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ENVIRONMENTAL IMPACT REPORT

for

CARMEL VALLEY RANCH SPECIFIC PLAN

Prepared by: County of Monterey
Department of Planning
Environmental Section

PC-2134
EIR #75-101

Applicant: Unique Golf Concepts, Inc.
2252 Fremont Avenue
Monterey, California 93940

June 1975

SUMMARY

THE PROJECT PROPOSAL IS A SPECIFIC PLAN FOR THE DEVELOPMENT OF A RESIDENTIAL AND RESORT LODGE COMPLEX OF 1,055 UNITS ON 1,700 ACRES, PROVIDING GOLF, TENNIS AND OPEN SPACE RECREATION. THE PROJECT IS LOCATED IN MID-CARMEL VALLEY. THE FOLLOWING IS A SUMMARY OF THE ADVERSE ENVIRONMENTAL EFFECTS EXPECTED TO RESULT FROM IMPLEMENTATION OF THE PROPOSED SPECIFIC PLAN:

1. LOSS OF WILDLIFE HABITAT (PAGE 45)
2. LOSS OF GRAZING LAND (PAGE 46)
3. INCREASED LOAD ON SCHOOLS (PAGE 59)
4. INCREASE IN TRAFFIC (PAGE 52)
5. INCREASE IN NOISE (PAGE 50)
6. INCREASED RUNOFF FROM SITE (PAGE 42)
7. VISUAL IMPACT ON AREA FROM THE LOSS OF A NATURAL ENVIRONMENT (PAGE 50)
8. INCREASED COMMITMENT OF ENERGY AND RESOURCES (PAGE 56)
9. INCREASED EROSION POTENTIAL (PAGE 36)
10. LOCATION OF RESIDENCES WITHIN THE 100-YEAR FLOOD PLAIN OF THE CARMEL RIVER (PAGE 42)
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14. REMOVAL OF NATURAL VEGETATION (PAGE 46)
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16. SHORT-TERM INCREASE IN AIR POLLUTION (PAGE 55)

MITIGATING FACTORS:

SEE SECTION 3.2 OF REPORT (PAGE 64)

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1. INTRODUCTION

1.1 Purpose and Authorization

On January 9, 1975 the applicant, Unique Golf Concepts, Inc., waived environmental determination by the Planning Commission on a Specific Plan for development of Carmel Valley Ranch and voluntarily submitted information for preparation of the draft Environmental Impact Report. Much of the basic data contained in this report was submitted on behalf of the applicant by Leighton and Associates. The data were analyzed by the staff and the environmental impact of the proposed Specific Plan was determined by independent staff analysis.

This document is a statement on environmental considerations for a Specific Plan proposal associated with an application for zoning reclassification of Carmel Valley Ranch, prepared by the Environmental Section of the Monterey County Planning Department. The degree of specificity in this report is relative to the nature of this development plan. Additional information may be required during the subsequent phased implementation of the Specific Plan.

An Environmental Impact Report is an informational document which will inform the public decision-makers and the general public of the environmental effects of projects they propose to carry out or approve. The Environmental Impact Report process is intended to enable the County of Monterey to evaluate a project, to determine whether it may have a significant effect on the environment, examine and institute methods of reducing adverse impacts, and consider alternatives to the project as proposed. An Environmental Impact Report may not be used as an instrument to rationalize approval of a project, nor do indications of adverse impact, as enunciated in an Environmental Impact Report, require that a project be disapproved.

1.2 Project Description

1.2.1 Location

Carmel Valley Ranch, formerly known as the Holt Ranch, is proposed for a residential, resort lodge and recreational project. The 1700 acre property is located

in Carmel Valley, 7.6 miles southeast of Carmel-by-the-Sea and 5.5 miles northwest of the unincorporated community of Carmel Valley Village.

The property lies south of Carmel Valley Road, with access to the site provided by Robinson Canyon Road. The Carmel River generally forms the northern boundary of the property, while the summit of Snivley's Ridge, just below Pinyon Peak, marks the southern boundary of the property. (See Figures 1.1, 1.2, and 1.3 for location maps and the Specific Plan for development)

1.2.2 Objective

The objective of the project is to develop a residential and resort lodge complex focused on golf, tennis, and open-space recreation.

1.3 General Description

The Carmel Valley Ranch Specific Plan envisions land uses divided into the following areas:

Residential	403.5 ac.	23.7%
Resort Lodge	47.0 ac.	2.8%
Golf Course and Clubhouse	149.5 ac.	8.8%
Stables	10.0 ac.	0.6%
Tennis Facility and Clubhouse	10.0 ac.	0.6%
Open Space	<u>1080.0 ac.</u>	<u>63.5%</u>
TOTAL AREA	1700.0 ac.	100.0%

The Specific Plan will be implemented in five phases. Each phase represents approximately 3 years, with total occupancy expected by 1990. The plan envisions 1055 units on 1700 acres, which computes to a gross density of 1 unit/1.6 acres. The water and sewer facilities, open space, recreation, private roads and security system will be managed by a Community Services Organization. (See Figure 1.4 for phased development program and Figure 1.5 for open space, recreation and conser-

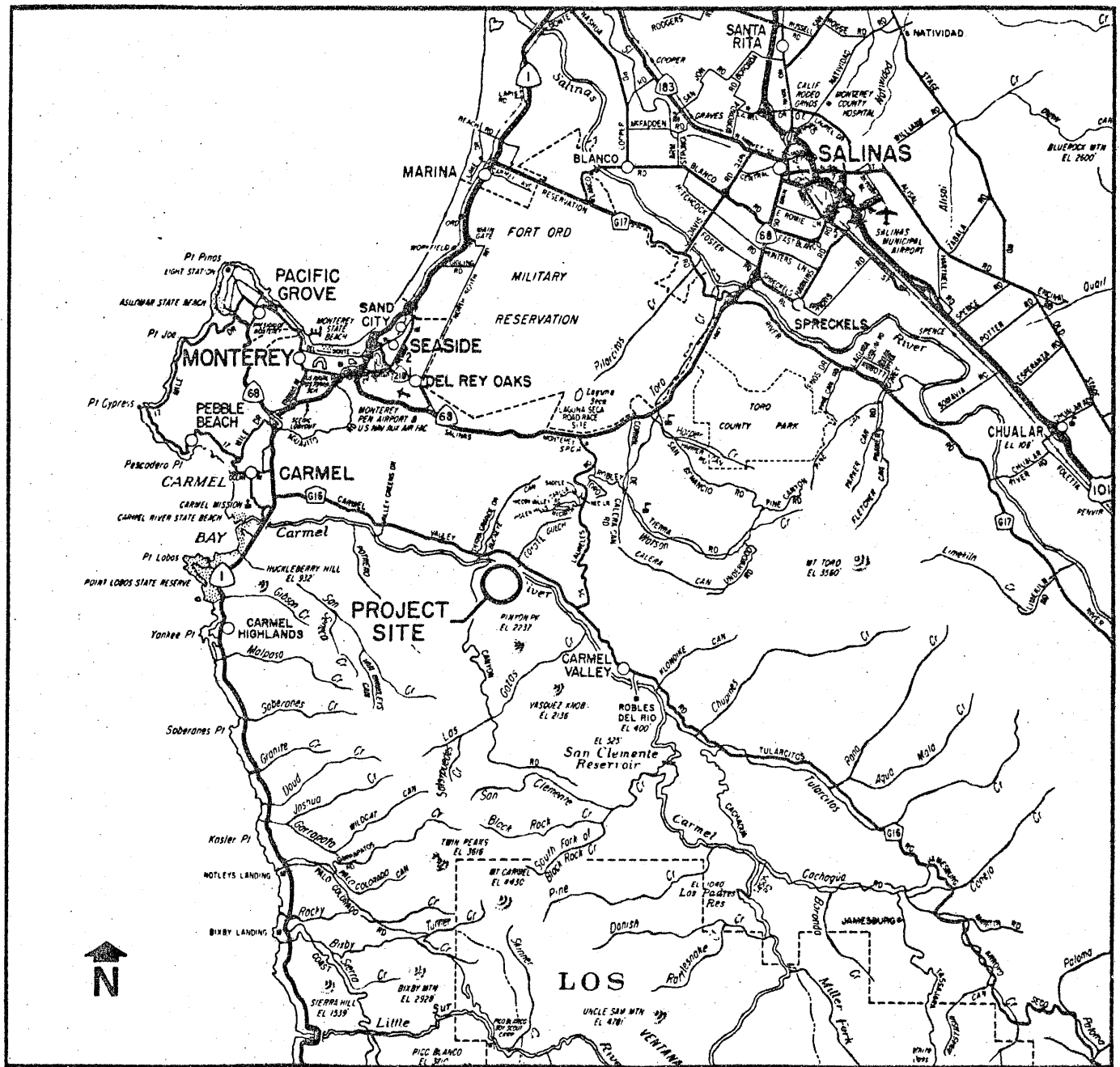


FIGURE I.1

**CARMEL VALLEY RANCH
REGIONAL LOCATION**

2 MILES TO CARMEL

CARMEL VALLEY GOLF & COUNTRY CLUB

CARMEL VALLEY RD.



CARMEL VALLEY RANCH VICINITY

FIGURE 1.2

MID-VALLEY SHOPPING CENTER

RANCHO TIERRA GRANDE

CARMEL VALLEY RD.

