developments) should pay "City traffic and signalization impact mitigation fees" for proportional effects on the City street system. I feel that referring to the City's fee system by its name will not only make it clear what's being paid, but should pin down how much (I assume they would pay the same per dwelling unit as the City collects from its own developments).

Please let me know if you have any questions or need additional information.

4. San Luis Obispo County Department of Public Works

4.1 The applicant revised the proposed project to reduce the identified Class I impact to less than significant. The revised project is described in Chapter I, Introduction and Chapter III, Project Description of the Final EIR. The Traffic and Circulation section (Section V.E.) has been revised to analyze the project changes. Based on the revised project, no Class I traffic impacts would occur.

4.2 Refer to response to comment 4.1 above. In addition, the EIR has been amended to specify the El Campo Road / Highway 101 intersection specific turning movements of greatest concern to the County Public Works Department (refer to Section V.E.5.a, page V-84). As stated in the EIR (page V-80), the City of Arroyo Grande is the lead agency that has initiated the process with Caltrans to improve this intersection to a grade-separated interchange; however, at this time, the City has not established a funding mechanism to collect mitigation fees towards a long-range solution. The project has been redesigned to route a significant percentage of project related traffic north to Castillo Del Mar, which would reduce potential traffic impacts at this intersection to less than significant.

4.3 Refer to responses 4.1 and 4.2 above. The applicant redesigned the proposed project, which was reviewed by the County Public Works Department. Based on the redesign, no potentially significant traffic impacts at the El Campo Road / Highway 101 intersection would occur, and no mitigation measures are recommended or determined to be necessary. The EIR has been revised to include the project revisions, and applicable revisions to the traffic analysis (refer to pages V-83 and V-84).

4.4 Refer to response to comment 4.3 above.

4.5 This comment pertains to the Administrative Draft EIR, and was submitted by the commenter, Mr. Marshall, as an attachment to the May 16, 2005 letter. These comments were addressed and incorporated into the public review Draft EIR.

TELEPHONE: (805) 543-0990
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e-mail: info@adamskimoroski.com

ADAMSKI MOROSKI
MADDEN & GREEN LLP
ATTORNEYS AT LAW

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PASO ROBLES OFFICE
1200 VINE STREET
PASO ROBLES, CA 93446-2268
TELEPHONE: (805) 238-2300
FACSIMILE: (805) 238-2322

May 23, 2005

HAND-DELIVERED

Julie Eliason, Environmental Division
County Planning and Building Department
County Government Center, Rm. 310
San Luis Obispo, California 93408-2040

Re: Comments to Draft EIR
Busick Tract Map
ED90-061; S890232T; SCH#1994941043

Dear Ms. Eliason:

This firm represents the applicants for the above-referenced project. On behalf of the applicants we make the following comments to the draft EIR:

Initially, we note that this residential project provides much needed housing to the residents of the County. It provides that housing through a low-density development with minimal impacts on the viewshed in a use pattern consistent with the immediately adjacent neighborhoods. The present configuration is the result of 15 years of interaction between the applicant, the County and the surrounding neighborhoods in which the applicant has consistently reduced or modified the project in order to address concerns raised during that process. Below, we address two of the issues raised by the draft EIR. We reserve the right to address any comments to the draft EIR that might be received prior to or at the certification hearing. 5.1

1. Water Supply. 5.2

As noted in the draft EIR, the Rural Water Company (RWC) will provide water for the project. A will-serve letter has been issued to the applicant. The Rural Water Company holds a blanket easement over Falcon Ridge Estates that will allow the project to connect to an existing water main. As noted in the draft EIR, RWC will require that the applicant construct a 210,000-gallon water tank as a condition of providing water service.

2. Traffic Impacts. 5.3

The draft EIR accurately relates the saga of the City of Arroyo Grande's involvement in the traffic analysis and mitigation efforts for this project. However, it does not quite do justice to the fact that throughout the process, the City's protestation and actions have been disingenuous at best.

Julie Eliason, Environmental Division
County Planning and Building Department
May 23, 2005
Page 2

5.3 (cont'd)

The City originally mislead the applicant and the County by repeatedly misrepresenting to the applicant, the County and the EIR consultant that traffic mitigation fees for impacts related to the 101/El Campo intersection were available. During the preparation of the first draft EIR, the City consistently advised everyone that any traffic impacts could be mitigated through the City's traffic impact fee program. After the initial draft EIR was prepared, the City then advised everyone that it had no impact fee program and wouldn't have one in place before the project was completed. Therefore, it claimed, there is no mitigation for impacts to the 101/El Campo intersection.

The City's current position is to oppose the project because it adds very minimal traffic to the already impacted 101/El Campo intersection. The City's underlying intention is belied by the fact that it has the ability to eliminate any project-related impacts on the 101/El Campo intersection without reducing the level of service to any other intersections. This ability comes about because the City holds a one-foot easement admittedly for the sole purpose of blocking Orchard Street as a means of ingress and egress for the Busick Tract. If the City relinquishes that easement, which it has steadfastly refused to do, there would be no additional impact to the 101/El Campo intersection. Instead, the minimal traffic from the project would be directed along Orchard to Fair Oaks Avenue.

The applicant worked with the City of Arroyo Grande for 18 months in an effort to reach an agreement for removal of the one-foot easement. The city purported to condition abandonment of the easement on the construction of a connector road from Orchard Street to Valley Road. During that process, the applicant commissioned a traffic study by Associated Transportation Engineers. The study, dated August 17, 2004, found that the use of Orchard Street as a means of ingress and egress, even without the Valley connector, would have no impact on the level of service:

> "...the project would not significantly impact the intersections, as they would continue to operate in the LOS "A"-"C" range." ATE Report, dated August 17, 2004."

Nevertheless, despite the ATE report, the City refused to consider the request to abandon the easement unless the applicant also constructed a connector road to Valley Avenue, which, as shown in the ATE traffic study, was unnecessary. In addition, the City also knew that the school district and the other property owner were unwilling to grant the easements necessary for the Valley connector.

Further, even though the Valley connector was unnecessary, the applicant, in an attempt to appease the City, offered to fund future construction of the improvement. The City refused and is now opposing the project based upon the very traffic impacts that it has created because of its underlying political motives. These political issues have no place in environmental review. If

Julie Eliason, Environmental Division
County Planning and Building Department
May 23, 2005
Page 3

which has unnecessarily delayed the project, cost the applicant to incur unnecessary expense and prevented 16-families from finding a home in San Luis Obispo County. 5.3 (cont'd)

Very truly yours,

ADAMSKI MOROSKI MADDEN & GREEN LLP

THOMAS D. GREEN

TDG:tlg
G:\VISTADELMAR\FALCONRIDGE\COR\COPLNGDEPT 052305.DOC

5. Adamski Moroski Madden & Green, LLP

5.1 Comment noted. No changes to the EIR are necessary.

5.2 Comment noted. No changes to the EIR are necessary.

5.3 Please refer to Chapter I (Introduction) and Chapter III (Project Description) of the Final EIR. These sections include a description of the applicant's negotiations with the City of Arroyo Grande, which occurred following circulation of the Revised Draft EIR.

05/24/2005 TUE 12:13 FAX 805 543 0980 002/002

Julie Eliason, Environmental Division
County Planning and Building Department
May 24, 2005
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the City opposes the project merely because it doesn't want the property developed in any manner, it should simply say so and not engage in misleading and potentially actionable conduct which has unnecessarily delayed the project, cost the applicant to incur unnecessary expense and prevented 16-families from finding a home in San Luis Obispo County. 6.1

Very truly yours,

ADAMSKI MOROSKI MADDEN & GREEN LLP

THOMAS D. GREEN

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6. Adamski, Moroski, Madden & Green, LLP

6.1 The third page of the May 23, 2005 letter was re-sent by fax on May 24, 2005 due to a typo (i.e., partial sentence left out of the original letter). The revised comment is noted. No revisions to the EIR are necessary.

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May 25, 2005

Hand Delivered

Julie Eliason
Environmental Resource Specialist
SLO County Dept. of Planning and Building
County Government Center
San Luis Obispo, CA 93408
(805) 781-1242

RE: Busick Tract Map 2789 Revised Draft EIR

Dear Ms. Eliason,

I submit these comments relative to the Busick Tract Map 1789 Revised Draft EIR ("RDEIR") on behalf of South County Citizens for Improved Access ("SCCIC"). SCCIC is dedicated to preservation and conservation of the human environment and particularly improving traffic conditions in the South County.

Traffic and Circulation Issues: **7.1**

- The existing levels of service for various intersections that are likely to be affected by the proposed project are listed in Table V.E.-1, RDEIR, according to which, the level of service ("LOS") at Highway 101/El Campo intersection is "C" overall for a.m. peak hours (20.5 seconds delay) and overall "A" for p.m. peak hours. (RDEIR at V-61.) The LOS for northbound traffic is rated as "F" based on delays exceeding 200 seconds. These estimates, however, are inconsistent with the California Department of Transportation findings which (as noted in the RDEIR) were made in connection with a Project Study Report ("PSR") that was released in September 2003.

  According to the PSR, "the traffic on the El Campo Road approach to US-101 experience significant delay." Table 2 on page 11 of the PSR provides that the LOS value for both a.m. and p.m. peak hours at the 101/El Campo intersection was "F", based on delays that exceeded 1000 seconds per vehicle.

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As it currently reads, the RDEIR is misleading and tends to minimize traffic delays relative to the 101/El Campo intersection. It is important for the EIR to accurately reflect that delays experienced by motorists at this intersection exceed 1000 seconds. Moreover, Table V.E.-1 must be revised to reflect that both northbound and southbound motorists experience delay at this intersection. It makes little difference that southbound traffic would experience shorter delays when southbound motorists cannot approach the intersection until vehicles that precede them (including the northbound motorists) have cleared the intersection. **7.1 (cont'd)**

- The RDEIR does not adequately discuss and evaluate the dangers or the risk to public health that is associated with the 101/El Campo at-grade crossroad intersection. The PSR provides that during a 36 month period (8–95 to 7-31-98), there were a total of 10 accidents at this intersection. (PSR at page 12, Table 4.) The PSR also cites a memorandum from the County, which analyzed the accident data for El Campo Road near the intersection. According to the County memo, there were thirteen accidents at El Campo Road during a four year period. According to the memo,"this segment of El Campo Road has an above-average collision rate and is one (1) of ten (10) rural road segments, which have been identified for further analysis." PSR at page 13. More recent accident reports obtained from Caltrans document a total of 6 accidents at the 101/El Campo intersection between November 2000to September 2003. The data collectively paint a grim picture of the 101/El Campo intersection as posing a serious threat to the health of South-County residents. The RDEIR must be revised to accurately convey this concern. **7.2**

- The RDEIR fails to adequately discuss or analyze the project's cumulative impact on circulation. It appears that the analysis was based on "the approved/pending projects in the area, . . ." CEQA, however, requires that cumulative impact analysis be conducted not based on a "list" of approved and pending projects, but on the area's development potential as provided in the County General Plan. See, Communities for Better Environment v. California Resource Agency ("CBE") 103 Cal. App. 4th 98, 124 (2002). Basing the cumulative impact analysis only on existing or pending projects will tend to underestimate the future traffic levels. The RDEIR must be revised to include an adequate analysis of the project's cumulative impact on circulation in light of the County and City's General Plan. **7.3**

- The PSR estimates that even with implementation of mitigation measures -including the construction of both on and off ramps- by 2030, the LOS for north-bound on and off ramps will be "F". Southbound, the LOS will be "D" for the on-ramp and "F" for the off-ramp. Accordingly, the EIR must be revised to more accurately reflect the expected LOS for the intersection. **7.4**

- SCCIC supports the "Revised Access Alternative A" and calls on the County to continue to engage the project applicant, City of Arroyo Grande and other interested parties to find an alternative access through the City. **7.5**

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Biological Resources.

- Burrowing owl.

The RDEIR indicates that suitable habitat for the Burrowing owl is present throughout the site, and the species was observed at the site in 1996. Although a 1997 focused survey did not find fresh evidence of occupancy, the report indicated that individuals may well use the site for foraging or occupy burrows in the future. Yet the RDEIR refers only to the 1997 survey, and not to the observation in 1996. **7.6**

The 1997 survey is by now stale. The RDEIR recommended pre-construction surveys are inadequate because they will not enable the County or the public to adequately determine the significance of the impact to the owl, or to decide whether the proposed mitigation measures will reduce the impact to less than significant, prior to the certification of the EIR for the project. Accordingly, focused surveys should be required prior to certifying the EIR and approval of the project. **7.7**

The RDEIR implies that the impact to burrowing owl habitat need not be mitigated unless owls are found to "occupy the site". (V-37) Even if it is not occupied (i.e. no nesting), the site does provide important foraging habitat for owls that may occupy sites nearby. As such, loss of foraging habitat will result in a significant adverse impact. The RDEIR must be revised accordingly. **7.8**

Moreover, the project proponent must be required to mitigate the loss of owl foraging habitat. The 1997 survey recommends permanent protection of suitable burrowing owl habitat (at the ratio of 1:1). This measure should be made a conditional of approval in recognition of the fact that the proposed project will permanently disturb suitable burrowing owl habitat. **7.9**

RDEIR would allow project applicant to disturb occupied burrows during nesting under certain conditions. There is no analysis of whether and to what extent disturbing nesting owls may result in harm to the owls and their off-spring. As such, there is no substantial evidence in the record to support a conclusion that disturbing nesting owls will not result in a significant impact. The RDEIR fails to propose and discuss alternatives to disturbing nesting owls. Such alternatives must be proposed and discussed because disturbing occupied nests would clearly cause an adverse impact. In the alternative, the RDEIR must discuss why suitable alternatives would be infeasible. **7.10**

- Nesting Raptors and song birds. **7.11**

The RDEIR admits that the project may result in removal of trees that provide suitable nesting habitat for birds of prey and other bird species. The RDEIR indicates that White-tailed kites (Fully protected species under California law, and "special concern" under Federal law) were observed on the site during wildlife surveys. An individual Northern harrier (California special concern) was also observed on site. Moreover, the RDEIR indicates that the project site provides suitable nesting habitat for other special status species, such as the Cooper's hawk.

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The RDEIR fails adequately to analyze the project's impact on these special status species. Thus, for example, the RDEIR fails to discuss the significance of the loss of foraging habitat to these special status species. Loss of foraging habitat is a significant impact because it will adversely impact the resident birds (nesting on the northeastern oak forest portion of the site) as well those birds that nest in the vicinity of the project, which nevertheless forage on the project site. RDEIR must be revised to adequately discuss this impact and propose adequate mitigation measures to address this impact. **7.11 (cont'd)**

- Monterey Dusk-footed Woodrat and American badger **7.12**

No adequate surveys for the Monterey Dusk-footed Woodrat or the American badger were ever conducted despite the RDEIR's admission that "it is expected that woodrats and badgers could occur in oak woodland and grassland habitats of the project site . . .) (V-39.) Instead, the RDEIR proposes preconstruction surveys. Post-certification surveys, however, will not permit the decision makers (i.e. the County) and the public to adequately determine the project's impact on these species. As such, the project applicant should be required to conduct adequate surveys for these species before the project is reviewed for final approval.

In case active burrows are founds on site, the RDEIR proposes that construction shall be delayed until the animal(s) has vacated the burrow, or "other avoidance measures (approved by CDFG) are implemented." This proposed mitigation measure is impermissibly vague because of the reference to "other . . . measures." Approval by CDFG does not constitute an adequate performance standard. **7.13**

More importantly, the RDEIR fails to propose any mitigation for the permanent loss of Woodrat or badger habitat. This is a significant biological impact which must be avoided or adequately mitigated. The RDEIR must be revised accordingly. **7.14**

- Cumulative biological impacts are not addressed **7.15**

The RDEIR admits that the permanent loss and modification of habitat for special status species will result in a cumulatively significant impact. (V-40) Yet, the RDEIR does not propose any meaningful measures to mitigate this cumulative impact.

The protection of the oak trees within the northeastern portion of the site will only minimally mitigate the impact on the oak woodland habitat. The benefit from this mitigation measure is limited because although individual oak trees will be protected, the oak woodland's biological value (as in providing nesting and foraging habitat for birds and other species) will be significantly diminished as a result of the indirect impact of the nearby residential development. It can be reasonably expected that the residents of the proposed homes will hike through these woods, that their cats will hunt the resident birds, etc. It can be expected that species such as the fox, great-horned owl or kingsnake will abandon the site after the homes are fully occupied. As such, the preservation of the trees on the northeast on the property will not fully mitigate the impact on woodlands. **7.16** **7.17**

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Moreover, the RDEIR admits that the "ongoing loss of annual grassland could contribute to a regional decline in important habitat for a variety of wildlife," yet no mitigation measure has been proposed to address the loss of grasslands. **7.18**

Sensitive Habitats **7.19**

Although there is evidence of ephemeral streams and wetlands on the site, no wetland delineation has been conducted. Without such a delineation, the County cannot adequately assess the project's impact on wetlands. The RDEIR provides that the wetlands delineation would be conducted according to the Army Corps of Engineers standard. Reliance on the Corps standard is inappropriate because California has adopted its own more expansive wetlands definition. As announced in 1993, the goal of the California Wetlands Conservation Policy is to establish a policy framework and strategy that will ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship and respect for private property. **7.20**

The California Dept. of Fish and Game, in conjunction with adopting a wetlands policy on March 9, 1987, adopted the definition used by the U.S. Fish and Wildlife Service for defining wetlands. Under this definition, an area is considered a wetland if it meets any one of the following three criteria: **7.21**

1) at least periodically, the land supports hydrophytic plants, or
2) the substrate is predominately undrained hydric (wetland) soil; or
3) the substrate is nonsoil and is saturated with water or recovered by shallow water at some time during the growing season of each year.

(Policy 660 FW 2).

The U.S. Army Corps of Engineers' definition of wetlands uses a "three parameter test" for permitting and planning purposes. Under this definition, an area is considered a wetland if it contains hydrophytic plants (plants that have adopted to live in wetlands), and hydric soil, and wetland hydrology. All three conditions must be met for an area to be considered a wetland. 33 Code of Federal Regulations (CFR) §328.3(b), 40 CFR 230.3(t).

The Army Corps' definition of wetlands is far more restrictive than the DFG definition. As such, using the Corps' definition will result in understating the extent of the wetlands, in contravention of the State's policy of protection of wetlands and CEQA's policy of maximum feasible protection of the sensitive resources, including wetlands.

The appropriate standard for wetland delineation is the one adopted by California DFG and Coastal Commission, not the more restrictive definition adopted by the U.S. Corps. of Engineers. **7.22**

Respectfully submitted

Babak Naficy

7. Law Office of Babak Naficy

7.1 The Traffic Analysis Report (Higgins Associates; April 29, 2002) was prepared consistent with County guidelines, and was reviewed and approved by the County Public Works Department. The report and EIR both disclose that the El Campo Road/State Route 101 northbound approach is LOS F during both A.M. and P.M. peak hours. The Level of Service determination is based on actual traffic counts and seconds of delay, and the Highway Capacity Manual (2000) LOS calculations are utilized as thresholds. At the time the traffic study was prepared, the threshold of significance based on a delay time of 200 seconds (LOS F). The EIR consultant, in agreement with the County Public Works Department, determined that northbound approach was determined to be worst approach (Higgins Associates; April 29, 2002). The EIR notes that a LOS F determination is significant, and also notes the safety hazard present at this at-grade highway intersection (refer to pages V-77, V-80, V-82, V-83, V-84, and V-86). No changes to the EIR are necessary.

7.2 The Re-circulated Draft EIR defines the El Campo Road/Highway 101 intersection as "hazardous" and "unsafe," and identified a Class I (significant, adverse, and unavoidable) impact at this intersection, due to both the LOS F designation and unsafe conditions (refer to Revised Draft EIR page V-66). Similar to the EIR, the El Campo Road/Highway 101 Project Study Report (Dokken Engineering, September 2003) documents that the northbound El Campo Road approach to Highway 101 operates at LOS F. For clarification, accident data documented in the El Campo Road/Highway 101 Project Study Report (Dokken Engineering, September 2003) has been incorporated into the EIR (refer to page V-84).

7.3 According the CEQA Guidelines (2005) Section 15130 (b)(1), cumulative impacts are adequately discussed based on either:

(A) A list of past, present, and probable future projects producing related or cumulative impacts, if necessary, those projects outside the control of the agency, or

(B) 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…."

Cumulative impacts were assessed in the Transportation and Circulation section of the EIR based on projects and build-out conditions included in the South County Circulation Study traffic model. This study was utilized in both the City of Arroyo Grande General Plan Update EIR (2001) and the El Campo Road/Highway 101 Project Study Report (Dokken Engineering, September 2003). The cumulative development scenario addressed in the Traffic Analysis Report (Higgins Associates; April 29, 2002) was reviewed and approved by the County Public Works Department. No changes to the EIR are necessary.

7.4 As discussed in the EIR, the City of Arroyo Grande has not yet decided on a preferred alternative design for the El Campo Road/Highway 101 Interchange, or initiated the next

phase of project development. The intent of the El Campo Road/Highway 101 Interchange project is to improve the LOS and safety at this intersection; however, a conclusion regarding the future LOS at this time is speculative and will be determined by the City in the appropriate environmental document for that project. The EIR analysis is based on a reasonable worst-case scenario including the cumulative development scenario (refer to response to comment 7.3 above). The Revised Draft EIR identified a Class I (long-term, significant, adverse, unavoidable) impact at the El Campo Road/Highway 101 intersection based on both a future assumption of LOS F and unsafe conditions; however, the applicant redesigned the project to re-route a significant percentage of project-related traffic to Castillo Del Mar Drive, as reflected in the Final EIR.

7.5 Refer to Section I.D.1 of the EIR, and comment letter number 5 submitted by the applicant's agent. This section of the EIR summarizes the interactions among the applicant, City of Arroyo Grande, County of San Luis Obispo, Lucia Mar School District, and a private property owner. As discussed in Chapter I (Introduction) and Chapter III (Project Description), the applicant and the City, School District, and property owner reached an agreement to allow implementation of the access plan proposed as "Revised Access Alternative A" in the EIR.

7.6 Refer to Table V.C.-2, and Section V.C.1.b.2, which document the observation of a burrowing owl onsite. The EIR references both the 1996 staff observance, and the 1997 protocol survey (refer to page V-34). No changes to the EIR are necessary.

7.7 The EIR assumes a worst-case scenario that burrowing owls may burrow onsite, and identifies a potentially significant impact (refer to BR/Impact 3, page V-49). Mitigation measure BR/mm-15 was amended to clarify required mitigation measures if burrowing owls are present prior to construction activities.

7.8 As stated in the EIR (page V-38), the California Special Concern (CSC) designation applies to the burrowing lifestage of the burrowing owl. The EIR has been amended to clarify that the potential loss of foraging habitat is not considered a significant impact due to the presence of alternative foraging sites in the region (page V-49).

7.9 As noted in response to comment 7.8 above, the loss of potential burrowing owl foraging habitat alone is not considered a significant impact. The Burrowing Owl Survey report identifies the loss of burrowing sites and foraging habitat associated with burrowing sites to be significant, and recommends mitigation measures, which include a requirement for permanent protection of burrowing sites, or creation of suitable burrowing sites at a 1:1 ratio (McCormick; June 1997). The EIR (BR/mm-15) refers to the mitigation measures referenced in the Burrowing Owl Survey (McCormick; June 1997). These specific measures have been added to the EIR for clarification (refer to pages V-49 and V-50).

7.10 As documented in the EIR, no burrowing owl burrow sites were observed onsite (page V-34). BR/Impact 3 identifies a potentially significant impact if burrowing owls are present onsite, and are disturbed or harmed during grading and construction activities (page V-

49). As stated in the EIR (pages V-49 and V-50, including language added for clarification), consultation with the California Department of Fish and Game, and compliance with Fish and Game Code Regulations is required prior to disturbance of a discovered burrow to avoid significant, adverse impacts to burrowing owls. Implementation of BR/mm-15 would ensure that the site is surveyed prior to site disturbance, nesting burrowing owls and their burrows are protected during the critical stages of their life cycle, and the applicant shall comply with all required codes and regulations pertaining to the species to ensure adequate mitigation of all impacts that may occur. No evidence of burrowing owl burrows was observed on the project site; however, the EIR assumes a reasonable worst-case scenario that this species may utilize the project site for burrows in the future. Mitigation measures proposed by the EIR consultant are designed to address the discovery of a burrow site, and mitigate potential impacts to burrowing owl and burrows to a less than significant level. Based on the characteristics of the project site, consideration of an alternative project design would not further reduce potential impacts to burrowing owls.

7.11 Refer to Section V.C.5.b of the EIR, which discusses the loss of foraging habitat for bird species (page V-49), and Section V.C.5.b.(2) (page V-51) and Section V.C.5.b.(3) (page V-52 which discuss potential impacts to nesting birds in both trees and grassland. It is the opinion of the EIR consultant that loss of foraging habitat on this project site is not significant based on the location of the project site and quality of the foraging habitat. No changes to the EIR are necessary.

7.12 As referenced in the EIR, the EIR biologist conducted field surveys for Monterey dusk-footed woodrat and American badger, and no evidence of these species was observed (refer to page V-35. Based on the habitat characteristics of the project site, these species have a potential to occupy the project site, as discussed in the EIR. No changes to the EIR are necessary.

7.13 Sections V.C.5.b.(4) and V.C.5.b.(5) discuss potential impacts to Monterey dusk-footed woodrat and American badger, if observed onsite (refer to pages V-53 and V-54). Based on further consultation with the California Department of Fish and Game (Bob Stafford, September 20, 2007), mitigation language has been amended to clarify that nesting woodrats and badgers would be avoided (refer to BR/mm-18 and BR/mm-19).

7.14 The EIR has been amended to clarify that implementation of the proposed open space easement would preserve the oak woodland habitat area, which is the preferable habitat for Monterey dusky-footed woodrat (refer to page V-53). Based on implementation of this measure, permanent loss of preferable habitat for this species would not occur. BR Impacts 7 and 8 identify potential impacts to badger (including loss of potential foraging and denning habitat), and the cumulative loss of grassland habitat in the region. A portion of grassland habitat would be retained within the open space easement, preserving badger habitat along the fringe of oak woodlands. As noted on page V-54, existing surrounding urban development, including residential neighborhoods, a mobile home park, and highway decrease the overall value of this parcel as a wildlife movement

corridor. In addition, evidence of woodrat and badger were not observed onsite during biological surveys.

7.15 As discussed in the EIR, cumulative impacts resulting from the loss and modification of habitat for special-status wildlife species would be mitigated by implementing pre-construction surveys, establishing an open space easement, and complying with CDFG requirements (refer to page V-55). Implementation of these measures would mitigate the proposed project's contribution to the cumulative effect on wildlife and its habitat. No changes to the EIR are necessary.

7.16 As discussed in the EIR, implementation of the proposed project would potentially impact habitat for special status species. As discussed in Section V.B.5.b. of the EIR (pages V-48 and V-49), the project site is a pocket of currently undeveloped grassland, and is surrounded by urban development (including residences, a mobile home park, and four-lane highway), and is currently affected by adjacent neighbors and domestic animals. It is the opinion of the EIR consultant that based on the existing biological setting, the biological value of the oak woodland habitat area would not be significantly affected by the proposed project. No changes to the EIR are necessary.

7.17 As discussed in response to comment 7.16 above, the existing biological setting includes urbanized areas immediately adjacent to the project site. Based on the location of the project site, and proposal to preserve the oak woodland area, it is the opinion of the EIR consultant that the wildlife corridor present within the oak woodland habitat area would not be significantly affected by the proposed project. No changes to the EIR are necessary.

7.18 The EIR has been revised to clarify that the easement would protect both oak woodland and a portion of grassland habitat located along the northwestern portion of the property and would minimize the project's contribution to the cumulative loss of grassland and oak woodland habitat in the region (refer to page V-55 and Figure V.C.-1).

7.19 The boundary of the ephemeral drainage is delineated in Figure V.C.-1 in the EIR (page V-21). The EIR analysis assumes a worst-case scenario, stated as the disturbance of this entire drainage area (page V-40). No changes to the EIR are necessary.

7.20 Section V.C.5.a has been amended to clarify that disturbance of all or a portion of the ephemeral drainage, resulting in direct impacts to areas potentially qualifying as "Waters of the U.S." including areas that may qualify as jurisdictional wetland as defined by both the U.S. Army Corps of Engineers (Corps) and California Department of Fish and Game (refer to page V-40). Wetland delineations conducted using Corps guidelines would adequately quantify potential impacts to wetlands, and would assist in the determination of required resource agency permits. In addition, mitigation measure BR/mm-3 requires submittal of a wetlands mitigation plan, including a minimum 1:1 replacement and restoration ratio for disturbed wetlands, which would be consistent with the "no net loss" policy (refer to pages V-41 and V-42).

7.21 Refer to response to comment 7.20 above. Mitigation would be required for identified wetlands, as defined by both the Corps and CDFG (refer to page V-40).

7.22 Refer to response to comments 7.20 and 7.21 above. In addition, the project site is not located within the Coastal Zone; therefore, the Coastal Commission definition does not apply.

May 23, 2005

Via Hand Delivery
Julie Eliason, Environmental Division
County Planning and Building Department
County Government Center, Rm. 310
San Luis Obispo, CA 93408-2040

Re: Falcon Ridge Estates Homeowners' Association Written Comments on the DEIR for Busick Tract Map

Dear Ms. Eliason:

These comments are submitted by the Falcon Ridge Estates Homeowner's Association ("Falcon Ridge"), the homeowners association which controls Tract 1256, a forty-six lot residential subdivision adjacent to the southern boundary of proposed Tract 1789. Overall, Falcon Ridge supports the project proposed for Tract 1256, however, Falcon Ridge has the following comments regarding the analysis of the project set forth in the most recent DEIR. Please note that these comments, are the comments of the Association as a whole and do not represent the opinions of each individual owner within the Falcon Ridge development.

Grant of Easement Subject to Conditions Precedent.

8.1 The roads within Tract 1256 are owned and controlled by Falcon Ridge. These are private roads, and there is no right of public access or use. The DEIR states "The applicant obtained an access easement for use of Falcon Crest Drive and Coast View Drive on July 1, 2004." (III.D.2., V.E.1.b.) It is true that Falcon Ridge has entered into an agreement (the "Access Agreement") with JH Land ("JH") whereby Falcon Crest Drive and Coast View Drive may be used to provide access to proposed Tract 1789, however, this agreement contains several conditions precedent which must occur before the Falcon Ridge roads can be used by Tract 1789. There are a number of conditions precedent, but the most significant perhaps is that the Access Agreement requires that JH obtain an abandonment of the existing offer of dedication over the Falcon Crest roads. Additionally, the agreement requires that all of the conditions precedent to the grant of easement to JH be set forth in the conditions of approval for Tract 1789.

8.2 For your reference, the specific conditions precedent to Falcon Ridge's obligation to convey an easement over Falcon Crest Drive and Coast View Drive to JH for Tract 1789 include, but are not limited to:

- Recordation of the Final Map. The Final Map for Tract 1789 shall have been recorded in the official records of the County of San Luis Obispo, California. In the event the Final Map is not recorded within three (3) years of the Effective Date [July 1, 2004], this

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Agreement shall terminate and neither party shall have any further obligations under this Agreement.

8.2 (cont'd)

- Conditions of Approval for the Final Map. JH shall be responsible for ensuring that each and every condition set forth in the Access Agreement is incorporated into the County's conditions of approval for the Final Map for Tract 1789.

- Falcon Ridge Improvements. As a condition precedent to the Association's obligation to grant the Easement, JH, at its sole cost and expense, shall have the obligation of designing and completing the improvements in Falcon Ridge Estates described below, and more particularly in the "Work Letter" attached to the Access Agreement as Exhibit "B" (collectively, the "Falcon Ridge Improvements"), or JH shall have bonded for all improvements required to record the Final Map (the "County Bond"), as well as obtained an additional bond in favor of the Association to cover any Falcon Ridge Improvements required by this Agreement which are not already covered by the County Bond. The Falcon Ridge Improvements are:

a) Access Roads. JH, shall improve the Access Roads (defined as Falcon Crest Drive and Coast View Drive) in conformance to the specifications set forth in the Work Letter, including but not limited to installing conduits under the roads to allow for the undergrounding of utilities within Falcon Ridge Estates and designing and constructing the Access Roads in a way which will improve and, where feasible, correct, existing water flow and contouring problems and which will not create any new water flow and/or contouring issues. This obligation shall include, but not be limited to, the obligation to provide smooth transitions between roadways and private driveways and the obligation to implement all recommendations set forth in the Garing Taylor and Associates Drainage Solutions Project plots W.O. No. 99-069 to remedy existing runoff problems at the intersection of Hawkview and Falcon Crest Drives and the intersection of Dove Court and Falcon Crest Drive.

b) Entrance Gates. JH shall (i) enhance the Entrance Gate on Falcon Crest Road at Los Berros Road, (ii) relocate the Entrance Gate located on Falcon Crest Road at El Campo Road (collectively with the Entrance Gate on Los Berros Road, the "Entrance Gates") in order to provide safer access from El Camp Road; (iii) the installation of Falcon Ridge Estates and JH signs and enhanced landscaping to suit the new location of the Entrance Gate on Falcon Crest Road at El Campo Road, (iv) replace or repair the existing entry intercom system at El Campo Gate as necessary to maintain the existing level of service to Falcon Ridge Estates and the JH Lots, and (v) replace the keypad switch at Los Berros gate with an entry intercom system equal to the El Campo system. Concurrent with the execution of the Access Agreement, the Association approved design plans for performing the work set forth in this Section. JH shall be entitled to place and maintain signs on the entrance gate for the purpose of identifying the JH development (e.g."XYZ Estates"). These signs shall be subject to the approval of the Association within its reasonable discretion.

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8.2 (cont'd)

c) Retardation Basin and Drainage. In compliance with the terms of the Work Letter, JH shall take all necessary measures to ensure that water and sediment drainage from JH Lots 13, 14, 15 and 16 onto Falcon Ridge properties after development and residential grading does not change, in a manner that is detrimental to the Falcon Ridge development and/or the lots therein, or increase from what existed prior to the grading. To reduce the risk of mosquito-borne viruses and other diseases from standing water, JH shall design the retardation basin flow control so that no water remains in the basin longer than four (4) days, regardless of whether the County will allow for longer periods. The retardation basin shall further be designed to adequately control water resulting from a 100-year storm. JH shall cause annual inspections by qualified engineers to ensure continued design performance of the basin. JH shall provide and maintain landscaping to screen the fence around the retardation basin from view of Falcon Ridge unless the fence is constructed of ornamental wrought iron and meets County fence standards for retardation basins. Landscape materials shall be oak trees and/or native shrubs sized to provide a mature appearance within four (4) years of installation.

d) Water Tank. If a water tank is erected, JH shall provide and maintain landscaping to screen the water tank and surrounding fence from view from Falcon Ridge. Landscape materials shall be oak trees and/or native shrubs sized to provide a mature appearance within four (4) years of installation.

e) Lighting Upgrade. JH, at its sole cost and expense, shall replace the five (5) street lights and poles in Falcon Ridge Estates as set forth in the Work Letter and the design of which shall be approved by the Association within its reasonable discretion.

- Abandonment of Offer to Dedicate. JH, at its sole cost and expense, shall have obtained an abandonment of the previously recorded Offer of Dedication of the private streets within Falcon Ridge Estates. The Association agrees to cooperate with the abandonment process. If prior to the approval of the Tentative Map, JH is unable to obtain a commitment from the County of San Luis Obispo to abandon the Offer of Dedication, the Access Agreement shall terminate.

- Restrictions/Improvements on JH Property. The CC&R's, Final Map and/ or other similar documents recorded on the JH Property as part of the processing of the Final Map shall include provisions to accomplish the following:

a) Restricted Lots. Development on JH Lots 13, 14 and 16 shall be limited to single story construction. JH Lot 1 may have second story construction, provided it does not interfere with ocean views from any Falcon Ridge Lot(s). Building envelopes for Lots 1, 13, 14 and 16 proposed on the Final Map shall be sited as near the centerline of the individual JH Lot as feasible. Setbacks along the boundary with Falcon Ridge Estates shall be designed to minimize the impact on the completed homes on Falcon Ridge Estates, subject to approval by the Association. Any other structures shall be at least fifty (50) feet from any Falcon Ridge lot.

3

8.2 (cont'd)

b) Number of Lots. No more than 16 lots shall be created on the JH Property.

c) Architectural Consistency. The parties desire that the aesthetics and character of development on the JH Lots be generally consistent with the aesthetics and character of the development of Falcon Ridge Estates. In order to promote this desire, the CC&R's and any other instrument that relates to the aesthetics of the JH development which are recorded and/or adopted in conjunction with the Final Map shall include:

1) Each lot shall be used as a single family residence, except that with County approval one secondary dwelling unit may be constructed in accordance with the County's secondary unit ordinance.

2) The minimum size of the enclosed living area of a residential unit shall be 2,500 square feet.

3) The minimum size of any garage shall be large enough to contain three standard automobiles.

4) Exterior textures and colors shall be unifying and harmonizing with the setting.

5) Building exterior wall and roof colors shall be earth and other natural tones, and no greater than six (6) in chroma and value on the Munsell Color Scale. Shiny and reflective colors and fluorescent colors shall be prohibited.

6) Roof finished materials shall be of wooden shake or shingle, Spanish tile, or cement tile equivalent.

7) Secondary dwellings, sheds, and other enclosures shall be of the same exterior finish and roofing as the primary dwelling.

8) All improvements that require a building permit must be completed within 18 months from issuance of the permit. Landscaping within thirty (30) feet of residences constructed must be completed within 120 days from issuance of the final inspection permit.

9) All boats, working trucks, trailers, recreational vehicles and non-operational vehicles kept on a lot shall be screened from view of other residences. Mobile homes and modular homes are prohibited except temporarily during the course of construction of the primary residence, and then for no more than 12 months.

10) These restrictive covenants shall be consistently enforced by JH and shall not be amended in a manner that would result in development inconsistent with these architectural standards.

4

- JH Property Utilities. All utility lines within the JH Property shall be placed underground. 8.2 (cont'd)

Again, the easement over Falcon Crest Drive and Coast View Drive to JH Land for use by Tract 1789 will not be recorded until each and every condition set forth above is satisfied. Therefore, the County should review these conditions to determine their effect, if any, on the analysis in the DEIR.

Revised Alternative A. 8.3

The Revised Alternative A avoids the Class I Impact regarding the El Campo Road Interchange by providing access through Vista del Mar and Arroyo Grande. If this alternative is pursued, the County should note that the existing Access Agreement between Falcon Ridge and JH only provides for *primary* access through Falcon Ridge. The Access Agreement specifically allows either party to terminate the agreement if alternative primary access is obtained, in which case the Falcon Ridge roads could not be used for secondary access. Therefore, since access to the Falcon Ridge roads for secondary access is not a certainty under the existing agreement, the analysis in the DEIR should be reviewed and revised to the extent there was any presumed secondary access through Falcon Ridge.

New Alternatives. 8.4

To the extent any new or modified alternatives are incorporated into the Final EIR which were not described in this DEIR, Falcon Ridge specifically reserves the right to comment on those new or modified alternatives at that time.

Drainage. 8.5

Responding to the first Falcon Ridge written comment letter, the new DEIR clarifies that the proposed retention basin, as designed, would empty in one day. But, the DEIR endorses the design "within (existing) County standards." This does not reflect the condition in the Access Agreement that an independent annual inspection be required. Existing County standards require only one inspection one year after the basin is certified. Falcon Ridge therefore asks that the final EIR indicate that there shall be an independent annual inspection.

Traffic Analysis. 8.6

The Traffic Analysis Report (pages 4 and 5 and elsewhere) identifies "an ultimate build out of 63 units in the Falcon Ridge (47 units) and Tract 1789 (16 units) subdivision." Falcon Ridge full build out is 46 units.

Additionally, the analysis in the Traffic Report is based on daily traffic generation of 154 trips per day from 16 units. Yet in the body of the DEIR its "Trip Generation" statement on page V-64 says "The average daily A.M. and P.M. peak hour generation numbers used for the proposed project are shown in Table V.E.4." That table shows 154 trips per day from single family residences. The DEIR then points out on the next page in "Existing and 8.7

5

Proposed Intersection Impacts" that "If individual lot owners chose to construct both a primary and secondary residence the trip generation would increase by 9.6 daily trips per secondary residence." Table V.E.4. shows the totals: 154 ADT for single family residential and another 154 ADT for secondary residences, for a total of 308 peak hour trips. The Traffic Analysis Report does not report on traffic impacts of this full build out, either in sections on "existing plus project" analysis or in "cumulative condition" analysis. Falcon Ridge, therefore, requests that the Traffic Report be revised to include the additional daily trips incurred by build out of the secondary residences. 8.7 (cont'd)

Visual Resources. 8.8

The DEIR in Section V.D.5. would mitigate the adverse impacts on views from public areas by setting limits on residential and water tank heights and locations (VR/mm1 - VR/mm-4.). It identifies Key Viewing Areas (KVAs) for this purpose. However, the chosen KVAs do not include Falcon Ridge. The conditions precedent set forth in the Access Agreement specifically restrict development on lots 1, 13, 14, and 16 in order to preserve views from Falcon Ridge lots.

The DEIR mitigation measure VR/mm-8 calls for screening the water tank with prescribed plantings on the southern, eastern and western sides. The prescribed plantings should screen views from Falcon Ridge Estates as well per specific conditions precedent set forth in the Access Agreement. 8.9

Water Supply. 8.10

A final issue of concern is the project description of water supply in Section III.D.4. of the DEIR. It says "The waterline would connect to an existing water main located on Coast View Drive approximately 225 feet southeast of the tract boundary within Falcon Ridge Estates (refer to Figure III-6.)" The DEIR makes no assessment of this proposal. Water pressure drops are already a periodic problem within Falcon Ridge so there should be at least some degree of analysis of this proposal to address the potential impacts.

If you have any questions or require any clarification regarding the comments set forth herein, please do not hesitate to contact me at (805) 473-4770.

Yours truly,

Janis Dreyer

Janis Dreyer, President
Falcon Ridge Estates Homeowners' Association

6

8. Falcon Ridge Homeowners Association

8.1 The legal easement agreement, including the conditions outlined in the above-referenced letter, and any subsequent revisions, constitute a separate and private agreement between the applicant and the Falcon Ridge Homeowner's association. These conditions will not be included as Conditions of Approval for the proposed project as a result of the above-referenced letter, nor will the impacts of their implementation be evaluated in this EIR. It should be noted that if any of the conditions conflict with proposed mitigation measures, and the proposed mitigation measures are adopted as conditionals of approval, the COAs adopted by the Board of Supervisors would take precedence. No changes to the EIR are necessary.

8.2 Refer to response to comment 8.1 above.

8.3 The applicant has redesigned the project, which would include primary access through Castillo Del Mar Drive and secondary access through Coast View Drive. The revised project is analyzed throughout the Final EIR.

8.4 Comment noted. No changes to the EIR are necessary.

8.5 Refer to response to comment 8.1 above. No changes to the EIR are necessary.

8.6 Comment noted. The correction would not affect the analysis, and no changes to the EIR are necessary.

8.7 Refer to Section V.E.5.a., page V-83. Richard Marshall, County Department of Public Works, was consulted on December 15, 2003 regarding the potential trips generated by secondary residences. Mr. Marshall concluded that the additional trips would not reduce the LOS at any intersection or increase intersection delays above thresholds requiring mitigation. No changes to the EIR are necessary.

8.8 The County of San Luis Obispo CEQA Guidelines and the California Environmental Quality Act do not require lead agencies to consider views from private property. Refer to response to comment 8.1 above, which states with respect to conditions precedent in the legal easement agreement, these conditions constitute a separate and private agreement between the applicant and the Falcon Ridge Homeowner's association. No changes to the EIR are necessary.

8.9 Refer to response to comment 8.7 above. No changes to the EIR are necessary.

8.10 As stated in the EIR, the applicant will obtain water service from Rural Water Company (refer to Section III.D.1d, page III-18). The will-serve letter issued by Rural Water Company includes a provision requiring the applicant to "pay for all costs for the design, surveying, materials and construction of the water system and any 'special facilities' required to serve subject development" (Charles M. Baker, President Rural Water Company, Inc.; March 30, 3004). Rural Water Company, Inc. and the applicant are

required to ensure compliance with the California Department of Forestry/County Fire (Cal Fire) water pressure requirements, consistent with the Uniform Fire Code. No changes to the EIR are necessary.

"Jean St. Martin" <jstmartin@amblaw.com>
05/27/2005 05:22 PM

To: <jeliason@co.slo.ca.us>
cc: <janisdreyer@yahoo.com>
Subject: Busick Tract Map- DEIR Comments

Ms. Eliason,

This firm represents the Falcon Ridge Estates Homeowners Association.

9.1

I got an e-mail from their president, Jan Dreyer, expressing concern that there was a minor typo in the first paragraph of the comments that they submitted back on the 23rd.

Just for clarification sake, I wanted to point it out to you. The second sentence of the first paragraph reads, "Overall, Falcon Ridge supports the project proposed for **Tract 1256**, however, Falcon Ridge has the following comments regarding the analysis of the project set forth in the most recent DEIR."

It should read, "Overall, Falcon Ridge supports the project proposed for **Tract 1789**, however, Falcon Ridge has the following comments regarding the analysis of the project set forth in the most recent DEIR." [emphasis added to show change]

Tract 1256 is the Falcon Ridge tract. Tract 1789 is the Busick Tract. They just got switched in this particular sentence.

If you have any questions, please don't hesitate to contact me.

Jean A. St. Martin
Attorney
Andre, Morris & Buttery
San Luis Obispo & Santa Maria, CA
805.543.4171
805.543.0752 fax
jstmartin@amblaw.com

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9. Andre, Morris & Buttery

9.1 Comment noted. Refer to response to comment letter number 8.

May 19, 2005

Julie Eliason, Environmental Division
County Planning and Building Dept.
County Government Center, Rm. 310
San Luis Obispo, CA 93408-2040

Dear Ms. Eliason,

This is in response to the Draft EIR of the Busick Track Map, ED90-061, S890232T. SCH#1994041043.

As I noted in my first letter, the historic drainage of 1789 will be altered by its development. I don't understand how the impact of increased impermeable area in the steeper-sloped terrain adjacent to and draining onto my property could be equally offset by an equivalent area removed in a lesser-sloped zone above Coast View. The water draining from the area above Coast View spreads out laterally because it is bounded by the plateau that is the road. On the other hand, an increase in impermeability on lot 16, in particular, will necessarily force a greater amount of water down the steepest slope on the sourthern portion of the project directly onto my property. I see no evidence for mitigation of this increase and because no lot lines or grading documents are provided by this EIR am unsure if the water will be free-falling or somehow channeled onto my property. Because the drainage retention basin is on the opposite slope of the ridge the water will not flow there but will flow onto me. Trading general amounts of water flow across a property for other amounts that decrease does not accurately reflect the impact that downhill property owners will experience. **10.1**

According to the Environmental Health Dept. there is a volunteer attempt to identify drainage retention basins in the county because they have been found to be ponds for mosquito breeding. The basins invariably silt up and fill with vegetation and cease to drain. The county does not now, and does not require in this EIR, any proof beyond the first year of operation that the basin meets original standards of 24-hour drainage following a rain event. The "likelihood of mosquitoes breeding in the proposed detention basin is low," claims the EIR, yet your own Environmental Health Dept. disputed this claim. As you know, the basin abuts the boundary of the Sunrise Terrace Mobile Home Park, a very large Senior Mobile Home Park. As I said before, the basin will offer an unprecedented opportunity for mosquito breeding and is a very real threat to elderly residents. When I responded to your request for EIR comments last year, the West Nile Virus had not been detected in San Luis Obispo County. As you now know, West Nile Virus has arrived and worse, the County has still not established a vector control program. The Environmental Health Dept. received $15,000 from the county that is being used to spray Laguna Lake, areas of Morro Bay, and some other regions, this in no way substitutes for a vector control program as found in every other county in California save **10.2** **10.3** **10.4**

two. The funding is grossly inadequate to identify and monitor drainage retention basins for mosquito larvae, as well as municipal water sources throughout the county. **10.4**

The EIR confirms the erodible nature of the soils on the project site but abstains from addressing any impacts claiming that individual homeowners will build on the lots, not the developer. This loophole allows the developer to avoid scrutiny of impacts resulting from soil movement, but does not absolve the county of responsibility to downhill residents. The EIR notes that "one to two acres of grading per lot would be required," with the majority of the lots averaging 2 acres. Clearly a lot of grading will occur during the home development phase and the impacts of that grading are not delineated here. **10.5**

Proposed lot lines and building pads should be included in the overall development plan and should be included in this EIR. There will be impacts but this EIR allows them to be ignored. Certainly the development of lots 16, 14 and 13 directly abutting Falcon Ridge properties is of concern, but of more concern is the transfer of responsibility for mitigation from the developer to some future homeowner. When purchasers buy lots 16, 14 and 13 do we then require another cycle of environmental impact reports? What guarantee then does a down-slope resident have that soils and/or water will not inundate their property? This EIR leaves unanswered these relevant questions and imposes ignorance upon adjacent property owners. **10.6**

The EIR contends the construction of a detention basin would not increase the quantity of ground squirrels on the project site. Again, this is a question of moving total numbers of squirrels from one region to another. In the developer's adjacent project, the numbers of squirrels may have declined on individual homeowners' properties, but it most certainly has increased in the fence drainage retention basin. The fence around the basin repels predators and unless regular baiting is required, the habitat is preferential for the squirrels. A groundskeeper at the adjacent high school noted that his use of bait has greatly increased because of the movement of the squirrels down the hill to the detention basin and then onto the high school fields. Prior to the basin construction, the squirrels were less dense, not concentrated in one area. This project proposes concentrating squirrel density adjacent to my home and to the Senior Mobile Home Park. There should be a requirement for squirrel control on an ongoing basis as a condition of project development. Asserting that the County non-vector control program would manage the squirrel population on private property within a homeowners association is duplicitous. **10.7**

As noted previously, the EIR for proposed Tract 1789 has omissions of scope that could lead to serious health, drainage and erosion consequences for its immediate neighbors as well as those within the region. I would ask that these concerns be mitigated and the EIR uncertified until these omissions are satisfactorily addressed. **10.8**

Sincerely,
Kelly Kimball Bob Kimball

Bob and Kelly Kimball
270 Pleasant Lane
Arroyo Grande, CA 93420

10. Bob and Kelly Kimball

10.1 As shown by Figure V.B.-2, Lots 16 is located within Drainage Area 3B, and drainage currently flows offsite to the south at "Point A." Stormwater currently flowing from Area 3A to discharge "Point A" would be intercepted by Castillo Del Mar Drive, and diverted into the stormwater basin in Lot 13. Based on calculations appended to the *Preliminary Drainage Report* (Garing, Taylor & Associates; January 16, 2003), located within Appendix B of the EIR, the current 100-year stormwater runoff calculation at "Point A" is 9.36 cubic feet per second (cfs). Upon construction of tract improvements and development of Lot 16, the 100-year stormwater runoff calculation at "Point B" would be 7.82 cfs, which is less than the current discharge rate. No changes to the EIR are necessary.

10.2 As discussed in the EIR, the basin is designed to drain in 24 hours (Section V.B5.a, pages V-15 and V-16). To ensure that the basin function is maintained, a mitigation has been added to require annual monitoring by the Homeowners Association or its designee (refer to DE/mm-1, page V-16).

10.3 The basin is designed to drain in 24 hours, and would not provide a sufficient timeframe for mosquitoes to breed in standing water. Refer to response to comment 10.2 above.

10.4 Refer to comments 10.2 and 10.3 above.

10.5 The EIR notes that the applicant is proposing to grade approximately 70,000 square feet and 25,000 cubic yards of material associated with tract improvements, which would result in a potentially significant impact if graded during the rainy season (refer to page V-17). The EIR also assumes a worst-case scenario of up to two acres of grading per lot for future residential development, which would result in a potentially significant impact if graded during the rainy season (refer to page V-17). The impact statement has been revised to clarify that the impact applies to both tract improvements and individual lot development (refer to DE/Impact 2, page V-17). In addition, future development would be reviewed by the County Planning Department, and would be required to comply with Sections 22.52.080 (Drainage) and 22.52.090 (Erosion and Sedimentation) of the County Land Use Ordinance. In addition, mitigation measure DE/mm-2 requires the submittal of an erosion and sedimentation control plan prior to issuance of permits for both tract improvements and individual lot development, and DE/mm-3 requires submittal and implementation of a Stormwater Pollution Prevention Plan (refer to page V-17).

10.6 Lot lines are shown in Figures III-5 (Tentative Tract Map) and III-6 (Proposed Preliminary Grading Plan). The EIR assumes a worst case scenario, which assumes that up to two acres of grading per lot may occur during build-out of the proposed subdivision. The County Land Use Ordinance requires preparation of a drainage plan and erosion and sedimentation control plan prior to issuance of grading permits (Sections 22.52.080 and 22.52.090), and the State Water Resources Control Board requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) if over one acre of disturbance is proposed. In addition to these standard regulations, the

EIR includes a mitigation measure (DE/mm-2) that requires preparation and implementation of these plans (refer to page V-17). This mitigation measure would be incorporated as a Tract Condition of Approval, and each lot owner would be required to comply with all applicable Tract Conditions prior to issuance of a grading permit. Future applications would be reviewed for consistency with the EIR, and implementation of standard regulations and compliance with Tract Conditions would ensure that significant drainage, erosion, and sedimentation impacts do not occur upon tract build-out. No changes to the EIR are necessary.

10.7 As discussed in the previous response to comments (Busick Draft EIR March 2005 Appendix F), based on the loss of ground squirrel habitat as a result of the proposed project, and County-wide monitoring of disease hosts and vectors, and the continued implementation of the County vector control program, implementation of the proposed project would not likely result in significant impacts resulting from ground squirrels, and no revisions to the EIR are necessary.

10.8 As noted in the EIR, no significant, adverse, unavoidable impacts related to public health, drainage, or erosion are identified. The above responses detail how the EIR addresses impacts to public health, drainage, erosion, and sedimentation.

May 23, 2005

County Board of Supervisors
c/o Julie Eliason, Environmental Resource Specialist
Division of Environmental and Resource Management
Department of Planning and Building
County Government Center, Room 310
San Luis Obispo, CA 93408-2040

Subject: Comment on Re-circulated Draft EIR SCH No. 1994041043, Busick Tract No. 1789

Dear Board of Supervisors:

Thank you for the opportunity to make comment on this environmental review ordered by unanimous vote of your Board in March, 1994. The Falcon Ridge HOA requested the review at that time as a result of the project's threat to "open up" our private roads for their own use. The applicants were to satisfy certain BOS concerns in particular: 1) access; 2) suitability for septic systems; 3) drainage; and 4) annexation into the City of Arroyo Grande. 11.1

These concerns were addressed in the following manner.

1) Primary access was established through a road lease agreement with Falcon Ridge Estates. This lease agreement is contingent on JH securing abandonment of all roads within Falcon Ridge prior to final map approval. 11.2

2) Lack of permeability of soils required to project to apply for annexation into the South County Sanitation District with services provided through the City of Arroyo Grande. 11.3

3) Drainage was mitigated through creation of a retention basin in the southwest corner of the project, abutting Falcon Ridge Estates and Sunrise Terrace Mobile Home Park in the City of Arroyo Grande. 11.4

4) Annexation into the City of Arroyo Grande hinged on improvements to the city's circulation elements which exceeded the project applicant's interest. Therefore, though the city is inextricably linked to this project - far greater than Falcon Ridge Estates, the city refused primary access through this applicant's adjacent city project, despite the city's requirement of a collector-width road connecting directly to this county project. 11.5

Since 1989, Falcon Ridge residents have struggled to retain their quiet, rural properties. The struggle lay in the on again-off again threat to the privacy of our internal roads from development of the Busick parcels, city or county. In an effort to guarantee this private road scenario, our members finally took the step of leasing access over our main roads providing certain conditions be met by JH and their 11.6

project development. If this EIR is certified with Falcon Ridge providing primary access, we ask that the Board support the conditions of this agreement by inclusion into the conditions of approval for the project. 11.6

It should also be noted that our concerns are substantial regarding the Busick project's impacts at El Campo crossroad and the 101 Fwy. The traffic studies for the project indicate over 100 ADTs per day using the at-grade intersection. This does not include the potential of additional traffic should secondary dwellings be added to the Busick properties. 11.7

We agree with this re-circulated DRAFT that impacts are unmitigatible. Attempts to mitigate traffic impacts by adjusting traffic flow or patterns at the 101/El Campo intersection would be felt regionally. Traffic from the Mesa and Arroyo Grande fringe areas, currently using this intersection, would be forced to take alternative routes utilizing City of Arroyo Grande streets. 11.8

Allowing the Busick traffic to impact the 101/El Campo corridor at this time also establishes a precedent should further development from the Los Berros hills or the north Mesa apply for project approvals. This occurred most recently with Cypress Ridge Phase II presumably coming forward at some time in the near future. 11.9

Routing more traffic to El Campo/101 must stop somewhere. We suggest, for this particular project, that the applicant be asked to reconsider requests for improved circulation patterns identified by the City of Arroyo Grande. Their General Plan Circulation Element identifies the location of the opportunity for positive circulation improvements on the west side of 101. It is our hope you will address this idea prior to certification of the EIR and project approval. 11.10

Thank you for your consideration,

Martin and Jane Line
265 Pleasant Lane
Arroyo Grande Estates
Arroyo Grande, CA 93420

11. Martin and Jane Line

11.1 The applicant responded the County Board of Supervisors (BOS) concerns by: proposing primary access via Castillo Del Mar Drive and secondary access via Coast View Drive; obtaining a will-serve letter from the South San Luis Obispo County Sanitation District; and, preparing a drainage study, which was peer reviewed by the EIR consultant. The City of Arroyo Grande is not proposing to annex the project site into the City.

11.2 Comment noted.

11.3 Comment noted.

11.4 Comment noted.

11.5 Comment noted.

11.6 The legal easement agreement, including referenced conditions, is the responsibility of the applicant and the Falcon Ridge Homeowner's association. Please note that the applicant redesigned the project to re-route a significant percentage of traffic onto Castillo Del Mar, within the City of Arroyo Grande (refer to Chapter 1, Introduction and Chapter III, Project Description).

11.7 Refer to response to comment 8.7.

11.8 Comment noted. Please note that the applicant redesigned the project to re-route a significant percentage of traffic onto Castillo Del Mar, within the City of Arroyo Grande (refer to Chapter 1, Introduction and Chapter III, Project Description).

11.9 Refer to response to comment 11.8 above.

11.10 Refer to response to comments 11.1 and 11.8 above.

Olaf & Anne Shipstead
260 Falcon Crest Drive
Arroyo Grande CA 93420

June 10, 2005

Ms. Julie Eliason, Environmental Division
County Planning and Building Dept.
County of San Luis Obispo
Courthouse, County Govt. Center, Room 310
San Luis Obispo, Ca. 93408-2040

SUBJECT: Recirculated Draft EIR, Busick Tract map ED 90-061, 58902321, SCH# 19941043

Dear Ms. Eliason,

As 11 year residents of Falcon Ridge Estates, we would like to bring to your attention an area in the subject DEIR that we feel will affect our community. 12.1

Section III. D.4 of the DEIR says that the water main supply for the tract of 16 homes would be connected to the six inch water main under Coast View Drive which serves 9 homes in and around Plesant Lane and Coast View Drive. Our water pressure is already low at times and adding 16 new homes to it would cause the system to fail completely.

Another more critical factor would be fire safety when a situation might occur when a fire breaks out in both Falcon Ridge and tract 1789 at the same time. The water supply would not be enough to meet CFD water delivery requirements. 12.2

Please provide a professional analysis of water flow requirements at peak home consumption times and emergency fire requirements.

Sincerely,

Olaf G. Shipstead Anne Shipstead

12. Olaf and Anne Shipstead

12.1 Refer to response to comment 8.10. No changes to the EIR are necessary.

12.2 Refer to response to comment 8.10. As discussed in the project description in the EIR, the applicant is proposing to construct a 210,000-gallon water storage tank (refer to page III-18). In addition, the applicant is required to provide any additional fire flows required by the California Department of Forestry/County Fire (Cal Fire) as a condition of water service (Charles M. Baker, President Rural Water Company, Inc.; March 30, 2004). No changes to the EIR are necessary.

May 21, 2005

James R. Talbot, Mary L. Talbot
230 Dove Court
Arroyo Grande, CA 93420

MAY 24 2005
S.L.O. ... DEPT.

County Board of Supervisors
c/o Julie Eliason, Environmental Resource Specialist
Division of Environmental and Resource Management
County Government Center, Room 310
San Luis Obispo, CA 93408-2040

Subject: Comment on Re-circulated Draft EIR SCH No. 1994041043, Busick Tract No. 1789

Dear Board of Supervisors:

Thank you for the opportunity to comment on the revised and re-circulated Draft EIR of March 2005, for the Busick Tract 1789 which abuts our community Falcon Ridge Estates. 13.1

We chose to make our home in Falcon Ridge Estates in 1998 in part because it is a small community with private, gated roads and a quiet rural setting. The Board of Supervisors set the requirement for this environmental review based on appeal from our Falcon Ridge Homeowners Association. We greatly appreciate that action. We look forward to your decisions regarding this Busick tract that will protect and preserve the private character of our community.

Our Homeowners Association has agreed to grant primary road access to the Busick tract in an Access Agreement, subject to completing a substantial number of stringent conditions. These conditions are intended to protect our community quality of life and minimize the impact of a doubling of traffic over some of our private roads. We ask you to consider each these conditions, as detailed in the Falcon Ridge comments on this revised DEIR. 13.2

We believe all of the conditions in that Access Agreement are essential to our property values and, should you decide to approve the Tract Map, that all of the conditions be included in the County conditions of approval. One of our overriding concerns is the requirement that the County first abandon the pre-existing offer of dedication of our private roads to public use. The Access Agreement specifies that unless the County does this the agreement *shall* terminate. We would like to see that assured in the Final EIR. 13.3

The revised DEIR shows that two thirds of the traffic that would exit Falcon Ridge Estates under the developers proposal would create a Class I Environmental Impact at the intersection of El Campo Road and US101. The DEIR also describes Revised Alternative A, which avoids the Class I impact by providing primary road access for the Busick Tract to the north. If that alternative is pursued the EIR should make clear that the Access Agreement does *not* provide for secondary access for the Busick Tract. It is our view that any proposal for secondary access through Falcon Ridge Estates should be preceded by County abandonment of its right to accept the pre-existing offer of dedication. 13.4

If an alternative is to send all of the traffic from the Busick Tract and Falcon Ridge Estates to Los Berros Road there should be some supporting analysis of this as it relates to our roads and Los Berros Creek crossing and to the traffic at the Falcon Crest Drive/Los Berros Road intersection. 13.5

The Revised DEIR supports the proposed retardation basin, "within County standards." County standards require only one inspection of retardation basins. The Access Agreement requires annual inspection by a qualified engineer to ensure continued performance to design standards. We believe this requirement should be included in the conditions of approval for the Busick Tract. We recognize that this is a departure from the County standard, but note that standard was set before the County recognized the growing threat of the West Nile Virus is a serious health and safety problem, and began to create preventive programs. The retardation basin is within areas in the South County that newspaper reports tell us the Public Health Department identifies as areas where mosquitos that have the potential to carry the West Nile virus exist. 13.6

Since joining the Falcon Ridge community we have supported the Association's continuing position that it can support other alternatives for the Busick Tract that do not jeopardize the privacy of our roads. As interested parties to this environmental review we would support alternatives that assure the privacy of Falcon Ridge roads. 13.7

Thank you for consideration of our concerns about this revised DEIR.

Sincerely,

James R. Talbot
Mary L. Talbot

James R. Talbot
Mary L..Talbot
Lot 23
Falcon Ridge Estates

13. James R. Talbot, Mary L. Talbot

13.1 Comment noted. No changes to the EIR are necessary.

13.2 Refer to response to comment 11.6.

13.3 Refer to response to comment 11.6.

13.4 Refer to response to comments 8.3 and 11.6.

13.5 This is not considered as an alternative in the EIR. No changes to the EIR are necessary.

13.6 Refer to response to comment 10.2.

13.7 The applicant has redesigned the project to re-route a significant percentage of project-related traffic onto Castillo Del Mar Drive (refer to Chapter III, Project Description). The Final EIR includes the revised project elements and associated analysis.

APPENDIX A

- **Notice of Preparation (NOP)/Initial Study**
- **Revised Scope of Work**

- **Notice of Preparation (NOP)/Initial Study**

Department of Planning and Building
San Luis Obispo County

Alex Hinds, Director
Bryce Tingle, Assistant Director
Barney McCay, Chief Building Official
Norma Salisbury, Administrative Services Officer
Ellen Carroll, Environmental Coordinator

NOTICE OF PREPARATION

DATE: April 11, 1994

TO:

SUBJECT: **Notice of Preparation of an Environmental Impact Report for Busick Tract Map; ED90-061 (TR1789)**

San Luis Obispo County will be the Lead Agency and will prepare an Environmental Impact Report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the Environmental Impact Report prepared by our agency when considering your permit or other approval for the project.

PLEASE provide us the following information at your earliest convenience, but not later than the 30 day comment period which began with your agency's receipt of the NOP.

1. NAME OF CONTACT PERSON. (Address and telephone number)

2. PERMIT(S) or APPROVAL(S) AUTHORITY. Please provide a summary description of these and send a copy of the relevant sections of legislation, regulatory guidance, etc.

3. ENVIRONMENTAL INFORMATION. What environmental information must be addressed in the Environmental Impact Report to enable your agency to use this documentation as a basis for your permit issuance or approval.

4. PERMIT STIPULATIONS/CONDITIONS. Please provide a list and description of standard stipulations (conditions) which your agency will apply to features of this project. Are there others that have a high likelihood of application to a permit or approval for this project? If so, please list and describe.

5. ALTERNATIVES. What alternatives does your agency recommend be analyzed in equivalent level of detail with those listed above?

6. REASONABLY FORESEEABLE PROJECTS, PROGRAMS or PLANS. Please name any future project, programs or plans that you think may have an overlapping influence with the project as proposed.

7. RELEVANT INFORMATION. Please provide references for any available, appropriate documentation you believe may be useful to the county in preparing the Environmental Impact Report.

8. FURTHER COMMENTS. Please provide any further comments or information which will help the county to scope the document and determine the appropriate level of environmental assessment.

The project description, location, and the probable environmental effects are contained in the attached materials.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but not later that **30 days** after receipt of this notice.

Please send your response to **Eric N. Wier** at the address shown above. We will need the name of a contact person in your agency.

PROJECT TITLE: **Busick Tract Map; ED90-061 (TR1789)**

PROJECT APPLICANT: **Leslie Busick, Incline Village, NV**

Responses due by: **May 16, 1994**

Signature Eric N. Wier
ERIC N. WIER, Environmental Specialist

Telephone: (805) 781-5600

Reference: California Administrative Code, Title 14, Section 15082.

Project Description & Location

The proposed project is a request for subdivision of a 47.25 acre parcel into 16 parcels ranging in size from 2.0 acres to 6.2 acres. The site is located in the Residential Suburban land use category southwest of Highway 101 between the Falcon Ridge Estates subdivision and the city limits of Arroyo Grande at the end of Coast View Drive, south of the city of Arroyo Grande in the San Luis Bay Planning Area (see attached maps).

The site has varied terrain with very steep, oak covered slopes facing Highway 101. The applicant is proposing a 17.54 acre open space easement over the visible slopes across the back portions of lots 1 through 6.

The proposed lot sizes are from 2.0 to 6.2 acres. The buildable areas on lots 1 through 6 outside of the open space easement are approximately 1.5 to 2 acres each. Water is proposed to be provided by Rural Water Company. Individual septic systems are proposed for wastewater disposal. The primary access will be either from Coast View Drive in Tract 1256 (Falcon Ridge Estates) or through the adjacent property (proposed Tract 1663) to existing city streets in Arroyo Grande. Proposed Tract 1663, adjacent to the subject site and within the City, is also owned by the applicant. Tract 1663 is currently being reviewed by City staff, and an environmental determination had not been made by the City at the time this NOP was prepared.

The County Planning Commission considered and approved the proposed project on December 9, 1993. The Planning Commission's decision was appealed by the Falcon Ridge Homeowners Association. On March 8, 1994, the Board of Supervisors considered the appeal and took tentative action to require an Environmental Impact Report (EIR). On April 5, 1994, the Board took final action to require an EIR. The Board has determined that the proposed subdivision may result in significant adverse effects upon the environment. Issues identified as significant include, but are not limited to:

1. **Traffic and Circulation**

Coast View Drive in Falcon Ridge Estates stubs-out at the property line with Tract 1789. It was constructed and offered for dedication with a previous parcel map (CO76-550). The streets of Tract 1256 have been dedicated to the public but have yet to be accepted on the public's behalf.

The City of Arroyo Grande is strongly opposed to adding traffic to Orchard Street, and a connection to Valley Road could entail condemnation of prime agricultural land. Caltrans has indicated that cumulative traffic impacts need to be addressed with regard to the El Campo/Highway 101 intersection.

A majority of the Falcon Ridge homeowners are strongly opposed to the applicant taking access through Falcon Ridge Estates. There is serious public controversy regarding this project. This is evidenced by the presentation to the Board of a petition opposing the project signed by 36 of 43 Falcon Ridge homeowners.

2. Drainage and Erosion

The applicant proposes to detain storm water runoff in an on-site basin at the southeast corner of the site. As with any development project in the county, drainage from this site cannot exceed the historical flow. The project is located in an area of gentle to very steep slopes and soils. In the County *Soil Survey*, the U.S. Department of Agriculture, Soil Conservation Service classifies the soils as "moderately erodible." A large erosion gully is present on the site, indicating the potential for further destructive erosion.

Area residents report numerous drainage-related problems, including failed retaining walls, and areas of perennially wet ground. Area residents have spent considerable funds on correcting drainage problems. Grading for new roads and building pads, as well as an increase in impervious surfaces could result in significant drainage impacts on downstream property owners, accelerated soil erosion and subsequent sedimentation of area waterways.

3. **Wastewater Disposal**

The project site contains shaly loam soils which are classified by the U.S. Department of Agriculture, Soil Conservation Service as "not well drained." The County *Soil Survey* indicates that the soils "may present some limitations to the percolation of sewage effluent due to slow percolation and/or excessive slopes." Soil borings and percolation tests conducted by the applicant's consultant demonstrate that areas of excessively slow permeability exist on the site. The County Environmental Health Division indicated that the on-site soils are "marginal" for wastewater percolation. The Environmental Health Division has stated that comprehensive soil testing will be required prior to final map approval.

