STATE CLEARINGHOUSE NO.	88062917
SCREENCHECK SUBMITTED	January 16, 1989
REVISED SCREENCHECK SUBMITTED	August 23, 1989
DRAFT EIR SUBMITTED	February 1, 1990
FINAL EIR SUBMITTED	

ENVIRONMENTAL IMPACT REPORT

FOR

LADYFACE MOUNTAIN SPECIFIC PLAN

Prepared For:

CITY OF AGOURA HILLS
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Agoura Hills, CA 91301
(818) 889-9114
Contact Person: David Anderson,
Planning and Community Development Director

Prepared By:

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FEBRUARY 1990

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1.0

INTRODUCTION

1.0 INTRODUCTION

This Environmental Impact Report (EIR) has been prepared pursuant to the State of California's Guidelines for Implementation of the California Environmental Quality Act (CEQA) to evaluate the potential impacts of the proposed Ladyface Mountain Specific Plan in the City of Agoura Hills, County of Los Angeles.

The City of Agoura Hills is the lead agency responsible for the preparation of this environmental documentation pursuant to CEQA, as amended. This EIR focuses on environmental concerns identified in the Initial Study and Notice of Preparation (NOP). The Initial Study was circulated for public review for a 30-day period beginning July 8, 1988. The NOP and Intital Study are provided in Appendix A of this EIR.

The following issues of concern were identified in the Initial Study:

- Earth Resources
- Air Quality
- Water Resources and Water Quality
- Biological Resources
- Noise
- Light and Glare
- Land Use
- Natural Resources
- Population and Housing
- Traffic and Circulation
- Public Services and Utilities
- Aesthetics
- Recreation
- Archaeological and Historical Resources

This EIR is intended as a general environmental review of the potential environmental impacts associated with the conceptual land use alternatives proposed in the Ladyface Mountain Specific Plan (P&D Technologies, 1989). This EIR does not preclude the need for site-specific environmental review as development is proposed for each parcel in the project area. This document has been prepared with the necessary detail consistent with a Program EIR.

1.1 Project Description

The City of Agoura Hills is a newly established community, incorporated in 1982, with a current population of approximately 20,500. Agoura Hills is located in a rural setting in the northwest corner of Los Angeles County, adjacent to the cities of Thousand Oaks and Westlake Village. Agoura Hills is part of an area known as the Conejo Valley in the Santa Monica Mountains. The regional location of Agoura Hills is shown in Exhibit 1-1.

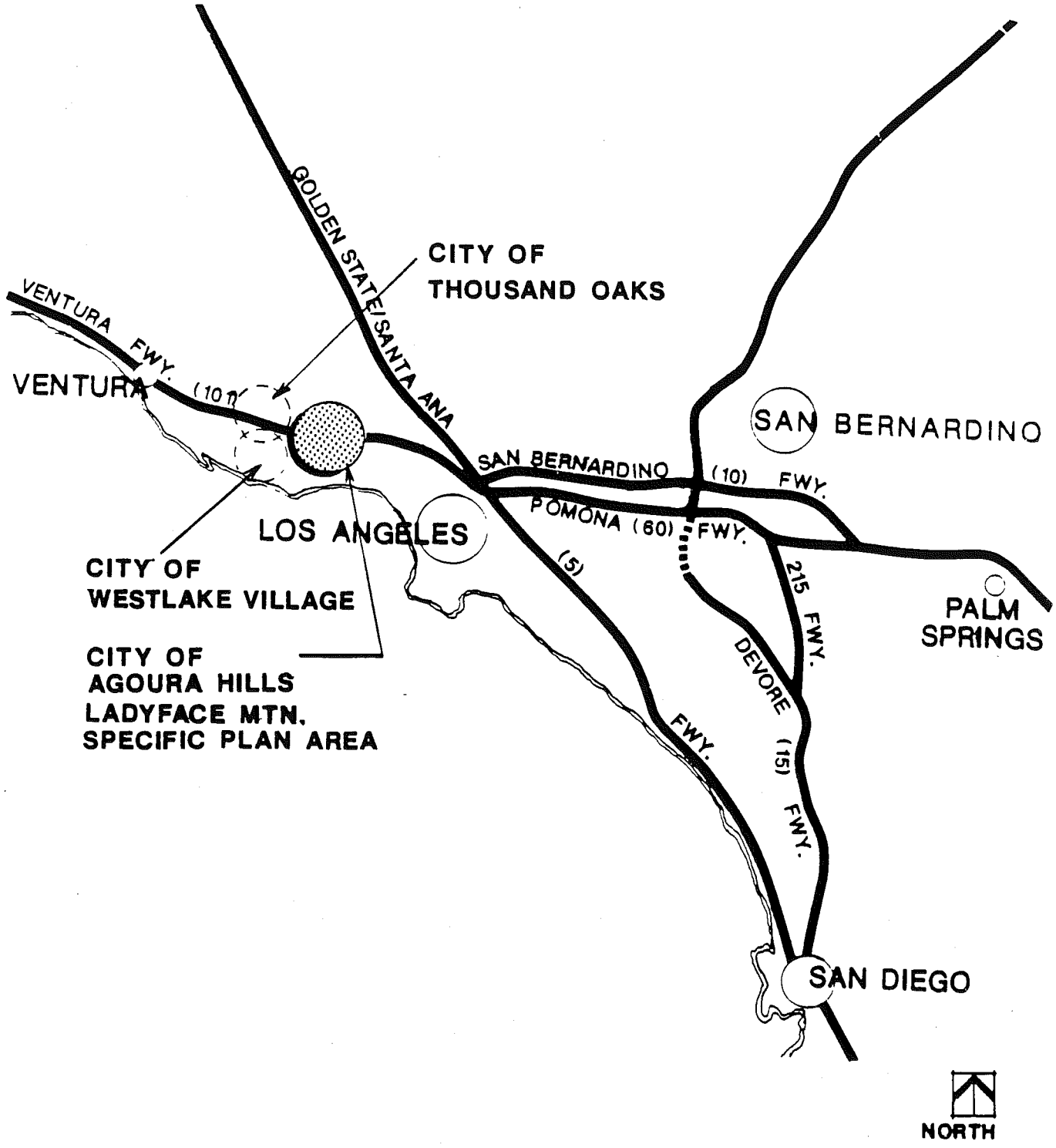
The Ventura Freeway (US 101) traverses through the City in an east-west fashion, with commercial and residential development on both sides of the freeway corridor. Research and development companies, as well as office buildings and traveler-related services, such as automobile service stations, also follow the corridor alignment through the City.

The City's highest point is Ladyface Mountain, at a peak elevation of 2,036 feet. Ladyface Mountain, once a defensive lookout point for the Chumash Indians, has long been a traveler's landmark. Ladyface Mountain is an east-west trending ridge situated on the northern edge of the Santa Monica Mountains between Kanan Road and the western city limits and includes approximately 747 acres of land (see Exhibit 1-2).

The topography of the mountain includes substantial, steep slopes. Of the total 747 acres, 225 acres are potentially suitable for development; approximately 65 acres are under consideration for development under the proposed Specific Plan. Existing development within the Ladyface Mountain site is located along its northern edge along Agoura Road, and in the northwest corner of the site. A Ladyface Mountain Design (LMD) Overlay District has been established by the City to establish special design considerations and studies to ensure that all development at the base of Ladyface Mountain is compatible with the natural characteristics of the mountain and the community.

The City of Agoura Hills has requested the preparation of a Specific Plan to guide the development of Ladyface Mountain. The Specific Plan project includes the following activities:

- Analysis of existing environmental conditions of the Ladyface Mountain site.

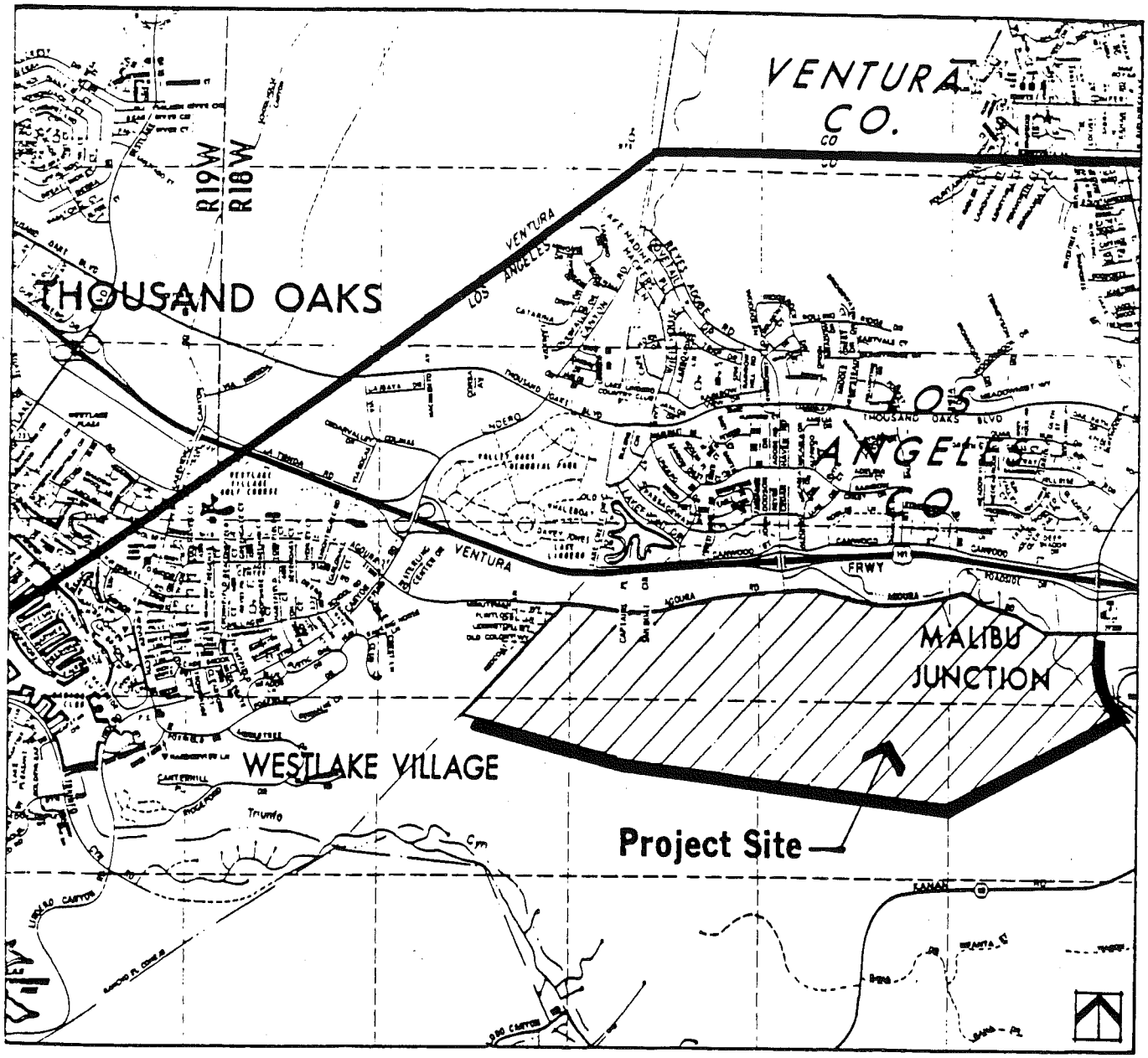


LADYFACE MOUNTAIN
SPECIFIC PLAN EIR

CITY OF AGOURA HILLS

REGIONAL LOCATION MAP

EXHIBIT 1-1



LADYFACE MOUNTAIN SPECIFIC PLAN EIR

CITY OF AGOURA HILLS

VICINITY MAP

EXHIBIT 1-2

- o Analysis of various land use development scenarios, taking environmental constraints into consideration.

- o Development of a Specific Plan to guide development of the Ladyface Mountain site.
- o Preparation of an EIR on the Ladyface Mountain Specific Plan.

Land use scenarios were developed with particular sensitivity regarding natural features, archaeological deposits, geologic hazards, natural drainage courses, and oak tree habitat. The land use scenarios included conceptual plans for residential, commercial, light industrial (business park), and a combination of mixed uses.

The Specific Plan establishes guidelines intended to ensure the orderly implementation of a quality planned district. It addresses land uses within each planning area, basic grading and circulation systems, open space, and overall landscape and design concepts. Generally, potential future development will be confined to the land along the northern portion of the site. The 520 acres of the site which are not considered to be suitable for potential development will be designated by the City and maintained as open space. All development will be below 1,100 feet elevation. The purpose of the Specific Plan was to develop design guidelines and a coordinated landscape concept to achieve a high quality aesthetic character, and to blend proposed uses with the natural surroundings.

Circulation within the proposed development will be accomplished via streets strategically designed to accommodate the access needs of the land uses. These roadways will create a network throughout the site and allow maximum efficiency for commuters who need access to and from the local roadways and surrounding facilities. Utility services, including natural gas, electricity, telephone, water, wastewater, and solid waste removal, will be supplied to the site via the appropriate agencies. All surface and/or underground distribution systems will be specified in the preliminary engineering phase of development and will be in place prior to site development.

PREFERRED PLAN AND ALTERNATIVES EVALUATED

Three development scenarios were evaluated as part of the Specific Plan, each representing a different level of development intensity.

a. Scenario 1 - applied a low-impact interpretation of hillside development regulations, the LMD Overlay District, and grading along scenic highways.

b. Scenario 2 - applied an interpretation of hillside regulations, the LMD Overlay District, and grading along scenic highways consistent with the general intent of the Agoura Hills General Plan.

c. Scenario 3 - applied a mathematical projection of potential development to a density almost twice that of Scenario 1 and Scenario 2. This scenario was determined to be unacceptable due to substantial impacts to the circulation network, and was rejected as a Specific Plan alternative.

All three land use scenarios include office, commercial, and residential development, and in each scenario the predominant land use is office space. It is important to note that each land use scenario is intended to be conceptual, representing development guidelines rather than absolute maximum development.

Scenario 2 has been selected as the preferred plan. The impacts and development constraints associated with the implementation of the preferred plan are evaluated in this EIR. The land use summary for the preferred plan is as follows:

Residential	- 29 dwelling units
Office	- 384,600 square feet
Commercial	- 109,200 square feet

This development is proposed to occur just south of Agoura Road to a depth of 500 to 1,200 feet, over an area of approximately 65 acres.

This EIR evaluates the potential impacts associated with overall implementation of the preferred plan of the Specific Plan. As development proceeds within the planned area, additional and more detailed environmental documentation will be required.

1.2 Description of Environmental Setting

The Ladyface Mountain site lies south of Agoura Road and US 101, extending approximately 1 1/4 miles west from Kanan Road. The site extends in a southerly direction across gently sloping foothills, characterized primarily by grassland vegetation and oak trees. Mixed chaparral is the predominant vegetation on the higher slopes, with some coastal sage scrub in the eastern ravines. As the topography increases in elevation, the terrain becomes more rugged and bedrock outcrops are visible. No active or potentially active faults are located in the vicinity of the site.

A summary of existing conditions onsite, including potentially sensitive riparian areas, oak tree habitat, and the general location of cultural resource sites are shown on Exhibit 1-3. Also shown are the intermittent streams which traverse the site, locations of alluvial areas which may present a liquefaction hazard, and existing and potential circulation access.

DRAINAGE CULVERT INTERMITTENT STREAM-IMPORTANT DRAINAGE ZONE

DEBRIS BASIN/ DETENTION AREA

INDICATES CULTURAL SENSITIVITY WITHIN PARCEL

POTENTIAL RIPARIAN AREA

ALLUVIAL AREAS WITH GREATEST LIQUEFACTION POTENTIAL

EXISTING OAK TREES (VERIFIED BY REPORT OR AERIAL RESERVATION)

POTENTIAL ACCESS

EXISTING ACCESS

100 0 200 400 600

PARCEL NO.	EXISTING OAKS
1	N.A.
2	9
3	70
4	0
5	0
6	6
7	40
8	16
9	18
10	29
11	N.A.
12	101
13	43
14	18

NOTES:

EXISTING OAK TREES VERIFIED BY OAK TREE REPORT OR RECENT AERIAL PHOTOGRAPHY EXACT NUMBER BY PARCEL NEEDS TO BE FIELD-VERIFIED

DEVELOPMENT FACTORS

LADYFACE MOUNTAIN

SPECIFIC PLAN EIR

CITY OF AGOURA HILLS

EXHIBIT 1-3

2.0

SPECIFIC PLAN SUMMARY AND RELATIONSHIP TO GENERAL PLAN

2.0 SPECIFIC PLAN SUMMARY

The Specific Plan provides the City of Agoura Hills with a comprehensive set of plans, policies, regulations and conditions for development and implementation of the Ladyface Mountain Design (LMD) Overlay District. Upon adoption, the standards and guidelines established in the Specific Plan will serve to refine, consolidate and subsequently supercede the existing LMD Overlay District, Section 9530 of the City of Agoura Hills Zoning Ordinance.

Accordingly, the purpose of the Specific Plan is two-fold:

1. To ensure that all development at the base of Ladyface Mountain is compatible with the unique nature of this natural asset of the community.

2. To encourage the coordinated development of a mixture of business park, commercial and residential uses within the study area.

After adoption, the standards and guidelines contained in the Specific Plan shall govern development of all areas within the study area boundaries.

SPECIFIC PLAN OBJECTIVES

The City has identified a number of planning issues and objectives to be addressed and implemented through the Specific Plan; these include the following:

- Preparation of an array of analyses which will provide base information necessary to coordinate the development potential of Ladyface Mountain.

- Preservation of Ladyface Mountain as a natural landmark and open space resource.

- Sensitivity to natural features, archaeological deposits, geologic hazards, oak trees, and natural drainage courses.

- Limitation of development to below 1,100 feet elevation.

- Appropriate character and design of potential development in order to assure compatibility with the existing natural hillside open space and surrounding land uses.

3.0

SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

3.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

A summary of potential environmental impacts and proposed mitigation measures associated with the project is provided in Table 3-1. A detailed listing of unavoidable adverse impacts is provided in Section 6.0.