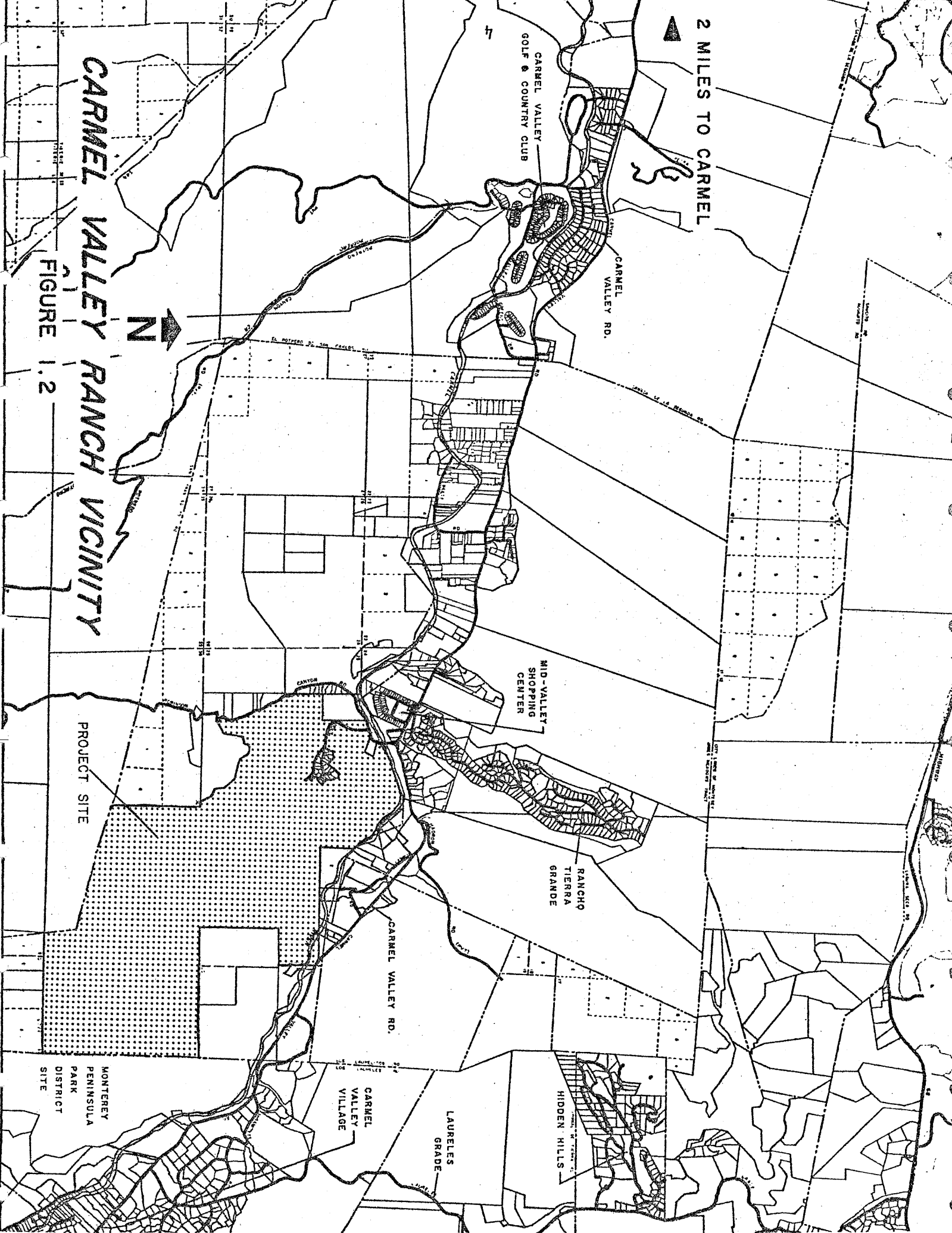
HIDDEN HILLS

LAURELES GRADE

CARMEL VALLEY VILLAGE

PROJECT SITE

MONTEREY PENINSULA PARK DISTRICT SITE



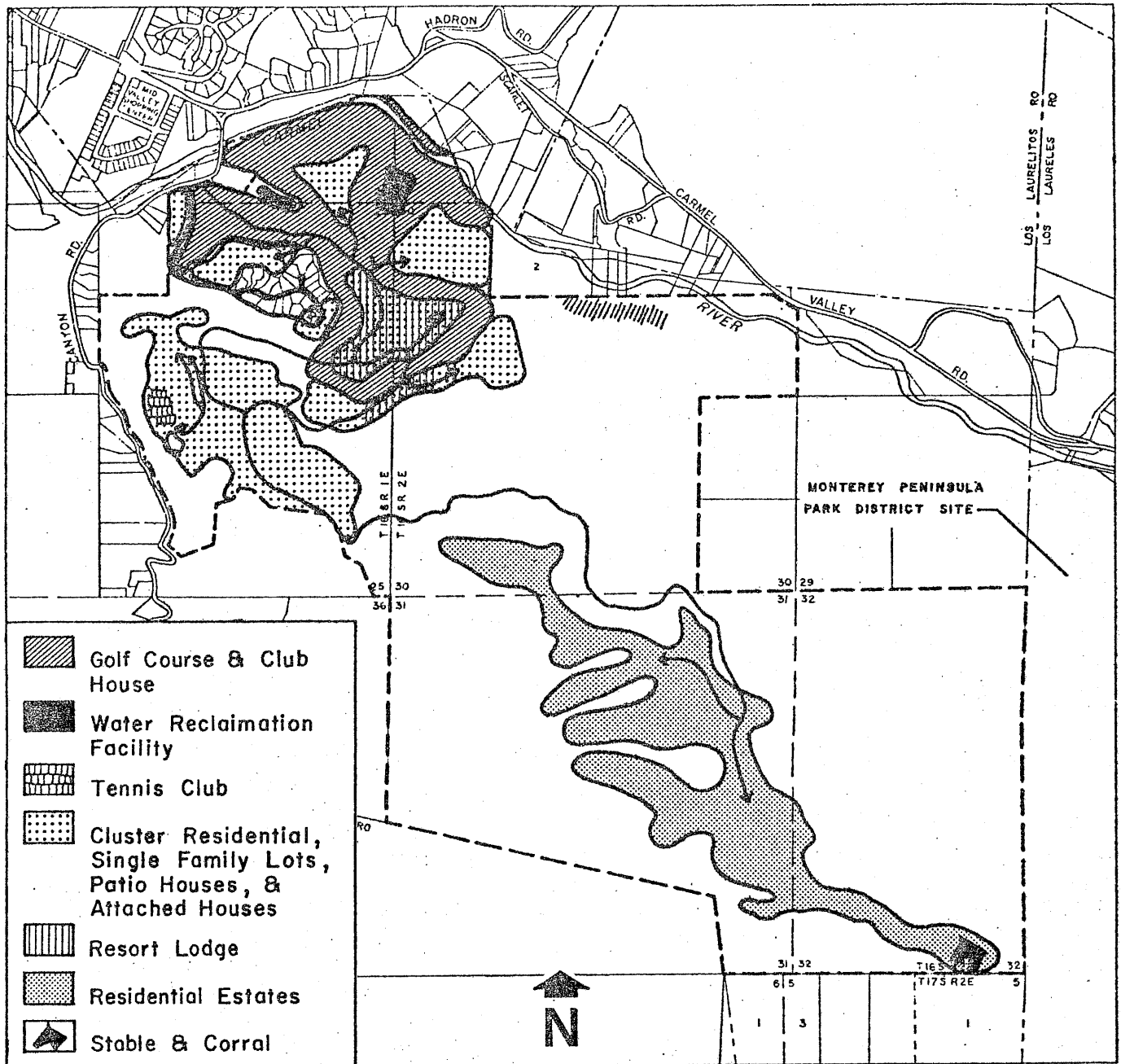


FIGURE 1.3

*THE SPECIFIC PLAN FOR
DEVELOPMENT OF
CARMEL VALLEY RANCH*

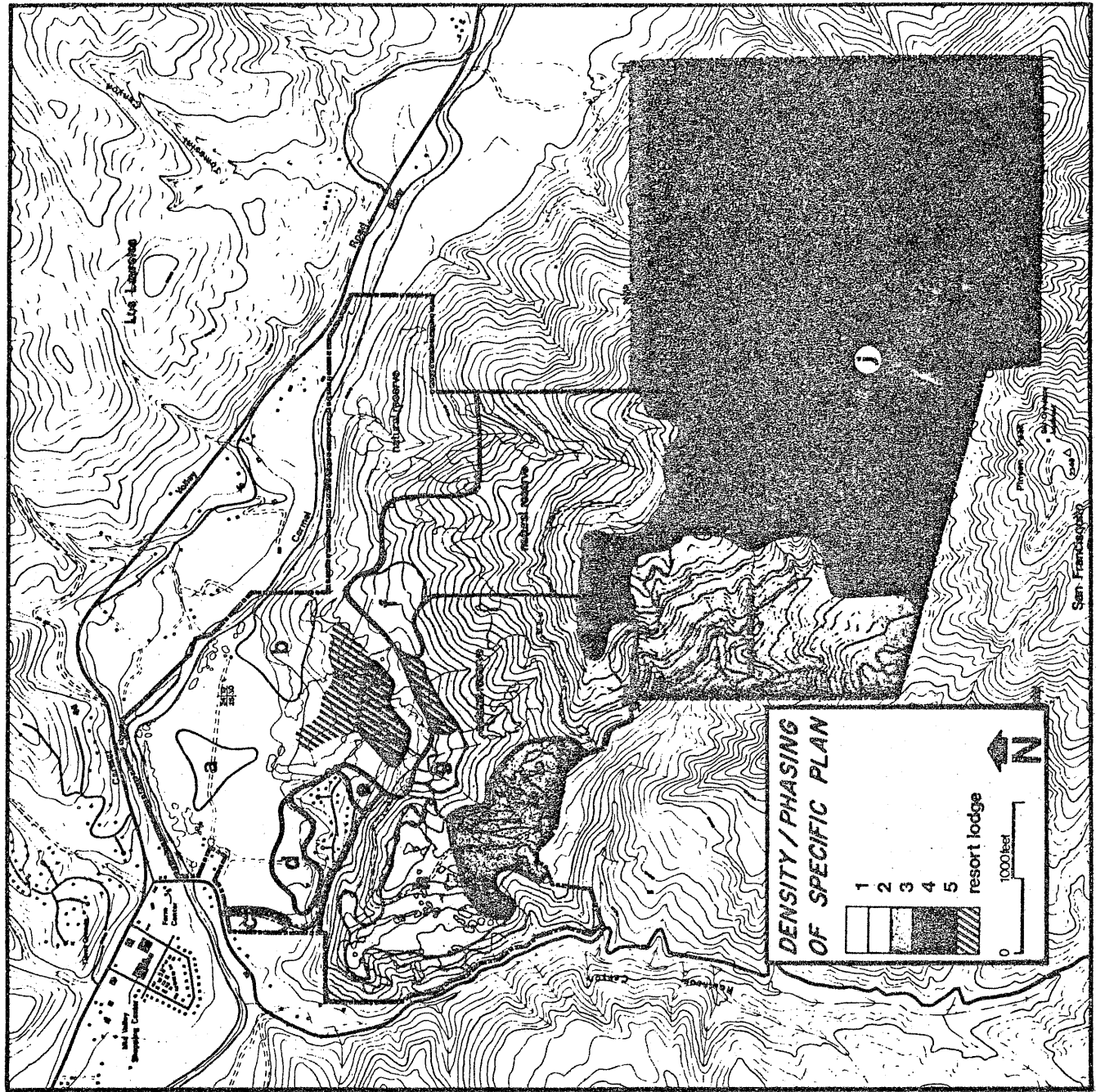


FIGURE 1.4

	du.	ac.	density
1 residential			
a.	100	16.5	
b.	130	26.0	
resort lodge	100	31.5	
golf club		149.5	
natural reserve		126.5	
sub-total	330	350.0	1 du./1.1 ac.

	du.	ac.	density
2 residential			
c.	11	3.0	
d.	90	17.5	
e.	20	8.0	
f.	52	16.0	
natural reserve		155.5	
sub-total	173	200.0	1 du./1.2 ac.

	du.	ac.	density
3 residential			
g.	52	16.0	
h.	135	40.0	
resort lodge		15.5	
tennis club		10.0	
natural reserve		218.5	
sub-total	187	300.0	1 du./1.1 ac.

	du.	ac.	density
4 residential			
i.	165	50	
natural reserve		150	
sub-total	165	200	1 du./1.2 ac.

	du.	ac.	density
5 residential			
j.	100	210.5	
natural reserve		439.5	
sub-total	100	650.0	1 du./6.5 ac.
total	1055	1700.0	1 du./1.6 ac.

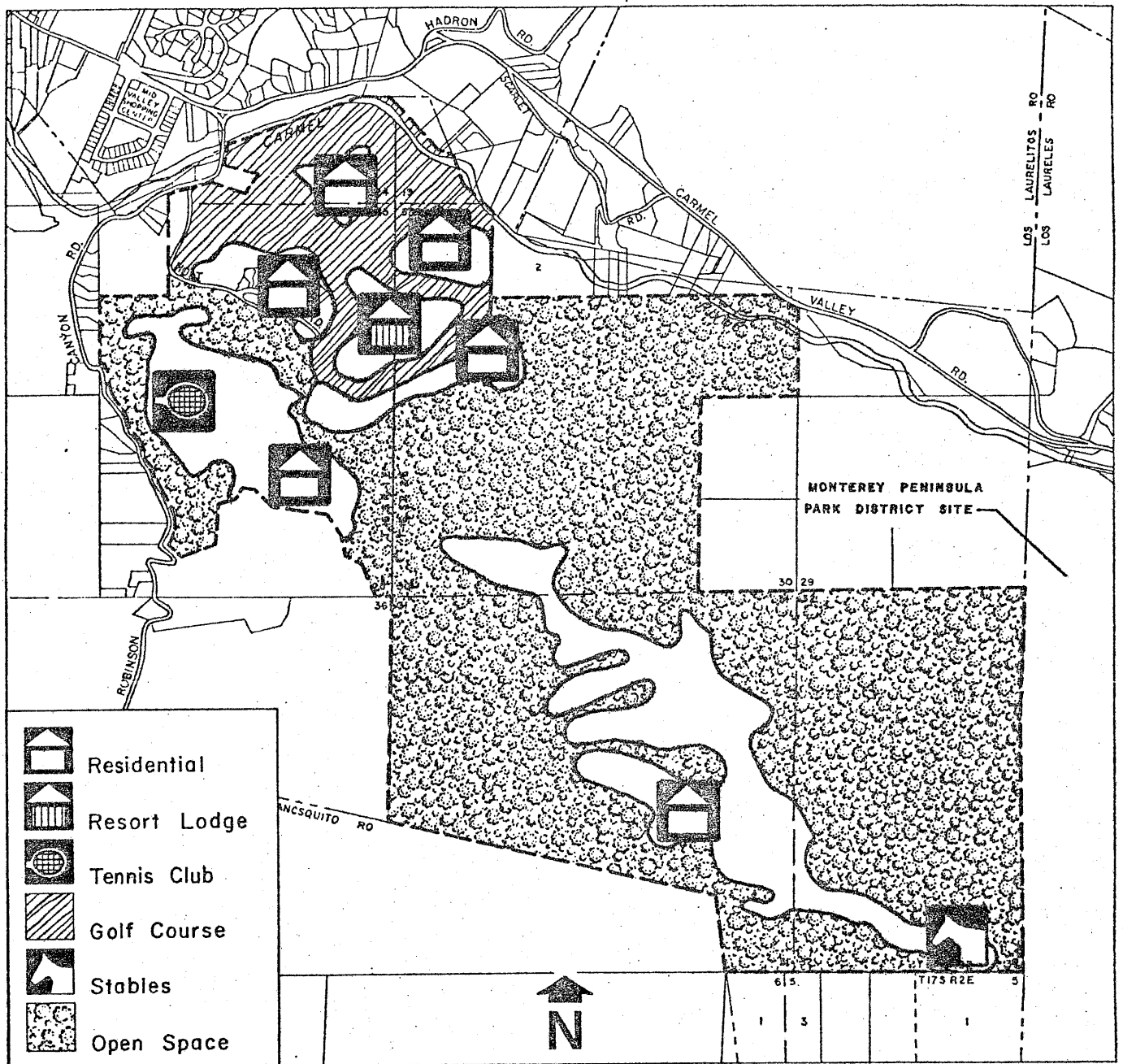


FIGURE I.5

OPEN SPACE, CONSERVATION AND RECREATION ASPECTS OF THE SPECIFIC PLAN

vation aspects of the Specific Plan)

The following represents a brief description of various land uses included in the Specific Plan:

1.3.1 Residential Units

There are 855 residential units proposed including 290 townhouses, 365 patio homes and 200 single-family home sites. With the exception of 100 single-family estate sites on Snivley's Ridge all three types of units will be integrated in residential clusters and located around the golf course and tennis club area.

Townhouse units will range in size from 1000 to 2000 square feet. Patio homes will range in size from 1400 to 2200 square feet. The 100 single-family lots interspersed among the patio homes and townhouse clusters will range in building site area from 4800 square feet to 12,000 square feet, with a minimum structure size of 1800 square feet. On Snivley's Ridge the 100 single-family estate building sites will be a minimum of 1 acre, with a minimum structure size also of 1800 square feet.

All residential units will have a maximum height of 35 feet from ground to eave. Site design for single-family sites will be controlled by architectural covenants, with all design to be approved by an architectural control committee. On Snivley's Ridge each building site will be individually selected, limiting construction to within a designated building envelope. Site plan and building design will also be subject to architectural control committee approval.

1.3.2 Resort Lodge

A 200-unit resort lodge is proposed for a tree-covered knoll on the moderate slopes adjacent to the valley floor. The resort lodge will consist of a main lodge building with core facilities (including a restaurant/lounge and commercial facilities) and satellite units clustered in a campus concept. Parking will be centralized; internal circulation will emphasize golf cart and pedestrian linkages.

1.3.3 Golf Course and Clubhouse

An 18-hole championship golf course and clubhouse are proposed to be developed

on 149.5 acres. The golf course and clubhouse will be operated as a private facility with 300 memberships offered and playing privileges for guests. The course will be routed between building clusters on the valley floor, with several holes playing through the bordering hillside areas. A cart bridge will cross the Carmel River to provide access to two holes located on the north side of the river.

The golf clubhouse will be centrally located on the golf course. The clubhouse facility will be approximately 10,000 square feet plus golf cart storage, and will provide parking for approximately 120 cars.

1.3.4 Tennis Club

Ten acres of the middle ridge area will be devoted to tennis facilities comprising 12 outdoor courts, a clubhouse, a swimming pool and parking for approximately 50 vehicles. The tennis club will be operated as a private facility with resident and non-resident memberships.

1.3.5 Stables

Approximately 10 acres will be set aside for the development of a corral and shelter building where resident homeowners may board horses. This facility will be located on Snivley's Ridge and will be remotely situated from any residential units.

1.3.6 Open Space, Nature and Scenic Reserve Areas

Open Space will encompass 1080 acres of the property. Three locations within this area have been designated for special consideration as natural and scenic reserves; the palisades area, Snivley's Gulch area and the northeastern slopes of Snivley's Ridge. Natural and scenic reserve areas will be maintained to preserve vegetation, wildlife and scenic qualities. Open Space areas are proposed to be placed under a scenic easement and conservation management program and will be maintained in their present state with the exception of constructing or upgrading fire access or emergency vehicle roads and bridle trails.