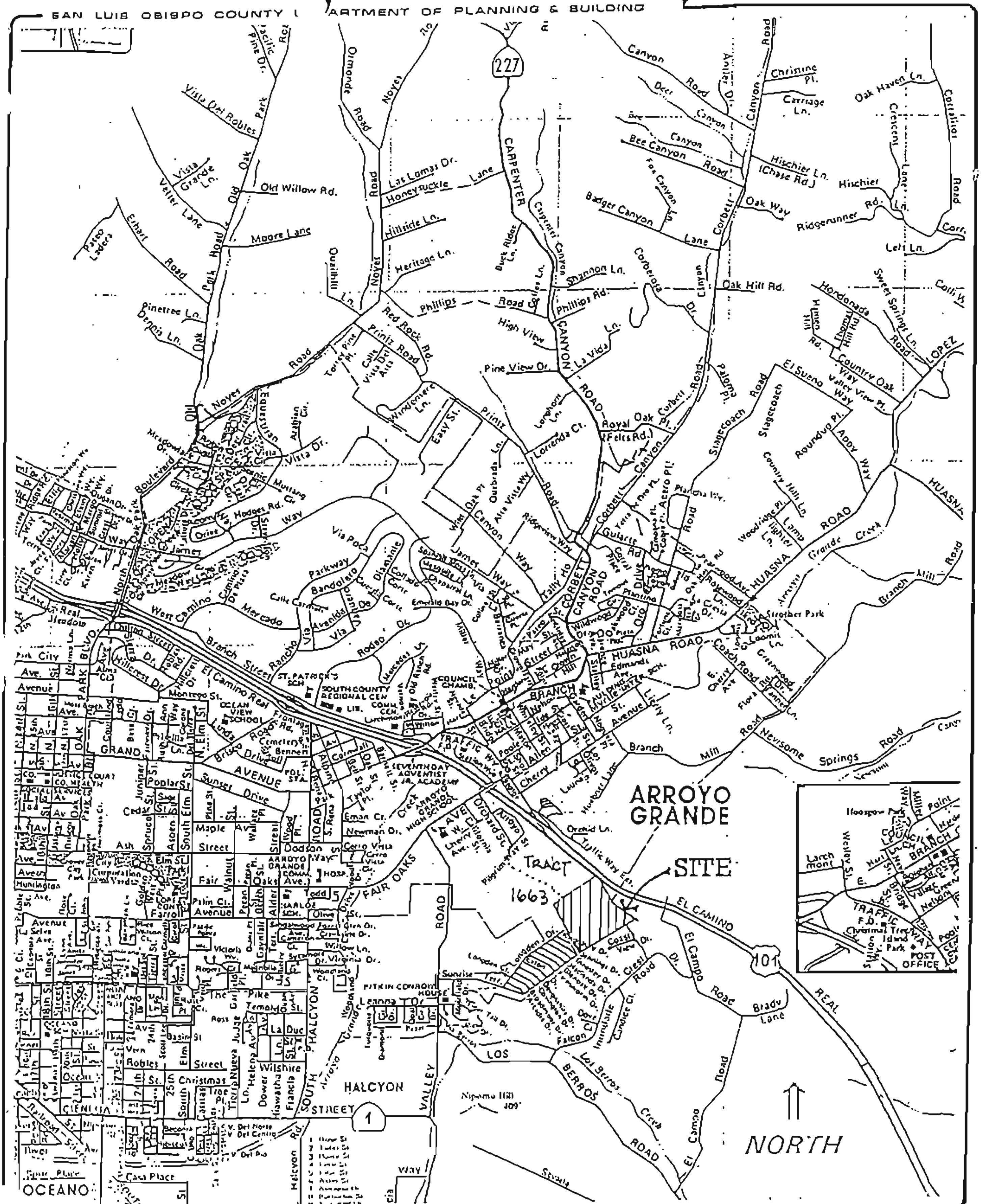
Falcon Ridge homeowners testify that a high percentage of engineered septic systems in the subdivision have failed, and that there are impermeable clay layers in the area which limit wastewater percolation.

Alternatives

As indicated by the difficulties the applicant has experienced in attempting to gain access to the project, the Falcon Ridge homeowners' concerns about increased traffic through their neighborhood, and the City of Arroyo Grande's concerns about routing traffic onto City streets, the Board determined that possible annexation of the site to the City of Arroyo Grande should be reviewed as part of the scope of the EIR.

ATTACHMENT II

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING & BUILDING



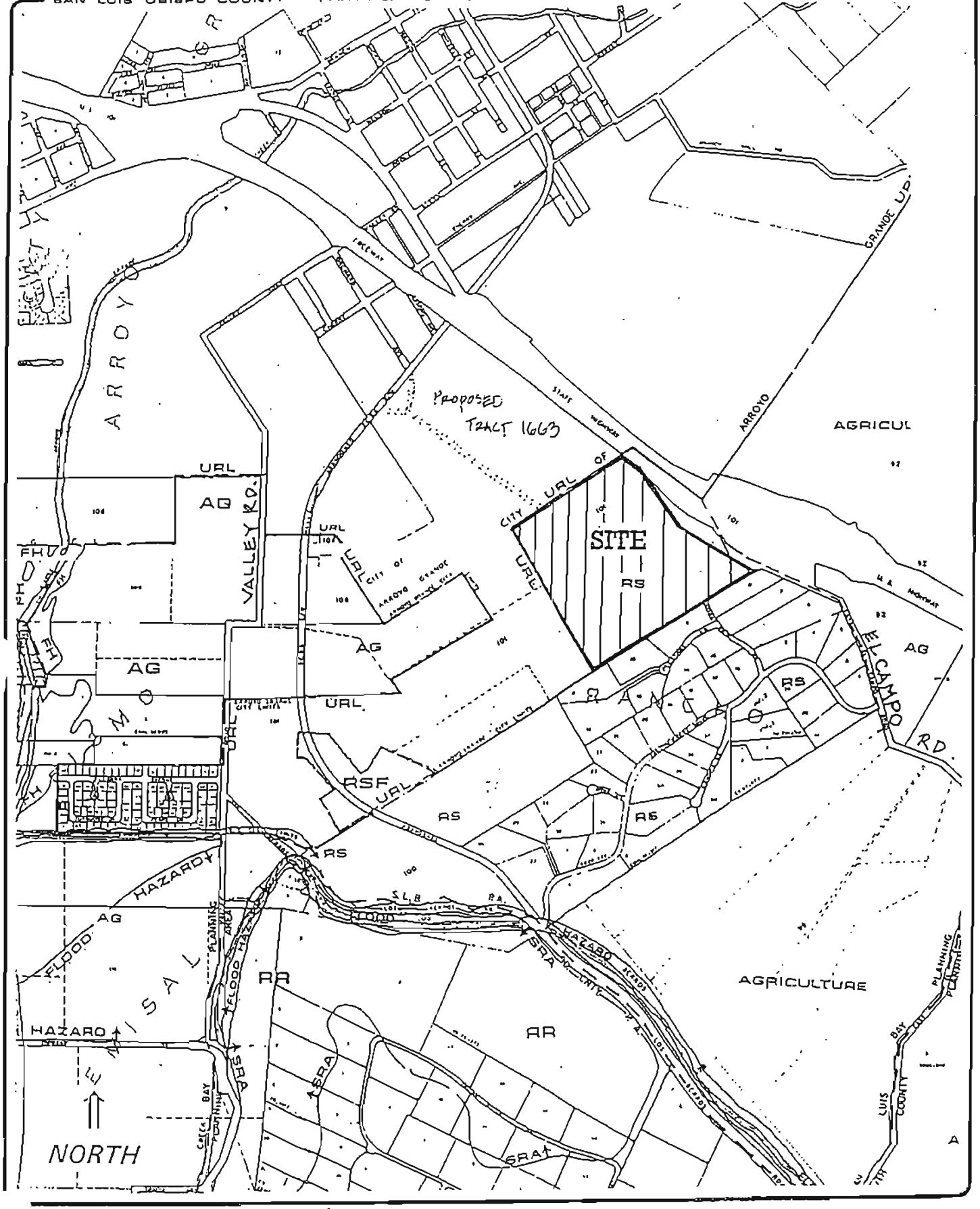
PROJECT

D890233D/TRACT 1789 - BUSICK

EXHIBIT

VICINITY MAP

SAN LUIS OBISPO COUNTY PARTMENT OF PLANNING & BUILDING



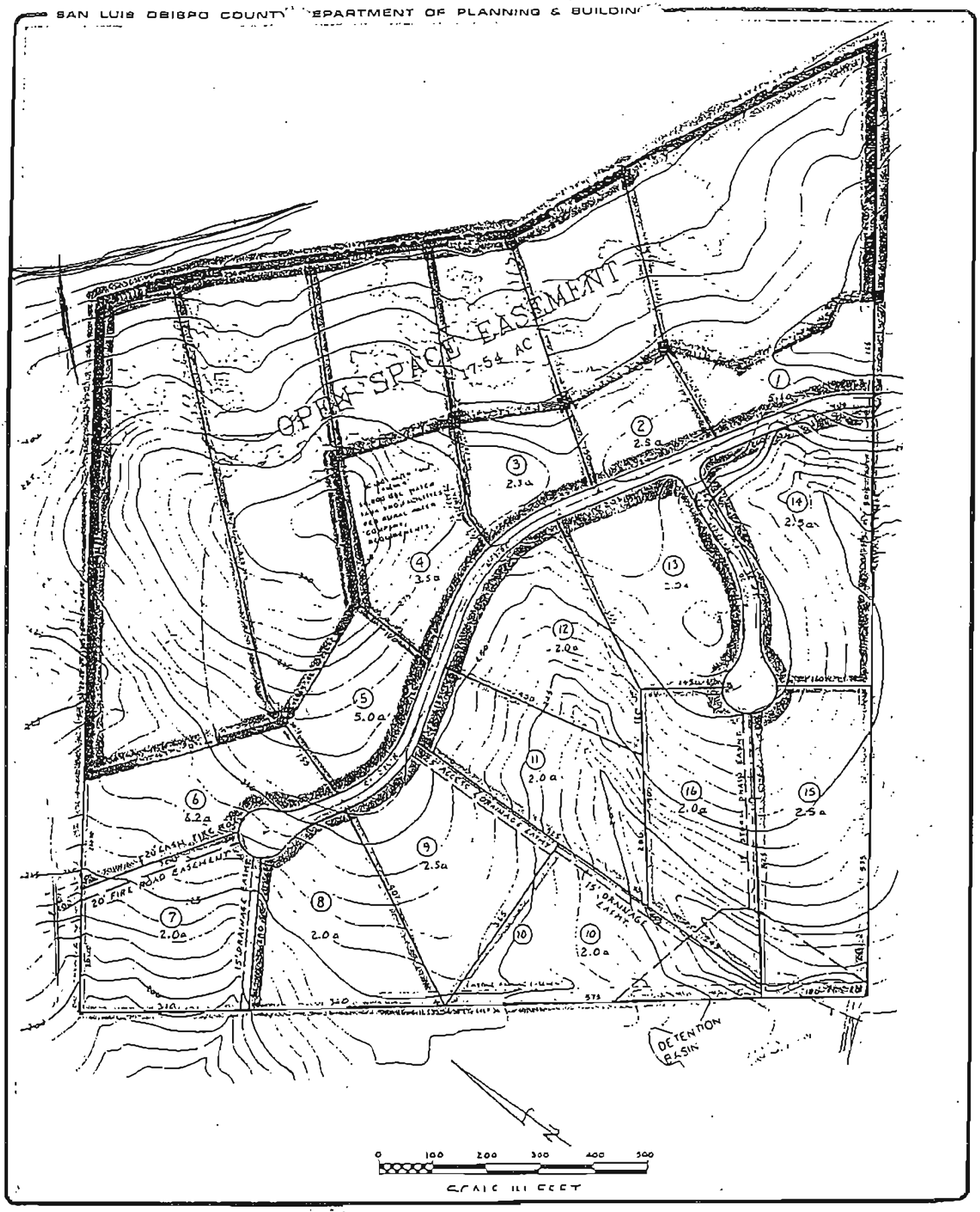
PROJECT

D890233D/TRACT 1789 - BUSICK

EXHIBIT

LAND USE CATEGORY MAP

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING & BUILDING



PROJECT

D890233D/TRACT 1789 - BUSICK

EXHIBIT

REVISED TENTATIVE MAP
(PRESENTED AT OCTOBER 28, 1993
P.C. HEARING; PC APPROVED 12-9-93)

SAN LUIS OBISPO COUNTY
INITIAL STUDY CHECKLIST

Project Title & No. Busick Tract Map; ED90-061 (TR 1789)

	Potential Significant Impact	Impact Can and Will Be Mitigated	Insignificant Impact	Not Applicable
I. BIOLOGICAL RESOURCES				
A. Wildlife	( )	( )	(✓)	( )
B. Vegetation	( )	(✓)	( )	( )
C. Habitat Area	( )	(✓)	( )	( )
D. Rare and/or Endangered Species	( )	( )	(✓)	( )
E. Unique or Fragile Biotic Community	( )	(✓)	( )	( )
F. State Area of Special Biological Importance	( )	( )	( )	(✓)
G. Riparian/Wetland Area	( )	( )	(✓)	( )
H. Other:_____	( )	( )	( )	( )
II. DRAINAGE, EROSION AND SEDIMENTATION				
A. Increased Storm Water Runoff	(✓)	( )	( )	( )
B. Erodible Soils/Erosion	(✓)	( )	( )	( )
C. Poorly Drained Soils	(✓)	( )	( )	( )
D. Sedimentation	(✓)	( )	( )	( )
E. Contributes to Existing Drainage Problem	(✓)	( )	( )	( )
F. Alters Existing Drainage Course or Waterway	(✓)	( )	( )	( )
G. Other:_____	( )	( )	( )	( )
III. GEOLOGICAL HAZARDS/SITE ALTERATION				
A. Landslide Hazard	( )	( )	(✓)	( )
B. Seismic Hazard	( )	( )	(✓)	( )
C. Topographic Alteration; Grading for Building___, Driveways___, Roads___, Other___	( )	( )	(✓)	( )
D. Soil Expansion	( )	( )	(✓)	( )
E. Steep Slopes	( )	( )	(✓)	( )
F. Other:_____	( )	( )	( )	( )
IV. WATER RESOURCES				
A. Groundwater Quantity	( )	( )	(✓)	( )
B. Groundwater Quality	( )	( )	(✓)	( )
C. Surface Water Quantity	( )	( )	(✓)	( )
D. Surface Water Quality	(✓)	( )	( )	( )
E. Stream Flow Change	( )	( )	(✓)	( )
F. Change to Estuarine Environment	( )	( )	(✓)	( )
G. Other:_____	( )	( )	( )	( )

	Potential Significant Impact	Impact Can and Will Be Mitig.	Insignifican Impact	Not Applicable
V. POLLUTION				
A. Hazardous Materials	( )	( )	(✓)	( )
B. Groundwater Pollution	( )	( )	(✓)	( )
C. Surface Water Pollution	(✓)	( )	( )	( )
D. Increase in Existing Noise Levels	( )	( )	(✓)	( )
E. Exposure of People to Severe Noise Levels	( )	( )	( )	(✓)
F. Substantial Air Emissions	( )	( )	( )	(✓)
G. Deterioration of Ambient Air Quality	( )	(✓)	( )	( )
H. Creation of Objectionable Odors	( )	( )	(✓)	( )
I. Other:_____	( )	( )	( )	( )
VI. TRAFFIC				
A. Increase in Vehicle Trips	(✓)	( )	( )	( )
B. Reduced Levels of Service on Existing Public Roadways	(✓)	( )	( )	( )
C. Limited or Unsafe Access	(✓)	( )	( )	( )
D. Creates Unsafe Conditions on Public Roadways	(✓)	( )	( )	( )
E. Areawide Traffic Circulation	(✓)	( )	( )	( )
F. Internal Traffic Circulation	(✓)	( )	( )	( )
G. Other:_____	( )	( )	( )	( )
VII. PUBLIC SERVICES				
A. Fire Protection Services	( )	(✓)	( )	( )
B. Police Services	( )	(✓)	( )	( )
C. Schools	( )	(✓)	( )	( )
D. Community Wastewater	( )	( )	( )	(✓)
E. Community Water Supply	( )	( )	(✓)	( )
F. Solid Waste Disposal	( )	( )	(✓)	( )
G. Onsite Wastewater	(✓)	( )	( )	( )
H. Onsite Water	( )	( )	( )	(✓)
I. Other:_____	( )	( )	( )	( )
VIII. AESTHETIC/CULTURAL RESOURCES				
A. Visual Impact from Public Roadway	( )	( )	(✓)	( )
B. Increased Light or Glare	( )	( )	(✓)	( )
C. Alters Important Scenic Vista	( )	( )	(✓)	( )
D. Archaeological Resources	( )	( )	(✓)	( )
E. Historic Resources	( )	( )	(✓)	( )
F. Other:_____	( )	( )	( )	( )

EXHIBIT B

CONDITIONS OF APPROVAL - TRACT 1789

Access and Improvements

1. On-site streets constructed to an A-1 (rural) section within a 50 foot dedicated right-of-way.

2. An off-site access road constructed to an A-1 (rural) section within a minimum 50 foot dedicated right-of-way to a county road.

3. A two-way secondary emergency access to county fire and city of Arroyo Grande standards, if secondary access is proposed through city, it would have to be approved by city of Arroyo Grande.

Drainage

4. Submit complete drainage calculations to the County Engineer for approval.

5. Drainage must be detained in a drainage basin on the property. The design of the basin to be approved by the County Engineer, in accordance with county standards.

6. The drainage basin along with rights of ingress and egress be reserved as a drainage easement in favor of the owners and assigns.

Plans

7. Improvement plans be prepared in accordance with San Luis Obispo County Improvement Standards and Specifications by a Registered Civil Engineer and submitted to the County Engineer, County Health Department and Environmental Coordinator's Office for approval. The plan to include:

   a. Street plan and profile (city of Arroyo Grande to be consulted for improvements within the city);
   b. Drainage ditches, culverts, and other structures (if drainage calculations require);
   c. Water plan (County Health);
   d. Grading and erosion control plan for subdivision related improvements; and,
   e. Public utility.
   f. If tree removal is necessary, a tree removal and replacement plan, to be approved jointly with the Environmental Coordinator. The plan shall identify the removal of no more than one oak tree and identify 4 in-kind replacement trees. The plan shall include caging from animals (e.g., deer, rodents). If possible, planting during the warmest, driest months (June through September) shall be avoided. In addition, standard planting procedures (e.g., planting tablets, initial deep watering) shall be used.

8. The applicant shall enter into an agreement with the county for inspection of said improvements.

9. The engineer, upon completion of the improvements, must certify to the County Engineer that the improvements are made in accordance with Subdivision Review Board requirements and the approved plans.

Open Space Agreement

10. **Prior to recordation of the final map,** the applicant shall record an open space easement, in a form approved by the Planning Director, for the open space easement area shown on the tentative map. The open space easement area is to be maintained as such in perpetuity.

EXHIBIT A

FINDINGS - TRACT 1789

Environmental Determination

A. On the basis of the Initial Study and all the comments received, there is no substantial evidence that the project will have a significant effect on the environment.

Tentative Tract Map

B. The proposed map is consistent with applicable county general and specific plans.

C. The design and improvement of the proposed subdivision are consistent with the applicable county general and specific plans.

D. The site is physically suitable for the type of development proposed.

E. The site is physically suitable for the proposed density of the development proposed.

F. The design of the subdivision or the proposed improvements will not cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

G. The design of the subdivision or the type of improvement will not conflict with easements acquired by the public at large for access through or use of property within the proposed subdivision; or that substantially equivalent alternate easements are provided.

H. The proposed subdivision complies with Section 66474.6 of the State Subdivision Map Act, as to methods of handling and discharge of waste.

I. The proposed subdivision be found consistent with the county zoning and subdivision ordinance.

	Potential Significant Impact	Impact Can and Will Be Mitiga	Insignificant Impact	Not Applicable
IX. HOUSING AND ENERGY				
A. Creates Substantial Demand for Housing	( )	( )	(✓)	( )
B. Uses Substantial Amount of Fuel or Energy	( )	( )	(✓)	( )
C. Encourages Growth Beyond Resource Capacities	( )	( )	(✓)	( )
D. Other: _____	( )	( )	( )	( )
X. AGRICULTURAL/MINERAL RESOURCES				
A. Eliminates Valuable Mineral Resources	( )	( )	( )	(✓)
B. Prime Agricultural Soils	( )	( )	( )	(✓)
C. Conflicts with Existing Agricultural Area	( )	( )	(✓)	( )
D. Change from Agriculture to Other Uses	( )	( )	(✓)	( )
E. Other: _____	( )	( )	( )	( )
XI. GROWTH INDUCING/CUMULATIVE EFFECTS				
A. Growth Inducing Effects	( )	( )	(✓)	( )
B. Precedent for Change in Area Land Use	( )	( )	(✓)	( )
C. Cumulative Effects: Traffic/Circulation	(✓)	( )	( )	( )
Drainage/Erosion	(✓)	( )	( )	( )
Wastewater disposal	(✓)	( )	( )	( )
_____	( )	( )	( )	( )
_____	( )	( )	( )	( )
_____	( )	( )	( )	( )
_____	( )	( )	( )	( )
D. Other: _____	( )	( )	( )	( )

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Covenants, Conditions and Restrictions

11. The developer shall submit proposed covenants, conditions, and restrictions for the subdivision to the county Department of Planning and Building for review and approval. The developer at a minimum shall provide the following provisions in the CC&Rs:

    a. Basin maintenance.
    b. Notice of the open space easement.
    c. Secondary emergency access road maintenance.

Additional Map Sheet

12. **Prior to application for a Final Map,** the applicant shall prepare an additional map sheet to be recorded with the Final Map, to be reviewed and approved by the Planning Director and the County Engineer. The additional sheet shall provide for the following:

    a. Identification of the open space easement, if not shown on the face of the map;
    b. All construction activities shall be conducted outside of the open space easement;
    c. No oak trees shall be removed for tract improvements or future residential development, including grading for roads, driveways or drainage improvements;
    d. Prior to grading activities, all oak trees that are within fifty feet of the proposed grading shall be marked for protection (e.g., with flagging) and their perimeters staked at 1-1/2 times the tree's dripline, as measured from the trunk. Once the protective measures have been completed and prior to grading, the applicant shall contact the county Environmental Coordinator's Office for an on-site inspection to confirm adequate measures have been taken to protect these trees during grading and construction.
    e. If trimming of oaks is necessary, a skilled arborist or accepted arborist's techniques shall be used when removing limbs. Unless a hazardous or unsafe situation exists, trimming shall be done only during July and August for evergreen species.
    f. Trees planted as replacement trees for subdivision improvements shall be maintained until successfully established. This shall include periodic weeding and adequate watering (e.g., drip-irrigation system).
    g. Colors shall be earthtones and no greater than 6 on the Munsell Scale.

Fire Safety

13. Prior to recordation of the final map, the applicant shall obtain a fire safety clearance letter from the California Department of Forestry (CDF)/County Fire Department establishing fire safety requirements.

Waste Water

14. Prior to filing of the final map, the applicant shall submit to and be jointly approved by the county Department of Planning and Building and Health Department, results of percolation tests and the log or logs of soil borings performed by a registered civil engineer. For this purpose, the applicant shall perform one or more soil borings to be a minimum depth of ten (10) feet in the area of the appropriate area of the proposed sewage disposal system to determine the: a) subsurface soil conditions, (example: impermeable strata which act as barriers to the effective percolation of sewage); b) presence of groundwater; c) separation between sewage disposal saturation areas and groundwater; d) borings shall be as deep as necessary below the proposed on-site disposal area to assure required separation. The applicant must perform a minimum of three (3) percolation test holes, to be spaced

uniformly in the area of the proposed sewage disposal system for all parcels.

Miscellaneous

15. This subdivisions is also subject to the standard conditions of approval for all subdivisions utilizing community water and septic systems, a copy of which is attached hereto and incorporated by reference herein as though set forth in full.

No responses to the April 11, 1994 Notice of Preparation were Received.

- **Revised Scope of Work**

Scope of Work
Revisions and Additions

The following is a description of the three resource issue areas that are being revised (Traffic and Circulation) or added (Visual Resources and Biological Resources) to the EIR.

1. Biological Resources

As part of the Busick Tract Map EIR, a detailed assessment of biological resources of the project site will be conducted. The assessment will, at a minimum, include the following components:

- Determining baseline conditions of the subject property and identifying the locations of major plant communities/habitat types relative to proposed residential lots and access routes;
- Identifying important wildlife resources of the project site;
- Evaluating the potential for occurrence of sensitive plants and animals within and adjacent to the project site;
- Determining potential impacts to biological resources, focusing on impacts to special-status species and sensitive habitats; and,
- Developing feasible mitigation measures to minimize or avoid project-related impacts to sensitive biological resources.

Changes to plant communities, sensitive habitats, and special-status species of the project site will be evaluated as part of the biological resources assessment. Primary issues concerning the creation of 16 residential parcels on the approximate 47-acre property include the following:

- Direct and indirect disturbance of coast live oaks located along the fringe of proposed residential lots;
- Disturbance of important habitats for wildlife and sensitive plant communities;
- Loss of individuals of special-status plants within the project site;
- Disturbance of special-status animals that occur within or frequent the project site;
- Reductions in populations of special-status species supported by various habitats of the project site.

Scope of Work

a. Review and Compile Existing Information. This task will focus on gathering information on existing conditions of the subject property, including proposed residential lots and the proposed open space area. Information obtained during this task will be use to focus the subsequent field survey effort and assessment of biological resources. A list of species with potential to occur at the project site will be compiled based on review of the California Natural Diversity Data Base (NDDB) and other pertinent literature. In addition, previous reports pertaining to biological resources of the subject property, including a botanical

EXHIBIT B

survey (Holland, 1989) and burrowing owl survey (McCormick, 1997), will be reviewed as part of this task.

b. Conduct Field Survey of Project Site. This task will focus on determining the location, composition, and extent of sensitive plant communities and important wildlife habitats of the project site. All major cover types of the project site will be mapped using colored aerial photographs provided by the County and information collected in the field. During the site survey, plant communities of the site will be assessed with regard to their potential to support special-status plants and animals. Focused surveys for sensitive plants and wildlife will not be conducted as part of this task. However, any observation of individuals of special-status animals known from the area, or evidence of their occurrence, will be documented and mapped accordingly.

c. Summarize Baseline Conditions of Project Site. This task will consist of preparing the biological resources setting section for the EIR. As part of this task, descriptions of major plant communities, wildlife resources, and special-status species of the project site will be prepared using information obtained from tasks "a" and "b". Results of the previous botanical survey (Holland, 1989) and burrowing owl survey (McCormick, 1997) will be incorporated into the discussion of baseline conditions of biological resources as appropriate. In addition, a detailed discussion of key federal, state and local regulations and policies associated with protection of biological resources of the project site will be included.

d. Evaluate Project-Related Impacts. As part of this task, the proposed project will be evaluated with respect to impacts on biological resources of the project site and surrounding vicinity. The proposed tract map will be reviewed to determine the locations of residential lots and access routes relative to existing sensitive resources. The focus of the impact assessment will be on determining potential project-related effects on sensitive communities, rare plants, and special-status wildlife known or having potential to occur within the approximate 47-acre site. Impacts associated with project implementation will be compared to defined thresholds of significance based on pertinent local, state, and federal plans and policies.

e. Develop Mitigation Measures for Proposed Project. This task will consist of developing mitigation measures to reduce, to the degree possible, the significant, adverse impacts associated with implementation of the proposed project. Mitigation will focus on those measures that are reasonably feasible and effective, and will be developed in sufficient detail to allow monitoring for compliance. Long-term protective measures for sensitive habitats of the project site will be identified as part of this task, and specific methods for minimizing direct impacts or degradation of sensitive habitats will be discussed. In addition, recommendations for avoidance of sensitive habitats and species, provided within the previous botanical survey and burrowing owl survey, will be incorporated into the biological resources section as part of this task.

2. Visual Resources

Review of the project proposal and project site indicate that there is the potential for project components to be seen from public roadways including the Highway 101 corridor. The single-

family lots would be sold to individual owners and developed independently. As a result, visible project components may include the following:

- Residential structures
- Landscaping and fencing
- Excavation and embankment slopes
- Paved roadways
- Vegetation alteration
- Street and exterior lighting

Preliminary investigation shows that portions of the project will be seen from northbound and southbound Highway 101, Valley Road, and Los Berros Road. Because of the viewing angle and elevation, the view from northbound Highway 101 is expected to be the most affected by the proposed development. Development on lots 3, 4 and 5 may have the greatest potential for visibility.

The visual resources section will identify the visual resources on-site and any related ridgelines and landforms which are of significance from key viewing areas on Route 101. These visual resources will be evaluated and rated for their aesthetic value and for their contribution to the existing character of the landscape and region. Critical project components as allowed under applicable ordinances will be specifically identified and marked on-site using a vertical and horizontal reference system of pylons, flags and other marking devices. The visual evaluation method will compare the visual resource inventory with the project components at the applicant's proposed locations and will identify any potential impacts to visual resources.

It is anticipated that potential viewers may perceive the project in terms of an overall landscape character change. Accordingly, an emphasis of the analysis methodology will be to evaluate the individual project components and their affect on the general visual character of the landscape as well as a scenic background.

The visual resources section will also analyze the potential impact of each possible project component in order to effectively evaluate and quantify their cumulative affect. In order to develop defensible and effective mitigation recommendations, the specific resources and impacts associated with each project component will be identified. This methodology will also ensure that any potential cumulative affects will be minimized.

The full extent of project visibility will be inventoried. Photographs will be taken from key viewing areas along the northbound Route 101 corridor and used as the basis for analyzing the potential affects of the project. Photo-simulations will document the potential project, and will identify changes in the area's visual character as a result of the project.

Actual project impacts will be determined by evaluating the physical changes proposed by the project in the context of the existing and surrounding landscape, as seen from important and representative viewing locations. Project impact determinations will be consistent with community scenic values as identified in applicable planning documents.

Scope of Work

a. Initiate analysis through consultation with County staff to determine critical factors including County guidelines and visual policies applicable to the site.

b. Determine key viewing areas based on visual access to the site, viewer-group expectations and sensitivity, along with applicable County policies. Viewing areas will consider both the northbound and southbound of State Route 101, as well as the visibility potential from any other public roads in the region. Key views will be prioritized by their relative impact potential based on field analysis including viewing duration and aspect, and research of relevant planning documents.

c. Establish on-site locations of proposed building envelopes, road alignments, and earthwork. Reference markers will be placed at critical locations where the proposed development has the greatest potential to conflict with areas of identified visual resources. Potential building heights and locations and the proposed stockpile will be established by the placement of approximately twelve on-site reference pylons as well as the use of flags. The specific locations of critical site-development components will be based on field surveys and staked information provided by the applicant.

d. Develop baseline photographs taken from key viewing areas showing in-place pylons and other reference markers.

e. Evaluate project impacts by superimposing possible development onto the baseline images. In conjunction with field studies, two computer generated photo-simulations showing "before and after" conditions will be used as the basis for the analysis. The analysis will evaluate the project's impacts relative to the overall landscape context including surrounding land use, visual harmony with the existing landform and landcover, consistency with existing landscape character, degree of visibility of the project components during daylight and night, and seasonal variation. These physical attributes will be considered along with the viewer's expected response to the proposed changes. In addition the proposed project will be analyzed for consistency with applicable planning policies and guidelines.

f. Identify and quantify general and specific visual impacts including the potential cumulative affects caused by the proposed project, based on the above analysis.

e. Provide impact-specific mitigation measures and identify any significant adverse unavoidable visual impacts and residual impacts.

g. Prepare photo-simulations of the project from key viewing areas showing applied mitigation measures and illustrating potential effectiveness.

A request will be forwarded to the applicant to provide supplemental information including:

- Field identification of all building envelopes.
- Mapping and identification marking of vegetation proposed to be removed.
- Field identification of road alignments.
- Field identification of critical grading limits.
- Proposed street lighting plan.

3. Traffic and Circulation

Traffic impacts associated with the proposed project were documented in a 1996 report prepared by Higgins Associates. The analysis documented in the 1996 report will be updated to reflect current (2001-2002) traffic volumes on the local road network. Cumulative traffic conditions will be analyzed using traffic forecasts derived from the South County traffic model that was recently updated by Higgins Associates for the Arroyo Grande General Plan update.

The scope of work was verified with Richard Marshall of the County of San Luis Obispo Department of Public Works. The analysis will document AM and PM peak hour traffic conditions at the following intersections:

1. Highway 101/El Campo Road;
2. Falcon Crest Road/Los Berros Road;
3. Falcon Crest Road/El Campo Road;
4. Falcon Crest Road/Coast View Drive.

New AM and PM peak period traffic counts will be obtained at all study intersections.

Traffic operations on the following road segments in the immediate vicinity of the proposed project will be analyzed:

1. Falcon Crest Road;
2. El Campo Road;
3. Coast View Drive; and
4. Highway 101.

Twenty-four hour counts using machine tube counters will not be conducted for this study. The peak hour intersection volumes will be utilized to establish peak hour volumes on the road segments adjacent to the study intersections. Planning level threshold volumes will be utilized to assess segment level of service based on the segment peak hour volume.

The following analysis conditions will be analyzed:

1. Existing Conditions;
2. Existing Plus Project Conditions;
3. Cumulative Conditions.

Scope of Work

a. All available information required to complete the project will be obtained. This includes a project site plan, traffic counts available from public agencies and traffic studies prepared for other approved and pending projects in the vicinity of the project.

b. AM and PM peak period intersection turning movement counts will be conducted at the following intersections:

1. Highway 101/El Campo Road;
2. Falcon Crest Road/Los Berros Road;
3. Falcon Crest Road/El Campo Road; and
4. Falcon Crest Road/Coast View Drive.

The peak period data will be tabulated to determine the peak hour volumes. Intersection levels of service will be calculated and warrants for traffic control and channelization will be determined.

c. Traffic forecasts for the following conditions will be prepared:

- Existing Plus Project Conditions; and
- Cumulative with Project Conditions.

Project trip generation, distribution and assignment analyses will be conducted. The project trip assignment will be added to the existing traffic volumes to establish Existing Plus Project Conditions. Cumulative Conditions will be analyzed using traffic volume projections from the South County traffic model that was recently updated by Higgins Associates for the City of Arroyo Grande General Plan. The analysis of Cumulative Conditions will assume the development of a grade-separated interchange at the Highway 101/El Campo Road intersection, which is currently in the planning stages.

d. Intersection and road segment levels of service will be evaluated for each of the analysis scenarios. Intersection traffic control and channelization warrants will be evaluated as well.

e. Mitigation measures necessary to mitigate Project and Cumulative impacts will be determined. Improvements warranted to improve existing deficient conditions will also be determined.

f. The results of the analysis will be documented in a report with appropriate tables and graphics. The report will be submitted as a draft report for your review. Comments will be incorporated into a final report for distribution to the County.

APPENDIX B

- **Supplemental Letter (Drainage)**
- **Preliminary Drainage Report**

- **Supplemental Letter (Drainage)**

Garing Taylor & Associates

Civil Engineering
Surveying
Project Development

January 31, 2005

Morro Group, Inc.
1422 Monterey Street, Suite C200
San Luis Obispo, CA 93401

Attn: Shawna Scott
Re: Busick Tract EIR – Drainage

Dear Shawna:

This letter has been composed to address the issues contained in your email of January 12, 2005 as follows. An additional copy of the Preliminary Drainage Report is attached for you reference.

1. Criteria agreed to between the Falcon Ridge HOA and the owners of Tract No. 1789.
   a. The Preliminary Drainage Report dated 1/16/05 shows that the retardation period is considerably less than four days. The drainage report calculates retardation through the basin in two ways. The first is a US Department of the Interior calculation that has been acceptable to the County of San Luis Obispo in the past. Per this calculation retardation occurs for approximately 5 hours (300 minutes). The second retardation calculation is the Santa Barbara Urban Hydrograph Method (SBUH) which is standard in Santa Barbara County. Although this calculation duration is 24 hours, significant retardation in excess of 1' depth in the basin occurs for a 9 hour period.
   b. The basis of the SBUH calculation is the 100 year storm event. Note that per the calculation the maximum water depth is 12' at hour 14.25. The capacity of the basin at 12' deep is 1.16 Ac-Ft. The capacity of the basin at 14' deep is 1.82 Ac-Ft which is an additional 56% increase in capacity. Note that once the 12' depth is reached, additional water will be diverted directly into an overflow structure to the existing storm drain piping. At no time will the basin overflow across the surface of the land into Falcon Ridge Development. All water will leave the project through the existing storm drain pipe.
2. The water flowing from the basin is "metered" out through a "bleed pipe" protect by a trash rack to prevent clogging. It should be noted that the drainage area already acts as a retardation basin and retains water based on the capacity of the existing storm drain that exits this area. No negative effects have been observed as a result of this existing drainage system or any infiltration that occurs as a result of it's presence. The percolation properties of the soils during the retardation period was <u>not</u> taken into consideration for these drainage calculations. Assuming that the basin is impervious will make the calculations more conservative and the basin is assumed to discharge all the water that would flow into it.
3. The purpose a retardation basin is to hold a given amount of water and then release it slowly so that even though the <u>amount</u> of storm water increases due to the increase in impervious runoff area, the historic <u>flow rates</u> from a given site are not exceeded. It is my opinion that the basin exceeds the requirements of the easement agreement based on the information that I have been given and that a redesign is not required.

141 South Elm Street • Arroyo Grande, CA 93420 • 805/489-1321 • Fax 805/489-6723

4. The flow rate onto the end of Castillo Del Mar will be increased due to the paving of the emergency access road and the development of Lot #8. This is not a significant increase, but if it can not be demonstrated to the satisfaction of the City of Arroyo Grande that the flow increase at Point "E" will be less than the flow decreases at Points "C" & "D", then a small retarding basin will be needed just up stream of Point "E" on Lot #8.

Hopefully this information is helpful to the processing of the EIR and if you have questions or need other information, please call or email me at the GTA offices.

Respectfully submitted,

GARING, TAYLOR & ASSOCIATES, INC.

Michael R. Ratty, RCE 30798
Project Engineer

MRR:mrr
T:\00-017\Morro Group4.doc
XC: Carlo Alfano – J.H. Land

- **Preliminary Drainage Report**

Preliminary Drainage Report

Tract No. 1789 – Busick Tract

January 16, 2003

The drainage areas for the proposed subdivision are shown on the attached drainage map (Drainage Map – 1798). The size of the areas is as follows:

Area #1A	1.74 Acres
Area #1B	1.90 Acres
Area #1C	4.01 Acres
Area #2	14.83 Acres
Area #3A	1.58 Acres
Area #3B	4.92 Acres

Area #4 drains northerly to the State Highway 101 right-of-way and will not be affected by the subdivision improvements.

The areas are numbered per the predevelopment condition.

After tract improvements are installed Drainage Areas #1B and #3A are combined with Area #2 and will flow to the proposed retardation basin. The post development size of this area is 18.31 Acres. Also post development, Area #1A is cutoff by the emergency access easement paving and drains to Castillo del Mar which is the adjacent street in Tract No. 2207. Tract No. 2207, which is located in the City of Arroyo Grande, was constructed with drainage facilities that accommodate Drainage Area #1 in the existing condition. Note that in the post development condition Area #1B no longer flows to the City.

Additional impervious area for driveways, walks and roofs associated with the construction of the homes will occur on Lots 9 and 10 but will be compensated for by the fact that Areas #1A and #1B will no longer drain to Points C and D as shown on the drainage map. Drainage to Points C and D is conveyed through Lots 16 and 17 of Tract No. 2207 using swales improved with that tract. Attached is a calculation for the Southwesterly Drainage Area, which demonstrates that the drainage to Points C and D doe not increase if the development of this tract complies with this report.

A similar situation will happen for the development of Lot 16 of the proposed tract. Attached is a drainage calculation for this lot showing that storm water leaving the tract in this area will not be greater than the existing condition. In this situation, Area #3A will cutoff drainage that would normally go to Point A. Area #3B will remain after development and although not all storm water from this area goes to Point A, the entire area is used for the calculation and will make it more conservative.

A retardation calculation for the proposed basin is attached based on a method from the Department of the Interior. This method uses 50-year storm inflow data combined with an assumed 2-year storm calculation to set the discharge. The calculation produces a basin size of approximately 0.60 Ac.-Ft. required capacity.

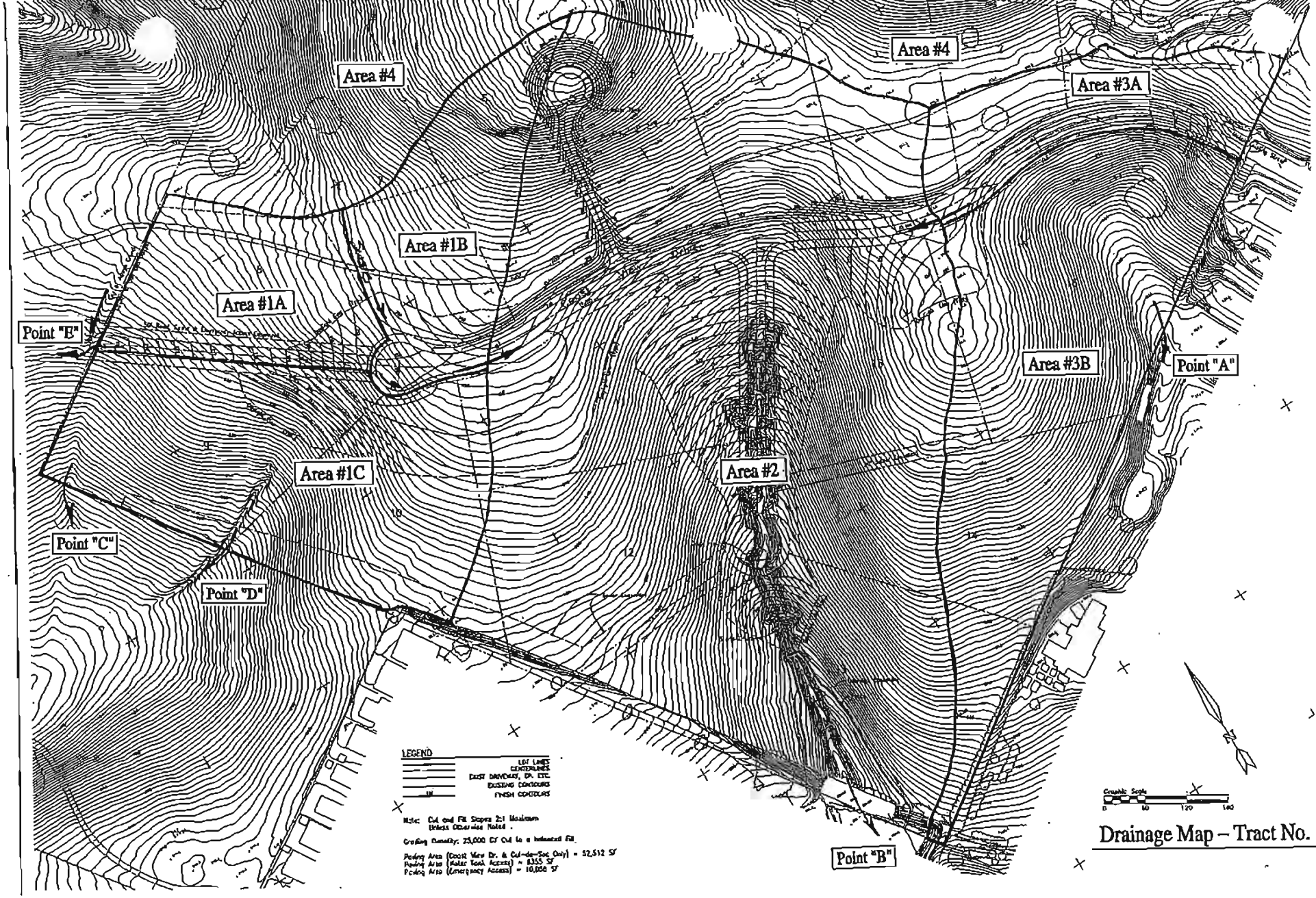
The Santa Barbara County FC&WCD Urban Hydrograph program was also used as a comparison to the Department of the Interior method (See attached). The outlet pipe was sized to produce a peak discharge of less than 8 CFS. Note that the maximum depth of the basin is less than 12 feet as calculated and that the volume of retardation is calculated at 1.16 Ac.-Ft. The shape of the existing topography and the slopes adjacent to the mobile home park creates the retardation basin area. An existing storm drain exits the tract to the south and drains this area. Additional minor grading will be done during the subdivision construction to flatten the bottom of the basin, make the sides more accessible and match the grading at the end of the cul-de-sac. This will make the basin slightly larger than the existing condition.

The proposed retardation structure that will bleed the water out of the basin will have trash racks to prevent the small outlet pipe (9" diameter) from clogging and an over flow weir structure that will be sized for the 100-year storm.

With the exception of Lots 9, 10 and 16, the impervious areas created by the construction of homes, driveways, walks, patios should drain to the proposed streets.

Refer to the Preliminary Grading & Street Design, Preliminary Sewer & Water Plan and the Preliminary Tentative Map for other information and dimensions.

REGISTERED PROFESSIONAL ENGINEER
MICHAEL R. RATTY
No. 30798
Exp. 3/31/04
CIVIL
STATE OF CALIFORNIA



Drainage Map – Tract No. 1798

Garing Taylor Associates
141 South Elm Street
Arroyo Grande, CA 93420
805/489-1321 Fax 805/489-6723

Job: Tr. 1789 - Drainage
Sheet No. ____ of ____
Calculated by: MR Date: 11/27/02
Checked by ____ Date ____
Scale ____

South westerly Drainage Area - Lot 9 and parts of Lots 6, 7, 8 & 10 - Drains into Lots 16 & 17 of Tr. 2207 (Points "C" & "D")

Original tributary area = 7.65 Acres (Area #1, total)
Area cutoff by Coast View Drive & Lot 7 drainage swale = − 1.90 Acres (Area #1B)
Area cutoff by the Emergency Access Easement = − 1.74 Acres (Area #1A)
Remaining Area after Construction = 4.01 Acres (Area #1C)

Assume undeveloped C = 0.20:

100 year storm runoff before development:

(7.65 Acres)(0.20)(3.2) = 4.90 cfs

After development, water from the remaining area (Lots 9 & 10) plus the impervious areas on the lots needs to be less than before development.

Flow from the remaining Lot 9 & 10 area plus 20,000 SF. of developed impervious area:

(4.01 Ac)(0.20)(3.2) + (0.46 Ac)(1)(3.2) = 4.04 cfs

Post development runoff to Points "C" & "D" is less than the predevelopment condition.

Earing Taylor Associates
141 South Elm Street
Arroyo Grande, CA 93420
805/489-1321 Fax 805/489-6723

Job: Tr. 1789 – Drainage
Sheet No. ____ of ____
Calculated by: TRE Date: 11/27/02
Checked by: ____ Date: ____
Scale: ____

Lot 16 Drainage Area – leaves tract in an existing arroyo on easterly boundary next to Falcon Ridge, (Point "A")

Original tributary area = 6.50 Acres (Area #3)
Remaining Area after construction of Coast View Drive = 4.92 Acres (Area #3B)

Given: SLO Co. Std. I_{100} = 3.2 in/hr @ 10 ft
Q = CIA
Lot may have as much as 10,000 SF (0.23 Ac) of additional impervious area after on-site development

If the existing undeveloped runoff coefficient is 0.45:

100 yr Storm runoff before development
(6.50)(0.45)(3.2) = 9.36 cfs

After tract development:

The drainage area is reduced by the construction of Coast View Drive but impervious area is added when the lot is developed.

(4.92 Ac)(0.45)(3.2) + (0.23)(1)(3.2) = 7.82 cfs

Post runoff using C = 0.45 is less than the existing condition.

Caring Taylor Associates
141 South Elm Street
Arroyo Grande, CA 93420
805/489-1321 Fax 805/489-6723

Job: Tr. 1789 - Drainage
Sheet No. _____ of _____
Calculated by: MR Date: 11/27/02
Checked by _____ Date _____
Scale _____

If the existing undeveloped runoff coefficient is 0.20:

Before tract development:

$(6.50 Ac)(0.20)(3.2) = \underline{4.16 \text{ cfs}}$

After tract development:

$(4.92 Ac)(0.20)(3.2) + (0.23)(1)(3.2) = \underline{3.88 \text{ cfs}}$

Post runoff using C = 0.20 is less than the existing condition.

Retardation Calculations - Tract No. 1789

			"C" NEW =		0.70	
C" OLD =	0.35		HISTORICAL I =		1.30	
AREA =	18.31		2-YEAR HISTORICAL Q =		8.33	c.f.s.
A.P.F. =	1		CALC'D RELEASE RATE =		0.00	c.f.s.
					STORAGE =	25,954 CF
TIME	I 50	Q 50	INFLOW	RELEASE	OUTFLOW	STORAGE
min.		c.f.s.	c.f.	RATE	c.f.s.	c.f.
10	2.90	37	22302	8	4999	17303
15	2.55	33	29415	8	7498	21917
20	2.18	28	33529	8	9997	23532
25	1.93	25	37105	8	12497	24609
30	1.73	22	39912	8	14996	24916
45	1.40	18	48448	8	22494	25954
60	1.12	14	51678	8	29992	21686
90	0.92	12	63675	8	44988	18687
120	0.82	11	75672	8	59984	15688
150	0.77	10	88822	8	74979	13842
180	0.74	9	102433	8	89975	12458
210	0.71	9	114661	8	104971	9690
240	0.68	9	125504	8	119967	5537
270	0.66	8	137039	8	134963	2076
300	0.64	8	147652	8	149959	-2307
330	0.62	8	157341	8	164955	-7613
360	0.60	8	166108	8	179951	-13842
390	0.58	7	173952	8	194947	-20994
420	0.56	7	180874	8	209942	-29069
450	0.55	7	190332	8	224938	-34606
480	0.54	7	199330	8	239934	-40604
510	0.52	7	203944	8	254930	-50986
540	0.50	6	207635	8	269926	-62291
570	0.49	6	214787	8	284922	-70135
600	0.47	6	216864	8	299918	-83054

REFERENCES: 1. PRACTICES IN DETENTION OF URBAN STORM WATER RUN-OFF
U.S. DEPT. OF INTERIOR
2. SLOCO STANDARDS: SECTION 11-351.1500, DRAWINGS D-2 TO D-8,
"UNOFFICIAL" DRAWING D-2

FORMULAS: APF = ANTICEDENT PRECIPTATION FACTOR
Q50 = C*I*A*APF
INFLOW = Q50 * TIME
RELEASE RATE = 2-YEAR Q @ OLD "C" @ 10 MIN. INTENSITY OR BY SEPARATE CALCULATION
OUTFLOW = RELEASE RATE * TIME
STORAGE = INFLOW - OUTFLOW

SANTA BARBARA COUNTY FC&WCD URBAN HYDROGRAPH, Version 1.2.1
01-16-2003
Licensed to City of Santa Maria

UTATION of a Runoff Hydrograph

Hyd Num	Return Period	Drainage Area	--24 hr Rain-- 100yr	Used	Imper- vious	Loss in/hr	T(c) min	Runoff Depth	Vol ac-ft	Peak Flow	Unit q
1	100yrs	18.3ac	5.50in	5.50in	0.28	0.28	10.0	2.71in	4.1	24.6cfs	1.34

SANTA BARBARA COUNTY FC&WCD URBAN HYDROGRAPH, Version 1.2.1
01-16-2003
Licensed to City of Santa Maria

COMPUTATION of a Runoff Hydrograph

Hyd Num	Return Period	Drainage Area	--24 hr Rain-- 100yr	Used	Imper- vious	Loss in/hr	T(c) min	Runoff Depth	Vol ac-ft	Peak Flow	Unit q
1	100yrs	18.3ac	5.50in	5.50in	0.28	0.28	10.0	2.71in	4.1	24.6cfs	1.34

SANTA BARBARA COUNTY FC&WCD URBAN HYDROGRAPH, Version 1.2.1
Licensed to City of Santa Maria
ROUTING Hydrograph 1 [Hydgph] thru a Basin, Outflow Hydrograph is 2

O· ˙et Pipe(s) :
, Slope = .005
Manning's n = .01
No. of Pipes = 1

Diameter = 9 in
Length = 5 ft
Entrance Loss Ke = .5
Pipe Inv below Basin Btm = 0

Storage data entered from keyboard

Depth (ft)	Storage Volume (cu ft)	(ac-ft)
1	210	0.00
2	807	0.02
3	1,890	0.04
4	3,491	0.08
5	5,710	0.13
6	8,649	0.20
7	12,409	0.28
8	17,202	0.39
9	23,275	0.53
10	30,780	0.71
11	39,866	0.92
12	50,687	1.16
13	63,631	1.46
14	79,141	1.82

Time (hrs)	Inflow (cfs)	Outflow (cfs)	Storage (ac-ft)	Water Depth (ft)	Flow Over Weir (cfs)
0.25	0.02	0.02	0.00	0.01	
0.50	0.05	0.05	0.00	0.03	
0.75	0.06	0.06	0.00	0.04	
1.00	0.06	0.06	0.00	0.04	

1.25	0.20	0.17	0.00	0.11
1.50	0.37	0.35	0.00	0.22
[illegible] 75	0.39	0.40	0.00	0.25
[illegible]00	0.40	0.39	0.00	0.25
2.25	0.46	0.45	0.00	0.28
2.50	0.53	0.52	0.00	0.32
2.75	0.54	0.54	0.00	0.34
3.00	0.54	0.54	0.00	0.34
3.25	0.56	0.56	0.00	0.35
3.50	0.59	0.59	0.00	0.37
3.75	0.60	0.60	0.00	0.37
4.00	0.60	0.60	0.00	0.37
4.25	0.62	0.62	0.00	0.38
4.50	0.65	0.65	0.00	0.40
4.75	0.65	0.65	0.00	0.41
5.00	0.65	0.65	0.00	0.41
5.25	0.67	0.66	0.00	0.41
5.50	0.68	0.68	0.00	0.42
5.75	0.68	0.68	0.00	0.43
6.00	0.68	0.68	0.00	0.43
6.25	0.72	0.71	0.00	0.44
6.50	0.76	0.76	0.00	0.47
6.75	0.77	0.77	0.00	0.48
7.00	0.77	0.77	0.00	0.48
7.25	0.82	0.81	0.00	0.50
7.50	0.87	0.87	0.00	0.54
7.75	0.88	0.88	0.00	0.55
8.00	0.88	0.88	0.00	0.55
[illegible]25	1.03	0.99	0.00	0.62
[illegible]50	1.19	1.17	0.00	0.73
8.75	1.22	1.22	0.00	0.76
9.00	1.22	1.22	0.00	0.76
9.25	1.71	1.60	0.00	1.00
9.50	2.28	1.96	0.01	1.32
9.75	2.36	2.28	0.01	1.61
10.00	2.37	2.36	0.01	1.68
10.25	3.24	2.74	0.02	2.04
10.50	4.23	3.21	0.04	2.67
10.75	4.38	3.62	0.05	3.28
11.00	4.40	3.84	0.07	3.65
11.25	4.40	4.00	0.08	3.92
11.50	4.40	4.09	0.08	4.08
11.75	4.40	4.15	0.09	4.20
12.00	4.40	4.20	0.09	4.29
12.25	6.14	4.41	0.11	4.68
12.50	8.13	4.82	0.17	5.53
12.75	8.41	5.22	0.23	6.41
13.00	8.45	5.52	0.30	7.11
13.25	8.46	5.73	0.36	7.64
13.50	11.94	6.01	0.45	8.36
13.75	24.62	6.57	0.69	9.92
14.00	21.21	7.08	1.03	11.44
14.25	5.93	7.25	1.16	11.98
14.50	2.88	7.17	1.10	11.74
1[illegible]75	2.44	7.05	1.01	11.37
15.00	2.38	6.93	0.91	10.99
15.25	1.84	6.77	0.82	10.52
15.50	1.24	6.60	0.71	10.01
15.75	1.15	6.38	0.60	9.38
16.00	1.14	6.14	0.49	8.71

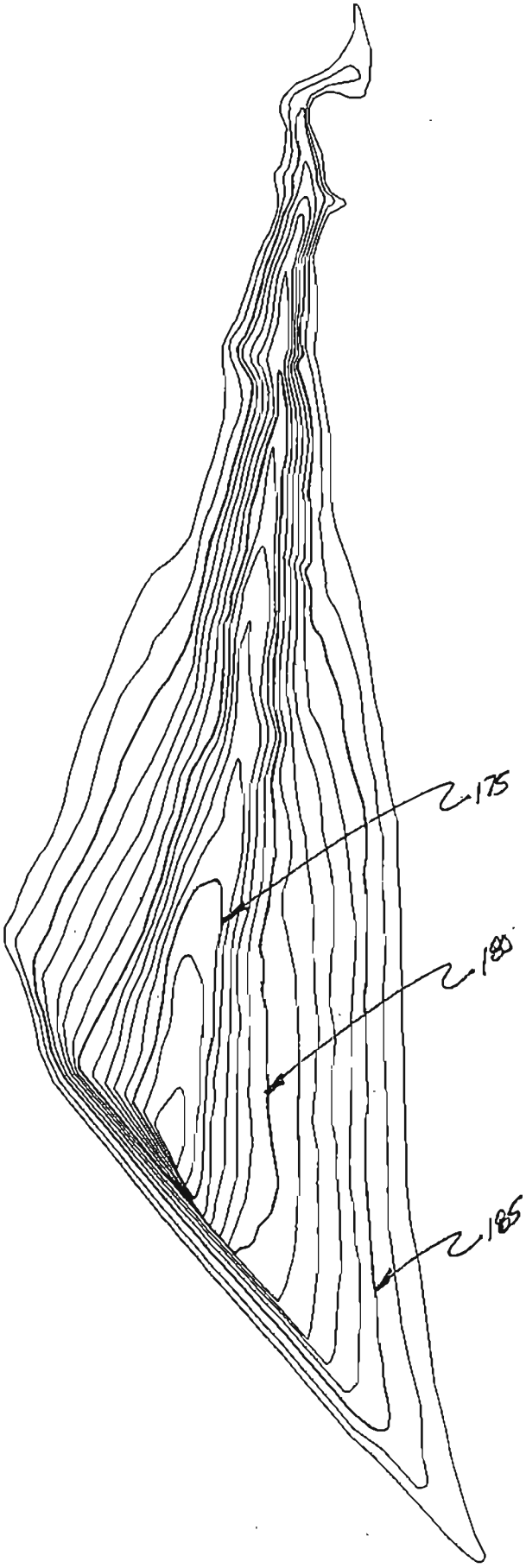
16.25	1.02	5.86	0.39	7.97
16.50	0.88	5.51	0.29	7.08
16.75	0.86	5.07	0.20	6.05
17.00	0.85	4.48	0.12	4.82
25	0.82	3.64	0.06	3.32
17.50	0.77	2.16	0.01	1.50
17.75	0.77	0.40	0.00	0.25
18.00	0.77	0.97	0.00	0.61
18.25	0.74	0.64	0.00	0.40
18.50	0.72	0.78	0.00	0.49
18.75	0.71	0.68	0.00	0.42
19.00	0.71	0.73	0.00	0.46
19.25	0.69	0.68	0.00	0.42
19.50	0.66	0.67	0.00	0.42
19.75	0.65	0.65	0.00	0.41
20.00	0.65	0.66	0.00	0.41
20.25	0.62	0.62	0.00	0.39
20.50	0.58	0.58	0.00	0.36
20.75	0.57	0.57	0.00	0.35
21.00	0.57	0.57	0.00	0.36
21.25	0.54	0.55	0.00	0.34
21.50	0.52	0.52	0.00	0.32
21.75	0.51	0.51	0.00	0.32
22.00	0.51	0.51	0.00	0.32
22.25	0.44	0.45	0.00	0.28
22.50	0.35	0.36	0.00	0.23
22.75	0.34	0.34	0.00	0.21
23.00	0.34	0.34	0.00	0.21
23.25	0.21	0.24	0.00	0.15
50	0.05	0.07	0.00	0.05
75	0.03	0.03	0.00	0.02
24.00	0.03	0.03	0.00	0.02

<<< Summary of Results >>>

```
Max INFLOW   =     25 cfs   at 13.75 hrs
Max OUTFLOW  =      7 cfs   at 14.25 hrs
Max STORAGE  =   1.16 ac-ft at 14.25 hrs
Max DEPTH    =  11.98 ft at 14.25 hrs
Total INFLOW Volume         =    4.13 ac-ft
Total OUTFLOW Volume        =    4.13 ac-ft
Storage at end of 24 hours =    0.00 ac-ft
```

Hydrograph # 2 Calced

Basin Volume Data
No Scale



depth	elev	area	
0	173	84 SF	Bottom
2	175	858 SF	
7	180	4204 SF	
12	185	11738 SF	TOP
14	187	16871 SF	(1st contour)

APPENDIX C

- **Table 1 Special-Status Plant Species**
- **Table 2 Special-Status Wildlife Species**
- **Botanical Survey**
- **Pismo Clarkia Survey**
- **Burrowing Owl Survey**

- **Table 1 Special-Status Plant Species**

Table 1
Special-Status Plant Species Documented or Potentially Occurring Within a Five-Mile Radius

Common Name	Scientific Name	Status Federal/State/CNPS Status & Threat Code	General Habitat Description	Habitat Present/ Absent	Rationale
Hoover's bent grass	*Agrostis hooveri*	-- / -- / 1B.2	Chaparral, cismontane woodland, and valley and foothill grassland habitats on usually sandy soil.	P	• Known to occur approximately one mile northwest of the project site. • Botanical surveys did not identify species within project site.
Sand Mesa manzanita	*Arctostaphylos rudis*	--/--/1B.2	Chaparral and coastal scrub, sandy substrates.	A	• Known to occur approximately 2.6 miles south of the project site. • No chaparral or coastal scrub exists in the project vicinity. • Botanical surveys did not identify species within project site.
Wells's manzanita	*Arctostaphylos wellsii*	--/--/1B.1	Closed cone coniferous forests and chaparral, primarily on sandstone.	A	• Known to occur approximately 1 mile northeast of the project site. • Closed cone coniferous forests and chaparral does not exist within the project site. • Botanical surveys did not identify species within project site.
Marsh sandwort	*Arenaria paludicola*	FE/SE/1B.1	Freshwater marshes with saturated acidic bog soils.	A	• Only known populations are at Black Lake and Oso Flaco Lake, approximately 3.5 miles southwest of the project site. • Botanical surveys did not identify species within project site. • No suitable habitat exists within the project site.
San Luis mariposa lily	*Calochortus obispoensis*	--/--/1B.2	Chaparral, coastal scrub and grassland communities on serpentine soils.	A	• Known to occur approximately 3 miles northwest of the project site. • Botanical surveys did not identify species within project site. • No suitable habitat exists within the project site.

Table 1
Special-Status Plant Species Documented or Potentially Occurring Within a Five-Mile Radius

Common Name	Scientific Name	Status Federal/State/CNPS Status & Threat Code	General Habitat Description	Habitat Present/ Absent	Rationale
Obispo Indian paintbrush	*Castilleja densiflora* ssp. *obispoensis*	-- / -- / 1B.2	Valley and foothill grassland habitat.	P	• Known to occur approximately two miles northwest of the project site. • Botanical survey did not identify species within project site.
straight-awned spineflower	*Chorizanthe rectispina*	-- / -- / 1B.3	Chaparral, cismontane woodland, and coastal scrub habitats; often on granite in chaparral.	A	• Known to occur approximately three miles north of the project site. • Botanical survey did not identify species within project site.
La Graciosa thistle	*Circium loncholepis*	FE/ST/1B.1	Coastal wetlands with dunes.	A	• Known to occur approximately 3 miles west of the project site. • Botanical survey did not identify species within project site. • No suitable habitat exists within the project site.
Surf thistle	*Cirsium rhothophilum*	--/ST/1B.2	Coastal bluff scrub and coastal dune habitats.	A	• Known to occur approximately 3.5 miles northwest of the project site. • Botanical survey did not identify species within project site. • No suitable habitat exists within the project site.
California sawgrass	*Cladium californicum*	--/--/2.2	Freshwater wetlands, alkali sink.	A	• Known to occur approximately 4 miles southwest of the project site. • Botanical survey did not identify species within project site.

Table 1
Special-Status Plant Species Documented or Potentially Occurring Within a Five-Mile Radius

Common Name	Scientific Name	Status Federal/State/CNPS Status & Threat Code	General Habitat Description	Habitat Present/ Absent	Rationale
Pismo clarkia	*Clarkia speciosa* ssp. *immaculata*	FE/SR/1B.1	Cismontane woodland, valley foothill grasslands, and in openings along the margins of chaparral habitats.	P	• Known to occur approximately 1.3 miles northwest of the project site. • Botanical survey did not identify species within project site.
Leafy tarplant	*Deinandra increscens* ssp. *foliosa*	-- / -- / 1B.2	Valley and foothill grasslands.	P	• Known to occur approximately 4.75 miles southeast of the project site. • Botanical survey did not identify species within project site.
Dune larkspur	*Delphinium parryi* ssp. *blochmaniae*	--/--/1B.2	Maritime chaparral and coastal dune habitats.	A	• Known to occur approximately 1.5 miles southeast of the project site. • Botanical survey did not identify species within project site. • No suitable habitat exists within the project site.
Beach spectaclepod	*Dithyrea maritima*	--/--/1B.2	Coastal dune and coastal scrub habitats with sandy substrate.	A	• Known to occur approximately 3.5 miles northwest of the project site, along Pismo Beach. • Botanical survey did not identify species within project site. • Suitable habitat does not exist in the vicinity of the site.
Blochman's leafy daisy	*Erigeron blochmaniae*	--/--/1B.2	Coastal dune habitats with sandy substrate.	A	• Known to occur approximately 5 miles southwest of the project site in association with dune scrub. • Botanical survey did not identify species within project site. • Suitable habitat does not exist in the vicinity of the site.

Table 1
Special-Status Plant Species Documented or Potentially Occurring Within a Five-Mile Radius

Common Name	Scientific Name	Status Federal/State/CNPS Status & Threat Code	General Habitat Description	Habitat Present/ Absent	Rationale
mesa horkelia	*Horkelia cuneata* ssp. *Puberula*	-- / -- / 1B.1	Chaparral, cismontane woodland, and coastal scrub habitats on sandy or gravelly soil.	A	• Known to occur approximately 5 miles northwest of the project site. • No chaparral or coastal scrub habitat onsite. • Botanical survey did not identify species within project site.
Kellogg's horkelia	*Horkelia cuneata ssp. sericea*	--/--/1B.1	Closed cone coniferous forest and coastal scrub habitats.	A	• Known to occur approximately 3.75 miles south of the project site. • Botanical survey did not identify species within project site. • Suitable habitat does not exist in the vicinity of the site.
San Luis Obispo County lupine	*Lupinus ludovicianus*	-- / -- / 1B.2	Chaparral and cismontane woodland habitats; sandstone or sandy soils.	P	• Known to occur 3.5 miles north of the project site. • Botanical survey did not identify species within project site.
Nipomo Mesa lupine	*Lupinus nipomensis*	FE/SE/1B.1	Coastal dune habitat with pockets of bare sand.	A	• Known to occur approximately 4.25 miles southwest of the project site on the Nipomo Mesa. • Botanical survey did not identify species within project site. • Suitable habitat does not exist in the vicinity of the site.
Crisp monardella	*Monardella crispa*	--/--/1B.2	Coastal dune and coastal scrub habitats.	A	• Known to occur approximately 2.75 miles southwest of the project site. • Botanical survey did not identify species within project site. • Suitable habitat does not exist in the vicinity of the site.

Table 1
Special-Status Plant Species Documented or Potentially Occurring Within a Five-Mile Radius

Common Name	Scientific Name	Status Federal/State/CNPS Status & Threat Code	General Habitat Description	Habitat Present/ Absent	Rationale
San Luis Obispo monardella	*Monardella frutescens*	--/--/1B.2	Coastal dune habitats.	A	• Known to occur approximately 2.5 miles southwest of the project site. • Botanical survey did not identify species within project site. • Suitable habitat does not exist in the vicinity of the site.
Gambel's watercress	*Rorippa gambellii*	FE/ST/1B.1	Freshwater and brackish marshes, swamps and the borders of lakes.	A	• Known to occur approximately 3.5 miles southwest of the project site. • Botanical survey did not identify species within project site. • Suitable habitat does not exist in the vicinity of the site.
Black-flowered figwort	*Scrophularia atrata*	--/--/1B.2	Associated with closed cone conifer forest, chaparral, coastal dune, coastal scrub, and riparian scrub habitats.	A	• Known to occur approximately 3.75 miles northwest of the project site. • Species not observed during botanical surveys. • Suitable habitat exists in association with riparian scrub within the project site.
San Bernardino aster	*Symphyotrichum defoliatum*	-- / -- / 1B.2	Cismontane woodland, coastal scrub coniferous forest, meadows and seeps, marshes and swamps, grasslands / near ditches, streams, springs.	P	• Known to occur two miles southwest of the project site. • Botanical survey did not identify this species within the project site.

Table 1
Special-Status Plant Species Documented or Potentially Occurring Within a Five-Mile Radius

Common Name	Scientific Name	Status Federal/State/CNPS Status & Threat Code	General Habitat Description	Habitat Present/ Absent	Rationale

Status Codes:*Federal:*
FC = Federal Candidate species.
FT = Federally-listed Threatened.
FE = Federally-listed Endangered.

State of California:
SE = State-listed Endangered.
ST = State-listed Threatened.
SR = State-listed Rare.

Habitat: Presence/Absence
Absent [A] means no further work needed. Present [P] means general habitat is present and species may be present. Critical Habitat [CH] means that the project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

California Native Plant Society (CNPS):
List 1B = rare, threatened, or endangered in California and elsewhere.
List 2 = rare, threatened, or endangered in California, but more common elsewhere.

Threat Code:
.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 = Fairly endangered in California (20-80% occurrences threatened)
.3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)

- **Table 2 Special-Status Wildlife Species**

Table 2
Special-Status Wildlife Species Documented or Potentially Occurring Within a Five-Mile Radius

Common Name	Scientific Name	Status Federal/State /CDFG	General Habitat Description	Habitat Present /Absent	Rationale
Invertebrates					
Oso Flaco robber fly	*Ablautus schlingeri*	-- / -- / SA	Occurs in sand dunes and other sandy areas in the vicinity of Oso Flaco Lake near the Oceano Dunes, California.	A	• Known to occur 3.5 miles west of the project site. • Suitable habitat does not exist in the vicinity of the project site.
Oso Flaco flightless moth	*Areniscythris brachypteris*	-- / -- / SA	Open, coastal sand dune slopes in San Luis Obispo County; larvae live in tubes attached to buried, green parts of plants at the margin of the active, moving sand dunes.	A	• Known to occur 3 miles southwest of the project site. • Suitable habitat does not exist in the vicinity of the project site.
Sandy beach tiger beetle	*Cicindela hirticollis gravida*	-- / -- / SA	Sand dune	A	• Known to occur 4.5 miles northwest of the project site. • Suitable habitat does not exist in the vicinity of the project site.
Monarch Butterfly	*Danaus plexippus* (wintering sites)	--/--/ SA	Coastal eucalyptus and Monterey pine stands.	A	• Several roosting sites occur within the Arroyo Grande region, approximately 1.4 miles west of the project site. • Preferred over-wintering habitat is not present within the vicinity of the project site.
White sand scarab beetle	*Lichnanthe albipilosa*	--/--/ SA	Coastal sand dunes in the vicinity of dune lakes.	A	• Known to occur 3.5 miles northwest of the project site in the Pismo Dunes. • Suitable habitat does not exist in the vicinity of the project site.