Table 3-1. Summary of Impacts, Mitigation Measures and Unavoidable Adverse Impacts

Subject	Impacts	Mitigation Measures	Unavoidable Adverse Impacts
Land Use	Mostly undeveloped open space to be developed. Existing views of Ladyface Mountain altered.	The Land Use Plan of the Specific Plan complies with General Plan. Higher elevations and significant landforms of the mountain to remain undisturbed. Buiding height restrictions to minimize view impacts.	No unavoidable adverse impacts.
Landform, Geology, Soils, Natural Resources	Risk of fault rupture negligible. Low potential for seismically induced settlement on-site. Cut and fill areas subject to surficial erosion.	Detailed analysis will assess building and roadway reinforcement methods for structures on fill material. Construction contractors shall comply with grading ordinances and Uniform Building Code requirements. Limit building height to two stories.	Landform modifications associated with grading for the construction of roads and building areas. Short-term exposure of underlying soils to erosion.
Drainage and Flooding	New impervious surfaces will increase run-off and sedimentation.	Catch-basins to collect excess surface flows. New facilities constructed to L.A. County Flood Control District standards. Grading in post-rainy season to minimize erosion. Revegetation after construction.	Increased run-off, urban pollutants from impervious surfaces. Modifications of drainage features, flow patterns. Short-term sedimentation potential.
Water Quality	Urban pollutants will be added to surface run-off, possibly groundwater.	Run-off diverted to storm drains, surface-retention basins. Revegetation after construction. Erosion and sedimentation control plan to be submitted to RWQCB. Development to include sanitary sewer facilities. Implement stormwater pollution control plan.	No unavoidable adverse impacts.
Biological Resources	Riparian communities along streambeds impacted. Native vegetation cleared, loss of natural habitat. Reduced wildlife movement. Harassment of wildife. Potential of raptor nest failure, habitat decrease.	Biological study including location of nesting sites. Raptor habitat preserved to maximum extent. Site specific oak tree studies. Oak tree protection through design considerations. Limits on development during sensitive times of year. Barriers to wildlife movement minimized. Wildlife corridor developed. Revegetation.	Loss of vegetation and wildlife displaced from development areas. Potential removal of limited oak woodlands, riparian woodland habitat and grasslands.
Cultural Resources	Possible impact to cultural resources and sensitive resource areas not yet discovered. Grading activity and increased access to remote areas could disturb sensitive archaeological areas.	Detailed archaeological study of cultural resources. If historical remains unearthed during grading, activity shall cease and a qualified archaeologist shall be consulted. Project shall be redesigned to protect significant findings.	No unavoidable adverse impacts.

Table 3-1. Summary of Impacts, Mitigation Measures and Unavoidable Adverse Impacts (continued)

Subject	Impacts	Mitigation Measures	Unavoidable Adverse Impacts
Aesthetics	Modification of existing terrain. Removal of existing, and change in appearance from, natural vegetation. Illuminated areas visible from surrounding locations. Glare potential from surfaces onto passing motorists.	Development confined to lower portions of mountain. Design compatible with natural forms, colors. Parking depressed, utilities underground. Structures, parking shielded by landscaping. Grading to city ordinances.	Permanent alteration of the visual character as urban development replaces open space land uses.
Air Quality	Short-term construction equipment emissions, dust. Long-term pollutant emissions from vehicular traffic and electrical production, natural gas consumption.	During construction, grading to use water; cease during winds. Over long term: Traffic management plan required for firms with 200+ employees. Implement programs to reduce vehicular travel.	No unavoidable adverse impacts.
Noise	Short term construction-related noise. Noise from additional traffic not expected to be significant.	Grading and construction restricted to daytime hours. For nearby residential, use of setbacks and noise barriers. Facilities to be sited to minimize noise.	No unavoidable adverse impacts.
Circulation	Increased vehicular traffic in project and on nearby roads and US 101. Additional impact to AM and PM peak hour congestion.	Traffic System Management Plan requires and provides incentives for trip-reducing measures. Tenant mix to reduce peak traffic conditions. Design to allow free traffic flow, optimum access to street.	No unavoidable adverse impacts.
Energy Resources	Impact on regional energy resources not expected to be significant.	Implement solar energy where feasible. Buildings, hot water lines to be insulated. Follow State Appliance Efficiency standards. Use natural design in lighting.	No unavoidable adverse impacts.
Public Services and Utilities	Increased demands for Sheriff, Fire, health care, library, gas, electric, telephone, water, wastewater, solid waste disposal services. No significant impact to schools. Not expected to disturb existing trails.	Design to discourage crime. Multiple access points for emergency vehicles. Controlled burns to reduce fire hazard. Recreation limited to least sensitive areas. Implement energy and water conservation measures, water reclamation/reuse and solid waste recycling.	Increased demands on police, fire, health care, library, telephone and solid waste disposal services. Increased consumption of water and energy supplies. Increased waste-water generation/treatment demands.
Population and Housing	Population increase less than number of jobs created. Project will partially restore balance between jobs and labor force members in other parts of the city.	No mitigation necessary.	No unavoidable adverse impacts.

4.0

EXISTING ENVIRONMENTAL CONDITIONS, IMPACTS AND MITIGATION MEASURES

4.0 EXISTING ENVIRONMENTAL CONDITIONS, IMPACTS AND MITIGATION MEASURES

4.1 Land Use

a. Existing Conditions

The City of Agoura Hills is primarily a residential community, with single-family homes accounting for approximately seventy percent of the existing developed area of the City. Office and industrial park development has been extensive along the Ventura Freeway (US 101) corridor since the mid-1970's. Primary uses along the corridor and Agoura Road include research and development facilities, office buildings, and traveler-related services. Commercial and residential land uses occur east and west of the Ladyface Mountain site, and the largest portion of residential development within the city lies north of the freeway corridor. According to the City's General Plan, most of the City's open space remains adjacent to the freeway corridor. Nearly all designated single family residential land has been developed, with the remaining developable land planned for business park, commercial, or higher-density residential use.

The General Plan outlines the City's goals to be primarily a bedroom community, allowing for commercial uses to occur adjacent to the US 101. The City is a mixed use community, including industrial, office, retail, and residential, while maintaining a rural character within the community. Commercial development along the freeway corridor proposes to balance local employment with the needs of the City's residents and local labor force.

Development of the Ladyface Mountain site has thus far not been extensive. At the northwest corner of Ladyface Mountain is an 8-acre, 178-unit multiple-family rental complex, and to the north along Agoura Road is a 26-acre commercial/retail/hotel complex, of which only the hotel (Ramada Inn) and one office building have been built. Additionally, a fifteen-building complex of the Gateway Foursquare Church is located along Agoura Road. During the summer months, the property is utilized by an education summer camp. The City of Agoura Hills recently received application for a 235,000 square foot commercial office complex and civic center site on a parcel located east of Ladyface Mountain and adjacent to Agoura and Kanan Roads.

The project site, from Agoura Road to the southern city limits and from the western city limits to Kanan Road, is currently zoned primarily as open space. From an elevation of 1,100 feet to Agoura Road, zoning is primarily for commercial/residential mixed use. Commercial shopping center development is zoned for the far eastern corner of the site, and rural and very-low density residential development is zoned for the middle-western and eastern portions of the site.

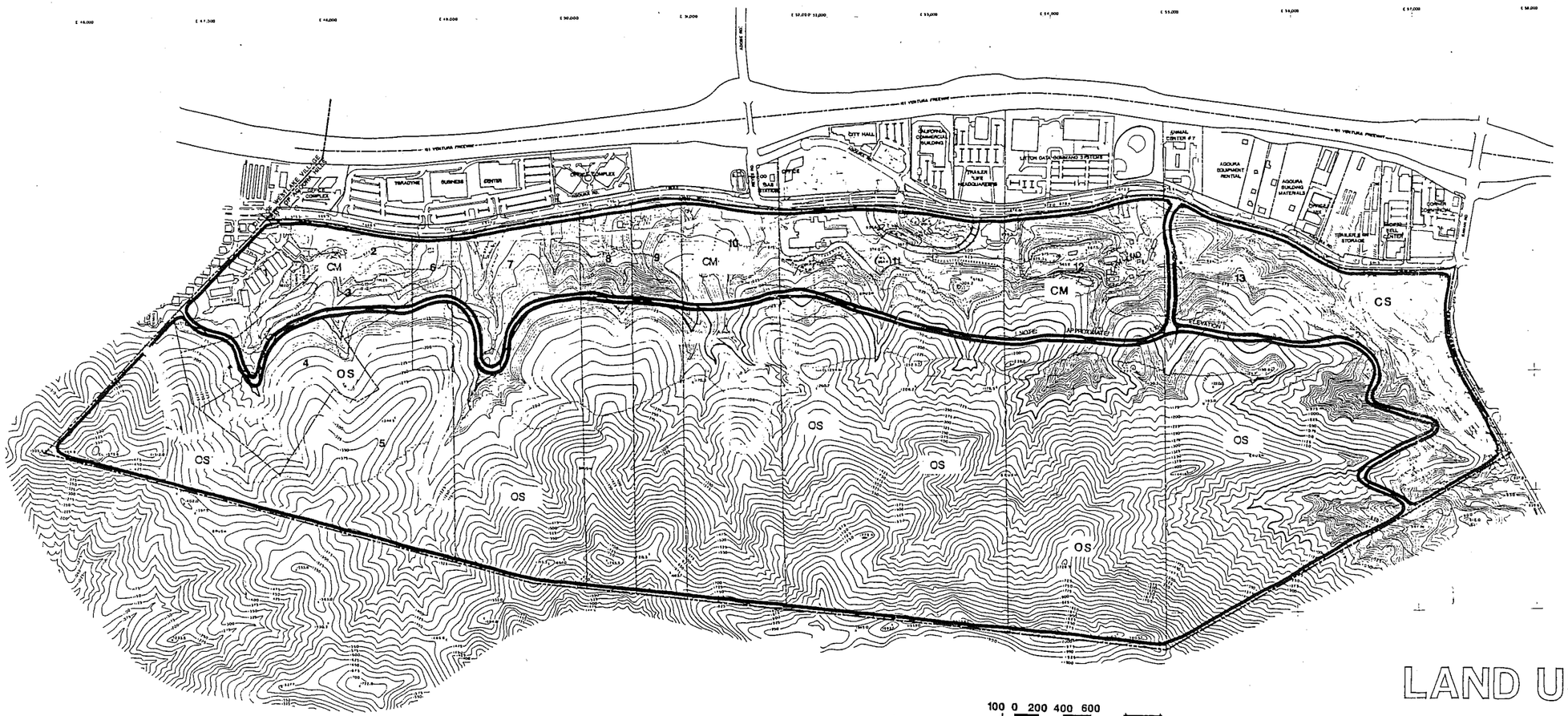
Preservation of open space and natural habitats is recognized as a key objective in the City's land use planning. The General Plan sets out specific open space areas, provides guidelines for development of open space areas and habitat preservation, and encourages open space corridors to minimize fragmented open space habitats throughout the community.

b. Environmental Impact

The Land Use Plan of the Agoura Hills General Plan proposes a mix of office, commercial, retail, residential and open space uses, with land use categories as follows: (1) commercial-mixed use (159 acres), (2) commercial shopping (62 acres), and (3) open space (525 acres). These general land use designations are depicted in Exhibit 4-1. In the Specific Plan, commercial/mixed-use and commercial shopping areas are proposed adjacent to Agoura Road. These areas will provide employment opportunities and local, community, and regional level community services. Limited medium-density residential development is also proposed in the commercial/mixed-use area. Residential uses are limited due to the density limitation of the Hillside Ordinance.

The land use impacts associated with development in accordance with the preferred plan of the Specific Plan are those resulting from the conversion of 65 acres of generally undeveloped land to residential, commercial, and office uses. On-site development will impact biological resources, including plant and wildlife habitats, earth resources (primarily as a result of grading and landform alteration), water resources and, potentially, archaeological resources. The existing views of Ladyface Mountain will also be altered, although elevation and building height restrictions will minimize this impact.

Changing the existing land use will also affect environmental conditions off-site by impacting local air and water quality, traffic circulation on local roadways, and demand for services. The magnitude of these impacts is discussed throughout this report.



LEGEND

		ACRES
CM	MIXED USE COMMERCIAL	159.4
CS	COMMERCIAL SHOPPING	62.0
OS	OPEN SPACE	525.0
		746.3

NOTES:

1. NUMBERS CORRESPOND TO INDIVIDUAL PARCELS
2. REFER TO SEPERATE TABLE FOR DEVELOPMENT DENSITY BY PARCEL
3. PERMITTED USES IN EACH LAND USE CATEGORY ARE DISCUSSED IN SECTION IV.

LAND USE PLAN

LADYFACE MOUNTAIN SPECIFIC PLAN EIR

CITY OF AGOURA HILLS

EXHIBIT 4-1

RELATIONSHIP TO GENERAL PLAN

A primary goal of the Land Use Element of the General Plan is stated as follows:

> Maintain a close relationship between the natural environment and urban areas through an extensive open space network providing a variety of opportunities for experiencing the natural environment within the City and a constant awareness of the City's natural environmental setting.

Its objectives for achieving that goal are stated as follows:

1. Preserve key habitat areas and physiographic features.

2. Preserve and maintain the natural character and visual quality of the hillsides as a scenic resource, while providing protection from geological hazards.

3. Provide an open space network with pedestrian access where appropriate.

The proposed Land Use Plan of the Specific Plan is designed to meet these objectives.

The land use element of the General Plan shows very low and rural residential areas set back from circulation routes and situated in the higher elevations of the mountain. These areas would provide opportunities for large-lot, single family residential development at a density that would minimize disturbance of the mountains' natural aesthetic character.

Areas generally at or above the 1,100 foot elevation and/or containing major rock outcroppings and natural canyons are proposed in the Specific Plan to remain as open space. This designation ensures that at the higher elevations and significant landforms of the mountain, the natural vistas and sensitive terrain will remain undisturbed.

Development in accordance with the preferred plan would further preserve the natural character of the mountain by limiting development to the northern edge of the site, just south of Agoura Road.

c. Mitigation Measures

Changes in existing land use are a key element of the proposed Specific Plan. The impacts of these changes in land use, and proposed mitigation measures for significant environmental impacts, are addressed throughout this EIR.

d. Residual Impacts

No unavoidable significant adverse impacts are anticipated if the proposed mitigation measures are implemented.

4.2 Landform, Geology, Soils, and Natural Resources

a. Existing Conditions

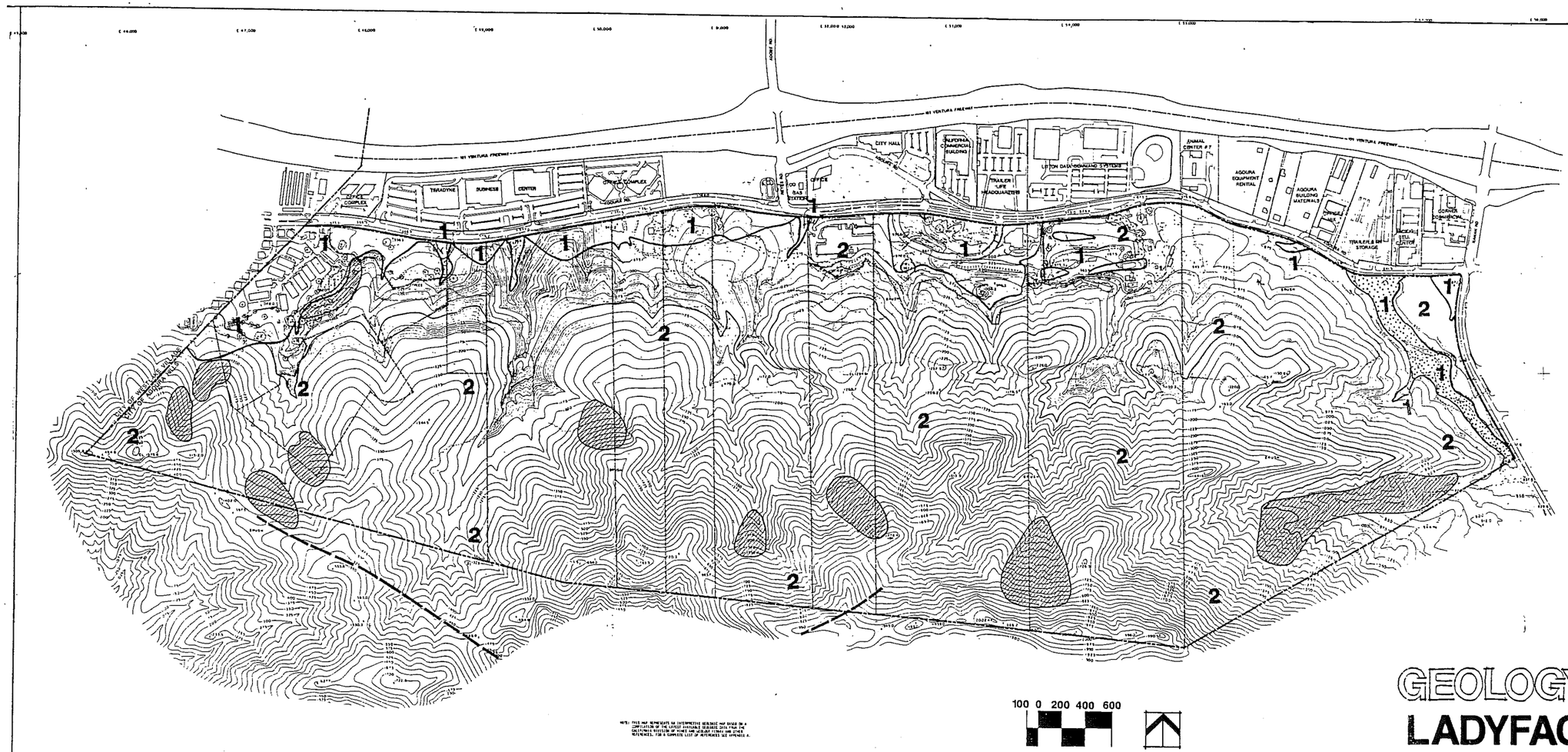
The 747-acre Ladyface Mountain site is situated on the north-sloping, moderate to steep hillside terrain of the Santa Monica Mountains, south of Agoura Road and the US 101. Topographically, the 225 acres of land at its base gently increases in elevation from approximately 850 feet to 1,100 feet. The mountain reaches a peak elevation of 2,036 feet. Existing geologic conditions in the project area are shown in Exhibit 4-2.

A fault investigation and geotechnical analysis of the project area was conducted by Leighton and Associates in August 1988. That study, incorporated by reference into this EIR, is summarized in the following paragraphs.

BEDROCK FORMATIONS

Bedrock formations in the area of Ladyface Mountain consist primarily of volcanic and marine sedimentary rocks aged 6 to 16 million years old. Bedrock underlying the area consists of the Conejo volcanics, a formation of hard, irregular layers. Older bedrock is exposed in the Simi Valley area north of the site and in the Santa Monica Mountains to the south.

Massive exposures of fractured and jointed volcanic bedrock were found in the southern portion of the site. Most of these outcrops are very irregular due to differential



NOTE: THIS MAP REPRESENTS AN INTERPRETIVE GEOLOGIC MAP BASED ON A COMPILATION OF THE LATEST AVAILABLE GEOLOGIC DATA FROM THE CALIFORNIA DIVISION OF MINES AND GEOLOGY (CDMG) AND OTHER REFERENCES. FOR A COMPLETE LIST OF REFERENCES SEE APPENDIX A.