1.4 Zoning and Master Plan

1.4.1 Zoning

The property is currently zoned "K-G-J-B-4," Agricultural-Residential, Rural-

Professional, Trailer Exclusion and one-acre minimum building site area. The Agricultural-Residential district ("K") has permitted uses such as one-family dwellings and all agricultural uses. Some of the uses permitted subject to first securing a Use Permit are country clubs, golf courses, and riding stables. The Rural-Professional district ("G") requires a Use Permit for resort hotels and clubs, with a minimum building site area of 10 acres, and executive offices of commercial or industrial firms, with a minimum building site area of 5 acres. "G" districts are subject to "Regulations for Design Control" or "D" districts. A "J" district excludes trailer or mobile homes used as living quarters. "B-4" districts require a minimum building site area of 1 acre. The applicant has applied for zoning reclassification associated with this Specific Plan.

The Holt Subdivision, located in the middle of the property, is presently zoned "R-1-B-3." This classification is for single-family residences with a minimum building site area of 20,000 square feet. The area surrounding the property has the same zoning classification as the site except for an area on the eastern border zoned "K-G-J-B-5 5 Acre Minimum Building Site Area." (See Figure 1.6 for Zoning Map)

1.4.2 Master Plan

Historically, the area of this Specific Plan was originally covered by the Carmel Valley Master Plan, which was adopted in January, 1961. In July, 1966 the Monterey Peninsula Area Plan was adopted, superseding the Carmel Valley Master Plan for the Carmel Valley. Concurrently, a plan was adopted for the Carmel Valley Ranch itself. The Carmel Valley Ranch Plan is part of the Del Monte Plan and supersedes the Monterey Peninsula Area Plan for this property.

The proposed Carmel Valley Ranch Specific Plan, upon which this document reports, is a refinement of the adopted Carmel Valley Ranch Plan prepared by Del Monte Properties Company. The Carmel Valley Ranch Plan designates Open Space, Residential and Resort-Residential-Residential Complex, with a minimum of 500 units and a maximum of 1,500 units.¹ The Specific Plan proposes 1,055 units in an arrangement similar to the existing Carmel Valley Ranch Plan. Therefore, there is no apparent inconsistency

with the existing plan, despite the fact that Hugh Bein of Del Monte Properties Company, in a letter dated June 22, 1966, states: "In the upper brown area (Snivley's Ridge) consisting of 250 acres, which probably will not be developed for many years in the future, we presently visualize 10 to 25 acre estate type parcels."² Although the use is consistent, the Specific Plan designation for Snivley's Ridge envisions 100 residential units on 210.5 acres. As further clarification, the text for the Carmel Valley Ranch Plan states: (on Snivley's Ridge) "Guest cottages and privately owned weekend homes would be sited around the recreational areas in suitable locations."³ (See Figure 1.7 for the existing Carmel Valley Ranch Plan)

It should also be noted that the property falls within the boundaries proposed by the Preliminary State Coastal Plan, however, the site is not within the permit zone.

1.5 Economic Factors

The following chart gives a description and market valuation of the various aspects of the Carmel Valley Ranch Specific Plan:

Project Description and Market Valuation

	<u>Number of Units</u>	<u>Average Market Value Per Unit</u>	<u>Total Market Value</u>	<u>Assessed Value at 25% of Market Value</u>
Townhomes	290	\$ 75,000	\$21,750,000	\$ 5,437,500
Patio Homes	365	80,000	29,200,000	7,300,000
Single Family	<u>200</u>	<u>85,000</u>	<u>17,000,000</u>	<u>4,250,000</u>
Total Residential	855	79,500	67,950,000	16,987,500
Resort Lodge	20 ac.	4,000,000	4,000,000	1,000,000
Tennis Club	5 ac.	300,000	300,000	75,000
Golf Club	140 ac.	3,000/ac.	420,000	105,000
Club House	5 ac.	1,250,000	1,250,000	312,500
Vacant Land	<u>1,200 ac.</u>	<u>1,300/ac.</u>	<u>1,560,000</u>	<u>390,000</u>
Total	1,700 ac.	\$ 44,400/ac.	\$75,480,000	\$18,870,000

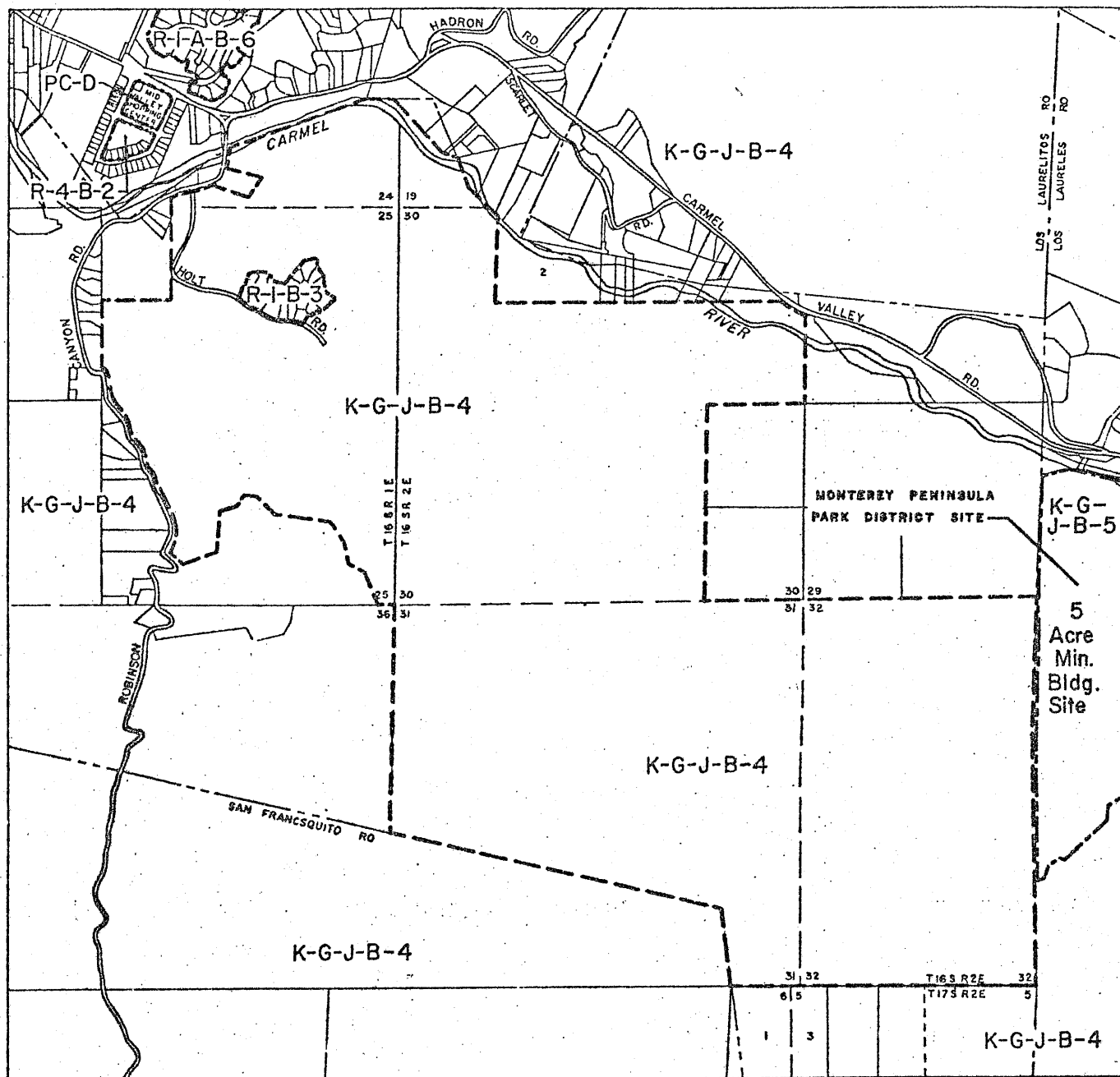


FIGURE 1.6

ZONING

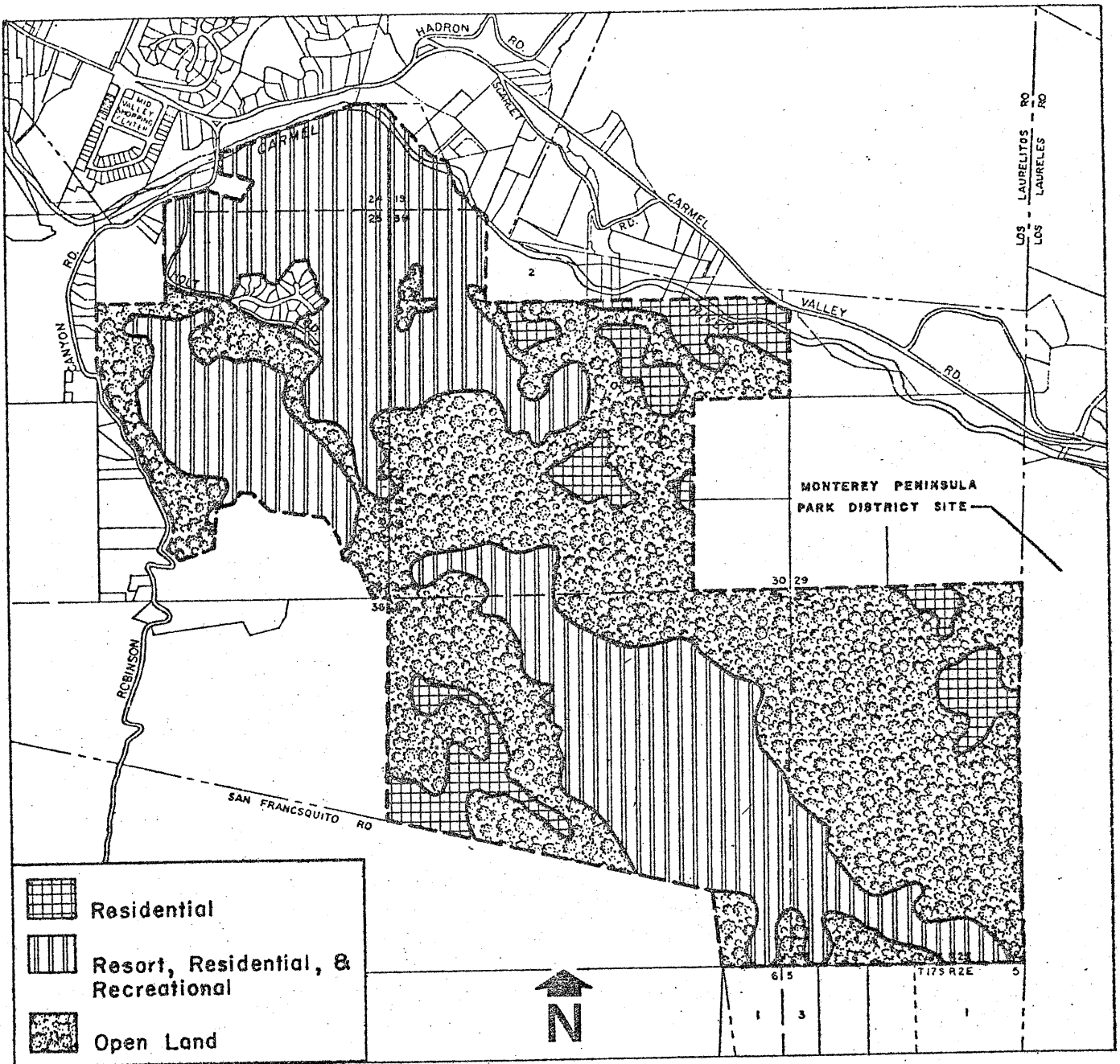


FIGURE 1.7

*THE ADOPTED DEL MONTE
CARMEL VALLEY RANCH PLAN*

Residential construction will begin in 1976 and will continue through 1989 at a rate of about 60 units per year during the first 13 years of construction; during the 14th year (1989) 75 units will be constructed. Occupancy of units is expected to occur in the year following construction. The phasing of residential construction will be as follows:

<u>Type of Unit</u>	<u>Number of Units</u>	<u>Annual Construction During First 13 Years 1976-1988</u>	<u>Construction During 14th Year - 1989</u>
Townhouse	290	20	30
Patio Home	365	25	40
Single Family	<u>200</u>	<u>15</u>	<u>5</u>
Total	855	60	75

In 1976 one hundred units of the resort lodge and the golf course and clubhouse will be constructed. One hundred additional units of the resort lodge will be constructed in 1982, and the tennis club will be constructed in 1984.

Employment opportunities generated by development of the project will be distributed as temporary jobs during construction and permanent jobs following construction. The following chart illustrates this job breakdown:

PERMANENT JOBS

<u>Number</u>	<u>Area</u>	<u>Time Period</u>
15	Golf Course	1977 - 1990 +
3	Security Office	1977 - 1990 +
80	Resort Lodge	1977 - 1982
30	Resort Lodge	1983 +
<u>5</u>	Tennis Club	1984 +

133 Total Permanent Jobs

CONSTRUCTION JOBS

<u>Number</u>	<u>Area</u>	<u>Time Period</u>
100	Residential	1976 - 1989
60	Resort Lodge, Golf Course and Clubhouse	1976
30	Resort Lodge	1982
10	Tennis Club	1984

160 Total Construction Jobs

The 1974-1975 total tax rate is \$7.243 per hundred dollars of assessed value. This is distributed to various taxing districts (See Figure 1.8). The Carmel Valley Ranch is in an area that is currently being reassessed. It is estimated that the new assessed value will be \$552,500, which is an increase over the previous assessed value of \$110,620.⁴ (See Figure 1.9 for the estimated future tax revenues, assuming the 1974-1975 tax rate and also assuming each homeowner utilizes his homeowner's exemption of \$1,750 of assessed value)

Property taxes from this development will pay most of the expenses of educating the children generated by the residents and employees of the ranch. As the average housing value on the ranch (\$80,000) is higher than the average for Carmel Valley (\$60,000), a housing unit on Carmel Valley Ranch will pay about 33% more in school property taxes than the average Carmel Valley unit. (See Figure 1.10 for a summary of the cost/revenue impact of the Carmel Valley Ranch on the Carmel Unified School District)

Monterey County's 1974-1975 budget for county-wide services is \$67,625,308; or \$751 per residential unit. The amount of this budget raised through property taxes is \$20,319,578; or \$266 on the average per residential unit. A housing unit on the Carmel Valley Ranch will pay \$444 to the County for county-wide services, compared to the average structural unit in Monterey County which pays \$140 to the County, and the average unit for Carmel Valley which pays \$322 to the County. (See Figure 1.11 for a summary of this information)

The development will generate other revenue in addition to property tax revenue. Annually, upon completion of the lodge, income will be generated for the County by a 5% surcharge on transient room rates. Income will also come from the 6% sales tax on retail expenditures by guests at the hotel, 1.25% of which is refunded to Monterey County. Revenue to the County for licenses and building permits needed for unit construction is estimated at \$100 per unit. (See Figure 1.12)

1.6 Population

The residential population of Carmel Valley Ranch will be approximately 2,200, and the average number of guests at the resort lodge, assuming 70% occupancy, will be approximately 250. When recreational facilities are in full operation there will be approximately 133 permanent employees.