Table 2
Special-Status Wildlife Species Documented or Potentially Occurring Within a Five-Mile Radius

Common Name	Scientific Name	Status Federal/State /CDFG	General Habitat Description	Habitat Present /Absent	Rationale
California brackishwater snail	*Tryonia imitator*	--/--/ SA	Coastal lagoons, estuaries, and salt marshes from Sonoma County, south to San Diego County.	A	• Known to occur at the mouth of Arroyo Grande Creek, approximately 3.5 miles west of the project site. • Suitable habitat does not exist in the vicinity of the project site
Fish					
Tidewater goby	*Eucyclogobius newberryi*	FE/ -- / CSC	Brackish shallow lagoons and lower stream reaches where water is fairly still, but not stagnant.	A	• Closest known occurrence is 4 miles northwest of the project site, at the mouth of Pismo Creek. • Suitable habitat does not exist in the vicinity of the project site
Steelhead	*Oncorhynchus mykiss irideus*	FT/ -- / CSC	Optimally, clear, cool water with abundant instream cover, well-vegetated stream margins, relatively stable water flow, and a 1:1 pool-to-riffle ratio.	A	• Known to occur approximately 1 mile to the west within Arroyo Grande Creek. • Wildlife survey did not identify species within project site. • No suitable habitat exists within the project site.
Amphibians					
California tiger salamander	*Ambystoma californiense*	FT/ -- / CSC	Vernal pools, long-lasting rain pools, foothill grasslands	A	• Known to occur in Santa Barbara County, potentially occurring in San Luis Obispo County. • No suitable habitat exists within the project site.

Table 2
Special-Status Wildlife Species Documented or Potentially Occurring Within a Five-Mile Radius

Common Name	Scientific Name	Status Federal/State /CDFG	General Habitat Description	Habitat Present /Absent	Rationale
California red-legged frog	*Rana aurora draytonii*	FT/ -- / CSC	Aquatic habitats with little or no flow, the presence of surface water to at least early June, surface water depths to at least 2.3 feet, and the presence of fairly sturdy underwater supports such as cattails.	A	• Known to occur approximately 1 mile north and southeast of the project site. • The lack of surface water and riparian vegetation in the ephemeral drainage onsite during the rainy season indicates that suitable habitat is not present onsite.
Western spadefoot toad	*Scaphiopus hammondii*	-- / -- / CSC	Annual grassland habitats, open sandy floodplains, and alluvial terraces.	A	• Closest documented occurrence is from the Santa Maria Valley, approximately 9 miles south of the project site. • The lack of surface in the ephemeral drainage onsite during the rainy season indicates that suitable habitat is not present onsite.
Reptiles					
Southwestern pond turtle	*Clemmys marmorata pallida*	-- / -- / CSC	Quiet waters of ponds, lakes, streams, and marshes. Typically in the deepest parts with an abundance of basking sites.	A	• Suitable habitat exists within portions of Arroyo Grande Creek and Los Berros Creek located 1 mile west and southwest of the project site. • Lack of ponds and preferred basking indicates that suitable habitat is not present onsite.
Coast (California) horned lizard	*Phrynosoma coronatum (frontale)*	-- / -- / CSC	Frequents a wide variety of habitats. Most commonly occurring in lowlands along sandy washes with scattered low bushes.	A	• Known to occur 3.5 miles northeast of the project site. • Suitable habitat does not exist in the vicinity of the project site.

Table 2
Special-Status Wildlife Species Documented or Potentially Occurring Within a Five-Mile Radius

Common Name	Scientific Name	Status Federal/State /CDFG	General Habitat Description	Habitat Present /Absent	Rationale
Birds					
Cooper's Hawk (nesting)	*Accipiter cooperi*	MBTA / -- / CSC	Nests in dense stands of coast live oak, riparian forest, or other woodland habitat near water.	P	• Suitable breeding and nesting habitat occurs within the oak woodland along the northeastern property boundary and in riparian forest habitat located just outside of the northeastern property boundary.
Burrowing owl (burrowing sites)	*Athene cunicularia*	MBTA / -- / CSC	Extensive grassland habitats and agricultural areas.	P	• Suitable grassland burrowing habitat is present onsite. • An individual species was observed onsite during a preliminary field visit.
Northern harrier (nesting)	*Circus cyaneus*	MBTA / -- / CSC	Nests on the ground near freshwater and salt marshes.	P	• Nesting habitat is not present onsite. • An individual species was observed foraging onsite during a wildlife survey.
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FC, MBTA / -- / CSC	Forests to open riparian woodlands with thick understory.	A	• Suitable habitat does not exist in the vicinity of the project site.
Western snowy plover	*Charadrius alexandrinus nivosus (nesting)*	FT, MBTA / -- / CSC	Sandy marine and estuarine shores	A	• Closest documented occurrence is 3.5 miles west of the project site, at Pismo Dunes. • Suitable habitat does not exist in the vicinity of the project site.

Table 2
Special-Status Wildlife Species Documented or Potentially Occurring Within a Five-Mile Radius

Common Name	Scientific Name	Status Federal/State /CDFG	General Habitat Description	Habitat Present /Absent	Rationale
White-tailed kite (nesting)	*Elanus leucurus*	MTBA / FP / --	Nests in treetops within dense foliage located in coastal and valley lowlands, usually associated with agricultural lands and open fields.	P	• Suitable nesting habitat is present within larger oak trees along the northeastern property boundary. • Individuals of the species were observed foraging onsite during wildlife surveys.
Mammals					
Monterey dusky-footed woodrat	*Neotoma fuscipes luciana*	--/ -- / CSC	Moderate vegetative canopy, such as oak woodland, with brushy understory.	P	• Suitable habitat present within oak woodland located along the northeastern property boundary.
American badger	*Taxidea taxus*	--/--/ CSC	Open grasslands and scrub habitats.	P	• Known occurrence 2 miles north west of the project site. • Suitable habitat present onsite in the grassland and oak woodland habitat areas.

Status Codes:
Federal:
FE = Federal-listed Endangered
FT = Federal-listed Threatened
FC = Federal Candidate species
MBTA = Protected by Federal Migratory Bird Treaty Act

State of California:
SE = State-listed Endangered
ST = State-listed Threatened
FP = Fully Protected

California Department of Fish and Game:
CSC = California Special Concern Species.
SA = Special Animal

Habitat: Presence/Absence
Absent [A] means no further work needed. Present [P] means general habitat is present and species may be present. Critical Habitat [CH] means that the project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present

- **Botanical Survey**

Botanical Survey of Vista Pacifica, Tract 1789, Arroyo Grande, California

by

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Prepared for:

RRM Design Group
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December 9 1989

INTRODUCTION

The study site is a 47.25 acre parcel located along and south of Highway 101, north of Sunrise Terrace Mobile Home Park and east of Falcon Ridge Estates in Arroyo Grande (see map). The area proposed for development contains about 33 acres of moderately sloping terrain. It lies between about the 200 foot and 305 foot contour lines and is currently being used for cattle rangeland. The northern 14 acres of the site, which is proposed for open space, is a steep north facing slope covered by coast live oaks. This portion of the parcel appears to have potentially unstable, highly erodible soil and should not be disturbed.

DESCRIPTION OF THE VEGETATION

A vegetational analysis of the project site was carried out in November and December, 1989. The field survey consisted of canvassing the area proposed for development on foot, recording all of the plant species in identifiable condition and describing the plant communities. A list of the plant species found in identifiable condition during the on-site survey is included (Table 1). However, it is important to note that this is not a complete list of the plants present on the site. Plant species composition, especially herbaceous cover, varies seasonally. During the fall, most herbaceous plants species are not present in identifiable condition. Winter and spring flowering annuals are typically represented only by the shattered, dried remains of last year's crop or by small seedlings and immature plants. In the case of the subject site, most of the area had been very heavily grazed and very few of the herbs were identifiable.

Special attention was given to the rocky outcrops; however, because of the very dry conditions over the last couple of years and because of the season in which the survey was conducted, very few plants were found. Consequently, the plants listed are only those present in identifiable condition during the late fall following a dry year and before any significant rainfall had occurred. A thorough survey through the entire year would be necessary for a complete listing of the flora found on the project site.

Plant Communities

The present-day vegetation of the development site comprises a series of three plant communities. These communities intergrade in response to a complex of environmental factors that include the grazing history, local topography, water availability, soil depth, soil composition, soil texture and various other factors. Some communities have been modified, directly or indirectly by human activity.

The vegetation on the study site can be divided into (1) Coastal Live Oak Woodland; (2) Grassland (includes the rock outcrops); and (3) Drainage Channel (area of gully and severe erosion). The distribution of

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these on the subject site is shown correctly and accurately on the vegetation map provided to me by RRM Design Group.

1. Coastal Live Oak Woodland- This community occupies the steep, north facing slope just south of Highway 101. For the most part, it is composed of a dense stand of coast live oaks *(Quercus agrifolia)* that form a closed canopy woodland; however, there are also several toyon trees (*Heteromeles arbutifolia*) mixed with the coast live oaks. Many of the coast live oaks are multi-stemmed trees with a sparse understory consisting of a thick layer of litter along with scattered, shade tolerant shrubs and herbs such as *Ribes* sp. (gooseberry)*Toxicodendron diversilobum*, (poison oak), *Solanum xanti* (nightshade), *Rhamnus californica* (coffeeberry), *Salvia spathacea* (hummingbird sage), and *Mimulus aurantiacus* (bush monkey flower). Additional species found scattered through the coast live oak woodland are listed in Table 1.

Where the coastal live oaks extend to the north of the project site, they mix with riparian woodland species along the creek that parallels Highway 101. Where the oaks extends downslope (southward), they intergrade with the grassland. The ecotone has scattered coast live oaks mixed with open grassland. Only the upper (southern) portions of the coast live oak woodland (those adjacent to the development area) were included in this survey.

3. Grassland including rock outcrops - Grassland is the common plant cover on moderately sloping hillsides which occupy the 33 acres proposed for development. Only a few, scattered oaks (about 10) extend into this development area. Most of the grassland species were not in identifiable condition during the on-site survey; however, based on those that could be identified, the grassland is dominated by annual grasses and forbs that were introduced to California and have become naturalized in the area. Many of the herbaceous species also extend into the coastal live oak woodland where they form part of the understory.

During the on-site survey, little difference in vegetation between grassland and the areas around the rock outcrops were noted. The rock surfaces themselves were devoid of plant growth except for lichens. No succulents such as *Dudleya* spp. (rock lettuce) were found. *Chlorogalum pomeridianum* (soap root) was found more commonly in the vicinity of the rock outcrops; otherwise the rock outcrop flora appeared very similar to that of the surrounding grassland. Typical plants of the grassland are *Erodium spp.* (filaree), *Bromus diandrus* (ripgut brome), *Bromus mollis* (soft chess brome), *Avena fatua* (wild oats), *Hordeum leporinum* (foxtail barley), and *Vulpia myuros* (mousetail fescue). Other species found in the grassland are listed in Table 1.

3. Drainage (gully) vegetation- The gully area (see map) was lined mostly by scattered *Baccharis pilularis* (coyote bush) and herbaceous species typical of the adjacent grassland. During the on-site visits, some

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small areas in the bottom of the gully were moist but are probably much wetter during the wet season. A few individuals of *Juncus* sp. (rush) and *Carex* sp. (sedge) were noted but were not common. Past human impact was indicated by the presence of large amounts of debris that had been dumped in the gully. In addition, a few scattered ornamentals were found growing in the gully. It appears that these exotics were either thrown into the gully as landscape debris or escaped from the adjacent mobile home park.

RARE AND ENDANGERED AND OTHER SENSITIVE PLANT SPECIES

No rare and/or endangered species were found on the project site. Rock outcrops, especially if they are serpentine, are commonly vegetated by rare species in San Luis Obispo County. However, the rock outcrops on the site are not serpentine and showed little evidence of supporting any listed plants. While I cannot state with absolute certainty that no rare/endangered species occur within the development site, none were found during the on-site survey, and judging from the condition of the habitat, none would be expected to be present.

OAK WOODLANDS AS THREATENED HABITAT

While most of the development is proposed for the grassland with scattered oaks and not the dense oak woodland, it should be noted that during the past few years great concern has been expressed over the threatened nature of oak trees in California and over the Oak Woodlands as a vegetation cover and wildlife habitat. Many investigators have written about the great danger facing oaks as a group (Plumb 1979). Several range managers, foresters, fish and game managers, plant ecologists, land use planners and others have reported their concern for loss of oak trees in numerous technical, scientific and popular articles. This widespread concern has resulted in several symposia and the allocation of grant monies for the study of oaks in California. At a 1979 symposium on the ecology, management, and utilization of California Oaks, the proceedings stated in part, "California's vast oak woodland resource, long neglected and generally mismanaged, if managed at all, is coming under the scrutiny of land managers, conservationists and others who are concerned about its welfare." There are three main areas of concern: (1) Oak trees are not successfully reproducing themselves due to human activities. Therefore, as the old oaks fall or are eliminated, there are no young oaks to replace them. (2) Oak trees are being cut down and eliminated in many areas for various reasons. (3) Residential development in oak woodlands is detrimental to oak trees not only due to direct elimination but also because of mismanagement during the construction phase and after the development has been completed.

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Abundant birdlife is present in the oak woodland and surrounding shrub communities on the subject property. In the few hours spent observing birds during the on-site survey, several different kinds were observed. Many of the birds are regular residents of the oak woodland where they find abundant food, shelter, and nesting sites. Hawks use dead limbs or uppermost branches for perches. Some of the trees might provide roosts for turkey vultures that comb the surrounding area for decaying animals. Deer, numerous fence lizards, snakeskins, and rodent holes were seen. These observations also indicate the high level of animal diversity that this oak woodland supports.

IMPACTS AND MITIGATIONS

Impact 1. Construction of roadways, driveways and buildings on the site will result in the removal or destruction of the grassland currently being used as range. Indirect impacts could also occur when habitat modifications extend to the fringe areas just outside the actual development site such as in the oak woodland. For example, humans tend to dump landscape debris, refuse, etc. in areas around developments. This type of disturbance may be a source of direct habitat destruction particularly to the native vegetation and soils. In addition, it may open the area to invasion of exotic species.

Impact 2. The development of the project will result in the planting of ornamentals, some of which usually escape into the surrounding native communities and compete with the native species. Once established, these introduced plants may replace the native vegetation and modify and degrade the habitat so that the native fauna is also adversely impacted. In the long-term, this degradation could result in loss of habitat in the fringe areas for many native plants and animals.

Clearing of land for construction can also result in profound changes not only on site but also in adjacent areas because introduced, weedy species will invade and become established in these fringe areas. Common invaders include several species of annual European grasses and forbs. Within the project site at present, the native coastal live oak woodland is fairly pristine and natural. Construction of this project and clearing of adjacent areas could open new areas for additional weed invasion.

Impact 3. Currently, the plant cover and fallen litter help to stabilize the soil on these hillsides, protecting the soil surface from erosion over much of the site. Both wind and water can be significant erosive factors and the development of a stable vegetative cover is sometimes a long-term process. Clearing the vegetative cover, disrupting the soil surface and creating fill and cut slopes could result in erosion by both wind and water.

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Impact 4. The development of the project will result in an increase in numbers of domestic animals like dogs and cats. This could have an impact on the native fauna of the adjacent oak woodland areas.

Impact 5. Development of the subject site will result in the loss of rangeland.

Mitigations: No development is planned or should occur on the steep, oak covered, slope on the northern one-third of the subject site. This slope is not only steep, but it also consists of a soil that would erode rapidly and easily if disturbed. In addition, the oak woodland on the slope and the riparian woodland along Highway 101 are relatively undisturbed and provide excellent habitat for wildlife.

Cleared areas should be revegetated as quickly as possible, and the vegetative cover should be established and the soil stabilized before the heavy rains. All revegetation should be with plants native and indigenous to the area if at all possible.

Impact 6. Development of lots 1 and 2 could potentially impact the fringe of the oak woodland.

Mitigation. Development of lots 1 and 2 should only be allowed away from the oak trees. I suggest moving the open space designation line to the edge of the oak woodland canopy in these areas. It would be best to maintain at least a 25 foot setback from the top of the steep slope and from the canopy edge of the oak woodland in the northern portion of the site.

Impact 7. The coast live oaks on site should be protected if at all possible. Some general considerations that should be taken into account in terms of development around oaks is provided below the summary.

SUMMARY

The project site is a part of a complex of ecosystems that extend beyond the boundaries of the subject property covered in this report. Therefore, impacts of the proposed development are not limited to the subject property but encompass a larger area. It is impossible to carry out a project of this sort without causing both foreseeable and unforeseeable impacts. Although some of the impacts of this project are predictable, others are not and will remain unknown until they happen.

All the environmental impacts discussed previously will, of course, be much worse if the adjacent properties also change. Direct and indirect loss of native habitats would result from residential and agricultural buildout. Cumulative impacts could include the sedimentation and eutrophication of the creek areas, fracturing of natural habitats and removal of native vegetative cover and wildlife habitats. All of these need to be considered.

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DEVELOPMENT AROUND OAKS

One of the major concerns of land developers in San Luis Obispo County is how to develop around oaks and still preserve them as an integral part of the landscape. Native oaks are an important part of the central coast's natural landscape and are sensitive to modifications in the environment around them. As a result, developers, builders, homeowners and others must be careful in their development and landscaping plans not to significantly change the oak's environment in any significant manner. Substantial changes will weaken a healthy tree and may eventually result in its death.

I strongly recommend that development around significant stands of oaks be avoided and that these areas be left in open space. However, in areas where there are small patches of oaks, development and landscape plans should be formulated in such a way that the areas under the driplines of the oaks are left in a natural condition with no modifications to the soil and no watering, especially in the summer. If this is not possible, there are mitigations measures that will help to reduce the impact of modifications around oaks and prolong their lifes.

Impact of grading and soil compaction during development

Oak trees have a very extensive root system that consists of both shallow and deep roots. Roots in some species of oaks (e.g., *Quercus douglasii*—blue oak) have been shown to extend over 80 feet down to tap the fringe of the water table. The deep roots primarily function to tap the deep water sources that are available for a longer period of time during the dry season. The shallow roots, which are extensive and usually extend beyond the drip line of the tree, primarily function to take in the surface soil water and the nutrients. Most of the available nutrients are in the surface of the soils as a result of breakdown of organic matter from the litter. Oak trees also have mycorrhizae (association of fungi with the roots) that assist the trees in taking up nutrients and water from the soil.

Grading, cutting, or trenching around oak trees may be detrimental to oaks in several ways. The shallow feeder roots may be cut or damaged by machinery or may be exposed. This may reduce the oak's ability to take up water and nutrients from the soil. Cutting also tends to scrape away the nutrient-rich topsoil leaving the nutrient-poor subsoil. Small amounts of soil may be removed without permanently damaging the oak. The amount of soil that can be removed without causing permanent damage will vary from tree to tree depending on the age, size, species, location, health, and other features of the individual oak tree.

Filling or adding soil to raise the soil level under the drip line of oak trees is also harmful. Roots must be able undergo respiration in order to take up nutrients from the soil. Oxygen is essential to root respiration and is directly related to the processes of active water absorption and nutrient

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uptake. Filling under oak trees covers the extensive surface, feeder root system and reduces the soil aeration and gas exchange to the roots. When deprived of oxygen the roots of oak trees can suffocate, resulting in death of the tree. Inadequate soil aeration also retards nutrient absorption and may cause stunting or death of roots.

Oxygen is also important for the soil ecosystem itself in that activities of worms, bacteria, fungi and other soil organisms that decompose organic materials and release nutrients into the soil for the oak trees to take up are also negative effected. Nitrogen gas is important in that nitrogen-fixing bacteria are able to convert it into a form of nitrogen that oak trees can use. Thus, filling can also disrupt the nitrogen cycle in the soil. Also, if gas exchange is hindered, carbon dioxide (a waste product of respiration) will build up in the soil. Excessive levels of carbon dioxide can inhibit root growth, and if allowed to become too great, can be toxic.

Filling around trees also has the negative effect of changing the water balance and level of available nutrients to the tree even if the soil is porous enough to allow gas exchange to the rhizosphere. Fill materials vary but tend to compact and to make the soil impermeable and thereby restrict water movement and gas exchange in the root zone. On the other hand excessive moisture trapped in fill can alter the water balance in the soil to the point that the tree may be susceptible to root or crown rot. The best advice is not to tamper with the natural grade around oak trees, especially not within the dripline.

Even when the natural grade under the canopy of the trees is not altered, one must be careful that soil compaction does not occur. During development, driving or parking heavy machinery and equipment under oak trees can compact the soil. The effect is similar to adding fill around the trees. A compacted soil inhibits the natural exchange of gases between the feeder roots and the atmosphere and restricts water percolation to the root zone. This alteration of the gas and water balance in the soil can stunt the growth of the oaks, weaken them and make them more susceptible to disease-causing organisms.

Grade-changes outside the dripline and root zone of the oaks may not directly lead to injury or death of the tree. However, there may be some indirect effects that will. For example, if fill material outside the tree results in change in drainage or water movement so that soil under the tree is saturated, it may result in a weakening of the tree and susceptibility to crown or root rot. Also, substantial cuts away from trees may change drainage patterns and cause the soil to dry more rapidly in the summer. The result can be insufficient moisture available to the trees; they may die of lack of water or become weakened and susceptible to disease.

During development, trenching is often necessary in order to install utilities, pipes, etc. Trenching under oak trees can result in severe damage to the root system, reducing the tree's ability to take up water and nutrients.

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The tree can be killed if a significant amount of root area is disrupted. Whenever possible, trenching should be restricted to the areas outside the dripline and root zone of the trees. If trenches must be dug under oak trees, every effort should be made to put all pipes, utilities, etc. in one trench rather than digging multiple trenches. If a significant section of the root system is disrupted, careful pruning of a proportional number of branches may reduce the impact.

Paving under oak trees or in their root zone should be avoided especially if it is an impervious material like asphalt or concrete. The effect of paving is similar to that of soil compaction—only more pronounced. Impervious paving prevents water percolation and gas exchange into the soil and will result in the early death of the oak tree. If paving is unavoidable, the developer should strive to keep the paving out of the dripline of the tree and certainly no closer than about 10 feet from the tree trunk. Consideration should be given to using a paving material that is porous, such as bricks with sand joints, open bricks, bark, gravel, cobbles, redwood planks, etc. This will allow some water penetration and gas exchange. Even with the porous paving the area around the trunk (at least a 6 foot radius) should be left natural, uncovered, and unirrigated, especially in the summer. Also, one must be very careful that proper drainage is maintained and water is not allowed to pool around the tree. In locating the house, driveway, patio, etc. innovative design is often necessary to save the existing oaks or at least provide partial solutions so that the trees will live longer.

Maintenance of oaks around homes

The best advice for maintaining oaks is to leave the environment around them as natural as possible. Anything one does to modify the environment will have an impact on the oak trees. However, when modification is necessary there are certain mitigation measures that will reduce the impact. Usually, the subjects of concern to homeowners are landscaping around oaks, irrigation and fertilization, pruning, and controlling disease.

It is okay to landscape under the dripline of oak trees with certain restrictions. Plants used in such landscaping should not require summer irrigation and should not develop such a thick root and foliage mat that water permeability and gas exchange are prohibited. Species that produce allelopathic substances (toxins that would poison the oak trees) should be avoided. Many native species are excellent landscape plants for areas under oaks. Even here though, it may be advisable to landscape away from the trunk. Vines should not be allowed to grow up the tree trunk. The authors will provide a list of indigenous, native plant species that could be used for landscaping if needed.

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Oak trees may occasionally benefit from fertilization with a balanced organic or commercial fertilizer if applied properly. Fertilization should only be used if the growth of the tree is stunted by lack of nutrients

Pruning of oak trees should be limited to the removal of dead, weakened, dangerous or diseased branches with no heavy pruning at any time. Excessive pruning may stimulate rapid new growth subject to mildew or other related diseases and should be avoided. Pruning which should only occur when absolutely necessary should be carried out on deciduous oaks during their dormant winter period (December to February) and on evergreen oaks during the summer (July and August). All cut surfaces should be sealed with a good sealing compound and kept sealed until the wound heals. Otherwise the tree may be subject to disease.

I strongly support the use of oaks in landscaping of developed areas. Oaks are a characteristic part of the Arroyo Grande area. Coast live oaks should be strongly considered for landscaping and revegetation of areas disturbed in development. Although these oaks require some supplemental watering to get them established, they are quite drought-tolerant once they are established. With the concern for water supplies in the central coastal region, it is only wise planning to use drought-tolerant natives in landscaping. Additionally such use of oaks will help to maintain the characteristic appearance of the area.

Signature V.L. Holland

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TABLE 1. Checklist of Vascular Plants Found on Vista Pacifica, Tract 1789, Arroyo Grande, California

Scientific Name	Common name
TREES	
Heteromeles arbutifolia	Toyon
Quercus agrifolia	Coast Live Oak
SHRUBS	
Artemisia californica	California Sagebrush
Baccharis pilularis	Coyote Bush
Eriogonum parvifolium	Coastal buckwheat
Hazardia squarrosa	Saw-toothed Goldenbush
Lotus scoparius	Deerweed
Mimulus aurantiacus	Sticky Monkeyflower
** Pyracantha sp.	Pyracantha
Rhamnus californica	Coffeeberry
Ribes sp	Gooseberry
Salvia mellifera	Black Sage
Solanum xanti	Nightshade
Toxicodendron diversilobum	Poison-Oak
HERBS	
Achillea millefolium	Yarrow
* Anagallis arvensis	Scarlet Pimpernel
* Avena barbata	Slender Wild Oats
* Avena fatua	Wild Oats
* Brassica geniculata	Field Mustard
* Brassica sp	Mustard
* Bromus diandrus	Ripgut Brome Grass
* Bromus mollis	Soft Chess Brome Grass
* Bromus rubens	Red Brome Grass
Calystegia cyclostegia	Bindweed
* Carduus pycnocephalus	Italian Thistle
Carex sp.	Sedge
Cerastium viscosum	Mouse-ear Chickweed
Chenopodium sp	Goosefoot
Chlorogalum pomeridianum	Soap Plant
* Cirsium vulgare	Bull Thistle

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* Eremocarpus setigerus	Turkey mullein
* Erodium botrys	Storkbill Filaree
* Erodium cicutarium	Redstem Filaree
Eschscholzia californica	California Poppy
* Filago gallica	Filago
* Gnaphalium luteo-album	Cudweed
Gnaphalium sp. [immature]	Everlasting
* Hemizonia sp	Tarweed
* Hordeum leporinum	Foxtail Barley
Juncus sp.	Rush
* Lamarckia aurea	Golden Top
Lomatium sp. [immature]	
Lotus sp. [immature]	Deervetch
Madia sativa	Coast Tarweed
* Malva nicaeensis	Cheeseweed
* Medicago polymorpha	Bur-clover
* Picris echioides	Bristly Ox-tongue
Poa scabrella	Perennial Bluegrass
Polypogon sp	Polypogon Grass
* Raphanus sativus	Wild Radish
Rumex sp	Dock
Salvia spathacea	Hummingbird Sage
* Senecio vulgaris	Common Groundsel
* Silene gallica	Windmill Pink
* Sonchus oleraceus	Common Sow-Thistle
* Sonchus asper	Prickly Sow-Thistle
* Spergula arvensis	Spurry
Trifolium sp. [immature]	Clover
* Vicia sp. [immature]	Vetch
* Vulpia myuros	Rattail-Fescue
** Zantedeschia aethiopica	Calla Lily

* Weedy species not native to California.
** Escaped from cultivation or planted.

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- **Pismo Clarkia Survey**

Pismo Clarkia Survey Report for the Busick Tract

Arroyo Grande, California

Prepared for:

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Division of Environmental and Resource Management
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Prepared by:

MORRO GROUP, INC.

Revised
August 28, 2003

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PISMO CLARKIA SURVEY REPORT
For the Busick Tract, Arroyo Grande, CA

Revised August 28, 2003

INTRODUCTION

The Busick Tract is an approximately 47-acre undeveloped area located at the northern terminus of Coast View Drive, immediately southwest of the City of Arroyo Grande, California (refer to Figure 1). A botanical survey report was prepared in December of 1989 to identify the presence of all identifiable plant species on the Busick Tract (V.L. Holland; December 9, 1989). Holland's 1989 report includes a comprehensive list of plants identified onsite (refer to Appendix A for a copy of the report). As part of preparation for the 1989 report, botanical surveys were conducted in November and December of 1989. These original surveys were conducted outside of the blooming period for special-status species including Pismo clarkia (*Clarkia speciosa* ssp. *immaculata*), therefore a supplemental survey conducted during the blooming period was required to determine the presence or absence of special-status species on the Busick Tract.

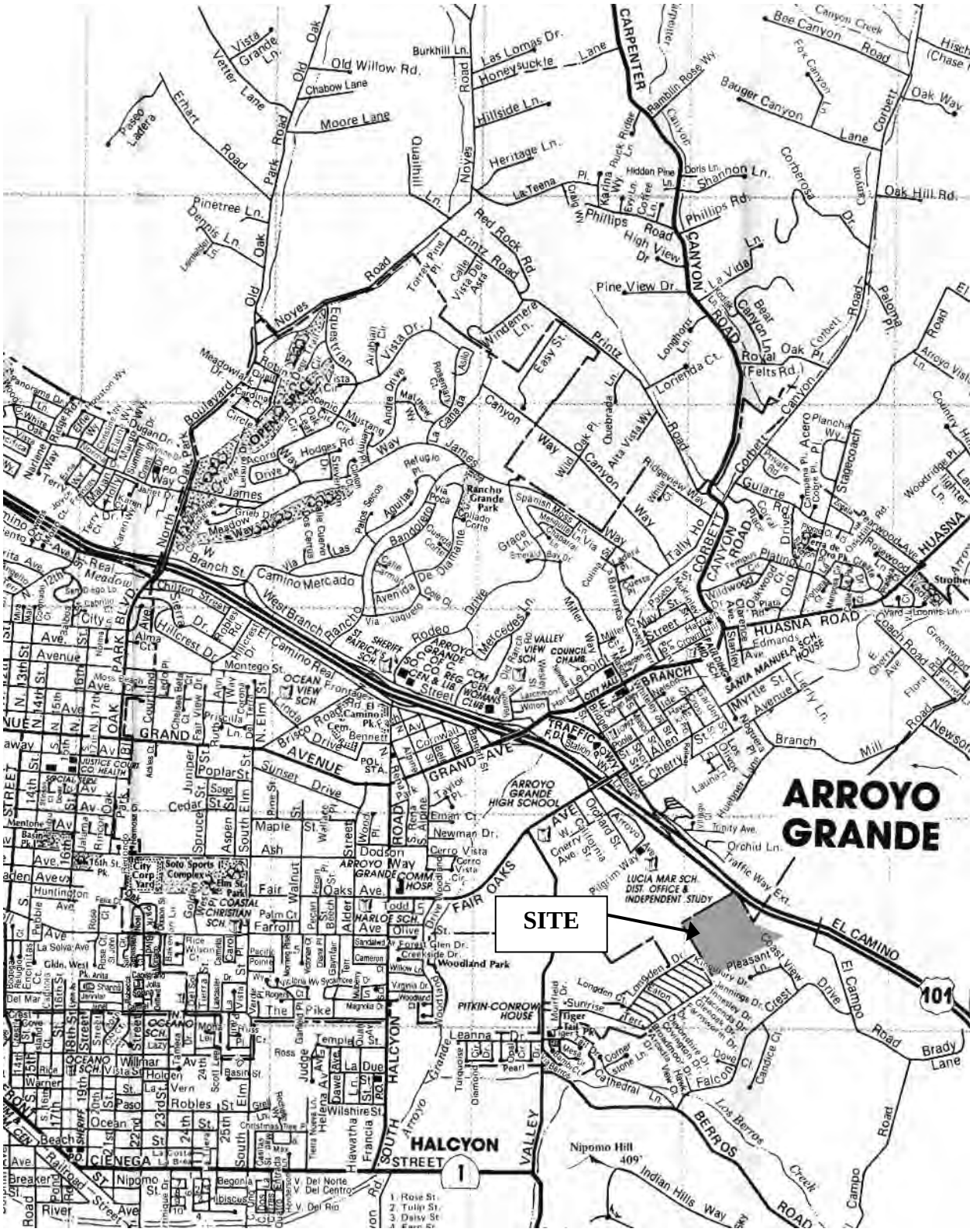
This focused botanical survey report has been prepared by Morro Group, Inc., and is intended for use by the County of San Luis Obispo and regulatory agencies for permitting and planning purposes. The objective of this report is to supplement the 1989 botanical survey report prepared by V.L. Holland, and document the presence or absence of Pismo clarkia and any other identified special-status species on the site. The data presented in this report is a compilation of information received from regulatory agencies, literature reviews, and an on-site investigation of the property by Morro Group personnel.

SURVEY METHODS

On June 27, 2003, Morro Group resource specialists Bob Sloan and Shawna Scott conducted a focused survey for Pismo clarkia over the entire Busick Tract. The property was thoroughly investigated on foot using meandering transects which covered all areas and habitats present. Immediately prior to the survey, a known southerly facing Pismo clarkia location off Stagecoach Road in Arroyo Grande was visited to assess the species' vegetative stage. Clarkia at this reference location were observed in full bloom, and as dried, standing skeletons with seed pods readily visible.

EXISTING CONDITIONS

The project site is comprised mainly of annual grassland, with fairly dense oak woodland located near the northeastern property boundary. Grassland areas of the site are densely vegetated with a variety of native and introduced species, with few bare or disturbed soil areas present. Rock outcrops occur within grassland in the north-central portion of the site.



Source: Compass Maps

VICINITY MAP
FIGURE 1

Topography includes moderately sloping south and west facing hills, with steeper slopes located along northeast-facing slopes, immediately south of U.S. Highway 101. Elevations range between 200 and 305 feet above mean sea level. Soils on the site consist of Chamise shaly loam and Chamise shaly sandy clay loam, with several slope classes present. Habitat types present include annual grassland, coast live oak woodland, and ephemeral drainage. At the time of the survey, a portion of the northwest corner of the site, and a broad band around the south, east, and west edges of the site had been mowed for fire safety purposes. The majority of the site was undisturbed.

Characteristic plant species observed during the survey included coast live oak (*Quercus agrifolia*), toyon (*Heteromeles arbutifolia*), gooseberry (*Ribes* sp.), poison oak (*Toxicodendron diversilobum*), nightshade (*Solanum xanti*), coffeeberry (*Rhamnus californica*), hummingbird sage (*Salvia spathacea*), bush monkey flower (*Mimulus aurantiacus*), purple needlegrass (*Nassella pulchra*), slender wild oats *(Avena barbata),* wild oats *(Avena fatua*), ripgut brome (*Bromus diandrus*), soft chess brome (*Bromus mollis*), vetch (*Vicia* sp.), filaree (*Erodium* spp.), bur-clover (*Medicago polymorpha*), dock (*Rumex* sp.), mustard (*Brassica* sp.), foxtail barley (*Hordeum leporinum*), moustail fescue (*Vulpia myuros*), soap plant (*Chlorogalum pomeridianum*), Italian thistle (*Carduus pycnocephalus*), rabbitsfoot grass (*Polypogon monspeliensis*), dock *(Rumex* sp.), wild radish (*Raphanus sativus*), calla lily (*Zantedeschia aethiopica*), and blue hyacinth (*Dichelostema capitatum*).

RESULTS

The survey found no Pismo clarkia or other special status plant species present on the property. If present, Pismo clarkia would have been easily visible, based on survey timing and site conditions. Pismo clarkia is normally found in association with loose, sandy soils. Soils on the Busick Tract are loamy and gravelly, and some areas exhibit a hard crust that may preclude establishment of species such as Pismo clarkia. Based on the observed conditions and negative survey results, the property does not appear to provide suitable habitat for Pismo clarkia.

CONCLUSION

No Pismo clarkia were found to be present on the property during a focused survey performed during the normal blooming period; therefore, no impact assessment or mitigation measures for the species should be required prior to development. The negative survey results presented in this report should be sufficient to satisfy the County of San Luis Obispo and interested regulatory agencies regarding this issue. A copy of this report should be submitted to the County Department of Planning and Building for their review and approval.

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- **Burrowing Owl Survey**

Burrowing Owl Survey
for the
Busick/Gearing Tract Map

San Luis Obispo County, California

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Introduction

The proposed project consists of creation of 16 residential parcels on an approximately 47-acre site in San Luis Obispo County. The project site is located about 0.5 miles southwest of the City of Arroyo Grande north of the existing terminus of Coast View Drive near State Highway 101. Approximately 33 acres of the site consists of suitable habitat for burrowing owls.

The purpose of this report is to document the results of a survey conducted specifically to detect burrowing owl (*Athene cunicularia*), a California species of special concern. During a site visit in the fall of 1996, Mr. Eric Weir (San Luis Obispo County) and Mr. Bill Henry (The Morro Group) observed a burrowing owl on rock outcrops in the northern portion of the project site. The owl was flushed and flew to a drainage in the center of the project site, however, owl occupation of burrows was not confirmed during their visit. Subsequent to that observation, the current survey was contracted to ascertain potential burrowing owl occupation of the site.

The general concern for the burrowing owl results from documented declines in populations of the species in the state of California primarily due to development pressures on suitable burrowing owl nesting and foraging habitat. Burrowing owls inhabit open, dry grassland throughout the state and other open desert habitats. Perches are important for hunting and roosting. Feeding mostly on insects, burrowing owl diet also includes small mammals, reptiles, birds, and carrion. Burrowing owls nest and roost in burrows, typically of ground squirrels. Individuals may hunt during the day or night, and frequently perch at or near the burrow during the day. The burrowing owl is a resident throughout most suitable habitats in California where it occurs. Breeding occurs between March and August, with the peak from April to May. Young emerge from the burrow at about two weeks and are able to fly by four weeks. Documented reasons for burrowing owl decline include grassland conversion, habitat destruction, and ground squirrel poisoning (Zeiner et al 1990).

A botanical survey completed by Dr. V.L. Holland (December 1989) described the vegetation of the project site as consisting of varying areas of coastal live oak woodland, grassland (including rock outcrops), and drainage channel. Of the total, grassland was found to occupy approximately 33 acres of the proposed development area.

Methods

A literature review was performed which included review of general reference material regarding burrowing owl and the data records of the California Natural Diversity Database (CNDDB).

A field survey for wintering and/or resident burrowing owls was conducted on January 9 and 10, 1996. The survey on day one was conducted during the late afternoon hours, from 4:00 p.m. to about 30 minutes after sunset. The second day survey was conducted from 8:30 a.m. to 10:30 a.m. Suitable habitat on the project site was walked using transects spaced approximately 100 feet apart on the initial survey. On subsequent surveys, meandering transects were walked with extra attention given to areas containing suitable roosting sites, perching areas, and burrows. During the survey, the observer frequently stopped to scan the site with binoculars. All grassland habitat on the site was surveyed, including the fringes of the oak woodland in the northern and eastern portions of the site. Surrounding properties were either developed (housing) or private property for which no permission for access had been obtained; therefore, a 500-foot buffer was not surveyed.

Results

No CNDDB records of burrowing owl observations were found for the Oceano USGS Quadrangle where the project site is located. However, a single observation of a burrowing owl was reported verbally by Bill Henry of The Morro Group during a site visit that he and Eric Weir, environmental specialist for San Luis Obispo County, conducted during the fall of 1996. The owl was observed to flush from the rock outcrop area of the site and fly towards the drainage located in the central and southern portion of the site. However, no signs of occupied burrows were located during this site visit.

The project site is currently being used as rangeland and habitat visibility was good due to grasses being clipped from grazing. Two areas on the site contained suitable perching, roosting, and burrowing opportunities (Figure 1). The entire grassland area of the project site represents suitable foraging habitat. Bird species observed during the survey are shown on Table 1.

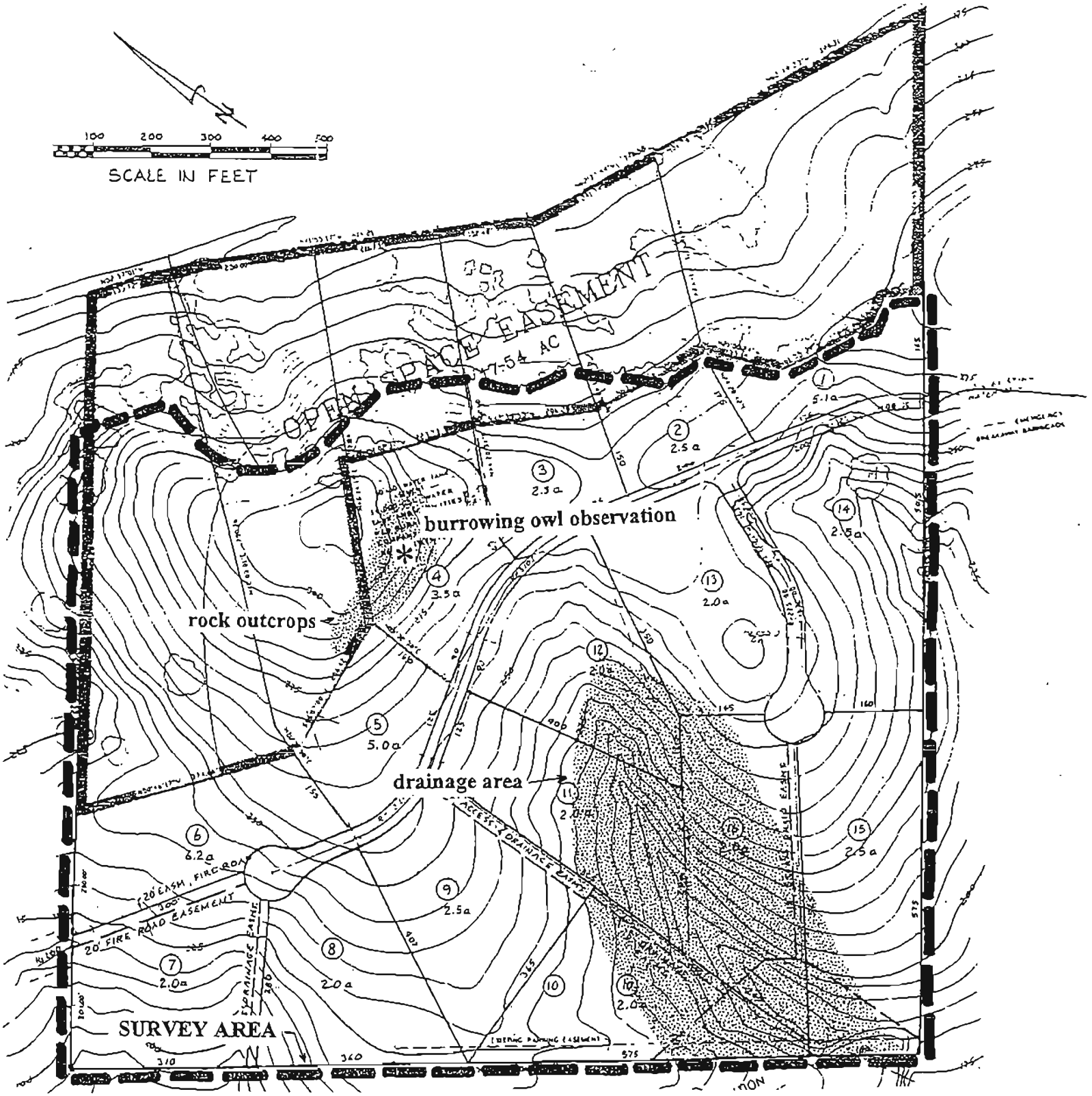
Two raptors, red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*), were observed on the site during the surveys. Red-tailed hawks are one of the documented predators of burrowing owls (Zeiner et al 1990). The red-tailed hawk was present on the site for approximately 15 minutes during the late afternoon survey on January 9.

No burrowing owls were observed during any site visit. All burrows potentially used by burrowing owls were closely examined for sign of use; however, no whitewash, pellets, or other sign was observed.

Discussion

No resident or breeding burrowing owls were observed on the site. Due to the presence of suitable habitat, prey species, and the observation of a burrowing owl previously, it is still reasonable that burrowing owls occasionally use the site for foraging and may even nest and/or occupy burrows on the site in the future. Assuming 6.5 acres of foraging habitat necessary for each breeding pair or resident owl (CDFG 1994), up to five owl pairs or five resident birds (or a combination) could occupy the suitable habitat of the site. This would represent a maximum of ten owls (if all were paired) and an indeterminant number of young during breeding season. Although home ranges smaller than 6.5 acres have been documented, this particular project site is not uniform across all suitable habitat in regard to burrow availability, perches, and roosting sites. Therefore, 6.5 acres per pair or resident bird is judged as reasonable for purposes of calculating a maximum number of burrowing owls potentially occupying the site.

Although burrowing owls were not found to currently occupy the proposed project site, the site represents suitable habitat and burrowing owls may use it in the future. Therefore, the following measures are recommended to reduce potential impacts, in the event that the site becomes occupied by burrowing owls between the completion of this survey and project implementation.



- areas containing concentration of burrows and other suitable roosting and perching features

Figure 1: Results of burrowing owl (*Athene cunicularia*) surveys conducted January 9 and 10 and April 17, 1997 for the Busick/Gearing Tract Map area.

Table 1

Busick/Gearing Tract Map
Birds Species Observed During Burrowing Owl Surveys
Conducted January 9 and 10 and April 17, 1997

Scientific Name	Common Name
Agelaius phoeniceus	Red-winged blackbird
Aphelocoma coerulescens	Scrub jay*
Buteo jamaicensis	Red-tailed hawk
Callipepla californica	California quail
Calypte anna	Anna's hummingbird*
Carpodacus mexicanus	House finch*
Cathartes aura	Turkey vulture**
Chondestes grammacus	Lark sparrow*
Colaptes auratus	Common flicker
Euphagus cyanocephalus	Brewer's blackbird*
Falco sparverius	Kestrel
Hirundo pyrrhonota	Cliff swallow**
Junco hyemalis	Dark-eyed junco
Parus inornatus	Plain titmouse*
Pipilo fuscus	Brown towhee*
Psaltriparus minimus	Bushtit*
Regulus calendula	Ruby-crowned kinglet
Sayornis saya	Say's phoebe
Sturnella neglecta	Western meadowlark*
Sturnus vulgaris	European starling*
Tachycineta thalassina	Violet-green swallow**
Tyrannus verticalis	Western kingbird**

Notes: Unmarked species denote those observed during the first survey
* - observed during both surveys
** - observed during the second survey only

Recommendations

1. A preactivity survey should be conducted prior to site grading. If no burrowing owls are found to occupy the site at that time, no further measures would be necessary.

2. If burrowing owls are subsequently found to occupy the site, CDFG should be contacted and the following measures should be implemented:

a. Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFG verifies that either: 1) birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and capable of independent survival.

b. To offset the loss of foraging and burrow habitat, a minimum of 6.5 acres of foraging habitat (calculated on a 100-meter foraging radius around the occupied burrow) per pair or unpaired resident bird, should be acquired and permanently protected. The protected lands should be adjacent to occupied burrowing owl habitat and at a location acceptable to CDFG. The protected habitat should contribute to the long-term conservation of the species and the ecosystem(s) on which they depend.

c. When destruction of occupied burrows is unavoidable, existing unsuitable burrows should be enhanced (enlarge or cleared of debris) or created (by installing artificial burrows) in a ratio of 1:1 at the protected lands site.

d. If owls must be moved away from the disturbance area, passive relocation techniques should be used rather than trapping. At least one week should be allowed to accomplish this and allow the owls to acclimate to alternate burrows.

e. The project sponsor should provide funding for management and monitoring of the protected lands. The monitoring plan should include mitigation success criteria and an annual report to CDFG.

f. As an alternative to a through e above, burrowing owl burrows may be avoided. No disturbance should occur within 50 meters of occupied burrowing owl burrows during the nonbreeding season (September 1 through January 31) or within 75 meters during the breeding season (February 1 through August 31). A minimum of 6.5 acres of foraging habitat must be permanently preserved contiguous with the occupied burrow sites for each pair of breeding burrowing owls (with or without dependent young) or single unpaired resident bird. The configuration of the protected habitat should be approved by CDFG.

g. Additional measures, such as active or passive relocation of resident owls, may be required.

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Persons Contacted

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JoAnn Karlton, Associate Wildlife Biologist, California Department of Fish and Game, Region 3.

Jim Lidberg, Associate Wildlife Biologist, California Department of Fish and Game, Region 3.

APPENDIX D

- **Higgins Associates Traffic Analysis Report, August 2002**
- **Associated Transportation Engineers Traffic Analysis, August 2004**

- **Higgins Associates, August 2002**

HIGGINS ASSOCIATES
CIVIL & TRAFFIC ENGINEERS

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BUSICK TRACT MAP
(TRACT 1789)
TRAFFIC ANALYSIS REPORT

SAN LUIS OBISPO COUNTY, CALIFORNIA

Prepared For

The Morro Group
San Luis Obispo, California

April 29, 2002

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I. INTRODUCTION

Development of a 16-lot residential subdivision is proposed for a 47.25-acre parcel located southwest of Highway 101 between the Falcon Ridge Estates Subdivision and the city limits of Arroyo Grande. Exhibit 1 shows the location of the proposed project with respect to the local road network and Exhibit 2 shows a proposed lot plan for the project.

The project will be accessed from Coast View Drive. The original application for this parcel was processed in conjunction with the development application for Tract 2207 (formerly Tract 1663), which is located immediately north of the subject site in the City of Arroyo Grande. The proposed access plan for Tract 2207 provides access to the site via the extension of Orchard Avenue in the City of Arroyo Grande. Originally, Tract 1789 was to be accessed through Tract 2207 to Orchard Avenue as well. The access plans for both tracts do not include a permanent connection between the two parcels.

This traffic study has been prepared to evaluate the traffic related impacts associated with the development of the proposed project. AM and PM peak hour traffic conditions were analyzed at the following intersections:

- o Highway 101/El Campo Road;
- o Falcon Crest Drive/Los Berros Road;
- o Falcon Crest Drive/El Campo Road; and,
- o Falcon Crest Drive/Coast View Drive.

In addition, traffic operations on the following road segments were analyzed:

- o Highway 101 north and south of El Campo Road;
- o Falcon Crest Drive;
- o El Campo Road north and south of Falcon Crest Drive;
- o Coast View Drive; and
- o Los Berros Road east and west of Falcon Crest Drive.

The following analysis conditions are analyzed:

- o Existing Conditions;
- o Existing Plus Project Conditions; and,
- o Cumulative Conditions.

Intersection and road segment levels of service during the AM and PM peak hours are evaluated at the study intersections. Warranted channelization and traffic control measures are recommended to correct existing deficiencies, project impacts, and cumulative impacts where necessary.

II. EXISTING CONDITIONS

The existing road network serving the project site and existing traffic operations are described in this section.

A. Existing Road Network

El Campo Road is a two-lane rural road that extends southerly from an at-grade intersection with Highway 101 and terminates at Montclair Place. It serves as a collector road..

Falcon Crest Drive is a two-lane private residential street that extends between El Campo Road and Los Berros Road. The road provides primary access to residential units built in the Falcon Ridge Subdivision.

Coast View Drive is also a private residential street that extends north from Falcon Crest Drive to the Busick Tract property line. It is a 25-foot wide roadway within a right-of-way 50 feet in width. Coast View Drive will be extended to the north to serve the Tract 1789 in conjunction with the proposed project.

Los Berros Road is a two-lane rural roadway that extends through the Los Berros Valley from Valley Road to Highway 101 west of Nipomo, where it becomes Thompson Road. Los Berros has a posted speed limit of 45 miles per hour east of Falcon Crest Drive and 35 miles per hour west of Falcon Crest Drive.

The intersections of Highway 101/El Campo Road, El Campo Road/Falcon Crest Drive, Los Berros Road/Falcon Crest Drive and Falcon Crest Drive/Coast View Drive are at-grade unsignalized intersections. Left turn lane channelization is provided on both Highway 101 approaches to El Campo Road and on the eastbound Los Berros Road approach to Falcon Crest Drive. Right turn lanes are not provided at these intersections.

B. Existing Road Segment Operations

Existing peak hour traffic volumes on the study road segments are shown on Exhibit 3. These volumes were obtained from the peak hour intersection volumes shown on Exhibit 5. Higgins Associates collected intersection turning movement volumes at the study intersections during the PM peak period on April 9, 2002 and during the AM peak period on Wednesday April 10, 2002.

Traffic operations are evaluated using the concept of level of service. Intersections and street segments are rated on an "A" to "F" scale with "A" representing excellent or free-flow operations and "F" representing forced flow/gridlock conditions. Road segment levels of service for Highway 101, El Campo Road and Los Berros Road in the vicinity of the project were determined using technical procedures documented in the *2000 Highway Capacity Manual* (HCM). The level of service procedures consider existing geometric design conditions and traffic volumes on the road sections to establish traffic operating efficiencies.

El Campo Road and Los Berros Road were analyzed as two-lane Class II highways. Class II facilities function as access routes where motorists do not usually expect high-speed travel. Level of service is measured by percent time-spent-following. Level of service criteria for two-lane Class II highways is shown in Appendix A1.

Highway 101 segment operations were evaluated based on multi-lane highway evaluation methodology presented in the 2000 HCM. Appendix A1 shows the level of service criteria for multi-lane highways.

Roadway capacity is not usually a critical operational consideration for residential streets. Impacts to the living environment of residents on the street due to increased traffic levels is typically more significant than roadway capacity. For the Falcon Crest Drive and Coast View Drive road segments, level of service thresholds representing quality-of-life thresholds were utilized to evaluate these roadway segments. The quality-of-life thresholds for local roads are shown in Appendix A2. Appendix B contains a discussion of the relationship between traffic and residential quality-of-life.

San Luis Obispo County has established Level of Service (LOS) "C" as a goal for rural roadways in the South County area. LOS C was utilized as the acceptable level of service for County roads and intersections and Highway 101. Caltrans strives to maintain a target LOS on State highway facilities at the transition (cusp) between LOS C and LOS D. For this study, the cusp between the LOS C and LOS D ranges was utilized as the acceptable level of service for State facilities.

The existing road segment levels of service are shown on Exhibit 4. Road segment level of service calculation worksheets are contained in Appendices F-K.

The Highway 101 segments north and south of El Campo Road currently operate at LOS C during the AM and PM peak hours with the exception of southbound Highway 101, which operates at LOS B during the PM peak hour. Los Berros Road, east and west of Falcon Crest Drive, currently operates at LOS B during the AM peak hour and LOS C during the PM peak hour. El Campo Road north and south of the intersection with Falcon Crest Drive currently operates at LOS A during the morning peak hour and LOS B during the evening peak hour. The existing Falcon Ridge Subdivision generates a relatively low volume of trips and LOS A conditions currently exist on Falcon Crest Drive and Coast View Drive. All existing road segment levels of service are within level of service standards.

C. Existing Intersection Operations

To establish AM and PM peak hour traffic volumes for the study road network, intersection turning movement volume counts were performed by Higgins Associates at each of the study intersections on April 9, 2002 (PM peak hour) and April 10, 2002 (AM peak hour). Existing AM and PM peak hour traffic volumes at the study intersections are shown on Exhibit 5.

Intersection operations were evaluated using technical procedures documented in the 2000 HCM. At two-way stop controlled intersections, vehicle movements that must yield to through movements on the major roadway are subject to delay until a suitable gap in traffic on the major road is provided. The level of service for vehicle movements on the controlled approaches is based on the distribution of gaps in the major street traffic stream and driver judgment in selecting gaps. Appendix C shows the relationship between the vehicle delay and level of service for two-way stop controlled intersections. The overall intersection level of service and the level of service for the critical minor street are reported in this study. Generally, LOS F operations on the side street approach is the threshold warranting improvements.

The existing intersection levels of service are summarized on Exhibit 6. Intersection level of service calculation worksheets are summarized in Appendices L-O.

Currently, all study intersections operate at LOS A during the morning and evening peak hours except the intersection of Highway 101 and El Campo Road. This intersection currently operates at an overall LOS C during the AM peak hour and LOS A during the PM peak hour. During the AM peak hour, the northbound approach operates at LOS F indicating significant delays are experienced by traffic entering from the minor street (El Campo Road) approach to Highway 101. The LOS F operation of the Highway 101/El Campo Road intersection is an existing deficient condition. Installation of a traffic signal at the Highway 101/El Campo Road intersection is not considered a feasible mitigation measure given the high-speed operating conditions on Highway 101. A Project Study Report (PSR) is currently being prepared for the Highway 101/El Campo Road intersection. The study is evaluating alternative interchange designs for the Highway 101/El Campo Road intersection. Construction of a grade-separated interchange would mitigate existing deficient conditions at the Highway 101/El Campo Road intersection.

Right turn channelization warrants were evaluated for the southbound Highway 101 approach to El Campo Road and the westbound Los Berros Road approach to Falcon Crest Drive. A right turn lane is currently warranted on the southbound Highway 101 approach to El Campo Road based on existing AM and PM peak hour traffic volumes. A right turn lane is not warranted on the westbound Los Berros Road approach to Falcon Crest Drive. Installation of a right turn lane on the southbound Highway 101 approach to El Campo Road is recommended. Right turn channelization warrant worksheets are contained in Appendix D.

Left turn channelization warrants were evaluated for the northbound El Campo Road approach to Falcon Crest Drive. At the current time, a left turn lane is not warranted on this intersection approach. Given the low traffic volumes and slow travel speeds on Coast View Drive and Falcon Crest Drive, left and right turn

lane channelization at the intersection of Falcon Crest Drive and Coast View Drive is not warranted. Left turn channelization warrant worksheets are contained in Appendix E.

III. PROJECT CONDITIONS

This section describes the process of generation, distribution and assignment used to estimate project traffic with the proposed development. Intersection and roadway segment levels of service were calculated with traffic generated by the proposed project combined with existing traffic. Any significant impacts are identified and mitigations recommended.

A. Project Trip Generation, Distribution and Assignment

1. Project Description

The proposed project will be developed on a 47-acre parcel located in southern San Luis Obispo County west of Highway 101 and south of the City of Arroyo Grande city limits. The project is comprised of 16 single-family residential lots and will be access via the extension of Coast View Drive. Secondary emergency access for the project will be provided from the terminus of the Coast View Drive extension via an unimproved road that will be constructed to the site located immediately north of the project site. A permanent access connection with the site to the north is not planned.

The proposed access plan for the site involves access via roads that are currently maintained as private roads (Falcon Crest Drive and Coast View Drive) by the Falcon Ridge Homeowners Association. The project applicant will be required to obtain an easement agreement with the Falcon Ridge Homeowners Association before Falcon Crest Drive and Coast View Drive can be utilized to access the project site. As an alternative, incorporating Falcon Crest Drive and Coast View Drive into the county road system would allow project traffic to utilize these roadways for access.

2. Trip Generation

The project trip generation estimate is tabulated on Exhibit 7. The trip generation for the 16 residential units is based on the rates published in the Institute of Transportation Engineers (ITE), *Trip Generation*, Sixth Edition, 1997 for residential homes.

The proposed project is anticipated to generate approximately 154 daily trip ends. Approximately 8% (12 trip ends), will occur during the morning peak hour with 3 inbound and 9 outbound. During the evening peak hour, approximately 10% of the estimated daily trips will occur (16 trip ends), with 10 inbound and 6 outbound.

3. Trip Distribution and Assignment

The trip distribution pattern utilized from the *Cypress Ridge Specific Plan Traffic Analysis Report* provided the basis for establishing a trip distribution pattern for the proposed project. The trip distribution pattern for the project is shown on Exhibit 8. An unbalanced inbound/outbound trip distribution pattern was utilized for the project to reflect the travel time differential to/from the north via the Highway 101/El Campo Road intersection. Outbound project traffic may utilize Los Berros for northbound circulation rather than Highway 101 to avoid the significant delays associated with accessing northbound Highway 101 from El Campo Road. Therefore, the trip distribution pattern assumes 50% of the inbound project traffic will access the site via southbound Highway 101 from the north, but only 25% of the outbound project trips will leave the site via northbound Highway 101 north of the site. The AM and PM peak hour project trip assignments are shown on Exhibit 9.

B. Existing Plus Project Roadway Segment Analysis

Existing plus project roadway segment volumes are shown on Exhibit 3. Anticipated levels of service based on peak hour traffic volumes on the study roadway segments for the existing plus project condition are tabulated on Exhibit 4.

With project traffic added to existing volumes the levels of service for all road segments remain unchanged from existing conditions and the levels of service for all segments are anticipated to operate at LOS C or better, within the County's LOS C standard. Highway 101 north and south of El Campo Road operates at LOS C in the northbound direction and LOS B in the southbound direction during the AM peak hour. During the PM peak hour, Highway 101 operates at LOS C in the northbound and southbound directions both north and south of El Campo Road. Los Berros Road segments west and east of Falcon Crest Drive will operate at LOS B during the AM peak hour and LOS C during the PM peak hour. El Campo Road study segments operate at LOS A during the AM peak hour and LOS B during the PM peak hour. With project traffic added to Coast view Drive and Falcon Crest Drive, LOS A conditions are anticipated for these streets. Development of the proposed project will not significantly impact the study segments.

C. Existing Plus Project Intersection Analysis

Exhibit 10 illustrates the AM and PM peak hour existing plus project intersection volumes at each of the study intersections and the intersection levels of service are summarized on Exhibit 6 for the existing plus project condition.

With the traffic generated by the proposed project combined with existing network volumes, all study interjections will operate at LOS A during the peak commute periods except the Highway 101/El Campo Road intersection. This intersection will operate at LOS C during the AM peak hour with the project developed with LOS F operations on the northbound El Campo Road approach to Highway 101. The project will exacerbate the poor conditions at this intersection. Otherwise, capacity related improvements are not required at the other intersection to serve existing plus project traffic demand.

Other than the right turn lane warranted for existing conditions on the southbound Highway 101 approach to El Campo Road, no additional auxiliary lane channelization is warranted for the existing plus project condition. The project will contribute five trips to the right turn movement from southbound Highway 101 to El Campo Road during the PM peak hour, resulting in an increase in the right-turning volume by approximately five percent. The project's contribution of traffic to this movement, which currently warrants the addition of a full right-turn lane to southbound Highway 101, is considered a significant impact.

D. Project Access

To provide access to the project site, the project applicant needs to obtain an access easement from the Falcon Ridge Homeowners Association allowing project traffic access to Falcon Crest Drive and Coast View Drive. As an alternative, incorporation of these roads into the County's road system would also allow project traffic access to these roadways.

These roadways may need upgrading to meet County road standards before the County will accept the roads into the County road system. The existing widths of Falcon Crest Drive and Coast View Drive (26 feet) conform to the County's design standard for an A-1 rural road with an average daily traffic (ADT) volume of less than 400 vehicles per day. Based on an ultimate buildout of 63 units in the Falcon Ridge (47 units) and Tract 1789 (16 units) subdivision, 602 total daily trips will be generated by the development served by Falcon Ridge Drive. Based on a 65%/35% split between traffic using El Campo Road for access and traffic using Los Berros Road for access, the ADT on Falcon Crest Drive at El Campo Road would be about 400 vehicles per day, the maximum daily volume for the existing 26 foot wide roadway. Therefore, no roadway widening would be required to upgrade the existing roadway to satisfy County road design standards. However, the existing roadway cross-section may need upgrading with regards to horizontal and vertical alignments and drainage.

IV. CUMULATIVE CONDITIONS

The analysis of cumulative conditions evaluates future traffic conditions on the study road network. For this study, the South County Traffic Model was utilized to develop traffic volume forecasts for the study road segments and intersections. This model was recently used for the City of Arroyo Grande General Plan update and the Highway 101/El Campo Road PSR study.

Exhibit 11 illustrates the forecast traffic volumes for cumulative condition. The volumes shown in Exhibit 11 are Year 2030 traffic volume projections. Also, the volumes represent the no-build condition wither respect to improvements at the Highway 101/El Campo Road interchange. The traffic assignments for the year 2030 condition assume the existing at-grade configuration of the Highway 101/El Campo Road intersection.

A. Cumulative Condition Segment Analysis

Under Year 2030 traffic demand conditions, Highway 101 would experience LOS E and F conditions in the vicinity of El Campo Road during the AM and PM peak hour conditions if maintained as a four-lane facility. With widening to a six-lane freeway, LOS C operations can be achieved during the AM peak hour and LOS C/D operations can be achieved in the PM peak hour. During the PM peak hour, the northbound and southbound segments of Highway 101 would operate at LOS C in the northbound direction with Highway 101 widened to 6 lanes, with the exception of the southbound direction north of El Campo Road during the PM peak hour, which would operate at LOS D. However, the segment density for this LOS D condition is 26.4 passenger cars per mile per lane. The break between the LOS C and LOS D categories is 26.0 passenger cars per mile per lane. Therefore, the LOS D condition is considered within the C/D cusp and it is considered a not significant impact.

The El Campo Road roadway segments operate at LOS C for the cumulative condition. No improvements are warranted based on the volumes projected for the no-build Highway 101/El Campo Road intersection condition. Should a grade-separated interchange be constructed at the intersection, volumes on El Campo Road would increase and improvements may be required to serve the higher traffic levels. Minimally, these improvements would include improvements to the vertical and horizontal alignment of El Campo Road. It is recommended that the analysis of interchange alternatives for the Highway 101/El Campo Road intersection/interchange consider traffic volume changes to El Campo Road associated with the interchange project and that improvements to El Campo Road be constructed to adequately serve the projected demand for the roadway.

Traffic projections from the South County Model indicate that Los Berros Road would operate at LOS D in year 2030. Widening to a four-lane facility would improve traffic operations on the Los Berros Road study segments to LOS C.

B. Cumulative Condition Intersection Analysis

Under cumulative conditions, the Highway 101/El Campo Road intersection would operate at LOS F during the AM and PM peak hours. The significant change in intersection operations is due to the addition of trips from new development on the north side of Highway 101 near the El Campo Road intersection. A grade-separated interchange will be required to serve the traffic demand projected for the cumulative condition. As previously stated, a PSR is currently underway that is evaluating alternative interchange configurations at the Highway 101/El Campo Road intersection and adjacent Highway 101 interchanges.

The other three study intersections will continue to operate at LOS A during the AM and PM peak hours under cumulative conditions. Left and right turn channelization will not be warranted at these intersections under cumulative conditions based on the year 2030 forecast volumes.

V. MITIGATION MEASURES

A. Improvements Warranted for Existing Traffic Conditions

1. Construct a right turn lane on the southbound Highway 101 approach to El Campo Road. This improvement would correct an existing deficiency.

B. Project Impact Mitigation

1. Contribute to the County of San Luis Obispo Traffic Impact Fee for the South County Benefit Area 2. Impact fees have been established by the County of San Luis Obispo for the South County area to fund the portion of roadway needs that are attributable to new development within the South County area. These improvements were explicitly determined for the likely types of development that are projected to occur in the South County area over the next 50 years. The fees calculated by the County of San Luis Obispo are based on the amount of traffic generated during the weekday evening peak hour by each type of new development.

2. Contribute a fair share to future improvements at the highway 101/El Campo Road intersection, including a right turn lane on southbound Highway 101.

3. An access easement or similar arrangement should be developed between the project applicant and the Falcon Ridge Homeowners Association to allow project traffic access to Falcon Crest Drive and Coast View Drive for access. As an alternative, these roads could be incorporated into the County's road system to allow access to these roadways by project traffic.

C. Cumulative Condition Impact Mitigation

In addition to those projects identified in the South County Circulation Study, the following improvements should be considered to mitigate the impacts of buildout conditions.

1. Construct a full interchange at the Highway 101/El Campo Road intersection or frontage road improvements to direct traffic to other interchanges.

2. Widen Highway 101 to a six-lane facility through the intersection with El Campo Road.

3. Widen Los Berros Road to a four-lane facility.

4. Improve El Campo Road as necessary to serve the traffic volumes associated with the interchange design configuration ultimately constructed at the Highway 101/El Campo Road intersection.