EXPLANATION;

1 — SURFICIAL DEPOSITS (Possible local soil constraints, shrink-swell, consolidation, liquefaction)

2 — BEDROCK, CONEJO VOLCANICS (Excavation constraint for deep cuts)

FAULT (INACTIVE) LOCATION APPROXIMATE

ALLUVIAL AREAS WITH GREATEST LIQUEFACTION POTENTIAL

POSSIBLE OR SUSPECTED LANDSLIDES, INCLUDES MUDFLOWS, SOIL SLUMPS, DEBRIS FALLS

PLATE 2

GEOTECHNICAL CONSTRAINT MAP
FOR
LADYFACE MOUNTAIN SPECIFIC PLAN
CITY OF AGOURA HILL, CALIFORNIA

Project 87173-01 Scale 1"=200' Date 7-89
Revised Date 7-89 Drawing No. 1

LEIGHTON AND ASSOCIATES, INC.

GEOLOGY
LADYFACE MOUNTAIN
SPECIFIC PLAN EIR
CITY OF AGOURA HILLS

EXHIBIT 4-2

weathering and erosion of the various volcanic constituents that make up the Conejo volcanic series. Unless weathered, they can be very hard and difficult to excavate.

SEISMICITY

No major faults are known to exist in the vicinity of the Ladyface Mountain site. The Malibu Coast Fault is the nearest major fault, located approximately seven miles north of the site.

A minor, unnamed fault has been mapped at the top of Ladyface ridge in the southwestern part of the site, and a probable buried fault has been mapped in the northwestern part of the site. These faults are considered neither active nor potentially active, based on the classification criteria adopted by the State Mining and Geology Board. According to these criteria, an active fault is one which has moved within the last 11,000 years or has exhibited earthquake activity.

Other shorter faults in the nearby areas include the Boney Mountain and Sycamore Canyon faults in the Thousand Oaks area, and the Liberty Canyon fault in the Malibu area. None of these faults are known to be active. Active or potentially active faults in the surrounding regions include the Simi, Oak Ridge, Anacapa-Santa Monica, Santa Susana and Malibu Coast faults. The maximum credible earthquake magnitudes of these faults are listed in Table 4-1.

VOLCANIC ACTIVITY

Volcanic rock in the area was formed approximately 16 million years ago. The nearest potentially active volcanic center is located approximately 90 miles southeast of the site in Riverside County. The potential for volcanic activity and volcanic hazards at the site is considered to be low.

SOIL DEPOSITS

Several types of soil deposits are exposed in the area of the site. These include artificial fill, alluvium, terrace deposits, flood plain deposits, and fanglomerates. While soil depths range widely, overall average soil thickness is approximately 1 to 2 feet. Soil types on site are described in the following paragraphs:

TABLE 4-1
MAJOR FAULTS AND SEISMIC PARAMETERS

Faults	Status	Distance From Site (in miles)	Maximum Credible Earthquake Magnitude (Richter)
Malibu Coast	Active	6.5	6.8
Anacapa-Santa Monica	Active	11.0	7.9
Oak Ridge	Active	17.0	7.2
Simi	Potentially Active	10.0	6.6
Santa Susana	Potentially Active	15.0	6.5

Artificial Fill. Artificial fill consists of materials cut from nearby areas. It is generally located where Agoura Road traverses the mouths of tributary canyons.

Alluvium. Alluvium consists of silt, sand and gravel. The site area includes alluvium which is actively being deposited in smaller channels. Some alluvium deposited by slopewash may also be included with alluvium near the toe of steeper slopes.

Terrace Deposits. Terrace deposits are found at the very northeastern corner of the site, east of Lindero Canyon Creek. The thickness of these sandy gravel deposits is unknown.

Floodplain Deposits. Floodplain deposits are located in a small area in the northwestern portion of the site. These generally consist of weathered reddish-brown silty sand with sparse gravel. The onsite thickness of these deposits is unknown; however, in this region they average 10 to 15 feet thick.

Fanglomerate Deposits. Fanglomerate deposits are firmly consolidated, partially cemented sandy gravel. These deposits, in the northwestern portion of the site, are more widespread than the floodplain deposits. The thickness of the fanglomerate ranges from 0 to 35 feet and averages 10 to 25 feet.

SOIL CONDITIONS

The soils on site are subject to various conditions which depend on a combination of their physical characteristics, earth processes, and weather. These conditions are summarized in the following paragraphs.

Expansion. The swell characteristics of surface soils and various bedrock types can vary widely, depending on the relative amount and type of clay present. Soils typically having the highest shrink-swell properties are those derived from clay-rich formations and certain types of volcanic rock.

Soils on the Ladyface Mountain site are derived from volcanic sources and have the potential for a high degree of expansion. Known expansion test results in the area range from low to moderately high.

Settlement. The sinking, or settlement, of a structure or heavy load is usually the result of compaction or consolidation of an underlying soil of low density or a compressible nature. Such soils are commonly found in alluvial valley areas and where old pits or gullies have been filled in with trash and loose soils.

Subsidence. The phenomenon of broad-scale land sinking, or subsidence, is generally related to the overpumping and depletion of water or oil from deep underground reservoirs. It is not related to the surface soil type and cannot be readily predicted without detailed subsurface data. No recognizable subsidence has been observed on the site.

Hydrocompaction. Hydrocompaction is a form of subsidence caused by the addition, rather than the extraction, of fluid, usually occurring in relatively loose, open-textured soils above the water table. Because it can affect the near surface soils very dramatically and can cause considerable structural damage in localized areas, hydrocompaction can be a serious hazard.

SLOPE STABILITY

The Ladyface Mountain site is generally located in an area of varying topography, ranging from flat, rolling lowlands to steep, rugged hillsides. The lowest elevation of the site is 850 feet, located at the eastern base of the mountain in a potential flood zone area. The highest elevation is at the mountain's peak, at 2,036 feet. Slopes on Ladyface Mountain range from 0 to over 30 percent.

Landslides. Several questionable landslides have been mapped in the Ladyface Mountain study area. These potential slides are located on the higher, steeper slopes of the site, and may involve bedrock masses or unstable surficial soils and slopewash; however, no record of the actual presence of landslides has been found on the site. Most of these potential landslides are located outside the area of projected future development.

Within the study area, weathered colluvium, typically found at the toe of steep slopes, is most susceptible to mudslides and erosion. Mudslides are most common during or shortly after heavy rainfall or a series of rainfalls, and can occur suddenly and without warning. The risk of mudslides and debris flows increases after local vegetation has been cleared or destroyed by brush fires.

Rockfalls and Erosion. Other elements of slope instability include erosion and rockfalls. Erosion typically occurs from concentrated runoff on unprotected slopes and along unlined channels underlain by erosion-prone materials, such as soft fill and soft alluvium.

Areas subject to rockfall hazards are those located at the base of steep, high slopes where large boulders may be dislodged from rock outcrops.

NATURAL RESOURCES

The Conejo volcanics are not known for any significant mineral deposits, and no metallic or industrial mineral resources are known to exist in the study area. The potential for the occurrence of any kind of mineral deposits in the study area is considered to be extremely low.

The occurrence of petroleum in the Conejo volcanics is rare. The Conejo Oil Field, approximately 14 miles east of the site, is a fault-related oil trap and is considered to be an isolated case in this area. Oil was first produced from the volcanic rock in 1892, and the field was abandoned in 1971.

b. Environmental Impact

Impacts to local geology due to development are limited to the north facing slope of the mountain and to the foothills. Alteration of existing landform and topography will occur as development takes place. Excavation in the hard, irregular layer of the Conejo volcanics may be difficult and could require blasting in isolated pockets. Grading in the preferred plan development scenario is projected to occur on eight separate land parcels, with average slopes ranging from 11 to 24 percent.

Geotechnical considerations regarding development on-site are described in the following paragraphs.

FAULT RUPTURE

Seismic hazards are not considered to be a significant constraint to development in the area of Ladyface Mountain, as there are no known active faults in the area. The risk of

fault rupture is considered to be negligible and does not create a significant adverse project-related impact.

SEISMIC SHAKING

The effects of seismic shaking are usually felt over many square miles, resulting in more widespread damage than other earthquake hazards, including fault rupture. All types of structures are affected by ground shaking, and most earthquake-related deaths result from structural failure.

Most of the locations of proposed structures associated with each designated land use are in bedrock or artificial fill. The seismic response of alluvium, terrace deposits, fanglomerate and artificial fill is somewhat greater than that of bedrock. Tall buildings on an alluvial site will generally have a more severe response to seismic shaking than will low buildings. All buildings on site are projected to be two stories or less, minimizing the potential impacts of seismic shaking.

Secondary impacts of seismic shaking include seismically induced landslides and settlement.

Seismically Induced Landslides. Seismically induced landslides are caused by gravity and failure of earth materials such as rocks, soil, artificial fill, or a combination thereof. Hillside development may contribute to slope instability and landslides, which may result from excavation, building on structurally weak soil or geologic formations, changing natural drainage through improper landscaping or grading, or leakage from swimming pools, septic tanks, or water or sewer lines.

Slopes subject to landsliding are limited to relatively shallow failures on the steeper slopes, particularly where the soil is thick and loose. Within the study area, the areas most susceptible to landslides are the steep slopes and hard rock outcrops.

Seismically Induced Settlement - Seismic vibration is able to cause moderate to severe ground settlement beneath buildings constructed on alluvium as the alluvial material consolidates. Subsidence, a downward sinking of surface material without any horizontal or surface displacement, may also be caused by earthquake activity.

Liquefaction can be described as a quicksand condition in which there is a total loss of foundation support. Within the study area, soils most prone to liquefaction are within alluvium in the vicinity of Lindero Canyon Creek in the northern portion of the site. In the absence of a shallow water table, but with soil conditions otherwise ideal for liquefaction, soil consolidation can occur to some degree, depending upon the intensity of shaking and the looseness of the soil. Such a compacting process could damage structures, primarily where a site is built partially on a bedrock formation and partially on fill which is subject to internal compaction or consolidation of unsuitable subsoils.

The potential for seismically induced settlement on-site is considered to be very low, and is not expected to result in a significant adverse project-related impact.

SOIL STABILITY

The removal of surface soil during grading will expose the underlying soil to a short-term increased potential for erosion. Cut and fill areas that expose sandy or gravelly soils will be subject to the highest potential for surficial erosion. Expansive soils that exist on-site may be reused for compacted fill. Detailed investigations should be required when specific development is proposed in order to assess the proper method of reinforcing buildings and roadway foundations placed over fill material.

RELATIONSHIP TO GENERAL PLAN

General Plan policies regarding geologic hazards include ensuring that geologic hazards in all areas intended for human use or habitation are properly mitigated or avoided prior to or during development.

The Specific Plan provides for siting of land uses away from areas with potential liquefaction hazards and away from potential landslides. Development is proposed for areas of other potential soil constraints, such as shrink-swell and consolidation of surficial soil deposits.

c. Mitigation Measures

A summary of measures to mitigate potential geotechnical constraints and hazards on-site is presented on the following page.

- Before approving any planned development, the City should require the applicant to provide a detailed geotechnical analysis on-site. As part of this analysis, detailed investigations should be made to assess the proper method of reinforcing buildings and roadway foundations placed over fill material.

- Construction contractors shall comply with standard grading techniques, appropriate foundation design and current grading requirements in order to minimize the potential hazards associated with expansive soils and soil settlement.

- Construction contractors shall design structures in accordance with current Uniform Building Code requirements.

- Construction contractors shall limit all buildings to two stories in height in order to minimize the potential impacts of seismic shaking.

d. Residual Impacts

Unavoidable adverse impacts of development include landform modifications associated with construction grading, and short-term exposure of soils to erosion.

4.3 Drainage and Flooding

a. Existing Conditions

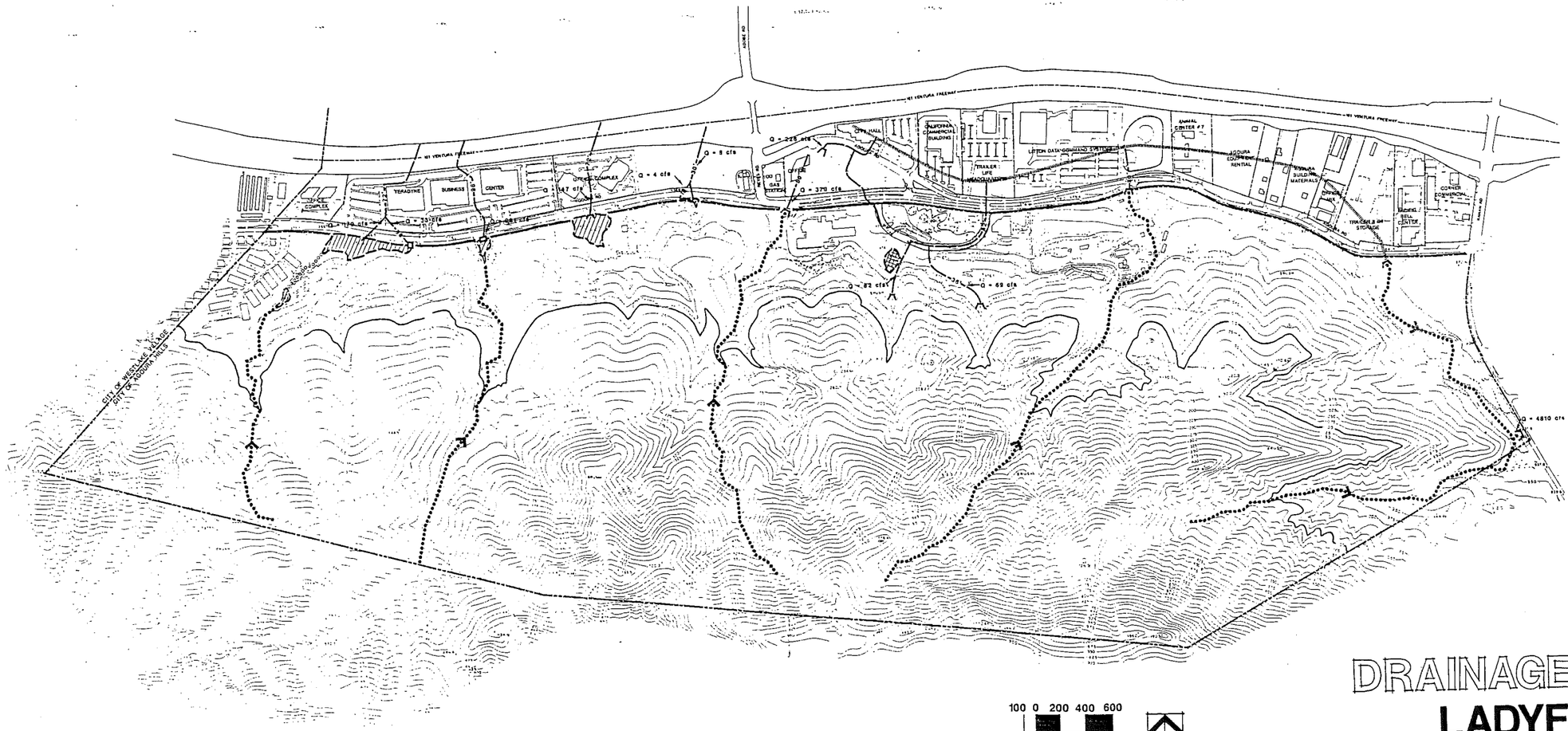
Three major drainage basins are located in the Agoura Hills area. Run-off from the Agoura, Kanan and Cornell areas and from areas north of the U.S. 101 is collected by the Medea Creek drainage basin. Surface water from portions of Ventura County, Triunfo and Lobo Canyons, Malibu Lake and Malibu State Park is collected by the Triunfo Canyon drainage basin. This surface water flows into the Malibu Creek watershed and eventually to the ocean. The Las Virgenes Creek watershed includes Las Virgenes Creek, Liberty Canyon, portions of Malibu Creek State park and Stokes Canyon. Las Virgenes Creek also flows into the Malibu Creek watershed.

Several tributaries drain the slopes of Ladyface Mountain and convey run-off to a series of culverts and retention basins along and under Agoura Road via the existing storm drain systems. Five intermittent streams originate from the mountain ridge and flow down the north side of the mountain. The western-most stream is channelized from an elevation of 1,000 feet to the mountain's base, terminating in a 3-acre detention basin and culvert. (Refer to Exhibit 4-3 for existing on-site drainage and hydrology systems.)

Lindero Canyon Creek flows through the northeastern corner of the site and joins Medea Creek east of Kanan Road. A majority of the off-site portion of this drainage basin is improved and channeled underground. The Lindero Canyon Channel box culvert extends west from the northeast corner of the site, which is currently zoned for commercial/ shopping center use. Channel improvements end at the northern boundary of the site and water flows through the site in an unlined natural drainage basin. Water flowing in Lindero Canyon Creek is primarily regulated by a 19-foot high earthen dam that forms Lake Lindero, a man-made residential lake located approximately 1,000 feet north of the site. The overflow from Lake Lindero drains into Medea Creek.

Flooding is a common occurrence in the Santa Monica Mountains, with streams filling quickly during heavy rains. Most of the streams have natural drainage basins with little flood control improvement. Areas of potential flooding have been identified south of the confluence of Lindero Canyon and Medea Creeks, just outside the site boundary. Ladyface Mountain is primarily characterized by a 50-year storm (the largest flood with a probability of occurrence of once every 50 years); however, some parts of the site have been identified as 100-year storm areas.

Flooding and local storm run-off in the area of Ladyface Mountain are controlled primarily through the use of retention basins, culverts, box culverts, and stream channelization. Eleven storm drain lines originate at the base of Ladyface Mountain. These range in diameter from 96 inches (281 cubic feet per second (cfs) rate of runoff for a 50-year storm event) to 18 inches (4 cfs). The existing storm drain systems under Agoura Road have been designed and built to provide flood protection in accordance with criteria of Los Angeles County Department of Public Works. (Reference Exhibit 4-3)



DRAINAGE/HYDROLOGY

LADYFACE MOUNTAIN SPECIFIC PLAN EIR

CITY OF AGOURA HILLS

EXHIBIT 4-3

b. Environmental Impact

RUN-OFF

The construction of buildings, roads, and other impervious surfaces associated with proposed Specific Plan development will result in increased on-site water run-off and increased sedimentation potential, requiring provisions for on-site collection and transportation of excess flows. Existing drainage features and flow patterns may require modification as a result of development.