The following chart illustrates the population breakdown by individual unit.⁵

Type of Unit	Number of Units	Family Size	School Children Per Unit	Total School Child Yield	Total Population
Townhouses	290	2.3	.3	87	667
Patio Homes	365	2.5	.4	146	913
Single-Family	200	3.1	.9	180	620
TOTAL	855	2.6	.5	413*	2200*

1.7 Traffic and Circulation System

The proposed Specific Plan will have a private internal road system with controlled access. Pedestrian circulation between various development areas will be encouraged by the construction of a footpath system and the use of mini-shuttle vehicles such as golf carts. A network of footpaths and bridle trails will also be developed throughout the open space area of the project. (See Figure 1.13 for internal circulation system - it should be noted that a "Specific Plan" must in-

* The discussion of population and related impacts is based on the maximum potential number of people from this project. It can be assumed, however, that some residential units will be used as second homes (15% is an estimated proportion)⁶

TAX RATE SCHEDULE

Monterey County	2.432
County Library	.162
Monterey County Education	.056
School Service Fund Special Ed.	.090
Equalization Aid Offset Tax	.131
Carmel Unified School District	2.471
Carmelo School District Bond	.014
Carmel Unified Sch. Dist. Bond 4	.044
Carmel Unified Sch. Dist. Bond 5	.107
Monterey Peninsula Jr. College	.478
Monterey Peninsula Jr. College Bond	.046
Monterey Peninsula Jr. College Bond 2	.023
Monterey Peninsula Jr. College Bond 3	.058
Monterey Peninsula Jr. College Bond 4	.021
County Service Area No. 59	1.000
MCFC X WC District	.010
Monterey Peninsula Regional Park	.100
TOTAL RATE FOR NET VALUES	7.243

FIGURE 1.8

TAX REVENUE GENERATED

	Assessed Value (AV)	AV minus Homeowners' Exemptions	Total Property Tax Levy	Monterey County	Carmel Unified Schools	All other Districts
			<u>.07243</u>	<u>.02432</u>	<u>.02636</u>	<u>.01275</u>
1975	\$552,500	552,500	40,000	13,400	14,600	12,000
1976	552,500	552,500	40,000	13,400	14,600	12,000
1977	2,772,600	2,667,600	193,200	64,900	70,300	58,000
1978	3,950,000	3,740,000	270,900	91,000	98,600	81,300
1979	5,127,600	4,812,600	348,600	117,000	126,900	104,700
1980	6,305,000	5,885,000	426,300	143,100	155,100	128,000
1981	7,482,600	6,957,000	503,900	169,200	183,400	151,300
1982	8,660,000	8,030,000	581,600	195,300	211,700	174,600
1983	10,212,600	9,477,600	686,500	230,500	249,800	206,200
1984	11,465,000	10,625,000	769,600	258,400	280,100	231,100
1985	12,642,600	11,697,600	847,300	285,500	308,400	254,400
1986	13,820,000	12,770,000	924,900	310,600	336,600	277,700
1987	15,013,800	13,858,800	1,003,800	337,100	365,300	301,400
1988	16,207,500	14,947,500	1,082,600	363,500	394,000	325,100
1989	17,401,300	16,036,300	1,161,500	390,000	422,700	348,800
1990 & after	18,870,000	17,373,750	1,258,400	422,500	458,000	377,900

FIGURE 1.9

SCHOOL DISTRICT REVENUE AND COST ANALYSIS

	Residential Property (855 Units)			Non-Residential Property (resort lodge, golf & tennis facilities, and vacant land)			
	Revenue to District from Property Taxes	School Children	Education Cost @\$1,200 Per Student	Revenue to District from Property Taxes	Employees	Employees School Children	Educational Cost @\$1,200 Per Student
1975	\$3,500	0	0	11,100	0	0	0
1976	3,500	0	0	11,100	0	0	0
1977	31,900	29	\$34,000	37,800	98	51	61,200
1978	60,400	58	69,000	37,800	98	51	61,200
1979	88,800	87	104,400	37,800	98	51	61,200
1980	117,300	116	139,200	37,800	98	51	61,200
1981	145,700	145	174,000	37,800	98	51	61,200
1982	174,200	174	208,000	37,800	98	51	61,200
1983	202,600	203	243,600	47,700	128	67	80,400
1984	231,100	232	278,400	49,700	133	70	84,000
1985	259,500	261	313,200	49,700	133	70	84,000
1986	288,000	290	348,000	49,700	133	70	84,000
1987	316,400	319	382,800	49,700	133	70	84,000
1988	344,900	348	417,600	49,700	133	70	84,000
1989	373,300	377	452,400	49,700	133	70	84,000
1990 & after	408,300	413	495,600	49,700	133	70	84,000

Residential property taxes pay for \$408,300 or 82.4% of the \$495,600 in property taxes required to educate the 413 students. The balance of the property tax revenue required comes from the assessed value of commercial properties, utilities, and vacant land. More directly, the assessed value of commercial property has increased because of the increase in capital improvements required for new jobs. The new jobs must be there or there would be little demand for new housing units - families would not come to the area or would move elsewhere to find work.

The construction of the resort lodge and the golf course and tennis facilities will create 133 new jobs. Using Monterey County's constant job-household ratio of 5 to 4, these new jobs imply 106 new households. Presently there are .66 students K-12 per household. Therefore, 106 households indicate 70 students. The property tax needed to educate these students is at \$1,200 per student - \$84,000. Anticipated property taxes for this education are \$49,700 or 59.2% of the needed revenue. The balance comes from residential property, utilities, and vacant land. More directly, the balance comes from the property tax on the employees' homes.

FIGURE 1.10

Property Tax
Revenue and Cost Analysis
for the
County of Monterey

1975	Cost	Average Property Tax Revenue to Monterey County per structural residential unit		
		per ¹ residential unit	Monterey ² County	Carmel Valley Carmel Valley Ranch
Budget of County wide Services	\$67,625,308	\$751	\$140	\$322 \$444
Amount Raised through Property Tax @ \$2.432 per \$100 of Assessed Value	\$20,319,578	\$266	\$140	\$322 \$444
Estimated Average Market Value of Structural Residential Unit			\$30,000	\$60,000 \$80,000

1. 90,000 residential units (includes single family dwellings, duplexes, apartments, condominium units, and mobile homes)
2. The balance of the required property tax revenue comes from commercial property, utilities, and vacant land.

FIGURE I.II

REVENUE TO MONTEREY COUNTY

YEAR	PROPERTY TAX TO COUNTY	COUNTY SUR-CHARGE ON TRANSIENT ROOMS	SALES TAX REVENUE REFUND	COUNTY PERMITS AND LICENSES	TOTAL COUNTY REVENUE
1975	\$ 13,400	0	0	0	\$ 13,400
1976	13,400	0	0	0	19,400
1977	64,900	44,700	5,400	6,000	121,000
1978	91,000	44,700	5,400	6,000	147,100
1979	117,000	44,700	5,400	6,000	173,100
1980	143,100	44,700	5,400	6,000	199,200
1981	169,200	44,700	5,400	6,000	225,300
1982	195,300	44,700	5,400	6,000	251,400
1983	230,500	85,400	10,900	6,000	332,800
1984	258,400	85,400	10,900	6,000	360,700
1985	285,500	85,400	10,900	6,000	387,800
1986	310,600	85,400	10,900	6,000	412,900
1987	337,100	85,400	10,900	6,000	439,400
1988	363,500	85,400	10,900	6,000	465,800
1989	390,000	85,400	10,900	7,500	493,800
1990 & after	422,500	85,400	10,900	0	518,800

FIGURE 1.12

clude all proposed streets and their names; this information will be supplied at a later date)

1.8 Water Management System

Waste water will be collected and treated at an on-site advanced secondary treatment plant to standards specified by the Monterey County Health Department and the California Regional Water Quality Control Board. The treated water will be temporarily stored in a retention pond on the golf course prior to being recycled in the golf course irrigation system. The treatment plant will be located on the valley floor and will be visually screened by earthen berms and landscaping. (See Figure 1.3 for treatment plant location)

2. ENVIRONMENTAL SETTING AND PROJECT IMPACT

2.1 Regional Setting

Carmel Valley, an east-west trending valley in western Monterey County, lies approximately 130 miles south of San Francisco, 82 miles south of San Jose and 337 miles north of Los Angeles.

The project site is located 7 miles east of Carmel Bay and 7 miles southeast of Monterey Bay. Shopping facilities are available in the Mid-Valley Shopping Center (0.5 miles from the property), Carmel Valley Village (5.5 miles) and Carmel Rancho Shopping Center (6.1 miles). Additional general facilities for food, clothing, and services are available in the larger business and shopping centers of Carmel (7.6 miles), Monterey (11.0 miles) and Salinas (18.7 miles).

2.2 Surrounding Area

Carmel Valley Ranch is surrounded on three sides by open land primarily used for grazing. South of the property is the grazing land of the San Carlos Ranch. East is additional grazing land and an approximate one mile contiguous border with a 541 acre site newly acquired by the Monterey Peninsula Regional Park District. West, in the Robinson Canyon area, is grazing land and scattered residences. On the north side of Carmel Valley Road is the Tierra Grande Subdivision, a single-family residential development of 258 lots on 400 acres. Also located to the north is the Mid-Valley Shopping Center, the Farm Center and a residential and farming area. (See Figure 2.1 for surrounding area land use map)

With the exception of the Mid-Valley Shopping Center and the Tierra Grande Subdivision, the area of the site along Carmel Valley Road is rural in characteristic. Most prominent are undeveloped tracts and scattered farms, ranches and residences.

IMPACT:

Development of Carmel Valley Ranch will have little impact on the Monterey Peninsula Regional Park. An integration of the park bridle trails with those of

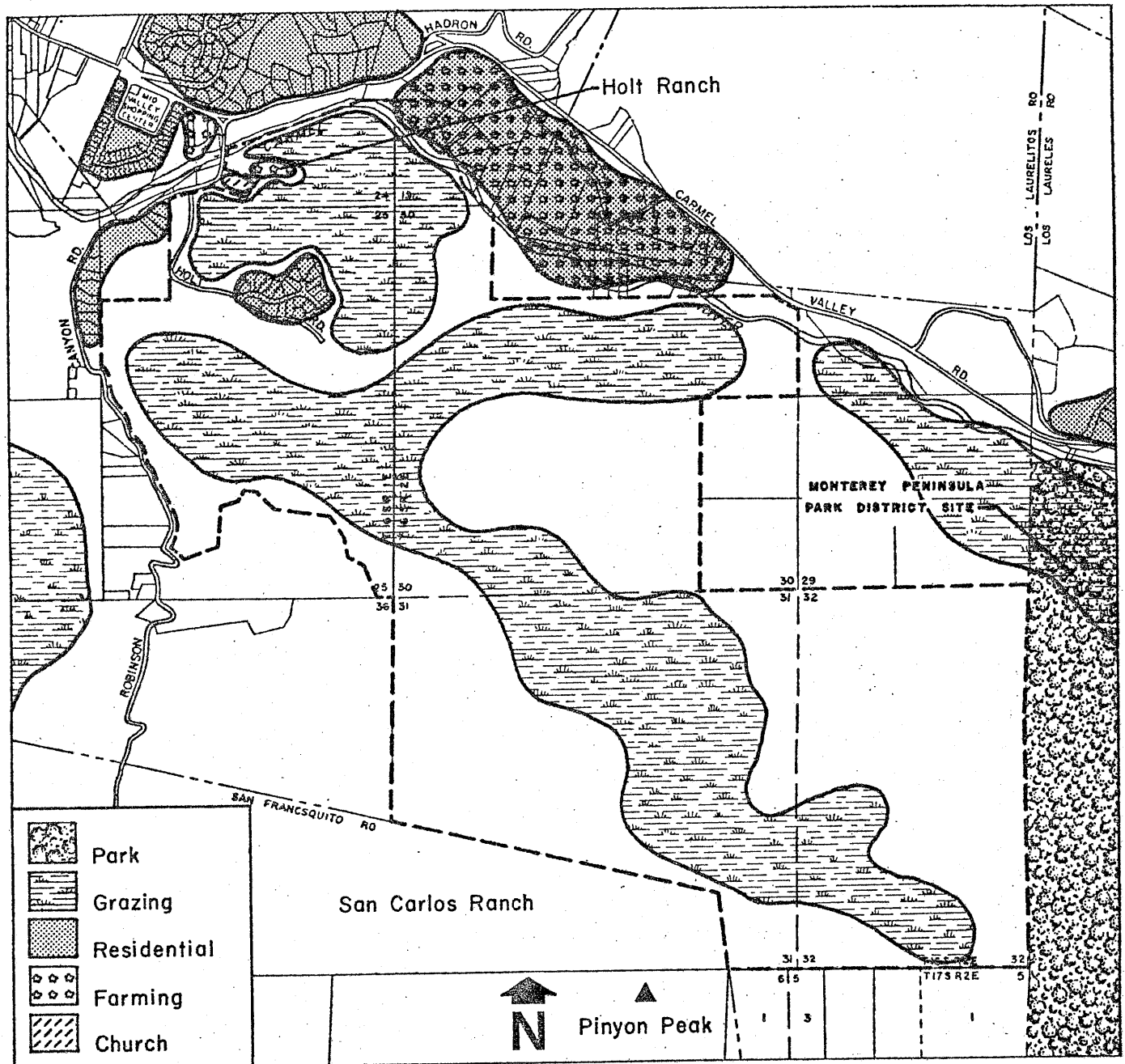


FIGURE 2.1

PRESENT LAND UTILIZATION

the ranch would be a positive result of implementation of this Specific Plan. It should also be noted that a riding and hiking trail is proposed along the Carmel River in the Monterey County Recreational Trails Plan.