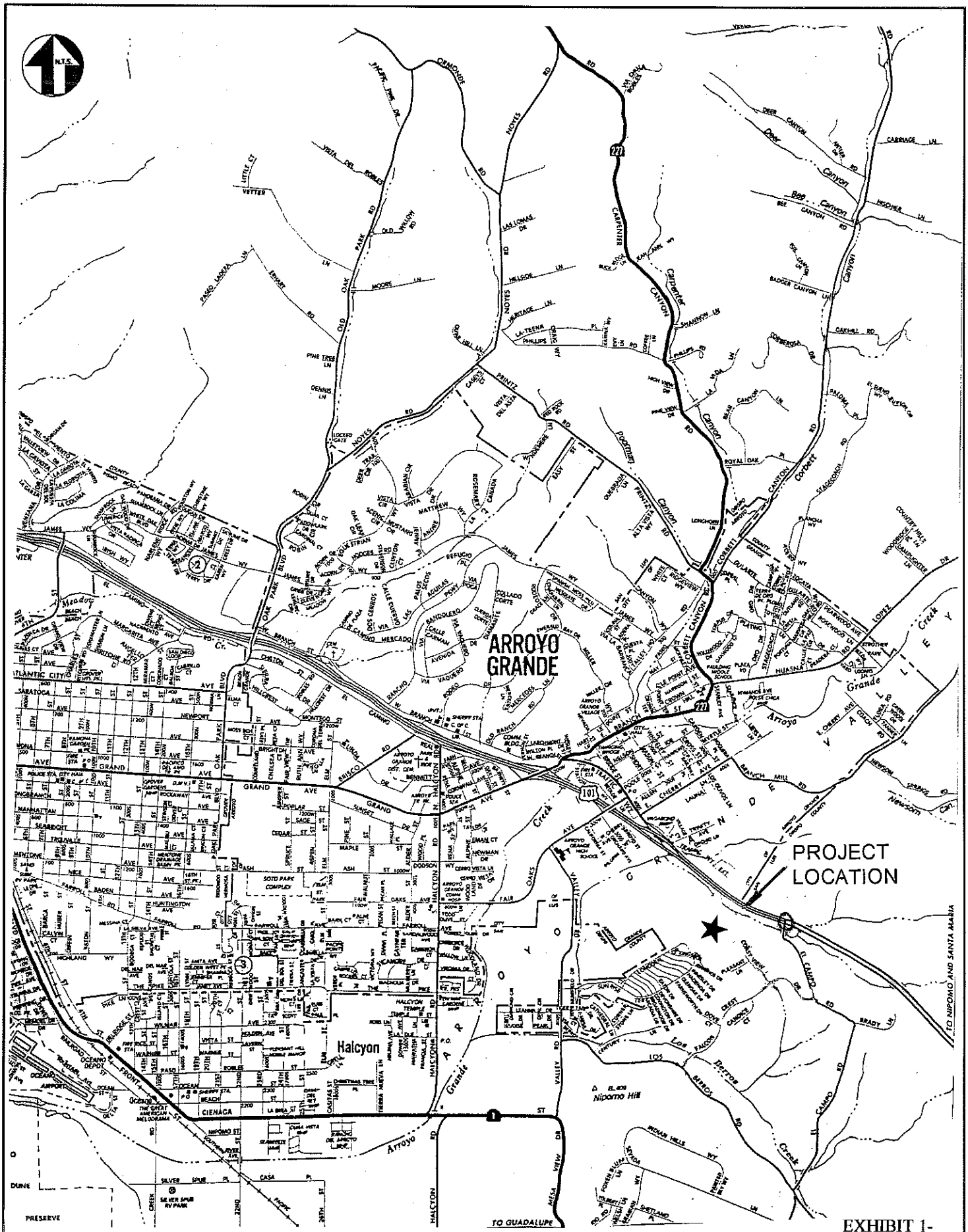


EXHIBIT 1-
PROJECT
LOCATION

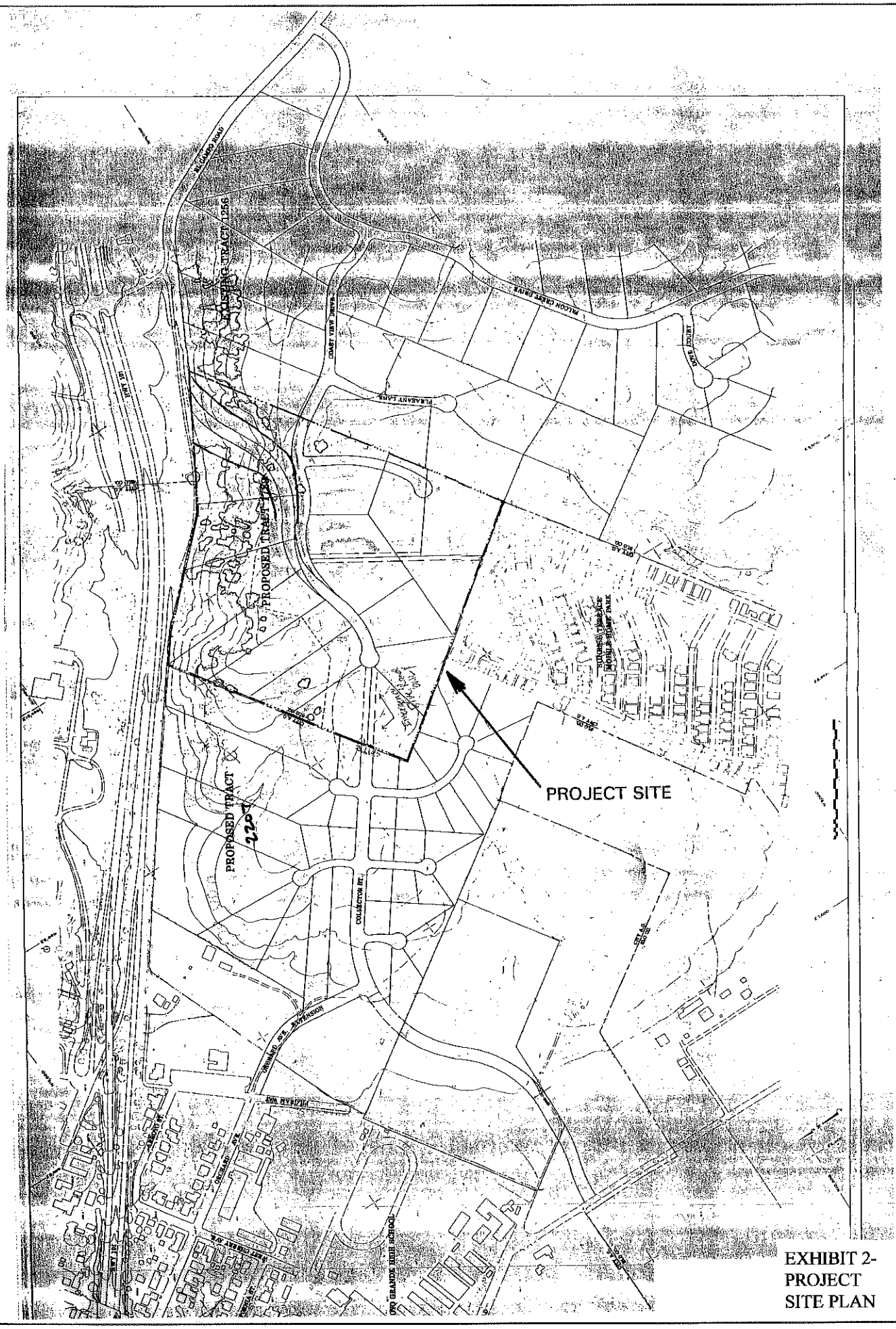


EXHIBIT 2-
PROJECT
SITE PLAN

		WEEKDAY AM PEAK HOUR VOLUMES				
		EXISTING	EXISTING + PROJECT		CUMULATIVE	
		PHV	PHV	(% INC)	PHV	(% INC)
A. COAST VIEW DRIVE						
1. North of Falcon Crest Drive	2-Lane Rural Local Rd	10	22	120%	22	120%
B. FALCON CREST DRIVE						
1. North of Los Berros Rd	2-Lane Rural Local Rd	12	17	42%	17	42%
2. West of Coast View Dr	2-Lane Rural Local Rd	13	18	38%	18	38%
3. East of Coast View Dr	2-Lane Rural Local Rd	21	28	33%	28	33%
4. West of El Campo Rd	2-Lane Rural Local Rd	23	30	30%	30	30%
C. LOS BERROS ROAD						
1. West of Falcon Crest Rd	2-Lane Rural Collector	368	373	1%	1282	248%
2. East of Falcon Crest Rd	2-Lane Rural Collector	360	360	0%	1269	253%
D. EL CAMPO ROAD						
1. South of Hwy 101	2-Lane Rural Collector	162	168	4%	831	413%
2. North of Falcon Crest Rd	2-Lane Rural Collector	168	174	4%	831	395%
3. South of Falcon Crest Rd	2-Lane Rural Collector	145	146	1%	803	454%
E. HIGHWAY 101						
1. North (West) of El Campo Rd	4-Lane Highway					
	Northbound	2286	2288	0%	4239	85%
	Southbound	1851	1852	0%	3779	104%
2. South (East) of El Campo Rd	4-Lane Highway					
	Northbound	2204	2205	0%	3445	56%
	Southbound	1777	1779	0%	3374	90%

		WEEKDAY PM PEAK HOUR VOLUMES				
		EXISTING	EXISTING + PROJECT		CUMULATIVE	
		PHV	PHV	(% INC)	PHV	(% INC)
A. COAST VIEW DRIVE						
1. North of Falcon Crest Drive	2-Lane Rural Local Rd	4	20	400%	20	400%
B. FALCON CREST DRIVE						
1. North of Los Berros Rd	2-Lane Rural Local Rd	10	15	50%	15	50%
2. West of Coast View Dr	2-Lane Rural Local Rd	8	13	63%	13	63%
3. East of Coast View Dr	2-Lane Rural Local Rd	10	21	110%	21	110%
4. West of El Campo Rd	2-Lane Rural Local Rd	18	29	61%	29	61%
C. LOS BERROS ROAD						
1. West of Falcon Crest Rd	2-Lane Rural Collector	455	460	1%	1585	248%
2. East of Falcon Crest Rd	2-Lane Rural Collector	451	451	0%	1576	249%
D. EL CAMPO ROAD						
1. South of Hwy 101	2-Lane Rural Collector	138	147	7%	745	440%
2. North of Falcon Crest Rd	2-Lane Rural Collector	143	152	6%	745	421%
3. South of Falcon Crest Rd	2-Lane Rural Collector	127	129	2%	722	469%
E. HIGHWAY 101						
1. North (West) of El Campo Rd	4-Lane Highway					
	Northbound	1950	1951	0%	4443	128%
	Southbound	2539	2544	0%	4528	78%
2. South (East) of El Campo Rd	4-Lane Highway					
	Northbound	1921	1923	0%	3696	92%
	Southbound	2430	2431	0%	3750	54%

Notes:
1. PHV: Peak Hour Volume.
2. % INC: Percentage increase from existing volumes.

EXHIBIT 3-
ROAD SEGMENT
VOLUMES

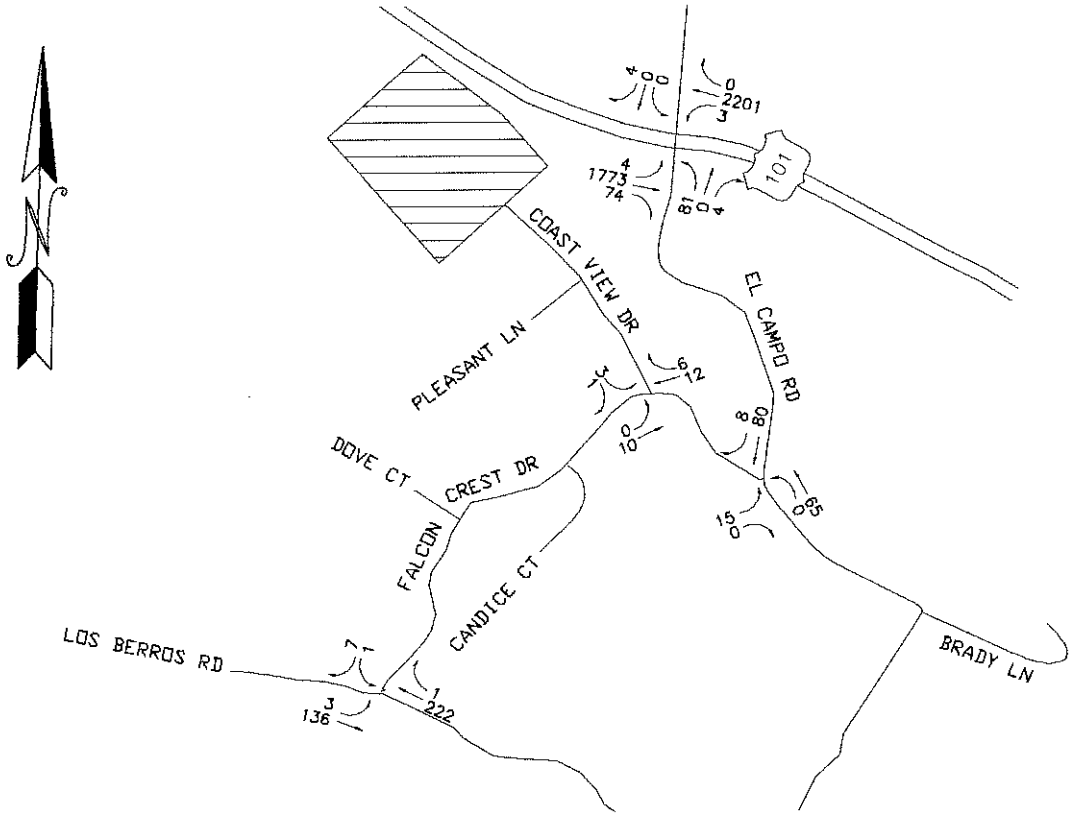
A02-031 SegmentLOS.xls

		WEEKDAY AM PEAK HOUR VOLUMES		
		EXISTING	EXISTING + PROJECT	CUMULATIVE
A. COAST VIEW DRIVE				
1. North of Falcon Crest Drive	2-Lane Rural Local Rd	A	A	A
B. FALCON CREST DRIVE				
1. North of Los Berros Rd	2-Lane Rural Local Rd	A	A	A
2. West of Coast View Dr	2-Lane Rural Local Rd	A	A	A
3. East of Coast View Dr	2-Lane Rural Local Rd	A	A	A
4. West of El Campo Rd	2-Lane Rural Local Rd	A	A	A
C. LOS BERROS ROAD				
1. West of Falcon Crest Rd	2-Lane Rural Collector	B	B	D; A
2. East of Falcon Crest Rd	2-Lane Rural Collector	B	B	D; A
D. EL CAMPO ROAD				
1. North of Falcon Crest Rd	2-Lane Rural Collector	A	A	C
2. South of Falcon Crest Rd	2-Lane Rural Collector	A	A	C
E. HIGHWAY 101				
1. North (West) of El Campo Rd	4-Lane Highway			
	Northbound	C	C	E; C
	Southbound	B	B	F; C
2. South (East) of El Campo Rd	4-Lane Highway			
	Northbound	C	C	D; C
	Southbound	B	B	D; C

		WEEKDAY PM PEAK HOUR VOLUMES		
		EXISTING	EXISTING + PROJECT	CUMULATIVE
A. COAST VIEW DRIVE				
1. North of Falcon Crest Drive	2-Lane Rural Local Rd	A	A	A
B. FALCON CREST DRIVE				
1. North of Los Berros Rd	2-Lane Rural Local Rd	A	A	A
2. West of Coast View Dr	2-Lane Rural Local Rd	A	A	A
3. East of Coast View Dr	2-Lane Rural Local Rd	A	A	A
4. West of El Campo Rd	2-Lane Rural Local Rd	A	A	A
C. LOS BERROS ROAD				
1. West of Falcon Crest Rd	2-Lane Rural Collector	C	C	D; A
2. East of Falcon Crest Rd	2-Lane Rural Collector	C	C	D; A
D. EL CAMPO ROAD				
1. North of Falcon Crest Rd	2-Lane Rural Collector	B	B	C
2. South of Falcon Crest Rd	2-Lane Rural Collector	B	B	C
E. HIGHWAY 101				
1. North (West) of El Campo Rd	4-Lane Highway			
	Northbound	C	C	F; C
	Southbound	C	C	F; D
2. South (East) of El Campo Rd	4-Lane Highway			
	Northbound	C	C	E; C
	Southbound	C	C	E; C

Notes:
1. Levels of service in parantheses are with mitigation. Highway 101 widened to 6 lanes and Los Berros widened to 4 lanes.

EXHIBIT 4 –
ROAD SEGMENT
LEVELS OF SERVICE



A.M. PEAK HOUR

P.M. PEAK HOUR

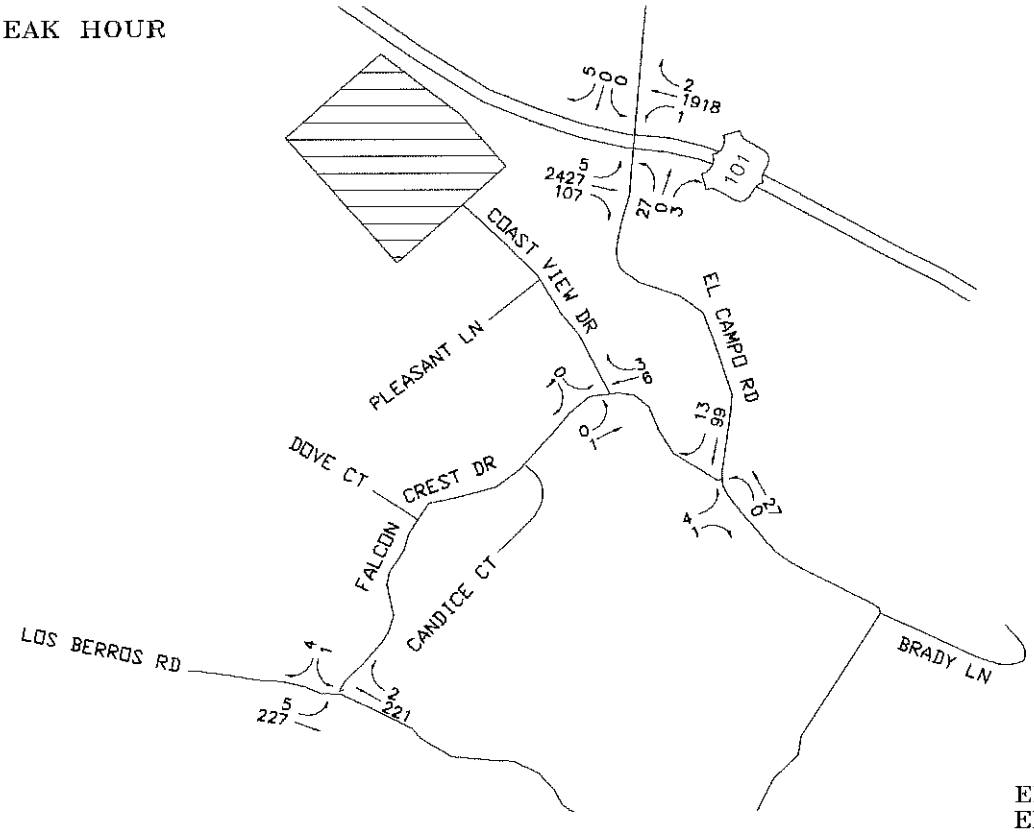


EXHIBIT 5– EXISTING PEAK HOUR TRAFFIC VOLUMES

N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard		Existing				Existing Plus Project				Cumulative			
						AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
						Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
El Campo Rd	Hwy 101	NB 1-L/T, 1-R SB 1-L/T/R EB 1-L, 1-T, 1-T/R WB 1-L, 1-T, 1-T/R	Unsignalized	C	Overall Intersection	20.5	C	5.2	A	22.2	C	5.7	A	*	F	*	F
					NB Approach	*	F	*	F	*	F	*	F	*	F	*	F
El Campo Rd	Falcon Crest	NB 1-L/T SB 1-T/R EB 1-L/R	Unsignalized	C	Overall Intersection	0.6	A	0.3	A	1.1	A	0.6	A	0.4	A	0.2	A
					EB Approach	9.5	A	9.3	A	9.5	A	9.3	A	16.2	C	13.9	B
Coast View	Falcon Crest	SB 1-L/R EB 1-L/T WB 1-T/R	Unsignalized	C	Overall Intersection	1.5	A	0.9	A	5.6	A	3.0	A	5.6	A	2.9	A
					SB Approach	8.5	A	8.4	A	8.6	A	8.5	A	8.5	A	8.5	A
Falcon Crest	Los Berros	SB 1-L/R EB 1-L, 1-T WB 1-T/R	Unsignalized	C	Overall Intersection	0.3	A	0.1	A	0.4	A	0.3	A	8.2	A	0.1	A
					SB Approach	10.0	B	10.0	B	10.0	A	9.9	A	16.0	C	17.9	C

Notes:
1. L,T,R = Left, Through, Right
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound
3. Level of service calculated using 2000 Highway Capacity Manual methods.
4. * = Delay exceeds 200 seconds per vehicle.

EXHIBIT 6
INTERSECTION
LEVELS OF SERVICE

HIGGINS ASSOCIATES

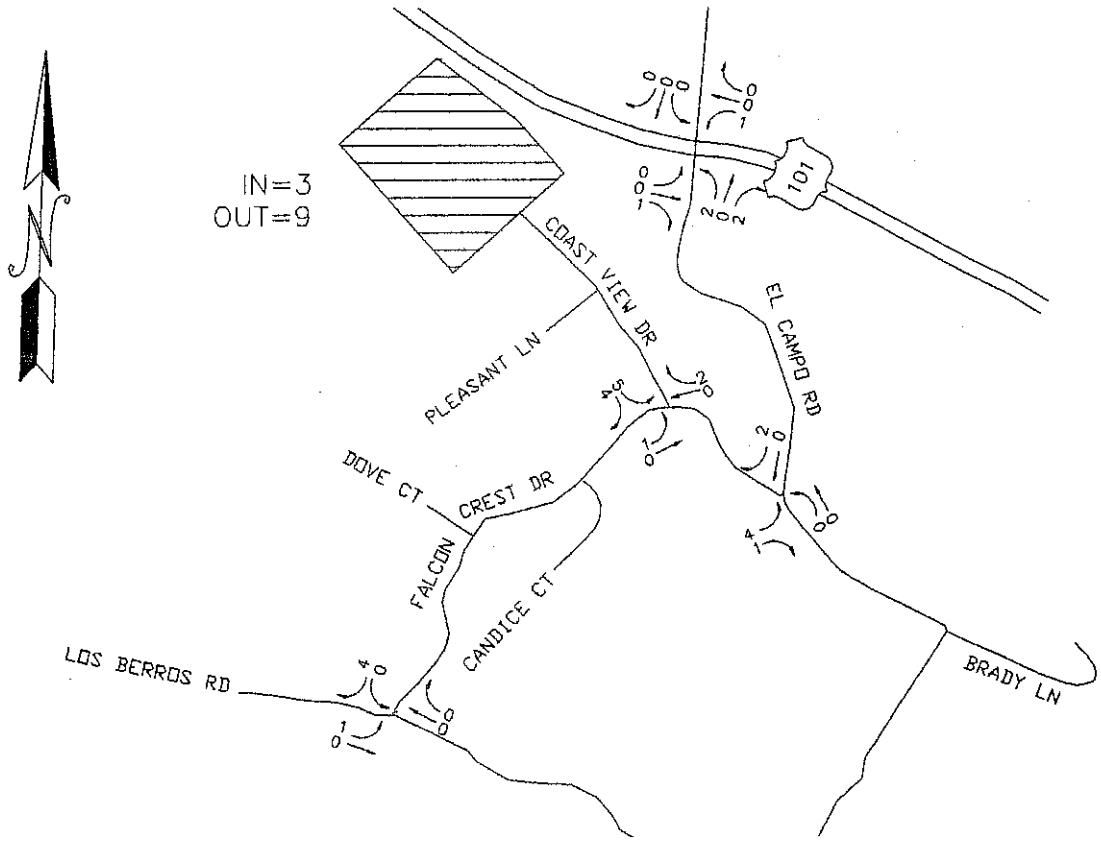
		PROJECT TRIP GENERATION									
				AM PEAK HOUR				PM PEAK HOUR			
	SIZE	DAILY TRIP RATE	DAILY TRAFFIC GENERATION	PEAK HOUR VOL.	% OF DAILY	IN	OUT	PEAK HOUR VOL.	% OF DAILY	IN	OUT
ITE Trip Generation Rates (per dwelling unit)		9.57	-	0.75		25%	75%	1.01		64%	36%
Busick Tract 1789	16 Homes	9.57	154	12	(8)	3	9	16	(10)	10	6

EXHIBIT 7 – PROJECT TRIP GENERATION

F:\2002\Jobs\001-050\A02-031\Exhibits\TRIPGEN.wb3

ROUTE	PROJECT TRIP DISTRIBUTION INBOUND	OUTBOUND
Highway 101-north	50%	25%
Highway 101-south	15%	15%
Los Berros Rd - north	20%	45%
Los Berros Rd - south	10%	10%
El Campo Rd - south	5%	5%
TOTAL	100%	100%

EXHIBIT 8 – PROJECT TRIP DISTRIBUTION



A.M. PEAK HOUR

P.M. PEAK HOUR

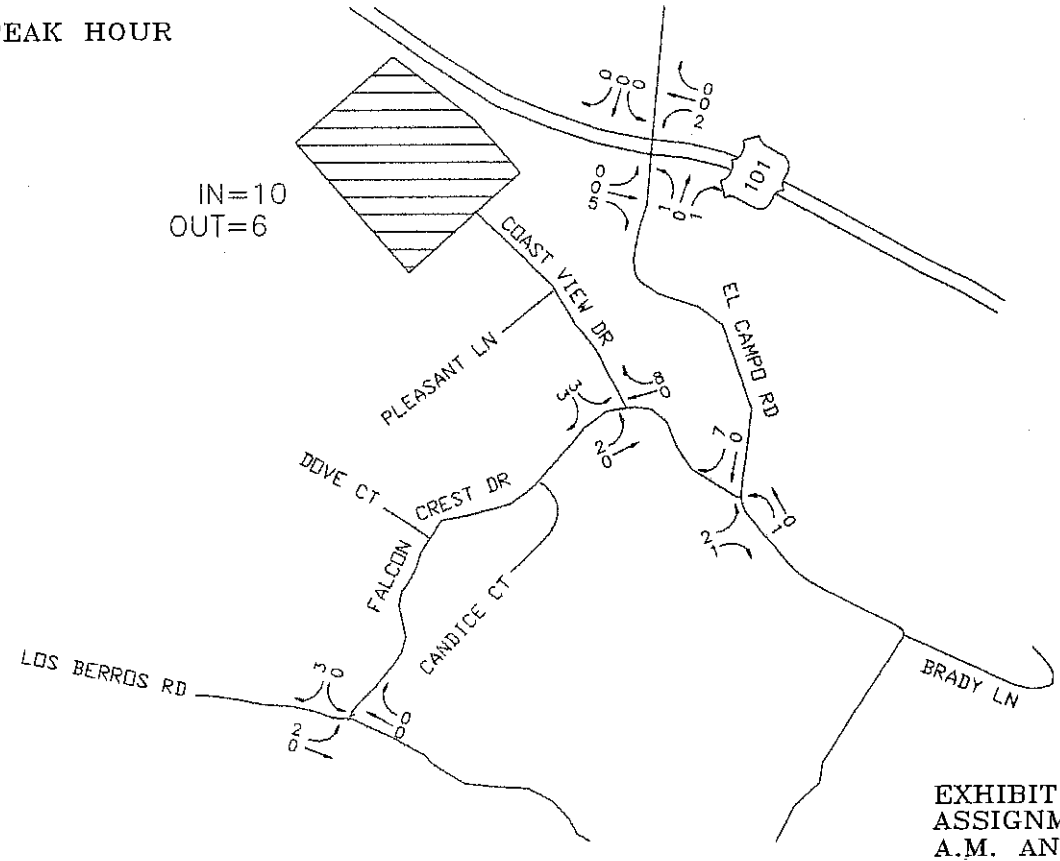
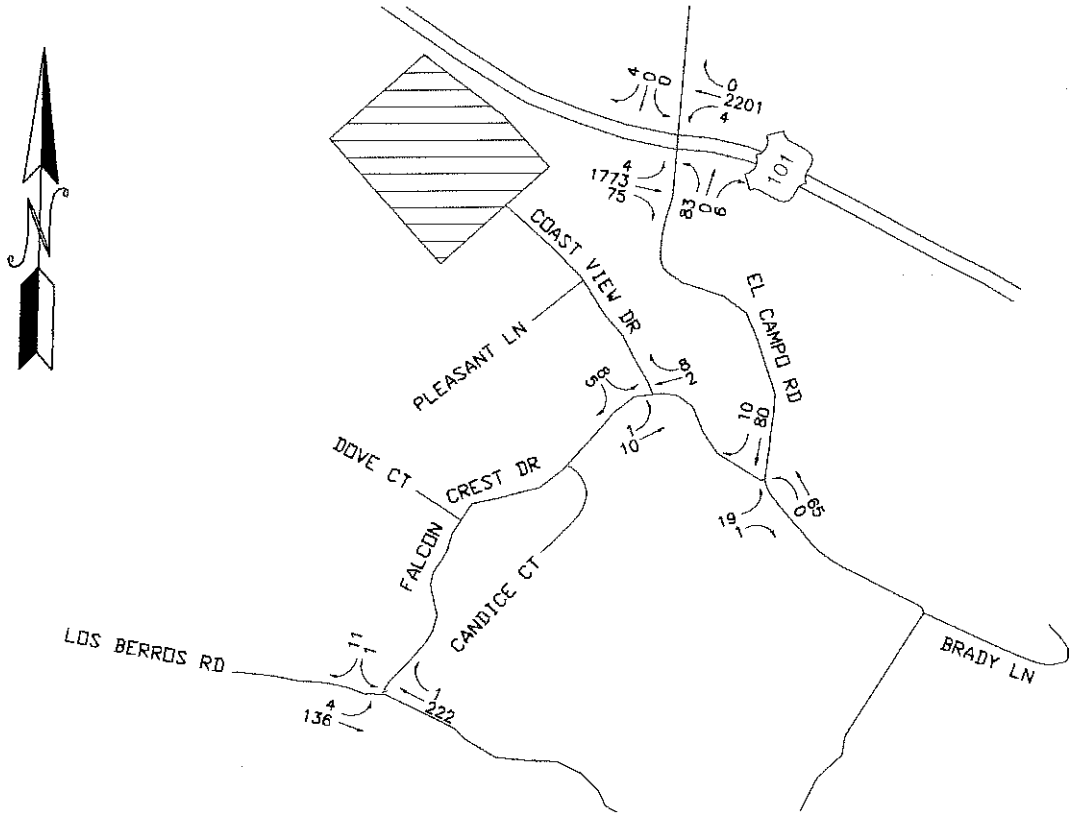


EXHIBIT 9–
ASSIGNMENT OF
A.M. AND P.M.
PEAK HOUR PROJECT
GENERATED TRIPS



A.M. PEAK HOUR

P.M. PEAK HOUR

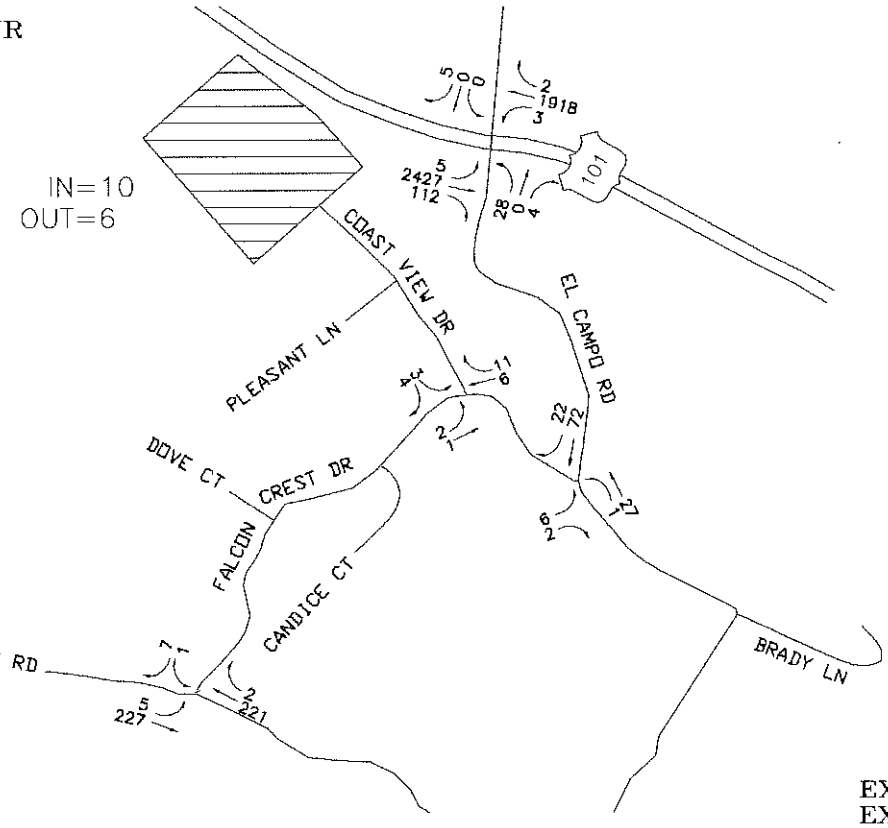
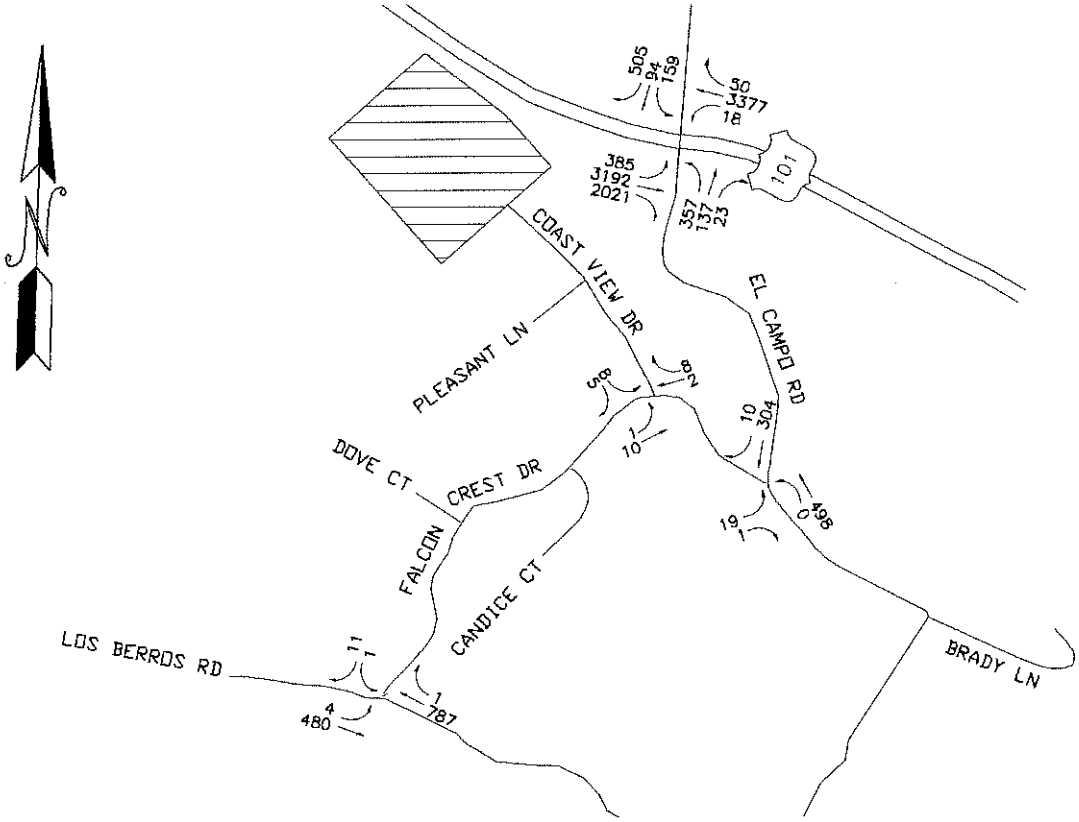


EXHIBIT 10– EXISTING PLUS PROJECT PEAK HOUR VOLUMES



A.M. PEAK HOUR

P.M. PEAK HOUR

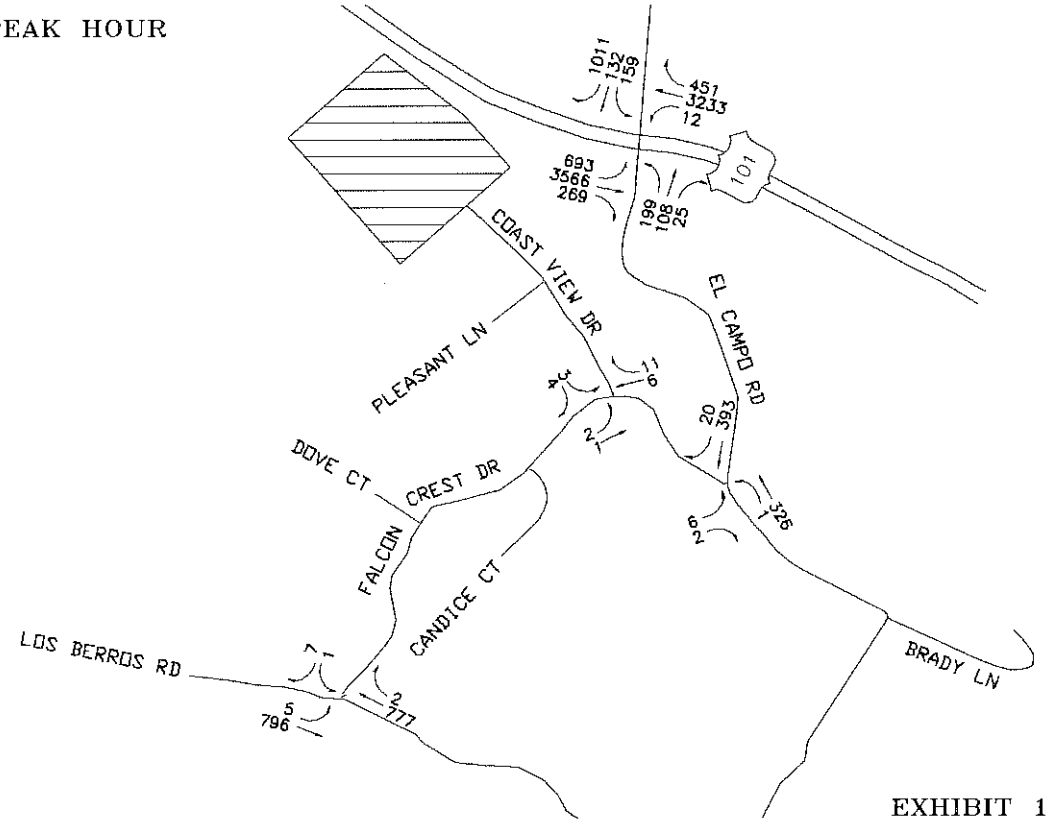


EXHIBIT 11–
CUMULATIVE CONDITION
PEAK HOUR VOLUMES

APPENDIX A1
LOS CRITERIA FOR COLLECTOR, ARTERIAL AND HIGHWAY SEGMENTS

LOS CRITERIA FOR TWO-LANE CLASS II HIGHWAYS

LOS	Percent Time-Spent-Following
A	< 40
B	>40-55
C	>55-70
D	>70-85
E	>85

LOS CRITERIA FOR MULTI-LANE HIGHWAYS

		LOS				
Free-Flow Speed	Criteria	A	B	C	D	E
60 mi/h	Maximum density (pc/mi/ln)	11	18	26	35	40
	Average speed (mi/h)	60.0	60.0	59.4	56.7	55.0
	Maximum volume to capacity ratio (v/c)	0.30	0.49	0.70	0.90	1.00
	Maximum service flow rate (pc/h/ln)	660	1080	1550	1980	2200
55 mi/h	Maximum density (pc/mi/ln)	11	18	26	35	41
	Average speed (mi/h)	55.0	55.0	54.9	52.9	51.2
	Maximum v/c	0.29	0.47	0.68	0.88	1.00
	Maximum service flow rate (pc/h/ln)	600	990	1430	1850	2100
50 mi/h	Maximum density (pc/mi/ln)	11	18	26	35	43
	Average speed (mi/h)	50.0	50.0	50.0	48.9	47.5
	Maximum v/c	0.28	0.45	0.65	0.86	1.00
	Maximum service flow rate (pc/h/ln)	550	900	1300	1710	2000
45 mi/h	Maximum density (pc/mi/ln)	11	18	26	35	45
	Average speed (mi/h)	45.0	45.0	45.0	44.4	42.2
	Maximum v/c	0.26	0.43	0.62	0.82	1.00
	Maximum service flow rate (pc/h/ln)	490	810	1170	1550	1900

Note:
The exact mathematical relationship between density and volume to capacity ratio (v/c) has not always been maintained at LOS boundaries because of the use of rounded values. Density is the primary determinant of LOS. LOS F is characterized by highly unstable and variable traffic flow. Prediction of accurate flow rate, density, and speed at LOS F is difficult.

LOS CRITERIA FOR FREEWAY SEGMENTS

LOS	Density Range (pc/mi/ln)
A	0-11
B	>11-18
C	>18-26
D	>26-35
E	>35-45
F	<45

APPENDIX A2 -

LEVEL OF SERVICE THRESHOLD VOLUMES
FOR VARIOUS ROADWAY TYPES
TOTAL PEAK HOUR VOLUME IN BOTH DIRECTIONS (PHV)

ROADWAY TYPE (with Abbreviation)	Level of Service A	Level of Service B	Level of Service C	Level of Service D	Level of Service E
8-Lane Freeway (8F)	5,100	7,900	11,200	13,600	14,600
6-Lane Freeway (6F)	3,900	5,900	8,500	10,200	11,000
8-Lane Expressway (8E)	3,500	5,400	7,500	9,000	9,800
6-Lane Expressway (6E)	2,800	4,200	5,600	6,700	7,400
4-Lane Freeway (4F)	2,600	3,900	5,700	6,800	7,300
8-Lane Divided Arterial (w/left turn lane) (9)	4,000	4,700	5,400	6,100	6,800
6-Lane Divided Arterial (w/left turn lane) (7)	3,200	3,800	4,300	4,900	5,400
4-Lane Expressway (4E)	1,800	2,700	3,600	4,500	5,000
4-Lane Divided Arterial (w/left turn lane) (5)	2,200	2,500	2,900	3,250	3,600
4-Lane Undivided Arterial (no left turn lane) (4)	1,600	1,900	2,200	2,400	2,700
2-Lane Rural Highway	400	800	1,200	1,700	2,500
2-Lane Arterial (w/left turn lane) (3)	1,100	1,250	1,450	1,600	1,800
2-Lane Collector (2)	600	750	900	1,050	1,200
2-Lane Local* (1)	120	140	160	180	200
1-Lane Freeway Ramp** (1)	500	750	1,050	1,300	1,500
2-Lane Freeway Ramp**	1,000	1,500	2,100	2,600	2,800

Note:

1. Non-directional peak hour volume (PHV) is normally about 10 percent of the daily volume. Directional split is assumed 60/40.
2. Based on "Highway Capacity Manual", Transportation Research Board, 1994.
3. *The capacity limitation is related to neighborhood quality-of-life rather than the physical carrying capacity of the road. This assumes a standard suburban neighborhood, 40 foot roadway width and 25 mile per hour speed limit with normal speed violation rates.
4. **Capacities given for each service level assume the same level of service for the adjoining merging roadway as well as level of service being determined by volume to capacity and not attainable speed. Level of service will be controlled by freeway level of service if worse than ramp.
5. All volumes are approximate and assume ideal roadway characteristics.

APPENDIX B -

NEIGHBORHOOD TRAFFIC RELATED QUALITY-OF-LIFE-CONSIDERATIONS

NEIGHBORHOOD TRAFFIC RELATED QUALITY-OF-LIFE CONSIDERATIONS

1. Introduction

Several studies have been made regarding the effects of traffic on the quality-of-life in residential neighborhoods. The variables affecting these impacts include traffic volumes, type, or makeup, of traffic (i.e. passenger cars, trucks, motorcycles, emergency vehicles, etc.), traffic speed, perception of through traffic as a percentage of total traffic, adequacy of street alignment (i.e. horizontal and vertical curvature), accident experience, on-street parking, residential dwelling setbacks from the street, pedestrian traffic, and street pavement conditions (which would add to traffic noise as the pavement deteriorates). Other factors that may be a contributor to neighborhood nuisance levels include socio-economic status of the neighborhood, and expectations of the residents regarding traffic volumes.

This discussion summarizes most current literature related to this subject. General guidelines regarding threshold volumes for levels of service pertaining to local streets is provided.

2. Summary of literature

a. American Society of Civil Engineers

In a study entitled, "Improving the Residential Street Environment", the nuisance threshold was found to be 800 to 3,000 vehicles per day depending upon the socio-economic status of the neighborhood. This study was made by the Federal Highway Administration, May, 1981. Another study indicates 6,500 to 10,000 vehicles per day as a threshold that some neighbors would leave the neighborhood, ("Visual Intrusion Impacts of Residential Impact", Transportation Engineering Journal of ASCE, September, 1981).

b. Institute of Transportation Engineers

The Institute of Transportation Engineers states the following:

> There are four broad functional classifications of streets within urban areas, as reviewed below:
>
> Local street represent the lowest category. Their primary function is to serve abutting land use. Typical residential Average Daily Traffic (ADT) ranges from 100 to 1,500, with A.M. peak hour traffic about 7 to 8 percent and P.M. peak hour traffic about 10 percent of ADT.

Collector streets have the primary purpose of intercepting traffic from intersecting local streets and handling this movement to the nearest major streets. A secondary function is service to abutting land use. Collector streets also may carry bus lines within a residential subdivision. ADT's are typically 1,500 to 3,500 in residential areas, with similar proportions of peak hour traffic as for the local streets.

Major streets have the primary purpose of carrying through traffic and the secondary purpose of providing access to abutting property. ADT's are typically in excess of 3,500.

The ranges in ADT may, of course, overlap, and the above figures are not intended as design criteria.

"Recommended Guidelines for Subdivision Streets", 1984.

c. "Livable Streets"

The following quote is from *Livable Streets*, by Donald Appleyard, University of California Press, 1981.

"The concept of setting environmental capacities for streets originated in the Buchanan Report. Since then there have been one or two efforts to develop this concept into operational schemes. The *Kensington Environmental Management Study* (1966) proposed a measure depending on the acceptable delay time for pedestrians. This standard set limits on the capacity of most residential streets at 200 vehicles per peak hour, or between 2,000 and 3,000 ADT (Average Daily Trips). On the other hand, a more recent study put the limiting capacity of streets in Louisville, Kentucky, at an amazing 14,000 ADT for a street of single-family houses (Sharpe and Maxman, 1972), and a report for San Luis Obispo, California, found ADT's of up to 4,000 a day acceptable (JHK Associates, 1974). This wide range of acceptability indicates the difficulty of setting standards.

Problems for residents can begin with very small volumes of traffic. On three San Francisco streets with only 400 to 500 vehicles per day, 40 to 50 percent of the residents were disturbed about danger for children because of hot-rodders or shortcutters. The environmental capacity of most residential streets might, therefore, be reached in the 500 to 800 vehicles per day range. The speed of drivers must also be considered. Speed limits even for the top 15 percent should be in the 15 to 20 mph range for children to be secure. These figures also depend on the vulnerability of residents who live on the streets: streets with large numbers of small children should have more stringent standards".

The characteristics of the streets studied in San Francisco are as follows:

TRAFFIC VOLUMES

LIGHT streets 0 to 2,000 vehicles per day
MEDIUM streets 2,000 to 10,000 vehicles per day
HEAVY streets 10,000 to 20,000 vehicles per day
VERY HEAVY streets over 20,000 vehicles per day

STREET ENVIRONMENTS

As expected, street width and number of moving lanes increased with traffic volume. Other characteristics did not. Building heights were almost uniform, ranging from 21 to 28 feet, in all street types.

LIGHT streets usually had parking on both sides and two moving lanes. Two-thirds of them were lined with single-family houses, and the rest with duplexes or apartments; the average set-backs were about 24 feet including sidewalk (about nine feet average), deeper than on other streets. Street trees were fewer on these streets (3.2 per block), probably because the city expects residents to plant in their yards. Distance to food stores was slightly further on these streets (1.3 blocks). Slightly more houses had "social amenities", such as benches and sitting places.

MEDIUM streets were characterized by much smaller set-backs (average only four feet) but had wider sidewalks (15 feet). Nearly 70 percent of these streets were lined with duplexes or apartments. Street trees were much more common on these street blocks, and they were the nearest to food stores.

HEAVY streets had smaller set-backs with nearly 60 percent of the blocks lined with duplexes and apartments. Street pavements were wider, with three to four moving lanes.

VERY HEAVY streets, of which there were only three, were the widest, with an average pavement width of 72 feet, and between four and six moving lanes. Sidewalks were as narrow on those on LIGHT streets, and set-backs averaged only seven feet. On the other hand, 70 percent of their length was lined with single-family houses, though set-backs were narrow (average seven feet). More houses (25 percent) had protective devices of some kind. Average speeds were about the same as on MEDIUM and HEAVY streets because of synchronized signaling. They had less on-street parking spaces per block.

d. Traffic infusion on Residential Environment (TIRE)

Level of service is a measure of congestion experienced by through traffic while TIRE is a measure of the impact of traffic on residents along a street. The TIRE index scale ranges from 0 to 5 depending on daily traffic volume. An index of 0 represents the least infusion of traffic and 5 the greatest, and, thereby, poorest residential environment. Typical street types associated with the various index levels are shown on the TIRE index chart.

TIRE INDEX CHART

TIRE Index	Daily Traffic Volume	Residential Environment Typical of:
0	1 _____	A cul-de-sac street with one home.
1	10 _____	A cul-de-sac street with 2 to 15 homes.
2	100 _____	A 2-lane minor street.
3	1,000 _____	A 2-lane collector or arterial street.
4	10,000 _____	A 2- to 6-lane arterial street.
5	100,000	

The TIRE index is derived from a theory by D.K. Goodrich based on work by Appleyard of the University of California at Berkeley, and by Buchanan of the Ministry of Transport, England. TIRE is based on the theory that a given increase in traffic volume has a greater impact on residential environment along a residential street with a low traffic volume than along a street with a high pre-existing volume. TIRE effects are separate from noise and air pollution impacts. TIRE represents the effect of traffic on the safety and comfort of human activities such as walking, cycling, and playing on or near a street and on the freedom to maneuver personal autos in and out of residential driveways.

The TIRE Index Table gives TIRE values associated with various daily traffic volume ranges. The mathematical relationships are logarithmic. A street with a TIRE value of 3 or greater is considered to function primarily as a traffic street and to exhibit significantly impaired residential environment. The projected difference between a pre–and post–project TIRE value is the predicted impact of the project on residential environment. Any projected change of 0.1 or greater would be noticeable to residents.

TIRE INDEX TABLE

Vehicles Per Day[1]	Tire Index	Vehicles Per Day[1]	Tire Index
6–7	0.8	711–890	2.9
7–8	0.9	891–1,100	3.0
9–10	1.0	1,101–1,400	3.1
11–14	1.1	1,401–1,800	3.2
15–17	1.2	1,801–2,200	3.3
18–22	1.3	2,201–2800	3.4
23–28	1.4	2,801–3,500	3.5
29–35	1.5	3,501–4,500	3.6
36–44	1.6	4,501–5,600	3.7
45–56	1.7	5,601–7,100	3.8
57–70	1.8	7,101–8,900	3.9
71–89	1.9	8,901–11,000	4.0
90–112	2.0	11,001–14,000	4.1
113–140	2.1	14,001–18,000	4.2
141–180	2.2	18,001–22,000	4.3
181–220	2.3	22,001–28,000	4.4
221–280	2.4	28,001–35,000	4.5
281–350	2.5	35,001–45,000	4.6
351–450	2.6	45,001–56,000	4.7
451–560	2.7	56,001–71,000	4.8
561–710	2.8	71,001–89,000	4.9

SOURCE: D.K. Goodrich

1 Range.

3. Recommended Level of Service Thresholds

The varying criteria provided in the literature leads to the following typical daily traffic volume thresholds.

Level of Service	Average Daily Traffic
A	1,200
B	1,400
C	1,600
D	1,800
E	2,000
F	Greater than 2,000

These assume that the midrange value of about 1,800 vehicles per day established by the Federal Highway Administration represents a D level of service. The Institute of Transportation Engineers recommended 1,500 ADT maximum is assumed to fall into a C level of service.

These values are slightly higher than the following values recommended by D.K. Goodrich. The TIRE (Traffic Infusion on Residential Environment) index of 3.0 corresponds with a maximum ADT of 1,000, which is just below the threshold for level of service A. This is a desirable goal to achieve in project design but perhaps unrealistically low for limiting traffic in established neighborhoods. The guideline of an increase of 0.1 in the TIRE index, recommended by Goodrich, is a good gauge of what level of traffic increase can be expected to be noticeable. The level of service thresholds should be used as a guide for evaluating whether a traffic increase is acceptable.

The 2,000 ADT corresponds with the maximum established for light traffic volume streets by Appleyard. It is generally consistent with the Kensington study. This is defined herein as level of service F, a possible quality-of-life capacity of neighborhood streets.

APPENDIX C -

LEVEL OF SERVICE DESCRIPTION
TWO-WAY STOP CONTROLLED

APPENDIX B

LEVEL OF SERVICE (LOS) DESCRIPTION
UNSIGNALIZED INTERSECTIONS WITH TWO-WAY STOP CONTROL (TWSC)

TWSC intersections are widely used and stop signs are used to control vehicle movements at such intersections. At TWSC intersections, the stop-controlled approaches are referred to as the minor street approaches; they can be either public streets or private driveways. The intersection approaches that are not controlled by stop signs are referred to as the major street approaches. A three-leg intersection is considered to be a standard type of TWSC intersection if the single minor street approach (i.e. the stem of the T configuration) is controlled by a stop sign. Three-leg intersections where two of the three approaches are controlled by stop signs are a special form of unsignalized intersection control.

At TWSC intersections, drivers on the controlled approaches are required to select gaps in the major street flow through which to execute crossing or turning maneuvers on the basis of judgement. In the presence of a queue, each driver on the controlled approach must use some time to move into the front-of-queue position and prepare to evaluate gaps in the major street flow. Capacity analysis at TWSC intersections depends on a clear description and understanding of the interaction of drivers on the minor or stop-controlled approach with drivers on the major street. Both gap acceptance and empirical models have been developed to describe this interaction.

Thus, the capacity of the controlled legs is based on three factors:

- the distribution of gaps in the major street traffic stream,;
- driver judgement in selecting gaps through which to execute the desired maneuvers; and
- the follow-up time required by each driver in a queue.

The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incident, control, traffic or geometric delay. Average control delay for any particular minor movement is a function of the capacity of the approach and the degree of saturation and referred to as level of service.

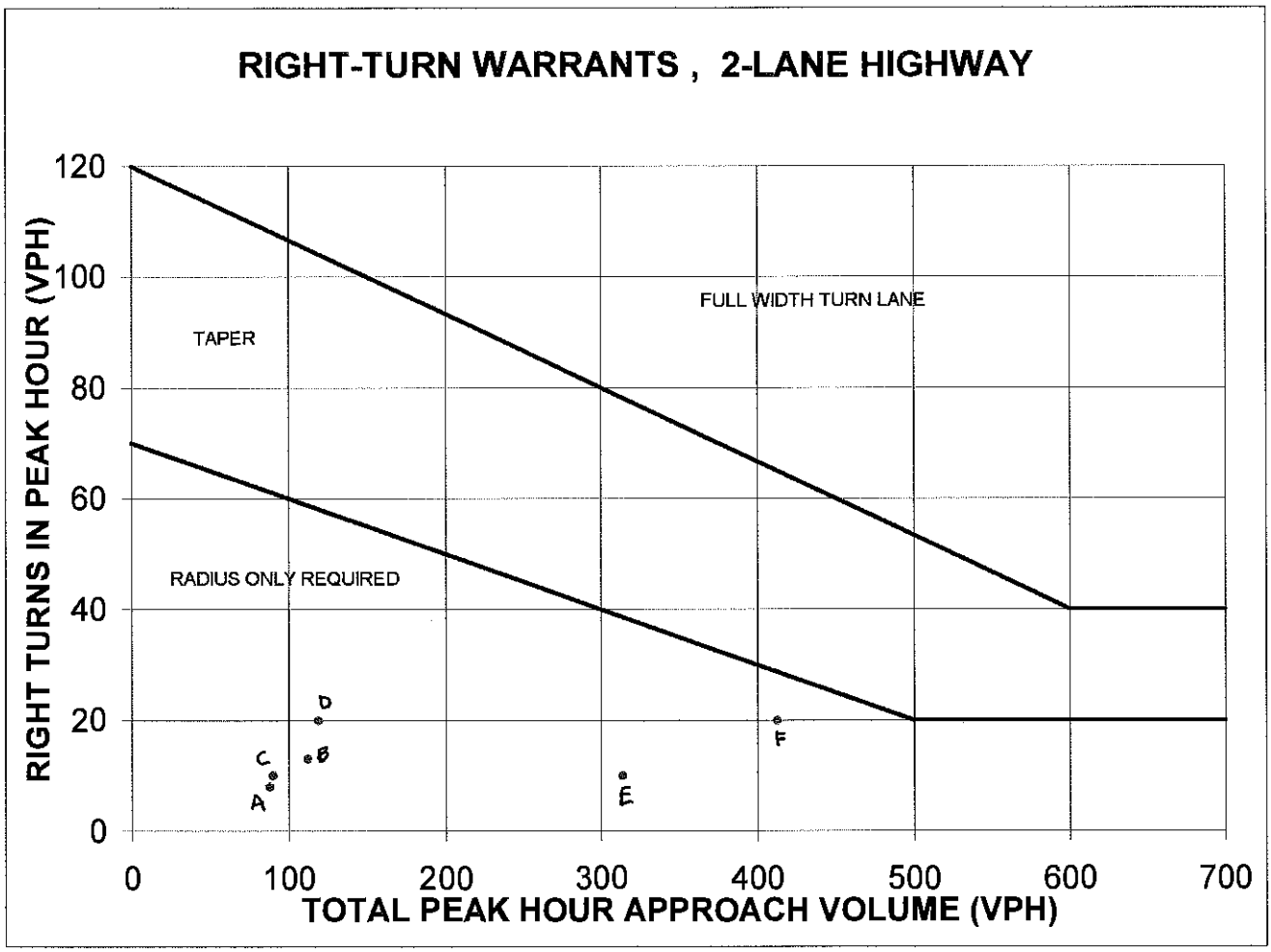
LEVEL OF SERVICE (LOS) CRITERIA FOR TWSC INTERSECTIONS
(Reference Highway Capacity Manual 2000)

Level of Service	Control Delay (seconds / vehicle)
A	0 - 10
B	>10 - 15
C	>15 - 25
D	>25 - 35
E	>35 - 50
F	>50

APPENDIX D -

RIGHT TURN WARRANT WORKSHEETS

El Campo Rd/Falcon Crest
Northbound Approach



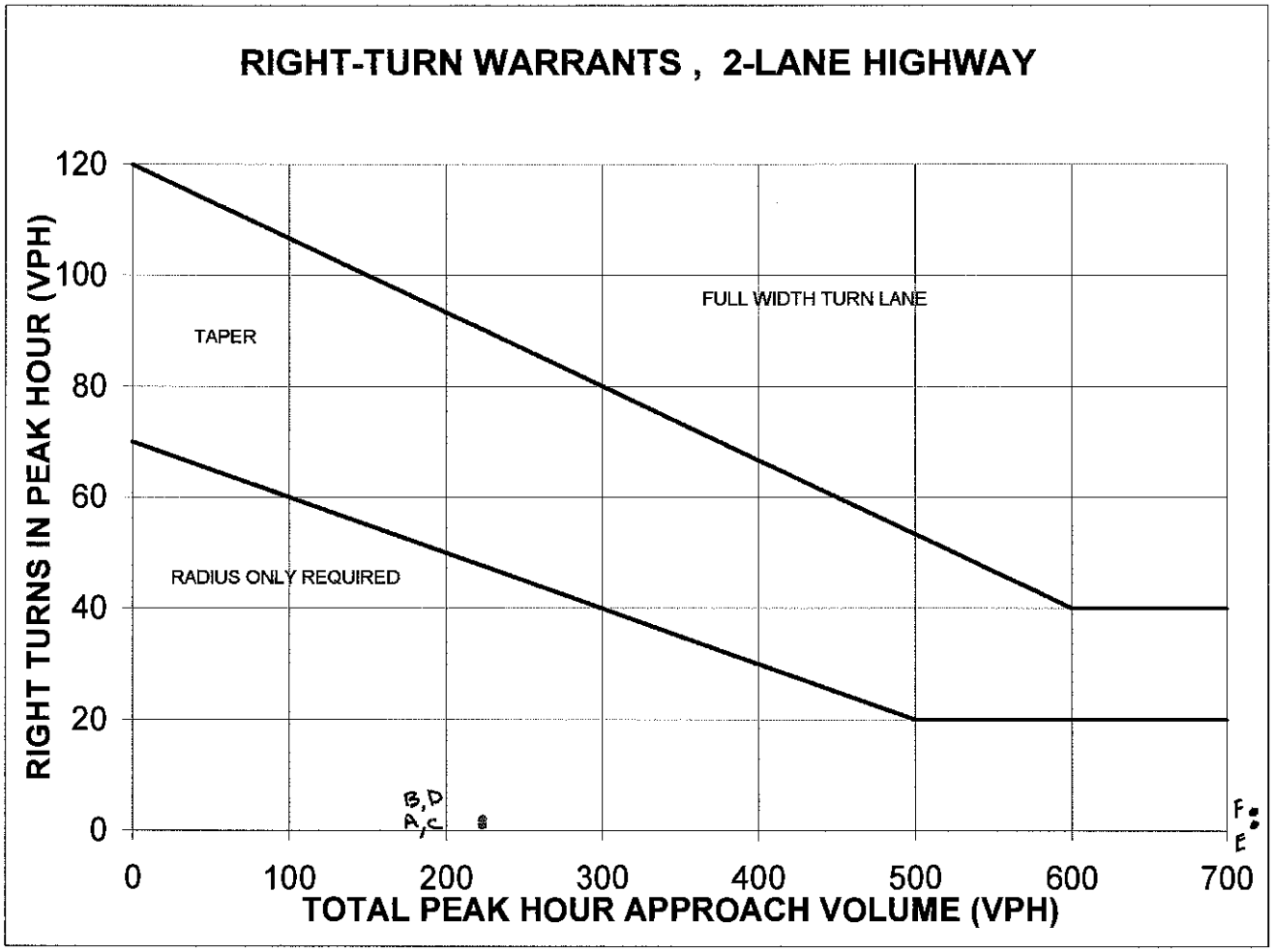
Scenario	Total	Right-Turning	Warrant
A. Existing AM	86	8	No
B. Existing PM	112	13	No
C. Existing + Project AM	90	10	No
D. Existing + Project PM	119	20	No
E. Cumulative W/ Project AM	314	10	No
F. Cumulative W/ Project PM	413	20	No

Source: Transportation Research Board, "Intersection Channelization Guide", NCHRP Report 287, November, 1985, p. 64.

Note: For posted speeds at or under 45 mph, peak hour right turns greater than 40 vph, and total peak hour approach less than 300 vph, adjust right turn volumes.

Adjust peak hour right turns = peak hour right turns - 20.

Los Berros/Falcon Crest
Westbound Approach



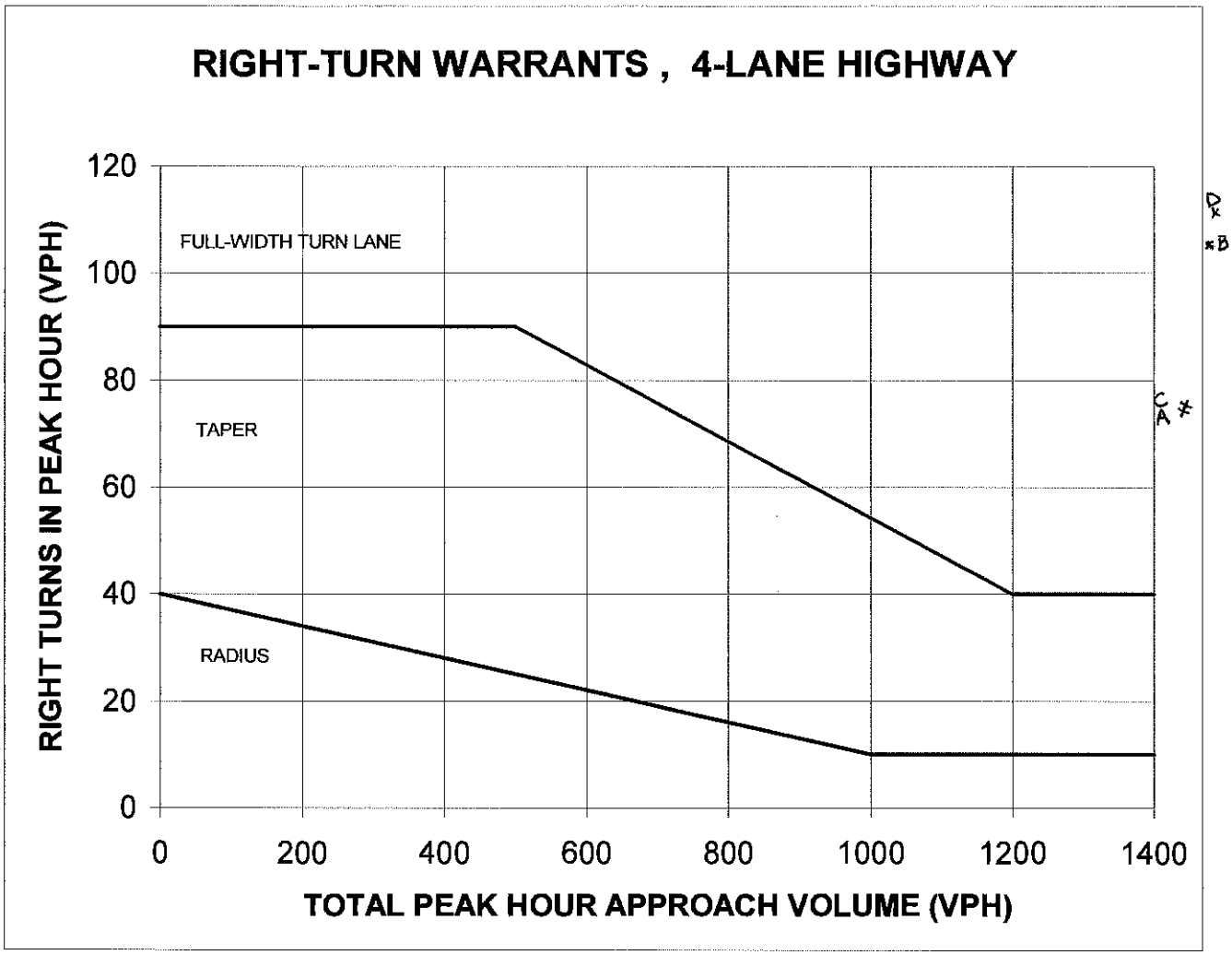
Scenario	Total	Right-Turning	Warrant
A. Existing AM	223	1	No
B. Existing PM	223	2	No
C. Existing + Project AM	223	1	No
D. Existing + Project PM	223	2	No
E. Cumulative W/ Project AM	788	1	No
F. Cumulative W/ Project PM	779	2	No

Source: Transportation Research Board, "Intersection Channelization Guide", NCHRP Report 287, November, 1985, p. 64.

Note: For posted speeds at or under 45 mph, peak hour right turns greater than 40 vph, and total peak hour approach less than 300 vph, adjust right turn volumes.

Adjust peak hour right turns = peak hour right turns - 20.

Hwy 101/El Campo Rd Eastbound Approach



Scenario	Total	Right-Turning	
A. Existing AM	1851	74	RT Lane Warranted.
B. Existing PM	2539	107	"
C. Existing + Project A	1852	75	"
D. Existing + Project P	2544	112	"
E. Cumulative AM	3779	202	
F. Cumulative PM	4528	269	

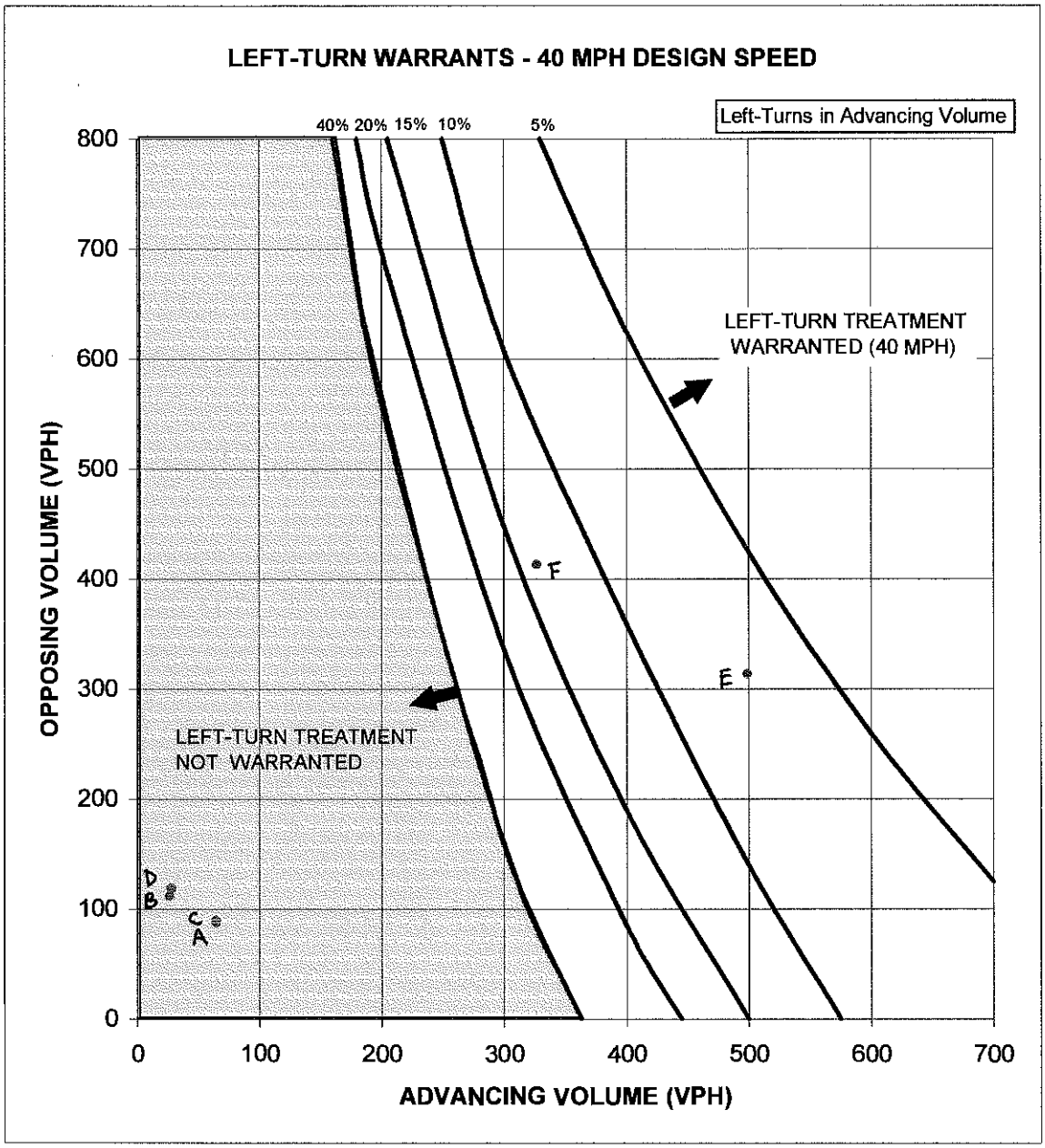
Source: Transportation Research Board, "Intersection Channelization Guide", NCHRP Report 287, November, 1985, p. 64.

Note: For application on high speed highways.