Commercial/mixed-use land uses typically increase impervious surface coverage by approximately 80 percent, and business park and retail uses result in increases of 90 percent. The proposed Specific Plan land use scenario specifies that a minimum of 20 percent of the total project area shall be landscaped unless otherwise specified by the Planning Commission. Assuming 65 acres of development, this would result in approximately 52 acres of impervious surface area. Run-off volumes will increase as a result of the increased impervious surface area, and the additional run-off may impact existing drainage control systems by requiring expansion or modification of facilities and/or flow patterns. A detailed site-specific hydrology study prior to development will provide project-related run-off information and allow recommendations of how the additional flows should be addressed.

SILTATION

Siltation occurs when sediment transported by stormwater run-off is deposited along stream channels or lake beds, resulting in decreased water volume capacity and potential overflow or flooding. The volume of sediment yielded from a drainage area depends largely on human activities. Construction activities, including site preparation, removal of vegetation, and grading, may increase debris transport and affect downstream facilities.

Rainfall run-off will increase sediment transport during and after site preparation activities. Sediment and debris transported from the site may eventually be deposited into Lake Lindero. Construction of debris and catch basins on-site will minimize the potential long-term impacts associated with erosion and sedimentation transport downstream.

RELATIONSHIP TO GENERAL PLAN

The drainage system policies in the Agoura Hills General Plan state that orderly construction of drainage facilities should be provided. The General Plan states that all new flood control facilities shall be constructed to Los Angeles County Flood Control District standards, and shall include provisions for maintenance. Facilities under private maintenance should be upgraded and turned over to the Flood Control District.

The existing storm drain systems under Agoura Road have been designed and built to provide flood protection in accordance with criteria of Los Angeles County Public Works Department (LACPWD), which require flood protection from a 50-year frequency storm for sump areas and natural drainage courses and from a 25-year frequency storm for all other areas. The storm drain systems also include debris and catch basins which have to be maintained periodically. If storm drain system are transferred to and accepted by LACPWD, then LACPWD will maintain them. In order to ensure compliance with General Plan policies, it will be necessary to quantify runoff impacts for site-specific development and assess the adequacies of existing drainage facilities to ensure adequate flood control measures.

c. Mitigation Measures

Prior to approval of any planned development, the City should require the applicant to submit a detailed hydrology study which addresses project-related run-off, on-site run-off control measures, the identification of site-specific flood zone areas, and the capacity of existing flood/run-off/storm drain facilities.

Developers shall ensure that landscaping and revegetation are implemented as soon as possible after construction to minimize erosion and siltation transportation off-site.

Grading contractors shall schedule grading activities to occur after the rainy season in order to reduce the potential for erosion and sedimentation, particularly downstream within the drainage improvement system.

d. Residual Impacts

Unavoidable adverse impacts of development include increased runoff and urban pollutants resulting from an increase in impervious surface area, permanent modifications of existing drainage features and flow patterns, and an increased potential for short-term sedimentation.

4.4 Water Quality

a. Existing Conditions

City of Agoura Hills Zoning Ordinance 9510 will be applied to areas known to be subject to flooding as determined by the City Council. A Development Permit is required prior to development and the following information must be provided by the applicant: (a) proposed plans drawn to scale (b) proposed elevation to which any structure shall be floodproofed; (c) appropriate certifications; and (d) a description of the extent to which any watercourse will be altered.

The Ladyface Mountain site is located entirely within the Lindero Canyon Hydrologic Subarea of the Malibu Creek Hydrologic Sub-unit. Groundwater within the area occurs primarily within the alluvium and within permeable, weathered or fractured portions of the underlying bedrock. The groundwater is primarily unconfined, although shallow, perched water zones may be present. Based on available water well records from the early 1960's to the late 1970's, depths to the water table have ranged from 20 feet to more than 240 feet, particularly in the major canyon bottoms. Although the drilling of new wells and the use of existing wells has declined in recent years, a consistent rise in water levels has not been observed.

The quality of surface water and groundwater in Agoura Hills is influenced by the following factors: (a) the quantity and quality of sewage treatment plant effluents from the Tapia Water Treatment Facility, (b) the quantity and quality of storm runoff; and (c) pollution from septic systems. The greatest impact on surface water quality generally results from run-off. Run-off carries urban pollutants (i.e., debris, oil, grease, landscaping chemicals and gasoline), which can ultimately percolate through conducive soil. In addition, septic tank use is scattered throughout the City. These underground treatment tanks may leak, allowing contaminants to travel through the soil.

The administrative agency responsible for regulating activities affecting water quality is the State Water Resources Control Board (SWRCB) and its supporting Regional Water Quality Control Boards (RWQCB). The site falls under the jurisdiction of the Los Angeles RWQBC, one of nine regional boards established under the provisions of the Federal Water Pollution Control Act (1969) and the California Porter-Cologne Water Quality Control Act (1969). Each RWQBC is charged with the responsibility for adopting and implementing water quality control plans, regulating waste discharge and performing other subsidiary functions relating to water quality control within their respective basin areas. The RWQCB is responsible for issuing regulatory permits and establishing waste discharge requirements for activities that may release point or non-point source run-off wastes to groundwater or surface waters.

SOIL PERCOLATION

The soil and bedrock formations throughout the study area generally have poor (slow) percolation rates because of their fine-grained or impermeable nature. The site may be constrained by these soils, but only as they relate to the stability of onsite slopes.

LOCAL SEEPAGE

Seepage in the study area has been encountered in alluvial areas at depths ranging from 2 to 15 feet below the ground surface; however, no measurement data were located for these seepage occurrences, which are thought to be a result of excessive run-off.

Studies on septic tank pollution in the study area have not been conducted; however, the Soil Conservation Service has indicated that the potential for contamination of soil and water as a result of septic tank fields is high. Septic systems are the primary source of chemical and bacterial pollution in the Malibu/Santa Monica Mountains area. All new subdivisions in Agoura Hills (except one acre lots or larger) require sewers. For areas not within 200 feet of sewer lines, septic tanks may be permitted under County regulations. Septic tanks are regulated by the Los Angeles County Health Department.

b. Environmental Impact

Implementation of Specific Plan development will result in both short-term and long-term impacts on the project area and downstream water quality. Short-term impacts

relate to the grading and construction phases of development, and long-term impacts relate to the effects of urban run-off and wastewater disposal activities over the life of the project.

During grading and construction, there will be an increased potential for short-term erosion and transportation of sediment to local drainage areas. These short-term impacts will cease once construction and landscaping of the development is completed. At that point, sedimentation and erosion problems will be reduced to minimal levels, as surface soils and debris are less exposed to run-off.

The introduction of urban uses within the project area will contribute to the cumulative long-term impacts on groundwater and surface water quality. Oil, grease, landscaping chemicals, gasoline, debris and other urban pollutants will be added to the existing surface run-off.

Landscaping and revegetation will minimize on-site run-off, thus minimizing the long-term impacts of development on water quality. Development is projected to provide sanitary sewer systems, thereby eliminating any potential for groundwater contamination as a result of septic tanks.

RELATIONSHIP TO GENERAL PLAN

General Plan policies state that the City will encourage, and require as appropriate in building regulations, measures for domestic and commercial water conservation, and will protect the quantity and quality of its groundwater resources.

Additionally, the General Plan states that the City will meet or exceed RWQCB water quality standards and State and County health regulations, and will require provisions for reclaimed water systems to serve areas such as parks and open space.

c. Mitigation Measures

Developers shall ensure that surface run-off is diverted to stormdrains or to on-site retention basins.

Developers shall ensure that revegetation and landscaping are implemented as soon as feasible to control run-off, reduce erosion, and minimize sediment loading downstream.

The City should ensure that an erosion and sedimentation control plan is prepared and submitted to the RWQCB for review and approval prior to on-site construction. Implementation during construction of the methods discussed in this plan will minimize potential short-term erosion and sedimentation impacts. During grading activities, the contractor may encounter seepage in alluvial areas. If seepage is encountered and dewatering is determined by the construction contractor to be necessary, the project sponsor (and/or contractor) will comply with all RWQCB requirements and obtain a NPDES permit to ensure that excess water is appropriately disposed of off-site.

The City should require site-specific geohydrology studies to address seepage, groundwater and other potential issues which may impact water resources on-site. The potential for dewatering during grading should also be included in the evaluation, as well as the identification of permits (i.e., NPDES) which may be required in order to comply with the RWQCB.

The City shall ensure that all proposed development within the Ladyface Mountain Specific Plan area includes sanitary sewer facilities.

Appropriate stormwater pollution control plans, such as a street sweeping program, periodic cleaning of storm drain systems, and plans controlling the use of fertilizers and pesticides, should be implemented by the City as a means of reducing long-term water quality impacts. Long-term erosion and sediment control within proposed development areas will include the installation of debris and catch basins as necessary.

d. Residual Impacts

No unavoidable significant adverse impacts are anticipated if the proposed mitigation measures are implemented.

4.5 Biological Resources

a. Existing Conditions

The project site supports a variety of plant communities which are generally associated with the foothills of the Santa Monica Mountains. Two Significant Ecological Areas (SEAs) are located in the Agoura Hills area. SEAs have resources which have been determined to be significant by the Los Angeles County Board of Supervisors. The Palo Comado SEA (2,760 acres) is approximately two miles northeast of the Agoura Road/ Kanan Road intersection, and the Las Virgenes SEA (434 acres) is just southeast of the Kanan Road/Agoura Road intersection. Two especially noteworthy biological resources on-site include oak trees and birds of prey. The following paragraphs discuss existing and potential biological resources at the Ladyface Mountain site. This section is based on a literature review of recent studies performed in the immediate vicinity of the site from 1982 to 1985.

PLANT COMMUNITIES

The Ladyface Mountain site currently includes five plant communities: oak woodlands, mixed chaparral, grasslands, coastal sage scrub, and riparian communities. The predominant plant community is mixed chaparral. Grasslands occur along Agoura Road at the northern and eastern edge of the site. Oak woodland habitat is found throughout the northern portion of the site, and coastal sage scrub is located in the eastern portion of the site. Appendix B lists plant and animal species which are commonly associated with the vegetative habitats found on-site.

Grasslands. Grasslands are characterized by low annual herbs such as black mustard, wild oats and brome grass. This vegetative community is located on slopes and valleys with heavy, fine-textured soils, and is found on the far northwestern edge of the site. Grassland communities in California were originally dominated by native perennial brome grasslands. During Spanish settlement in California, the grasslands were converted to a non-native annual vegetation as a result of overgrazing and the introduction of weedy European grasses and herbs.

Grasslands have high primary biological productivity, providing forage for herbivores, primary habitat for small mammals and abundant small animal populations such as rabbits, ground squirrels, and gophers. These small mammal populations furnish primary food source for raptors and mammals such as the gray fox, coyotes, bobcats and long-tailed weasels. Grasslands are subject to many man-made constraints, including the introduction of non-native species, agricultural conversion and urbanization.

Coastal Sage Scrub. Along with chaparral, coastal sage scrub is the most widespread vegetative community in the Santa Monica Mountains area. It is referred to as "soft chaparral" due to the flexibility of its leaves and stems. Within the study area, the coastal sage scrub community is usually found below 1,100 feet, where it extends into the mountains in the larger canyons at the eastern end of the site. Three distinct phases of this community occur: namely the Inland Phase, the Sea-Bluff Succulent Phase, and the Maritime Phase. The Inland Phase is by far the most abundant and is the community which occurs in the Agoura Hills area.

Coastal Sage scrub is well-adapted to dry, rocky slopes and is also found in well-drained clay or gravelly areas. These soil conditions are low in fertility and subject to rapid erosion, which makes coastal sage scrub important in slope stabilization. Fire is important in the ecology of this vegetative community. After a fire, coastal sage scrub usually recovers within a few years through a series of transitional stages, each with characteristic species.

Mixed Chaparral. This plant community comprises the majority of the native plant material on-site, covering most of the acreage with the exception of the grassland in the northern foothills, the woodlands in the northwest, and the eastern area coastal sage scrub habitats.

Chaparral, which is probably the most characteristic vegetative type of Southern California, occurs on steep slopes with shallow soils. This community usually occurs above the coastal sage scrub zone. The stiff, woody evergreen shrubs usually grow 3 to 6 feet high. Chaparral is extremely drought-resistant, which makes it well adapted to Southern California's long, dry summers. Chaparral is dense and often impenetrable, which is important in stabilizing steep slopes and decreasing erosion. Chaparral provides cover for large animals, serves as a major component in the diet of the mule deer and produces seeds for birds and small mammals.

Chaparral burns quickly and ignites easily, with fires occurring in the chaparral on the order of once every 10 to 40 years. Fire, however, plays an important role in chaparral ecology. Most species in this community are fire-conditioned, with some plants germinating only if burned after the seeds have been dormant for years.

Older chaparral communities (older than 20 years) have a great deal of dead material due to its low rate of decomposition. Fire is the major decomposing agent. Because of the general fire prevention efforts in chaparral areas, this vegetation frequently builds up very high fuel levels, so that when a fire finally does occur, it is extremely intense. A large number of animal species are dependent upon chaparral and require adjacent expanses of chaparral for existence after a fire passes through a particular area.

Oak Woodland. The project site includes a number of existing oak trees, some of which are estimated to be over 100 years old. These oaks contribute to the natural beauty of the Ladyface Mountain setting.

Oak woodlands occur in canyon bottoms and north-facing hillsides. Oaks are found scattered and in clusters, generally below 1,000 feet elevation. Reports and aerial photo observations have identified over 300 oaks on site, with concentrations occurring in the vicinity of natural drainage areas (refer to Exhibit 1-3). The species of oaks present on the site are Quercus agrifolia, commonly known as the Coast Live Oak, and Quercus lobata, commonly known as the California Valley Oak.

Oak woodlands and savannahs often occur in areas where the topography is suitable for development. Development often occurs, leading to a decline of this community. Oak woodlands are important to raptors. They provide roosting and nesting sites, which are needed by the birds of prey in conjunction with grasslands for hunting purposes. Oaks have long life spans, ranging from 100 to over 500 years or more. They support many levels of wildlife, and are used by animals for physical cover, nesting, foraging, and thermal cover.

Riparian Habitat. Riparian communities occur in canyons and valleys with loamy or gravelly soils at low elevations throughout Southern California, and comprise less than one percent of the Agoura Hills area. This community is clustered along stream courses where there is moisture at or near the surface year-round. Riparian communities include willow, mulefat, and sycamore. Riparian areas onsite are located along the Lindero Canyon Creek on the eastern edge of the site.

Riparian woodlands are often the only source of water for wildlife during the summer months in the Santa Monica Mountains area. Riparian communities have a high bioproductivity. The canopy furnishes habitat for birds, small mammals and insects; the sub-canopy provides forage for small birds and protective cover for larger mammals. The ground cover provides forage for a wide range of wildlife species (aquatic life forms, insects, reptiles, amphibians and mammals).

These communities are fragile and their range is being greatly reduced; they are uncommon in Southern California. This rich habitat type has been lost to increased development often for flood control and irrigation projects. Once channelized, the riparian habitat is lost. Many remaining riparian woodlands are now confined to remote and inaccessible areas.

WILDLIFE

Each plant community supports a different diversity and frequency of occurrence of native and non-native vertebrates. The wooded areas typically act as an ecological magnet due to their three-dimensional character--offering perch and nesting sites for birds, and cover (thermal and visual) and food encounters for all vertebrate groups. Consequently, substantial bird diversity is characteristic of the oak woodland.

The mixed chaparral community also attracts wildlife, including vertebrate wildlife dispersing between resting and breeding grounds and those areas used for forage. Due to the cover value of chaparral communities, many species of free-ranging mammals are able to disperse without being noticed. Available cover such as mixed chaparral or sage scrub along the perimeter of an arboreal forest increases the biotic value of the forest by providing cover to dispersing wildlife attracted to the wooded community.

The Palo Comado SEA just west of the Ladyface Mountain site contains valley oak savannah communities, in which large concentrations of raptors regularly nest. Nesting sites for a number of raptor species have been recorded in the Palo Comado SEA, the most numerous being the red-tailed hawk. Others include the Cooper's Hawk, the American kestrel, the golden eagle, and the great horned owl.

Raptors have large foraging requirements, and the following species may also utilize the Palo Comado SEA and Agoura Hills area: sharp-shinned hawk, turkey vulture, northern harrier, and screech owl. Several vegetative habitats in Agoura Hills are important to raptors. The oak woodland habitat provides nesting sites, and grasslands provide important foraging grounds. Coastal sage scrub provides a foraging source to a somewhat lesser extent, while foraging is minimal in chaparral.

Sensitive species which are associated with the habitats on site are the coast horned lizard and the ringtail cat. The coast horned lizard, typically associated with coastal sage scrub, oak woodland, and grassland habitats, has been designated a Category 2 candidate species by the U.S. Fish and Wildlife Service (USFWS) indicating that sufficient data regarding their threat and distribution are not available. The ringtail cat, associated with chaparral habitat and rocky terrain, is extremely rare and is a fully protected species under the California Department of Fish and Game (CDFG) Code.

b. Environmental Impact

The proposed maximum land use scenario indicates that development will occur to a depth of approximately 500 to 1,200 feet along the northern border of the site and along the eastern site boundary, and will cover approximately 65 acres. This would potentially impact the remaining grassland habitat, the oak habitat, and a portion of the mixed chaparral. Potential riparian communities along the streambeds, particularly in the northeast corner of the site, may also be impacted. Potential biological impacts would include destruction or alteration of habitat, resulting in a lower diversity of native plant and animal species on the site and, potentially, in the vicinity of the site.

The primary impacts of the proposed development are related to site preparation and clearing of native vegetation onsite. The plant communities particularly impacted will be grasslands and oak woodland. Modification of natural drainage courses will further impact trees and other plant life associated with the streambeds, and will interfere with their use as wildlife corridors. Table 4-2 summarizes the tolerance levels of wildlife to development-related disturbances.

The most direct long-term impact on local wildlife is the loss of natural habitat from clearing, grading, and the laying of pavement and other structures. Construction activities associated with development are potential sources of environmental

TABLE 4-2
WILDLIFE ENVIRONMENTAL TOLERANCE

Type of Disturbance	Large Mammals	Small Mammals	Fur-Bearers	Upland Game Birds	Water-Fowl	Other Birds
SURFACE SOIL COMPACTION						
Clearing	L	M	L	L	L	M
Grading	L	M	L	L	L	M
IMPERVIOUS SURFACING						
Noise	L	M	L	L	M	M
Motion	L	M	L	L	L	M
Climatic Changes	M	M	H	L	M	M
Insect and Disease Control Operations	H	M	M	L	L	L
INTRODUCED VEGETATION						
Use of Chemicals	H	M	M	L	L	L
Controlled Burning	L	L	L	L	H	H

LEGEND:

H = High capability to withstand to disturbance. Most species in this category showed little or no response to the disturbances.