According to the Monterey County Assessor's Office, land values of large acreages in this area would only be affected by subsequent demand to purchase these lands and will not be affected by this development. Smaller acreages that will have exposure on the golf course, such as the Holt Subdivision and Tierra Grande Subdivision, would probably feel the effects of this development in subsequent increased land values.⁷

2.3 Site Description

The site slopes irregularly from the Carmel River south to Snivley's Ridge. Over a 2.5 mile distance the site terrain rises from approximately 115 feet above sea level at the riverbed to approximately 2039 feet along Snivley's Ridge. The proposed development plan for the property relates to four distinct geographical regions.

The valley floor and the moderate slopes adjacent to the valley floor are located at the lower elevations in the northerly section of the property. Included in the moderate slopes is a conspicuous grassy area, which is a coalesced landslide. An oak-woodland tree line separates the grass covered valley floor from the adjacent moderate slopes, and also marks the "toe" area of the landslide. The Holt Subdivision is completely surrounded by the Carmel Valley Ranch property and is also located within the moderate slopes.

A mid-elevation plateau is located in the western section of the property below the steeper slopes that surround Snivley's Ridge. The plateau slopes to the southwest towards Robinson Canyon. Located in roughly the southern section of the site is the northwesterly trending Snivley's Ridge. The lower extremity of Snivley's Ridge is covered by oak-woodland, which turns into chaparral encircling the ridge crest. Along the ridge summit is a scattered oak-woodland covering and expanses

of grassland.

Two other prominent landforms are Snivley's Gulch, in the southwestern section, and the Palisades facing the Carmel River. (See Figure 2.2 for landforms map)

IMPACT:

The physical characteristics of the site offer constraints to development. A development suitability map was prepared by Unique Golf Concepts, combining the available environmental data on the site. Although the use of this map does not preclude there being environmental impacts, the information is valuable as a planning guide. The Specific Plan appears to be flexible enough to avoid definite problem areas except for an area within the 100-year flood plain of the Carmel River. This data was obtained after the Specific Plan was prepared. (See Figure 2.3 for development suitability map)

2.4 Climate

Carmel Valley is located in the Central California region, with a climate characterized by moderately warm dry summers and mild rainy winters. Average temperatures vary between 35°F and 55°F in winter and between 45°F and 70°F in summer. Extremes for the past five years have ranged from 20°F to 110°F. The site periodically experiences fog during the summer and fall.

The topographic extremes of Carmel Valley Ranch result in microclimatic variations within the limits of the property. Precipitation falls predominantly as rain and is concentrated between October and March, with nearly one-half occurring in December and January. Because of the elevation of Snivley's Ridge, precipitation occasionally falls as snow. Average annual precipitation is about 18 inches for the lower elevations of the property, increasing to 20 inches for the higher elevations along Snivley's Ridge.

During summer and early fall the site is subject to sea breezes up-valley during the day and land breezes down-valley occurring at night. Up-valley/down-valley flows become disrupted during winter by the frequent passage of frontal systems. Pre-

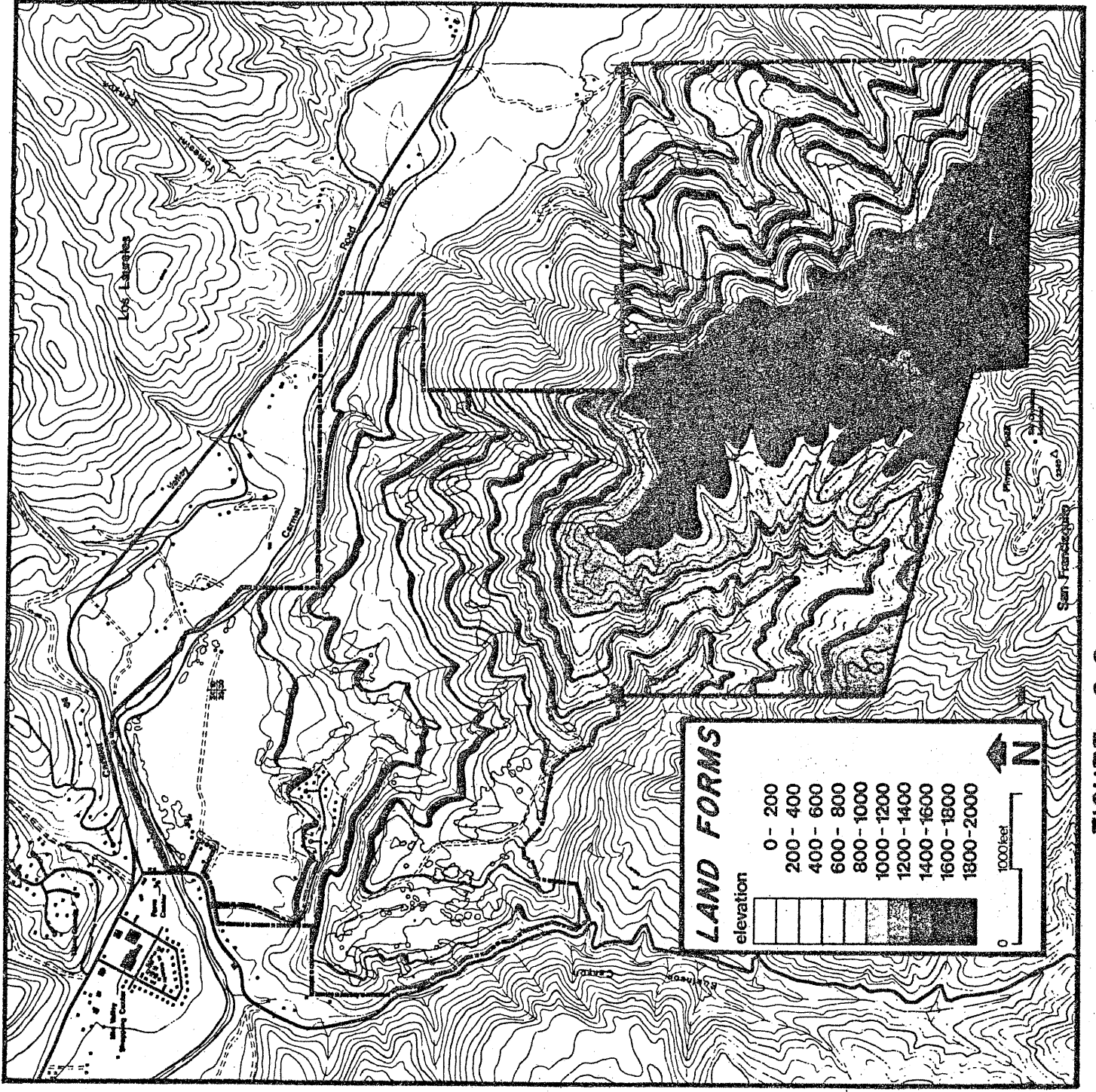
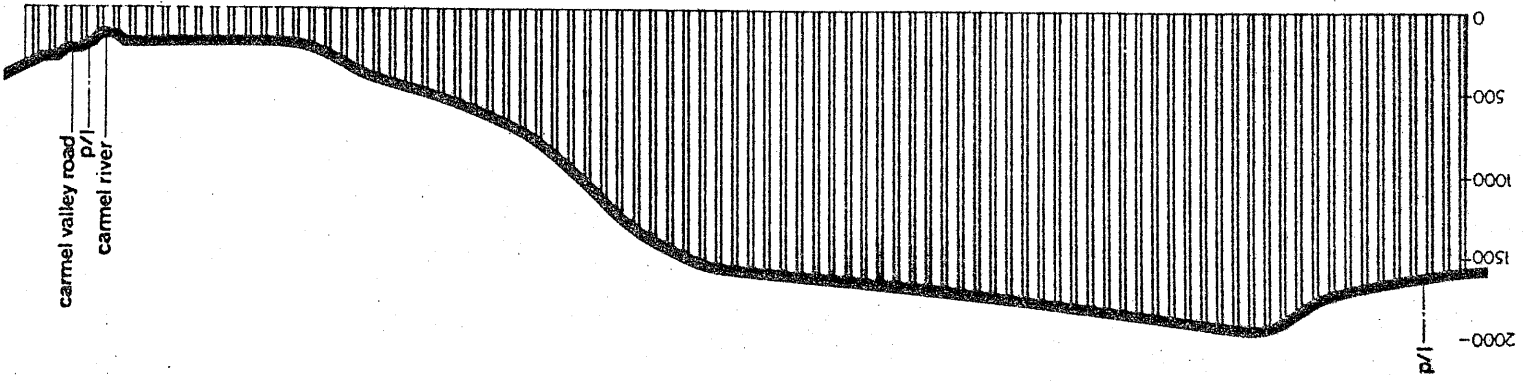


FIGURE 2.2

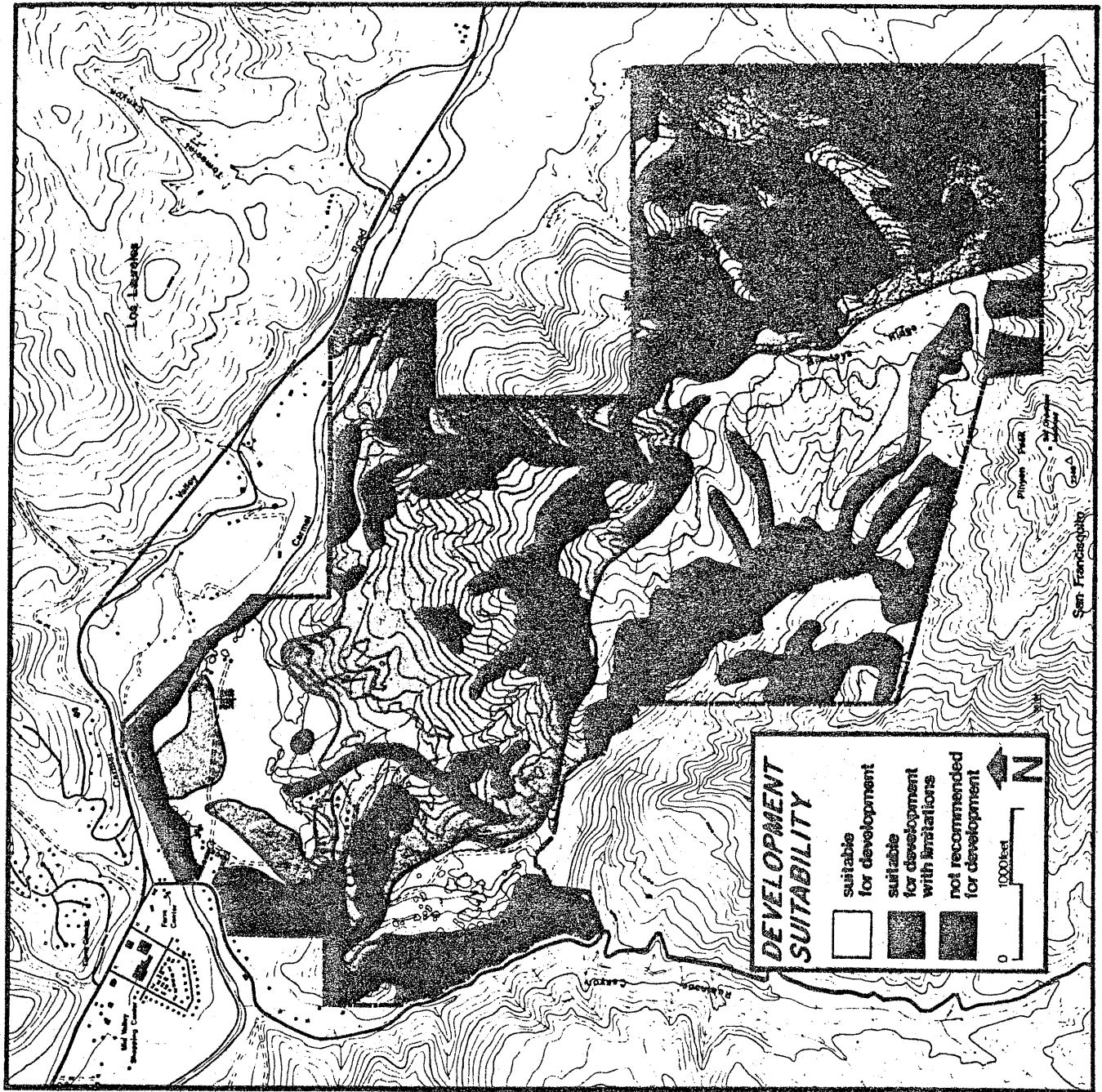


FIGURE 2.3

Development Suitability Factors

Suitable for development:

- 0 - 30% slopes
- stable soil and geologic conditions
- low-moderate visual sensitivity
- no unusual or sensitive wildlife or vegetation

Suitable for development with

- limitations or remedial measures:**
- slopes 30 - 50%
- stabilized landslides
- soils subject to creep and flow
- sensitive vegetation or wildlife habitat
- moderate to high visual sensitivity

Not recommended for development:

- slopes over 50%
- active landslide areas
- 100-year flood plain
- major drainageways
- unique natural area

frontal winds are from the south, exposing Snivley's Ridge to 40 m.p.h. plus winds. Post-frontal winds have a similar velocity but are from the northwest. Areas of the ranch at lower elevations are less affected by extreme winds, being partially protected by surrounding topographic barriers. (See Figure 2.4 for site climate map)

IMPACT:

Implementation of the Specific Plan, as proposed, will not result in a significant impact on climate. However, climatic impacts on the project could be significant. Fog and the occasional presence of snow in Snivley's Ridge present hazardous conditions for driving. House construction and placement must take into account the high winds from frontal storms.

2.5 Slopes

The entire property lies on the south side of Carmel Valley, with the majority of the slopes facing north and northeast. Slopes exceeding 30% occur on both sides of Snivley's Ridge and along the west boundary of the ranch adjacent to Robinson Canyon. Approximately 60 percent of the site consists of 30% slope or greater. (See Figure 2.5 for slope map)

IMPACT:

Access roads to the residences in the mid-elevation plateau and Snivley's Ridge will traverse slopes greater than 50%, with the Snivley's Ridge road involving further cutting of the existing dirt road into the bedrock. Much of the land designated as open space also contains very steep slopes; approximately 455 of the 1080 acres in open space is over 50% slope.