APPENDIX E -

LEFT TURN WARRANT WORKSHEET

El Campo/Falcon Crest - Northbound Approach



Scenario	Advancing	Opposing	% Left-Turn	Warrant
A. Existing AM	65	88	0%	NO
B. Existing PM	27	112	0%	NO
C. Existing + Project AM	65	90	0%	NO
D. Existing + Project PM	28	119	4%	NO
E. Cumulative W/ Project AM	499	314	0%	NO
F. Cumulative W/ Project PM	327	413	0%	NO

Source: Transportation Research Board, "Intersection Channelization Guide", NCHRP Report 279, November, 1985

APPENDIX F-

HIGHWAY 101/NORTH OF
EL CAMPO ROAD

LEVEL OF SERVICE
CALCULATION WORKSHEETS

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/25/02
Analsis Period: AM Peak Hour
Highway: 101
From/To: North of El Campo
Jurisdiction: SLO County
Analysis Year: Existing
Project ID: Busick Subdivision EIR

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

	SB		NB	
Direction	1		2	
Volume, V	1851	vph	2286	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	514		635	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	1042	pcphpl	1287	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1042	pcphpl	1287	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	17.4	pc/mi/ln	21.5	pc/mi/ln

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/25/02
Analsis Period: PM Peak Hour
Highway: 101
From/To: North of El Campo
Jurisdiction: SLO County
Analysis Year: Existing
Project ID: Busick Subdivision EIR

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2539	vph	1950	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	705		542	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	1430	pcphpl	1098	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1430	pcphpl	1098	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	59.9	mph	60.0	mph
Level of service, LOS	C		C	
Density, D	23.9	pc/mi/ln	18.3	pc/mi/ln

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/25/02
Analsis Period: AM Peak Hour
Highway: 101
From/To: North of El Campo
Jurisdiction: SLO County
Analysis Year: Existing Plus Project
Project ID: Busick Subdivision EIR

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1852	vph	2288	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	514		636	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	1043	pcphpl	1288	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1043	pcphpl	1288	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	17.4	pc/mi/ln	21.5	pc/mi/ln

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/25/02
Analsis Period: PM Peak Hour
Highway: 101
From/To: North of El Campo
Jurisdiction: SLO County
Analysis Year: Existing Plus Project
Project ID: Busick Subdivision EIR

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2544	vph	1951	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	707		542	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	1433	pcphpl	1099	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1433	pcphpl	1099	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	59.9	mph	60.0	mph
Level of service, LOS	C		C	
Density, D	23.9	pc/mi/ln	18.3	pc/mi/ln

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/25/02
Analsis Period: AM Peak Hour
Highway: 101
From/To: North of El Campo
Jurisdiction: SLO County
Analysis Year: Cumulative
Project ID: Busick Subdivision EIR

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	3779	vph	4239	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	1050		1178	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	2128	pcphpl	2387	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	2128	pcphpl	2387	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	56.4	mph		mph
Level of service, LOS	E		F	
Density, D	37.8	pc/mi/ln		pc/mi/ln

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/25/02
Analsis Period: PM Peak Hour
Highway: 101
From/To: North of El Campo
Jurisdiction: SLO County
Analysis Year: Cumulative
Project ID: Busick Subdivision EIR

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	4528	vph	4443	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	1258		1234	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	2550	pcphpl	2502	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	2550	pcphpl	2502	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S		mph		mph
Level of service, LOS	F		F	
Density, D		pc/mi/ln		pc/mi/ln

HCS2000: Basic Freeway Segments Release 4.1a

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	
Agency or Company:	
Date Performed:	4/25/02
Analysis Time Period:	AM
Freeway/Direction:	101 Northbound
From/To:	North of El Campo
Jurisdiction:	
Analysis Year:	Cumulative W/6 lane freeway
Description: Busick	

Flow Inputs and Adjustments

Volume, V	4239	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1178	v
Trucks and buses	2	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.986	
Driver population factor, vp	1.00	
Flow rate, vp	1592	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1592	pc/h/ln
Free-flow speed, FFS	65.0	mi/h

Average passenger-car speed, S	64.9	mi/h
Number of lanes, N	3	
Density, D	24.5	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS2000: Basic Freeway Segments Release 4.1a

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	
Agency or Company:	
Date Performed:	4/25/02
Analysis Time Period:	AM
Freeway/Direction:	101 Southbound
From/To:	North of El Campo
Jurisdiction:	
Analysis Year:	Cumulative W/6 lane freeway
Description: Busick	

Flow Inputs and Adjustments

Volume, V	3779	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1050	v
Trucks and buses	2	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.986	
Driver population factor, vp	1.00	
Flow rate, vp	1419	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1419	pc/h/ln
Free-flow speed, FFS	65.0	mi/h

Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	21.8	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS2000: Basic Freeway Segments Release 4.1a

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	
Agency or Company:	
Date Performed:	4/25/02
Analysis Time Period:	PM
Freeway/Direction:	101 Northbound
From/To:	North of El Campo
Jurisdiction:	
Analysis Year:	Cumulative W/6 lane freeway
Description: Busick	

Flow Inputs and Adjustments

Volume, V	4443	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1234	v
Trucks and buses	2	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.986	
Driver population factor, vp	1.00	
Flow rate, vp	1669	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1669	pc/h/ln
Free-flow speed, FFS	65.0	mi/h

Average passenger-car speed, S	64.7	mi/h
Number of lanes, N	3	
Density, D	25.8	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS2000: Basic Freeway Segments Release 4.1a

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	
Agency or Company:	
Date Performed:	4/25/02
Analysis Time Period:	PM
Freeway/Direction:	101 Southbound
From/To:	North of El Campo
Jurisdiction:	
Analysis Year:	Cumulative W/6 lane freeway
Description: Busick	

Flow Inputs and Adjustments

Volume, V	4528	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1258	v
Trucks and buses	2	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.986	
Driver population factor, vp	1.00	
Flow rate, vp	1701	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1701	pc/h/ln
Free-flow speed, FFS	65.0	mi/h

Average passenger-car speed, S	64.5	mi/h
Number of lanes, N	3	
Density, D	26.4	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

APPENDIX G -

HIGHWAY 101 SOUTH OF
EL CAMPO ROAD

LEVEL OF SERVICE
CALCULATION WORKSHEETS

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/25/02
Analsis Period: AM Peak Hour
Highway: 101
From/To: South of El Campo
Jurisdiction: SLO County
Analysis Year: Existing
Project ID: Busick Subdivision EIR

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1777	vph	2204	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	494		612	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	1001	pcphpl	1241	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1001	pcphpl	1241	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	16.7	pc/mi/ln	20.7	pc/mi/ln

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/25/02
Analsis Period: PM Peak Hour
Highway: 101
From/To: South of El Campo
Jurisdiction: SLO County
Analysis Year: Existing
Project ID: Busick Subdivision EIR

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2430	vph	1921	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	675		534	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	1368	pcphpl	1082	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1368	pcphpl	1082	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		C	
Density, D	22.8	pc/mi/ln	18.0+	pc/mi/ln

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/25/02
Analsis Period: AM Peak Hour
Highway: 101
From/To: South of El Campo
Jurisdiction: SLO County
Analysis Year: Existing Plus Project
Project ID: Busick Subdivision EIR

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	1779	vph	2205	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	494		613	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	1002	pcphpl	1242	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1002	pcphpl	1242	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	B		C	
Density, D	16.7	pc/mi/ln	20.7	pc/mi/ln

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/25/02
Analsis Period: PM Peak Hour
Highway: 101
From/To: South of El Campo
Jurisdiction: SLO County
Analysis Year: Existing Plus Project
Project ID: Busick Subdivision EIR

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	2431	vph	1923	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	675		534	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	1369	pcphpl	1083	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1369	pcphpl	1083	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	60.0	mph	60.0	mph
Level of service, LOS	C		C	
Density, D	22.8	pc/mi/ln	18.0+	pc/mi/ln

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/25/02
Analsis Period: AM Peak Hour
Highway: 101
From/To: South of El Campo
Jurisdiction: SLO County
Analysis Year: Cumulative
Project ID: Busick Subdivision EIR

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	3374	vph	3445	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	937		957	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	1900	pcphpl	1940	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1900	pcphpl	1940	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	57.8	mph	57.5	mph
Level of service, LOS	D		D	
Density, D	32.9	pc/mi/ln	33.7	pc/mi/ln

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/25/02
Analsis Period: PM Peak Hour
Highway: 101
From/To: South of El Campo
Jurisdiction: SLO County
Analysis Year: Cumulative
Project ID: Busick Subdivision EIR

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	60.0	mph	60.0	mph

VOLUME

Direction	1		2	
Volume, V	3750	vph	3696	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	1042		1027	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	2112	pcphpl	2082	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	2112	pcphpl	2082	pcphpl
Free-flow speed, FFS	60.0	mph	60.0	mph
Avg. passenger-car travel speed, S	56.5	mph	56.7	mph
Level of service, LOS	E		E	
Density, D	37.4	pc/mi/ln	36.7	pc/mi/ln

HCS2000: Basic Freeway Segments Release 4.1a

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	
Agency or Company:	
Date Performed:	4/25/02
Analysis Time Period:	AM
Freeway/Direction:	101 Northbound
From/To:	South of El Campo
Jurisdiction:	
Analysis Year:	Cumulative W/6 lane freeway
Description: Busick	

Flow Inputs and Adjustments

Volume, V	3445	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	957	v
Trucks and buses	2	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.986	
Driver population factor, vp	1.00	
Flow rate, vp	1294	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1294	pc/h/ln
Free-flow speed, FFS	65.0	mi/h

Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	19.9	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS2000: Basic Freeway Segments Release 4.1a

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	
Agency or Company:	
Date Performed:	4/25/02
Analysis Time Period:	AM
Freeway/Direction:	101 Southbound
From/To:	South of El Campo
Jurisdiction:	
Analysis Year:	Cumulative W/6 lane freeway
Description: Busick	

Flow Inputs and Adjustments

Volume, V	3374	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	937	v
Trucks and buses	2	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.986	
Driver population factor, vp	1.00	
Flow rate, vp	1267	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1267	pc/h/ln
Free-flow speed, FFS	65.0	mi/h

Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	19.5	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS2000: Basic Freeway Segments Release 4.1a

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	
Agency or Company:	
Date Performed:	4/25/02
Analysis Time Period:	PM
Freeway/Direction:	101 Northbound
From/To:	South of El Campo
Jurisdiction:	
Analysis Year:	Cumulative W/6 lane freeway
Description: Busick	

Flow Inputs and Adjustments

Volume, V	3696	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1027	v
Trucks and buses	2	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.986	
Driver population factor, vp	1.00	
Flow rate, vp	1388	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1388	pc/h/ln
Free-flow speed, FFS	65.0	mi/h

Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	21.4	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS2000: Basic Freeway Segments Release 4.1a

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	
Agency or Company:	
Date Performed:	4/25/02
Analysis Time Period:	PM
Freeway/Direction:	101 Southbound
From/To:	South of El Campo
Jurisdiction:	
Analysis Year:	Cumulative W/6 lane freeway
Description: Busick	

Flow Inputs and Adjustments

Volume, V	3750	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1042	v
Trucks and buses	2	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.986	
Driver population factor, vp	1.00	
Flow rate, vp	1408	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1408	pc/h/ln
Free-flow speed, FFS	65.0	mi/h

Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	21.7	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

APPENDIX H -

EL CAMPO ROAD/HIGHWAY 101 -
FALCON CREST DRIVE

LEVEL OF SERVICE
CALCULATION WORKSHEETS

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	AM
Highway	El Campo
From/To	N/O Falcon Crest
Jurisdiction	
Analysis Year	Existing
Description Busick	

Input Data

Highway class Class 2					
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.3	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 168 veh/h
Directional split 52 / 48 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	210	pc/h
Highest directional split proportion (note-2)	109	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	3.5	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	194	pc/h
Highest directional split proportion (note-2)	101	
Base percent time-spent-following, BPTSF	15.7	%
Adj.for directional distribution and no-passing zones, fd/np	21.4	
Percent time-spent-following, PTSF	37.1	%
	A	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.07	
Peak 15-min vehicle-miles of travel, VMT15	14	veh-mi
Peak-hour vehicle-miles of travel, VMT60	50	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

HCS2000: Two-Lane Highways Release 4.1a

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	PM
Highway	El Campo
From/To	N/O Falcon Crest
Jurisdiction	
Analysis Year	Existing
Description Busick	

Input Data

Highway class Class 2

Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.3	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 143 veh/h
Directional split 78 / 22 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	178	pc/h
Highest directional split proportion (note-2)	139	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	3.1	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	165	pc/h
Highest directional split proportion (note-2)	129	
Base percent time-spent-following, BPTSF	13.5	%
Adj.for directional distribution and no-passing zones, fd/np	30.1	
Percent time-spent-following, PTSF	43.6	%
	B	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.06	
Peak 15-min vehicle-miles of travel, VMT15	12	veh-mi
Peak-hour vehicle-miles of travel, VMT60	43	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	AM
Highway	El Campo
From/To	N/O Falcon Crest
Jurisdiction	
Analysis Year	Existing + Project
Description Busick	

Input Data

Highway class Class 2					
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.3	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 174 veh/h
Directional split 52 / 48 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	217	pc/h
Highest directional split proportion (note-2)	113	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	3.6	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	200	pc/h
Highest directional split proportion (note-2)	104	
Base percent time-spent-following, BPTSF	16.1	%
Adj.for directional distribution and no-passing zones, fd/np	21.4	
Percent time-spent-following, PTSF	37.5	%

A

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.07	
Peak 15-min vehicle-miles of travel, VMT15	15	veh-mi
Peak-hour vehicle-miles of travel, VMT60	52	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	PM
Highway	El Campo
From/To	N/O Falcon Crest
Jurisdiction	
Analysis Year	Existing + Project
Description Busick	

Input Data

Highway class Class 2					
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.3	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 152 veh/h
Directional split 78 / 22 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	190	pc/h
Highest directional split proportion (note-2)	148	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	3.3	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	175	pc/h
Highest directional split proportion (note-2)	137	
Base percent time-spent-following, BPTSF	14.3	%
Adj.for directional distribution and no-passing zones, fd/np	30.1	
Percent time-spent-following, PTSF	44.3	% B

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.06	
Peak 15-min vehicle-miles of travel, VMT15	13	veh-mi
Peak-hour vehicle-miles of travel, VMT60	46	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

HCS2000: Two-Lane Highways Release 4.1a

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	AM
Highway	El Campo
From/To	N/O Falcon Crest
Jurisdiction	
Analysis Year	Cumulative
Description Busick	

Input Data

Highway class Class 2					
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.3	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 831 veh/h
Directional split 62 / 38 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.2	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.973	
Two-way flow rate,(note-1) vp	971	pc/h
Highest directional split proportion (note-2)	602	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	2.7	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	958	pc/h
Highest directional split proportion (note-2)	594	
Base percent time-spent-following, BPTSF	56.9	%
Adj.for directional distribution and no-passing zones, fd/np	12.8	
Percent time-spent-following, PTSF	69.7	% C

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.30	
Peak 15-min vehicle-miles of travel, VMT15	71	veh-mi
Peak-hour vehicle-miles of travel, VMT60	249	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	PM
Highway	El Campo
From/To	N/O Falcon Crest
Jurisdiction	
Analysis Year	Cumulative
Description Busick	

Input Data

Highway class Class 2					
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.3	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 745 veh/h
Directional split 55 / 45 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.2	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.973	
Two-way flow rate,(note-1) vp	870	pc/h
Highest directional split proportion (note-2)	479	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	2.9	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	858	pc/h
Highest directional split proportion (note-2)	472	
Base percent time-spent-following, BPTSF	53.0	%
Adj.for directional distribution and no-passing zones, fd/np	14.2	
Percent time-spent-following, PTSF	67.2	%
	C	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.27	
Peak 15-min vehicle-miles of travel, VMT15	63	veh-mi
Peak-hour vehicle-miles of travel, VMT60	224	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

APPENDIX I -

EL CAMPO ROAD SOUTH OF
FALCON CREST DRIVE

LEVEL OF SERVICE
CALCULATION WORKSHEETS

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	AM Peak Hour
Highway	El Campo
From/To	S/O Falcon Crest
Jurisdiction	
Analysis Year	Existing
Description	

Input Data

Highway class	Class 2				
Shoulder width	2.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.3	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 145 veh/h
Directional split 55 / 45 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	181	pc/h
Highest directional split proportion (note-2)	100	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	2.6	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	3.2	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	167	pc/h
Highest directional split proportion (note-2)	92	
Base percent time-spent-following, BPTSF	13.7	%
Adj.for directional distribution and no-passing zones, fd/np	22.0	
Percent time-spent-following, PTSF	35.7	%
	A	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.06	
Peak 15-min vehicle-miles of travel, VMT15	12	veh-mi
Peak-hour vehicle-miles of travel, VMT60	44	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

HCS2000: Two-Lane Highways Release 4.1a

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	PM Peak Hour
Highway	El Campo
From/To	S/O Falcon Crest
Jurisdiction	
Analysis Year	Existing
Description	

Input Data

Highway class	Class 2				
Shoulder width	2.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.3	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 127 veh/h
Directional split 79 / 21 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	158	pc/h
Highest directional split proportion (note-2)	125	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	2.6	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	2.8	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	146	pc/h
Highest directional split proportion (note-2)	115	
Base percent time-spent-following, BPTSF	12.0	%
Adj.for directional distribution and no-passing zones, fd/np	30.7	
Percent time-spent-following, PTSF	42.7	%
	B	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.05	
Peak 15-min vehicle-miles of travel, VMT15	11	veh-mi
Peak-hour vehicle-miles of travel, VMT60	38	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	AM Peak Hour
Highway	El Campo
From/To	S/O Falcon Crest
Jurisdiction	
Analysis Year	Existing + Project
Description	

Input Data

Highway class	Class 2				
Shoulder width	2.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.3	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 146 veh/h
Directional split 55 / 45 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	182	pc/h
Highest directional split proportion (note-2)	100	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	2.6	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	3.2	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	168	pc/h
Highest directional split proportion (note-2)	92	
Base percent time-spent-following, BPTSF	13.7	%
Adj.for directional distribution and no-passing zones, fd/np	22.0	
Percent time-spent-following, PTSF	35.8	%
	A	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.06	
Peak 15-min vehicle-miles of travel, VMT15	12	veh-mi
Peak-hour vehicle-miles of travel, VMT60	44	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	PM Peak Hour
Highway	El Campo
From/To	S/O Falcon Crest
Jurisdiction	
Analysis Year	Existing + Project
Description	

Input Data

Highway class	Class 2				
Shoulder width	2.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.3	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V	129	veh/h		
Directional split	78 /	22	%	

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	161	pc/h
Highest directional split proportion (note-2)	126	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	2.6	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	2.8	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	149	pc/h
Highest directional split proportion (note-2)	116	
Base percent time-spent-following, BPTSF	12.3	%
Adj.for directional distribution and no-passing zones, fd/np	30.1	
Percent time-spent-following, PTSF	42.4	%
	B	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.05	
Peak 15-min vehicle-miles of travel, VMT15	11	veh-mi
Peak-hour vehicle-miles of travel, VMT60	39	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

HCS2000: Two-Lane Highways Release 4.1a

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	AM Peak Hour
Highway	El Campo
From/To	S/O Falcon Crest
Jurisdiction	
Analysis Year	Cumulative
Description	

Input Data

Highway class	Class 2				
Shoulder width	2.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.3	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 804 veh/h
Directional split 55 / 45 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.2	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.973	
Two-way flow rate,(note-1) vp	939	pc/h
Highest directional split proportion (note-2)	516	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	2.6	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	2.7	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	926	pc/h
Highest directional split proportion (note-2)	509	
Base percent time-spent-following, BPTSF	55.7	%
Adj.for directional distribution and no-passing zones, fd/np	13.5	
Percent time-spent-following, PTSF	69.1	%
	C	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.29	
Peak 15-min vehicle-miles of travel, VMT15	69	veh-mi
Peak-hour vehicle-miles of travel, VMT60	241	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

HCS2000: Two-Lane Highways Release 4.1a

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	PM Peak Hour
Highway	El Campo
From/To	S/O Falcon Crest
Jurisdiction	
Analysis Year	Cumulative
Description	

Input Data

Highway class Class 2					
Shoulder width	2.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.3	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 722 veh/h
Directional split 55 / 45 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.2	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.973	
Two-way flow rate,(note-1) vp	843	pc/h
Highest directional split proportion (note-2)	464	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	2.6	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	2.9	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	832	pc/h
Highest directional split proportion (note-2)	458	
Base percent time-spent-following, BPTSF	51.9	%
Adj.for directional distribution and no-passing zones, fd/np	14.5	
Percent time-spent-following, PTSF	66.4	%
	C	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.26	
Peak 15-min vehicle-miles of travel, VMT15	62	veh-mi
Peak-hour vehicle-miles of travel, VMT60	217	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

APPENDIX J -

LOS BERROS ROAD WEST OF
FALCON CREST DRIVE

LEVEL OF SERVICE
CALCULATION WORKSHEETS

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	AM Peak Hour
Highway	Los Berros
From/To	W/O Falcon Crest
Jurisdiction	
Analysis Year	Existing
Description	

Input Data

Highway class	Class 2				
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.5	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 368 veh/h
Directional split 62 / 38 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	459	pc/h
Highest directional split proportion (note-2)	285	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	4.3	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	424	pc/h
Highest directional split proportion (note-2)	263	
Base percent time-spent-following, BPTSF	31.1	%
Adj.for directional distribution and no-passing zones, fd/np	22.2	
Percent time-spent-following, PTSF	53.3	%
	B	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.14	
Peak 15-min vehicle-miles of travel, VMT15	52	veh-mi
Peak-hour vehicle-miles of travel, VMT60	184	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	PM Peak Hour
Highway	Los Berros
From/To	W/O Falcon Crest
Jurisdiction	
Analysis Year	Existing
Description	

Input Data

Highway class	Class 2				
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.5	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 455 veh/h
Directional split 50 / 50 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	568	pc/h
Highest directional split proportion (note-2)	284	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	4.0	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	524	pc/h
Highest directional split proportion (note-2)	262	
Base percent time-spent-following, BPTSF	36.9	%
Adj.for directional distribution and no-passing zones, fd/np	22.1	
Percent time-spent-following, PTSF	59.0	%

C

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.18	
Peak 15-min vehicle-miles of travel, VMT15	65	veh-mi
Peak-hour vehicle-miles of travel, VMT60	228	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

HCS2000: Two-Lane Highways Release 4.1a

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	AM Peak Hour
Highway	Los Berros
From/To	W/O Falcon Crest
Jurisdiction	
Analysis Year	Existing + Project
Description	

Input Data

Highway class	Class 2				
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.5	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 373 veh/h
Directional split 62 / 38 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	465	pc/h
Highest directional split proportion (note-2)	288	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	4.3	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	430	pc/h
Highest directional split proportion (note-2)	267	
Base percent time-spent-following, BPTSF	31.5	%
Adj.for directional distribution and no-passing zones, fd/np	22.2	
Percent time-spent-following, PTSF	53.6	%
	B	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.15	
Peak 15-min vehicle-miles of travel, VMT15	53	veh-mi
Peak-hour vehicle-miles of travel, VMT60	187	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

HCS2000: Two-Lane Highways Release 4.1a

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	PM Peak Hour
Highway	Los Berros
From/To	W/O Falcon Crest
Jurisdiction	
Analysis Year	Existing + Project
Description	

Input Data

Highway class Class 2					
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.5	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 460 veh/h
Directional split 50 / 50 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	574	pc/h
Highest directional split proportion (note-2)	287	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	4.0	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	530	pc/h
Highest directional split proportion (note-2)	265	
Base percent time-spent-following, BPTSF	37.2	%
Adj.for directional distribution and no-passing zones, fd/np	22.0	
Percent time-spent-following, PTSF	59.2	%
	C	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.18	
Peak 15-min vehicle-miles of travel, VMT15	65	veh-mi
Peak-hour vehicle-miles of travel, VMT60	230	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	AM Peak Hour
Highway	Los Berros
From/To	W/O Falcon Crest
Jurisdiction	
Analysis Year	Cumulative
Description	

Input Data

Highway class	Class 2				
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.5	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V	1282	veh/h	
Directional split	62 / 38	%	

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.986	
Two-way flow rate,(note-1) vp	1477	pc/h
Highest directional split proportion (note-2)	916	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	1.6	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	1457	pc/h
Highest directional split proportion (note-2)	903	
Base percent time-spent-following, BPTSF	72.2	%
Adj.for directional distribution and no-passing zones, fd/np	7.8	
Percent time-spent-following, PTSF	80.0	%
	D	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.46	
Peak 15-min vehicle-miles of travel, VMT15	182	veh-mi
Peak-hour vehicle-miles of travel, VMT60	641	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

HCS2000: Two-Lane Highways Release 4.1a

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	PM Peak Hour
Highway	Los Berros
From/To	W/O Falcon Crest
Jurisdiction	
Analysis Year	Cumulative
Description	

Input Data

Highway class Class 2					
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.5	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 1581 veh/h
Directional split 50 / 50 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.986	
Two-way flow rate,(note-1) vp	1822	pc/h
Highest directional split proportion (note-2)	911	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	1.3	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	1797	pc/h
Highest directional split proportion (note-2)	899	
Base percent time-spent-following, BPTSF	79.4	%
Adj.for directional distribution and no-passing zones, fd/np	5.6	
Percent time-spent-following, PTSF	85.0	%
	D	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.57	
Peak 15-min vehicle-miles of travel, VMT15	225	veh-mi
Peak-hour vehicle-miles of travel, VMT60	791	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/30/02
Analsis Period: AM
Highway: Los Berros
From/To: West of Falcon Crest
Jurisdiction:
Analysis Year: Cumulative W/ 4 lanes
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	484	vph	798	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	134		222	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	272	pcphpl	449	pcphpl

RESULTS

Direction	EB 1		WB 2	
Flow rate, vp	272	pcphpl	449	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	A		A	
Density, D	6.0	pc/mi/ln	10.0	pc/mi/ln

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/30/02
Analsis Period: PM
Highway: Los Berros
From/To: West of Falcon Crest
Jurisdiction:
Analysis Year: Cumulative W/ 4 lanes
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	801	vph	784	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	223		218	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	451	pcphpl	441	pcphpl

RESULTS

Direction	EB 1		WB 2	
Flow rate, vp	451	pcphpl	441	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	A		A	
Density, D	10.0	pc/mi/ln	9.8	pc/mi/ln

APPENDIX K -

LOS BERROS ROAD EAST OF
FALCON CREST DRIVE

LEVEL OF SERVICE
CALCULATION WORKSHEETS

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	AM Peak Hour
Highway	Los Berros
From/To	E/O Falcon Crest
Jurisdiction	
Analysis Year	Existing
Description	

Input Data

Highway class	Class 2				
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.7	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 360 veh/h
Directional split 62 / 38 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	449	pc/h
Highest directional split proportion (note-2)	278	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	4.4	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	415	pc/h
Highest directional split proportion (note-2)	257	
Base percent time-spent-following, BPTSF	30.6	%
Adj.for directional distribution and no-passing zones, fd/np	22.3	
Percent time-spent-following, PTSF	52.8	%
	B	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.14	
Peak 15-min vehicle-miles of travel, VMT15	72	veh-mi
Peak-hour vehicle-miles of travel, VMT60	252	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

HCS2000: Two-Lane Highways Release 4.1a

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	PM Peak Hour
Highway	Los Berros
From/To	E/O Falcon Crest
Jurisdiction	
Analysis Year	Existing
Description	

Input Data

Highway class Class 2					
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.7	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 451 veh/h
Directional split 50 / 50 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	563	pc/h
Highest directional split proportion (note-2)	282	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	4.0	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	520	pc/h
Highest directional split proportion (note-2)	260	
Base percent time-spent-following, BPTSF	36.7	%
Adj.for directional distribution and no-passing zones, fd/np	22.2	
Percent time-spent-following, PTSF	58.9	%
	C	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.18	
Peak 15-min vehicle-miles of travel, VMT15	90	veh-mi
Peak-hour vehicle-miles of travel, VMT60	316	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	AM Peak Hour
Highway	Los Berros
From/To	E/O Falcon Crest
Jurisdiction	
Analysis Year	Existing + Project
Description	

Input Data

Highway class	Class 2				
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.7	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V	360	veh/h		
Directional split	62 /	38	%	

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	449	pc/h
Highest directional split proportion (note-2)	278	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	4.4	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	415	pc/h
Highest directional split proportion (note-2)	257	
Base percent time-spent-following, BPTSF	30.6	%
Adj.for directional distribution and no-passing zones, fd/np	22.3	
Percent time-spent-following, PTSF	52.8	%
	B	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.14	
Peak 15-min vehicle-miles of travel, VMT15	72	veh-mi
Peak-hour vehicle-miles of travel, VMT60	252	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	PM Peak Hour
Highway	Los Berros
From/To	E/O Falcon Crest
Jurisdiction	
Analysis Year	Existing + Project
Description	

Input Data

Highway class	Class 2				
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.7	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V	451	veh/h		
Directional split	50	/	50	%

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.7	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.911	
Two-way flow rate,(note-1) vp	563	pc/h
Highest directional split proportion (note-2)	282	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	4.0	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	0.986	
Two-way flow rate,(note-1) vp	520	pc/h
Highest directional split proportion (note-2)	260	
Base percent time-spent-following, BPTSF	36.7	%
Adj.for directional distribution and no-passing zones, fd/np	22.2	
Percent time-spent-following, PTSF	58.9	%
	C	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.18	
Peak 15-min vehicle-miles of travel, VMT15	90	veh-mi
Peak-hour vehicle-miles of travel, VMT60	316	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	AM Peak Hour
Highway	Los Berros
From/To	E/O Falcon Crest
Jurisdiction	
Analysis Year	Cumulative
Description	

Input Data

Highway class Class 2					
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.7	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V 1269 veh/h
Directional split 62 / 38 %

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.986	
Two-way flow rate,(note-1) vp	1462	pc/h
Highest directional split proportion (note-2)	906	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	1.6	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	1442	pc/h
Highest directional split proportion (note-2)	894	
Base percent time-spent-following, BPTSF	71.8	%
Adj.for directional distribution and no-passing zones, fd/np	7.9	
Percent time-spent-following, PTSF	79.7	%
	D	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.46	
Peak 15-min vehicle-miles of travel, VMT15	252	veh-mi
Peak-hour vehicle-miles of travel, VMT60	888	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:
E-Mail:

Two-Way Two-Lane Highway Segment Analysis

Analyst	
Agency/Co.	
Date Performed	4/26/02
Analysis Time Period	PM Peak Hour
Highway	Los Berros
From/To	E/O Falcon Crest
Jurisdiction	
Analysis Year	Cumulative
Description	

Input Data

Highway class	Class 2				
Shoulder width	4.0	ft	Peak-hour factor, PHF	0.88	
Lane width	12.0	ft	% Trucks and buses	14	%
Segment length	0.7	mi	% Recreational vehicles	4	%
Terrain type	Level		% No-passing zones	100	%
Grade: Length	0.25	mi	Access points/mi	8	/mi
Up/down	3.0	%			

Two-way hourly volume, V	1586	veh/h	
Directional split	50 / 50	%	

Average Travel Speed

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.1	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor,	0.986	
Two-way flow rate,(note-1) vp	1828	pc/h
Highest directional split proportion (note-2)	914	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	-	mi/h
Observed volume, Vf	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	1.3	mi/h
Adj. for access points, fA	2.0	mi/h
Free-flow speed, FFS		mi/h
Adjustment for no-passing zones, fnp	1.3	mi/h
Average travel speed, ATS		mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	1802	pc/h
Highest directional split proportion (note-2)	901	
Base percent time-spent-following, BPTSF	79.5	%
Adj.for directional distribution and no-passing zones, fd/np	5.6	
Percent time-spent-following, PTSF	85.0	%
	D	

Level of Service and Other Performance Measures

Level of service, LOS		
Volume to capacity ratio, v/c	0.57	
Peak 15-min vehicle-miles of travel, VMT15	315	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1110	veh-mi
Peak 15-min total travel time, TT15		veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/30/02
Analsis Period: AM
Highway: Los Berros
From/To: East of Falcon Crest
Jurisdiction:
Analysis Year: Cumulative W/ 4 lanes
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	481	vph	788	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	134		219	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	270	pcphpl	443	pcphpl

RESULTS

Direction	1 EB		2 WB	
Flow rate, vp	270	pcphpl	443	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	A		A	
Density, D	6.0	pc/mi/ln	9.8	pc/mi/ln

Phone: Fax:
E-mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co:
Date: 4/30/02
Analsis Period: PM
Highway: Los Berros
From/To: East of Falcon Crest
Jurisdiction:
Analysis Year: Cumulative W/ 4 lanes
Project ID:

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	0		0	
Median type				
Free-flow speed:	Measured		Measured	
FFS or BFFS	45.0	mph	45.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	797	vph	779	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	221		216	
Trucks and buses	2	%	2	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Grade	0.00	%	0.00	%
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.986		0.986	
Flow rate, vp	448	pcphpl	438	pcphpl

RESULTS

Direction	1 EB		2 WB	
Flow rate, vp	448	pcphpl	438	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	A		A	
Density, D	10.0	pc/mi/ln	9.7	pc/mi/ln

APPENDIX L -

HIGHWAY 101/EL CAMPO ROAD
INTERSECTION

LEVEL OF SERVICE
CALCULATION WORKSHEETS

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Hwy 101/El Campo

Average Delay (sec/veh): 996.6 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	0 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	81	0	4	0	0	4	4	1773	74	3	2201	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	81	0	4	0	0	4	4	1773	74	3	2201	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	95	0	5	0	0	5	5	2086	87	4	2589	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	95	0	5	0	0	5	5	2086	87	4	2589	0
Critical Gap Module:												
Critical Gp:	7.5	xxxx	6.9	xxxxx	xxxx	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	3441	xxxx	1086	xxxx	xxxx	1295	2589	xxxx	xxxxx	2173	xxxx	xxxxx
Potent Cap.:	3	xxxx	215	xxxx	xxxx	156	171	xxxx	xxxxx	249	xxxx	xxxxx
Move Cap.:	3	xxxx	215	xxxx	xxxx	156	171	xxxx	xxxxx	249	xxxx	xxxxx
Total Cap:	36	0	xxxxx	0	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	28.8	26.7	xxxx	xxxxx	19.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	D	D	*	*	C	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	37	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	997	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	*	*	*
ApproachDel:	996.6			28.8			xxxxxx			xxxxxx		
ApproachLOS:	F			D			*			*		

overall = 20.5

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Hwy 101/El Campo

Average Delay (sec/veh): 773.1 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 1			1 0 1 1 0			1 0 1 1 0		
Volume Module:												
Base Vol:	27	0	3	0	0	5	5	2427	107	1	1918	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	27	0	3	0	0	5	5	2427	107	1	1918	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	30	0	3	0	0	5	5	2667	118	1	2108	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	30	0	3	0	0	5	5	2667	118	1	2108	2
Critical Gap Module:												
Critical Gp:	7.5	xxxx	6.9	xxxxx	xxxx	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	3793	xxxx	1392	xxxx	xxxx	1055	2110	xxxx	xxxxx	2785	xxxx	xxxxx
Potent Cap.:	1	xxxx	134	xxxx	xxxx	225	263	xxxx	xxxxx	143	xxxx	xxxxx
Move Cap.:	1	xxxx	134	xxxx	xxxx	225	263	xxxx	xxxxx	143	xxxx	xxxxx
Total Cap:	17	0	xxxxx	0	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	21.4	19.0	xxxx	xxxxx	30.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	C	C	*	*	D	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	19	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	773	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	*	*	*
ApproachDel:	773.1			21.4			xxxxxx			xxxxxx		
ApproachLOS:	F			C			*			*		

overall 5.2

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #1 Hwy 101/El Campo

****

Average Delay (sec/veh): 1030.2 Worst Case Level Of Service: F

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	0 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	83	0	6	0	0	4	4	1773	75	4	2201	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	83	0	6	0	0	4	4	1773	75	4	2201	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	98	0	7	0	0	5	5	2086	88	5	2589	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	98	0	7	0	0	5	5	2086	88	5	2589	0
Critical Gap Module:												
Critical Gp:	7.5	xxxx	6.9	xxxxx	xxxx	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	3444	xxxx	1087	xxxx	xxxx	1295	2589	xxxx	xxxxx	2174	xxxx	xxxxx
Potent Cap.:	3	xxxx	215	xxxx	xxxx	156	171	xxxx	xxxxx	249	xxxx	xxxxx
Move Cap.:	3	xxxx	215	xxxx	xxxx	156	171	xxxx	xxxxx	249	xxxx	xxxxx
Total Cap:	36	0	xxxxx	0	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	28.8	26.7	xxxx	xxxxx	19.8	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	D	D	*	*	C	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	38	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	1030	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	*	*	*
ApproachDel:	1030.2			28.8			xxxxxx			xxxxxx		
ApproachLOS:	F			D			*			*		

overall 22.2

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Hwy 101/El Campo

Average Delay (sec/veh): 800.3 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 1			1 0 1 1 0			1 0 1 1 0		
Volume Module:												
Base Vol:	28	0	4	0	0	5	5	2427	112	3	1918	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	28	0	4	0	0	5	5	2427	112	3	1918	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	31	0	4	0	0	5	5	2667	123	3	2108	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	31	0	4	0	0	5	5	2667	123	3	2108	2
Critical Gap Module:												
Critical Gp:	7.5	xxxx	6.9	xxxxx	xxxx	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	3800	xxxx	1395	xxxx	xxxx	1055	2110	xxxx	xxxxx	2790	xxxx	xxxxx
Potent Cap.:	1	xxxx	133	xxxx	xxxx	225	263	xxxx	xxxxx	142	xxxx	xxxxx
Move Cap.:	1	xxxx	133	xxxx	xxxx	225	263	xxxx	xxxxx	142	xxxx	xxxxx
Total Cap:	17	0	xxxxx	0	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	21.4	19.0	xxxx	xxxxx	30.9	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	C	C	*	*	D	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	19	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	800	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	*	*	*
ApproachDel:	800.3			21.4			xxxxxx			xxxxxx		
ApproachLOS:	F			C			*			*		

overall 5.7

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Hwy 101/El Campo

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 1 1 0			1 0 1 1 0		
Volume Module:												
Base Vol:	357	137	23	159	94	505	385	3192	202	18	3377	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	357	137	23	159	94	505	385	3192	202	18	3377	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	376	144	24	167	99	532	405	3360	213	19	3555	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	376	144	24	167	99	532	405	3360	213	19	3555	53
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	6142	7922	1786	6182	8002	1804	3607	xxxx	xxxxx	3573	xxxx	xxxxx
Potent Cap.:	0	0	72	0	0	70	67	xxxx	xxxxx	69	xxxx	xxxxx
Move Cap.:	0	0	72	0	0	70	67	xxxx	xxxxx	69	xxxx	xxxxx
Total Cap:	0	0	xxxxx	0	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2409	xxxx	xxxxx	76.1	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	F	*	*	F	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Hwy 101/El Campo

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	199	108	25	159	132	1011	693	3566	269	12	3233	451
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	199	108	25	159	132	1011	693	3566	269	12	3233	451
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	209	114	26	167	139	1064	729	3754	283	13	3403	475
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	209	114	26	167	139	1064	729	3754	283	13	3403	475
Critical Gap Module:												
Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	7151	9257	2018	7058	9162	1939	3878	xxxx	xxxxx	4037	xxxx	xxxxx
Potent Cap.:	0	0	50	0	0	57	52	xxxx	xxxxx	44	xxxx	xxxxx
Move Cap.:	0	0	50	0	0	57	52	xxxx	xxxxx	44	xxxx	xxxxx
Total Cap:	0	0	xxxxx	0	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6053	xxxx	xxxxx	115.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	F	*	*	F	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			F			*			*		

APPENDIX M -

EL CAMPO ROAD/FALCON CREST DRIVE
INTERSECTION

LEVEL OF SERVICE
CALCULATION WORKSHEETS

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 El Campo/Falcon Crest

Average Delay (sec/veh): 9.5 Worst Case Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1 0 0			0 0 0 1 0			1 0 0 0 0			0 0 0 0 0		
Volume Module:												
Base Vol:	0	65	0	0	80	8	15	0	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	65	0	0	80	8	15	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
PHF Volume:	0	76	0	0	93	9	17	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	76	0	0	93	9	17	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	173	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	821	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	821	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.5			xxxxxx		
ApproachLOS:	*			*			A			*		

overall = 0.83

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #2 El Campo/Falcon Crest

****

Average Delay (sec/veh): 9.3 Worst Case Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Volume Module:												
Base Vol:	0	27	0	0	99	13	4	0	1	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	27	0	0	99	13	4	0	1	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
PHF Volume:	0	34	0	0	125	16	5	0	1	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	34	0	0	125	16	5	0	1	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	168	xxxx	134	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	827	xxxx	921	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	827	xxxx	921	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	844	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.3	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.3			xxxxxx		
ApproachLOS:	*			*			A			*		

overall = 0.31

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 El Campo/Falcon Crest

Average Delay (sec/veh): 9.5 Worst Case Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	0	0 0 0	1	0	0 0 1!	0	0	0 0 0	0	0
Volume Module:												
Base Vol:	0	65	0	0	80	10	19	0	1	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	65	0	0	80	10	19	0	1	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
PHF Volume:	0	76	0	0	93	12	22	0	1	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	76	0	0	93	12	22	0	1	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	174	xxxx	99	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	820	xxxx	962	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	820	xxxx	962	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR		- RT	LT - LTR		- RT	LT - LTR		- RT	LT - LTR		- RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	826	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.5	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.5			xxxxxx		
ApproachLOS:	*			*			A			*		

overall 1.07

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 El Campo/Falcon Crest

Average Delay (sec/veh): 9.3 Worst Case Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0 0		0 0 0	1 0		0 0 1!	0 0		0 0 0	0 0	
Volume Module:												
Base Vol:	1	27	0	0	99	20	6	0	2	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	27	0	0	99	20	6	0	2	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
PHF Volume:	1	34	0	0	125	25	8	0	3	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	1	34	0	0	125	25	8	0	3	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	151	xxxx	xxxxx	xxxx	xxxx	xxxxx	175	xxxx	138	xxxx	xxxx	xxxxx
Potent Cap.:	1443	xxxx	xxxxx	xxxx	xxxx	xxxxx	820	xxxx	916	xxxx	xxxx	xxxxx
Move Cap.:	1443	xxxx	xxxxx	xxxx	xxxx	xxxxx	819	xxxx	916	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	841	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.3	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.3			xxxxxx		
ApproachLOS:	*			*			A			*		

overall = 0.56

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 El Campo/Falcon Crest

Average Delay (sec/veh): 16.2 Worst Case Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	0	0 0 0	1	0	0 0 1!	0	0	0 0 0	0	0
Volume Module:												
Base Vol:	0	498	0	0	304	10	19	0	1	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	498	0	0	304	10	19	0	1	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	524	0	0	320	11	20	0	1	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	524	0	0	320	11	20	0	1	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	849	xxxx	325	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	334	xxxx	721	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	334	xxxx	721	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	343	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	16.2	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	C	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			16.2			xxxxxx		
ApproachLOS:	*			*			C			*		

overall = .39

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 El Campo/Falcon Crest

Average Delay (sec/veh): 13.9 Worst Case Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	1	0	0 0	0	0	0	1 0	0	0	1!	0 0	0	0	0	0 0
Volume Module:																
Base Vol:	1	326		0	0	393		20	6		0	2	0		0	0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	1	326		0	0	393		20	6		0	2	0		0	0
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	1	343		0	0	414		21	6		0	2	0		0	0
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Final Vol.:	1	343		0	0	414		21	6		0	2	0		0	0
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx			6.4	xxxx		6.2	xxxxx	xxxx	xxxxx	
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx			3.5	xxxx		3.3	xxxxx	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	435	xxxx	xxxxx	xxxx	xxxx	xxxxx			769	xxxx		424	xxxx	xxxx	xxxxx	
Potent Cap.:	1136	xxxx	xxxxx	xxxx	xxxx	xxxxx			372	xxxx		634	xxxx	xxxx	xxxxx	
Move Cap.:	1136	xxxx	xxxxx	xxxx	xxxx	xxxxx			372	xxxx		634	xxxx	xxxx	xxxxx	
Level Of Service Module:																
Stopped Del:	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*				
Movement:	LT	- LTR	- RT	LT	- LTR	- RT	LT	- LTR	- RT	LT	- LTR	- RT				
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	415	xxxxx	xxxx	xxxx	xxxxx				
Shrd StpDel:	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	13.9	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx			13.9			xxxxxx						
ApproachLOS:	*			*			B			*						

overall = 0.15

APPENDIX N -

COAST VIEW DRIVE/FALCON CREST DRIVE
INTERSECTION

LEVEL OF SERVICE
CALCULATION WORKSHEETS

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Falcon Crest/Crest View

Average Delay (sec/veh): 8.5 Worst Case Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	3	0	1	0	10	0	0	2	6
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	3	0	1	0	10	0	0	2	6
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
PHF Volume:	0	0	0	4	0	1	0	13	0	0	3	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	4	0	1	0	13	0	0	3	8
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	20	xxxx	7	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	1002	xxxx	1082	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	1002	xxxx	1082	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1021	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	8.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	*	*	*	*	*	*
ApproachDel:	xxxxxx				8.5		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

overall = ~~1.2~~ 1.46

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Falcon Crest/Crest View

Average Delay (sec/veh): 8.4 Worst Case Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 0 0 1			0 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	0	0	1	0	1	0	0	6	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	1	0	1	0	0	6	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
PHF Volume:	0	0	0	0	0	2	0	2	0	0	10	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	2	0	2	0	0	10	5
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	12	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	1074	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	1074	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.4	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			8.4			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

overall = 0.88

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Falcon Crest/Crest View

Average Delay (sec/veh): 8.6 Worst Case Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	8	0	5	1	10	0	0	2	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	8	0	5	1	10	0	0	2	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
PHF Volume:	0	0	0	11	0	7	1	13	0	0	3	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	11	0	7	1	13	0	0	3	11
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	24	xxxx	8	13	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	997	xxxx	1080	1618	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	997	xxxx	1080	1618	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1027	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	8.6	xxxxx	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			8.6			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

overall = 5.56

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Falcon Crest/Crest View

Average Delay (sec/veh): 8.5 Worst Case Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0		0 0 1!	0 0		0 1 0	0 0		0 0 0	1 0	
Volume Module:												
Base Vol:	0	0	0	3	0	4	2	1	0	0	6	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	3	0	4	2	1	0	0	6	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
PHF Volume:	0	0	0	5	0	6	3	2	0	0	10	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	5	0	6	3	2	0	0	10	18
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	26	xxxx	18	27	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	994	xxxx	1066	1600	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	993	xxxx	1066	1600	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1033	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	8.5	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			8.5			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

overall = 2.95

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Falcon Crest/Crest View

Average Delay (sec/veh): 8.5 Worst Case Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	8	0	5	1	10	0	0	2	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	8	0	5	1	10	0	0	2	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	8	0	5	1	11	0	0	2	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	8	0	5	1	11	0	0	2	8
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	19	xxxx	6	11	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	1004	xxxx	1082	1622	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	1003	xxxx	1082	1622	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1032	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	8.5	xxxxx	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				8.5		xxxxxx			xxxxxx		
ApproachLOS:		*			A			*			*	

overall = 5.63

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Falcon Crest/Crest View

Average Delay (sec/veh): 8.5 Worst Case Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	3	0	4	2	1	0	0	6	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	3	0	4	2	1	0	0	6	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	3	0	4	2	1	0	0	6	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	3	0	4	2	1	0	0	6	12
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	17	xxxx	12	18	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	1006	xxxx	1074	1612	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	1005	xxxx	1074	1612	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	1043	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	8.5	xxxxx	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			8.5			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

overall = 2.90

APPENDIX O -

LOS BERROS ROAD/FALCON CREST DRIVE
INTERSECTION

LEVEL OF SERVICE
CALCULATION WORKSHEETS

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Los Berros/Falcon Crest

Average Delay (sec/veh): 10.0 Worst Case Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	1	0	7	3	136	0	0	222	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1	0	7	3	136	0	0	222	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
PHF Volume:	0	0	0	1	0	9	4	174	0	0	285	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	1	0	9	4	174	0	0	285	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	467	xxxx	285	286	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	558	xxxx	759	1288	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	556	xxxx	759	1288	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	726	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			10.0			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

overall = 0.~~3~~28
= 0.28

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Los Berros/Falcon Crest

Average Delay (sec/veh): 10.0 Worst Case Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0		0 0 1!	0 0		1 0 1	0 0		0 0 0	1 0	
Volume Module:												
Base Vol:	0	0	0	1	0	4	3	227	0	0	221	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1	0	4	3	227	0	0	221	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	1	0	4	3	252	0	0	246	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	1	0	4	3	252	0	0	246	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	506	xxxx	247	248	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	530	xxxx	797	1330	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	529	xxxx	797	1330	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	724	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			10.0			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

overall = 0.14

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Los Berros/Falcon Crest

Average Delay (sec/veh): 10.0 Worst Case Level Of Service: A

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0		0		0	1		0		11	4		136		0	0		222		1
Growth Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0		0		0	1		0		11	4		136		0	0		222		1
User Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	0.78		0.78		0.78	0.78		0.78		0.78	0.78		0.78		0.78	0.78		0.78		0.78
PHF Volume:	0		0		0	1		0		14	5		174		0	0		285		1
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
Final Vol.:	0		0		0	1		0		14	5		174		0	0		285		1
Critical Gap Module:																				
Critical Gp:	xxxxx		xxxx		xxxxx	6.4		xxxx		6.2	4.1		xxxx		xxxxx	xxxxx		xxxx		xxxxx
FollowUpTim:	xxxxx		xxxx		xxxxx	3.5		xxxx		3.3	2.2		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Capacity Module:																				
Cnflict Vol:	xxxx		xxxx		xxxxx	470		xxxx		285	286		xxxx		xxxxx	xxxx		xxxx		xxxxx
Potent Cap.:	xxxx		xxxx		xxxxx	556		xxxx		759	1288		xxxx		xxxxx	xxxx		xxxx		xxxxx
Move Cap.:	xxxx		xxxx		xxxxx	554		xxxx		759	1288		xxxx		xxxxx	xxxx		xxxx		xxxxx
Level Of Service Module:																				
Stopped Del:	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	7.8		xxxx		xxxxx	xxxxx		xxxx		xxxxx
LOS by Move:	*		*		*	*		*		*	A		*		*	*		*		*
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx		xxxx		xxxxx	xxxx		736		xxxxx	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Shrd StpDel:	xxxxx		xxxx		xxxxx	xxxxx		10.0		xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Shared LOS:	*		*		*	*		A		*	*		*		*	*		*		*
ApproachDel:	xxxxxx					10.0					xxxxxx					xxxxxx				
ApproachLOS:	*					A					*					*				

overall = 0.39

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Los Berros/Falcon Crest

Average Delay (sec/veh): 9.9 Worst Case Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	1	0	7	5	227	0	0	221	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1	0	7	5	227	0	0	221	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	1	0	8	6	252	0	0	246	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	1	0	8	6	252	0	0	246	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	510	xxxx	247	248	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	527	xxxx	797	1330	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	525	xxxx	797	1330	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	749	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	*	*	*	*	*	*
ApproachDel:	xxxxxx				9.9		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

overall = 0.26

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Los Berros/Falcon Crest

Average Delay (sec/veh): 16.0 Worst Case Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	1	0	11	4	480	0	0	787	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1	0	11	4	480	0	0	787	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	1	0	12	4	505	0	0	828	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	1	0	12	4	505	0	0	828	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1343	xxxx	829	829	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	169	xxxx	374	811	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	169	xxxx	374	811	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	339	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	16.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	C	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			16.0			xxxxxx			xxxxxx		
ApproachLOS:	*			C			*			*		

overall = 0.18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Los Berros/Falcon Crest

Average Delay (sec/veh): 17.9 Worst Case Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	1	0	7	5	796	0	0	777	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1	0	7	5	796	0	0	777	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	1	0	7	5	838	0	0	818	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	1	0	7	5	838	0	0	818	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1667	xxxx	819	820	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	107	xxxx	379	818	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	107	xxxx	379	818	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	287	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	17.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	C	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			17.9			xxxxxx			xxxxxx		
ApproachLOS:	*			C			*			*		

overall = 0.11

- **Associated Transportation Engineers, August 2004**

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TRAFFIC ANALYSIS ALTERNATIVE ACCESS FOR TENTATIVE TRACT MAP 1789 - ARROYO GRANDE, CALIFORNIA

Tentative Tract Map 1789 is in the San Luis Obispo County area immediately adjacent to the City of Arroyo Grande. The initial processing and traffic study was based upon the project taking access from Coast View Drive to El Campo Road. The primary connection to the regional road system would be via the El Campo Road/Route 101 at grade intersection. Emergency access would be provided to Orchard Street in Arroyo Grande. The City of Arroyo Grande has challenged the EIR for the project on the basis of safety concerns at the El Campo Road/Route 101 intersection. During the processing period, the Lucia Mar School District completed construction of the Nipomo High School and began to assign current and future students from the Arroyo Grande High School to the Nipomo facility. The effect of this action is a reduction in student enrollment at the Arroyo Grande High School.

The project site is located at the end of a street in Tract 2207 which connects to Orchard Street in the southeastern section of the City of Arroyo Grande east of the Arroyo Grande High School. The study provides information related to the changing of the access for the project to address the City of Arroyo Grande's challenge of the EIR for the following scenarios Year 2002, Year 2002 + project taking into consideration the reduction of enrollment at the Arroyo Grande High School.

PROJECT DESCRIPTION

J.H. Land Partnership is proposing to modify the access shown on Vesting Tentative Tract Map No. 1789 to have the primary access by extending Orchard Street towards Coast View Drive with an emergency access connection to Coast View Drive. Tentative Tract 1789 is for the creation of 16 single-family lots. The existing street system and project location is shown on Figure 1. Regional

access would be provided to Route 101 via the Fair Oaks Avenue -Traffic Way and Grand Avenue. Orchard Street presently serves the Lucia Mar School District administrative offices, the Arroyo Grande High School and residential uses in the immediate vicinity. This access plan would remove the project traffic from the El Campo Road leg of the El Campo Road/Route 101 intersection thus eliminate the safety concerns raised by the City of Arroyo Grande.

EXISTING CONDITIONS

Street Network

The circulation system adjacent to the project site is comprised of Route 101, Fair Oaks Avenue, Orchard Street, California Street and West Cherry Avenue which serve as the major arterials for the area, collector and local streets, as illustrated in Figure 1. The following text provides a brief discussion of the primary components of the study-area street network.

Route 101, located directly north of the project site, is a multi-lane freeway serving the Pacific Coast between Los Angeles and San Francisco. Primary access from Route 101 in the vicinity of the project site is provided via the Fair Oaks Avenue southbound off-ramp on the westside and the Traffic Way on/off-ramps on the eastside. The Route 101/Fair Oaks Avenue southbound off-ramp/Orchard Street intersection is all-way STOP controlled.

Fair Oaks Avenue, located north of the project site, is an east-west arterial roadway within the study-area. Fair Oaks Avenue extends east from Elm Street across Route 101 to Traffic Way. In the study-area the Fair Oaks Avenue is a 4-lane roadway.

Orchard Street, located directly west of the site, is a 2-lane north-south residential roadway. Orchard Street extends from Fair Oaks Avenue through to West Cherry Avenue. Orchard Street currently provides direct access to the Lucia Mar School District administrative offices and the Arroyo Grande High School. Orchard Street will also provide direct access to the project site via a collector street connection.

California Street, located directly west of the site, is a 2-lane north-south residential roadway. California Street extends north from West Cherry Avenue to Fair Oaks Avenue. California Avenue also provides direct access to the Lucia Mar School District administrative offices and the Arroyo Grande High School.

West Cherry Avenue, located directly north of the site, is a 2-lane east-west residential roadway. West Cherry Avenue extends east from California Street to Route 101 terminating in a cul-de-sac.

Intersections Operations

The operational characteristics of the study-area roadways are analyzed based on a set of standard roadway design capacities which are summarized in the Technical Appendix. In rating a roadway's operating condition, "Levels of Service" (LOS) "A" through "F" are used. LOS "A" and LOS "B" represent primarily free-flow operations. LOS "C" represents stable conditions, LOS "D" nears

unstable operations with restrictions on maneuverability within traffic streams, LOS "E" represents unstable operations with maneuverability very limited, and LOS "F" represents breakdown or forced flow conditions. LOS "C" is considered acceptable for rural County roadways.

ATE assessed the operations of three study-area intersections based on Year 2002 traffic counts obtained from Caltrans. The Year 2002 traffic counts include traffic generated by the Arroyo Grande High School for the 2002-2003 academic school year. According to the Lucia Mar Unified School District, the Arroyo Grande High School student enrollment for Year 2002-2003 was 3,200. The current student enrollment at the Arroyo Grande High School is 2,200 students. Year 2002 levels of service for the study-area intersections were calculated using the Highway Capacity Manual unsignalized methodology. Worksheets illustrating the level of service calculations are contained in the Technical Appendix for reference. Table 1 lists the existing intersection level of service for the three study-area intersections. Figure 2 illustrates the Year 2002 A.M. peak hour traffic volumes.

Table 1
Year 2002 A.M. Peak Hour Intersection Operations

Intersection	Control	A.M. Peak Hour Delay-LOS
Route 101 SB Off-Ramp/Fair Oaks Avenue	STOP-sign	20.3 sec. - LOS C
Fair Oaks Avenue/California Street	STOP-sign	0.8 sec. - LOS A
Orchard Street/West Cherry Avenue	STOP-sign	9.3 sec. - LOS A

The data presented in Table 1 indicates that the study-area intersections operated in the LOS "A"-"C" range during the Year 2002 A.M. peak hour period.

ARROYO GRANDE IMPACT THRESHOLDS

The addition of project traffic, or project plus cumulative traffic to an unsignalized intersection increases the level of service to an unacceptable level (less than LOS "C". Level of Service shall be determined by the Highway Capacity Manual. Mitigation measures are required for roadway and intersection facilities which would operate at less than LOS "C".

PROJECT-GENERATED TRAFFIC

Project Trip Generation

Weekday average daily, A.M. and P.M. peak hour trip generation was developed for Tentative Tract Map 1789 based on rates published in the Institute of Transportation Engineers (ITE), Trip Generation, 7th Edition.

Table
Project Trip Generation

Land Use	Size	ADT	A.M. Peak Hour			P.M. Peak Hour		
			Enter	Exit	Total	Enter	Exit	Total
Single Family Residential	16 D.U.'s	153	3	9	12	10	6	16

Table 2 summarizes the trip generation for the 16 single-family lot development. It's estimated that the residential project will generate 153 average daily, 12 A.M. peak hour and 16 P.M. peak hour trips.

Project Trip Distribution and Assignment

Trip distribution for the project was developed for the project based on travel data derived from existing traffic volumes, as well as a general knowledge of the population, employment and commercial centers in the Arroyo Grande and Five Cities area. Figure 3 illustrates the trip distribution and assignment of project-generated A.M. peak hour traffic volumes. Since the peak traffic volumes in the study-area occur during the A.M. peak hour period the project analysis focused on only on the A.M. peak hour period.

POTENTIAL TRAFFIC IMPACTS

Intersection. Intersection analyses for the Year 2002 + project traffic volumes are listed in Table 3. Year 2002 + project peak day traffic volumes are illustrated in Figure 4.

Table 3
Year 2002 + Project A.M. Peak Hour Intersection Operations

Intersection	A.M. Peak Hour		Impact
	Year 2002	Year 2002 + Project	
	Delay-LOS	Delay-LOS	
Route 101 SB Off-Ramp/Fair Oaks Avenue	20.3 sec. - LOS C	20.6 sec. - LOS C	No
Fair Oaks Avenue/California Street	0.8 sec. - LOS A	0.8 sec. - LOS A	No
Orchard Street/West Cherry Avenue	9.3 sec. - LOS A	9.3 sec. - LOS A	No

The data in Table 3 shows that based on Year 2002 traffic volumes with the addition of project-generated traffic to the study-area intersection, the project would not significantly impact the intersections, as they would continue to operate in the LOS "A"-"C" range.

FUTURE YEAR TRAFFIC ANALYSIS

Given the current trip reductions related to the reassigning of students from Arroyo Grande High School to the new Nipomo High School, the study-area intersections currently operate at a better LOS than in Year 2002. The net addition of 12 A.M. peak hour and 16 P.M. peak hour trips through the study-area does not significantly affect the roadway and intersection operations and would not return the LOS to the level experienced prior to the opening of the Nipomo High School. The study-area roadways and intersections are expected to operate well within the City's LOS standard with the addition of project traffic.

Associated Transportation Engineers

Richard L. Pool, P.E.
President

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. POOL
No. 18,090
Expires 6/30/05
CIVIL
STATE OF CALIFORNIA

RLP/DFN

Attachments:

■ ■ ■

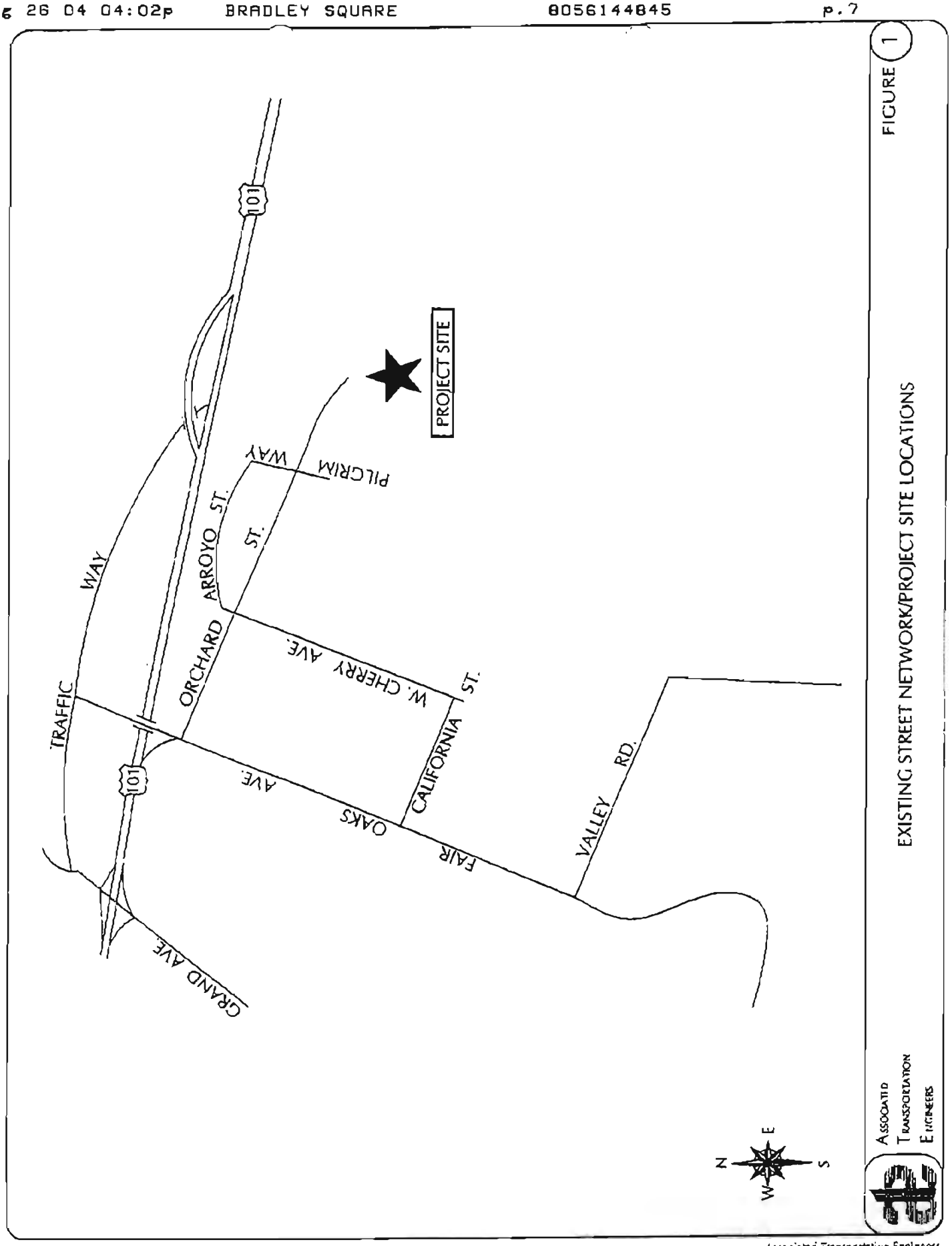


FIGURE 1

EXISTING STREET NETWORK/PROJECT SITE LOCATIONS

Associated Transportation Engineers

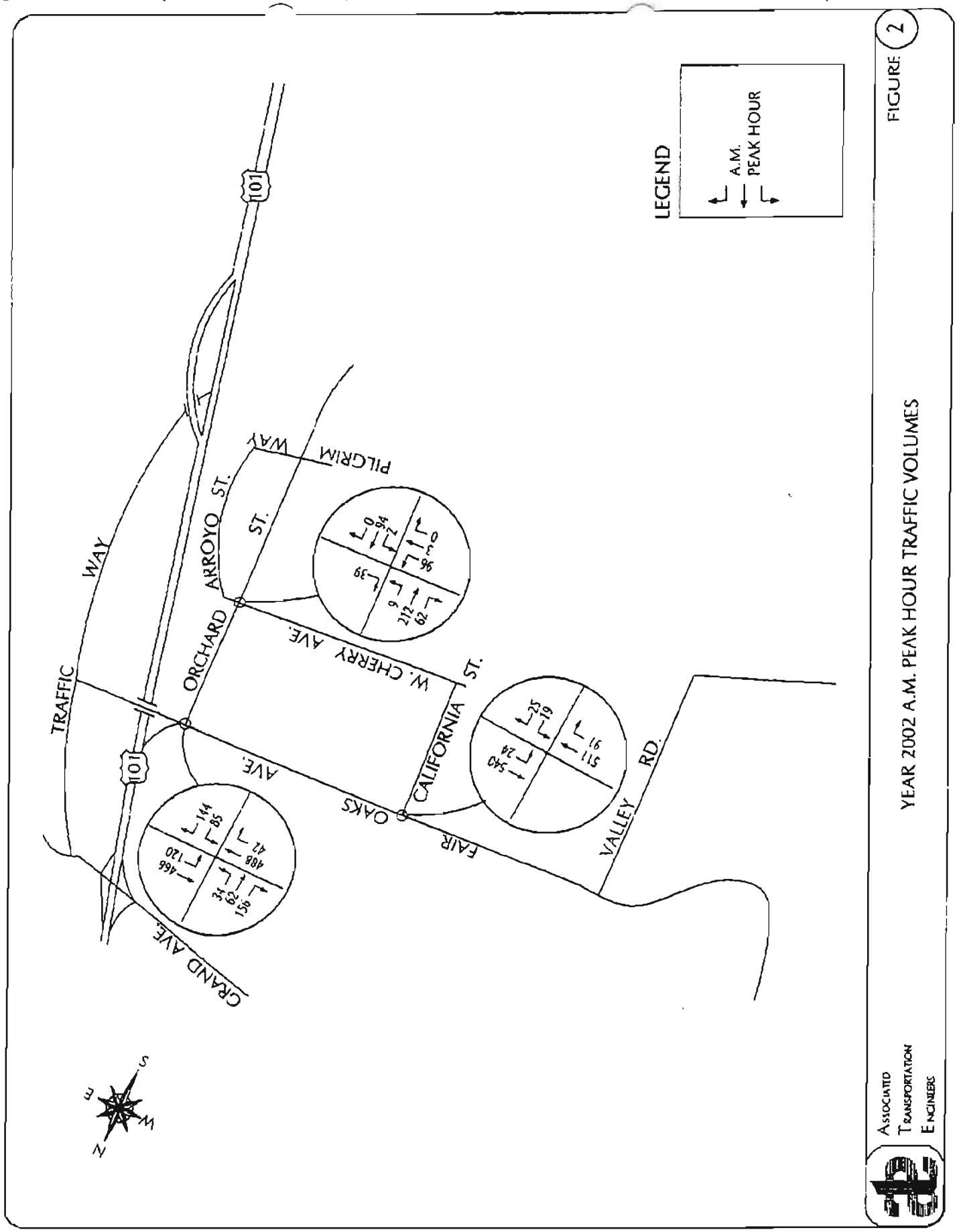


FIGURE 2

YEAR 2002 A.M. PEAK HOUR TRAFFIC VOLUMES

Associated Transportation Engineers

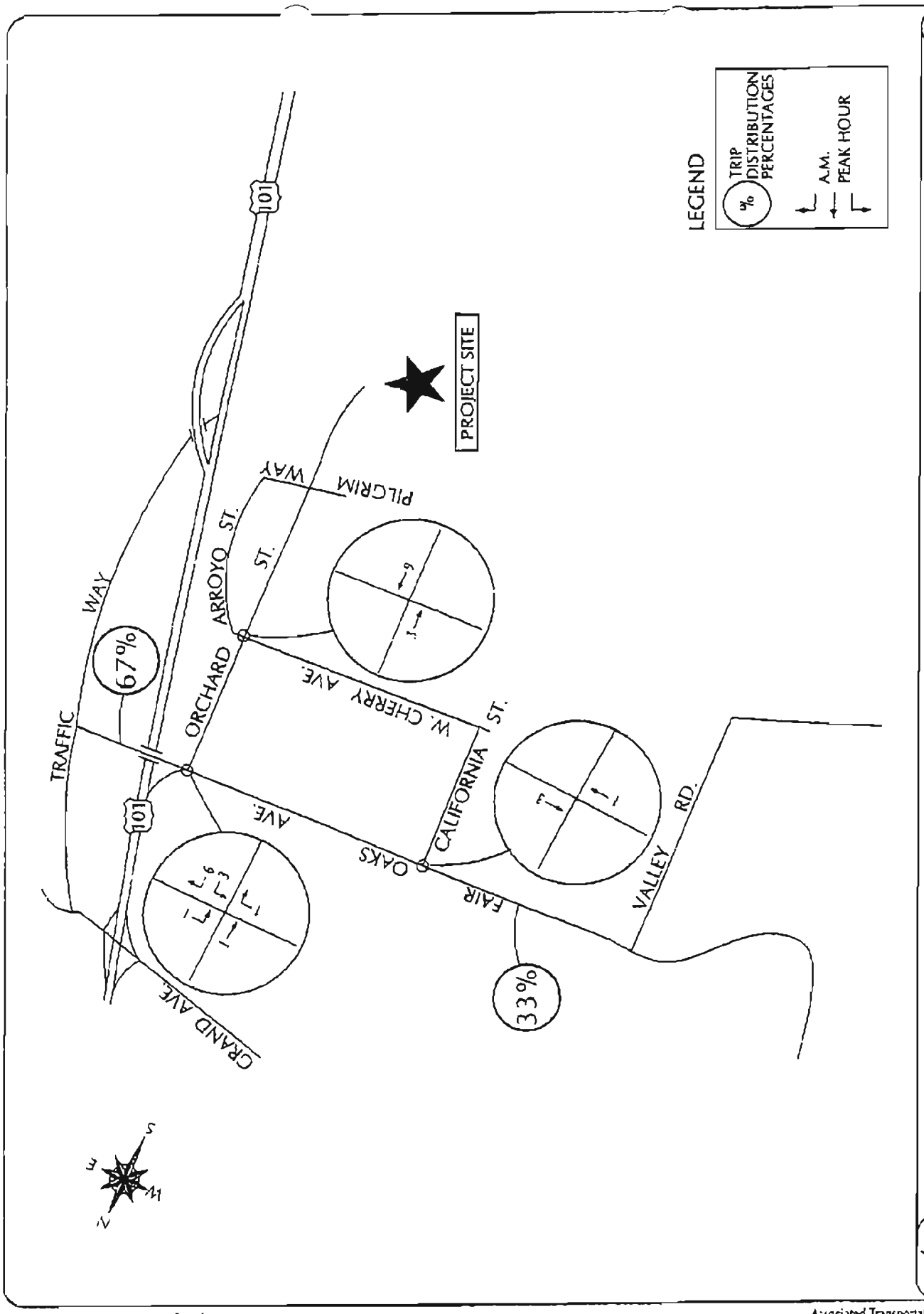


FIGURE 3

PROJECT A.M. PEAK HOUR TRAFFIC VOLUMES

Associated Transportation Engineers

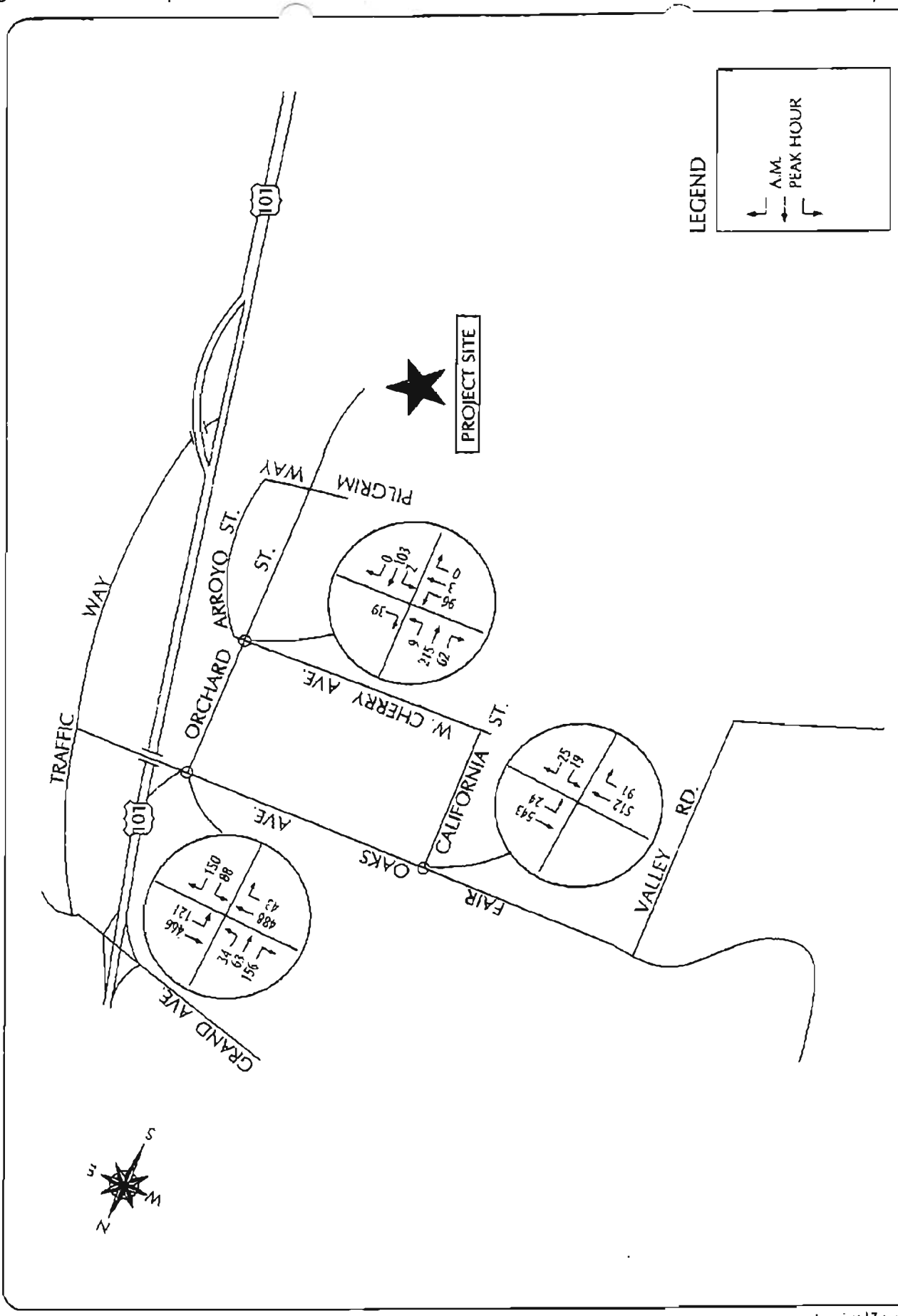


FIGURE 4

YEAR 2002 + PROJECT A.M. PEAK HOUR TRAFFIC VOLUMES

Associated Transportation Engineers

Year 2002 A.M. Peak Hour
3: U.S. Highway 101 SB Off-Ramp & Fair Oaks Avenue

Tentative Tract Map 1789
8/16/2004

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	34	62	156	85	0	144	0	488	42	120	466	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	37	67	170	92	0	157	0	530	46	130	507	0