M = The species can tolerate the disturbance, but the population trend turns downward. Most species receiving this rating responded unfavorably to the disturbance but could adjust; the exceptions were species having territorial traits.

L = Low capability to withstand disturbance. Most species in this category react. Population trend is downward.

Source: Wildlife of the Lake Tahoe Region

disturbance. Marked changes in vegetation are frequently associated with these disturbances.

The loss of native plant materials will contribute to the incremental reduction of wildlife movement. Altered habitats resulting from development reduce habitat quality and restrict or constrict wildlife activity to isolated greenbelts or nocturnal activities. Although some smaller prey species may increase in abundance due to the constant supply of grass forage, larger free-ranging mammals such as coyote, muledeer, bobcat, racoon and fox will be less likely to transcend developed property due to increased human presence. Nocturnal use of landscaped areas may take place in dry summer and fall months due to the availability of water and lush forage.

Besides the actual physical alteration of habitat areas, a number of impacts can be expected as a result of increased human activity. Increased human activity leads to increases in wildfires which, along with associated wildfire suppression activities, destroys wildlife habitat and destabilizes slopes. This leads to erosion and potential flooding impacts. Development creates wildlife migratory interferences and diminishes water quality. Off-road vehicle access destroys habitat and frightens wildlife. Human presence may also lead to illegal hunting and dumping and to the introduction of domestic pets, which are predators of some wildlife species. Increased human activity also results in harassment to wildlife in the form of street lighting (which particularly impacts nocturnal species), plant collecting and nest disturbances.

Oak trees within the County of Los Angeles are protected by law. Preserving oak tree habitat will require careful efforts during construction to maintain the health of existing trees after development. The trees like deep, rich, dry, undisturbed soil around their trunks. They do not adapt to moist soil during summer months, and summer watering is the major cause of death among local oaks. Oaks can also be lost to development when increased siltation occurs. The trees require high soil oxygen around their root crowns, and have been killed with as little as 6 inches of fill over the root crown.

Raptor (birds of prey) nest failures are attributable to both direct and indirect human impacts. Construction activities, including noise generation, negatively impact nesting raptors. Although some species may return to their nests after construction has been completed, the impact of construction on young birds during brooding season and while the birds are fledglings can be severe. Raptors may abandon their young during construction, leaving the fledglings to freeze or starve.

The cumulative effects of development on raptors may be substantial. Foraging area requirements are often large. For example, the Golden Eagle has a home range of about 25 miles. Development in Thousand Oaks and Westlake Village to the west of Agoura Hills has decreased foraging areas and nesting sites for raptors. As development increases in the community of Oak Park, raptor habitat will correspondingly decrease. Further, development often occurs in the most valuable raptor habitats. Grasslands and oak woodlands, vital to raptors, are also the most suitable development sites in the Agoura Hills area.

Depending upon the extent and magnitude of impacts to streamcourses, a streamcourse alteration permit (1603 Permit) and/or a Dredging and Discharge (404) Permit may be required. The site is under the jurisdiction of the CDFG (1603 Permit) and the U.S. Army Corps of Engineers (404 Permit). A 1603 Permit is generally relevant if conditions change - ultimately deteriorating or negatively affecting fish and wildlife resources through the diversion or obstruction of the natural flow or substantial change in the bed, channel or bank of the streamcourse or use of any material from the streambeds. Permit conditions are dependent upon several factors, such as the type or density of vegetation in the riparian area. The 1603 Permit is administered by the CDFG.

The streamcourses on-site are blue line streams (U.S.G.S. Thousand Oaks quadrangle, 7 1/2 minute) as shown on Figure 1-3. Any stream shown as a blue line on a USGS 7 1/2 minute topographic map is termed a "blue line stream." These channels carry water at some time of the year (intermittent streams) and come under the jurisdiction of the CDFG. The value of these streams is for wildlife or sensitive species which depend on them, as they act as an ecological magnet. As a part of the water/riparian resource of the State, blue line streams are considered a significant biological resource in themselves. Alterations are not limited to changes in the stream channel, but include actions that affect wildlife usage, lower water quality with increased sedimentation or pollution, and increased or decreased water flow. In addition to site specific (onsite impacts) factors affecting wildlife and wildlife habitat downstream and upstream are also considered.

The Section 404 Permit is applicable when any construction or site preparation activities impact waters of the United States. Waters of the United States include intermittent streams and isolated wetlands. The 404 Permit is administered by the U.S. Army Corps of Engineers, which utilizes USFWS as an advisory agency. The Corps of Engineers has ultimate responsibility for permit decisions.

The City of Agoura Hills has specific ordinances to ensure the preservation of natural drainages (Chapter 9550 of the Municipal Code), and the preservation of natural drainages is stated as an objective in the Agoura Hills General Plan and in the hillside regulations. The City also has specific ordinances requiring oak tree preservation, and requiring that reports be submitted and permits be issued for each development parcel which may impact existing oak habitat.

RELATIONSHIP TO THE GENERAL PLAN

The Agoura Hills General Plan sets forth specific policies with respect to vegetation and wildlife issues. The General Plan policies include the following:

- Maintaining habitats of rare and endangered species, or areas identified as habitats of regional significance, in a natural state if possible.

- Identifying in development plans all oak trees more than 6 inches in diameter, and providing preservation, where possible, or replacement of oaks.

The Specific Plan provides extensive oak tree protection/replacement guidelines, designed to ensure that site alterations within the Specific Plan area do not adversely affect oaks which are intended to remain on-site. When specific development is proposed, an oak tree mitigation plan will be required as a part of the site plan review process. All mitigation measures will be consistent with the City's Oak Tree Preservation Guideline and Section 9650.700 - Oak Tree Preservation Regulations.

c. Mitigation Measures

It is the policy of the City to require the preservation of all oak trees unless compelling reasons justify their removal. Any person desiring to pursue an activity which has the potential to damage an oak tree (including trenching, excavating, or paving within the greater of the protected zone and 15 feet from the tree) must obtain a permit.

A detailed on-site biological study should be authorized by the City prior to development on Ladyface Mountain. This will provide a record of plant and animal species currently on site, particularly of fully listed or candidate species for State and/or Federal status. The locations of nesting sites should be determined as part of the biological study.

Developers shall conduct site-specific oak tree surveys to evaluate the value of individual trees in terms of size and health, as well as aesthetic considerations. Specific development plans should consider the impacts of the proposed project on area oak trees and mitigate potential impacts in accordance with the City's oak tree preservation guidelines and regulations.

It is preferable to restrict the harvesting of oaks through project design considerations. Clustering development on the project site away from oaks is one alternative. Most ordinances for oak tree preservation have allowed the replacement of a 100-year old tree with 15-gallon trees. Although in the long term this method will help to ensure continuity of the species, in the short term it will not. Habitat provided by mature oaks would be lost. Wildlife supported by oaks, especially nesting birds, would be crowded into smaller areas and wildlife populations would decline.

Developers should ensure that landscaping on-site includes relocated oaks or their replacements, native shrubs and trees, and as many native drought-tolerant species as is practical. The planting of natural vegetation that is both drought tolerant and fire resistant will reduce fire hazards, offset the loss of native plant species and encourage the return of some wildlife following construction.

Developers should be sensitive to the proximity of development to raptors, and development activities should be restricted in areas with particularly high concentrations of nesting sites. Habitats and individual vegetative species of high value to raptors, particularly oak woodlands and grasslands, should be preserved to the maximum extent feasible.

If the City allows development to occur in areas close to raptor nesting sites, such development should be limited or curtailed during certain times of the year. For some species, such as the golden eagle and the great horned owl, egg laying begins in early January. For others, such as the red-shouldered hawk, egg laying begins in March. Brooding is a particularly critical time and disturbances to the nest can prevent eggs from successfully hatching. After June 1, the young birds have left the nest and development will have less of an impact. Since the timing of disturbance will vary between raptor species, plans for specific projects should consider the type of raptors in the project area.

The City should ensure that barriers to wildlife movement are minimized wherever possible. Signage at key wildlife crossing points should be provided to inform motorists of wildlife corridors. Disruption from human activities can be reduced by vegetative buffers separating wildlife corridors from residential and commercial land uses.

In developing wildlife corridors for Ladyface Mountain and Agoura Hills, it is important that the corridors are integrated into a continuous open space system with linkages to surrounding areas. Such a system will necessarily have more than one wildlife circulation path so animals will have more than one way in and out in case of fire or human disturbances. The Santa Monica Mountains National Recreation Area to the east and south of the City will be important sources of linkages for a corridor system.

Required mitigation measures will involve adequate provisions to offset biological damage associated with disturbance to the riparian wash. The acceptability of any remedial measures will be determined primarily by the CDFG during review of a Section 1603 streamcourse alteration agreement and Section 404 Corps of Engineers Dredge and Fill Permit. The primary goal of a mitigation package would be to create new or expand existing riparian sources so as not to have a net loss of habitat value.

The CDFG, as a matter of policy, requests that project applicants avoid impacting the riparian resource prior to assigning mitigation/compensation strategies. The applicant is requested to document why the avoidance alternative is not feasible and how it would jeopardize the success of the project. Once the applicant has provided this documentation, a mitigation/compensation strategy is submitted to offset displaced resources. This could include a revegetation effort onsite or offsite. It is generally preferable to conduct the revegetation effort onsite, nearer the impacted area.

d. Residual Impacts

Unavoidable adverse impacts of development include primarily habitat loss and wildlife displacement. Other impacts include the potential loss or disruption of oak woodland, riparian woodland, and grassland habitat.

4.6 Cultural Resources

a. Existing Conditions

The Specific Plan area is situated in the Conejo volcanics formation. Ladyface Mountain forms the south side of Lindero Canyon, bordered on the north by the Simi Hills and on the south by the Santa Monica Mountains. The canyon is approximately 1/4 mile wide at the base of Ladyface. Ladyface Mountain is on the southern side of what is called the "Conejo Corridor," a series of narrow valleys and canyons which provides a passage between the San Fernando Valley on the east and the Onxard Plain on the west. Archaeological evidence indicates that this area was used extensively by early inhabitants and travelers during the late prehistoric area.

The Conejo volcanics formation provided a variety of stone materials that were sought by the region's prehistoric inhabitants for making tools. For example, basalts, andecites and various metavolcanics were useful for making milling tools, heavy flaked cutting and scraping tools and other forms. Finer-grained materials, such as calcedony and metacherts, were flaked into projectile points and smaller cutting tools.

Historically, the Ventureno Chumash Indians occupied the general area of the western Santa Monica Mountains, camping temporarily on the open slopes and maintaining sizable settlements along the major streams and coastline. The Chumash culture, however, was the final stage of 7,000 years of human occupation in the valleys and hills of the western Santa Monica Mountains. This time period (5500 B.C. to historic contact) is usually divided into three cultural sequences, reflecting the changes in population, site locations, and food gathering techniques. The earliest known group in the area, the Millingstone people, were mostly plant gatherers with hunting and fishing as their secondary sources of food. Remains of the intermediate cultural groups (1500 B.C. to 1000 B.C.) reflect a shift away from vegetable foods to maritime resources. In the late prehistoric period even the inland inhabitants, who located their villages along main trade routes, relied greatly on shellfish and maritime resources.

Historic contact began in 1541 with the Cabrillo Expedition into the region, though contact with Europeans was minimal until the late 1700's. The Spanish missions then began occupation of this region, removing the Indians forcibly from their native lands. This historic habitation of the region continued through the Mexican and American

periods of Southern California history. Glass and metal artifacts, which pre-date the 20th century, and remaining adobe and brick structures permit the dating of historic sites.

Archaeologists believe that much of the northern slope of Ladyface Mountain may contain significant archaeological sites, theorizing that the Chumash were drawn to the mountain because it offered a ready supply of volcanic rock and a site which overlooked vast areas of land. Prehistoric bones and fragments of tools have been found in the vicinity.

Several archaeological surveys were conducted on and in the vicinity of the north slope of Ladyface Mountain between the years 1951 and 1987. They provide ample evidence of the continued use through time of the area by its early inhabitants. The records of sites which have been investigated indicate that most are classified as occupation sites and chipping stations, or areas of stone tool manufacture. Others are classified as temporary campsites and quarries.

Two sites have been identified in an 87-acre parcel in the western area of the Ladyface Mountain, and 16 sites have been identified within a one-mile radius of that parcel. Archaeological studies were also performed in 1987 within the boundaries of the project area, specifically for a 10-acre area at the base of the mountain, the northern edge of which borders Agoura Road. The immediate vicinity of the parcel has been visited by archaeologists several times, the earliest recorded inspection occurring in 1979. The site has been described as one of "flake scatter," or lacking the characteristics of a concentrated work site or toolmaking site. Some concentrations of stone artifacts, small refuse collection areas, and burials have been recorded.

In 1985, an investigation was performed on a 23-acre site on Ladyface Mountain for the Lincoln Property Company. The approximate location of the site was the northern flank of the mountain, on a bench located at the head of a narrow north-south trending ridge. Artifacts indicated the presence of a Chumash Indian Village which was occupied in 1200 AD to 1400 AD, and possibly as early as 500 AD. Another site located at the northern base of Ladyface Mountain was investigated in 1985. Artifacts from these sites included tools and knives. (General locations of areas of cultural sensitivity within the Ladyface Mountain site are indicated on Exhibit 1-3.)

b. Environmental Impact

The Specific Plan proposes development in an area containing recorded archaeological sites. The foothills, in general, contain areas that appear to favor the location of prehistoric habitation sites in this region. The potential, therefore, exists for uncovering additional unrecorded archaeological remains during site preparation and grading.

While development of the preferred plan land use scenario on Ladyface Mountain is not expected to impact known archaeological sites, grading could result in the unintentional destruction of sensitive resource areas. Several sites have been identified on the northern face of Ladyface Mountain, and evidence indicates that the potential for additional sites does exist. The location of deposits on hill slopes renders them very fragile, and even brush clearing will result in disturbance through erosion.

Another possible impact on archaeological resources is loss from collectors and vandals resulting from increased access to remote areas. Currently, information regarding the exact locations of these sensitive sites is available to qualified persons and agencies only on a need-to-know basis. As access to these areas increases, the potential for disturbance also increases. Additional human activity in the area may also impact cultural resources not yet discovered.

Because of the lack of comprehensive details and specific information available about archaeological resources in Agoura Hills, proper excavation and documentation of archaeological sites should be implemented. The loss of resources without such excavation and documentation would be considered a significant adverse impact of development.

RELATIONSHIP TO GENERAL PLAN

The General Plan states the City's intent to preserve the cultural and historical heritage of Agoura Hills. It states that efforts could be undertaken in cooperation with the Santa Monica Mountains National Recreation Area and the Santa Monica Conservancy to preserve or, if preservation is impossible, excavate Native American dwelling sites and burial grounds, and establish an interpretive center for exhibits of local cultural history.

c. Mitigation Measures

Dense growths of chaparral and other vegetation has made difficult a definitive assessment of the areal distribution of culturally sensitive sites. Therefore, a detailed site-specific archaeological investigation into cultural resources should be authorized by the City in the area of proposed development on Ladyface Mountain prior to City approval of any project-specific development plans.

Developers shall ensure that a formal survey and assessment of cultural resources is conducted by a qualified archaeologist acceptable to the City, prior to any alteration of the property. This cultural resources survey should include a survey of local documented archaeological and historic sites and a field survey to confirm documented sites, determine the current quality of the sites, and identify new sites. The survey should indicate the value of the sites and recommend a method of mitigating potential development impacts. The results of the cultural resources survey should be transmitted to associations or agencies directly concerned with archaeology of the region.

If during earth moving activities any historical or prehistorical remains are discovered, the Construction contractor shall cease all activities, and a qualified archaeologist shall be consulted to ascertain the nature and significance of the remains. If significant archaeological finds are unearthed, development shall be redesigned to preserve the findings. A Native American Indian observer should be invited to participate in subsequent archaeological site testing and evaluation programs.

Known archeological sites of historic value should be preserved and protected in development of the Specific Plan through one of the following techniques:

1. Preserve deposits in their present condition, ensuring protection from intrusion.

2. Protect the site by covering the total area of the deposit with some form of soil blanket that would stabilize the cultural materials and protect them from adverse impacts.

3. Conduct an archaeological excavation by qualified scientists and document findings.

4. Post signs at edges of development restricting entry into undeveloped areas.

d. Residual Impacts

No unavoidable significant adverse impacts are anticipated if the proposed mitigation measures are implemented.

4.7 Aesthetics

a. Existing Conditions

Research and development companies, office buildings and traveler-related services currently dominate the freeway corridor along Agoura Road, as well as north of the project area across US 101. Some development has occurred within site boundaries, including a 178-unit rental complex at the northwest corner of the site. The main body of residential development in the City lies north, across the freeway corridor.

The existing aesthetic environment of the site itself is relatively undisturbed open space. Agoura Road fronts the northern boundary of the site. Lush vegetation on-site consists of oak trees and grassland on the gentler terrain of the foothills, and mixed chaparral and coastal sage scrub on the steeper slopes. The site includes drainage basins and streamcourses which carry runoff from the top of the ridge to the valley below.

The project area is at the foot of the western extension of Ladyface Mountain, a 2,036 foot volcanic structure that is the most prominent landmark in the City. The City's General Plan identifies Ladyface Mountain as a key physiographic feature of the community and includes a list of policies related to development adjacent to it.

The topography of the site is characterized by gently sloping terrain in the northern portion of the site, which increases in steepness as one moves progressively south. The portion of the site to be developed ranges in elevation from 850 feet in the vicinity of Agoura Road to an elevation of about 1,100 feet.

The slope increases gradually to become greater than 25 percent at approximately 1,100 feet elevation. The elevation of the Ladyface ridgeline south of the project site varies from approximately 1,600 feet to approximately 1,900 feet. The ridgeline distance ranges from 3,000 to 4,000 feet south of Agoura Road.

Along US 101, recent development in the City of Agoura Hills, the City of Westlake Village and the City of Thousand Oaks includes structures and land uses similar to those proposed in the Specific Plan Land Use Plan. Existing views from locations north of the site are shown in Exhibit 4-4.

SCENIC CORRIDORS

Local arterials in the vicinity of the site with strong scenic character include Reyes Adobe Road, Kanan Road, Agoura Road and Canwood Street. The Malibu/Santa Monica Mountains Area Plan has identified nearby Kanan Road as a scenic highway. US 101 is both a local scenic corridor and an element of the Los Angeles County Scenic Corridor System. The State of California has included US 101 in the Master Plan for Scenic Highways, and official designation is pending.