2.6 Geology

2.6.1 General Geological Description

The property is underlain principally by granodiorite of early Cretaceous age and on-lapping marine and continental sediments of Middle and Upper Miocene age. Generally, those portions of the ranch adjacent to the Carmel River are immediately underlain with up to 175 feet of recent (Holocene) river alluvium composed primarily

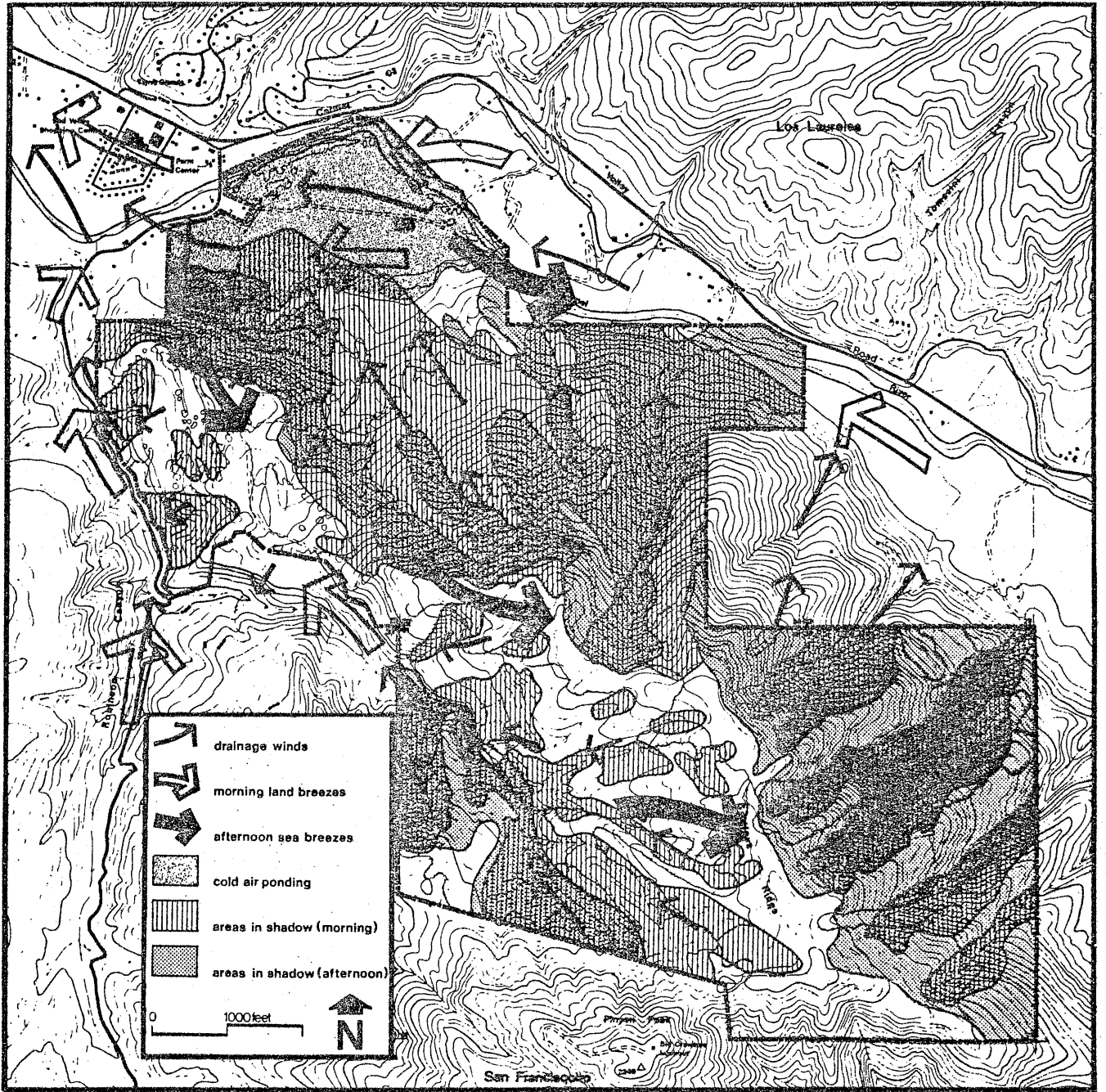


FIGURE 2.4

CLIMATE

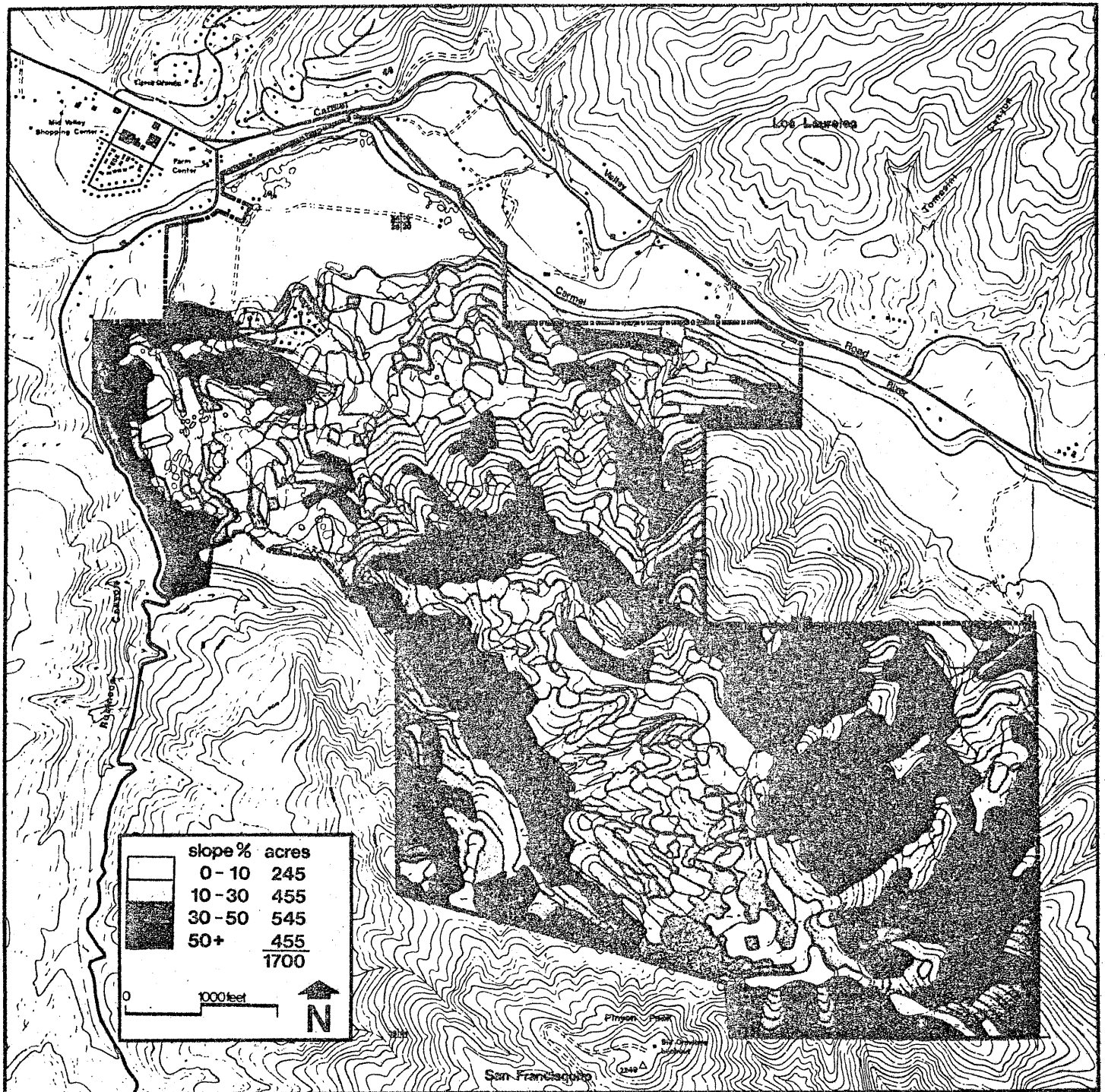


FIGURE 2.5

SLOPES

of sand and gravel. The more mountainous sections of the property are generally composed of granodiorite and Sur Series rock of igneous and metamorphic origin. The granodiorite of Snivley's Ridge is deeply weathered and disintegrated near the surface and extensive piedmont talus cones have developed on the north facing slopes of the ridge.

Several areas of coalesced landslides are located on the property, all but one of which have stabilized. The one active slide on the property occurs near the crest of Snivley's Ridge just north of Pinyon Peak. (See Figure 2.6 for geological suitability map and Appendix A for criteria used to formulate the geological suitability map)

IMPACT:

The active landslide on Snivley's Ridge and the talus cones and aprons on greater than 30% slopes (where sliding could occur) are designated as open space. The two stable landslides have been designated for golf course, tennis club and some residences. Portions of residential clusters B and G (as shown in Figure 1.4) are located on the stable landslide adjacent to the valley floor. A detailed analysis should be made in regard to major cuts, fills and the percolation of water into the slides. Also included should be methods to increase slide stability. According to consulting geologist Oliver Bowen, potential hazards from reactivating the two stable landslides can be eliminated by development of an adequate surface drainage system and preservation of the "toe" areas.⁸ Some drilling and soil testing should also be done on the Tularcitos Member of the Chamisal Formation to pinpoint hazardous spots where instantaneous liquefaction can occur during storms.

2.6.2 Seismicity

There are two faults which cross the Carmel Valley Ranch property. Snivley's Fault crosses the southwestern corner of the property and the Tularcitos Fault, which runs parallel with Carmel Valley, crosses under the alluvium of the valley floor. Snivley's Fault is considered to be inactive and the Tularcitos Fault is considered to be potentially active.⁹ The property is within 10 miles of the active San

Gregorio-Palo Colorado Fault Zone and 24 miles from the San Andreas Fault. Bowen states:

"The chances of surface rupture on the Tularcitos Fault or of subsidence along the Snivley's Fault on the Carmel Valley Ranch are small in comparison to the likelihood of damage due to lurching from a distant strong motion epicenter on some other active fault The entire perimeter of Monterey Bay is in counties subject to strong-motion earthquakes. Carmel Valley Ranch is not, however, in a position any more hazardous than most other areas of equivalent size and relief in the Central Coast Ranges."¹⁰

IMPACT:

Bowen states: "No special plans need be formulated to allow for activity on the Tularcitos and Snivley's Faults except to reduce structures to a minimum within 100 feet of the mapped trace."¹¹

Much of the property is underlain by granite or by undisturbed, moderately well cemented sandstone of the Chamisal Formation. These offer good foundation conditions which in most places will be wholly satisfactory for low-rise structures.¹² The deeply alluviated portions of the ranch are somewhat more susceptible to lurching by earthquake waves than the portions underlain by granitic rock or cemented sandstone.¹³ In regard to areas underlain by recent alluvium, the proposed Seismic Safety Element of the Monterey County General Plan states:

"The hazard potential for these areas are moderate to high with respect to ground failures, whereas the hazard potential for ground shaking is considered high to severe. The effects of ground failure and the potential effects of ground shaking should be considered with respect to future land use. It is recognized that areas underlain by recent alluvium cannot always be avoided for future development. However, the alternatives should be carefully considered and the benefits and risks carefully weighed"¹³

2.7 Soils

The U.S.D.A. Soil Conservation Service has mapped 11 different types of soils located on the Carmel Valley Ranch property. Unfavorable characteristics of the site soils are as follows: approximately 90% of the site has rapid to very rapid runoff, approximately 80% of the site has a high to very high erosion hazard and approximately 1% of the site has a high shrink-swell potential.

The capability classification* is a practical grouping of soils. Soils on the property suited for cultivation and other uses include: the Tujunga fine

sand (TuAB, 0-5% slopes), generally located on the valley floor, with a capability classification of IVs4; and the Elder very fine sandy loam (EdBC, 2-9% slopes), generally located in the moderate slopes adjacent to the valley floor and in the mid-elevation plateau, with a capability classification of IIIe1. The remaining soils are considered limited in use, and thus generally not suited for cultivation. (See Figure 2.7 for the Land Capability Classification, Figure 2.8 for soils map and Figure 2.9 for corresponding soils chart)

IMPACT:

The most significant impact on soils will be from the grading necessary for access roads, the golf course, residential units and the parking area for the lodge. The Specific Plan, however, appears to be flexible enough to avoid residential construction on slopes greater than 30%. By not allowing construction in these areas there would be a significant reduction in the amount of grading that would be necessary. A significant impact could occur if the residential construction and golf course grading on the valley floor occur at the same time. This would denude the area of vegetation, making the Tujunga fine sand susceptible to wind erosion.

Approximately 80% of the site soil has a high to very high erosion hazard. This causes problems with surface runoff and cut and fill areas. Especially crucial are the access roads to the mid-elevation plateau and to Snivley's Ridge.

It should also be noted that the Tujunga fine sand has a severe limitation in regard to the installation of a golf course because it has very rapid subsoil permeability. This soil characteristic poses the maintenance problem of requiring a great deal of water for irrigation.

From an engineering standpoint, an analysis of the soils on the site by Leighton and Associates indicates that the present plan limits construction to areas that appear to be feasible for development.

2.8 Hydrology

2.8.1 Groundwater

Three sources of groundwater have been identified on Carmel Valley Ranch.

CF-CONS.-214
March 1970

THE LAND CAPABILITY CLASSIFICATION

The capability classification is a practical grouping of soils. Soils and climate are considered together as they influence use, management, and production on the farm or ranch.

The classification contains two general divisions: (1) Land suited for cultivation and other uses, and (2) land limited in use and generally not suited for cultivation. Each of these broad divisions has four classes which are shown on the map by a standard color and number. The hazards and limitations in use increase as the class number increases. Class I has few hazards or limitations, or none, whereas Class VIII has a great many.

LAND SUITED FOR CULTIVATION AND OTHER USES

CLASS I Soils in Class I have few or no limitations or hazards. They may be used safely for cultivated crops, pasture, range, woodland, or wildlife.

CLASS II Soils in Class II have few limitations or hazards. Simple conservation practices are needed when cultivated. They are suited to cultivated crops, pasture, range, woodland, or wildlife.

CLASS III Soils in Class III have more limitations and hazards than those in Class II. They require more difficult or complex conservation practices when cultivated. They are suited to cultivated crops, pasture, range, woodland, or wildlife.