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	37	237	92	157	354	222	299	338
Volume Left (vph)	37	0	92	0	0	0	130	0
Volume Right (vph)	0	170	0	157	0	46	0	0
Hadj (s)	0.53	-0.47	-0.63	-0.67	-0.03	0.11	-0.25	-0.03
Departure Headway (s)	8.7	7.7	8.8	7.6	7.5	7.3	7.6	7.4
Degree Utilization, x	0.09	0.51	0.23	0.33	0.73	0.45	0.63	0.69
Capacity (veh/h)	391	439	388	449	471	479	455	474
Control Delay (s)	14.2	16.1	13.1	14.3	27.0	15.0	21.5	24.1
Approach Delay (s)	16.4		13.1		22.4		22.9	
Approach LOS	C		B		C		C	C

Intersection Summary	
Delay	20.9
HCM Level of Service	C
Intersection Capacity Utilization	62.1% ICU Level of Service B
Analysis Period (min)	15

Year 2002 + Project A.M. Peak Hour
3: U.S. Highway 101 SB Off-Ramp & Fair Oaks Avenue

Tentative Tract Map 1789
8/16/2004

Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	34	63	156	88	0	150	0	486	43	121	466	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	37	68	170	96	0	163	0	530	47	132	507	0
Volume Total (vph)	37	238	96	163	354	224	300	338				
Volume Left (vph)	37	0	0	0	0	0	0	0				
Volume Right (vph)	0	170	0	163	0	47	0	0				
Hadj (s)	0.53	-0.48	0.53	-0.07	-0.03	-0.11	-0.25	-0.02				
Departure Headway (s)	8.7	7.7	8.8	7.6	7.5	7.4	7.6	7.4				
Degree Utilization, x	0.09	0.51	0.23	0.34	0.74	0.46	0.55	0.70				
Capacity (veh/h)	389	436	387	448	468	476	452	471				
Control Delay (s)	11.4	17.4	13.6	13.3	22.5	21.9	23.9	25.5				
Approach Delay (s)	16.6		13.3		22.8		23.3					
Approach LOS	C		B		C		C					

Delay	20.6
HCM Level of Service	C
Intersection Capacity Utilization	62.4% ICU Level of Service B
Analysis Period (min)	15

Year 2002 A.M. Peak Hour
5: California Street & Fair Oaks Avenue

Tentative Tract Map 1789
8/16/2004

Lane Configurations						
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Volume (veh/h)	19	25	513	91	24	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	27	558	99	26	43
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	951	327			654	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	951	327			654	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	96			97	
cM capacity (veh/h)	251	669			929	

Volume Total	48	370	284	222	69
Volume Left	21	0	0	26	0
Volume Right	27	0	99	0	43
cSH	389	1700	1700	929	1700
Volume to Capacity	0.12	0.22	0.17	0.03	0.03
Queue Length 95th (ft)	10	0	0	2	0
Control Delay (s)	15.6	0.0	0.0	3.1	0.0
Lane LOS	C			A	
Approach Delay (s)	15.6	0.0		1.05	
Approach LOS	C				

Average Delay	0.8
Intersection Capacity Utilization	42.6% ICU Level of Service A
Analysis Period (min)	15

Year 2002 + Project A.M. Peak Hour
5: California Street & Fair Oaks Avenue

Tentative Tract Map 1789
8/16/2004

Lane Configurations						
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Volume (veh/h)	19	25	512	31	624	543
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	27	557	33	678	590
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	953	328			655	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	953	328			655	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	96			97	
cM capacity (veh/h)	250	668			928	

Volume Total	48	37	284	339	393
Volume Left	21	0	0	26	0
Volume Right	27	0	557	0	590
cSH	388	1700	1700	928	1700
Volume to Capacity	0.12	0.02	0.17	0.03	0.23
Queue Length 95th (ft)	10	0	0	2	0
Control Delay (s)	15.6	0.0	0.0	3.3	0.0
Lane LOS	C			A	
Approach Delay (s)	15.6	0.0		0.5	
Approach LOS	C				

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

Year 2002 A.M. Peak Hour
8: Orchard Avenue & West Cherry Avenue

Tentative Tract Map 1789
8/16/2004

Lane Configurations												
Sign Control		Stop				Stop			Stop			Stop
Volume (vph)	9	212	62	2	94	0	96	3	0	0	0	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	230	67	2	102	0	104	3	0	0	0	42

Volume Total (vph)	308	104	108	42
Volume Left (vph)	10	2	104	0
Volume Right (vph)	67	0	0	42
Hadj (s)	-0.09	-0.04	-0.24	-0.57
Departure Headway (s)	4.3	4.7	5.1	4.4
Degree Utilization, x	0.37	0.14	0.15	0.05
Capacity (veh/h)	807	727	650	723
Control Delay (s)	9.8	8.4	9.1	7.7
Approach Delay (s)	9.8	8.4	9.1	7.7
Approach LOS	A	A	A	A

Delay		9.3	
HCM Level of Service		A	
Intersection Capacity Utilization	38.4%	ICU Level of Service	A
Analysis Period (min)		15	

Year 2002 + Project A.M. Peak Hour
8: Orchard Avenue & West Cherry Avenue

Tentative Tract Map 1789
8/16/2004

Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	215	62	2	103	0	96	3	0	0	0	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	234	67	2	112	0	104	3	0	0	0	42
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	311	114	108	42								
Volume Left (vph)	10	2	104	0								
Volume Right (vph)	67	0	0	42								
Hd (s)	0.09	0.04	0.23	0.07								
Departure Headway (s)	4.3	4.7	5.2	4.5								
Degree Utilization, x	0.37	0.15	0.15	0.09								
Capacity (veh/h)	804	727	645	716								
Control Delay (s)	9.9	8.5	9.1	7.7								
Approach Delay (s)	9.9	8.5	9.1	7.7								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			9.3									
HCM Level of Service			A									
Intersection Capacity Utilization			38.7%		ICU Level of Service						A	
Analysis Period (min)			15									

APPENDIX E

- **Air Quality Tables 1 through 3**
- **Construction Emission Calculations**

- **Air Quality Tables 1 through 3**

Table 1
Ambient Air Quality Standards

POLLUTANT	AVERAGING TIME	CALIFORNIA STANDARDS[1]	NATIONAL STANDARDS[2]	
		CONCENTRATION[3]	PRIMARY[3,4]	Secondary[3,5]
OZONE (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	0.12 ppm (235 µg/m^3)[6]	Same as Primary Standard
	8 Hour	-----	0.08 ppm (157 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	
RESPIRABLE PARTICULATE MATTER (PM_{10})	Annual geometric mean	30 µg/m^3	-----	
	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	-----	0.053 ppm (100 µg/m^3)	Same as Primary Standard
	1 Hour	0.25 ppm (470 µg/m^3)	-----	
LEAD	30 day average	1.5 µg/m^3	-----	-----
	Calendar quarter	-----	1.5 µg/m^3	Same as Primary Standard
SULFUR DIOXIDE (SO_2)	Annual arithmetic mean	-----	0.030 ppm (80 µg/m^3)	-----
	24 Hour	0.04 PPM (105 µg/m^3)	0.14 PPM (365 µg/m^3)	-----
	3 Hour	-----	-----	0.5 ppm (1300 µg/m^3)
	1 Hour	0.25 PPM (655 µg/m^3)	-----	-----
VISIBILITY REDUCING PARTICLES	8 Hour (10 am to 6 pm, PST)	In sufficient amount to produce an extinction coefficient of 0.23 per kilometer – visibility of ten miles or more due to particles when the relative humidity is less than 70 percent.	No National Standards	
SULFATES	24 Hour	25 µg/m^3		
HUDROGEN SULFIDE	1 Hour	0.03 PPM (42 µg/m^3)		

NOTES:

1. California standards for ozone, carbon monoxide, sulfur dioxide (1- and 24-hour), nitrogen dioxide, respirable particulate matter (PM_{10}), and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded.

2. National standards, other than ozone, fine particulate matter (PM2.5), and those based on annual averages or annual arithmetic mean, are not to be exceeded more than once a year. The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM2.5 the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national Policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar). Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

5. National Secondary Standards: The levels of quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

6. New national 8-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18, 1997. The national 1-hour ozone standard continues to apply in areas that violated the standard. Contact U.S. EPA for further clarification and current national policies.

Source: San Luis Obispo County Air Pollution Control District, Clean Air Plan, December 2001

Table 2
San Luis Obispo APCD
Maximum Pollutant Concentrations Measured
In San Luis Obispo County from 1993-1999

Pollutant/ Monitoring Station	Averaging Time	Units of Measure	1993	1994	1995	1996	1996	1997	1998	1999
Ozone (O_3)										
San Luis Obispo	1-hour	ppm	0.08	0.09	0.07	0.08	0.08	0.07	0.07	0.09
Nipomo	1-hour	ppm	0.09	0.10	0.09	0.07	0.07	**	**	0.09
Grover Beach	1-hour	ppm	0.11	0.08	0.07	0.08	0.08	0.07	0.07	0.09
Morro Bay	1-hour	ppm	0.09	0.09	0.10	0.11	0.14	0.08	0.07	0.10
Paso Robles	1-hour	ppm	0.09	0.09	0.10	0.11	0.14	0.08	0.13	0.10
Atascadero	1-hour	ppm	0.10	0.10	0.10	0.10	0.10	0.09	0.10	0.09
Carbon Monoxide (CO)										
San Luis Obispo	1-hour	ppm	8.0	9.0	6.0	5.7	5.0	7.4	4.0	5.0
	8-hour	ppm	3.1	3.2	3.2	3.1	2.9	2.6	2.3	3.1
Nitrogen Dioxide (NO_2)										
San Luis Obispo	1-hour	ppm	0.06	0.1	0.07	0.07	0.06	0.07	0.06	0.06
	Annual	ppm	0.013	0.010	0.014	0.013	0.013	0.014	0.012	0.013
Nipomo	1-hour	ppm	0.04	0.10	0.05	0.06	0.04*	**	0.04	0.07
	Annual	ppm	0.010	0.010	0.010	0.008	0.008	**	0.008	0.007
Grover Beach	1-hour	ppm	0.05	0.10	0.05	0.04	0.05	0.04	0.05	0.05
	Annual	ppm	0.007	0.010	0.010	0.007	0.007	0.008	0.007	0.008
SLO-Lewis Lane	1-hour	ppm	0.03	0.10	0.04	0.02*	**	**	**	**
	Annual	ppm	0.006	0.010	0.000	0.003	**	**	**	**
Atascadero	1-hour	ppm	0.06	0.10	0.07	0.06	0.06	0.07	0.06	0.07
	Annual	ppm	0.015	0.010	0.010	0.012	0.012	0.012	0.111	0.0113
Sulfur Dioxide (SO_2)										
Nipomo	1-hour	ppm	0.04	0.03	0.03	0.024	0.031	**	**	**
	24-hour	ppm	0.010	0.010	0.01	0.004	0.005	**	**	**
	Annual	ppm	0.000	0.000	0.000	0.001	0.001*	**	**	**
Grover Beach	1-hour	ppm	0.03	0.04	0.03	0.04	0.05	0.04	0.02	0.04
	24-hour	ppm	0.004	0.010	0.020	0.004	0.005	0.006	0.004	0.005
	Annual	ppm	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001
Morro Bay	1-hour	ppm	0.01	0.01	0.01	0.038	**	**	**	**
	24-hour	ppm	0.000	0.000	0.000	0.005	**	**	**	**
	Annual	ppm	0.000	0.000	0.000	0.000	**	**	**	**

Pollutant/ Monitoring Station	Averaging Time	Units of Measure	1993	1994	1995	1996	1996	1997	1998	1999
SLO-Lewis Lane	1-hour	ppm	0.020	0.020	0.020	0.010	**	**	**	**
	24-hour	ppm	0.004	0.010	0.000	0.000*	**	**	**	**
	Annual	ppm	0.000	0.000	0.000	0.000*	**	**	**	**
Nipomo Mesa	1-hour	ppm	0.170	0.140	**	**	**	**	**	**
	24-hour	ppm	0.017	0.020	**	**	**	**	**	**
	annual	ppm	0.003	0.000	**	**	**	**	**	**
PM_{10}										
San Luis Obispo	24-hour	$\mu g/m^3$	36*	57	37	51	39	55	32	44
	annual	$\mu g/m^3$	18.8*	19.1	19.1	17.6	15.2	17.2	16.0	17.6
Atascadero	24-hour	$\mu g/m^3$	44*	78*	44	52	44	70	47	43
	annual	$\mu g/m^3$	22.3*	20.7*	21.1	20.8	16.1	18.7	16.3	19.4
Nipomo	24-hour	$\mu g/m^3$	46	59*	52	62	48	**	**	72
	annual	$\mu g/m^3$	22.9	19.2*	20.8	17.0	18.1*	**	**	22.3
Morro Bay	24-hour	$\mu g/m^3$	38	64	48*	40	42	57	33	39
	annual	$\mu g/m^3$	17.8	18.6	18.3*	17.5	15.8	18.2	14.6	15.6
Paso Robles	24-hour	$\mu g/m^3$	53*	54*	30*	56	46	75	55	58
	annual	$\mu g/m^3$	22.8*	16.3*	19.5*	18.7	17.4	19.0	17.4	22.7

Notes: -- Indicates data not available

** Data are valid but incomplete and may not be representative*

*** Monitoring Terminated;*

++ Annual arithmetic man for SO_2 and NO_2, Annual geometric mean for TSP and PM_{10}

Source: San Luis Obispo County Air Pollution Control District, Clean Air Plan, December 2001

Table 3
San Luis Obispo APCD 1991 Reference Year
Annual Emissions Inventory Summary (tons per year) Revised 12-26-00

SOURCES	TOG	ROG	CO	NO_X	SO_2	PM	PM_{10}
STATIONARY SOURCES							
FUEL COMBUSION							
Electric Utilities	166.04	83.95	1,262.63	3,453.35	123.10	129.34	126.59
Cogeneration	3.00	0.33	23.60	42.32	0.00	0.00	0.00
Oil and Gas Production	20.51	4.75	130.16	166.96	6.12	3.11	3.11
Petroleum Refining	20.74	10.16	108.51	139.50	761.57	9.59	9.59
Manufacturing and Industrial	17.69	3.73	98.58	164.41	2.90	2.91	2.89
Food and Agriculture Processing	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Services and Commercial	49.62	21.27	68.08	246.87	4.18	7.28	6.96
Fuel Combustion Subtotal	*277.60*	*124.19*	*1,691.56*	*4,213.41*	*897.87*	*152.23*	*149.14*
WASTE DISPOSAL							
Sewage Treatment	0.95	0.71	0.00	0.00	0.00	0.00	0.00
Landfills	6,501.91	10.34	0.00	0.00	0.00	0.00	0.00
Incinerators	0.01	0.01	0.17	0.22	0.10	0.21	0.21
Soil Remediation	1.10	1.10	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waste Disposal Subtotal	*6,503.97*	*12.16*	*0.17*	*0.22*	*0.10*	*0.21*	*0.21*
CLEANING AND SURFACE COATING							
Laundering and Dry Cleaning	6.91	6.91	0.00	0.00	0.00	0.00	0.00
Degreasing	186.94	128.82	0.00	0.00	0.00	0.00	0.00
Coatings and Related Proc. Solvents	477.57	439.39	0.00	0.00	0.00	2.39	2.29
Printing	28.13	28.13	0.00	0.00	0.00	0.00	0.00
Other	142.11	125.74	0.00	0.00	0.00	0.00	0.00
Cleaning/Surface Coating Subtotal	*841.66*	*728.99*	*0.00*	*0.00*	*0.00*	*2.39*	*2.29*
PETROLEUM PRODUCTION AND MARKETING							
Oil and Gas Production	147.63	78.11	0.00	0.00	0.00	0.00	0.00
Petroleum Refining	291.58	237.39	9.13	37.51	4,083.96	20.01	12.46
Petroleum Marketing	458.35	425.17	0.00	0.00	0.00	83.53	41.77
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Petroleum Prod. And Mark. Subtotal	*897.56*	*740.67*	*9.13*	*37.51*	*4,083.96*	*103.54*	*54.23*
INDUSTRIAL PROCESSES							
Chemical	18.37	15.22	0.00	0.00	0.00	0.00	0.00
Food and Agriculture	31.03	31.03	0.00	0.00	0.00	38.94	21.51
Mineral Processes	0.12	0.05	1.77	4.56	2.94	202.01	61.64
Metal Processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wood and Paper	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Glass and Related	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electronics	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.50	0.25
Industrial Processes Subtotal	*49.52*	*46.30*	*1.77*	*4.56*	*2.94*	*241.45*	*83.40*
TOTAL STATIONARY SOURCES	**8,570.31**	**1,652.31**	**1,702.63**	**4,255.70**	**4,984.87**	**499.82**	**289.27**
AREA-WIDE SOURCES							

SOURCES	TOG	ROG	CO	NO_X	SO_2	PM	PM_{10}
SOLVENT EVAPORATION							
Consumer Products	1,033.14	860.67	0.00	0.00	0.00	0.00	0.00
Arch. Coatings/Related Proc. Solv.	271.20	254.77	0.00	0.00	0.00	0.00	0.00
Pesticides/Fertilizers	284.34	284.34	0.00	0.00	0.00	0.00	0.00
Asphalt Paving	84.32	84.32	0.00	0.00	0.00	0.00	0.00
Refrigerants	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solvent Evaporation Subtotal	*1,673.00*	*1,484.10*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
MISCELLANEOUS PROCESSES							
Residential Fuel Combustion	508.45	223.02	3,488.56	186.94	9.86	528.03	494.08
Farming Operations	0.00	0.00	0.00	0.00	0.00	1,436.28	652.62
Construction and Demolition	0.00	0.00	0.00	0.00	0.00	2,379.80	1,163.99
Paved Road Dust	0.00	0.00	0.00	0.00	0.00	2,879.49	1,316.19
Unpaved Road Dust	0.00	0.00	0.00	0.00	0.00	5,378.28	3,195.94
Fugitive Wind Blown Dust	0.00	0.00	0.00	0.00	0.00	1,258.16	584.37
Fires	1.83	1.46	16.79	0.37	0.00	2.19	2.19
Waste Burning and Disposal	1,604.18	734.38	8,310.32	5.84	1.10	1,144.28	1,124.57
Other	12.41	8.76	0.00	0.00	0.00	36.87	25.92
Miscellaneous *Processes Subtotal*	*2,126.87*	*967.62*	*11,815.67*	*193.15*	*10.96*	*15,043.38*	*8,559.87*
TOTAL AREA-WIDE SOURCES	**3,799.87**	**2,451.72**	**11,815.67**	**193.15**	**10.96**	**15,043.38**	**8,559.87**
MOBILE SOURCES							
ON-ROAD MOTOR VEHICLES							
Light Duty Passenger	4,961.45	4,565.42	34,547.55	2,611.21	93.08	54.39	52.93
Light Duty Trucks	2,119.92	1,926.11	23,111.44	1,787.41	50.74	40.88	39.42
Medium Duty Trucks	798.99	723.43	8,585.90	496.04	20.44	10.95	10.95
Light Heavy Duty Gas Trucks	582.91	531.08	8,234.04	419.02	5.84	1.83	1.83
Medium Heavy Duty Gas Trucks	420.12	379.97	6,489.46	265.72	2.56	0.37	0.37
Heavy Heavy Duty Gas Trucks	157.32	141.26	2,829.12	80.30	1.10	0.00	0.00
Light Heavy Duty Diesel Tricks	4.75	4.38	14.24	58.40	13.14	3.29	3.29
Medium Heavy Duty Diesel Trucks	10.59	9.49	67.16	251.49	35.04	14.60	14.60
Heavy Heavy Duty Diesel Trucks	125.20	109.87	533.63	1,199.76	190.53	81.40	81.40
Motorcycle	227.40	215.35	784.39	22.63	0.37	1.10	1.10
Heavy Duty Diesel Urban Buses	2.56	2.19	13.87	50.37	8.40	1.10	1.10
Heavy Duty Gas Urban Buses	6.94	5.84	144.18	6.94	0.00	0.00	0.00
School Buses	17.52	15.70	379.60	57.31	5.11	1.46	1.46
Motor Homes	40.88	35.41	684.38	63.88	1.46	0.37	0.37
On-*Road Motor Vehicle Subtotal*	*9,476.55*	*8,665.50*	*86,418.96*	*7,370.48*	*427.81*	*211.74*	*208.82*
OTHER MOBILE SOURCES							
Aircraft	154.03	137.24	1,723.17	24.46	3.29	0.00	0.00
Trains	26.65	23.36	85.05	785.48	31.39	19.35	19.35
Ships and Commercial Boats	28.11	24.82	83.59	342.74	46.72	27.74	27.74
Recreational Boats	743.14	716.86	3,456.19	86.51	2.56	33.95	30.66
Off-Road Recreational Vehicles	99.28	88.33	682.92	10.95	1.46	1.10	1.10
Off-Road Equipment	582.54	533.63	5,310.75	1,584.10	137.61	114.61	114.61
Farm Equipment	210.97	186.52	1,318.02	1,512.93	147.83	103.66	103.66
Other *Mobile Sources Subtotal*	*1,844.72*	*1,710.76*	*12,659.69*	*4,347.17*	*370.86*	*300.41*	*297.12*
TOTAL MOBILE SOURCES	**11,321.27**	**10,376.26**	**99,078.65**	**11,717.65**	**798.67**	**512.15**	**505.94**
TOTAL ALL SOURCES	**23,691.45**	**14,480.29**	**112,596.95**	**16,166.50**	**5,794.50**	**16,055.35**	**9,355.08**

Source: San Luis Obispo County Air Pollution Control District, Clean Air Plan, December 2001

- **Construction Emission Calculations**

Busick Tract Map EIR
Construction Emission Calculations

Screening Emission Rates for Construction Operations

Reactive Organic Gases (ROG)	0.0123	lbs/yd^3
Oxides of Nitrogen (NOx)	0.0946	lbs/yd^3
Combustion Particulate (PM10)	0.0057	lbs/yd^3
Carbon Monoxide (CO)	0.0247	lbs/yd^3
Sulfur Oxides (SOx)	0.0108	lbs/yd^3

Construction Activities

	Alignment 1	
Total Volume of Excavation	25,000	cubic yards
Maximum Rate of Excavation Per Day	2,000	cubic yards
Total Days of Excavation	13	days
Construction Hours Per Day	8	hours/day

Total Construction Emissions (lbs)

	ROG	NOx	PM0	CO	SOx
Alignment 1	308.64	2365.00	143.30	617.50	270.06

Total Construction Emissions (tons/qtr)

	ROG	NOx	PM0	CO	SOx
Alignment 1	0.15	1.18	0.07	0.31	0.14

Total Construction Emissions Per Day (lbs)

	ROG	NOx	PM0	CO	SOx
Alignment 1	24.69	189.20	11.46	49.40	21.61

APPENDIX F

- **Comment Letters and Responses to Comments on January 2004 Revised Draft EIR**

RESPONSE TO COMMENTS

The following agencies and members of the public have prepared comments on the Draft EIR, dated January 2004:

Federal, State and Local Agencies	
San Luis Obispo County **Department of Public Works** Letter of 5 February 2004	County Government Center Room 207 San Luis Obispo, CA 93408 Contact: Richard Marshall
City of Arroyo Grande **Public Works Department** Letter of 2 March 2004	208 East Branch Street Arroyo Grande, CA 93420 Contact: Victor Devens
City of Arroyo Grande **Community Development Department** Letter of 9 March 2004	P.O. Box 550 214 East Branch Street Arroyo Grande, CA 93421 Contact: Rob Strong
San Luis Obispo County **Air Pollution Control District** Letter of 11 March 2004	3433 Roberto Court San Luis Obispo, CA 93401 Contact: Melissa Guise
San Luis Obispo Council of Governments Letter of 15 March 2004	1150 Osos Street Suite 202 San Luis Obispo, CA 93401 Contact: James J. Worthley
California Department of Transportation **District 5** Letter of 15 March 2004	50 Higuera Street San Luis Obispo, CA 93401-5415 Contact: James Kilmer

Applicant/Agent	
JH Land Partnership, L.P. Letter of 11 March 2004	1525 Suite B East Main Street Santa Maria, CA 93454 Contact: Haythem S. Dawlett

General Public and Private Organizations	
Victor Lund Letter of 30 January 2004	291 Falcon Crest Drive Arroyo Grande, CA 93420
Nancy Morgan Letter of 1 March 2004	240 Candice Court Arroyo Grande, CA 93420

General Public and Private Organizations	
William T. Dreyer Jan Dreyer Letter of 1 March 2004	275 Candice Court Arroyo Grande, CA 93420
Kelly Kimball Letter of 11 February 2004	270 Pleasant Lane Arroyo Grande, CA 93420
Mr. and Mrs. Heyne Letter of 10 March 2004	2725 Hawk View Court Arroyo Grande, CA 93420
Mr. and Mrs. Throndson Letter of 11 March 2004	2750 Hawk View Court Arroyo Grande, CA 93420
Mr. and Mrs. Naylor Letter of 12 March 2004	2720 Hawk View Court Arroyo Grande, CA 93420
Falcon Ridge Estates Homeowner's Association Letter of 12 March 2004	3563 Empleo Street Suite B San Luis Obispo, CA 93401 Contact: Ronald Bryant
Mr. and Mrs. Pueraro Letter of 13 March 2004	2755 Hawk View Court Arroyo Grande, CA 93420
Martin Line Jane Line Letter of 15 March 2004	265 Pleasant Lane Arroyo Grande, CA 93420

The letters of comment are given in the above order with the responses following the individual letters. Letters of comment are reproduced in total, and numerical annotation has been added as appropriate to delineate and reference the responses to those comments. The pages of the letters have been re-numbered to conform to the page sequence of this section.

Planning

SAN LUIS OBISPO COUNTY
DEPARTMENT OF PUBLIC WORKS
Noel King, Director
County Government Center, Room 207 • San Luis Obispo CA 93408 • (805) 781-5252
Fax (805) 781-1229
email address: pwd@co.slo.ca.us

February 5, 2004

MEMORANDUM

TO: Julie Eliason, Environmental Resource Specialist

FROM: Richard Marshall, Development Services Engineer RSM

SUBJECT: Busick Tract 1789 – Draft EIR

Thank you for the opportunity to review the subject report. I offer the following comments:

1. Figure V.C.-1 identifies an "ephemeral drainage" which is aligned with the proposed culdesac serving lots 12, 13 and 14. Beyond the end of the culdesac is the location of the proposed detention basin. Clearly, the placement of the basin is appropriate, as this is the location on the site that will be able to receive all future runoff and meter the release onto downstream properties. However, it seems that a slight modification to the access configuration could eliminate the need to construct a road along this ephemeral drainage, which could substantially reduce potential biological impacts. **1.1**

   My suggestion is that lots 12 and 13 could be served by a private easement which would come from Coast View Drive, along the property line common to lots 10, 11 and 12, then angling along the site boundary until it reaches lot 13. Similarly, lot 14 could be served by a private easement along the line common to lots 15 and 16. In this way, all lots are provided access, and none have to travel along or across the drainage way. I am attaching a sketch of my suggestion. **1.2**

2. In the evaluation of impacts to Traffic and Circulation, recommended mitigation measure TR/mm-1 on page V-67 involves contributing a "fair share" to the City of Arroyo Grande towards future improvements at the Route 101/El Campo Road intersection. Has the City established a funding mechanism to receive this contribution? Otherwise, the EIR should evaluate and recommend the specific amount that should be paid. **1.3**

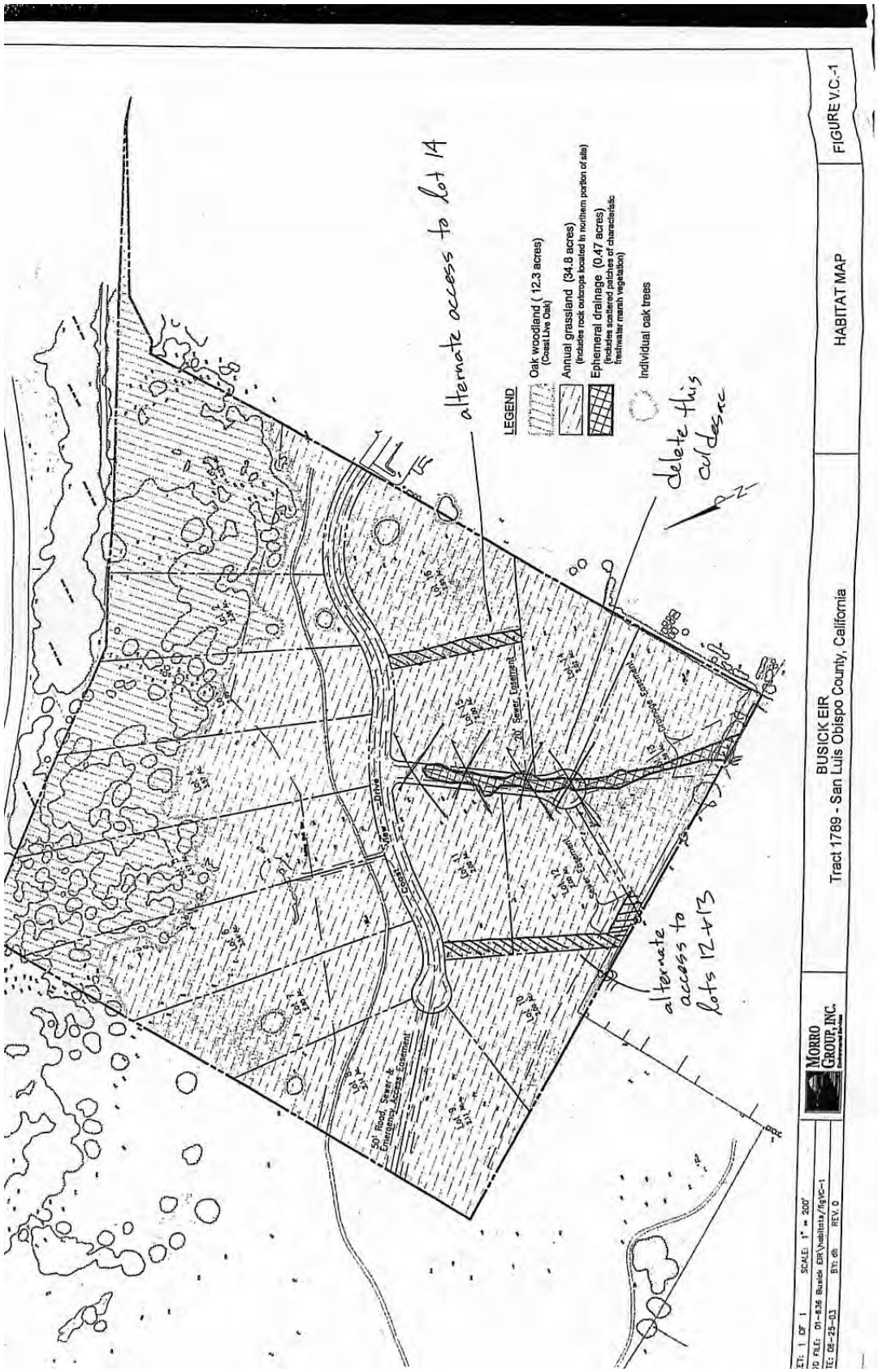
3. On page V-67, TR/Impact 2 notes that feasible access to the project site is limited to Falcon Crest Drive and Coast View Drive. Although this was discussed in the earlier part of the report, it would be helpful to review the topic within the Traffic and Circulation section. Otherwise, the impact seems to appear out of nowhere. **1.4**

Please call me at 781-5280 if you have questions or need additional information.

Attachment

File: Tract 1789

L:\DEVELOP\FEB04\eliason.mmo.wpd.lnd.rem


LEGEND
Oak woodland (12.3 acres)
(Coast Live Oak)
Annual grassland (34.8 acres)
(includes rock outcrops located in northern portion of site)
Ephemeral drainage (0.47 acres)
(includes scattered patches of characteristic freshwater marsh vegetation)
Individual oak trees
alternate access to lot 14
delete this cul-de-sac
alternate access to lots 12+13
50' Road, Sewer & Emergency Access Easement
70' Sewer Easement
Drainage Easement
Sewer Easement
BUSICK EIR
Tract 1789 - San Luis Obispo County, California
HABITAT MAP
FIGURE V.C.-1
MORRO GROUP, INC.
SCALE: 1" = 200'
REV: 0

1. San Luis Obispo County Department of Public Works

1.1 Comment noted.

1.2 Mitigation measure BR/mm-3 has been expanded in the EIR to include an option for relocating access to the parcels south of the proposed extension of Coast View Drive to minimize the permanent conversion of areas potentially qualifying as wetlands (refer to Section V.C.5.a.1). Implementation of this mitigation measure would not result in any new secondary impacts because the EIR analysis considered a worst-case scenario regarding future site disturbance and the creation of impervious surfaces including driveways to each parcel and structures. Avoidance of the ephemeral drainage, and areas potentially qualifying as wetlands, is not feasible due to the drainage characteristics of the project site, and the need for a storm water management system and detention basin to avoid significant erosion within the ephemeral drainage and a post-development increase in off-site storm water flow. Implementation of the newly added mitigation measure would still require construction of a storm water management system to conduct flow within Coast View Drive, and into the proposed detention basin to avoid off-site drainage impacts during storm events, similar to the proposed project. If the proposed road and sub-surface drainage system are not installed per the proposed project, the ephemeral drainage would need to be stabilized and improved to manage storm water flow in an non-erosive manner, as required by the expanded mitigation language of BR/mm-3. Subsequent discussions with the County Department of Public Works concluded that both scenarios are acceptable for the management of storm water drainage, provided that the ephemeral drainage can be stabilized to avoid significant erosion (Richard Marshall; March 22, 2004).

1.3 Based on further consultation with the City of Arroyo Grande (Rob Strong; March 23, 2004 and Don Spagnolo; March 25, 2004), the City does not have an estimated timeframe for improvements to the El Campo Road and Highway 101 intersection, and a fee program to facilitate the use of developer paid fees is not in place. The City of Arroyo Grande is the agency responsible for all studies associated with future improvements to the intersection and the eventual construction of improvements. The City has been given this responsibility because the City initiated the process to construct improvements to the existing El Campo Road and State Route 101 intersection, which is currently a sub-standard, at-grade intersection with significant traffic safety issues. The California Department of Transportation (Caltrans) is providing oversight review on the interchange project (Tom Houston; March 25, 2004). San Luis Obispo Council of Governments (SLOCOG) is also providing oversight and some funding for the project (James Worthley; March 25, 2004). The City prepared and submitted a Project Study Report (PSR) for the El Campo Road and State Route 101 Interchange Project. The PSR is a project initiation document that is used to program the project development support for State funding. The PSR describes the transportation problem, identifies the scope of the viable alternatives, and provides an estimate of the project development support resources required for the specific project. The City Public Works Director stated that developer-paid traffic mitigation fees provided a portion of the funding to prepare the PSR, and that he is currently seeking funds for the next stage of review (Don Spagnolo; March 25,

2004), and that is why the El Campo mitigation was initially determined to be feasible. Caltrans approved the PSR, and the next step is the Project Approval/Environmental Document (PA/ED) phase. The PA/ED phase includes public meetings, determination of the preferred alternative, preparation of technical studies (e.g. biological, noise, cultural resource, visual resource, etc.) and the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) environmental review process. The recommended mitigation measures arose during preparation of the Draft EIR. During this time, the City of Arroyo Grande Public Works Director was contacted to discuss potential mitigation options, and the traffic impact fee was determined to be a feasible mitigation measure to mitigate potentially significant impacts to the El Campo Road and State Route 101 intersection to a level of insignificance (Don Spagnolo; December 12, 2003). The EIR has been revised to remove this mitigation measure (refer to Section V.E.5). No mitigation is currently available at this time, and the proposed project would result in a significant, adverse, unavoidable (Class I) traffic impact.

1.4 The applicant was granted an access easement on July 1, 2004 from the Falcon Ridge Homeowner's Association for primary access to the south via Coast View Drive and Falcon Crest Road. The EIR has been revised to include a discussion of the easement (refer to Section V.E.1).

CITY OF ARROYO GRANDE INCORPORATED JULY 10, 1911 CALIFORNIA

MEMORANDUM

COPY

TO: PLANNING COMMISION

FROM: VICTOR DEVENS, ASSOCIATE ENGINEER - DEVELOPMENT VED

SUBJECT: DRAFT EIR REVIEW FOR TRACT 1789, COUNTY TRACT ADJACENT TO TRACT 2207, VISTA DEL MAR

DATE: MARCH 2, 2004

Public Works has reviewed the Draft EIR for Tract 1789 and has the following comments, which needs be forwarded to the County:

DRAINAGE/EROSION

1. The EIR shows three locations where project drainage leaves the site and flows into the facilities at Vista Del Mar. The EIR indicates that with site grading and development, the tributary areas currently draining to Lots 16 and 17 (points C & D) of Vista Del Mar will be significantly reduced, thus negating the increased runoff due to the added impervious area. The preliminary grading plan is difficult to read, and verifying the reduction in tributary area is difficult to verify. **2.1**

   The EIR does not address how the drainage entering Vista Del Mar at the end of Castillo Del Mar (point E) will be affected. **2.2**

   The EIR does not address the removal of pollutants from storm water runoff. **2.3**

   The EIR does not address post-construction erosion. **2.4**

UTILITIES

5. The EIR needs to address that the applicant shall provide paved access and an easement to the City of Arroyo Grande for the manhole currently being constructed above Lot 16 within the boundaries of Tract 1789. **2.5**

STREETS

6. Why is the fair share of the El Campo Interchange project paid to the City of Arroyo Grande? The facility, when constructed will be owned and maintained by Caltrans. **2.6**

C: Director of Public Works/City Engineer
Assistant City Engineer
Director of Community Development
Project File

S:\PUBLIC WORKS ENGINEERING SHARED ITEMS\Development Projects\MISC\Review by Other Cities-Dists\San Luis Obispo County\TRACT 1789\Memo - EIR Review - Tract 1789.doc

2. City of Arroyo Grande Public Works Department

2.1 Figure III-5 depicting the preliminary grading plan has been improved to increase visibility.

2.2 The EIR has been revised to clarify that a portion of runoff would continue to drain offsite at Point "E", however runoff from hardscape areas would be directed into the proposed stormwater system within Coast View Drive. The reduction in runoff at Points "C" and "D" to adjacent properties as a result of these interceptions would exceed the increased runoff to these properties as a result of development (refer to Section V.B.5.a).

2.3 The primary pollutant source during proposed grading and construction activities would be sediment; therefore, the EIR has been revised to include a discussion of the Stormwater Pollution Prevention Plan (SWPPP) that would be required by the State Water Resources Control Board (refer to Section V.B.5). The SWPPP, in addition to the Sedimentation and Erosion Control Plan required by County Land Use Ordinance 22.52.090, is required to include measures to avoid or minimize pollution of stormwater discharge during project construction and implementation.

2.4 Mitigation measure DE/mm-1 states that the applicant/and or individual lot owner(s) are required to prepare and implement a Sedimentation and Erosion Control Plan pursuant to County Land Use Ordinance (LUO) 22.52.090, which would include both temporary and final measures to avoid and minimize erosion (refer to Section V.B.5.b). The intention of final measures is to ensure long-term stabilization of disturbed soils. In addition, as stated in Section V.A. (Drainage and Erosion) of the EIR, implementation of proposed drainage and road improvements is anticipated to reduce erosion because storm water runoff that historically flowed offsite eroding existing swales and the ephemeral drainage would be directed into a storm water system and detention basin. Based on implementation of the required plans, post-construction erosion would not be significant. No revisions to the EIR are necessary.

2.5 Coast View Drive and the emergency access easement would be paved as described in the project description of the EIR (refer to Section III.2) and as shown in Figures III-4, III-5, and III-6. No revisions to the EIR are necessary.

2.6 Refer to response to comment 1.3.

City of
Arroyo Grande
COMMUNITY DEVELOPMENT

P.O. Box 550
214 East Branch Street
Arroyo Grande, CA 93421
Phone: (805) 473-5420
FAX: (805) 473-0386
E-Mail: agcity@arroyogrande.org

March 9, 2004

RECEIVED
MAR 1 0 2004
Planning & Bldg

Julie Eliason, Environmental Division
County Planning and Building Department
County Government Center, Room 310
San Luis Obispo, California 93408-2040

SUBJECT: Comment on DEIR SCH1994041043, Busick Tract No. 1789, ED90-061, S890Z3ZT, Arroyo Grande, CA

Dear County of San Luis Obispo Planning Commission & Board of Supervisors:

The City of Arroyo Grande appreciates the referral of the above project DEIR for public review and comment. The subject 47.5-acre site of this proposed 16-lot residential subdivision adjoins the City on the west, north and east while the south side abuts the Falcon Ridge Estates Residential Suburban tracts in the unincorporated fringe of southeast Arroyo Grande.

As discussed in the introduction and summary, the potentially significant environmental effects addressed in the DEIR include: **3.1**

- Geologic, soils and seismic hazards
- Drainage and erosion
- Biological resources
- Visual resources
- Traffic and circulation
- Air quality

The City considers water resources as well as traffic and air quality as potentially significant cumulative impacts. The City's 2001 General Plan Program FEIR identified these impacts as Class I, requiring CEQA findings and a Statement of Overriding Considerations. While the project is relatively small, the City disagrees that the traffic and air quality impact issues are "insignificant" residual impacts. Nor do the recommended mitigation measures adequately address these basic concerns. The DEIR is also incomplete in its failure to evaluate potentially significant water resource impacts which are being litigated due to alleged regional overdraft of the groundwater basin. **3.2** **3.3**

Specifically, the traffic and circulation impacts of the project on the deficient and unsafe El Campo intersection with State Route 101 are not mitigated by a "fair share" contribution toward future improvement of the El Campo Interchange, nor is this major freeway modification part of the current County traffic impact fees. We fully agree that this project should proportionately contribute to future improvement of the interchange **3.4**

Julie Eliason, Environmental Division
County Planning And Building Department
DEIR SCH 1994041043, Busick Tract No. 1789
March 10, 2004
Page 2

at El Campo Road as well as Los Berros Road and Valley Road. Additionally, however, we believe that any County projects in the Arroyo Grande Residential Suburban fringe areas should also pay City traffic and signalization impact mitigation fees for proportional environmental effects on the City street system such as Valley Road, Fair Oaks Avenue, Traffic Way and East Grand Avenue. **3.5**

The unsafe existing crossing of Highway 101 at El Campo Road should be considered for closure until a future interchange is constructed. It may be inconvenient for Nipomo Mesa and Falcon Ridge, but access to northbound 101 is unsafe at this crossing. **3.6**

One access alternative that should be reconsidered before the final EIR and project are resolved is the proposed road extension called Coast View Drive from Falcon Ridge Estates (Tract 1256), located south of the project site. The alternative primary access from the City of Arroyo Grande, by extension of Orchard Drive from Tract 2207, Vista Del Mar, could still provide for controlled secondary access at the southern end, but would avoid the adverse impacts of added traffic to the unsafe and deficient El Campo Road intersection with Highway 101. **3.7**

It is the City's opinion that Mitigation Measures TR/mm-1 and TR/mm-3 do NOT reduce residual impacts to less than significant or "insignificant" and that the City and County should reconsider project access from Orchard Drive extension. **3.8**

The enclosed memorandum dated March 2, 2004 from Victor Devens of City Public Works Department also raises several technical points regarding drainage/erosion, utilities and streets within the proposed tract which should be clarified before the EIR and project approval. **3.9**

The City appreciates the opportunity to comment on County project referrals and hopes that the Final EIR response to comments can include these clarifications and corrections before the project is considered for approval. **3.10**

Sincerely,

Rob Strong,
Community Development Director

Encl:

cc: Planning Commission
City Council

3. City of Arroyo Grande Community Development Department

3.1 Comment noted. Refer to response 3.2 below.

3.2 Section V.E. (Traffic and Circulation) of the EIR was revised based on additional information received from the City of Arroyo Grande regarding the delayed progress of the El Campo Road and Highway 101 Interchange Project. Based on consultation with the City following circulation of the Draft EIR, the City stated the El Campo Road and Highway 101 Interchange Project would not be constructed within a reasonable timeframe and a traffic fee mitigation program is not currently in place (Rob Strong; March 23, 2004 and Don Spagnolo; March 25, 2004). In addition, the County of San Luis Obispo does not have a traffic impact fee program that would direct funds towards future improvements at the Highway 101 and El Campo Road intersection. Based on this information, the previously identified mitigation measure is no longer feasible, resulting in a significant, adverse, unavoidable (Class I) impact. The EIR analysis determined that cumulative impacts to County and City roads (with the exception of the El Campo Road and Highway 101 intersection) would be mitigated to a level of insignificance by the applicant's contribution to the County of San Luis Obispo Traffic Impact Fee program and City of Arroyo Grande fee mitigation program (refer to TR-mm-1 and TR/mm-2, Section V.E.6.a and Section V.E.6.b).

Section V.F. (Air Quality) of the EIR did not identify potentially significant cumulative impacts to air quality because the short-term impacts can be mitigated to levels of insignificance, and no long-term operational impacts were identified. No revisions to the EIR are necessary.

3.3 During the Notice of Preparation and scoping process for this EIR, the County determined that the proposed project's impact on water resources is not a significant issue. As described in the project description of the EIR, the applicant has received a will-serve letter from Rural Water Company demonstrating availability of water to serve the proposed development of up to 16 residential lots (refer to Section III.4). The Rural Water Company obtains its water supply from wells within the Santa Maria Groundwater Basin. Based on the most comprehensive study completed for this basin, water extractions will increase above current levels over the next twenty years (*Water Resources of the Arroyo Grande-Nipomo Mesa Area,* State Department of Water Resources; 2002). The study concludes that "supplies appear adequate to meet water demands through water year 2020"; however, the study recognizes that there is a sizeable local pumping depression on the Nipomo Mesa that has changed the dynamics of flow between two sub areas (Santa Maria, Nipomo Mesa). The study warns that seawater intrusion could result from this existing pumping depression if water management practices are not changed in the future and this depression continues to grow. Also, due mainly to the absence of current evidence of seawater intrusion, DWR concludes that the basin is not in a state of overdraft. Water purveyors in the Nipomo Mesa area, including the Rural Water Company, have been encouraged to strengthen their water conservation programs, increase their use of reclaimed water, and continue their efforts to secure supplemental water. Based on the results of the State Department of Water Resources

report, and implementation of water conservation measures throughout the unincorporated areas of the County, no significant impacts to water resources were identified, and no revisions to the EIR are necessary.

3.4 Refer to response to comments 1.3 and 3.2.

3.5 The EIR was revised to clarify cumulative impacts to both the County and City local road system (refer to Section V.E.6.a and V.E.6.b). A mitigation measure has been added to the EIR requiring the applicant to contribute fair share traffic mitigation fees to the City of Arroyo Grande traffic mitigation fee fund (refer to TR/mm-2, Section V.E.6.b).

3.6 The El Campo/Highway 101 intersection is within the jurisdiction of the California Department of Transportation (Caltrans). Based on a letter received from San Luis Obispo Council of Governments (James Worthley; March 15, 2004), Caltrans may either eliminate all left turn alignments or close the intersection if it becomes a hazard. No revisions to the EIR are necessary.

3.7 When the City of Arroyo Grande approved the adjacent residential tract development to the north, Vista Del Mar, the City requested a secondary access road to extend from Orchard Drive to Valley Road. A portion of the desired alignment would cross property owned by the Lucia Mar Unified School District and a private landowner. The property owned by the private landowner supports agricultural production. The easement was not granted, and the City did not require a secondary access road extending to Valley Road. The City did not identify any significant, adverse, unavoidable impacts associated with the Vista Del Mar subdivision, and approved the project with a Mitigated Negative Declaration, but required that a one-foot easement and unlocked gate be placed along the property boundary between Vista Del Mar and the proposed project site. The one-foot easement blocks all access across the County/City property line. An unpaved emergency access road was constructed on the project site, connecting Castillo Del Mar in Vista Del Mar with Coast View Drive in Falcon Ridge Estates. Only emergency vehicles are permitted to use the emergency access road.

Based on comments received from the City following public review of the Draft EIR for the proposed project, the applicant pursued consultation with the City regarding reconsideration of removing the one-foot easement so as to allow the proposed project to take access to the north. During a meeting attended by County staff, City staff, school district staff, the private landowner, and the applicant, the City stated that access via Castillo Del Mar and Orchard Street would be reconsidered by the City provided the applicant construct an secondary access road extending from Orchard Drive to Valley Road (Tony Ferrara; August 19, 2004). The secondary access road would extend from the western boundary of Vista Del Mar to Valley Road through property owned by the Lucia Mar Unified School District and a private landowner. A portion of the desired alignment would be located on land currently farmed by the private landowner. Based on recent personal communications with the school district and private landowner (who stated he would not grant an easement), it is unlikely that an easement would be granted to allow construction of the access road connection to Valley Road (August 19, 2004).

After the above approach failed, the applicant submitted a request to the City of Arroyo Grande for consideration of the access proposal, and proposed payment of fees to construct future improvements including an access road connector to Valley Road in exchange for removal of the one-foot easement and access via Castillo Del Mar and Orchard Drive. The Arroyo Grande City Council considered and denied the applicant's request during a City Council meeting on September 14, 2004.

Therefore, there are no other access options for the proposed project other than Coast View Drive to the south, which would result in the generation of 6 A.M. peak hour trips and 9 P.M. peak hour trips affecting the El Campo Road and State Route 101 intersection. Based on the above discussion, there are no mitigation options available to mitigate impacts to the El Campo Road and State Route 101 intersection, resulting in a Class I impact and the need to revise and re-circulate the Draft EIR. The EIR has been revised to incorporate this information (refer to Section I.D.1 and Section V.E.1.b).

3.8 Refer to responses to comments 1.3, 3.2, 3.5 and 3.7.

3.9 Refer to responses prepared for comments to letter 2.

3.10 Comment noted. The EIR has been revised to address the concerns indicated in your letter as described above.

AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN LUIS OBISPO

RECEIVED
MAR 1 2 2004
S.L.O. CO PLANNING DEPT.

DATE: March 11, 2004

TO: Julie Eliason, Environmental Resource Specialist
San Luis Obispo County Department of Planning and Building

FROM: Melissa Guise, MAG Air Quality Specialist
San Luis Obispo County Air Pollution Control District

SUBJECT: Busick Tract Map - Draft Environmental Impact Report (DEIR); ED90-061, S890Z3ZT, SCH#1994041043

Thank you for including the APCD in the environmental review process. We have completed our review of the above referenced project. The project as proposed would subdivide an existing 47.54 acre parcel into 16 residential lots (ranging from 2.0 to 5.3 acres each). The proposed project is within the Residential Suburban land use category and is located at the north end of Coast View Drive, approximately 700 feet northwest of Falcon Crest Drive in Arroyo Grande. We have the following comments on this proposal. **4.1**

General Comments

This project will promote additional development in areas **outside** of the urban and village reserve lines (URL/VRL). This is inconsistent with the goals and objectives of the Clean Air Plan (CAP) and could contribute to existing stresses on air quality, circulation and other resources that are not sustainable or easily mitigated. **4.2**

District staff is very concerned with the cumulative effects resulting from this type of low density development in rural areas. Such development fosters continued dependency on automobile use as the only viable means of access to essential services and other destinations. This type of development is inconsistent with the Land Use Planning Strategies recommended in the CAP, which promote the concept of compact development by directing growth to areas within existing URL/VRL. The Land Use Planning Strategies were designed to lessen automobile dependence through greater pedestrian access; increase of transit access; increase mixed-use and compact zoning; promote in-fill development as opposed to development at the urban fringe, and provide for a balance of jobs and housing. (CAP, Chapter 6, Transportation and Land Use Management sub-sections: L-1 Planning compact communities, L-2 Mixed Use, and L-3 Balancing Job and Housing.) **4.3**

The proposed project will bring about growth at the urban fringe outside the URL/VRL which will result in limited or no pedestrian access; inability to support transit services; and sprawling development. **We do not support this type of development.** **4.4**

Specific Comments

Section V.F Air Quality, page V-75

San Luis Obispo County was recently re-designated as attainment with the state health based ozone standard. This is a great achievement for our area and speaks to the strong partnerships we have between business, industry, environment and the public. The type of development which may result from the proposed project is not consistent with the goals and objectives of the Clean Air Plan and if allowed to continue could jeopardize the County's air quality attainment status. **4.5**

3433 Roberto Court • San Luis Obispo, CA 93401 • 805-781-5912 • FAX: 805-781-1002
info@slocleanair.org ❖ www.slocleanair.org

Busick Tract Map- DEIR
March 11, 2004
Page 2 of 4

Section V.F Air Quality, page V-76, Table V.F-1

The District's CEQA Air Quality Handbook was updated in April 2003. It should be noted that the Tier I threshold for CO is no longer 50 ppm. Under the new requirements the CO threshold is not triggered until the concentration reaches 550 lbs./day which is considered a Tier II level requiring mitigation. Table V.F-1 should be updated to be consistent with the latest version of the CEQA Air Quality Handbook page 2-2. **4.6**

Section V.F Air Quality, page V-77, Table V.F-2

The level of construction activity requiring mitigation was updated in April 2003. Table V.F-2 contains data from the 1997 Handbook. This table should be revised to be consistent with the latest version of the CEQA Air Quality Handbook page 6-4. **4.7**

Section V.F Air Quality, page V-77, Table V.F-3 and Section VIII page VIII-11

On page V-77 under *Impact Assessment and Methodology* the statement is made that emission estimates for the proposed project have been determined though use of the APCD CEQA Air Quality Handbook, April 2003. However, the construction emission calculations presented in Appendix E were based upon old emission factors. Based on assumptions presented in the DEIR, District staff completed screening level calculations for the construction emissions. The results vary slightly but are consistent with the values presented in the DEIR. District staff agrees with the mitigation measures proposed for this project. **4.8**

Section II, pages II-15 through II-18; Section V.F Air Quality, pages V-78 through V-80; and Section VIII, page VIII-12 - AQmm-2

The proposed project will exceed the District threshold level of significance for fugitive dust. District staff agrees with the mitigation measures listed to control fugitive dust however, we recommend adding the following measures to the list.

1. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities.

2. Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site.

3. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible. **4.9**

4. All PM10 mitigation measures required must be included on grading and building plans. In addition, the contractor or builder should designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust off site. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD prior to land use clearance for map recordation and land use clearance for finish grading of the structure.

5. Naturally Occurring Asbestos (NOA) has been identified by the state Air Resources Board as a toxic air contaminant. Serpentine and ultramafic rocks are very common in the state and may contain naturally occurring asbestos. Under the State Air Resources Board Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, prior to any grading activities at the site, the project proponent shall ensure that a geologic evaluation is conducted to determine if naturally occurring asbestos is present within the area that will be

Busick Tract Map- DEIR
March 11, 2004
Page 3 of 4

disturbed. If naturally occurring asbestos is found at the site the applicant must comply with all requirements outlined in the Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations. These requirements may include but are not limited to 1) an Asbestos Dust Mitigation Plan which must be approved by the District before construction begins, and 2) an Asbestos Health and Safety Program will also be required for some projects. Please refer to the District web page at *http://www.slocleanair.org/business/asbestos.asp* for more information regarding these requirements. If you have any questions regarding these requirements, please contact Karen Brooks of our Enforcement Division at 781-5912.

6. Demolition activities can have potential negative air quality impacts, including issues surrounding proper handling, demolition, and disposal of asbestos containing material (ACM). Asbestos containing materials could be encountered during demolition or remodeling of existing buildings. Asbestos can also be found in utility pipes/pipelines (transite pipes or insulation on pipes). If utility pipelines are scheduled for removal or relocation; or building(s) are removed or renovated this project may be subject to various regulatory jurisdictions, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40CFR61, Subpart M - asbestos NESHAP). These requirements include but are not limited to: 1) notification requirements to the District, 2) asbestos survey conducted by a Certified Asbestos Inspector, and, 3) applicable removal and disposal requirements of identified ACM. Please contact Tim Fuhs of the Enforcement Division at 781-5912 for further information. **4.9 cont'd**

7. Effective February 25, 2000, the District prohibited developmental burning of vegetative material within San Luis Obispo County. Under certain circumstances where no technically feasible alternatives are available, limited developmental burning under restrictions may be allowed. This requires prior application, payment of fee based on the size of the project, District approval, and issuance of a burn permit by the District and the local fire department authority. The applicant is required to furnish the District with the study of technical feasibility (which includes costs and other constraints) at the time of application. If you have any questions regarding these requirements, contact Karen Brooks of our Enforcement Division at 781-5912.

Section V.F Air Quality, page V-80

District staff agrees with the finding regarding operational phase emissions however the following measures should be included in the event wood burning devices are included in the project.

Wood Burning Devices

As you may be aware, under District Rule 504, only District approved wood burning devices can be installed in new dwelling units. District approved devices include: **4.10**

- All EPA-Certified Phase II wood burning devices;
- Catalytic wood burning devices which emit less than or equal to 4.1 grams per hour of particulate matter which are not EPA-Certified but have been verified by a nationally-recognized testing lab;
- Non-catalytic wood burning devices which emit less than or equal to 7.5 grams per hour of particulate matter which are not EPA-Certified but have been verified by a nationally-recognized testing lab;
- Pellet-fueled woodheaters; and
- Dedicated gas-fired fireplaces.

If you have any questions about approved wood burning devices, please contact Tim Fuhs of our Enforcement Division at 781-5912.

Busick Tract Map- DEIR
March 11, 2004
Page 4 of 4

Appendix E, Air Quality, Table 1

It should be noted that the California standard for PM2.5, Annual Arithmetic Mean is 12 $\mu g/m^3$ and the Annual Arithmetic Mean for PM10 is 20 $\mu g/m^3$. **4.11**

Again, thank you for the opportunity to comment on this proposal. If you have any questions or comments, feel free to contact me at 781-4667.

cc: Tim Fuhs, SLOAPCD Enforcement Division
Karen Brooks, SLOAPCD Enforcement Division

H:\OIS\PLAN\RESPONSE\2833.doc

4. San Luis Obispo County Air Pollution Control District

4.1 Comment noted. No revisions to the EIR are necessary.

4.2 The Draft EIR has been revised to include additional discussion regarding the *Clean Air Plan* and the proposed project's potential inconsistency with specific policies (refer to Section V.F.5.c).

4.3 Refer to response to comment 4.2 above. The proposed project is located immediately adjacent to Arroyo Grande City limits, and is bordered on one property line by State Route 101 and surrounded on three property lines by existing residential development including single family residences and a mobile home park. Based on the surrounding environment described in the Existing Setting chapter of the EIR, and the growth-inducing impact analysis (Refer to Section VII.A), the proposed project is considered in-fill, and would not promote urban sprawl. An emergency access road extending from the end of the proposed Coast View Drive extension would provide pedestrian and biking access into the City. Based on the existing land use category (Residential Suburban) and surrounding land uses and circulation constraints identified in the EIR, development of a mixed-use development is not readily feasible.

4.4 Refer to response to comments 4.2 and 4.3.

4.5 Refer to response to comments 4.2 and 4.3.

4.6 Comment noted. Table V.F.-1 has been updated in the EIR to reflect updates to the *CEQA Air Quality Handbook* (April 2003).

4.7 Comment noted. Table V.F.-2 has been updated in the EIR to reflect updates to the *CEQA Air Quality Handbook* (April 2003).

4.8 Comment noted. No revisions to the EIR are necessary.

4.9 Comment noted. Mitigation measure AQ/mm-2 has been amended to include the recommended additional mitigation measures (refer to Section V.F.5.a).

4.10 Comment noted. The recommended mitigation measure has been added to the EIR as AQ/mm-3 (refer to Section V.F.5.b).

4.11 Comment noted. Table 1 (Ambient Air Quality Standards) of Appendix E in the EIR has been modified to reflect current standards.

Mar-15-04 04:32P SLOCOG 805-781-5703 P.02

San Luis Obispo Council of Governments

Regional Transportation Planning Agency
Metropolitan Planning Organization
Census Data Affiliate
Service Authority for Freeways and Expressways

Ronald L. DeCarli - Executive Director

Arroyo Grande
Atascadero
Grover Beach
Morro Bay
Paso Robles
Pismo Beach
San Luis Obispo
San Luis Obispo County

March 15, 2004

Julie Eliason, Environmental Division
County Planning and Building Department
County Government Center, Room 310
San Luis Obispo, CA 93408-2040

RE: Busick Tract Map Notice of Availability of Draft EIR; ED90-061, S890Z3ZT, SCH#1994041043

Dear Ms. Eliason,

Thank you for the opportunity to provide comments on the Busick Tract Map draft EIR. I found the material to be comprehensive and well organized and would like to submit the following comments.

Page V-65 notes that El Campo Road Intersection with SR 101 currently operates at LOS F. While a Project Study Report (PSR) is completed for this intersection, it is unlikely to be constructed in the next 10 years. Limited availability and higher priority demands on regional funding, as well as local funding, will slow the completion of this improvement. Any new demands on this deficient crossing will further exacerbate an already bad situation. Caltrans has indicated that if it becomes a hazard, it may either eliminate all left turn movements (through a barrier) or close it entirely. Three of the four project alternatives in the PSR have alignments that are adjacent or through this property. Alternative 1 moves the interchange north of the existing location 250' - this would require purchase of a piece of lot 1. Alternatives 3 and 4 move the interchange north of the property and require a frontage road connection to the existing El Campo. Both would require purchases where the right of way is narrow along the highway for a frontage road. **5.1**

1. Would a reduction of the number of units or the elimination of secondary unit options significantly ease the burden on this crossing? **5.2**
2. Could a dedication of right of way be exacted from the lots bordering on the freeway as well as the 'tail' of lot 1 for a connection to El Campo Road consistent with the project alternatives defined in the PSR? **5.3**

Page III-6. As noted on Page 51 (3f) of the RTP Policy Element, SLOCOG does "Encourage and coordinate with local jurisdictions to develop parallel and complimentary collectors, frontage roads or arterial routes adjacent to Route 101." While the City of Arroyo Grande has, in the past, denied primary access through the northern parcel onto Castillo Del Mar, this must be revisited. Development of Falcon Ridge Estates (to the south) was leap frogging over an adjacent parcel. Development of this tract provides a needed infill connection, and necessitates the direct road connection. Connecting these roads will provide driving options and reduce the impacts to the El Campo Road/SR 101 crossing. **5.4**

3. How will opportunities such as new or improved connectivity be encouraged or exacted? **5.5**
4. What opportunities exist for the city to incorporate this development?

Thank you again for the opportunity to review this document. Please feel free to contact me at 788-2002 should you have any questions. **5.6**

James J. Worthley
Transportation Planner

J:\2003-2004 Overall Work Program\3100 RTP\3150 Local plans, projects, studies\South County\Busick Tract Map DEIR-County.doc

1150 Osos Street, Ste. 202, San Luis Obispo, CA 93401 ◆ Tel. (805) 781-4219 ◆ Fax. (805) 781-5703
E-mail. slocog@slocog.org ◆ Internet. http://www.slocog.org

5. San Luis Obispo Council of Governments

5.1 Comment noted. No revisions to the EIR are necessary.

5.2 Based on the traffic analysis report prepared for the proposed project, the northbound approach of El Campo Road to State Route 101 currently operates at LOS F during the AM peak hour. Build-out of the proposed project would not cause a reduction in the Level of Service on any other roads or intersections, therefore it is unlikely that a reduction in proposed or potential units would significantly ease the burden on the existing deficient intersection. No revisions to the EIR are necessary.

5.3 Approval of the proposed project would not preclude future right-of-way dedications associated with the proposed interchange improvements. No revisions to the EIR are necessary.

5.4 Refer to response to comments 1.3, 3.2, and 3.7.

5.5 At this time, there are no feasible options to connect Coast View Drive to Castillo Del Mar or provide a transportation link between the County and City on the project site. No revisions to the EIR are necessary.

5.6 The project parcel is not located within the City of Arroyo Grande Sphere of Influence, and the City is not considering annexation (personal communications, Kelly Heffernon; December 2, 2003). No revisions to the EIR are necessary.

03/15/04 16:09 FAX 805 549 3077 CALTRANS, PLANING 002

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401-5415
PHONE (805) 549-3111
FAX (805) 549-3329
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Flex your power!
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March 15, 2004

SLO – 101 PM 11.83
Busick Tract Map
S890232T; Tract 1789
ED No. 90-061 DEIR

SCH # 1994041043

Ms. Julie Eliason
Planning Department
County of San Luis Obispo
County Government Center, Rm. 310
San Luis Obispo, CA, 93408-2040

Dear Ms. Eliason:

The California Department of Transportation (Department) Development Review Staff has reviewed the above referenced document. As a result, the following comments were generated.

(General Comment) The Busick Project proposes to construct 16 single-family residential units on 47 acres adjacent to U.S. Route 101, just south of the City of Arroyo Grande, within San Luis Obispo County jurisdiction. The location of this proposed private development may pose a problem. It appears that the Busick project is within the footprint of proposed alternatives scoped in the September 2003, Project Study Report (PSR) for the construction of an interchange at 101/El Campo Road. This should send a signal to the Lead Agency for caution, that a potential conflict may exist between implementation of the existing, identified engineering solution to the problem at 101/El Campo as it competes for land with the proposed Busick project. **6.1**

The Department requests that the Lead Agency review the various alternatives (Alternative # 4 for instance) scoped in the PSR, as all are slated for further study in the next phase of project development, in this case, the Project Report and Environmental Document (PA&ED) phase. This will allow the County to confirm that the spatial needs of the proposed new interchange (I/C) will be preserved. This will keep costs of constructing the I/C down and ensure that it will be constructed. The County may want to consider the option of requesting from the applicant, an irrevocable offer of Right of Way (R/W) for the footprint of the new 101/El Campo I/C and appurtenant facilities. **6.2** **6.3**

"Caltrans improves mobility across California"

03/15/04 16:09 FAX 805 549 3077 CALTRANS.PLANING 003

(Ms. Eliason)
March 15, 2004
Page 2

1. (Ref. Page V-61, Section E *Traffic and Circulation*, subsection b, *Intersection Operations*) This section of the traffic & circulation study states that, "based on existing conditions, a right turn lane is warranted on the southbound Highway 101 approach to El Campo." The Department requests that construction of the right-turn lane be made a project specific condition of approval for this project. Please be advised that for work done in the Department's R/W, the applicant will need an encroachment Permit. Please contact Mr. Steve Senet (549-3206) for information on the encroachment permit process. **6.4**

2. (Ref. Page V67, TR/mm-1) The Department agrees that the applicant should be required to contribute a pro rata share of the costs of constructing the Route 101/El Campo I/C. However, this mitigation strategy might best be identified in Section 6, as mitigation for cumulative impacts. **6.5**

Thank you for including the Department in review of the DEIR. If you have any questions, please contact me at 549-3683.

Sincerely,

James Kilmer

James Kilmer
District 5
Development Review

cc: File, D. Murray, R. Barnes, T. Houston, S. Senet, R. DeCarli - SLOCOG

"Caltrans improves mobility across California"

6. California Department of Transportation

6.1 Comment noted. No revisions to the EIR are necessary.

6.2 The City of Arroyo Grande is the project proponent for the El Campo Road/Highway 101 Interchange Project. Based on conversations with the City of Arroyo Grande, the El Campo Road/Highway 101 Interchange Project is not currently being pursued based on lack of funding, and there is not a scheduled timeframe for the next phase of analysis (Rob Strong; March 23, 2004 and Don Spagnolo; March 25, 2004). The City will identify the physical changes and environmental impacts potentially resulting from the proposed interchange project during the environmental review phase of that project. No revisions to the EIR are necessary.