US 101 is the most traveled scenic route in the City, and it plays an important role in establishing the character of the City to through travelers. Because it is the widest roadway in the City, the freeway generally provides the least obstructed views of the surrounding hills and mountains. The freeway is related to the open space corridor system at key crossings at Medea Creek and Palo Comado Canyon, with riparian areas visible at these crossings.

Agoura Road is the scenic corridor through the southern section of Agoura Hills. The view along Agoura Road is characterized by close-in foothill views to the south, with occasional vistas over the City to the north.

Canwood Street is the freeway frontage road on the north side of US 101. Because of its location adjacent to the freeway, views of Ladyface Mountain are relatively unobstructed.

Kanan Road is a local scenic highway. The portion of the road south of US 101 has been designated a primary County scenic highway. From its high point north of US 101, Kanan Road provides views of Ladyface Mountain.

Reyes Adobe Road is also a local scenic highway, running in a north-south direction perpendicular to the freeway. Panoramic views of Ladyface Mountain are afforded travellers southbound on Reyes Adobe Road, particularly at the freeway bridge.

b. Environmental Impacts

The subject property consists of 747 acres, of which 225 are considered to be suitable for potential development. These 225 acres are located in the lower elevations of the northern portion of the site adjacent to Agoura Road, and make up that portion of the site that will potentially undergo a visual alteration. Seventy percent of the site, including the upper slopes and ridgeline, will remain as open space. The Specific Plan restricts all development below 1,100 feet elevation. Implementation of the Specific Plan would potentially impact 65 acres along the northern edge of the site, substantially limiting the visual impacts which would be associated with complete development of the 225 acres of developable land on Ladyface Mountain.

The project site contributes to local scenic resources, in as much as it is located adjacent to designated scenic roadways. Portions of the site also have visual importance as viewed from Kanan Road, Reyes Adobe Road, Canwood Street and Agoura Road. Visual distractions include cars, trucks, freeway structures such as overpasses and signs, and other man-made structures along the freeway. The preferred plan land use scenario proposes to develop to a maximum depth from Agoura Road of 1,200 feet in a southerly direction. The maximum depth of development along the eastern and western boundaries is 600 feet.

Aesthetic impacts will result from the following project-related activities:

- Grading. Grading will occur on the project site, modifying the existing terrain to create building pads appropriate for development of relatively large, low structures. The Specific Plan states that cut and fill slopes will not exceed 15 feet. Along Agoura Road and Kanan Road, scenic highway standards will be applied in accordance with established guidelines.

- Removal of existing vegetation. The uncovering of soil and movement of excavated soil on site will impact the aesthetic quality of existing vegetation on site.

- Construction. Development will require the construction of new building structures, automobile circulation and parking areas, and utilities and lighting facilities. Maximum building height is expected to be 35 feet, with no structures

extending above 1,100 feet elevation. Buildings of more than one story will not be placed upon higher elevations. The Specific Plan also encourages the use of varied setbacks and stepping to reduce linear building mass and to add architectural interest.

- o Landscaping. Landscaping is intended to provide as natural appearance for the project area as feasible and make maximum use of existing trees. Regardless, there will be a change in the appearance of the vegetation on site from natural habitat to manicured landscaping. Landscaping, however will also soften the appearance of proposed buildings and help shield parking areas. A minimum of 20 percent of the total project area is expected to be landscaped. The Specific Plan also proposes a landscape corridor along Agoura Road.

- o Lighting. Lighting of structures, parking areas, streets and sidewalks will occur. Parking lot lighting has the potential to illuminate areas which may be visible to homes north of the site. Lighting can be designed so that direct illumination of offsite areas is minimized; however, adequate security lighting will require that some illuminated areas are visible from surrounding locations.

- o Glare. The siting of structures along the freeway will result in the potential for glare from reflective surfaces onto passing motorists.

RELATIONSHIP TO GENERAL PLAN

The primary goal of the General Plan with respect to viewsheds is to create a network of scenic highways in Agoura Hills which will create an awareness of the environmental character and natural and man-made resources of the community. Maintaining a quality visual experience along the entire length of scenic highways will be accomplished through protection and enhancement of views and development of appropriate landscaping.

In addition, the General Plan provides guidelines for development which are intended to preserve local landmarks, particularly Ladyface Mountain. Objectives summarized in the General Plan include the following:

1. Maintaining clear views of Ladyface Mountain from a distance and from nearby areas.

2. Limiting development so as not to break the view of the ridgelines with building structures.

3. Maintaining view corridors between structures.

4. Maintaining the natural appearance of the mountain.

The Specific Plan proposes extensive guidelines intended to ensure that the development of Ladyface Mountain occurs in a well-coordinated, environmentally sensitive, and aesthetically pleasing manner. These guidelines include architectural design, the use of materials, the placement of structures, and the use of landscaping.

c. Mitigation Measures

The City will ensure that development of the site will be confined to the lower portions of the northern facing slope of Ladyface Mountain. Architectural design will conform to the design guidelines contained in the Specific Plan and will be compatible with natural forms and colors surrounding the site.

Specific mitigation measures proposed development include the following:

1. Landscaping to shield structures and parking facilities. Plants indigenous to the area will be used where appropriate.

2. Use of existing oaks in landscaping design to maintain the current natural appearance of the area as much as is feasible. One native oak tree of a minimum 24-inch box per 15,000 square feet of gross floor area shall be provided within those areas or at alternate locations as approved by the City.

3. Installation of utilities underground.

4. Depressed parking and loading areas along the north side of buildings.

5. Providing a planting area along the north side of all buildings.

6. The use of architectural design and materials, and the sensitive location of structures which may produce glare to passing motorists and existing structures and homes.

7. Along Agoura Road and Kanan Road, Resolution No. 329 of the City of Agoura Hills pertaining to grading next to scenic highways shall apply. All other grading shall be subject to the standards outlined in City Ordinances 65 and 109.

d. Residual Impacts

Unavoidable impacts of development include the permanent alteration of the visual character of the site as urban development replaces the existing land uses.

4.8 Air Quality

a. Existing Conditions

Air quality at any site is dependent upon regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates for the South Coast Air Basin (SCAB) have been made for existing emissions ("Final Air Quality Management Plan, 1982 Revision," October 1983). The data indicate that mobile sources are the major source of regional emissions. Motor vehicles account for 50 percent of reactive hydrocarbon emissions, 58 percent of nitrogen oxide emission, and 85 percent of carbon monoxide emissions.

In addition to motor vehicles, the combination of a large population concentrated in a fairly small area, frequent temperature inversions, westerly winds and surrounding mountains contributes to the smog problem in the SCAB. The main ingredients of air pollution in Southern California are carbon monoxide (CO), nitrogen oxides (NO_x), and hydrocarbons (HC). Nitrogen oxides react with hydrocarbons in the presence of sunlight to from secondary pollutants such as ozone, and PAN (peroxyacetyl nitrates). CO is a colorless, odorless, toxic gas which is produced by the incomplete combustion of substances containing carbon. CO concentrations are generally higher in winter months when meteorological conditions limit dispersal of contaminants. Automobiles are the major source of CO in the SCAB (90 percent). CO concentrations in the SCAB are among the highest in the nation and are about twice the state and federal standards.

There are a number of nitrogen oxides compounds, but only two are considered to be significant air pollutants. Nitric oxide (NO) is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperatures or high pressure. Nitrogen dioxide (NO_2) is formed by the combustion of nitric oxide with oxygen. Motor vehicle engines contribute about two thirds of the oxides of nitrogen while power plants, refineries and other stationary sources contribute one third. The SCAB is the only region in the United States that has not attained the Federal standard for nitrogen dioxide.

Compounds consisting of hydrogen and carbon are known as hydrocarbons. Motor vehicles are the primary source of hydrocarbons in the Basin. The Basin has very light average wind speeds and thus the dispersion of air contaminants is difficult. On almost all spring and early summer days, most of the pollution produced on any given day is moved out of the SCAB through mountain passes or is lifted by warm vertical currents produced by the heating of mountain slopes. However, from late summer through the winter months, this occurs less frequently due to higher wind speeds and the earlier appearance of off-shore winds.

Ambient air quality data is given in terms of State and Federal standards adopted to protect public health with a margin of safety. In addition to ambient standards, California has adopted Episode Criteria for oxidant, carbon monoxide, and sulfur dioxide pollutants. The Episode levels present short-term exposures at which public health is actually threatened.

LOCAL AIR QUALITY

Air quality in the Agoura Hills study area is good relative to the rest of the SCAB. Pollutants are dispersed as coastal winds blow fresh air through Malibu Canyon towards Las Virgenes, and from Westlake Village east towards the San Fernando Valley. Local air pollution problems result primarily from automobile exhaust. Carbon monoxide pollution is greatest along US 101. The vehicle miles travelled along this corridor are the most within the entire Malibu/Santa Monica Mountains area.

The SCAB is under the jurisdictional responsibility of the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB). SCAQMD monitors stationary sources and the CARB controls motor vehicle emissions.

The nearest air monitoring station operated by SCAQMD is in Reseda, approximately 15 miles northeast of the site. Air quality data for 1988 for the Reseda Station is provided in Table 4-3.

Air quality data for the Reseda monitoring station indicate that State standards for carbon monoxide were exceeded only two days out of the year, and that nitrogen dioxide and sulfur dioxide standards were not exceeded. Ozone is the air pollutant of primary concern in the area, in that the standard was exceeded 121 days of the year. All areas of the SCAB contribute to the ozone levels experienced at Reseda.

Particulates, lead, and sulfate pollutants are not measured at the Reseda station. However, measurements taken at the nearby Burbank station indicate that State particulate standards were exceeded by 78.9 percent, while measured lead and sulfate levels were within standards. Sulfur dioxide and sulfate concentrations are usually the result of large industrial facilities, which are not present in the vicinity of Ladyface Mountain. Levels of particulate matter are due to natural sources, grading operations, and motor vehicles. The primary source of carbon monoxide and lead pollutants is motor vehicles. The intensity of vehicular traffic in the region is not sufficient to cause these standards to be exceeded.

b. Environmental Impact

Air quality impacts are categorized as short-term and long-term. Short-term impacts result from construction and grading operations, and long-term impacts are associated with long term operation of the project.

SHORT-TERM IMPACTS

Temporary impacts will result from on-site construction activities. Air pollutants will be emitted by construction equipment, and dust will be generated during grading and site preparation. Construction activities for large development projects are estimated by the U.S. Environmental Protection Agency (EPA) ("Compilation of Air Pollutant Emission Factors") to add 1.2 tons of fugitive dust per acre of soil disturbed per month of construction activity. If water or other soil stabilizers are used to control dust, as required by SCAQMD Rule 403, emissions can be reduced by 50 percent. Applying the above factors to the approximately 65 acres proposed for development on the site, a

1988 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Source/ Receptor Area No.	Location of Air Monitoring Station	Carbon Monoxide: Max. Conc. in ppm 1-Hour	Carbon Monoxide: Max. Conc. in ppm 8-Hour	Carbon Monoxide: No. Days Standard Exceeded — Federal: ≥ 9.5 ppm 8-Hr.	Federal: > 35 ppm 1-Hr.	State: ≥ 9.1 ppm 8-Hr.	State: > 20 ppm 1-Hr.	Ozone: Max. Conc. in ppm 1-Hour	Ozone: No. Days Standard Exceeded — Federal: > .12 ppm 1-Hour	State: ≥ .10 ppm 1-Hour	Nitrogen Dioxide: Max. Conc. in ppm 1-Hour	Nitrogen Dioxide: Average Compared to Federal Std.[a] — Annual Avg. in ppm	% Above Std.	No. Days St'd. Exc'd. State: > .25 ppm 1-Hour	Sulfur Dioxide: Max. Conc. in ppm 1-Hour	Sulfur Dioxide: Average Compared to Federal Std.[b] — Annual Avg. in ppm	Sulfur Dioxide: No. Days St'd. Exc'd.[c] — Federal: > .14 ppm 24-Hr.	State: ≥ .05 ppm 24-Hr.[d]	Visibility*: Location	Days not Meeting State St'd.[e]
1	Los Angeles	16	11.43	3	0	5	0	.21	24	68	.54	.0613	14.8	6	.04	.0041	0	0	Burbank Airport	206
2	W. Los Angeles	15	8.57	0	0	0	0	.24	16	60	.26	.0343	0	1	.03	.0022	0	0		
3	Hawthorne	23	15.86	26	0	31	4	.22	5	11	.27	.0358	0	1	.15	.0048	0	0	Los Angeles	
4	Long Beach	13	10.29	1	0	2	0	.16	7	18	.28	.0475	0	1	.05	.0068	0	0	International	145
5	Whittier	13	7.29	0	0	0	0	.29	29	72	.22	.0498	0	0	.10	.0055	0	0		
6	Reseda	16	13.13	3	0	4	0	.25	71	137	.20	.0378	0	0	.02	.0017	0	0	Long Beach	
7	Burbank	15	11.86	13	0	14	0	.24	64	135	.26	.0528	0	2	.02	.0022	0	0	Airport	175
8	Pasadena	17	10.63	3	0	3	0	.29	119	175	.27	.0500	0	2	.03	.0023	0	0		
9	Azusa	8	6.00	0	0	0	0	.30	125	173	.24	.0530	0	0	.03	.0022	0	0		
9	Glendora	NM	NM	NM	NM	NM	NM	.34	148	193	.20	.0439	0	0	NM	NM	NM	NM	William J. Fox	
10	Pomona	13	8.63	0	0	0	0	.29	91	145	.20	.0561	5.1	0	NM	NM	NM	NM	Airport	
11	Pico Rivera	14	9.86	1	0	3	0	.30	67	128	.24	.0539	0.9	0	.05	.0048	0	0	(Lancaster)	5
12	Lynwood	32	27.50	51	0	57	20	.21	12	29	.31	.0478	0	1	.06	.0069	0	0		
13	Santa Clarita	NM	NM	NM	NM	NM	NM	.30	107	152	NM	NM	NM	NM	NM	NM	NM	NM		
14	Lancaster	11	5.88	0	0	0	0	.18	44	105	.09	.0162	0	0	NM	NM	NM	NM		
16	La Habra	20	9.86	2	0	4	0	.29	33	89	.24	.0424	0	0	.05	.0038	0	0		
17	Anaheim	17	12.00	5	0	6	0	.27	19	53	.28	.0458	0	1	.06	.0041	0	0		
17	Los Alamitos	NM	NM	NM	NM	NM	NM	.23	17	39	NM	NM	NM	NM	.04	.0029	0	0		
18	Costa Mesa	16	11.57	2	0	3	0	.15	2	15	.26	.0268	0	1	.03	.0018	0	0		
19	El Toro	10	5.13	0	0	0	0	.21	18	41	NM	NM	NM	NM	NM	NM	NM	NM		
22	Norco	NM	NM	NM	NM	NM	NM	.25	61	135	NM	NM	NM	NM	NM	NM	NM	NM	March Field	
23	Rubidoux	9	6.75	0	0	0	0	.28	123	178	.19	.0368	0	0	.02	.0014	0	0	(Riverside)	219
23	Riverside	17	10.00	1	0	1	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
24	Perris[f]	NM	NM	NM	NM	NM	NM	.23	82	137	.14	.0310	0	0	NM	NM	NM	NM		
25	Lake Elsinore[g]	NM	NM	NM	NM	NM	NM	.15	1	3	NM	NM	NM	NM	NM	NM	NM	NM		
28	Hemet	NM	NM	NM	NM	NM	NM	.18	28	89	NM	NM	NM	NM	NM	NM	NM	NM		
29	Banning	NM	NM	NM	NM	NM	NM	.26	64	118	NM	NM	NM	NM	NM	NM	NM	NM		
30	Palm Springs	4	2.14	0	0	0	0	.20	35	99	.11	.0220	0	0	NM	NM	NM	NM		
30	Indio[g]	NM	NM	NM	NM	NM	NM	.11	0	1	NM	NM	NM	NM	NM	NM	NM	NM		
32	Upland	9	5.00	0	0	0	0	.35	122	165	.21	.0472	0	0	.03	.0017	0	0	Norton AFB	
33	Ontario	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	(San Bernardino)	215
34	Fontana	8	5.63	0	0	0	0	.29	124	170	.21	.0369	0	0	.04	.0016	0	0		
34	San Bernardino	9	7.57	0	0	0	0	.28	121	173	.19	.0421	0	0	.02	.0018	0	0	Ontario	
35	Redlands	NM	NM	NM	NM	NM	NM	.29	130	176	NM	NM	NM	NM	NM	NM	NM	NM	Airport	242
37	Crestline	NM	NM	NM	NM	NM	NM	.29	128	160	NM	NM	NM	NM	NM	NM	NM	NM		

ppm - Parts by volume per million parts of air.

NM - Pollutant not monitored at this station.

* - Data received from FAA.

a) - The federal standard is annual arithmetic mean NO_2 greater than 0.0534 ppm.

b) - The federal standard is annual arithmetic mean SO_2 greater than 80 ug/m^3 (.03ppm). No location exceeded the standard in 1988.

c) - The other federal (3-hour average > 0.50 ppm) and state (1-hour > 0.25 ppm) standards were also not exceeded.

d) - Twenty-four hour average SO_2 ≥ 0.05 ppm with 1-hour Ozone ≥ 0.10 ppm, or wi 24-hour TSP ≥ 100 ug/m^3.

e) - Visibility standard is less than 10 miles for hours with relative humidity less than 70%.

f) - Nitrogen dioxide monitored November 1 - December 31, 1988.

g) - Ozone monitored November 1 - December 31, 1988.