CLASS IV Soils in Class IV have greater limitations and hazards than Class III. Still more difficult or complex measures are needed when cultivated. They are suited to cultivated crops, pasture, range, woodland, or wildlife.

LAND LIMITED IN USE--GENERALLY NOT SUITED FOR CULTIVATION

CLASS V Soils in Class V have little or no erosion hazard but have other limitations that prevent normal tillage for cultivated crops. They are suited to pasture, range, woodland, or wildlife.

CLASS VI Soils in Class VI have severe limitations or hazards that make them generally unsuited for cultivation. They are suited largely to pasture, range, woodland, or wildlife.

CLASS VII Soils in Class VII have very severe limitations or hazards that make them generally unsuited for cultivation. They are suited to grazing, woodland, or wildlife.

CLASS VIII Soils and land forms in Class VIII have limitations and hazards that prevent their use for cultivated crops, pasture, range, or woodland. They may be used for recreation, wildlife, or water supply.

Capability classes are divided into subclasses. These show the principal kinds of conservation problems involved. The subclasses are: "e" for erosion, "w" for wetness, "s" for soil, and "c" for climate.

Capability classes and subclasses, in turn, may be divided into capability units. A capability unit contains soils that are nearly alike in plant growth and in management needs.

The units are: "1" erosion hazard; "2" wetness problems; "3" slowly permeable subsoil; "4" coarse texture, low water-holding capacity, "5" fine textures, tillage problems; "6" salinity or alkali; "7" cobbly, rocky, or stony; "8" root zone limitation, bedrock, or hardpan; "9" low fertility, acidity, or toxic properties; and "0" very coarse textured substratum.

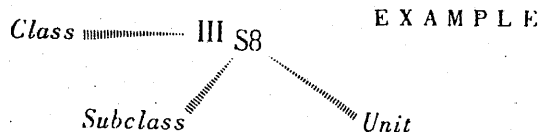


FIGURE 2.7

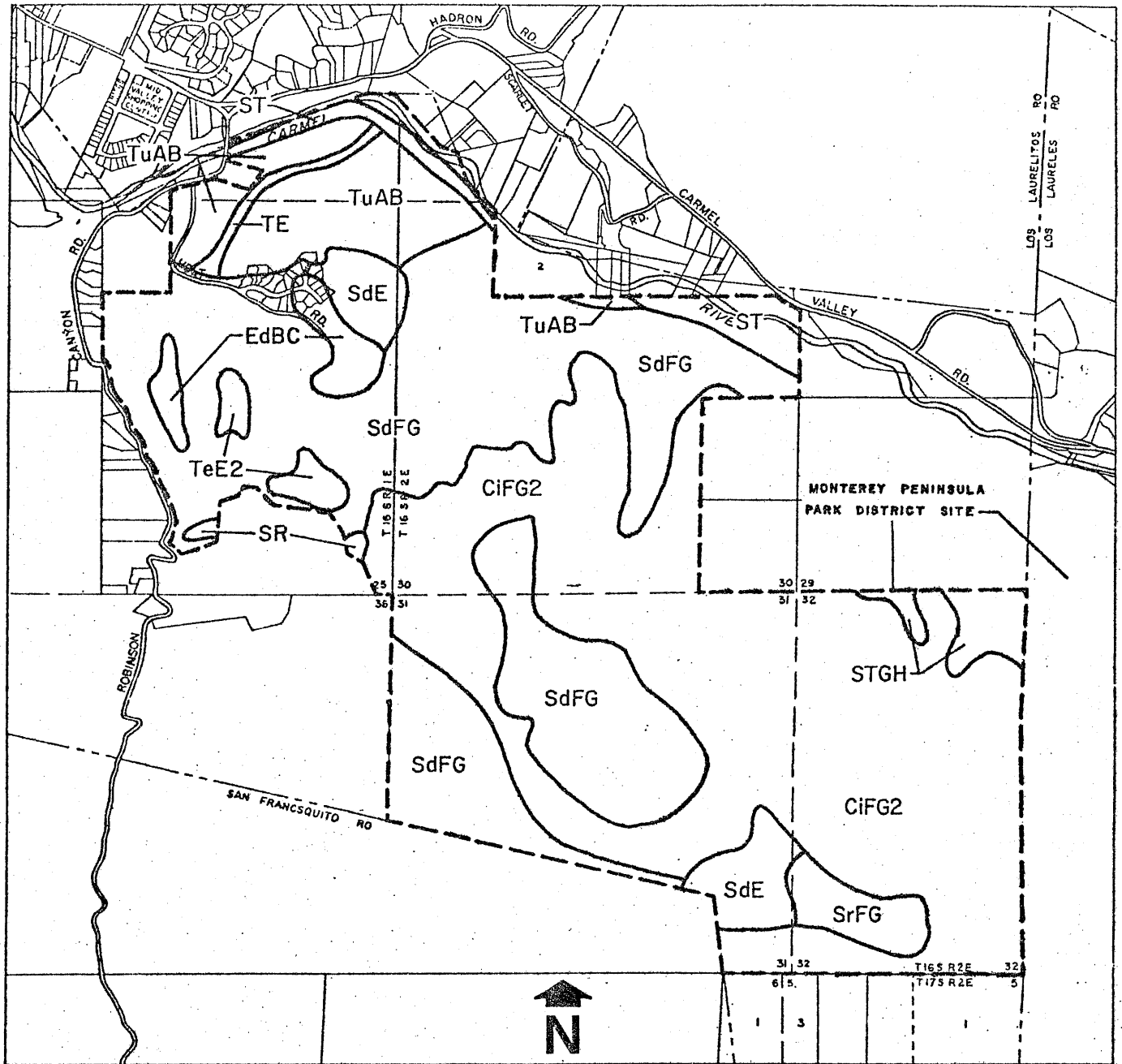


FIGURE 2.8

SOILS

FROM U.S. DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 SOIL SURVEY FIELD SHEETS

MAP SYM.	SOIL NAME	NATURAL DRAINAGE	SUBSOIL PERM	RUNOFF	EROSION HAZARD	SHRINK-SWELL BEHAVIOR	WATER RETENTION LIMIT	LAWN & GOLF FAIRWAY LIMITATION	CAPAB UNIT
TuAB	Tujung fine sand, 0-5% slope	Excessive	Very Rapid	Very slow	Slight Channelled	Low	Impoundment -Severe-	Severe	IVs4
TeE2	Tierra fine sandy loam 15 to 30% slopes, eroded.	Moderately Well	Very Slow	Rapid	High	High	Impoundment -Severe-	Severe	VIe3
TE	Terrace Escarpments	Variable	Variable	Variable	Variable	Moderate	Impoundment -Severe-	Severe	VIe1
ST	Stony Alluvial Land	Variable	Variable	Variable	Variable	Low	Impoundment -Severe-	Severe	VIIIs7
SR	Sandstone and shale rockland	Excessive	Slow	Very Rapid	Very High	Low	Impoundment -Severe-	Severe	VIIIe1
SdFG	San Andreas fine sandy loam, 30 to 75% slopes	Well	Moderate	Rapid or Very Rapid	High	Low	Impoundment -Severe-	Severe	VIIIe1
SdE	San Andreas fine sandy loam, 15 to 30% slopes	Well	Moderate	Rapid	Moderate	Low	Impoundment -Severe-	Severe	VIe1
EdBC	Elder very fine sandy loam, 2 to 9% slopes	Well	Moderate	Medium	Moderate	Low	Impoundment -Severe-	Moderate	IIIe1
CI FG2	Ciereba fine gravelly sandy loam, 30 to 75% slopes, eroded	Excessive	Moderately Rapid	Very Rapid	Very High	Low	Impoundment -Severe-	Very Severe	VIIIe1
STGH	Junipero-Sur Complex	Somewhat Excessive to Excessive	Moderately Rapid	Rapid to Very Rapid	High to Very High	Low	Impoundment -Severe-	Severe	VIIIIs1 VIIIIs7
SrFG	Sheridan course sandy loam, 30 to 75% slopes	Well	Moderately Rapid	Rapid or Very Rapid	Moderate or High	Low	Impoundment -Severe-	Severe	VIIIe1

FIGURE 2.9

Two of these are deep aquifer sources which were previously untested. Two small yield wells (16s/2E - 19N1 and 16s/1E - 25B1) are already in use, extracting water from the Carmel Valley Alluvium Aquifer. These wells are used for irrigation, producing approximately 170 acre feet per year.

A test well, Holt #1, has been drilled adjacent to Robinson Canyon along the western border of the ranch. This well potentially has tapped a new producing aquifer and a new structural trap for good quality water in a major Synclinal* Aquifer involving the continental Middle Miocene and the Tularcitos Member (both sandstone and conglomerate units) of the Chamisal Formation. Water was encountered in this formation at various depths and the electric log and sidewall samples indicate a high-yield well in a newly defined structural trough. This structure extends west from Snivley's Ridge nearly to Coast Highway 1, roughly parallel to the trend of Carmel Valley.

A third, as yet untested, potential source of water lies near the southern border of Carmel Valley Ranch where the Robinson Canyon and Tularcitos Members of the Chamisal Formation are buttressed against granite along Snivley's Fault. This forms a Homoclinal* trough where water has collected. In addition, the broken zone of Snivley's Fault proper is a potential for water.

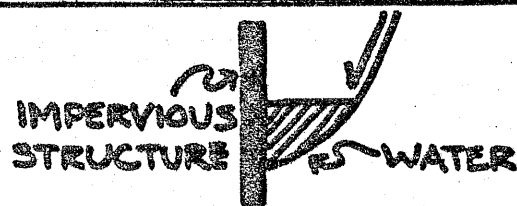
On-site wells have been measured for depth to groundwater on the valley alluvium. Between 1960 and 1969 the water level in the northeastern well (16s/2E - 19N1) has ranged between 26.0 feet and 44.3 feet below ground, and the water level

* Capability Classification - Soils and climate are considered together as they influence use, management and production on the ranch.

* Syncline - A fold in which the strata dips inward from both sides toward the axis.

* Homocline - A structural condition in which the beds dip uniformly in one direction.

(For illustration only)



in the northwestern well (16s/1E - 25B1) has ranged between 12.2 feet and 28.0 feet below ground. (See Figure 2.10 for hydrology map and Appendix B for water quality chart)

IMPACT:

An adequate water supply for the project must be established. The applicant proposes to withdraw all water for residential use from the newly discovered Synclinal Aquifer, which should be test pumped to assure adequate supply. The residential waste water will be treated at an onsite treatment plant and then used for irrigation of the golf course, thus recharging the Carmel Valley Alluvium Aquifer with approximately 30% of the water used for irrigation. For the project to have this beneficial effect on the Carmel Valley Aquifer it must be proven that pumping from the deep Synclinal Aquifer, or the other potential water sources, will not draw from the shallow Carmel Valley Aquifer. If these newly discovered potential sources of water do draw from the Carmel Valley Aquifer, or if they do not have an adequate supply, consideration must be given to the condition of the Carmel Valley Aquifer and the impacts of increased withdrawal.

In regard to the condition of the Carmel Valley Aquifer, the State Department of Water Resources states:

"Additional well fields could be installed to operate the basin more extensively. Such fields could lower the average water table another 10 feet over that reached in 1972 and provide an additional 8,600 acre-feet, increasing the total yield to about 15,000 acre-feet."¹⁵

This investigation has two conclusions relating directly to this development; one, that additional near-term water requirements can be met in the California-American Water Company service area from groundwater in Carmel Valley, and two, that future growth will require additional water supplies over and above that available from the Carmel Valley Aquifer. (See Section 2.15.1 for additional impacts)

2.8.2 Surface Hydrology

The entire property is within the 255 square mile Carmel River watershed. On the property itself there are 18 sub-watershed areas, ranging in size from 436

acres to 6 acres. The series of small ridges and valleys on the slopes north of Snivley's Ridge drain directly into the alluvium along the Carmel River. The area lying south of Snivley's Ridge drains south and west into Snivley's Gulch, then to Robinson Canyon and finally into the Carmel River. Two sub-watershed areas drain south, eventually into the Carmel River via Las Gazas Creek. (See Appendix B for watershed map and runoff calculations)

IMPACT:

Disturbance of soil through excavation, paving, building, vehicular or foot travel or removal of vegetation by fire usually causes greatly increased runoff. Development associated with the Carmel Valley Ranch Specific Plan will increase the runoff on site approximately 27%. As noted in the Soil section of this report (Section 2.7), approximately 90% of the site has rapid to very rapid runoff and approximately 80% of the site has a high to very high erosion hazard. The increased runoff, along with the rapid runoff and high erosion hazard characteristics of the soils, compounds the usual erosion problems associated with development. A detailed hydrology study should be undertaken to recommend methods to properly channel the runoff, especially in those areas subject to landslide activity.