6.3 The City of Arroyo Grande is the project proponent for the El Campo Road/Highway 101 Interchange Project, and would be requesting right-of-way acquisition at the appropriate time. No revisions to the EIR are necessary.

6.4 Refer to response to comments 1.3 and 3.2.

6.5 Refer to response to comment 1.3. The EIR has been revised to identify a significant, adverse, unavoidable (Class I) impact resulting from the proposed project's trip contribution to an existing deficient intersection at the El Campo Road/State Route 101 intersection (refer to Section V.E.5.a).

JH LAND PARTNERSHIP, L.P.
1525-B E. MAIN STREET
SANTA MARIA, CA 93454
(805) 929-7184
(805) 929-1494 FAX

March 11, 2004

Ms Julie Eliason
Environmental Coordinator
County of San Luis Obispo
Division of Environmental and Resource Management
Department of Planning and Building
County Gov. Center, Room 310
San Luis Obispo, CA 93408

RE: Applicants Comments to Draft EIR County Case Nos. 1789 (S890232T) ED90-061

Dear Ms Eliason:

In summary, the DEIR completely addressed all of the issues that have been raised over the 17 years that we have been involved in processing VTTMAP 1789 and the Applicant agrees to the mitigation measures stated therein rendering any impacts insignificant with the following comments: **7.1**

1. **Change of Address of Owner/Applicant**: The new address is 1525-B E. Main St., Santa Maria, CA 93454, Attn: Haythem Dawlett. **7.2**

2. **III-5 Project History**

Project Summary - The Applicant is proposing a subdivision of approximately 47.54 acres into 16 single-family lots at a density of approximately 1 unit per 3 acres. This is significantly less dense than the existing zoning on the property (RES Suburban) which allows 1 unit per 1 acre with community sewer, which the Applicant has secured through annexation to the South SLO County Sanitation District. Similarly, under the County's Clustering Ordinance, the site could potentially be subdivided up to 47 lots. The Applicant's substantial reduction of density on the property below that allowable under the County's General Plan represents Applicant's effort to conform to the neighborhood. Also included in this project's development plan is a provision for open space easements to preserve oak woodlands on the site. **7.3**

3. **II-6 Access**

The applicant has been negotiating with the Falcon Ridge HOA for an easement agreement to facilitate the access to El Campo and Los Berros via Coast View and Falcon **7.4**

1

Ms Julie Eliason
Environmental Coordinator
County of San Luis Obispo
Division of Environmental and Resource Management
Department of Planning and Building
February 12, 2004
Page 2

Crest. It is hoped this agreement will be finalized prior to the approval of the Final EIR for VTT1789. As part of the agreement with the Falcon Ridge HOA, the Applicant has agreed among other items to make current needed repairs to the paving of Coast View and Falcon Crest from Los Berros to El Campo, relocate the El Campo gate for safer stacking of automobiles, include deed restrictions similar to Falcon Ridge's, and limit heights on certain lots to avoid blocking existing homeowner's views. If a mutually acceptable agreement is not reached with the HOA then the applicant will file a request with the County to accept the offer of dedication for Tract 1225 and the applicant will prepare the improvement plans for the accepted roads (Coast View and Falcon Crest) with access to Los Berros and El Campo pursuant to Title 22 of the County Land Use Plan and development requirements. **7.4 cont'd.**

4. Class 2 Impacts II-13 Visual Resources

It should be noted that absent this project there are visual impacts currently existing both uphill and downhill which include large residential structures within Falcon Ridge Estates, Vista Del Mar and the mobile home park which bound the site to the North, South and West. **7.5**

5. III-15 Drainage

The applicant will, prior to the recordation of the Final Map, prepare construction plans by a licensed civil engineer that provide for proper drainage and retention in accordance with the State and County's Ordinance, Codes and requirements. **7.6**

6. IV-5 Consistency Analysis. This project **is** consistent with the County's residential density and Land Use Ordinance (Title 22). **7.7**

7. V-67 TR/Impact 1

The applicant will contribute a "fair share" towards future improvements at the State 101 and El Campo Intersection through its payment of County Road Fees. **7.8**

8. Comments to City of Arroyo Grande Letter dated March 9, 2004

In review of the above referenced letter, it should be noted that the specific project impacts raised by the City are all addressed in the DEIR with mitigation measures rendering any such impacts insignificant. Specifically: **7.9**

* The Court in the Santa Maria water litigation recently issued an opinion finding **no** clear and convincing evidence of an overdraft in the basin. Moreover, Rural Water **7.10**

2

Ms Julie Eliason
Environmental Coordinator
County of San Luis Obispo
Division of Environmental and Resource Management
Department of Planning and Building
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Page 3

Company is providing water service to this site and has accounted for the water use since the early 1990's. **7.10 cont'd**

* A traffic analysis was completed during the preparation of this DEIR and it was found the relatively small amount of traffic from 16 homes on the road or freeway systems will not materially deteriorate the existing levels of service, and that the payment of it "fair share" towards by way of County traffic fees will reduce any impacts to insignificant. **7.11**

* Contrary to the City's suggestion of potential alternative access, the City of Arroyo Grande recently precluded any project access through the City by implementing and recording a one-foot dedication between Vista Del Mar TT2206 and this site. In mandating that one-foot "barrier", the City sought to ensure that no traffic from this project (or Falcon Ridge) could access City maintained roads. Moreover, the DEIR fully examined other project access routes and properly concluded, as did the County when it reserved the offer of dedication for Tract 1225, that the only viable primary access for this project was El Campo and Los Berros through Coast View and Falcon Crest. **7.12**

* The DEIR addresses mitigation measures that will reduce any impact on air quality to insignificant. No mass grading is contemplated, with the onsite construction primarily for street and utility improvements. Moreover, given the custom nature of the proposed project, the residences would be developed individually over several years with much of the land on these large lots being kept in its natural state. **7.13**

We appreciate the City of Arroyo Grande's comments and hope our comments reflect clarifications from the applicant to these issues.

Thank you for this opportunity to comment on the DEIR. We look forward to finalizing it and the tentative tract map after this long and arduous 17-year process. **7.14**

Sincerely,

Haythem S. Dawlett
Partner

cc: Ty Green, Esq.

3

7. JH Land Partnership, L.P.

7.1 Comment noted. No revisions to the EIR are necessary.

7.2 The EIR has been modified to reflect change in address (refer to Section III.A).

7.3 Comment noted. No revisions to the EIR are necessary.

7.4 Comment noted. No revisions to the EIR are necessary.

7.5 Comment noted. No revisions to the EIR are necessary.

7.6 Comment noted. No revisions to the EIR are necessary.

7.7 Comment noted. No revisions to the EIR are necessary.

7.8 Refer to response to comments 1.3 and 3.3.

7.9 Comment noted. No revisions to the EIR are necessary.

7.10 Comment noted. No revisions to the EIR are necessary.

7.11 Comment noted. No revisions to the EIR are necessary.

7.12 Comment noted. No revisions to the EIR are necessary.

7.13 Comment noted. No revisions to the EIR are necessary.

7.14 Comment noted. No revisions to the EIR are necessary.

RECEIVED
FEB 04 2004
SLO Bldg

Victor Lund
291 Falcon Crest Drive
Arroyo Grande, CA 93420
victor@wilsonvictor.com
805-473-9119 tel. 805-473-9118 fax

January 30, 2004

County Planning Department
Environmental Division

Regarding: Tract 1789; a.k.a. Busick Tract Map Draft EIR sch. No. 1994041043

I have read the Draft Environmental Impact Study (DEIR) regarding development on Tract 1789 outlining how access to the development is proposed to use the private roads located within the gated community of Falcon Ridge Estates, where I live. **8.1**

In March of 1994, the Falcon Ridge Estates Homeowners Association (FRHOA) pleaded with the County to consider the impact that the development of Tract 1789 would have upon our community. I appreciate the action taken by the County at that time and echo the same concerns that we had in 1994. **8.2**

Falcon Crest Drive and Coast View drive are the roads outlined in the DEIR that would be used to access Tract 1789. In purchasing my home, I was attracted to the Quality of Life standard that a Private Gated Community offers, and as such, paid a premium for my home. Included in the purchase of my home was the cost of the private roads, private gates, and the stewardship of maintaining those roads. The homeowners of Falcon Ridge continue to pool together resources to maintain the roads and other infrastructure of our community in an effort to maintain the Quality of Life that we pursued when purchasing our homes. **8.3**

I am adamantly opposed to any action that may be taken by the County which would lead to accepting the Offer of Dedication of our roads that was made at the time of tract map approval for Falcon Ridge Estates. I hope that the County will embrace our desire to maintain Falcon Ridge Estates as a Private Gated Community, and reject our Offer of Dedication. **8.4**

The FRHOA has expended considerable expense and time in an effort to come to an agreement with the developers of tract 1789 to conclude terms and conditions that would allow them to access their property without disturbing the Quality of Life in Falcon Ridge. **8.5** We are trying to be good neighbors despite cumulative circulation impact of as much as 400% on some of our roads. Our effort in this regard is motivated because we feel that the potential reduction in our Quality of Life exceeds the Circulation impact. **8.6**

I ask that the County refuse to accept any proposal to develop Tract 1789 in the absence of an agreement between the FRHOA and the developers of Tract 1789. **8.7**

Victor Lund

Falcon Ridge Resident

8. Victor Lund

8.1 Comment noted. No revisions to the EIR are necessary.

8.2 Comment noted. No revisions to the EIR are necessary.

8.3 The EIR was prepared in compliance with the California Environmental Quality Act (CEQA), which does not require the County (lead agency) to analyze affects to "Quality of Life". No revisions to the EIR are necessary.

8.4 The applicant obtained a road access agreement from the Falcon Ridge Estates Homeowner's Association on July 1, 2004; therefore, the Falcon Ridge Estates will remain a private gated community, and Coast View Drive and Falcon Crest Drive will not be incorporated into the County road system. This new information has been incorporated into the EIR (refer to Sections III.D.2 and Section V.E.1.b).

8.5 Refer to response to comment 8.3 above. The County of San Luis Obispo considers traffic impact thresholds based on effects to Level of Service. The traffic analysis of the EIR did not identify any significant impacts, including cumulative impacts, to the neighborhood road system on Coast View Drive or Falcon Crest Drive. No revisions to the EIR are necessary.

8.6 Refer to response to comments 8.3 and 8.5 above.

8.7 Refer to response to comment 8.4 above.

Nancy Morgan
240 Candice Court
Arroyo Grande, CA 93420
805 481-1765

March 1, 2004

County Planning Department
Environmental Department

Regarding: Track 1789; a.k.a. Busick Track Map Draft EIR sch. No. 1994041043

Dear Madame/Sir:

I have read the Draft environmental Impact Study (DEIR) regarding development on Tract 1789 outlining how access to our development is proposed to use the private roads located within the gated community of Falcon Ridge Estates, where my husband and I currently reside. **9.1**

I am adamantly opposed to any action that may be taken by the County, which would lead to accepting the Offer of Dedication of our roads that was made at the time of tract map approval for Falcon Ridge Estates. I hope that the County will embrace our desire to maintain Falcon ridge Estates as a Private Gated Community, and reject our Offer of Dedication. **9.2** **9.3**

Nancy Morgan
Nancy Morgan
Falcon Ridge Resident

9. Nancy Morgan

9.1 Comment noted. No revisions to the EIR are necessary.

9.2 Refer to response to comment 8.4.

9.3 Refer to response to comment 8.4.

William T Dreyer
275 Candice Court
Arroyo Grande Ca. 93420

Telephone 805 473 4770 Fax 805 489 6493 E-mail wtdrever@charter.net

March 1, 2004

June Eliason,
County Planning
San Luis Obispo, CA

Dear Ms Eliason,

We have reviewed the DEIR on the Busick Tract (Tract 1789) and are very concerned about the findings. **10.1**

As a resident of Falcon Ridge Estates, we find it unacceptable to even consider opening our private roads for public use. This small gated community of less than 50 homes was designed, developed and built to maintain a rural-quiet setting. To change that would be a tremendous personal loss. Additionally it would greatly reduce the value of our homes. **10.2**

I would encourage you to do an in-depth analysis of traffic impacts and personal impacts of opening our roads to the public. **10.3** Additionally I believe further analysis is required of alternate routes before making this decision. **10.4**

Sincerely,

Jan & Ted Dreyer

10. William T. Dreyer and Jan Dreyer

10.1 Comment noted. No revisions to the EIR are necessary.

10.2 Refer to response to comment 8.4.

10.3 Refer to response to comments 8.4 and 8.5.

10.4 Refer to response to comment 3.7.

February 11, 2004

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MAR 0 9 2004
Planning & Bldg

Julia Eliason, Environmental Division
County Planning and Building Dept.
County Government Center, Rm. 310
San Luis Obispo, CA 93408-2040

Dear Ms. Eliason,

You have invited interested parties to comment on the EIR for the Busick Tract Map, ED90-061, S890Z3Zt, SCH#1994041043, and they are contained herewith. **11.1**

First I'd like to address the issue of drainage as it pertains to my property at 270 Pleasant Lane, directly adjacent to and downslope of lots 16, 14 and 13 as noted in the EIR map for Tract 1789. Historically drainage across lot 16 has flowed across Falcon Ridge Lot 9, my eastern neighbor, while the upslope portions of lot 14(and a small portion of lot 13) would flow across my property. As I understand the discussion of drainage in the EIR, the construction of the continuation of Coast View Road would alter ground slopes such that the portion of water that flowed across Falcon Ridge Lot 9 would now be channeled into a retention basin on lot 13. This is an alteration, in fact an increase, of historic flow into the below ground pipe that drains water off 1789, under Sunrise Terrace and into the Arroyo Grande Channel. As I understand county planning policy, the volume of water that leaves a property has to match historic flow, in spite of development. The historic drainage of 1789 will be altered by its development. The altering of this historic drainage pattern is said to be mitigated by the construction of a drainage retention basin on lot 13 that will allow for metered flow of the increased volume. **11.2**

Metered flow is a euphemism for slowing down the water that will be forced through grading into a concentrated area. According to Richard Marshall, the county requires developers to post a one-year bond to prove that a retention basin will drain within 7-days. After one year of successful performance, no further requirements are made. **11.3**

According to the University of California, Davis, mosquitoes in California may complete a life cycle in 4 days, three-days short of the county drainage requirement. The 7-day, one- year performance expectation is inadequate in light of the insect's life cycle. As well, the California Department of Health certifies that the West Nile Virus has been found in mosquitoes within California. The ultimate hosts for the mosquitoes are migrating birds, which I myself have in my backyard, but humans and horses are known intermediate hosts for the virus and become infected as well. In fact, senior citizens are particularly susceptible to the West Nile Virus and this retention basin is located directly adjacent to a very large Senior Mobile Home Park. Clearly the basin will offer an unprecedented opportunity for mosquito breeding and could lead to or contribute to the public health threat of West Nile Virus in San Luis Obispo County. The county has no vector control program and no way of determining if mosquitoes in this area are carrying **11.4**

the virus, nor any way of controlling mosquitoes that may carry this or other harmful viruses. **11.4 cont'd**

Through its historic creation, the retention basin creates the opportunity for mosquito-borne viruses to be promulgated. There is no mitigation offered for the creation of a mosquito habitat nor is there any discussion of its possible consequences within the EIR. This is inadequate for a potential health risk of such severity adjacent to a particularly susceptible population. **11.5**

Because there has been no tentative approval of Tract 1789, there are no "Conditions of Approval." In the case of the retention basin there need to be conditions for drainage that avoid completion of the mosquito life cycle, and a lifetime certification that these requirements are met. This is not stated in the EIR and is a deficiency. **11.6**

Further, I'm told that the city of Arroyo Grande will channel sewage for tract 1789 through its line and onto the Oceano Sewer Plant. I was told by Public Works that Arroyo Grande is one of the few cities that may be paid to take storm and road run-off and channel it into the citywide system. If this is the case, consideration of this alternative should be examined as an alternative to creating a mosquito lagoon. **11.7**

No consideration is given to the lack of percolation of site soils insofar as its effect on the basin. I am told by Public Works that drainage basins are expected to be permeable and allow seepage underground. If this is true of this site, there is neither investigation nor elucidation of this possibility within the EIR. Here in Falcon Ridge we have discovered that water will seep into the soil to a certain depth and will flow laterally if it encounters a clay layer. If that occurs within the basin on 1789, that water will flow laterally onto my property; representing a disturbance of historic drainage, which is unacceptable to me. There is no discussion of this potential in the EIR, a deficiency of EIR scope, which was ordered to consider all aspects of drainage onto adjacent properties. Remember, leach fields have failed on Pleasant Lane, and were replaced with drywells due to lack of percolation. There were instances of sewage flowing laterally across a property because of an inability to penetrate the underlying clay layer. Has this been addressed? If so, it has not been addressed in the EIR and represents a deficiency. **11.8**

As an interested party, the grading of the adjacent property is of concern to me. As the EIR notes, "the soils at the site are erodible and would become more so when disturbed during grading and construction." The interested party questions certification prior to review of a grading plan. Interested parties can reasonably require an opportunity to review such grading plans prior to EIR certification. The time sequence of this EIR process necessarily places me at a disadvantage. I do not know by reading the EIR whether the slope above me will be graded or cut in anyway. This despite the fact that the soil engineer notes the erodible nature of the soil and its likelihood to travel when disturbed. The soil will travel across my property if it is disturbed, another historic alteration of drainage patterns. The lack of access to grading plans imposes ignorance upon adjacent property owners and is a deficiency that should be addressed by the EIR. **11.9**

A drainage retention basin located in the development adjacent to 1789, tract 2207, is now providing a preferential ground squirrel habitat. Because the site is fenced and vegetation is maintained at a low height, ground squirrels have flourished in unprecedented numbers on the site. I would not like ground squirrels to have an unprecedented favorable environment immediately adjacent to my property. The squirrels are known to carry vermin that house communicable diseases for both humans **11.10**

and other animals. No attention has been paid to squirrel eradication during the dry months and represents a deficiency in the EIR. **11.10 cont'd**

The tunneling of ground squirrels creates new flow patterns for drainage. A retention basin upslope of my property with ground squirrel tunnels will necessarily allow subterranean lateral flow that will cross my property and surface. At present the ground squirrel population is low because of predation by raptors and coyotes. Fencing will prevent coyote predation and may affect raptor predation. There is no consideration of an increase in squirrel population nor its drainage consequences in this EIR. **11.11**

The EIR for proposed Tract 1789 has omissions of scope that could lead to serious health, drainage and erosion consequences for its immediate neighbors as well as those within the region. I would ask that the EIR remain uncertified until these omissions are satisfactorily addressed. **11.12**

Sincerely,

Kelly Kimball

Kelly Kimball
270 Pleasant Lane
Arroyo Grande, CA 93420
(805) 473-1873

11. Kelly Kimball

11.1 Comment noted. No revisions to the EIR are necessary.

11.2 As discussed in the EIR, the applicant proposes to manage stormwater by directing flow from pervious surfaces into a storm water system including curbs, drain inlets, underground pipes, and a detention basin (refer to Section V.B.5.a). The proposed stormwater management system and associated drainage calculations were analyzed in the EIR, and no significant impacts were identified (refer to Section V.5.a). The County Department of Public Works reviewed the EIR, and did not identify any significant issues associated with the proposed stormwater management system and detention basin (Richard Marshall; February 5, 2005). No revisions to the EIR are necessary.

11.3 Based on additional analysis of the proposed detention conducted by the applicant and reviewed by the EIR consultant, the detention basin would be designed to drain with 24 hours following a rain event, within the seven-day criteria established by the County Public Works Department. The EIR has been revised to include this additional descriptive information (refer to Section V.B.5.a).

11.4 The County Agriculture Department established a monitoring program to detect West Nile Virus in San Luis Obispo County, including sentinel chicken flocks and mosquito survey traps in July 2003 (Brenda Ouwerkerk; July 1, 2003). In addition to this existing monitoring program, the County of San Luis Obispo Board of Supervisors approved a joint request from the County Public Health Department and Agricultural Commissioner on March 23, 2004 to develop and implement a Mosquito Abatement Program. According to the California Department of Health Services California West Nile Surveillance Information Center, the breeding period for mosquitoes, and the period when West Nile Virus is most prevalent, is May through October (http://www.westnile.ca.gov/). The proposed detention basin would only contain water during and within 24 hours following a rain event, which typically occur October through May; therefore the likelihood of mosquitoes breeding in the proposed detention basin is low. No revisions to the EIR are necessary.

11.5 Refer to response to comment 11.4.

11.6 Refer to response to comment 11.4.

11.7 Refer to response to comment 11.4.

11.8 Based on additional analysis conducted by the applicant's engineer and reviewed by the EIR consultant, the proposed detention basin would drain within 24 hours. The percolation properties of the underlying soils were not taken into consideration for the drainage calculations; however, the calculations are conservative and assume that the underlying soils are impervious. The drainage report assumes the basin would discharge all stormwater into the existing storm drain pipe (Garing Taylor and Associates; January 31, 2005).

11.9 The proposed preliminary grading plan for tract improvements is shown in Figure III-5 of the EIR. The applicant is not proposing building envelopes or lot development. Each lot would be sold and developed individually by each future property owner, including grading for driveways and building pads. The EIR assumed that future residences would be similar to the large-home development within Falcon Ridge Estates, and considered a worst-case scenario with regard to site disturbance and effects to drainage patterns, including future grading associated with individual development of each lot (one to two acres per lot). The EIR has been revised to clarify the assumed worst-case scenario (refer to Section III.D.3).

Section V.B. (Drainage and Erosion) of the EIR identified a potential impact associated with site disturbance during the wet season, and mitigation measure DE/mm-1 in the EIR states that: "…the applicant and/or individual lot owner shall prepare and implement a Sedimentation and Erosion Control Plan per the requirements of [County Land Use Ordinance] LUO Section 22.52.090." Implementation of this mitigation measure, and compliance with County Ordinance, would prevent erosion and down-gradient sedimentation during implementation of both tract improvements and the future individual development of each lot.

11.10 An abundance of ground squirrels has been observed within the existing drainage swale and throughout the project site. The existing grassland areas provide favorable habitat for this species. Construction of the proposed development would reduce the quality of habitat for ground squirrels and would likely result in a decrease in the numbers of ground squirrels onsite. Based on a conversation with the County Environmental Health Division, the primary health concern regarding ground squirrels is that they can be hosts to fleas, which can be vectors for disease such as bubonic plague (Susan Ayres; January 12, 2005). The last reported case of bubonic plague in the area (City of San Luis Obispo) was 1924. Ground squirrels do not survive if they are hosts to fleas carrying bubonic plague, and entire populations of ground squirrels will rapidly die off if infected. On January 25, 2005, the County Division of Environmental Health is requesting Board of Supervisors approval of a benefit assessment funded program to expand the existing vector control program to include rodents such as ground squirrels (Susan Ayers; January 12, 2004). The Board of Supervisors authorized the County Administrative Officer to implement actions necessary to continue the current vector control program. Based on the loss of ground squirrel habitat as a result of the proposed project, and County-wide monitoring of disease hosts and vectors, and the continued implementation of the County vector control program, implementation of the proposed project would not likely result in significant health hazards caused by the presence of ground squirrels. No revisions to the EIR are necessary.

11.11. Refer to responses to comments 11.3 and 11.10. There are ground squirrel tunnels within the existing natural drainage feature. Construction of a detention basin would not likely increase the quantity of ground squirrels on the project site or tunnels within the drainage feature or future detention basin. No revisions to the EIR are necessary.

11.12. Refer to responses to comments 11.3, 11.9, 11.10, and 11.11 above.

SLO CNTY
PLANNING/BUILDING
DEPT
2004 MAR 15 PM 1:13

Mr. & Mrs Heyne
2725 Hawk View Court
Arroyo Grande, CA 93420
March 10, 2004

Ms. Julie Eliason, Environmental Specialist
Division of Environmental and Resource Management
Department of Planning and Building
County Government Center, Room 310
San Luis Obispo, CA 93408-2040

RE: EIR on Tract 1789

Ms. Eliason,

I am a resident of Falcon Ridge, the private gated neighborhood located adjacent to the proposed development known as Tract 1789. I have read the draft version of the EIR and have major concerns over the recommendation regarding access to the proposed development. **12.1**

The EIR concludes that access should be provided though our neighborhood, either by agreement or by forcing the removal of our gates and allowing pubic use of our roads.
Each of these scenarios is grossly unfair to the 46 property owners in our neighborhood. Forcing us to allow another 16 homes to use our roads is bad enough. Forcing us to remove our gates and allow unlimited public traffic is intolerable. **12.2**

All of the Falcon Ridge residents have invested significant dollars in the quality of life that we have. Why should we be required to suffer damage to that quality of life simply to benefit a developer that wants to profit from our loss? **12.3**

When the developer gave up access to tract 1789 by way of the pubic streets of Arroyo Grande in order to gain approval of his other development, Vista del Mar, he and he alone, landlocked Tract 1789. His own actions to gain the approval for Vista del Mar created the problem that we will be required to fix if the recommendation is adopted. **12.4**

In the draft EIR on page VIII-10, paragraph 4, TR/mm-2, the language effectively threatens the homeowners in Falcon Ridge that if we don't agree to provide access to Tract 1789 through our neighborhood, that the preparer of the EIR recommends that the County force us to lose our gates and open our streets to public access allowing unlimited flow of traffic throughout out our previously quiet streets. **12.5**

I sincerely request that you require the preparer of the EIR to study and report on all available methods of access to Tract 1789. **12.6**

Sincerely,

Mr. & Mrs. Heyne

12. Mr. and Mrs. Heyne

12.1 Comment noted. No revisions to the EIR are necessary.

12.2 Refer to response to comment 8.4.

12.3 Refer to response to comment 8.3.

12.4 Refer to responses to comments 1.3 and 3.7.

12.5 Refer to response to comment 8.4.

12.6 Refer to response to comments 1.3, 3.7, and 8.4.

Mr. & Mrs Throndson
2750 Hawk View Court
Arroyo Grande, CA 93420

SLO CNTY
PLANNING/BUILDING
DEPT
2004 MAR 15 PM 1:12

March 11, 2004

Julie Eliason, Environmental Division
County Planning and Building Department
County Government Center, Room 310
San Luis Obispo, CA 93408-2040

RE: Draft EIR on Busick Tract Map

Julie,

After reviewing the EIR on Tract 1789, it is apparent to us that the EIR's recommended alternative to resolve the access issue is that access should be provided over the streets of our neighborhood, Falcon Ridge. This determination has been made without a complete and balanced study of the alternative routes. **13.1**

The alternative of access across Orchard Street was eliminated simply because the City of Arroyo Grande doesn't want it. **13.2** The alternative of access by the construction of a road from El Campo was eliminated because impacts to El Campo would not be avoided and **13.3** would create some negative visual impact as seen from Highway 101. The alternative of access from Valley Road was not even mentioned. **13.4**

It's important to see that NO evaluation of the negative impact to the residents of Falcon Ridge was made. This lack of consideration of the interests of the homeowners in Falcon Ridge is grossly unfair and seems to reflect a bias towards the interests of the developer. **13.5**

Please require the writers of the EIR report to revisit the issue of access and provide a COMPLETE analysis of every possible access route. All positives and negative for every possible route must be evaluated in order to make a reasoned recommendation. **13.6**

Sincerely,

Robert Throndson & Mary Throndson

Mr. & Mrs. Throndson

13. Mr. and Mrs. Throndson

13.1 Refer to responses to comments 3.7 and 8.4.

13.2 Refer to response to comment 3.7.

13.3 As discussed in the EIR, consideration of alternative access from El Campo was rejected because the alternative would not avoid or minimize traffic, erosion, biological, or visual impacts (Section VI.A.4). No revisions to the EIR are necessary.

13.4 Refer to response to comment 3.7.

13.5 Refer to responses to comments 8.3 and 8.5.

13.6 Refer to responses to comments 3.7 and 13.3.

SLO CNTY
PLANNING/BUILDING
DEPT

2004 MAR 15 PM 1:12

Mr. & Mrs. Naylor
2720 Hawk View Court
Arroyo Grande, CA 93420

March 12, 2004

Julie Eliason, Environmental Division
County Planning and Building Department
County Government Center, Room 310
San Luis Obispo, CA 93408-2040

Dear Julie,

We have read the draft EIR Report on Tract 1789. We have a couple of items of concern as listed below.

1. Access to Tract 1789 and the potential public use of the roads in our neighborhood. Our community of Falcon Ridge was approved by the County and developed many years ago as a private gated neighborhood. We purchased our home after carefully considering the value of the private access and the quality of life that the private access provides. Now, many years later, the draft EIR report has recommended that access to Tract 1789 be provided by our homeowners and neighborhood. **14.1**

We are aware that the developer of 1789 willingly gave up access to his Tract 1789 by way of Orchard Street and Castillo del Mar in order to get approval from the City of Arroyo Grande to build Vista Del Mar, a subdivision on the land he owned within the city limits of Arroyo Grande. This action, by the developer, effectively landlocked Tract 1789. **14.2**

Now, the draft EIR states that access by way of Orchard Street and Castillo del Mar is not a viable option because the City of Arroyo Grande "…is strongly opposed to allowing traffic through this location." Well, the homeowners in Falcon Ridge "are strongly opposed" as well. **14.3**

Why is the EIR recommending access though our neighborhood without studying the negative impact on our quality of life? **14.4** Why is the EIR unwilling to consider access by way of the route to Valley Road that was used during the construction of the developer's Tract 2207? **14.5** All possible alternatives for access to 1789 should be thoroughly evaluated before a recommendation is made. **14.6**

Let us summarize. The developer and the City of Arroyo Grande together, willingly created the access problem for Tract 1789 and now, without thoroughly evaluating all alternatives, the EIR is recommending that our neighborhood suffer a diminishing of our **14.7**

quality of life in order to fix the problem that they created. The EIR has recommend access be provided though the use of our streets, either privately or if necessary, publicly. Either way, traffic in our neighborhood will increase, causing increased damage to our quality of life. **14.7 cont'd**

2. Water

The EIR fails to adequately address the issue of adequate water supply. The recommended water source is Rural Water Co, the current supplier of water to our neighborhood. The ability of Rural Water Co. to add another 16 homes to its service base has not been adequately evaluated by the EIR. **14.8**

The EIR has clearly failed to adequately address the above concerns. Further study on these issues is required to ensure that our quality of life is not compromised for the financial benefit of the developer. **14.9**

Sincerely,

Ed Naylor & Rita Naylor

Mr. & Mrs. Naylor

14. Mr. and Mrs. Naylor

14.1 Comment noted. No revisions to the EIR are necessary.

14.2 Refer to response to comment 3.7.

14.3 Refer to response to comment 3.7.

14.4 Refer to response to comment 8.3.

14.5 Refer to response to comment 3.7.

14.6 Refer to responses to comments 3.7 and 13.3.

14.7 Refer to responses to comments 8.3, 8.4, 8.5, and 13.3.

14.8 Refer to response to comment 3.3.

14.9 Refer to response to comment 8.3.

FALCON RIDGE ESTATES HOMEOWNER'S ASSOCIATION INC.

3563 Empleo Street, Suite B, San Luis Obispo, CA 93401
(805) 544-9093 (Fax) 544-6215

SLO CNTY PLANNING/BUILDING DEPT 2004 MAR 15 PM 1:13

March 12, 2004

Ms. Julie Eliason, Environmental Specialist
Division of Environmental and Resource Management
Department of Planning and Building
County of San Luis Obispo County Government Center, Room 310
San Luis Obispo, CA 93408

Dear Ms. Eliason:

These comments are submitted by the Falcon Ridge Estates Homeowner's Association ("Falcon Ridge"), the homeowner's association which controls Tract 1256, a forty-six lot residential subdivision adjacent to the southern boundary of proposed Tract 1789. **15.1**

The roads within Tract 1256 are owned and controlled by Falcon Ridge. These are private roads, and there is no right of public access or use, nor is there any existing right for Tract 1789 to use these roads. **15.2**

Nonetheless, the DEIR states that the project proponents propose to use Tract 1256 roads to access Tract 1789. The DEIR states that Tract 1256 roads will be available for access to Tract 1789 through one of two alternative means. One, that the County of San Luis Obispo will accept a prior offer of dedication thereby making the roads public, or two, that Falcon Ridge and the owners of Tract 1256 will enter into a voluntary easement agreement. **15.3**

Falcon Ridge is in the process of negotiating with the owners of Tract 1789 regarding the terms of a voluntary easement agreement. The negotiations are not complete; meaning that the final terms of an agreement have not been settled upon by the parties handling the negotiations. Furthermore, once the final terms have been settled upon by the negotiating parties, the agreement will still have to be approved by the lot owners in Tract 1256 before it can be completed. While Falcon Ridge intends to continue the negotiations in good faith, these comments to the DEIR are submitted in the event that no final agreement is reached in regards to a road easement. **15.4**

It should be emphasized that Falcon Ridge will oppose any effort to make the roads in Tract 1256 public. There is an existing private gate that was installed with the permission of the County. Furthermore, the County agreed to allow the roads to be private because they were substandard roads that predated the creation of Tract 1256. At the time the County granted approval of the private roads it recognized the benefit of avoiding disturbance of sensitive wetland and riparian areas that would be required were the roads upgraded to County standards. The owners of property in Falcon Ridge have relied on the County's decision to allow for private roads, and as mentioned above, there **15.5**

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is no right to now convert the roads to public use and Falcon Ridge will oppose any effort to do so. **15.5 cont'd**

Returning to the subject of the easement agreement that is in the process of being negotiated; once such an agreement is finalized, Falcon Ridge will agree to allow the private use of its roads for Tract 1256 on the terms and conditions that will be spelled out in the final agreement. Also, Falcon Ridge will, in a manner consistent with the to-be-agreed-upon agreement, modify its comments to the subject DEIR and to Tract 1256. **15.6**

Within the context of these introductory remarks, Falcon Ridge submits the following comments to the DEIR. **15.7**

Access. Public Use of Falcon Ridge Roads. V-69, II-15, III-6
The Statement of Work (SOW) Revisions and Additions required evaluation of the traffic volume coming from Tract 1789 through Falcon Ridge, and the traffic analysis in Appendix D makes this limited evaluation. The analysis is intended to support the recommendation that JH arrange an easement agreement with Falcon Ridge to take traffic from Tract 1789. Based on that analysis alone, the DEIR also recommends an alternative: take Falcon Ridge roads for public use, just to give Tract 1789 access. The DEIR says in TR/Impact 2, that the residual impact after Class II Mitigation Measure (TR/mm-2), of taking Falcon Ridge roads public will be Insignificant. There is no traffic analysis to support this Alternative. There is no description of the resulting impact on Falcon Ridge, and no proposed mitigations for that impact. **15.8**

Using only traffic from Tract 1789, it says that the cumulative volume on Falcon Crest Drive would be just at, but not above, the county standard for A-1 rural roads of 400 trips per day. It states therefore that the road would not have to be widened to county standards for higher volume A-1 rural roads. Clearly, the added traffic volume from public use would exceed the 400ADT threshold. This would require widening the roads and the low water crossing which would significantly impact our utility easements, and the 22 properties with their 30 driveways that enter the two roads. **15.9**

The Falcon Ridge community would derive no benefit from opening its roads to public use. On the contrary, there would be at least three major impacts. First, the very large increase in the volume of traffic would create a safety hazard for our children, our pets, and our walkers and joggers who now use our private roads regularly and safely. **15.10**

Second, removing the gates in Falcon Ridge would significantly reduce property values. One realtor's estimate of the value added by privacy gating in the local real estate market is about five percent. The 46 properties in Falcon Ridge would lose between $1,600,000 and $2,300,000 in 2003 dollars if the roads were taken for public use. As the local market continues to inflate, that loss will increase. **15.11**

Third, taking our roads for public use to give Tract 1789 public access would also destroy the quality of life standard of this private gated community. Falcon Crest roads are substandard roads, lightly paved over old fire roads, and only 25 feet wide, with a low water crossing over Los Berros Creek that is also substandard. Modification of this water crossing was specifically avoided so as to avoid significant negative impacts to **15.12** **15.13**

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wetland and riparian habitat. The County waived its standards and approved both the roads and the low water crossing subject to a limit on average daily trips, approved gating the development, and declined the offer of dedication to public use. None of the adverse environmental impacts that were expressly and intentionally avoided by the privatization of the Falcon Ridge roads have been analyzed in the DEIR. Specifically, there has been no analysis of the impacts to the wetland and riparian areas at the Los Berros Creek water crossing, nor to the wildlife that may inhabit that area. **15.13 cont'd**

Homeowners have since purchased or built homes, improved their homes and grounds, and have systematically contributed to upkeep of roads and common areas for over 15 years to maintain and enhance the quality of life standards they chose, in the reasonable expectation that they would be able to continue to enjoy the quality of life and the economic value of a small, private, gated community. Further, the four-fold increase in traffic will be a safety hazard to our walkers, bikers, children and pets. There has been an inadequate consideration and evaluation of impacts to human safety and aesthetics that would result from a change in the volume and character of traffic were private roads in Tract 1259 changed to public roads. **15.14** **15.15** **15.16**

To summarize the concerns expressed above, the DEIR is deficient in its analysis of impacts to biological resources and traffic and circulation, in that it fails to analyze the impacts that would result from converting the existing Falcon Ridge roads from private roads to public roads. The conversion would involve physical changes such as road widening and the widening of the Los Berros low water crossing. These physical changes involve very real and substantial impacts to the physical environment, including impacts to wetland and riparian areas none of which are the subject of any analysis in the DEIR. Likewise, there is no analysis of the impact to the social setting in Falcon Ridge that would result from opening the Falcon Ridge roads to the public, including a lack of analysis of safety issues. **15.17**

Access, through Vista del Mar. VI-8.
The SOW requires analysis of alternative circulation patterns. One option is access through the other half of the Developer's full parcel, Vista del Mar (Tract 2207) in Arroyo Grande. The DEIR dismisses this option based on the city's "determination" not to allow access via that tract. Tract 2207 has at least three reasonable and practical traffic paths for Tract 1789 traffic. One is over the main road, Castillo del Mar, to Orchard Avenue. Another is through lot 40, which the developer dedicated in perpetuity to the city for use in traffic circulation, including but not limited to connection to US 101. A third is a route behind the High School to Valley Road, which the developer already used for construction in Tract 2207. **15.18**

The DEIR estimates (Appendix D) that Tract 1789 will generate 9.55 trips per day per lot or 153 average daily trips. This volume over Castillo del Mar to Orchard Avenue would have insignificant impact on the urbanized area of Arroyo Grande. The Orchard Avenue intersection was last rated at LOS C (LOS D during school arrival and departure times.) Since then Nipomo High School opened and this has reduced high school traffic at this intersection. The trips per day generated by Tract 1789 therefore would not degrade that LOS. **15.19**

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Experience shows that Falcon Crest Drive is used as a shortcut by non-residents who have obtained the gate code. If the gates were removed public traffic would undoubtedly increase beyond the estimated 153 trips per day as the public uses the route. No analysis of that greater traffic volume was provided. The resulting impact on Falcon Ridge was not assessed, and no mitigations were offered. **15.20**

The DEIR also identifies an Environmentally Superior Alternative to the 16-lot JH project, an 11-lot alternative. It says this alternative would reduce the daily traffic trips from 154 to 106. While not mitigating the traffic impact on Falcon Ridge this alternative would substantially reduce that adverse impact. **15.21**

Access, within Tract 1789 to El Campo Road VI-8.
The DEIR does not identify the County office that "rejected the possible access route from El Campo Road to Tract 1789." The three reasons given are not well supported and should not eliminate this option, especially in favor of degrading the environment and quality of life in Falcon Ridge Estates by taking its roads public. The reasons given:

1. **Due to the amount of grading to be done.** The DEIR recommends accepting the project requirement to move 25,000 cu. ft. in grading the rest of the tract. The DEIR does not quantify the additional grading on this portion of the tract would be required: it would clearly not add greatly to this acceptable volume.

2. **"Likely" loss of "several" oaks**. The DEIR recommends accepting "removal or impact of up to 13 oaks" on the rest of the tract and replacing them with one gallon oaks at a ration of 4 to 1. See Fig.V.D.1. The "likely" impact on only "several" oak trees of this practical route cannot then be reasonably found unacceptable, especially with a 4 to 1 replacement ratio. An earlier study by Vaughan Surveys Inc demonstrated a practical route that minimizes impact on oak trees. **15.22**

3. **Visual impacts from Highway 101**. The photo-simulations in Fig. V.D.2. clearly show that an access road down to the tract's finger of property along the old US101 road bed to El Campo Rd. would not silhouette above the ridge line or otherwise impact the view, particularly if reasonable landscaping was required. We understand that that finger of property was originally purchased to add to the tract before Falcon Ridge Estates was established and that the purpose was to retain for the tract access to US101. This adds to the reasonableness and practicality of this potential access route.

For the above reasons the DEIR must recast its assessment of Traffic and Circulation to demonstrate the significant impact of taking Falcon Ridge roads public and either suggest reasonable and practical mitigation that could be reasonably considered, or find those impacts unmitigable. **15.23**

Traffic and Circulation Impact Mitigation. TR/mm-2. V-69
Mitigation Monitoring. VIII-11
The DEIR rejects all options for access except Falcon Ridge Estates (see Access above) and recommends two options for access, both through Falcon Ridge: **15.24**

4

(1) An easement agreement with Falcon Ridge, or
(2) Taking Falcon Ridge roads for public use.
The basis and rationale are in Appendix D (see below). **15.24 cont'd**

Falcon Ridge has been negotiating in good faith for over a year on a request from the project developer to grant a right of access through Falcon Ridge. Their proposal would include the County abandoning its right to accept our prior offer of dedication of our roads to public use, removal of our community from the South County Sanitation District Sphere of Influence (SOI) and requirements to effectively address health and safety impacts from a retardation basin and surface runoff in the proposed development. The developer also offers some road and entry improvements needed by the developer which, together with some added benefits for Falcon Ridge, are intended to partially compensate for the impact of their traffic flow. It is clear that the pollution, safety, and quality of life impacts of this traffic flow through Falcon Ridge's quiet gated community would remain. They cannot be effectively mitigated, except by use of the environmentally superior alternative, and cannot be reduced to insignificance. **15.25**

However, there are deficiencies in the analyses in the DEIR that prevent sound final judgments about the alternatives it mentions. **15.26**

Traffic Analysis Report. Impact on Falcon Ridge. Appendix D.
This report evaluates only the developer's desired access route through Falcon Ridge Estates as the SOW specified, but it does not provide complete analysis of the second, public use, option by measuring and evaluating the resulting traffic flow and volume. **15.27**

The report uses a 1981 study of metropolitan city streets to judge the "nuisance threshold" impact on quality of life in Falcon Ridge Estates. It cites a 1981 article describing impact of traffic volumes on safety and quality of life in San Francisco. It then describes an index called Traffic Infusion on Residential Environment (TIRE.) The TIRE Index represents the effect of traffic on the safety and comfort of human activities such as walking, cycling and playing in or near a street. The report suggests, using these city criteria, that there is no significant impact on Falcon Ridge. However, the TIRE Index does disclose that there will be significant impact on the rural residential environment of Falcon Ridge from Tract 1789 traffic. The predicted increased traffic volume from Tract 1789 alone is five times the amount the TIRE index defines as "noticeable." **15.28**

The analysis does not estimate the increased traffic from taking Falcon Ridge roads public. Despite the clear safety and comfort impact from Tract 1789 alone, the DEIR does not address either those impacts or recommend mitigation measures. **15.29**

The EIR must therefore finish its analysis of the access issue, and define the impact of the public use alternative on Falcon Ridge Estates. **15.30**

Drainage Impact and Mitigation Measures V-12, and
Consistency with Plans and Policies IV-1
County code requires retardation basins to have metered release of flow quantity, and must drain within seven days. County policy requires only a one-year check, but no **15.31**

5

ongoing assessments of drainage performance. The Drainage analysis in Section V.5. does not assess consistency with this County policy. **15.31 cont'd**

Prompt drainage is very important to Falcon Ridge and adjoining communities because of the health risks of the West Nile virus. Seniors are particularly vulnerable to this virus. UC Davis has established that mosquitoes may complete a life cycle in four days. Mosquitoes are known vectors for the West Nile Virus, which is becoming more common in California, as well as the rest of the country. A second West Nile virus vector is ground squirrels. As evidenced by other basins in the area, ground squirrels will gather to den preferentially in the banks of the basin, adding to the risks to area residents. The typical bird migrations through the area are a source of bringing the disease into our area. Yet the County does not yet have a disease vector control program. **15.32**

The proposed retardation basin is located directly adjacent to senior populations in Sunrise Terrace and in Falcon Ridge. Because standing water threatens the health of seniors and others in the area mitigation of this health risk requires that the basin should be drained within four days, no standing water should be allowed and it should be checked by Public Works at least once a year during the rainy season. **15.33**

Drainage. V-7, and **Preliminary Drainage Report** Appendix B. The described project and preliminary report describe a retardation basin projected to keep outflow into Los Berros Creek to less than the current volume. The design uses an assumed 50-year storm inflow to design the discharge rate and a small 9-inch outlet pipe sized to produce a peak discharge of less than eight cubic feet per second (CFS.). **15.34**

Because the proposed basin does not have the capacity to handle a 100-year storm it adds an overflow weir structure to carry that overflow. It appears, then, that the 100-year storm overflow will flood Falcon Ridge property. The DEIR states that some of the runoff from Tract 1789 drains into Falcon Ridge but does not clearly state whether the runoff into Falcon Ridge will or will not be eliminated or whether any excess runoff over the weir structure will or will not drain into Falcon Ridge. The preliminary drainage report does not clearly show that there will no longer be runoff into Falcon Ridge along the boundary. **15.35**

The runoff from Tract 1789 has and continues to create flooding and erosion problems in Falcon Ridge Estates. Before the project is approved this environmental problem must mitigated through redesign of the retardation basin or some other approach. **15.36**

Water Supply. III-7 The DEIR states that Rural Water Co will supply water. (Dennis: NOTE that Rural Water is a defendant in the Santa Maria groundwater suit brought by Santa Maria Valley Water Conservation District titled Santa Maria Valley – Vs – City of Santa Maria, case 1-97CV770214. A preliminary ruling in the case reportedly gives overlying landowners first priority to groundwater in the Santa Maria basin. Water agencies including Rural Water Co are entitled only to surplus water. This inferior water right may affect the ability of Rural Water to serve Tract 1789 in addition to its service to Falcon Ridge. The DEIR does not assess this circumstance either in evaluating **15.37** **15.38**

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impact on Falcon Ridge, whom Rural Water serves, or in dismissing the option of annexing the Tract into Arroyo Grande, where city water service would be available. **15.38 cont'd**

Visual Impacts; Project Characteristics II-1 **and Environmentally Superior Alternative**VI-8. Falcon Ridge is also concerned about the potential for interference with our ocean and hillside views by residential construction on four of the lots – 1,13,14, and 16 - of the proposed 16-lot development. To address this impact these lots should be restricted to single story residences and not otherwise obstruct our views, with similar limitation in the environmentally superior alternative **15.39**

V-67, V-70, II-15. Added Traffic to State Route 101. The project would add traffic volume to the El Campo /US101 intersection. That intersection is already classified as Level of Service F. We understand that adding additional traffic to LOS F intersections is not permitted **15.40**

There is no recognition in the impact analysis that distinguishes the impact of private road access through Falcon Ridge, versus public road access. In fact, mitigation measure TR/mm-2 states that prior to the recordation of the final map, the applicant shall either obtain an easement from Falcon Ridge or have the County open the roads to public use. This would in no way mitigate impacts from the project, especially the El Campo/US101 intersection, but rather it would simply provide the legal means to facilitate the flow of traffic from Tract 1789, across Falcon Ridge and to El Campo Road and Highway 101. What the impact analysis lacks is an evaluation of how the El Campo/US101 intersection would be impacted depending on whether the Falcon Ridge roads were private or public. As a general proposition it is reasonable to assume that public roads will generate greater traffic volumes and therefore public roads would have even a greater impact on an already excessively impacted intersection. **15.41** **15.42**

Further, the mitigation measure requiring contribution of a fair share towards future improvements to the El Campo/US 101 intersection is inadequate (see TR/mm-1). This mitigation measure provides no description of what, if anything will be done to improve the intersection, nor when. If Falcon Ridge roads are made public, the impact will be immediate, and it will be adding substantial additional traffic to an existing dangerous and deficient intersection. Private roads in Falcon Ridge will reduce the impact, and no access coming through Falcon Ridge will eliminate it. The mitigation measure needs to distinguish between the impacts of private roads vs. public roads, and the mitigation measure needs to be more specific as to what improvements will be made to the intersection and when. **15.43** **15.44** **15.45**

OTHER OBSERVATIONS

III-1. Owners. John Scardino is not shown. County records show the tract is owned by John Scardino and Carlo Alfano. **15.46**

III-5. History. Omits the relevant fact that the Planning Commission approved the project with out any mapped access, which was the basis for Falcon Ridge Estate's appeal to the Board of Supervisors. **15.47**

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Contents. Notice of Preparation. Appendix A. The DEIR does not include the 1994 Scope of Work (SOW) or the 2002 Amendments to the Scope of Work. **15.48**

III-6. Lot Size. Listed lot sizes do not match the lot sizes shown in Fig.III-4. That Figure shows the listed Emergency Road Access Extension as an easement *within* the acreage of lots 7 and 8. **15.49**

Contents. Beginning with B. Drainage and Erosion, the Table of Contents lists the wrong pages for the subjects making the DEIR very difficult to work with. **15.50**

Falcon Ridge Homeowner's Association and its members believe the problems identified must be satisfactorily resolved before proceeding with the proposed project. **15.51**

Ronald D. Bryant
President

Copy:
Dennis D. Law
Andre Morris & Buttery
1102 Laurel Lane
Post Office Box 730
San Luis Obispo, CA 93406-0730

8

15. Falcon Ridge Homeowner's Association

15.1 Comment noted. No revisions to the EIR are necessary.

15.2 Refer to response to comment 8.4.

15.3 Refer to response to comment 8.4.

15.4 Refer to response to comment 8.4.

15.5 Refer to response to comment 8.4.

15.6 Refer to response to comment 8.4.

15.7 Comment noted. No revisions to the EIR are necessary.

15.8 Refer to response to comment 8.4.

15.9 Refer to response to comment 8.4. Falcon Crest Drive would remain a private road, and improvements (including widening and modifications to the low water crossing) would not be required.

15.10 Refer to response to comment 8.4.

15.11 Refer to response to comment 8.4.

15.12 Refer to responses to comments 8.3 and 8.4.

15.13 Refer to responses to comments 8.4 and 15.9.

15.14 Refer to response to comment 8.3.

15.15 Refer to responses to comments 8.3 and 8.5.

15.16 Refer to response to comment 8.4.

15.17 Refer to responses to comments 8.4, 8.5, and 15.9.

15.18 Refer to response to comment 3.7.

15.19 Refer to response to comment 3.7.

15.20 Refer to response to comment 8.4.

15.21 Comment noted. No revisions to the EIR are necessary.

15.22 Refer to responses to comments 8.4 and 13.3.

15.23 Refer to responses to comments 1.3, 3.2, 3.7, and 8.4.

15.24 Refer to responses to comments 1.4 and 8.4.

15.25 Refer to responses to comments 1.4, 8.3, and 8.4.

15.26 Refer to responses to comments 3.7, 8.5, and 13.3.

15.27 Refer to responses to comments 1.4 and 8.4.

15.28 According the TIRE index, and future build-out of both Falcon Ridge Estates (47 lots, 451 daily trips) and the proposed project (16 lots, 154 trips), the number of daily trips would increase from 451 to 605, and the TIRE index would increase from 2.7 to 2.8, which is below the threshold of 3, which is defined as a significantly impaired residential environment. In addition, the intent of the TIRE index is to: "define what level of traffic increase can be expected to be noticeable" (*Traffic Analysis Report*, Appendix B; Higgins Associates; April 29, 2002). Actual thresholds utilized by the County of San Luis Obispo Department of Public Works are determined by the proposed project's effect on existing Level of Service (LOS). As determined Section V.E.5 of the EIR, the increase in traffic would not result in a deterioration of LOS, which is currently A. No revisions to the EIR are necessary.

15.29 Refer to responses to comments 1.4 and 8.4.

15.30 Refer to responses to comments 1.4 and 8.4.

15.31 Comment noted. Refer to response to comment 11.3. The proposed detention basin would be drain within 24 hours following a rain event, within the seven-day timeframe required by the County. No revisions to the EIR are necessary.

15.32 Refer to response to comment 11.4, 11.10 and 11.11.

15.33 Refer to response to comment 11.4.

15.34 Comment noted. No revisions to the EIR are necessary.

15.35 During any storm event, including a 100-year storm, some runoff would flow from the project site onto adjacent properties, including Falcon Ridge Estates. Stormwater would flow over the proposed weir structure along the existing drainage course to the south. Based on the EIR (Section V.B.5) and *Preliminary Drainage Analysis* (Garing, Tayor and Associates; January 16, 2003) (Appendix B), implementation of the proposed project would not cause flooding or result in additional stormwater flow offsite. No revisions to the EIR are necessary.

15.36 Refer to responses to comments 11.3 and 15.35.

15.37 Refer to response to comment 3.3.

15.38 Refer to response to comment 3.3. Pursuant to conversations with the City of Arroyo Grande Community Development Department, the proposed project site is not located within the City's Sphere of Influence, and the City does not plan on annexing the project site (Kelly Heffernon; December 2, 2003).

15.39 Pursuant to the California Environmental Quality Act (CEQA), the EIR does not evaluate impacts to private views. No revisions to the EIR are necessary.

15.40 Comment noted. No revisions to the EIR are necessary.

15.41 Refer to responses to comments 1.4 and 8.4.

15.42 Refer to responses to comments 1.4 and 8.4.

15.43 Refer to responses to comments 1.3 and 3.2.

15.44 Refer to responses to comments 1.4 and 8.4.

15.45 Refer to responses to comments 1.3, 1.4, 3.2, and 8.4.

15.46 The EIR has been revised to reflect John Scardino as a property owner (refer to Section III.A).

15.47 The EIR has been revised to include this background information (refer to Section III.C.).

15.48 Appendix A of the EIR has been supplemented to include Scope of Work from 1994 and 2002.

15.49 The gross acreage of Lot 8 is 2.11, and the gross acreage of Lot 9 is 2.11, as shown in Figure III-4 in the EIR. The net acreage of Lot 8 is 2.0, and the net acreage of Lot 9 is 2.0. The acreage of the emergency access road is 0.22 acre. Table III-1 of the EIR has been revised to reflect gross acreage.

15.50 The EIR Table of Contents has been corrected to reflect correct pagination.

15.51 Comment noted.

SLO CNTY
PLANNING/BUILDING
DEPT
2004 MAR 15 PM 1:13

Mr. & Mrs. Pueraro
2755 Hawk View Court
Arroyo Grande, CA 93420

March 13, 2004

Julie Eliason, Environmental Specialist
Division of Environmental and Resource Management
Department of Planning and Building
County Government Center, Room 310
San Luis Obispo, CA 93408-2040

RE: Draft EIR, Tract 1789

Julie,

This letter is to request that the preparer of the above referenced EIR report be required to further study the issue of access and provide a more balanced analysis of the alternative routes of access. **16.1**
The draft version fails to adequately present the pros and cons of each alternative and recommends the alternative that appears to be in the interest of the developer. **16.2**

The recent history of Tract 1789 reveals that the developer of Tract 1789 gave up the existing access to the parcel because he was required to, by the City of Arroyo Grande, in order to get approval of his other development, Vista del Mar. He, in effect, landlocked Tract 1789 by his own action. HIS problem of access, that HE created, now threatens the lifestyle of my family and neighborhood. **16.3**

The EIR recommends access to Tract 1789 be provided by the existing streets of Falcon Ridge. Well, Falcon Ridge was approved by the County to be a private community with gated access and has been private ever since. The EIR states on page VIII-10 that the County should require the developer to either obtain an agreement of access from Falcon Ridge Homeowner Association or conduct necessary actions to make the streets of Falcon Ridge open for public access to Tract 1789. Either option will seriously damage the quality of life that the residents of Falcon Ridge have paid for and continued to maintain for many years. **16.4**

Why doesn't the report direct the developer to obtain access through the already public streets of Orchard and Castillo del Mar? **16.5** Why not consider the route by the High School that was used during the construction of Vista del Mar? Why is alternative B, El Campo Road rejected simply because of a few oak trees, site disturbance, and visual impact from Highway 101? **16.6** If these issues are important enough to reject the El Campo access, then the same criteria should apply to the development overall and the application for development should be rejected. **16.7**

In summary, the EIR, as written, fails to adequately support the conclusion that access to 1789 should be obtained at the expense of the residents of Falcon Ridge. **16.8**

Sincerely,

Mr. & Mrs. Pueraro

16. Mr. and Mrs. Pueraro

16.1 Refer to responses to comments 3.7 and 13.3.

16.2 Refer to responses to comments 3.7 and 13.3.

16.3 Refer to responses to comments 3.7 and 8.3.

16.4 Refer to responses to comments 1.4, 8.3, and 8.4.

16.5 Refer to response to comment 3.7.

16.6 Refer to response to comment 3.7.

16.7 Refer to response to comment 13.3.

16.8 Refer to responses to comments 3.7, 8.3, 8.5, and 13.3.

May 15, 2004

Martin D. Line, Jane Q. Line
265 Pleasant Lane
Falcon Ridge Estates
Arroyo Grande, CA 93420

Julie Eliason, Environmental Division
County Planning and Building Dept. Room 310
County Planning Commissioners,
County Board of Supervisors,
County Government Center,
San Luis Obispo, CA 93408-2040

Subject: Comment on DEIR SCH#1994041043, Busick Tract No. 1789, ED90-061, S890Z3ZT, Arroyo Grande, CA

Dear Ms. Eliason, County Planning Commission, and Board of Supervisors:

Thank you for the opportunity to make public comment on the DRAFT EIR prepared for the Busick Tract 1789 directly north of our home in Tract 1256, Falcon Ridge Estates. This development was approved by the County as a private, gated, 46-lot development in 1989 with an offer of dedication refused without prejudice at that time. Our home is separated by one lot from the proposed project. We have followed the process for approval of Tract 1789 since 1990. **17.1**

In 1994, we, along with others from our HOA, worked to require an EIR on the Tract 1789 project. It had been approved in Dec. 1993 by the County Planning Commission with NO access determination. Falcon Ridge appealed, along with Sunrise Terrace Mobile Home Park in the City of AG. We were successful in attaining a 5-0 vote from the Board of Supervisors for a full EIR with specific attention paid to drainage, suitability for septic systems, access, and annexation into the City of Arroyo Grande. Following is a little background to the Busick property issues, both the now developed City Tract 2207 (Vista del Mar) and County Tract 1789.

The historical mapped access for the Busick property - split into two parcels in the 1980s, with the jurisdictional line going through the middle of the property - has always been Orchard Avenue, off Fair Oaks Avenue, in the City of Arroyo Grande. The City denied access to the county parcel in the early 1990s because the developer was not interested in building a secondary access behind AG High School out to Valley Rd. This proposed secondary access is referred to as Valley Rd. Extension and was to be paid for through fees collected from the Busick city tract 2207 (Vista del Mar) and the county tract 1789. The same development company, now known as JH Properties, would be developing both projects. **17.2**

As a result of the applicants' lack of interest in building the Valley Rd. Extension, the city approved Tract 2207 (Vista del Mar) with only one access, but asked the County to permit an emergency road over the undeveloped county parcel/1789. This emergency road connected directly to the Falcon Ridge Estates private road Coast View Rd. Additionally, JH Properties determined they would appeal to the county to consider accepting the right of dedication on the Falcon Ridge Roads, thus creating access for them to their proposed county development. This threat has hung over the residents of Falcon Ridge since 1993. This EIR was our hope for appropriate review of the alternative accesses for this project, in particular the city routes. **17.2 cont'd**

E. Traffic and Circulation Comments

1-6. Existing Conditions - Cumulative Impacts, pp. V-60 through V-71.

- Citing a lack of feasibility for other alternatives, the DEIR analyzes only one access route to 1789 - Coast View Rd., a private road maintained by Falcon Ridge. The consultants cite two possibilities for use of this road: open Falcon Ridge roads up for the public's use or suggest a "lease of the FR roads" by JH. The limited or non-existent analysis of either of these possibilities as it would relate to cumulative changes to the environment of the residents of Falcon Ridge is clear. The DEIR simply suggests any impacts from this option would be "significant but mitigable." Adding 156 ADTs to a rural, private community or opening the private development up to public use without substantial analysis is a serious deficiency in the DEIR. **17.3**

- Additionally, indicating "pre-existing conditions," NO analysis was done by the EIR consultants on the alternative access from the City as required by the Board of Supervisors in their findings for the EIR, April 1994, and the resulting SOW. *Further it should be noted that the City of AG currently indicates a willingness to reconsider the suitability of accessing the County project from its Orchard Avenue and Vista del Mar project.* This should be fully analyzed prior to release of the final EIR. **17.4** **17.5**

- State Hiway 101 and its intersection with the crossroad El Campo Rd. is and has been operating for some time at an LOS F. (As users of the intersection on a daily basis, we completely reject the Table V.E.1 postulation of an overall LOS C and A currently exists for the AM/PM peak.) It is an unsafe intersection, northbound or southbound. Additionally, the El Campo I/C studies are on hold at the current time as a result of budget constraints. No relief is visible for many years. **17.6**

Though the County has "no stated policy or traffic safety standards" in its General Plan, it cannot be denied the additional traffic (factored at 9+ ADTs) from even a small, 16 unit development such as Tract 1789 impacts the health, safety, and welfare of the all future drivers on State Hiway 101, north and southbound, as well as the drivers on El Campo Rd. in its vicinity. **17.7**

The impact of additional traffic at 101/El Campo Rd. should be considered a Class I Impact requiring a vote of overriding consideration for project approval. The DEIR does not consider this. The traffic impacts at 101/El Campo must be re-analyzed for a more appropriate Class impact designation. **17.8**

A much more responsible approach to the 101/El Campo Rd. cumulative impacts would be to close El Campo Rd. at its juncture with the State Hiway. Though this is somewhat *inconvenient* for Falcon Ridge and the surrounding residents from the unincorporated area, it is the most responsible action possible regarding the protection of the public's safety and welfare. We request meaningful analysis of this reasonable mitigation for an LOS F intersection at the juncture of a State Hiway and local crossroad. The DEIR simply suggests "a potentially significant impact can be mitigated by the applicant contributing a fair share" contribution to the City of Arroyo Grande. This is also a serious deficiency in the DEIR. **17.9** **17.10**

- TR/Impact 3 is confusing at the least. This mitigation measure proposes to reduce the cumulative impacts at the intersection of two "private" roads, Coast View Rd. and Falcon Crest Drive, with the intersection going from LOS A to LOS C, by having the individual lot owners of Tract 1789 contribute to the County's Traffic Impact Fee for South County Benefit Area 2. This should be clarified as it appears to mitigate nothing regarding the cumulative impacts at the indicated intersection of a private community. **17.11**

Project description/# 4. Water Supply and Wastewater Disposal, pp. III-7 and 8

- The DEIR simply states that Rural Water Company will provide water for the proposed project. There is no mention or analysis of any impacts to the project's water availability regarding the current litigation involving Rural Water Co. and the Santa Maria water basin. As the first ruling has been issued by the judge in this case, and that ruling identifies urban water servers as having secondary water rights to private water users, it would seem appropriate to determine whether the "surplus" water available for Rural Water Company's additional use is considered. **17.12**

The further rulings to come down from the Santa Clara District Courts may endanger the availability of Rural Water to serve new projects. This could result in Tract 1789 needing to find water sources elsewhere. Some analysis of this possibility seems appropriate, if not mandatory, in the DEIR. The existing one paragraph discussing water availability seems completely inadequate under the circumstances. **17.13**

- The South County Sanitation District has allowed this project to meet its requirement to handle wastewater through the City of AG and their sewer lines. But it is worth noting the county tract is once again united with its sister city tract insofar as taking services from an identical source while utilizing the city's infrastructure. This seems appropriate. **17.14**

Other

We reserve the right to make future comments at any time on the matter of Tract 1789's access, annexation into the City of Arroyo Grande, drainage issues including the proposed retention/detention basin adjacent to Falcon Ridge, lot sizes or location, air pollution, or any other areas of concern that may arise during the continuation of the EIR process for Tract 1789. **17.15**

Thank you for your consideration of our response in the matter of this DEIR and its deficiencies.

Sincerely,

Martin D. Line
Jane Q. Line
Lot 13
Falcon Ridge Estates

Copy to: Falcon Ridge HOA Board of Directors
Community Development Dir., City of Arroyo Grande

17. Martin Line and Jane Line

17.1 Comment noted. No revisions to the EIR are necessary.

17.2 Refer to response to comment 3.7.

17.3 Refer to responses to comments 1.4 and 8.4.

17.4 Refer to response to comment 3.7.

17.5 Refer to response to comment 3.7.

17.6 The traffic analysis conducted for the proposed project identified significant impacts to the El Campo Road and State Route 101 intersection, which currently operates at a deficient level of service (LOS F). As identified in the EIR, the proposed project would not significantly affect any other roads or intersections.

17.7 Refer to response to comment 17.6.

17.8 Refer to response to comment 1.3 and 3.2.

17.9 Refer to response to comment 3.6.

17.10 Refer to response to comment 1.3 and 3.2.

17.11 The EIR has been revised to reflect an accurate discussion of cumulatively affected areas as presented in Table V.E.6, which shows that no significant impacts to Coast View Drive or Falcon Crest Drive would occur as a result of the proposed project. The cumulative impact discussion has been revised to correctly state: "Under cumulative conditions, the southbound Falcon Crest Drive/Los Berros Road intersection would decrease from LOS A to LOS C" (refer to Section V.E.6).

17.12 Refer to response to comment 3.3.

17.13 Refer to response to comment 3.3.

17.14 Comment noted. No revisions to the EIR are necessary.

17.15 Comment noted. No revisions to the EIR are necessary.

APPENDIX G

- **Castillo Del Mar Drive / Valley Road Mitigated Negative Declaration**

HEARING DATE: *July 13, 2006*
AGENDA ITEM: *II. C.*

CITY OF ARROYO GRANDE

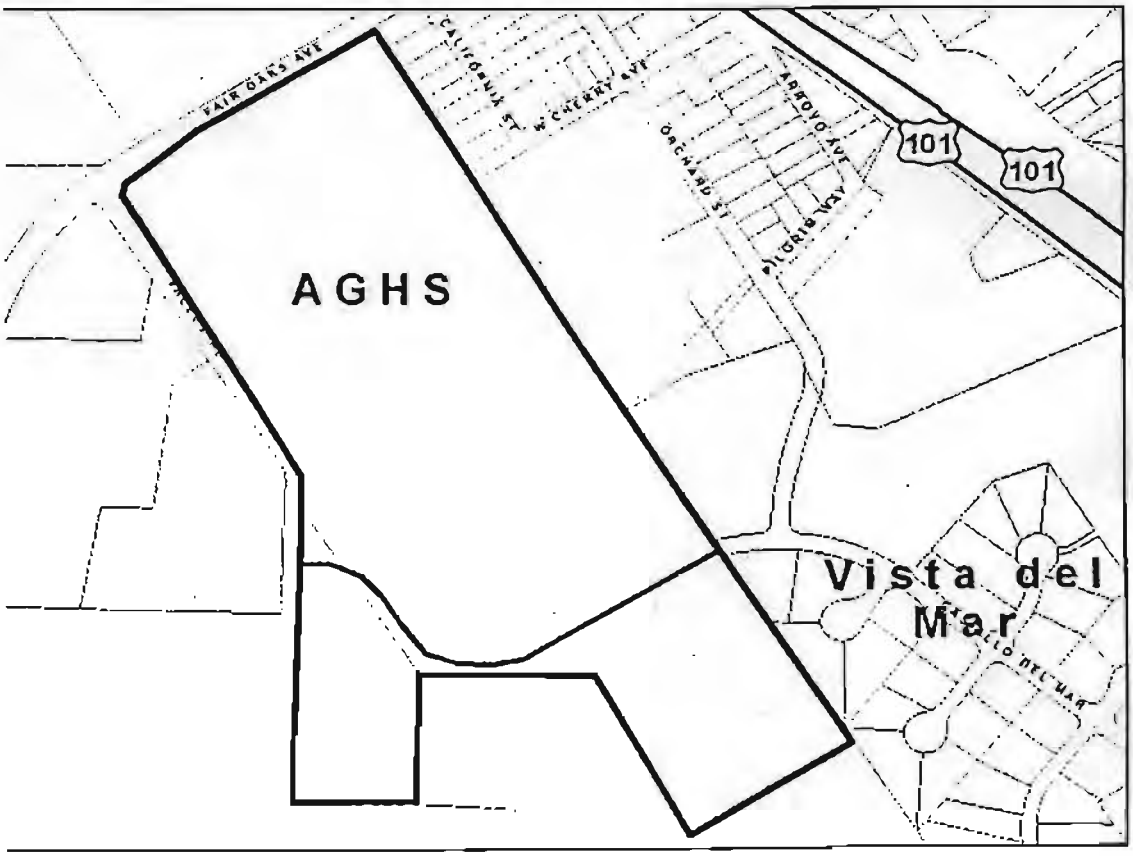
PLANNING COMMISSION MEETING

FILE/INDEX: General Plan Amendment Case No. 06-001, Development Code Amendment Case No. 06-001, and Tentative Parcel Map Case No. 06-004

APPLICANT: J.H. Land, John Taylor, Lucia Mar Unified School District, and City of Arroyo Grande

REP.: City of Arroyo Grande/ Rob Strong, Community Development Director

LOCATION: Parcels containing and adjoining Arroyo Grande High School, hillside southeast of campus and Agricultural land south of campus on east side of Valley Road (APN 006-095-001 and 006-095-002)



PROPOSAL: Improve and extend Castillo del Mar Drive from Orchard to Valley Road south of Arroyo Grande High School, and amend General Plan and zoning to reflect campus as Public Facility and reclassify/rezone an 11.6 acre hillside parcel from Agriculture to Single Family Residential Low Density, zoned Residential Hillside and 1.2 acres agricultural parcel from Agriculture to Community/Facilities zoned Public Facility.

PROJECT PLANNER: Rob Strong, Community Development Director

NOTIFICATION: 37 Public Hearing Notices sent on June 23, 2006 and July 3, 2006. Published in Tribune on July 3, 2006.

Parcel Sizes: Existing: 50-acre LMUSD ownership, Arroyo Grande High School Campus; 7.5 acre agricultural property, owner, John Taylor
Proposed: 37 acre +/- campus, 11.6 acre Residential Hillside and 1.2 acre Agriculture to Public Facility, and 6.3 acre remaining Agriculture.

Terrain: 37-acre campus and 1.2-acre parcel are flat. 11.6-acre hillside slopes less than 15%.