Table 4-3

SOUTH COAST
AIR QUALITY MANAGEMENT DISTRICT
9150 Flair Drive
El Monte, CA 91731

1988 AIR QUALITY

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Source/ Receptor Area No.	Location of Air Monitoring Station	Suspended Particulates PM10[h] Number of Samples	Max. Conc. in ug/m3 24-Hr.	No. (%) Samples Exceeding Standard Federal > 150 ug/m3 24-Hour	State > 50 ug/m3 24-Hour	Annual Averages[j] AAM Conc. ug/m3	AGM Conc. ug/m3	Particulates TSP[i] Number of Samples	Max. Conc. in ug/m3 24-Hour	AGM Conc. ug/m3	Lead[i] Max. Conc. in ug/m3 24-Hour	Quarters/Months Exceeding Standard Federal > 1.5 ug/m3 Qrtly Avg,	State ≥ 1.5 ug/m3 Mo. Avg.	Sulfate[i] Max Conc. in ug/m3 24-Hr.	No. (%) Samples Exceeding Standard State ≥ 25 ug/m3 24-Hr.
1	Los Angeles	58	130	0	33 (56.9)	58.3	53.3	61	257	99.8	0.44	0	0	26.6	1 (1.6)
2	W. Los Angeles	NM	NM	NM	NM	NM	NM	56	125	62.9	NM	NM	NM	17.4	0
3	Hawthorne	NM	NM	NM	NM	NM	NM	58	248	79.7	0.27	0	0	19.0	0
4	Long Beach	60	149	0	24 (40.0)	52.4	47.1	61	292	85.3	0.38	0	0	27.8	1 (1.6)
5	Whittier	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6	Reseda	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
7	Burbank	59	138	0	40 (67.8)	62.1	57.1	61	217	101.9	1.02	0	0	25.1	1 (1.6)
8	Pasadena	NM	NM	NM	NM	NM	NM	59	180	78.9	NM	NM	NM	24.4	0
9	Azusa	61	127	0	41 (67.2)	63.3	55.9	58	220	109.4	NM	NM	NM	23.6	0
9	Glendora	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
10	Pomona	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
11	Pico Rivera	NM	NM	NM	NM	NM	NM	59	229	98.7	0.43	0	0	28.1	1 (1.7)
12	Lynwood	NM	NM	NM	NM	NM	NM	57	349	113.9	0.51	0	0	27.1	1 (1.8)
13	Santa Clarita	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
14	Lancaster	NM	NM	NM	NM	NM	NM	58	257	69.9	NM	NM	NM	5.7	0
16	La Habra	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
17	Anaheim	NM	NM	NM	NM	NM	NM	60	306	84.4	0.21	0	0	23.1	0
17	Los Alamitos	57	132	0	15 (26.3)	45.6	40.2	58	304	91.7	NM	NM	NM	27.3	1 (1.7)
18	Costa Mesa	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
19	El Toro	61	97	0	11 (18.0)	38.4	35.1	59	156	75.2	NM	NM	NM	16.2	0
22	Norco	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
23	Rubidoux	61	252	7 (11.5)	51 (83.6)	94.9	81.8	61	313	126.8	0.15	0	0	23.6	0
23	Riverside	NM	NM	NM	NM	NM	NM	61	307	119.6	0.20	0	0	19.0	0
24	Perris	60	164	1 (1.7)	38 (63.3)	59.4	51.9	60	260	91.4	NM	NM	NM	11.5	0
25	Lake Elsinore	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
28	Hemet	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
29	Banning	57	113	0	17 (29.8)	42.0	33.6	60	192	73.5	NM	NM	NM	10.6	0
30	Palm Springs	60	77	0	8 (13.3)	29.2	23.7	61	145	56.6	NM	NM	NM	11.2	0
30	Indio	61	115	0	22 (36.1)	48.5	42.7	59	309	101.1	NM	NM	NM	8.4	0
32	Upland	NM	NM	NM	NM	NM	NM	60	229	95.9	0.12	0	0	18.5	0
33	Ontario	60	192	2 (3.3)	47 (78.3)	78.4	66.7	59	283	106.8	NM	NM	NM	21.1	0
34	Fontana	60	287	4 (6.7)	46 (76.7)	81.0	66.9	61	564	126.0	NM	NM	NM	28.1	1 (1.6)
34	San Bernardino	56	289	3 (5.4)	40 (71.4)	80.2	66.8	59	486	116.7	0.19	0	0	15.8	0
35	Redlands	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
37	Crestline	NM	NM	NM	NM	NM	NM	60	108	51.5	NM	NM	NM	13.4	0

ug/m3 - Micrograms per cubic meter of air.

AAM - Annual Arithmetic Mean.

AGM - Annual Geometric Mean.

h) - PM10 suspended particulate samples were collected every 6 days using the size-selective inlet high volume sampler with quartz filter media (PM10 refers to fine articles with aerodynamic diameter of 10 micrometers or less.)

i) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media. Federal TSP standard superseded by PM10 standard July 1, 1987.

j) - Federal PM10 standard is AAM > 50 ug/m3; state standard is AGM > 30 ug/m3.

Table 4-3 (continued)

1 month grading cycle and a 10-year total buildout period results in an estimated 3.3 tons per year (average of 17.8 pounds per day) of particulate emissions released.

The above estimate represents a reasonable annualized estimate of the particulate emissions generated. However, it should be noted that these emissions will not be averaged out over 365 days per year. Typically, the grading for one or two phases of development will occur and then no grading will occur for several months until the next development phase is initiated. A reasonable assumption is that grading may occur 5 percent of the time over the development life of the project. This would result in daily particulate emissions of 355 pounds during grading operations for the proposed land use scenario. It should be noted that the impact due to grading is very localized. Additionally, this material is inert silicates rather than the complex organic particulate matter released from combustion sources, which are more harmful to health. Dust generated by such activities usually becomes more of a local nuisance than a serious health problem. In some cases grading may be near existing development. The generation of dust can be minimized by watering prior to and during grading.

Heavy duty equipment emissions are difficult to quantify because of day-to-day variability in construction activities and equipment used. Typical emission rates for a diesel powered scraper, typically used in grading operations, are provided in Table 4-4. For the proposed project, three pieces of heavy equipment may be expected to operate at one time. If all the equipment operated for 8 hours per day, the emissions estimated in Table 4-4 would result. Generally, emissions generated by construction equipment are expected to result in a minimal environmental impact.

LONG-TERM IMPACTS

Vehicular traffic is the main source of air pollutant emissions generated by the project. Other emissions will be generated from the combustion of natural gas for space heating and the generation of electricity.

Vehicular Emissions. Estimates of vehicular emissions generated by the preferred plan were made. The Ladyface Mountain Specific Plan forecasts 12,165 project-generated vehicular trips per day. An average trip length of 10 miles per trip was used to calculate the typical vehicle miles traveled daily, and an average vehicle speed of 30 miles per hour was assumed. Emissions projected for the year 2000 are presented in Table 4-5.

TABLE 4-4
EMISSION RATES FOR DIESEL GRADING SCRAPER

Pollutant	Emission Rates (grams per hour)	Estimated Emissions (lbs. per day)
Carbon Monoxide	660	37
Nitrogen Oxides	2,820	156
Hydrocarbons	284	16
Sulfur Oxides	210	12
Particulates	184	10

Source: SCAQMD Air Quality Handbook.

TABLE 4-5
VEHICULAR EMISSIONS
(YEAR 2000)

Pollutant	Emission Rate (grams/mile)	Estimated Emissions (pounds/day)
Carbon Monoxide	12.67	3,395
Hydrocarbons	0.50	134
Nitrogen Oxides	1.25	335
Sulfur Oxides	0.21	56
Particulates	0.27	72

Source: EMFAC7D Composite Emission Factors developed by California Air Resource Board, November 1987.

Stationary Sources. Emissions will be generated on-site by the combustion of natural gas for space heating and water heating. Emission projections for the preferred plan are presented in Table 4-6. Square footage for land uses in the preferred plan land use scenario are assumed as follows:

Office	384,600 square feet
Commercial	109,200 square feet
Residential	29 units

Off-site emissions will be generated due to combustion of fossil fuels in the production of electricity. Table 4-7 outlines electrical emissions which will be generated by preferred plan development.

Development on Ladyface Mountain will result in increases in local concentrations of primary pollutants and in increased contribution to regional emissions and pollutant concentrations. Local emissions are not expected to significantly influence regional pollution levels. Project-generated long-term air emissions are estimated to relate to projected future (Year 2000) emissions in the SCAB as follows: (a) CO - 0.04 percent, (b) NO_x - 0.02 percent, (c) SO_x - 0.02 percent; and (d) particulates - negligible.

Air quality in Agoura Hills can be expected to continue to exceed the national ambient air quality standard for ozone as a result of regional pollution problems, and can be expected to continue to exceed the national ambient air quality standard for carbon monoxide resulting from local emissions from motor vehicles under unusual conditions.

Ambient Air Quality Standards. In order to guage the significance of the air quality impact of development on Ladyface Mountain, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality which are considered safe, with an adequate margin of safety, for the protection of the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, the ill, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

TABLE 4-6
EMISSIONS FROM THE COMBUSTION OF NATURAL GAS

Pollutant	Emission Rates (pounds/million cubic feet)	Estimated Emissions (pounds/day)
Carbon Monoxide	20	0.85
Nitrogen Oxides	80 (domestic	0.52
	120 (commercial)	4.34
Sulfur Oxides	negl	negl
Particulates	0.15	0.006
Reactive Organic Gases	5.3	0.23

Source: SCAQMD Air Quality Handbook, Revised 1987.

TABLE 4-7
EMISSIONS GENERATED BY ELECTRICAL USAGE

Pollutant	Emission Rates (pounds/1000 KWH)	Estimated Emissions (pounds/day)
Carbon Monoxide	0.20	2.66
Nitrogen Oxides	1.15	15.28
Sulfur Oxides	0.12	1.59
Particulates	0.04	0.53
Reactive Organic Gases	0.01	0.13

Source: SCAQMD Air Quality Handbook, Revised April 1987

National Ambient Air Quality Standards (AAQS) were established in 1971 for six pollutants, with states retaining the option to add other pollutants, to require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was later extended to 1987 for national AAQS, and is still not met in air quality problem areas like Southern California. Because California had established AAQS several years before the federal action and because of the unique air quality problems introduced by the restrictive dispersion meteorology, state and national clean air standards are considerably different. Federal and State standards of pollutants measured by the SCAQMD are shown on Table 4-3.

Air Quality Management Planning. The Clean Air Act Amendments of 1977 require that each state develop an implementation plan that outlines the pollution control measures by which attainment will occur in all non-attainment areas of the state by 1987. Such a document was prepared by the SCAQMD and the Southern California Association of Governments (SCAG) in 1978 and called the South Coast Air Basin Air Quality Management Plan (AQMP). The basic premise of the AQMP was that Southern California could have a reasonable rate of growth and still achieve clean air goals if a number of assumptions were realized. In the update to the AQMP issued in 1982, the SCAQMD and SCAG acknowledge that air quality is still far from attainment and that the control measures needed to reach attainment are so drastic and unacceptable that a realistic expectation for attainment is well into the 21st Century.

With the passage of the 1987 deadline, there is currently no Clean Air Act in effect. The EPA developed a set of administrative guidelines as a basis for a post-1987 attainment strategy. A new plan based on those guidelines was adopted in March 1979. That effort may be superceded by the U.S. Congress, however, which has indicated its intention to re-enable the Act.

The AQMP will create major changes in life styles and transportation practices. The AQMD as already mandated ridesharing programs for all employers of more than fifty people. The AQMP is also considering mandatory clean fuels programs for all large travel fleets. New pollution controls on sources such as stand-by generators, cogeneration plants, and central plant heating and cooling systems may affect the proposed development. The AQMD has already mandated ridesharing programs for all employers of more than fifty people.

RELATIONSHIP TO GENERAL PLAN

The City of Agoura Hills accepts that as growth takes place, some increases in pollution levels can be expected; however, these levels will remain below those of surrounding urban areas. In order to maintain the health and safety of the public, the City will attempt to reduce air pollution to achieve national ambient air quality standards for the Agoura Hills region.

c. Mitigation Measures

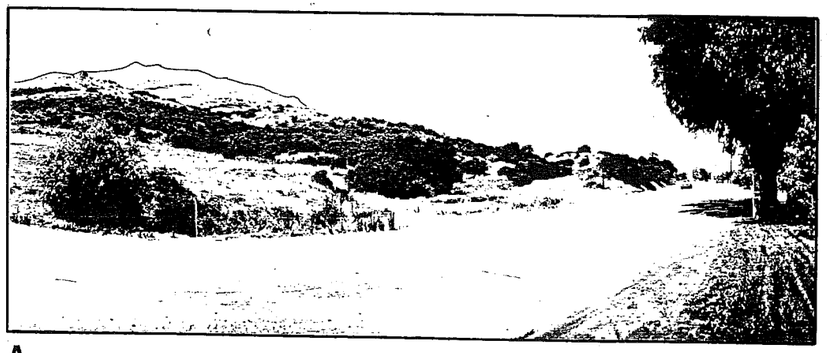
The most significant reductions in regional air pollutant emissions are attainable through programs which reduce vehicular travel associated with the project. In accordance with City ordinances, a traffic management plan will be submitted to the City for all projects in the Specific Plan which will employ 200 or more persons.

The AQMP identifies several measures designed to reduce vehicular traffic. These measures should be reviewed for applicability to Specific Plan development. Measures which may be appropriate include the following:

1. The City should consider implementing a "high occupancy vehicle" program, including carpool and vanpool matching services, public information dissemination and encouragement of employer-sponsored incentives, for project-related development.

2. Suitable sites where commuters could congregate for ridesharing to common destination either by carpool or transit should be provided by development applicants.

3. Water or other soil stabilizers shall be used by construction contractors to control dust, as required by SCAQMD Rule 403. This will reduce construction-related dust emissions by 50 percent. To further reduce emissions, construction contractors should discontinue grading activities when wind speeds exceed 20 mph.



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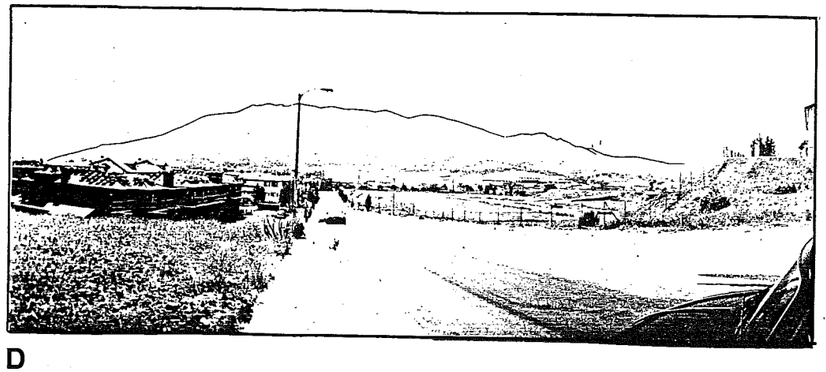

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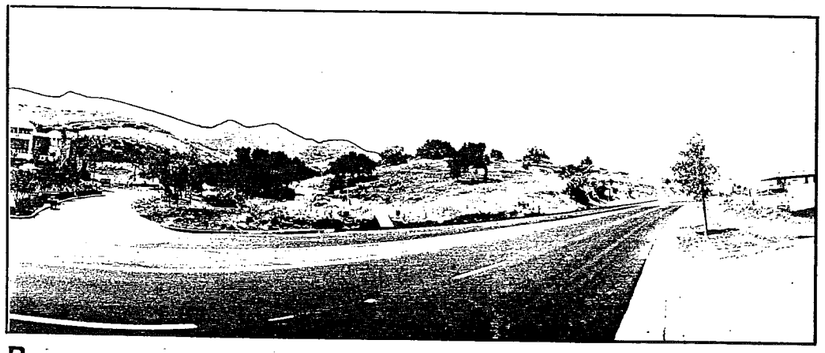

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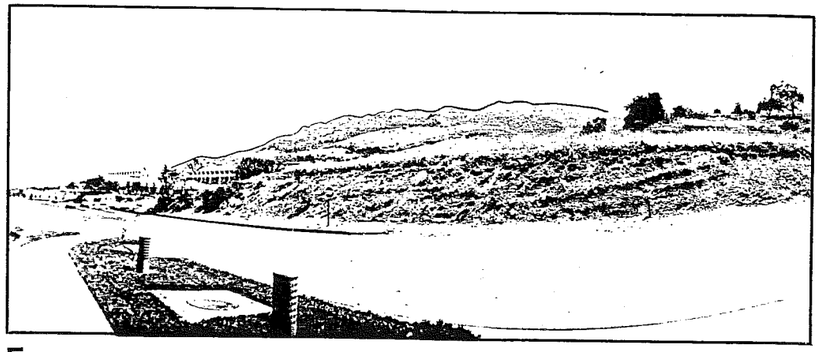

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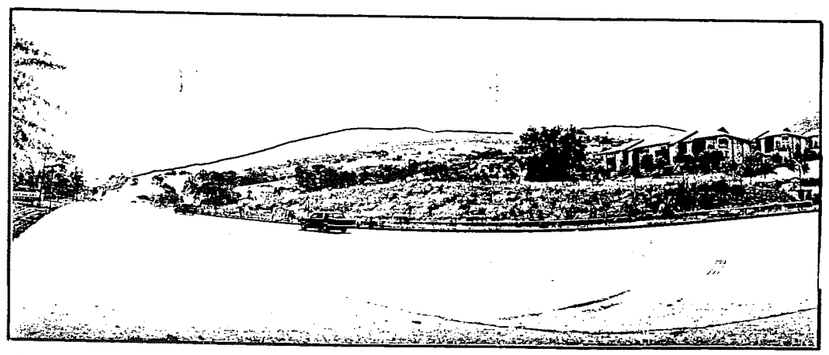

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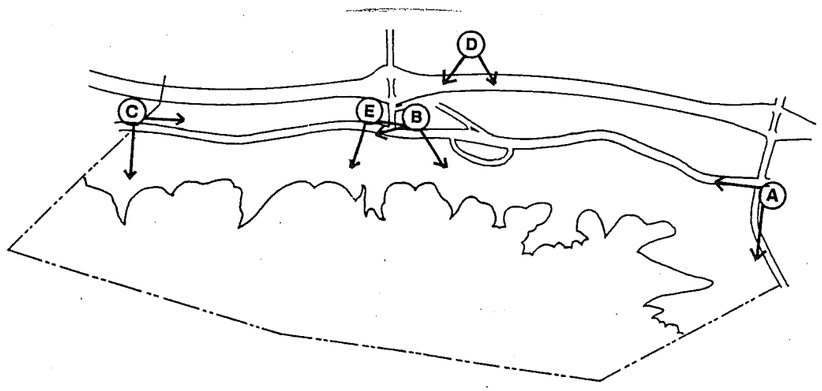


EXISTING VIEWSHED
LADYFACE MOUNTAIN
SPECIFIC PLAN EIR

CITY OF AGOURA HILLS

EXHIBIT 4-4

d. Residual Impacts

No unavoidable significant adverse impacts are anticipated if the proposed mitigation measures are implemented.

4.9 Noise

a. Existing Conditions

Several rating scales have been developed for measurement of community noise. These rating scales consider the following factors:

- The parameters of noise that have been shown to contribute to the effects of noise on people.
- The variety of noises found in the environment.
- Variations in noise levels that occur as a person moves through the environment.
- Variations associated with the time of day.

The predominant rating scales for land use compatibility assessment are the Noise Equivalent Level (Leq) and the Community Noise Equivalent Level (CNEL). Both scales are based on the a-weighted decibel (dB(A)). A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear.