Vegetation: Oaks, willows and grassland hillside

Existing Land Use: 37-acre Arroyo Grande High School campus, parking and sports fields. 11.6 acre undeveloped hillside and 1.2 acre agriculture (cultivated and irrigated field crops)

General Plan Designations: Community Facilities and Agriculture

Zoning Designations: Public Facility (PF) and Agriculture (Ag)

Surrounding Land Use/Zoning/General Plan Designation:

North: Agriculture/Ag/Agriculture

South: Undeveloped hillside/RH/Single Family Residential Low Density

East: Vista del Mar (Tract No. 2207) subdivision homes, streets and open space/RH/Single Family Residential Low Density

West: Home on large undeveloped hillside/RH/Single Family Residential Low Density

BACKGROUND

The subject 11.6 acre undeveloped hillside is located southeast of the 37 acre Arroyo Grande High School campus, both of which are owned by Lucia Mar Unified School District (LMUSD). An emergency access roadway, water and sewer lines traverse the foot of the hillside, separating the undeveloped part of the LMUSD ownership being

considered for alternative use and possible disposition. The 11.6 acre undeveloped hillside is surrounded on the east, south and west by private properties designated Single Family Residential Low Density on the adopted 2001 General Plan Land Use Map, currently zoned Residential Hillside (RH), allowing a density of 1 dwelling unit per 1.5 acres. The RH zone encourages cluster subdivision into smaller home sites and natural open space. Adjoining to the east is the "Vista del Mar" residential subdivision (Tract No. 2207), which created 38 hillside home sites on half-acre or larger lots for custom single family residential development and two large common open space parcels, which include a storm drainage detention basin, flood plain, grassland and wooded hillside adjoining and visible from Highway 101. Orchard Street and Castillo del Mar Drive provide the primary access to the residential neighborhood east of Arroyo Grande High School, including Vista del Mar.

Because secondary access is severely restricted, the City has discouraged additional hillside development until this access constraint is corrected. This constraint caused the City Council to reject a previous request to allow controlled local access extension to the southeast end of Castillo del Mar for a proposed 16-lot County tentative subdivision proposal called the Busick Tract No. 1789, unless the developer, J.H. Land, could achieve secondary access around the south side of the Arroyo Grande High School campus, including a westerly public street extension of Castillo del Mar from near Orchard Street to a new intersection with Valley Road. This City access alternative was "the environmentally superior alternative" identified in the County's EIR for the Busick Tract, which otherwise would depend on access from El Campo Road through the Falcon Crest Residential Suburban private road network. To connect to Valley Road the street extension must cross the northern tip of adjoining Agriculture land owned by John Taylor.

DISCUSSION

Recently the City, Lucia Mar Unified School District, the developer (J.H. Land), and the agricultural property owner (John Taylor) completed a Memorandum of Understanding (MOU) to accomplish this circulation improvement and address related land use changes and impact mitigations, which the parties need to resolve. The westerly extension of Castillo del Mar Drive will require J.H. Land to acquire approximately 1 acre (1.2 acre gross) of prime farmland soils at the northern triangular tip of John Taylor's 7.5 acre Agricultural designated and zoned cultivated and irrigated fields on the east side of Valley Road, south of Arroyo Grande High School property. The proposed street alignment will create an "s" curve to a right angle intersection with Valley Road and the residual part of the field north of the street would be offered to LMUSD for future High School campus related development. It is proposed that this 1-acre be classified as Community Facility (High School) on the 2001 General Plan Land Use Map and rezoned from Agriculture (Ag) to Public Facilities (PF). The Tentative Parcel Map No. 06-004 providing for the proposed road dedication effectively creates two Agriculture parcels (1.2 and 6.3 acres in size) and separates the 37 acre campus from the undeveloped 11.6 acre hillside, dividing it into two parcels.

The MOU also provides that J.H. Land will contribute sufficient funds to the City of Arroyo Grande to enable widening, improvement and extension of Castillo del Mar Drive across the High School and Taylor properties to intersect with Valley Road. Additionally, the developer has agreed to contribute sufficient funds to the City of Arroyo Grande to constitute an off-site "in lieu" prime farmland mitigation payment intended to acquire at least one (1) acre of permanent Agricultural Conservation Easement to offset the loss of prime farmland soils associated with the road extension and Public Facility use of the former Taylor field. A 2:1 ratio is part of the proposed mitigation.

Consistent zoning "Clean-up"

The rear 10-acre portion of the 37-acre campus containing parking lots and sports fields of the LMUSD properties are designated on the General Plan as Community Facilities but zoned Agriculture, rather than appropriate Public Facilities (PF) zone. It is recommended that this approximately 10 acres of parking lots and sports fields be rezoned from Agriculture to Public Facility consistent with the General Plan.

Parcel Map and Road Dedication

The proposed road dedication and extension would effectively create two separate parcels owned by LMUSD, the 37 acre high school campus, parking and sport fields on the flats to the north and the 11.6 acre undeveloped hillside on the south. As an alternative to Public Facility use, the LMUSD has requested that the City consider reclassification and rezoning of the 11.6 acres from Community Facility to Low Density Single Family Residential, rezoned from Agriculture (Ag) to Residential Hillside (RH).

General Plan Amendments and Policy Issues:

It is apparent that the improvement and extension of Castillo del Mar Drive south of the Arroyo Grande High School campus to connect to Valley Road is an important secondary access to the Orchard Street and Vista del Mar neighborhood east and southeast of the campus, including circulation to the campus, administrative offices, and a large church and school. This secondary access and circulation is a prerequisite to local street extension to serve additional hillside homes such as the Busick Tract 1789 as well as to provide adequate circulation and access to other hillside properties such as the 11.6 acre undeveloped portion of LMUSD ownership southeast of the proposed street and the adjoining Haddox hillside property to the south and west. This westerly street extension behind the high school is the only possible means of secondary access to the area because Freeway 101 right of way precludes connections to the east and Falcon Crest and Sunrise Terrace private roads preclude connections to the south. In particular, the General Plan Circulation/Transportation Element, policy CT 3-4.2 provides:

> "Emergency access design standards should limit cul-de-sac lengths, provide a logical grid or connected system of local streets providing at least two directions of neighborhood access, and minimize through traffic on local streets, particularly traversing single-family residential neighborhoods" (emphasis added)."

Assuming that the Castillo del Mar Drive extension is accomplished as proposed, the street alignment requires consideration of several adjoining land use alternatives. The existing private street and utilities at the foot of the hillside coincide with the proposed public street right of way and separate an 11.6 acre undeveloped portion of the fifty-acres owned by LMUSD. The 37 acre campus and grounds located on the north side of this road are fully committed to high school, sport fields, and parking. (As noted above, designated Community Facilities on the General Plan, the southernmost ten acres of the campus are inappropriately and inconsistently zoned Agriculture.) Additionally, the 11.6 acres of undeveloped hillside land owned by the school district is also designated Community Facilities, reflecting its current public agency ownership but zoned Agriculture. Once separated from the high school campus by the proposed Castillo del Mar Drive extension it could either remain as classified for future Community Facilities, or logically considered for re-classification (due to slope constraints) for Single Family Residential Low Density and RH zoning. As noted above, the private lands within the City to the east, south and west of the subject 11.6 acres are designated Single Family Residential Low Density and zoned RH. Vista del Mar subdivision (Tract 2207) developed the hillside to the east, and with adequate access, it is probable that the 18.0-acre Haddox property to the south and west will similarly develop. Subsequent Residential Hillside subdivision of either LMUSD property and/or Haddox property would probably involve "cluster design" similar to Vista del Mar with half or more of the acreage retained as natural or landscaped open space and the residential development contained on half-acre sized detached single family residential lots and local streets. Because subsequent subdivision requires discretionary design and City approval as well as environmental impact determination when development design and density are proposed, the current consideration of land use alternatives is only an initial step. If the 11.6 acre hillside remained Community Facilities on the General Plan and was re-zoned Public Facility, the LMUSD or any successor public agency could propose any type of pubic or quasi-public use subject to City and CEQA review. Examples of possible PF use include: community college or high school classrooms, church or private school, related administrative offices or corporation yard, park, playground or athletic facilities.

While not yet resolved, however, the LMUSD board has requested that the 11.6-acre hillside be considered for possible disposition and alternative use to Single Family Residential Low Density and zoned Residential Hillside, to enable development similar to the properties to the east, south and west.

In staff's opinion, this lower intensity alternative use potential is more consistent with the sloping terrain, natural drainage, existing trees and access constraint evident on this hillside. It also could provide a significant sale or lease income to the school district, faced with declining enrollments in this part of the district, other apparent undeveloped and potential surplus properties and continuing budget pressures. As part of the MOU, the district initiated this request for General Plan and Development Code Amendments to enable possible disposition and alternative private use.

It should also be noted that this access extension and alternative Single Family Residential Low Density use and Residential Hillside (RH) zone may facilitate future

consideration of the similar development of the hillside portions of Runels' properties currently outside the City limits, zoned County Agriculture, although subject to Williamson Act Conservation agreements for at least a10-year period.

The reclassification from Community Facilities and rezone from Agriculture to Single Family Residential Low Density use and Residential Hillside (RH) zone appears consistent with General Plan Land Use Element policies LU2-2, 2.1 and 2.4, which provide:

> "Accommodate the development of Residential Hillside cluster development and allow a maximum density of 1 du/1.5 acre in appropriate Single Family Residential Low Density areas zoned Residential Hillside. Encourage clustered subdivision or Planned Development to retain steeper slopes, drainage, natural vegetation and other site features as Conservation Open Space."

> "Ensure that all residential hillside development, regardless of density, does not excessively intrude on the natural slope and terrain of the hillside including density that is commensurate with the steepness of slope and discouraging excessive use of retaining walls, intrusive grading and removal of native oak trees."

On the south side of the Arroyo Grande High School campus, which was historically developed on prime agricultural soils, the proposed connection of Castillo del Mar Drive to Valley Road, unfortunately requires that an additional 1.2 acre portion of Taylor's adjoining agricultural fields be converted to provide a safe road intersection and separating a triangular tip which could not be efficiently farmed. It is therefore proposed that this triangle be reclassified and rezoned from Agriculture to Public Facility and that the remnant north of the road right-of-way be re-designated Community Facilities and zoned Public Facility. The MOU provides that this acre be donated to LMUSD and combined with the 37 acre Arroyo Grande High School property for campus related uses. While no specific uses are proposed at this time it is probably that landscaping, drainage basin, parking and perhaps accessory office or classroom buildings would be considered by the district in the future. In concept, this 1.2-acre loss of Agriculture land is an allowed exception to Agriculture, Conservation and Open Space Element policy Ag1, which provides:

> "Avoid and/or mitigate loss of prime farmland soils and conserve non-prime Agriculture use and natural resource lands."

Specifically, Ag1-1.2 states:

> "Public facilities are permitted on agricultural and natural resources lands when required by public health, safety and welfare of the public."

That is the case regarding extension of Castillo del Mar Drive to provide adequate and safe circulation and secondary access around the high school.

Additionally, General Plan policies Ag1-4, Ag1-4.1, Ag1-4.2 and Ag1-4.3 provide that loss of prime farmland soils is a significant adverse environmental impact unless mitigated. Loss includes unavailability for agricultural use due to pavement or buildings or conversion to other uses including landscaping. Possible mitigation for loss may include permanent protection of prime farmland soils at a ratio of 1:1 with regard to the acreage of land removed from the capability for agricultural use or other potential mitigation measures acceptable to the City Council: Payment of in-lieu fees is one example of mitigation mentioned in Ag1-4.2. However, Ag 1-4.3 provides in part:

> "Only after the imposition of available mitigation and consideration of alternatives to avoid the proposed action (loss of prime farmland soils) may the City Council approve development on prime farmland soils subject to overriding considerations as permitted by California Government Code Section 15093."

If interpreted literally, this policy would require preparation of an EIR, despite mitigation to less than significant (if the in lieu fee offered is accepted by the City Council). Legally and procedurally, this is not consistent with the intent of CEQA nor Ag1 to avoid or mitigate loss of prime farmland soils. Furthermore, policy Ag1-4 states that the City should first:

> "Establish and apply a significance criterion (threshold of significance) for CEQA analysis, as provided by CEQA Section 15064.7, that considers loss of prime farmland soils as a significant adverse environmental impact."

The City has not yet revised its CEQA guidelines to include such criteria nor addressed possible exceptions or mitigation as provided by Ag1-1.2 and Ag1-4.2

Alternatively, if the Planning Commission is opposed to recommending the proposals of the MOU without an EIR and overriding considerations and findings, it could suggest leaving the existing General Plan and zoning as Agriculture but allowing road extension and open space use and/or a specific public facility use proposed pursuant to policy Ag1-1.2. This might not, however, meet the intent of the MOU provisions nor be within the control of the City once the land is owned by LMUSD and subject to their determinations.

In either event, the City Council will need to interpret these apparent conflicts and intent of the policies, based in part on recommendations from the Planning Commission. To a lesser extent, the reclassification and rezoning of the existing LMUSD property, which is undeveloped, hillside non-prime land, currently zoned Agriculture, could be viewed as "agricultural conversion to urban uses." However, Ag3-1.5 states: "Vacant or undeveloped agricultural land shall refer to fallow cropland, grazing land or land supporting other agricultural uses as identified in Ag 3-1.1, that is not in productive use at the time of any designation action or redesignation request." Further, policy Ag 3-3.2 defines:

> "Non-prime areas shall comprise what are commonly referred to as 'grasslands' on hillsides and sloped areas generally southeast, east and north of the urban area. These are typically non-irrigated and support grazing or dry-land crops."

Conservation of non-prime Agricultural lands and allowing use of vacant or undeveloped agricultural land (other than prime farmland soils) does not require mitigation nor is it considered a significant environmental impact except as addressed in the General Plan Program EIR. Other Agriculture, Conservation and Open Space policies and programs of the General Plan are also intended to promote coexistence of agricultural and urban land uses including "right-to-farm", "buffers", ag-support and ag-conservation measures. In particular, Ag3-14 states:

> "Consider reclassification of an Ag parcel, only if and when the parcel is less than minimum size (e.g. legally nonconforming as to area) and is isolated from other agricultural uses."

Ag3-14.1 defines when a parcel is "isolated" from other nearby Agriculture areas and Ag3-14.2 further provides:

> "In cases considered for conversion, the parcel shall be adequately served by appropriate infrastructure and any development application shall be subject to environmental analysis as referenced in AOSCE Policy Ag1-4."

Environmental Assessment:
Staff has reviewed this project in compliance with the California Environmental Quality Act (CEQA), the CEQA Guidelines and the City of Arroyo Grande Rules and Procedures for Implementation of CEQA. Based on the review, staff does not anticipate that this project will have a significant effect on the environment. Therefore, staff has prepared a negative declaration with mitigation measures for the Planning Commission's consideration (see Attachment 3).

Alternatives:

- Recommend the proposals as presented in the MOU and this staff report, including the mitigated negative declaration, road extension, GPA and DCA reclassifications and rezonings from Ag to PF and RH.
- Discuss and separate the road extension proposal and request further studies of land use alternatives prior to GPA and/or DCA recommendations. This could, however, effectively eliminate the private parties involved in the MOU and complicate or preclude cooperation and funding which are essential to this project.
- Recommend requiring an EIR to address significant adverse impacts that cannot be mitigated to less than significant. This would also threaten the MOU and project feasibility due to time factors and could result in "no project or alternatives with greater adverse impacts."
- If the Planning Commission finds the project and/or the above alternatives cannot be recommended for approval, it can recommend denial of all or part.
- Finally, if the Commission needs specific issues further addressed or has questions which should be answered prior to action, it could continue the public hearing to the August 1, 2006 regular meeting. (It is, however, important that a recommendation be forwarded to the City Council for their public hearing on August 22, 2006.)

RECOMMENDATION

Staff recommends that the Planning Commission recommend to City Council that they favorably consider the attached Mitigated Negative Declaration and Resolution related to extension of Castillo del Mar Drive between Orchard Street and Valley Road and changes to General Plan Land Use Element and Development Code zoning map for portions of Arroyo Grande High School campus and grounds and adjacent undeveloped hillside and Agriculture zoned land as depicted on the attached maps (Attachments 1 and 2).

Attachments:

Resolution

1. General Plan amendments map
2. Development Code Amendments map
3. Draft Mitigated Negative Declaration and Initial Study
4. Tentative Parcel Map

RESOLUTION NO.

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF ARROYO GRANDE RECOMMENDING TO THE CITY COUNCIL APPROVAL OF GENERAL PLAN AMENDMENT CASE NO. 06-001, DEVELOPMENT CODE AMENDMENT CASE NO. 06-001, AND TENTATIVE PARCEL MAP CASE NO. 06-004, INCLUDING IMPROVEMENT AND EXTENSION OF CASTILLO DEL MAR DRIVE FROM ORCHARD STREET TO VALLEY ROAD; LAND USE ELEMENT RECLASSIFICATION OF 11.6 ACRES FROM COMMUNITY FACILITIES TO SINGLE FAMILY RESIDENTIAL LOW DENSITY AND CONSISTENT REZONING FROM AGRICULTURE TO RESIDENTIAL HILLSIDE (RH); AND LAND USE ELEMENT RECLASSIFICATION OF 1.2 ACRES FROM AGRICULTURE TO COMMUNITY FACILITIES AND CONSISTENT REZONING OF THIS 1.2 ACRES AND AN ADJOINING 10.0 ACRES OF ARROYO GRANDE HIGH SCHOOL CAMPUS FROM AGRICULTURE TO PUBLIC FACILITY (PF), AS INITIATED BY THE CITY OF ARROYO GRANDE.

WHEREAS, the City Council of Arroyo Grande on May 9, 2006 considered and approved a Memorandum of Understanding (MOU) with Lucia Mar Unified School District (LMUSD), J.H. Land, and John Taylor regarding the above proposals for circulation and access improvements, land use and zoning changes and related mitigation measures; and

WHEREAS, the Program EIR prepared for the 2001 General Plan adopted October 9, 2001, evaluated environmental impacts associated with numerous circulation, land use and zoning alternatives, but did not address potential changes involving public agency owned properties; and

WHEREAS, area and site specific DEIR was prepared in December 1990 for GPA 89-3, PD Rezoning 89-215 and proposed development project known as Vista del Mar, including the same circulation and more substantial land use and zoning proposals, and

WHEREAS, the Community Development Department has conducted current initial studies and concluded that environmental impacts associated with the MOU and proposed circulation and land use changes will be mitigated to less than significant as outlined in a draft Mitigated Negative Declaration dated June 23, 2006; and

WHEREAS, the Planning Commission, after public hearing, consideration of the draft Mitigated Negative Declaration, all testimony and evidence presented, finds the Mitigated Negative Declaration appropriate and adequate pursuant to State and local CEQA laws and guidelines; and

WHEREAS, the Planning Commission, after public hearing, consideration of staff report, all testimony and evidence presented, finds the proposed Castillo del Mar Drive improvement and extensions necessary for the public health, safety and welfare and

consistent with adopted Circulation Transportation Element policies, particularly CT3-4.2; and

WHEREAS, the Planning Commission, after public hearing, consideration of staff report regarding Agriculture, Conservation and Open Space and Urban Area Land Use Elements, all testimony and evidence presented finds the proposed land use and zoning map changes as shown on Attachments 1 and 2 to be appropriate and consistent with the intent of adopted policies, including LU2-2, LU2-2.1 and LU2-2.4, and Ag1, Ag1-1.2, Ag1-4, Ag1-4.1 and Ag1-4.2; and

WHEREAS, the Planning Commission finds that the Tentative Parcel Map Case No. 06-004, General Plan Amendments and Development Code Amendments Case Nos. 06-001 will not adversely affect public health, safety and welfare and that the City Council will determine the adequacy of proposed in-lieu mitigation contribution regarding loss of prime farmland soils which cannot be avoided by any feasible alternatives.

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission recommends to the City Council of the City of Arroyo Grande that Tentative Parcel Map Case No. 06-004, General Plan Amendment Case No. 06-001, and Development Code Amendment Case No. 06-001, including the improvement and extension of Castillo Del Mar Drive between Orchard Street and Valley Road be approved as depicted on map Attachments 1 and 2.

On motion by Commissioner _____, seconded by Commissioner _____, and by the following roll call vote, to wit:

AYES:
NOES:
ABSENT:

the foregoing Resolution was adopted this 13th day of July 2006.

ATTEST:

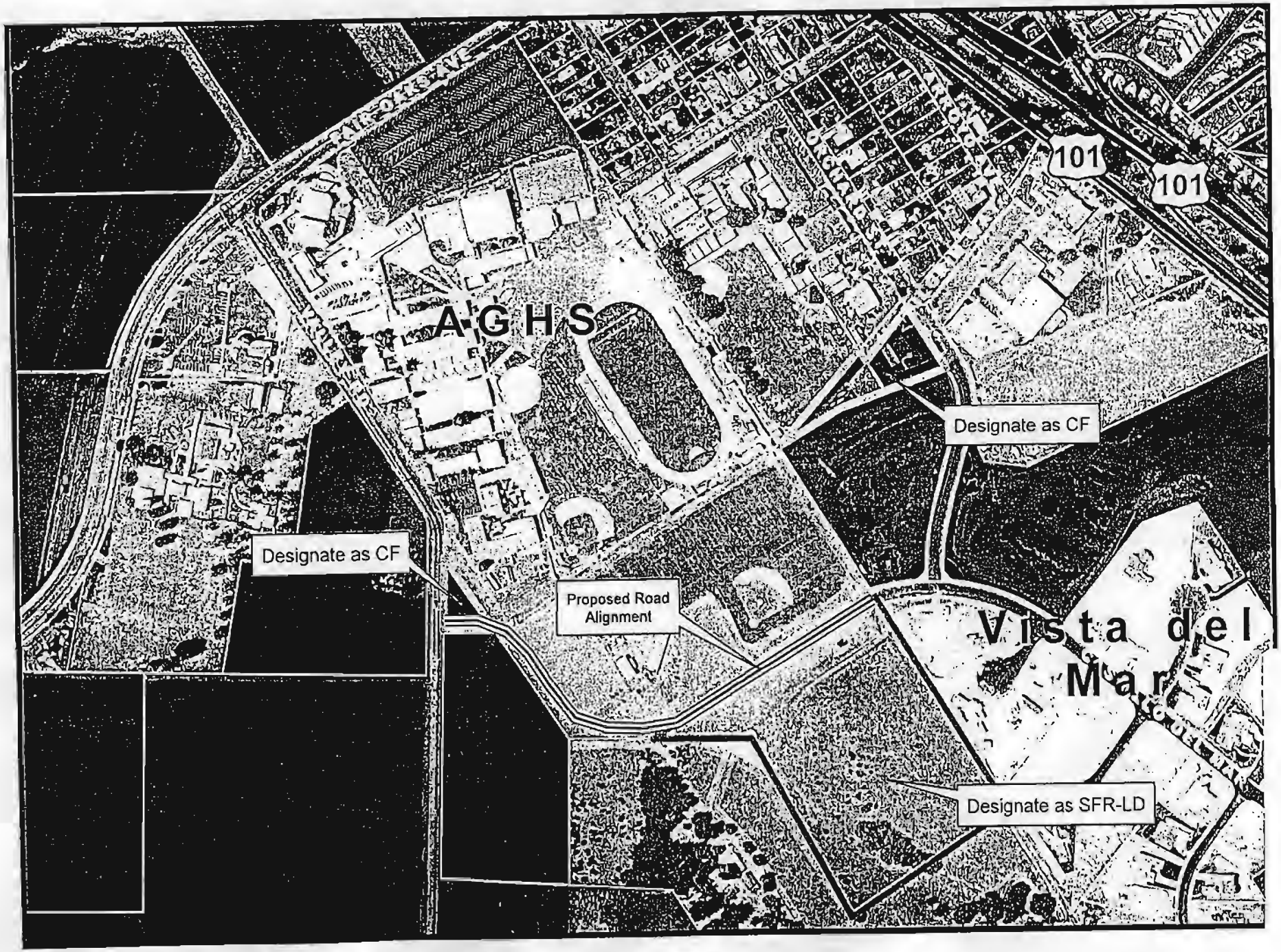
_____ _____

LYN REARDON-SMITH
SECRETARY TO THE COMMISSION

CHUCK FELLOWS, CHAIR

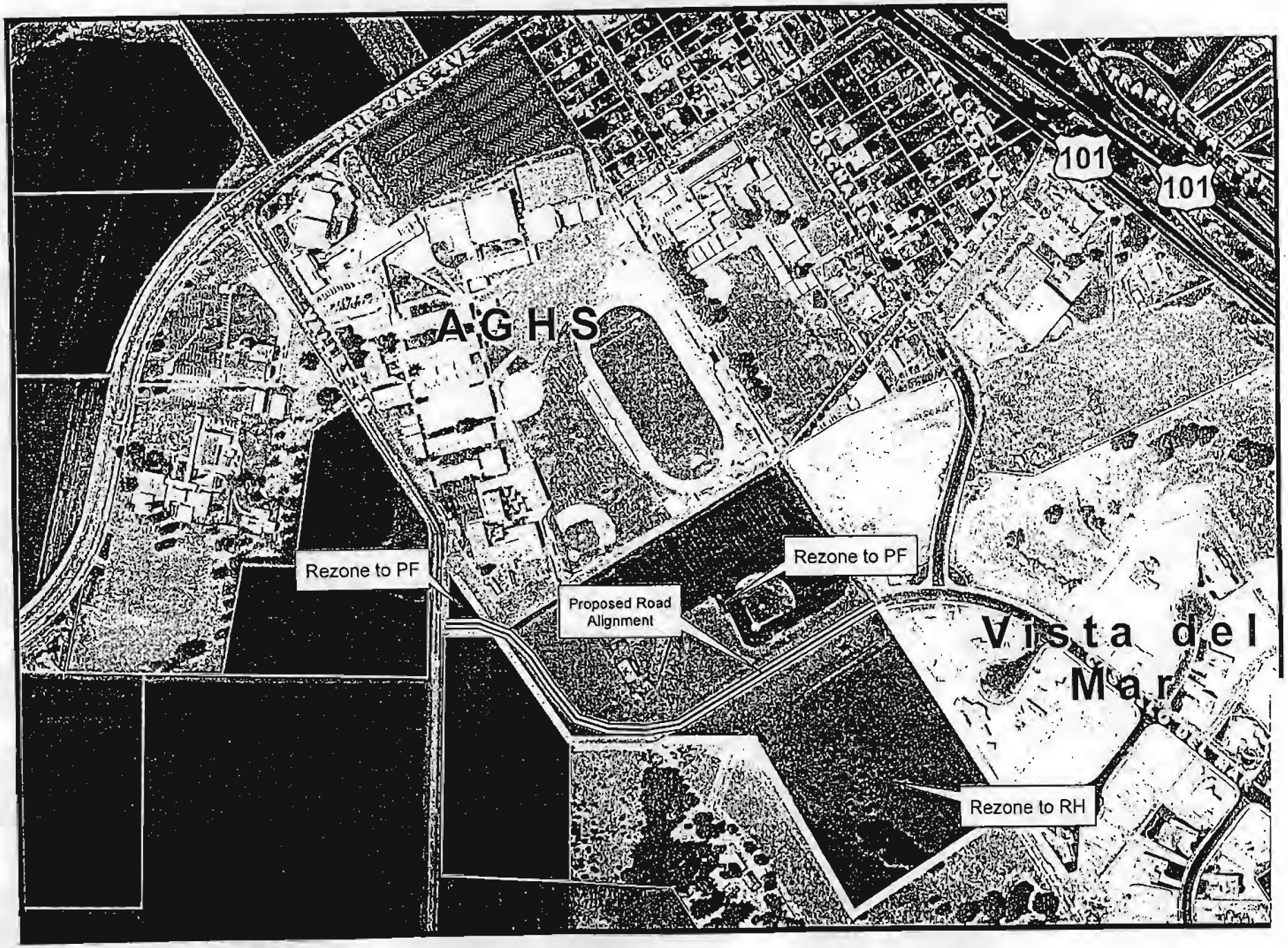
_____

ROB STRONG,
COMMUNITY DEVELOPMENT DIRECTOR



Proposed Road Alignment & GPA

ATTACHMENT 1



Proposed Road Alignment & Rezone

ATTACHMENT 2

CITY OF ARROYO GRANDE
INITIAL STUDY SUMMARY - ENVIRONMENTAL CHECKLIST

Project Title & No. GPA 06-001; DCA 06-001; and TPM 06-004 AGHS/Valley Road

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: the environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "POTENTIALLY SIGNIFICANT IMPACT" or "POTENTIALLY IS SIGNIFICANT UNLESS MITIGATED", as indicated by the checklist on the following pages.

☒ Aesthetics	☒ Geology and Soils	☐ Recreation
☒ Agricultural Resources	☐ Hazards/Hazardous Materials	☒ Transportation/Circulation.
☒ Air Quality	☒ Noise	☐ Wastewater
☒ Biological Resources	☒ Population/Housing	☐ Water
☒ Cultural Resources	☒ Public Services/Utilities	☒ Land Use

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation, the Environmental Coordinator finds that:

☐ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Teresa McClish, Associate Planner — Teresa McClish — June 13, 2006
Prepared by (Print) — Signature — Date

Rob Strong, Community Development Director — Rob Strong — June 13, 2006
Reviewed by (Print) — Signature — Date

Project Environmental Analysis

The City's environmental review process incorporates all of the requirements for completing the Initial Study as required by the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The Initial Study includes staff's on-site inspection of the project site and surroundings and a detailed review of the information in the file for the project. In addition, available background information is reviewed for each project. Relevant information regarding soil types and characteristics, geologic information, significant vegetation and/or wildlife resources, water availability, wastewater disposal services, existing land uses and surrounding land use categories and other information relevant to the environmental review process are evaluated for each project. The Community Development Department uses the checklist to summarize the results of the research accomplished during the initial environmental review of the project.

Persons, agencies or organizations interested in obtaining more information regarding the environmental review process for a project should contact the City of Arroyo Grande Community Development Department at 214 East Branch Street Arroyo Grande, CA 93420 or call (805) 473-5420.

A. PROJECT

DESCRIPTION: Proposal to extend the existing City roadway known as Castillo Del Mar to improve circulation around the southeast portion or Arroyo Grande High School campus and adjoining residential neighborhood. Castillo Del Mar will be extended from its present terminus to Valley Road to serve the existing Vista Del Mar development located within the City limits and the J.H. Land Partnership proposed development located within the unincorporated area of San Luis Obispo County. The proposed roadway extension will traverse the Lucia Mar Unified School District (LMSD) property for the existing Arroyo Grande High School site (APN 006-095-001) and a portion of a private agricultural parcel owned by John Taylor (Assessor's Parcel No. 006-095-002).

The project includes the following components:

1) Tentative parcel map for an approximate 50-acre property including and southeast of Arroyo Grande High School campus to create a 37-acre parcel (existing Arroyo Grande High School campus) and an 11-acre parcel and to rezone a 10-acre portion (existing sports fields and parking lots) of the 37-acre parcel from Agriculture to Public Facilities (identical to the zoning for the remainder of the Arroyo Grande High School campus); and amend the 2001 General Plan Land Use Element to re-designate the 11-acre proposed parcel from Community Facilities to Low Density Single Family Residential and to rezone the 11-acre proposed parcel from Agriculture (Ag) to Residential Hillside (RH) [See Attachment A];

2) Subdivide an approximate 7.5 acre parcel adjoining and south of Arroyo Grande High School campus on the east side of Valley Road to create a 1.2-acre parcel and a 6.3-acre parcel and amend the 2001 General Plan Land Use Element to designate the 1.2-acre parcel from Agriculture to Community Facilities and rezone the 1.2 –acre parcel from Agriculture (Ag) to Public Facility (PF);

3) To design, construct, extend and improve Castillo Del Mar Drive from near Orchard Street to Valley Road to enable circulation around Arroyo Grande High School and allow local street access southeast to a proposed County subdivision known as Busick Tract No. 1789 located outside City limits;

4) To accept an in-lieu mitigation contribution for loss of one acre of prime farmland associated with proposed road extension and potential conversion of prime farmland to future Public Facility use.

Design and review of any subsequent residential subdivision is not part of the project and therefore any future development is subject to separate discretionary and environmental review. This Initial Study evaluates potential environmental impacts for the proposed amendments to the Land Use Element and Zoning maps that are intended to provide consistency between the General Plan and Zoning Ordinance, the General Plan and Zoning amendments that are related to the Tentative Parcel Map and land use changes associated with the proposed construction of Castillo del Mar, as well as the proposed road extension and improvements.

ASSESSOR PARCEL NUMBER(S): 006-391-044; 006-095-002

B. EXISTING SETTING

LAND USE CATEGORY:	Agriculture (A); Open Space (OS) as a combining designation on a portion of the project site; Community Facility (CF)
ZONING:	Agriculture (AG)
EXISTING USES:	High School athletic fields and parking lots; farming operations; vacant
TOPOGRAPHY:	The site has varying topographical gradients with an approximate 2 – 9% slope southeast to athletic fields and farmland.
VEGETATION:	Native and exotic grasses, oak trees and willow trees; one-acre cultivated irrigated farmland
PROJECT SIZE:	Approximately 57 acres total for two existing parcels, including 1) APN 006-095-002 -an approximate 50-acre LMSD property consisting of the Arroyo Grande High School campus (approximately 27 acres), AGHS sports fields and parking (approximately 10-acres), and a vacant hillside parcel (approximately 11.6-acres); and 2) APN 006-095-001- an approximate 7.5-acre parcel owned by John Taylor and used for agriculture.

SURROUNDING LAND USE CATEGORIES AND USES:

North: Community Facilities;(CF); Public Facilities (PF); Arroyo Grande High School; Agriculture (AG) north of Fair Oaks Avenue.	*East:* Agriculture (A); County Agriculture; Low Density Residential; Agriculture (AG); Residential Hillside (RH) Vista Del Mar residential Subdivision
South: Agriculture (A); County Agriculture; Low Density Residential – single house; Agriculture (AG); Residential Hillside (RH) vacant	*West:* Low Density Residential; Residential Hillside (RH) vacant; County Agriculture; Farmland.

C. ENVIRONMENTAL ANALYSIS

During the Initial Study process, several issues were identified as having potentially significant environmental effects (see following Initial Study). Those potentially significant items associated with the proposed project can be minimized to less-than-significant levels by incorporating the mitigation measures listed below. All mitigation measures contained in this Initial Study shall be included in the Conditions of Approval for the project.

CITY OF ARROYO GRANDE
INITIAL STUDY CHECKLIST

1.	**AESTHETICS** - *Will the project:*	Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a)	*Create an aesthetically incompatible site open to public view?*	☐	☐	☒	☐
b)	*Introduce a use within a scenic view open to public view?*	☐	☒	☐	☐
c)	*Change the visual character of an area?*	☐	☒	☐	☐
d)	*Create glare or night lighting that may affect surrounding areas?*	☐	☐	☒	☐
e)	*Impact unique geological or physical features?*	☐	☐	☒	☐
f)	*Other* _____	☐	☐	☐	☐

Setting. The project includes approximately 11.6-acres of undeveloped hillside behind the Arroyo Grande High School sports fields and student parking area which is proposed for disposition and rezoning from Agriculture (A) to Residential Hillside (RH). An existing roadway, Castillo del Mar Drive, and a connecting segment currently used for emergency access, would be improved as a public street right-of way and offered for dedication. Additionally, the roadway improvement includes a 44 ft. wide roadway extension, that is 987 lineal ft. for Castillo Del Mar from its current terminus, along the southern edge of the Arroyo Grande High School campus, and extended in an "S" curve to intersect Valley Road (Attachment A). Additionally, approximately one-acre of prime farmland including the proposed road extension, immediately adjacent the Arroyo Grande High School is proposed to be re-designated and rezoned from Agriculture to Community Facility/Public facility. Both the 11.6 acres of vacant hillside and the area east of Valley Road through which the Castillo del Mar Drive is proposed to be extended, are open to public view.

Impact. Policy C/OS1-1 of the Agriculture, Conservation and Open Space Element of the General Plan encourages protection of visually accessible scenic resources. A 'scenic resource' is further defined as "agricultural land, open spaces, hillsides, ridgelines, canyons, valleys, landmark trees, woodlands, wetlands, streambeds and banks, and well as aspects of the built environment that are of a historic nature, unique to the City, or contribute to the rural, small town character of the City." The City has not officially recognized this property as being a sensitive scenic resource, and the road extension will only traverse vacant and farmed agricultural land for approximately 100 feet. Since the road extension crosses property at the bottom of a moderately sloped parcel and along the periphery of existing parking lots for Arroyo Grande High School, it is not expected that the road extension will cause a significant aesthetic impact.

The 11.6 acres proposed to be re-designated and rezoned to Residential Hillside (RH) are surrounded on three sides by RH zoning, which includes the Vista del Mar subdivision to the east. This proposal would enable future subdivision application, subject to project-specific environmental review, for a maximum of eight residences, exclusive of possible density bonuses for affordable housing.

Mitigation/Conclusion.

MM 1.1The Lucia Mar Unified School District (LMUSD) or subsequent owner of the 11.6-acre hillside parcel, shall apply for a tentative map or improvement plan prior to any grading, alteration of topography, drainage modification or tree removal.

Responsible Party:	Developer
Monitoring Agency:	City of Arroyo Grande – CDD, Public Works Dept.
Timeframe:	Prior to Grading Permit

MM 1.2 The City shall install a protective fence or silt barrier on both sides of the proposed public street extension of Castillo del Mar Drive prior to road construction activity which shall remain in place until road improvements are completed according to approved plans and specifications.

Responsible Party:	City of Arroyo Grande – Public Works Dept.
Monitoring Agency:	City of Arroyo Grande – CDD, Public Works Dept.
Timeframe:	Prior to Grading

MM 1.3 Consistent with the Program EIR for the General Plan 2001 update; any future tentative map or development proposal for the 11.6-acre parcel shall include the following measures to ensure consistency with the Single Family Residential - Low Density (LD) General Plan designation as well as the RH zoning classification: cluster any proposed development if necessary to retain steeper slopes, drainage, natural vegetation and other site features as conservation open space (LU2-2.1); ensure that all residential hillside development, regardless of density, does not excessively intrude on the natural slope and terrain of the hillside including density that is commensurate with the steepness of the slope and prohibiting the excessive use of retaining walls, intrusive grading and removal of native oak trees (LU2-2.4); and allow development at a maximum of 1.5 dwelling units per acre, with potential for lower densities if required in order to address site-specific environmental impacts.

Responsible Party:	Developer
Monitoring Agency:	City of Arroyo Grande – CDD
Timeframe:	Prior to certification of project –specific CEQA document

2. AGRICULTURAL RESOURCES *- Will the project:*	**Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) *Convert prime agricultural land to non-agricultural use?*	☐	☒	☐	☐
b) *Impair agricultural use of other property or result in conversion to other uses?*	☐	☒	☐	☐
c) *Conflict with existing zoning or Williamson Act program?*	☐	☒	☐	☐
d) *Other* _____	☐	☐	☐	☐

Setting. Both the 11.6-acre hillside portion of the project and the Arroyo Grande High School sports fields (approximately 10 acres) have conflicting zoning and General Plan classifications. The General Plan classification is Community Facilities (CF) and the zoning district is Agriculture. This conflict was documented in the City's study on Agricultural Resources (2003), and determined that the General Plan designation for this parcel was not inconsistent or in need of modification, and therefore the zoning would be changed from Agriculture to PF during the Development Code Update process to

address changes required by the 2001 General Plan update (not yet complete). Therefore the change in zoning from Agriculture for the 10-acre sports fields and the 11.6-acre vacant hillside area is not considered a conversion of prime agricultural land due to it's consistency with the designation as CF in the 2001 General Plan, review under the 2001 General Plan EIR and subsequent analysis in the 2003 Report on Agricultural Resources (including it's non-prime classification as class IV – VI soils according to the USDA Soil Survey of San Luis Obispo County). However, the proposed General Plan and Zoning Amendments for the 1.2 acre portion of John Taylor's 7.5-acre parcel (APN 006-095-001), currently in row crop production, from Agriculture to Community Facilities/PF is considered a conversion of prime agricultural land.

Impact. Due to the proposed re-zoning and conversion of 1.2 acres of irrigated and farmed agricultural land, the impact must be considered significant unless it can be determined that in consideration of all the implications of the conversion, there is feasible mitigation that can reduce the impact to less than significant. The General Plan Agricultural, Conservation and Open Space Element objective Ag1 requires the City to "Avoid and/or mitigate loss of prime farmland soils and conserve non-prime Agriculture use and natural resource lands." Several policies and implementation measures specifically relate to loss of the City's agricultural land inventory and must be considered in light of the specifics of the proposal in order to determine if the impact can be mitigated to the extent that it is no longer significant or if it remains significant even after all applicable mitigation is required. Given that the proposal includes the improvement, extension and dedication of a public road to address a circulation deficiency, Ag1-1.2 relates to the proposed action as it states: "Public facilities are permitted on agricultural and natural resource lands when required by public health, safety and welfare of the public". Adequate and safe circulation and secondary access around the high school is an applicable application of this policy and provides for consideration of mitigation if the potential conversion can not be fully avoided due to public health safety and welfare.

Additionally, the proposed conversion of 1.2-acres of agricultural land is located a triangular piece of property between the Arroyo Grande High School campus and Valley Road, and as such it is not anticipated that it will fragment or impair other agricultural lands. Since nearly the entire proposed 1.2-acre parcel would be included within 100 ft. of operational farmland, there could not be any residential development on the property, consistent with the City's agricultural buffer requirements in Section 16.12.170.E.

General Plan policy Ag1-4 and related policies include provisions for mitigation which may include permanent protection of prime farmland soils at a ratio of at least 1:1 with regard to the acreage of land removed from the capability for agricultural use which may be satisfied by payment of in-lieu fees as proposed. Development Code provisions suggest up to a 2:1 mitigation of comparable Ag capability.

Mitigation/Conclusion.

MM 2.1: Payment of an in-lieu fee sufficient to provide for the permanent protection of comparable farmland for the 1.2-acre conversion. The General Plan indicates mitigation fees of comparable farmland at a ratio or 1:1, however the City's Development Code requires mitigation fees at a ratio of up to 2:1 to be used for acquisition of a farmland conservation easement of farmland deed restriction in accordance with Section 16.12.170. Proposed mitigation fees are consistent with the 2:1 ratio.

Responsible Party:	Developer
Monitoring Agency:	City of Arroyo Grande CDD Dept.
Timing:	Prior to recordation of the final map.

MM 2.2: A deed restriction shall be recorded on the proposed 1.2-acre public facilities parcel prohibiting residential development consistent with Section 16.12.170.E of the City's Development Code.

Responsible Party:	LMUSD
Monitoring Agency:	City of Arroyo Grande, CDD Dept.
Timing:	Prior to recordation of the final map

MM 2.3: Consistent with the 2001 General Plan Update Program EIR, any future development application on the proposed 11.6-acre Residential Hillside parcel shall include provision for a permanent open-space parcel to retain steeper slopes, drainage, natural vegetation and other site features (i.e. a "cluster subdivision" or PUD).

Responsible Party:	Developer
Monitoring Agency:	City of Arroyo Grande CDD Dept.
Timing:	Prior to certification of project-specific CEQA document.

3. AIR QUALITY - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Violate any state or federal ambient air quality standard, or exceed air quality emission thresholds as established by County Air Pollution Control District (APCD)?*	☐	☒	☐	☐
b) *Expose any sensitive receptor to substantial air pollutant concentrations?*	☐	☐	☒	☐
c) *Create or subject individuals to objectionable odors?*	☐	☐	☒	☐
d) *Be inconsistent with the District's Clean Air Plan?*	☐	☐	☒	☐
e) *Other* _____	☐	☐	☐	☐

Setting. The San Luis Obispo County Air Pollution Control District (APCD) has developed the CEQA Air Quality Handbook to evaluate project specific impacts and determine if air quality mitigation measures are needed, or if potentially significant impacts could result. The City refers to this Handbook for all discretionary projects subject to CEQA.

Impact. The proposed road extension allows for alternative circulation for existing development. Any future projects that may utilize the road extension will be evaluated under CEQA for any potential impacts. The proposed road connection would be constructed along the periphery of existing parking lots for Arroyo Grande High School and would not subject individuals to objectionable odors or expose any sensitive receptors to substantial air pollutant concentrations.

Short-term impacts related to dust generation from grading would result in dust generation that could affect adjacent properties. Mitigation measures placed on the project would reduce short-term dust generation during construction of the project to less-than-significant levels. The dust control measures listed below shall be followed during construction of the project, and shall be shown on grading and building plans.

Mitigation/Conclusion. The following mitigation measures are necessary to reduce potential air quality impacts from construction to a less-than-significant level.

The project shall comply with all applicable Air Pollution Control District (APCD) regulations pertaining to the control of fugitive dust (PM_{10}) as contained in section 6.5 of the Air Quality Handbook. All site grading and demolition plans shall list the following regulations:

MM 3.1: All dust control measures listed below (MM 3.2 – 3.6) shall be followed during construction of the project and shall be shown on grading and building plans. The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust off site. The name and telephone number of such person(s) shall be provided to the APCD prior to map recordation and grading of the road improvement and extension.

MM 3.2: During construction, water trucks or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent airborne dust from leaving the site. At a minimum, this would include wetting down such areas in the later morning and after work is completed for the day and whenever wind exceeds 15 miles per hour. Reclaimed (non-potable) water should be used.

MM 3.3: Soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation.

MM 3.4: All vehicles hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114.

MM 3.5: Install wheel washers where vehicles enter and exit unpaved roads on to streets, or wash off trucks and equipment leaving the site. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.

MM 3.6: Sweep streets at the end of each day if visible soil material is carried on to adjacent paved roads. Water sweepers with reclaimed water should be used where feasible.

MM 3.7: All off-road and portable diesel powered equipment, including but not limited to bulldozers, graders, cranes, loaders, scrapers, backhoes, generator sets, compressors, auxiliary power units, shall be fueled exclusively with California Air Resources Board (ARB) motor vehicle diesel fuel.

MM 3.8: Diesel construction equipment shall meet the ARB's 1996 certification standard for off-road heavy-duty diesel engines.

Responsible Party:	City of Arroyo Grande
Monitoring Agency:	City of Arroyo Grande - Public Works Dept., Building and Fire Department; Air Pollution Control District
Timing:	During construction

4. BIOLOGICAL RESOURCES - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Result in a loss of unique or special status species or their habitats?*	☐	☐	☒	☐
b) *Reduce the extent, diversity or quality of native or other important vegetation?*	☐	☐	☒	☐
c) *Impact wetland or riparian habitat?*	☐	☐	☒	☐
d) *Introduce barriers to movement of resident or migratory fish or wildlife species, or factors that could hinder the normal activities of wildlife?*	☐	☐	☒	☐
e) *Other* _____	☐	☐	☐	☐

Setting. The proposed road improvements and extension include an area of paved roadway that is currently used for emergency access. The area of land that will be included in the portion of the roadway widening is currently roughly graded and includes an area used for storage containers. The proposed roadway extension will traverse about 200 feet across a portion of the 1.2 acre agricultural parcel currently in row crop production. There is a seasonal drainage ditch that traverses the AGHS campus between sports fields and connects to the proposed 1.2-acre Public Facilities parcel. However, the proposed road construction will occur in the area where there is existing crop production and avoids the area where there is some evidence of native vegetation (the drainage ditch is dug seasonally in the crop area for flood protection.)

Impact. It is not anticipated that there will be any impact to biological resources due to the project construction because the area of proposed construction does not include special habitat or important vegetation. Any future development of the proposed 11.6-acre residential hillside parcel will be subject to site-specific environmental review.

5. CULTURAL RESOURCES - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Disturb pre-historic resources?*	☐	☐	☒	☐
b) *Disturb historic resources?*	☐	☐	☒	☐
c) *Disturb paleontological resources?*	☐	☐	☒	☐
d) *Other* _____	☐	☐	☐	☐

Setting. An assessment of archaeological/cultural resources in and surrounding the project area was prepared by C.A. Singer and Associates, consulting archaeologists, under contract to McClelland Consultants for the original Vista Del Mar subdivision planned development in 1990. The nearest recorded archaeological site is located approximately 2,500 feet southwest of the project site near Los Berros Creek. However, immediately south of the project site on the Haddox property, an unrecorded site exists.

Impact. The assessment for the 1990 Vista Del Mar EIR included a surface examination of the off-site area that indicated that no part of the project site extends into the vicinity of the archaeological site. Further, a thorough field reconnaissance of the project site revealed no surface evidence of the prehistoric or early historic occupation or use of the site, and that the soils and geological conditions of the site indicate that the likelihood of the project site is not anticipated to have any direct impact on local archaeological/cultural resources.

Mitigation/Conclusion. Although it is not anticipated that there are any impacts to archaeological/cultural resources, implementation of the mitigation measure(s) listed below will ensure that no impacts will occur.

MM 5.1: In the event that prehistoric cultural materials, or historic cultural materials are encountered, work in the immediate vicinity of the finds shall be suspended and a qualified archaeologist and representative from the Northern Chumash Tribal Council allowed to quickly record, collect, and analyze any resources encountered. The City shall be notified should resources meeting CEQA significance standards be discovered. The Chumash representative and archaeologist shall work as quickly as possible to permit resumption of construction activities. It is preferred that location data of finds be recorded using a hand-held global positioning system (GPS) receiver. In the event that human remains (burials) are found, the County Coroner (781-4513) shall be contacted immediately. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she will contact by telephone within 24 hours the Native American Heritage Commission.

Responsible Party:	Developer
Monitoring Agency:	City of Arroyo Grande – CDD, Public Works Dept.
Timeframe:	During grading and construction activities

6. GEOLOGY AND SOILS - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Result in exposure to or production of unstable earth conditions, such as landslides, earthquakes, liquefaction, ground failure, land subsidence or other similar hazards?*	☐	☒	☐	☐
b) *Be within a CA Dept. of Mines & Geology Earthquake Fault Zone?*	☐	☐	☒	☐
c) *Result in soil erosion, topographic changes, and loss of topsoil or unstable soil conditions from project-related improvements, such as vegetation removal, grading, excavation, or fill?*	☐	☒	☐	☐
d) *Change rates of soil absorption, or amount or direction of surface runoff?*	☐	☒	☐	☐

6. GEOLOGY AND SOILS - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
e) *Include structures located on expansive soils?*	☐	☐	☒	☐
f) *Change the drainage patterns where substantial on- or off-site sedimentation/ erosion or flooding may occur?*	☐	☐	☒	☐
g) *Involve activities within the 100-year flood zone?*	☐	☐	☒	☐
h) *Be inconsistent with the goals and policies of the County's Safety Element relating to Geologic and Seismic Hazards?*	☐	☐	☒	☐
i) *Preclude the future extraction of valuable mineral resources?*	☐	☐	☐	☒
j) *Other* _____	☐	☐	☐	☐

Setting. The site has varying topographical gradients with an approximate 2 – 9% northwestern – facing slope. There is a seasonal drainage ditch that traverses the existing AGHS sports fields. Undisturbed vegetation consists primarily of grasses. According to the 1990 EIR for Vista Del Mar, the project area lies on a northwest –facing slope

Impact. A major source of potential earthquake damage to Arroyo Grande is from activity along the regional San Andreas Fault located less than forty (40) miles east along the eastern border of San Luis Obispo County. The most widespread intensity of ground shaking depends on several factors including the magnitude of the earthquake, the distance from the earthquake epicenter, and underlying soil conditions. Other regional faults of significance that could affect the project area in terms of ground shaking are the Rincondada and Nacimiento faults, located approximately twenty-five (25) miles east of the City. These faults are considered "potentially active", and could cause moderate (Magnitude 6.0+) earthquakes in the area. The West Huasna fault is located roughly three (3) miles east of the City of Arroyo Grande. The project site would be subject to severe ground shaking in a strong seismic event, which could cause damage to structures and endanger public safety. .

The project site will be subject to soil erosion and downstream sedimentation during construction and after project completion. Specific erosion control requirements are specified below under the Hydrology and Water Quality section.

Mitigation/Conclusion. Seismic hazard, soil stability, soil erosion and downstream sedimentation are considered potentially significant impacts that can be reduced to a less-than-significant level with implementation of the mitigation measures listed below.

> **MM 6.1:** Final road improvement plans prepared by the City's consulting engineer shall be accompanied by a letter of certification from the civil engineer that the plans are in conformance with the following:

- The road improvements shall be designed to withstand ground shaking associated with a large magnitude earthquake on nearby active faults.
- The project shall comply with the requirements of the City's Grading Ordinance.
- Site-specific specifications regarding clearing, site grading and preparation, site drainage, and pavements shall be delineated, including an erosion control program.

Responsible Party: City of Arroyo Grande
Monitoring Agency: City of Arroyo Grande – Public Works Dept.
Timeframe: Prior to Grading

7. HAZARDS & HAZARDOUS MATERIALS - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Result in a risk of explosion or release of hazardous substances (e.g. oil, pesticides, chemicals, radiation) or exposure of people to hazardous substances?*	☐	☐	☒	☐
b) *Interfere with an emergency response or evacuation plan?*	☐	☐	☒	☐
c) *Expose people to safety risk associated with airport flight pattern?*	☐	☐	☐	☒
d) *Increase fire hazard risk or expose people or structures to high fire hazard conditions?*	☐	☐	☒	☐
e) *Create any other health hazard or potential hazard?*	☐	☐	☒	☐
f) *Other* _____	☐	☐	☐	☐

Setting. The project is not located in an area of known hazardous material contamination. The project is not within a high severity risk area for fire. The project is not within an Airport Review area.

Impact. The project does not propose the use of hazardous materials. The project is not expected to conflict with any regional evacuation plan. Although the project does not present a significant fire safety risk the following mitigation measures can reduce the usage of chemical herbicides within the right of way and meet state goals.

Mitigation/Conclusion. For fire reduction the following measure is being considered for use within the project limits:

MM 7.1 Use polymer for a natural soil pavement to prevent weed growth under (MBGR) around signposts, power line poles and a 4-foot swath parallel to the edge of roadway to keep fires from starting.

Responsible Party: City of Arroyo Grande
Monitoring Agency: City of Arroyo Grande – Public Works Dept.
Timeframe: During Grading activities

8. NOISE - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Expose people to noise levels that exceed the City's Noise Element thresholds?*	☐	☒	☐	☐
b) *Generate increases in the ambient noise levels for adjoining areas?*	☐	☒	☐	☐
c) *Expose people to severe noise or vibration?*	☐	☒	☐	☐
d) *Other* _____	☐	☐	☐	☐

Setting. Existing ambient noise in the vicinity of the project site is primarily generated by vehicular traffic and adjacent agricultural operations.

Impact. The project is expected to generate loud noise during construction that will impact the adjacent school site and residences. This is considered a potentially significant impact that can be mitigated to a less-than-significant level with implementation of the below mitigation measures.

Mitigation/Conclusion. The project will generate short-term noise impacts with construction activities that require mitigation. Long-term increases in traffic and other operational noise levels are considered less-than-significant impacts and no mitigation measures are necessary.

MM 8.1: Construction activities shall be restricted to the hours of 8 a.m. and 6 p.m. Monday through Saturday. No construction shall occur on Sunday. On-site equipment maintenance and servicing shall be confined to the same hours.

MM 8.2: All construction equipment utilizing internal combustion engines shall be required to have mufflers that are in good condition. Stationary noise sources shall be located at least 300 feet from occupied dwelling units unless noise reducing engine housing enclosures or noise screens are provided by the contractor.

MM 8.3: Equipment mobilization areas, water tanks, and equipment storage areas shall be placed in a central location as far from existing residences as feasible.

Responsible Party:	Developer
Monitoring Agency:	City of Arroyo Grande – CDD, Public Works Dept.
Timeframe:	During construction

9. POPULATION/HOUSING - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Induce substantial growth in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?*	☐	☐	☒	☐

9. POPULATION/HOUSING - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
b) *Displace existing housing or people, requiring construction of replacement housing elsewhere?*	☐	☐	☒	☐
c) *Create the need for substantial new housing in the area?*	☐	☐	☒	☐
d) *Use substantial amount of fuel or energy?*	☐	☐	☒	☐
e) *Other* _____	☐	☐	☐	☐

Setting. The project includes an improvement, extension and dedication of a portion of existing emergency access road to improve public circulation around AGHS and to the existing development of Vista del Mar and residential subdivision in the county. The proposed road connection was originally anticipated when the Vista del Mar subdivision was built as a preferred circulation alternative instead of Orchard Ave. Castillo del Mar will enable access to a potential low density (maximum of 7-units) subdivision on the proposed 11.6-acre residential hillside parcel.

Impact. The proposal addresses a long-term circulation deficiency for AGHS and surrounding residences. Although the project will enable access to a potential future subdivision, its potential for increased traffic is less than ten peak-hour trips, and thus the road improvement is not considered to induce substantial growth in the vicinity. The project will not result in a need for a significant amount of new housing, and will not displace existing housing.

10. PUBLIC SERVICES/UTILITIES - *Will the project have an effect upon, or result in the need for new or altered public services in any of the following areas:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Fire protection?*	☐	☐	☒	☐
b) *Police protection?*	☐	☐	☒	☐
c) *Schools?*	☐	☐	☒	☐
d) *Roads?*	☐	☐	☒	☐
e) *Solid Wastes?*	☐	☐	☒	☐
g) *Other* _____	☐	☐	☐	☐

Setting. The proposal includes redesignation and rezoning of land and proposed road improvements that will not require the need for new public services in the vicinity and will not require modification of existing utilities that are in place. Any future subdivision application will include an analysis of impacts to public services.

Impact. It is not anticipated that the proposal will have a significant impact on public services.

11. RECREATION - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Increase the use or demand for parks or other recreation opportunities?*	☐	☐	☒	☐
b) *Affect the access to trails, parks or other recreation opportunities?*	☐	☐	☒	☐
c) *Other* _____	☐	☐	☐	☐

Setting. The proposed road improvements will include sidewalk and improve vehicular and pedestrian circulation for AGHS and residences in the vicinity. No trail or recreation amenity is proposed.

Impact. It is not anticipated that the proposal will have a significant impact for recreation.

12. TRANSPORTATION/ CIRCULATION - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Increase vehicle trips to local or areawide circulation system?*	☐	☐	☒	☐
b) *Reduce existing "Levels of Service" on public roadway(s)?*	☐	☐	☒	☐
c) *Create unsafe conditions on public roadways (e.g., limited access, design features, sight distance)?*	☐	☐	☒	☐
d) *Provide for adequate emergency access?*	☐	☐	☒	☐
e) *Result in inadequate parking capacity?*	☐	☐	☒	☐
f) *Result in inadequate internal traffic circulation?*	☐	☐	☒	☐
g) *Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., pedestrian access, bus turnouts, bicycle racks, etc.)?*	☐	☒	☐	☐
h) *Result in a change in air traffic patterns that may result in substantial safety risks?*	☐	☐	☐	☒
i) *Other* _____	☐	☐	☐	☐

Setting. The project includes an improvement, extension and dedication of a portion of existing emergency access road to improve public circulation around AGHS and to the existing development of Vista del Mar and residential subdivision in the County. The proposed road connection will implement a preferred circulation alternative (instead of Orchard Ave.) that was originally anticipated when the Vista del Mar subdivision was built. Castillo del Mar will enable access to a potential low density subdivision on the proposed 11.6-acre residential hillside parcel subject to future environmental review.

Impact. Due to the grade change on the north shoulder of the existing emergency access portion of Castillo del Mar, additional widening on the north side may require retaining walls. In order to reduce the need for retaining walls to accommodate the 64' right-of-way, the following mitigation shall be required. Additionally, mitigation is required in order to provide for and encourage bicycle transportation, particularly in the vicinity of AGHS.

Mitigation/Conclusion. Although no significant traffic-related concerns were identified the following mitigation is required.

MM 12.1: No parking or sidewalk shall be provided on the north side of Castillo del Mar where grade change would require substantial retaining walls. Future residential subdivision on the south side of Castillo del Mar will include a curb, gutter, and sidewalk with or without on-street parking.

Responsible Party:	Developer
Monitoring Agency:	City of Arroyo Grande – Building & Fire Dept.; Public Works Dept.
Timeframe:	Prior to issuance of grading permit for future road improvements.

MM 12.2: All road improvement plans for Castillo del Mar, including both the proposed improvements and the anticipated future improvements, shall include a minimum of a class II bike lane to provide safe bicycle access in the vicinity of AGHS and the residential subdivisions.

Responsible Party:	Developer
Monitoring Agency:	City of Arroyo Grande – Building & Fire Dept.; Public Works Dept.
Timeframe:	Prior to issuance of Grading Permit

13. WASTEWATER - ***Will the project:***	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Violate waste discharge requirements for wastewater systems?	☐	☐	☐	☒
b) Change the quality of surface or ground water (e.g., nitrogen-loading, daylighting)?	☐	☐	☒	☐
c) Adversely affect community wastewater service provider?	☐	☐	☐	☒
d) Other _____	☐	☐	☐	☐

Setting. There is no wastewater disposal required for the proposal.

Impact: There is no anticipated impact for wastewater.

14. HYDROLOGY AND WATER QUALITY - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Violate any water quality standards?*	☐	☐	☒	☐
b) *Discharge into surface waters or otherwise alter surface water quality (e.g., turbidity, temperature, dissolved oxygen, etc.)?*	☐	☒	☐	☐
c) *Change the quality of groundwater (e.g., saltwater intrusion, nitrogen-loading, etc.)?*	☐	☐	☒	☐
d) *Change the quantity or movement of available surface or ground water?*	☐	☐	☒	☐
e) *Adversely affect water supply?*	☐	☐	☒	☐
f) *Other* _____	☐	☐	☐	☐

Setting. Localized stormwater surface runoff follows the topography of the site northerly toward AGHS and farmland. A season drainage ditch traverses east to west the AGHS sports fields and will run through a proposed pipe under the proposed road extension near Valley Road and continue through existing farmland to Los Berros Creek. Approximately one-acre of irrigated farmland will be removed from production.

Impact. Construction and grading activities and exposed soil could cause erosion during project development. An approximate 150 ft. segment of proposed road extension will traverse the vicinity of a drainage ditch, dug seasonally by the agricultural landowner for flood protection.

Mitigation/Conclusion. In order to reduce the potential for erosion and to provide for seasonal drainage, the following mitigation is required.

MM 14.1: To reduce erosion hazards due to construction activities, grading shall be minimized, and the developer shall provide for a temporary siltation and drainage control basin during construction. All finished slopes shall be hydroseeded with a permanent seed mix composed of native plant species indigenous to the areas. If a drainage structure is widened, all exposed soil needs to be replanted with native grass plugs or hydroseeded for storm water requirements.

Responsible Party: City of Arroyo Grande – Public Works Dept.
Monitoring Agency: City of Arroyo Grande – CDD, Public Works Dept.
Timeframe: Prior to Grading

MM 14.2: Work shall be completed during the dry season (April 15 to October 15) to reduce active construction erosion to the extent feasible. If construction must extend into the

wet weather season, a qualified hydrogeologist or civil engineer shall prepare a drainage and erosion control plan that addresses measures to accommodate the seasonal drainage ditch.

Responsible Party:	Developer
Monitoring Agency:	City of Arroyo Grande – Public Works Dept.
Timeframe:	Prior to issuance of Grading Permit and during construction

MM 14.3: All temporary fill placed during project construction shall be removed at project completion and the area restored to approximate pre-project contours and topography.

Responsible Party:	Developer
Monitoring Agency:	City of Arroyo Grande – Public Works Dept.
Timeframe:	Prior to issuance of a Certificate of Occupancy

MM 14.4: No construction debris or materials shall be allowed to enter the vicinity of the drainage ditch either directly or indirectly.

Responsible Party:	Developer
Monitoring Agency:	City of Arroyo Grande – Public Works Dept.
Timeframe:	During construction

15. LAND USE - ***Will the project:***	**Inconsistent**	**Potentially Inconsistent**	**Consistent**	**Not Applicable**
a) ***Be potentially inconsistent with land use, policy/regulation (e.g., General Plan, Development Code), adopted to avoid or mitigate for environmental effects?***	☐	☒	☐	☐
b) ***Be potentially inconsistent with any habitat or community conservation plan?***	☐	☐	☒	☐
c) ***Be potentially inconsistent with adopted agency environmental plans or policies with jurisdiction over the project?***	☐	☐	☒	☐
d) ***Be potentially incompatible with surrounding land uses?***	☐	☐	☒	☐
e) *Other* _____	☐	☐	☐	☐

Setting/Impact. Surrounding uses are identified on Page 3 of the Initial Study. The proposed project was reviewed for consistency with policy and/or regulatory documents relating to the environment and appropriate land use (e.g., City's Land Use Element, Development Code, Zoning Map, etc.). Referrals were sent to outside agencies to review for policy consistencies and code compliance (e.g. County Agricultural Commissioner, RWQCB, APCD.) As discussed in the section relating to impacts to Agriculture, the proposed zoning and general plan land use designations for the 10-acre AGHS sports fields and 11.6-acre proposed residential hillside parcel are considered internally consistent. The General Plan land use designation and rezoning of the 1.2 acre of farmland requires mitigation.

The proposal also includes an area of conservation open space land use designation overlay as shown on the General Plan land use map. This designation is to acknowledge need to maintain a drainage facility through the AGHS sports fields to prevent flooding and to convey regional drainage to Los Berros Creek and eventually to Arroyo Grande Creek. The proposal does not conflict with this overlay by rezoning from agriculture to public facility and the proposed road improvements and extension will provide for the necessary drainage facility.

Mitigation/conclusion. No inconsistencies remain after implementation of all required mitigation and no additional mitigation is determined to be necessary.

16. MANDATORY FINDINGS OF SIGNIFICANCE - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*	☐	☒	☐	☐
b) *Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)*	☐	☒	☐	☐
c) *Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*	☐	☐	☒	☐
d) *Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*	☐	☐	☒	☐

Exhibit A - Initial Study References and Agency Contacts

The City of Arroyo Grande has contacted various agencies for their comments on the proposed project. With respect to the subject application, the following have been contacted (marked with an ☒) and when a response was made, it is either attached or in the application file:

Contacted	Agency
☐	County Public Works Department
☐	County Environmental Health Division
☒	County Planning & Building & Fire Dept.
☒	County Agricultural Commissioner's Office
☒	Air Pollution Control District
☒	Regional Water Quality Control Board
☒	CA Department of Fish and Game
☐	CA Department of Forestry
☐	CA Department of Transportation
☒	US Army Corps of Engineers
☐	So. County Sanitation District
☒	Northern Chumash Tribal Council

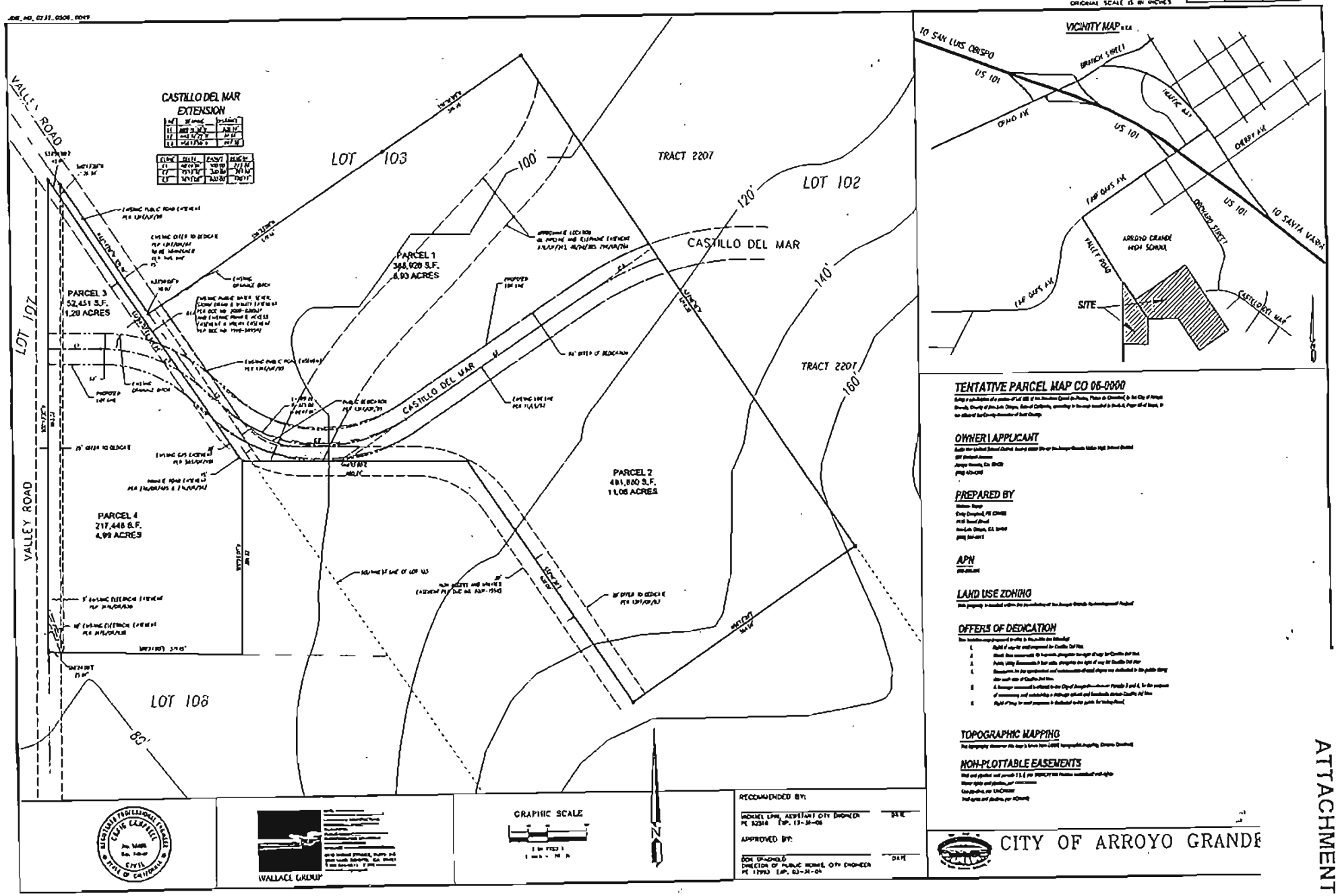
The following reference materials have been used in the environmental review for the proposed project and are hereby incorporated by reference into the Initial Study. The following information is available at the City Community Development Department.

SOURCE LIST:

1. City of Arroyo Grande General Plan (October 2001)
2. City of Arroyo Grande General Plan Land Use Map (October 2001)
3. City of Arroyo Grande Development Code
4. City of Arroyo Grande Zoning Map
5. City of Arroyo Grande Existing Setting and Community Issues Report
6. City of Arroyo Grande General Plan Program EIR (October 2001)
7. Air Pollution Control District Clean Air Plan
8. FEMA - Flood Insurance Rate Map
9. Ordinance No. 521 (Amending Title 10, Chapter 3 of the Municipal Code regarding the Community Tree Program)
10. Ordinance No. 550 (Amending Title 16 of the Municipal Code to incorporate regulations and amending the Zoning Map to create an Agricultural Preservation Overlay District)
11. San Diego Council of Governments – Vehicular Traffic Generation Rates
12. City of Arroyo Grande 2003 Report on Agricultural Resources
13. Environmental Impact Report for General Plan Amendment 89-2; Planned Development Rezone 89-215 (Vista Del Mar) December 1990.

ATTACHMENTS:

A: Roadway improvement location map
B: Map showing proposed road alignment and rezone
C: Map showing proposed road alignment and general plan amendment



ATTACHMENT 4