CNEL is similar to LEQ, but it is considers noises over a 24-hour period and applies a weighting factor which places greater significance on noise events occurring during the evening and night hours when sleep disturbance is a concern. The evening time period (7:00 PM to 10:00 PM) "penalizes," or upwardly adjusts, noises by 5 decibels (dB), while nighttime (10:00 PM to 7:00 AM) noises are penalized by 10 dB.

In an attempt to protect residential areas from excessive noise, the State of California has established an exterior noise level of 65 dB and an interior noise level of 45 dB on the CNEL scale as the levels above which all future residences must be provided with sound insulation. The U.S. Department of Housing and Urban Development uses somewhat

different measures of noise level, but in general considers this same level normally unacceptable for residential use and will not fund housing projects or individual home loans in noise impact areas.

The point at which noise becomes the most important environmental factor in people's assessments of the quality of their neighborhoods is generally considered to be 65 decibels. Noise at that level, therefore, constitutes a significant adverse impact on perceived neighborhood quality and property values.

The City of Agoura Hills has adopted the following standard for noise levels for various land uses:

Land Use	Desirable Max. dB CNEL	Allowable Max.* dB CNEL
Residential (Low Density)	55	65
Residential (Medium Density)	60	65
Residential (High Density)	65	70
Residential (Interior)	45	45
Schools	60	70
Commercial/Office	65	75
Industrial	70	75

Source: Agoura Hills General Plan

*Sound insulation may be required at maximum acceptable levels.

Residential uses, schools, and churches are the most common community noise-sensitive uses. The proposed Specific Plan specifies the development of residential, commercial, and office uses.

EXISTING NOISE LEVELS

Existing noise sources in the vicinity of Ladyface Mountain are described in the following paragraphs.

Transportation Noise. The largest contributor to existing noise levels in the area is motor vehicles. The General Plan requires sound insulation for residences within 50 feet of Agoura Road and Kanan Road. US 101 is a major thoroughfare in the Agoura Hills area, passing within 600 to 800 feet north of the site, and the northern edge of the site falls within the freeway's 65 dB noise contour.

Aircraft Noise. The City is exposed to occasional aircraft overflights from airports operating in the Southern California region, but it is not exposed to regular approaches and departures in the vicinity of any airport.

Mechanical Equipment Noise. Mechanical equipment on buildings includes such items as air conditioners, swimming pool pumps, and building fans, and can be a local noise problem if not properly shielded from adjacent uses. These are typically controlled through noise ordinance limits and building code requirements.

Residential Noise. Typical residential noises include barking dogs, amplified or live music, the use of swimming pools, or other activities. These are typically controlled by noise ordinances and enforced by local law enforcement.

Construction Noise. Because construction is temporary in most locations, and because high noise levels are generally recognized as an unavoidable adverse impact of construction activities, most people do not consider short-term construction noise to be a significant nuisance. However, construction during nighttime hours or without best efforts to minimize noise can cause significant annoyance.

b. Environmental Impact

Approximately 65 acres of the site are being proposed for development in the preferred plan. This area lies along the flatter, northern edge of the site. Proposed development includes residential, office, and commercial land uses. Noise generated from this development will include short-term construction-related noise, and long-term noise associated with the applicable land use. The potential long-term noise impacts may be segregated into two categories: (1) the impact of the proposed project on surrounding land uses, and (2) the compatibility of the project with ultimate noise levels at the site.

TABLE 4-8
TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment	Noise Level in dBA at 50, 100 and 200 Feet: Present 50	100	200	With Feasible Noise Control (2) 50	100	200	Important Noise Sources (3)
Lifting							
Heavy Lift Crane	88	82	76	75	69	63	ECFIT
Mid-Size Crane	83	77	71	75	69	63	ECFIT
Small Telescoping Crane	80	74	68	75	69	63	ECFIT
Excavating							
Backhoe	85	79	73	75	69	63	ECFIH
Truck	91	85	79	75	69	63	ECFIT
Grader	85	79	73	75	69	63	ECFIW
General Construction							
Air Compressor	81	75	69	75	69	63	ECHI
Pump	76	70	64	75	69	63	EC
Small Miscellaneous (1)	86	80	74	80	74	68	PWEC
Pick-Up Truck	75	69	63	75	69	63	ECFIT

(1) Pneumatic tools.

(2) Estimated levels obtainable by selecting quieter procedures or machines and implementing noise control features requiring no major redesign or extreme cost.

(3) In order of importance: T = power transmission system, gearing; C = engine casing; E = engine exhaust; P = pneumatic exhaust; F = cooling fan; W = tool-work interaction; H = hydraulics; I = engine intake.

Source: U.S. Environmental Protection Agency. 1971. Noise from Construction Equipment and Operations, Building Equipment and Home Appliances. Office of Noise Abatement and Control, Washington, D.C.

CONSTRUCTION NOISE

Construction noise represents a short-term impact on ambient noise levels. The noise levels generated by construction vehicles and equipment is significant. Sound levels range from 75 dB(A) at distances of 50 feet for pickup trucks to 85 to 91 dB(A) for excavation equipment. Table 4-8 illustrates typical construction equipment noise levels with and without noise control measures.

Time periods of greatest sensitivity occur in the evening and at night in residential areas (although construction activity is not expected to occur at those times), and during the day in the vicinity of parks and schools. The duration of construction-related noise impacts will depend on the level of development which will occur. High-density residential development will likely require more construction time than low-density development, and, due to the complexity of the structures, multi-story office facilities may require more construction time than residential development (although tilt-up concrete structures can be erected in a very short duration of time).

The closest existing residential land uses are located at the western edge of the site and north of US 101, approximately 1/4 mile from the site. These homes may be exposed to audible noise levels from construction activities. Most construction activities associated with the proposed land uses do not generate consistently high noise levels. However, occasional single-event disturbance from construction activities is a potential impact.

PROJECT GENERATED NOISE

The most significant noise impact in the vicinity of the site will result from increased traffic circulation. Traffic noise resulting from office and commercial development will be due primarily to employee, client, visitor, and delivery vehicles entering and leaving the area. Employees will likely come and go on a regular cycle during the day, and noise impacts will be greatest during those times.

Based upon project-generated traffic volumes obtained from the traffic study prepared for the Specific Plan, the office land use will generate much greater traffic volumes than the residential or commercial classifications. Office uses will generate approximately 16 daily vehicle trips per 1,000 square feet of office space. Currently, 376,600 square feet of office space is proposed in the preferred plan, generating a total of 5,985 vehicle

trips. If office use is developed in the western edge of the site, the existing sensitive residential uses at that location may be impacted by increased traffic noise. Increased traffic-related noise is not expected to seriously impact existing office and commercial uses north of Agoura Road.

The proposed Specific Plan development will result in a total 1,380 PM peak hour trips per day. The majority of these trips will travel east and west on the US 101. Existing peak-hour volumes on the freeway overpass are approximately 1,970 vehicles. Generally, it takes a doubling of traffic volumes to perceptibly increase noise levels. In community noise assessments, changes in noise levels greater than 3 dB(A) are often described as significant, while changes less than 1 dB(A) will not be discernible to local residents. In the range of 1-3 dB(A), residents who are very sensitive to noise may perceive a slight change. The additional traffic resulting from development is not expected to significantly increase noise levels in the project vicinity.

The preferred plan land use scenario proposes development to a depth of 600 to 800 feet south of Agoura Road, including 29 residential units. According to the General Plan, the 65 dB(A) CNEL noise contour of US 101 extends a maximum of approximately 500 to 750 feet from the roadway in the northwestern portion of the site. Without mitigation measures, residential units placed in this area within the 65 dB(A) CNEL contour may experience exterior noise levels exceeding the maximum allowable level of 65 dB(A).

RELATIONSHIP TO GENERAL PLAN

The Noise Element of the General Plan states that the City's objectives are to prevent or eliminate noise problems through proper arrangement of land uses and circulation systems, appropriate noise emission or insulation standards for land uses, and remedial measures to deal with existing noise problems.

Implementation of these objectives must be considered in Specific Plan land use planning and design in order not to exceed the maximum allowable noise levels for the interiors (45 dB(A) CNEL) and exteriors (65 dB(A) CNEL) of residences.

c. Mitigation Measures

The following mitigation measures may be used to minimize potential noise impacts from Specific Plan development.

CONSTRUCTION NOISE

Construction equipment noise comes under the control of the EPA's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations).

Local noise ordinances (Zoning Ordinance 9650.600) provide a means to control potential noise impacts from construction activities and should be enforced by the City. The noise ordinance specifies that during the construction phase of a project, grading and other activities are restricted to daytime hours (i.e., 7:00 AM to 7:00 PM).

In addition, construction/repairwork or the use of any noisy equipment shall not be performed on any Sunday, public holiday, or at any other time between 7:00 PM and 7:00 AM the following day without express written permission from the City Manager.

Construction contractors should ensure that construction vehicles and equipment are equipped and maintained with effective muffler systems.

PROJECT-RELATED NOISE

Mitigation measures shall be designed to satisfy the City's requirement that 65 dB(A) CNEL not be exceeded at the exterior of residences. Potential future noise problems may be prevented by ensuring that residential uses are planned far enough away from major transportation corridors to reduce noise to acceptable or desirable levels for those uses. The distance required varies with the expected volume of traffic.

Where residential dwelling units are to be located within the 65 dB(A) CNEL contours, mitigation measures can include building setbacks, construction of noise barriers, or orientation of the units themselves to act as barriers.

Mitigation through the design and construction of a noise barrier (wall, berm, or combination wall/berm) is the most common way of alleviating traffic noise impacts. The effect of a noise barrier is critically dependent on the geometry between the noise source and the receiver. A noise barrier effect occurs when the "line of sight" between the source and receiver is penetrated by the barrier. The greater the penetration, the greater the noise reduction. Noise barriers or site design using buildings as barriers generally attentuates noise to acceptable levels.

Developers shall ensure that the project is built to the standards of the Uniform Building Code. Siting of traffic access points, loading areas, and parking lots for commercial and industrial development shall be designed to minimize traffic-generated noise. Block walls and perimeter landscaping should also be used to minimize noise levels.

When specific development plans are prepared, project-generated noise levels should be reviewed with regards to design and placement of structures and the impact of project-generated traffic on specific structures to ensure that adequate mitigation has been incorporated into the project. On-site noise monitoring is recommended.

d. Residual Impacts

No unavoidable significant adverse impacts are anticipated if the proposed mitigation measures are implemented.

4.10 Circulation

To determine the impacts of the Specific Plan land use scenario on the circulation system in the project area, a traffic study was prepared by P&D Technologies. This traffic study included trip generation rates and volumes, considering buildout of the surface street arterial system. Willdan Associates subsequently performed an analysis of traffic generated as a result of the land use alternatives contained in the Specific Plan against the buildout of proposed freeway interchanges at Kanan Road and Reyes Adobe Road. The Willdan Associates Report, "Summary of Traffic Operations in Agoura Hills" is included in this EIR as Appendix C.

The study area is bounded by Canwood Street on the north, Agoura Road on the south, Reyes Adobe Road on the west, and Kanan Road on the east. Included in the study area are the following eight key intersections:

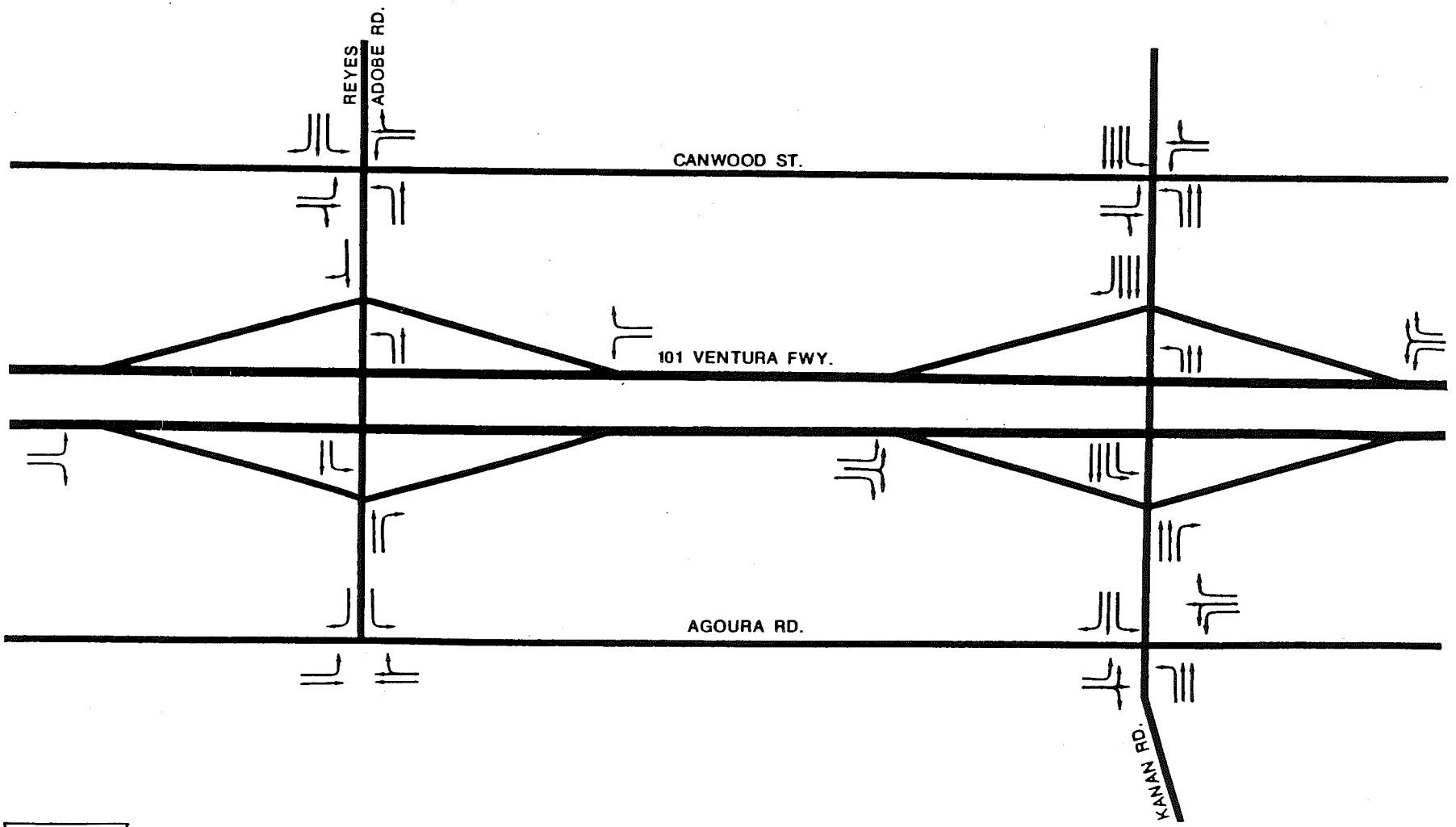
- Reyes Adobe Road at the US 101 westbound ramp
- Reyes Adobe Road at the US 101 eastbound ramp
- Reyes Adobe Road at Canwood Street
- Reyes Adobe Road at Agoura Road
- Kanan Road at the US 101 westbound ramp
- Kanan Road at the US 101 eastbound ramp
- Kanan Road at Canwood Street
- Kanan Road at Agoura Road

a. Existing Conditions

Existing Geometrics. The existing geometrics at the eight key intersections are shown on Exhibit 4-5. Between Canwood Street and Agoura Road, Reyes Adobe Road is a two-lane road with turn pockets at major intersections. Agoura Road is a four-lane road from midway between Kanan Road and Reyes Adobe Road to west of Reyes Adobe Road; it is a two-lane road east of that midpoint. Canwood Street is a two-lane road. Kanan Road is a four-lane road, but its width varies to accommodate turning movements at major intersections.

Existing Peak Hour Traffic Volumes. PM peak hour traffic counts were conducted at the eight key intersections in January and February, 1988. The heaviest two-way peak hour volumes were observed on Kanan Road. North of Canwood Street, approximately 2,700 vehicles were counted. On the US 101 overpass, 1,970 vehicles were counted. Just south of Agoura Road, 890 vehicles were counted during the PM peak hours. About 515 vehicles were counted on Agoura Road just west of Kanan Road. Just east of Reyes Adobe Road there were 390 PM peak hour vehicles. Reyes Adobe Road currently carries approximately 1,210 PM peak hour vehicles on the US 101 overpass.

Existing Traffic Operations. Seven traffic signals are located in the study area, including at all four intersections along Kanan Road and three intersections along Reyes Adobe Road. The signals at the two intersections of Reyes Adobe Road and the US 101 ramps were recently installed and were not included as part of the circulation study. PM peak



ARROWS SHOW NUMBER OF LANES
AND DIRECTION OF TRAFFIC MOVEMENT

CIRCULATION–EXISTING TURNING MOVEMENTS

LADYFACE MOUNTAIN

SPECIFIC PLAN EIR

CITY OF AGOURA HILLS

EXHIBIT 4-5

hour capacity analyses based on the 1988 traffic counts were conducted for the other five signalized intersections. Level of service (LOS) "A" was obtained at the two intersections on Agoura Road and at the Kanan Road/US 101 eastbound off-ramp. The Kanan Road/Canwood Street intersection operates at LOS "C" with a volume/capacity ratio (V/C) of 0.78. The intersection at Kanan Road and the US 101 westbound off-ramp operates at LOS "D" with a V/C of 0.81. The intersection at Reyes Adobe Road and the US 101 westbound is the most congested location, operating at LOS "F".

Existing traffic operations at the five signalized intersections are summarized in Table 4-9.

b. Environmental Impacts

Trip Generation and Distribution. Approximately 12,165 daily vehicle trips will be generated by the preferred plan land use plan, including 1,380 trips occurring during the PM peak hour. This traffic would load onto the local street network according to the projected trip distribution and the locations of developed parcels. Development in the study area would be located along Agoura Road from west of Reyes Adobe Road to Kanan Road, and along the west side of Kanan Road just south of Agoura Road. According to this layout, traffic would load onto Agoura Road and Kanan Road adjacent to the developed parcels. It should be noted that the effects of passerby and internal trip generation were included in the analysis; thus, retail trip generation was reduced to account for passerby trips.

Table 4-10 summarizes the land uses and associated trip generation for the Specific Plan land use plan. Table 4-11 shows the formula used to calculate trip generation. The trip generation assumed for the analysis is as follows: 37 percent east via US 101, 35 percent west via US 101, 5 percent east via Agoura Road, 6 percent west via Agoura Road, 10 percent north via Kanan Road, 3 percent south via Kanan Road, and 4 percent north via Reyes Adobe Road. The trip distribution is the same as that used in the "Hidden Trails Business Campus Traffic Impact Study", performed by Thomas S. Montgomery and Associates for the City of Agoura Hills in May 1988. Traffic was assumed to take the shortest route in the assignment of trips to roadways. The same distribution was used