Based on a flood hazard evaluation for the Carmel Valley Ranch by the U.S. Army Corps of Engineers (revised since the 1967 Flood Plain Information report), only a small area of the golf course would be inundated by a 100-year frequency flood from Robinson Canyon Bridge upstream.¹⁶ By extending this flood level downstream from Robinson Canyon Bridge, the 11 units in the residential cluster west of Holt Road and a small portion of the residential cluster below the Holt Subdivision (clusters C and D in Figure 1.4) would be inundated by a 100-year flood. (See Figure 2.11 for the 100-year flood plain on the Carmel Valley Ranch)

Depending on design, the golf cart bridge could catch debris and present a hazard by causing water to back-up. According to Bob Binder of the Monterey County Flood Control and Water Conservation District, a fragile bridge would have little flood hazard impact and a more strongly constructed bridge would have a greater

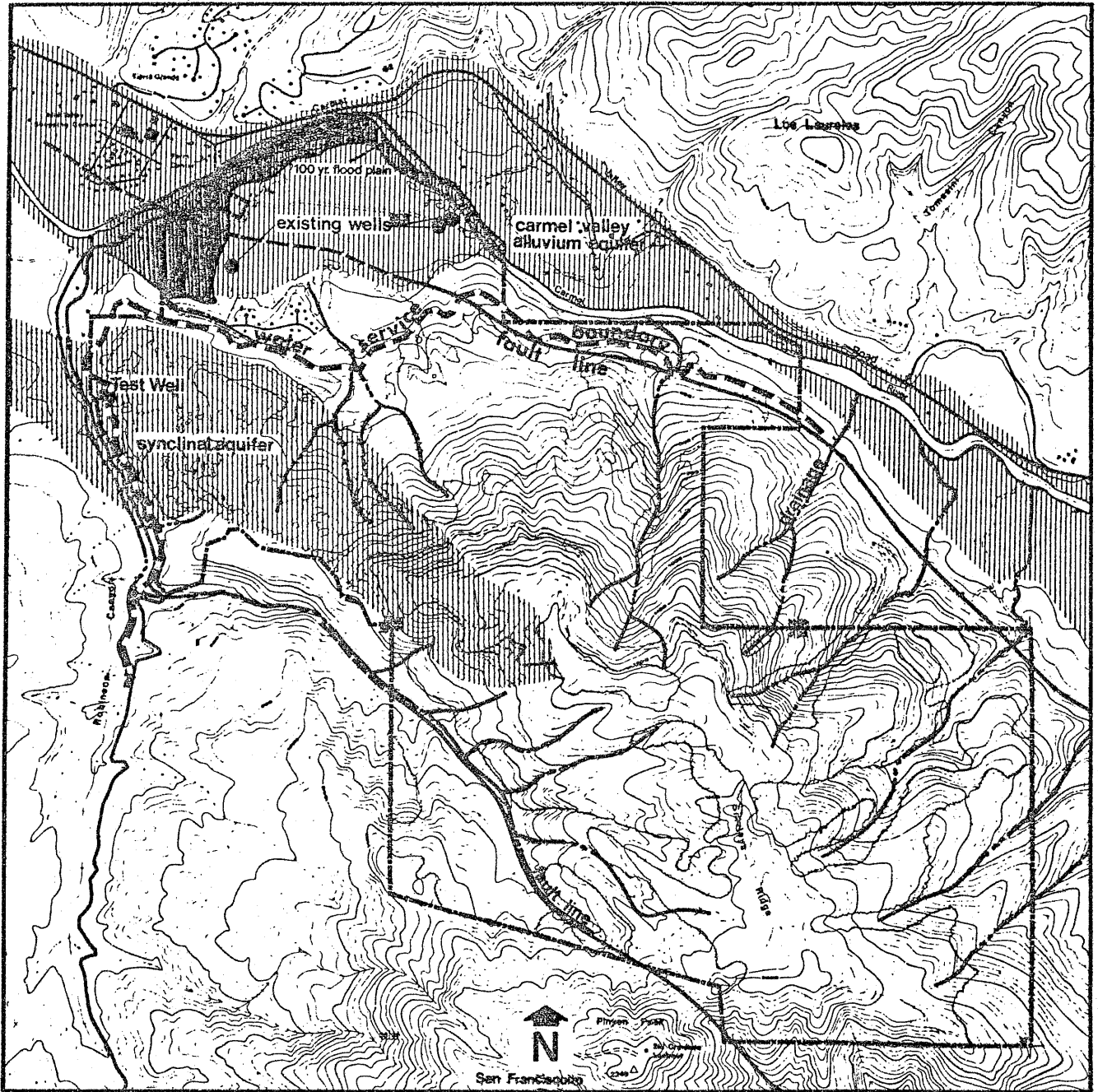
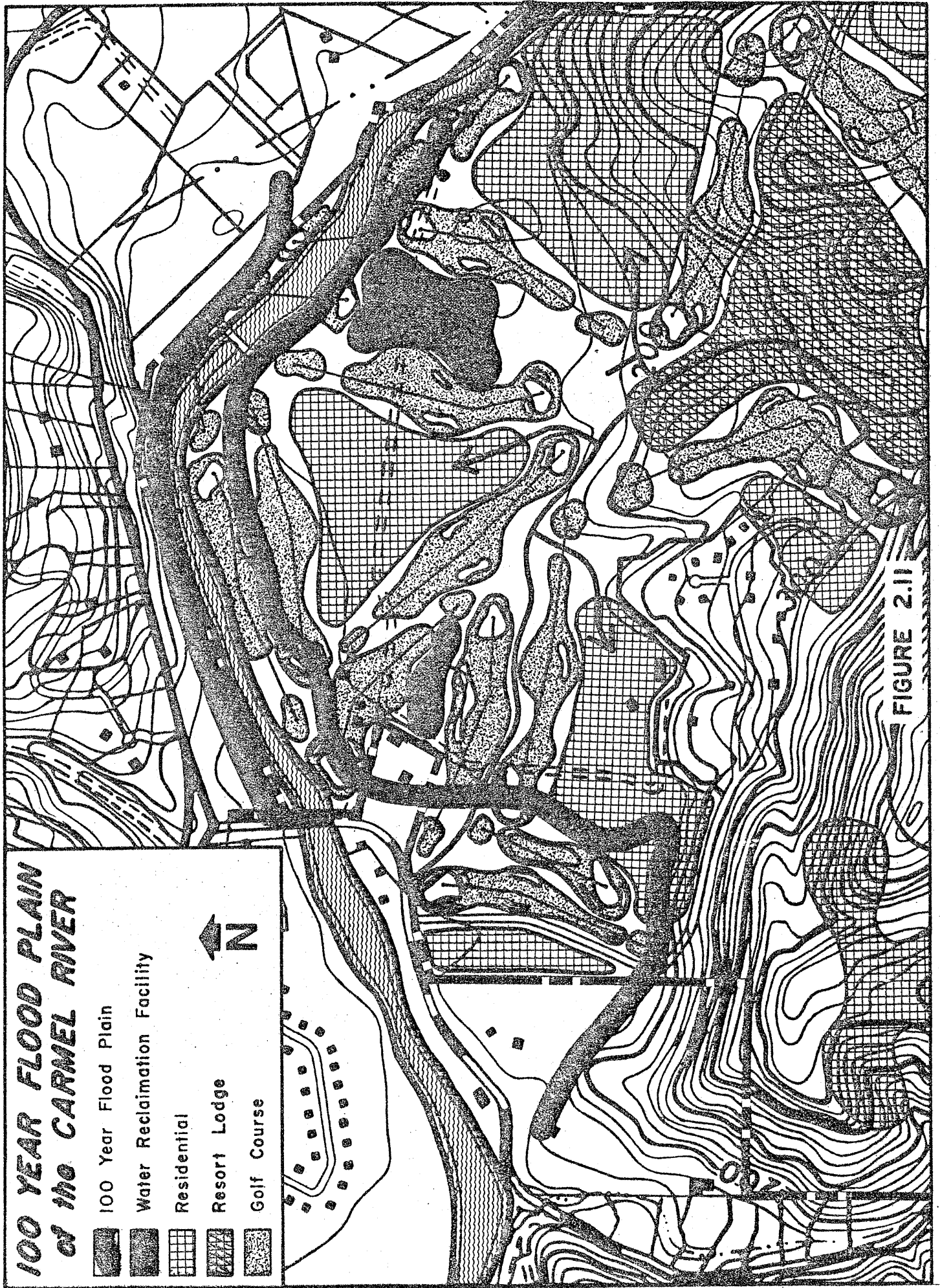








FIGURE 2.10

HYDROLOGY



**100 YEAR FLOOD PLAIN
OF THE CARMEL RIVER**

	100 Year Flood Plain
	Water Reclamation Facility
	Residential
	Resort Lodge
	Golf Course



N

FIGURE 2.11

Christmas berry and infrequent sycamore. There are also nearly pure stands of coastal live oak along the ridge crests. Few interior live oaks or blue oaks were encountered on the property. Deer, woodrats, junco, bushtits, tree creepers and towhees are common.

There are no rare or endangered wildlife on the property.¹⁸ There is also no indication of rare or endangered vegetation species.¹⁹ (See Figure 2.12 for vegetation and wildlife habitat map and Appendix C for vegetation and wildlife on the property)

IMPACT:

Development of the Carmel Valley Ranch will impact vegetation, wildlife and the present human usability of the property. There will be a loss of wildlife habitat, loss of hunting area, loss of grazing land and removal of trees and natural vegetation.

Specifically, impacts on wildlife will result through disruption of animal feeding and local movement patterns between water supply, nesting areas, feeding areas and cover. The residential clusters, recreational facilities and resort lodge will be located on 620 acres. Open space will encompass 1080 acres. The proximity of houses, increase in noise, introduction of domestic animals, placement of roads, use of bridle trails and accessibility of the property to roughly 2,500 people will diminish the usefulness of the open space areas as a wildlife habitat.

The golf course will disturb riparian vegetation along the river, which, according to the State Department of Fish and Game, "provides living conditions for a greater variety of wildlife than any other type."²⁰ A well-developed riparian area on the north side of the Carmel River, particularly, will be significantly disturbed by golf course placement. An evaluation of the groundwater requirements for trees in riparian areas (sycamore, cottonwood, willow) is necessary in regards to golf course grading plans, water application rates, and possible use of water from the Carmel Valley Aquifer if the alleged Synclinal Aquifer is proven not to have adequate storage.

Preliminary data indicates that withdrawal of water from the Synclinal Aquifer will not have a significant impact on the Redwood trees in Snivley's Gulch. Redwoods are very strong trees, dependent on a great deal of moisture, and because

flood hazard impact. The bridge could also present a hazard if it has narrow spans compared to widespans.¹⁷ Another factor to be considered is the possible impact of debris from the bridge, assuming it washes out, lodging downstream and causing water to back-up.

Implementation of the Specific Plan will result in an increased fertilization of the golf course area. Surface runoff may have a secondary effect of reducing water quality in the Carmel River because of the increase in nitrates and phosphates from fertilization.

2.9 Vegetation and Wildlife

The Carmel Valley Ranch lies at the edge of the coastal fog belt and has a relatively undisturbed vegetation and wildlife. The vegetation on the ranch can be divided into five types whose location define a similarly named wildlife habitat.

Grasslands are located along the ridge crests and in the irrigated pasture and at lower elevations. This habitat provides feeding areas for cattle, deer, gophers and various birds. Raptors range over this territory.

Riparian habitat is located along the Carmel River, Snivley's Creek and adjacent to several stock watering ponds. Cottonwood is located along the river, while willow, California bay, sycamore and big-leaf maple are indicative of springs and seeps. A varied and extensive wildlife population frequents riparian areas.

Coyote Brush Chaparral is distributed at lower elevations along north and east facing slopes. Included in this area are coyote brush, poison oak and emergent trees and shrubs such as elderberry, sycamore, Christmas berry and hoary nettle. Animals seeking shelter in this area include deer, bobcat, brush rabbit, brown towhee and fence swifts.

Chamise Chaparral covers the more exposed south and west facing slopes up to the ridge crests. Typical plants include manzanita, coastal sage and chamise. This area has the same inhabitants as the coyote brush chaparral.

Lower elevations of the ranch have a well-developed mixed evergreen Oak-Woodland plant community of mature coastal live oak, California buckeye, California bay,

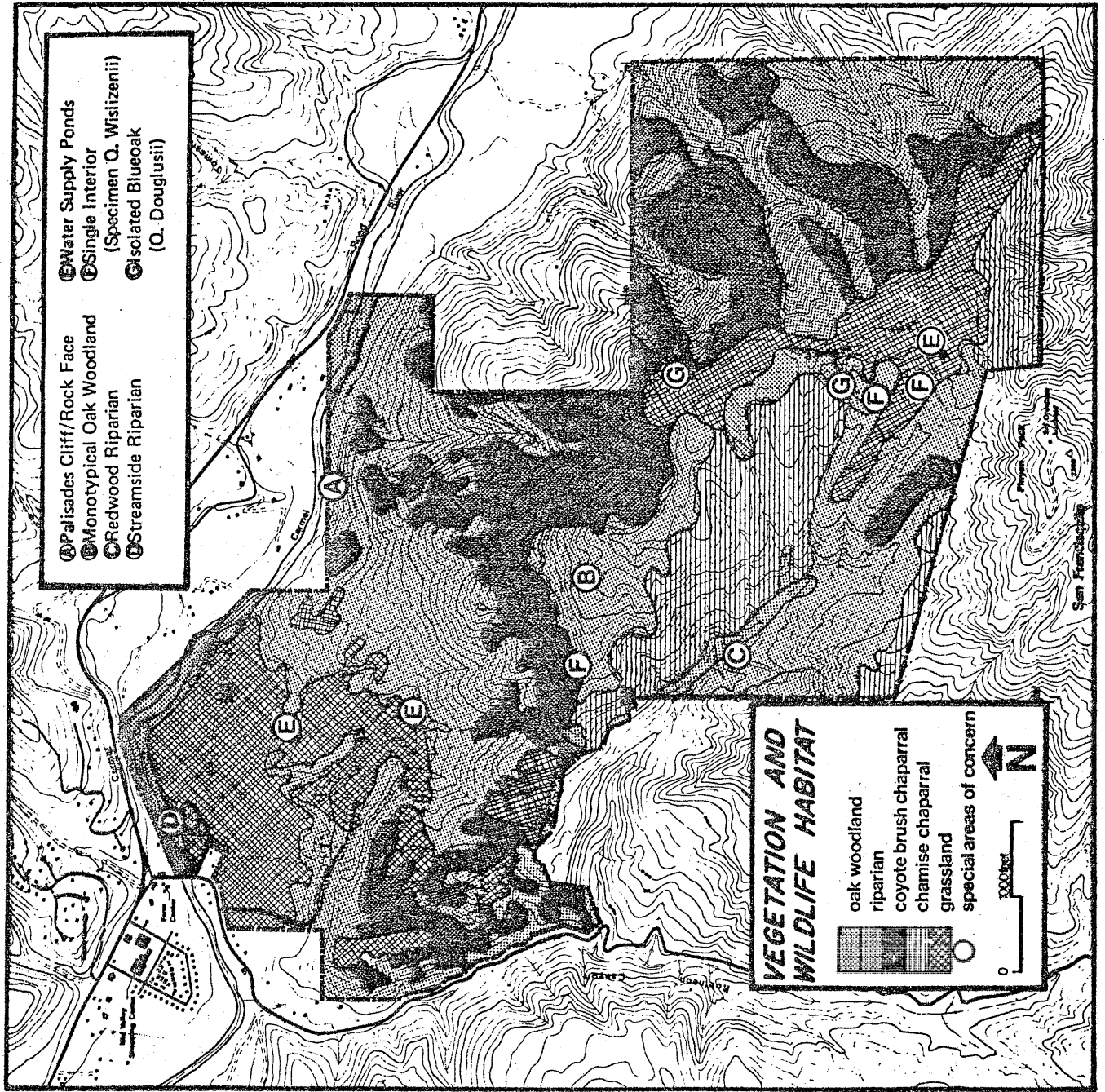
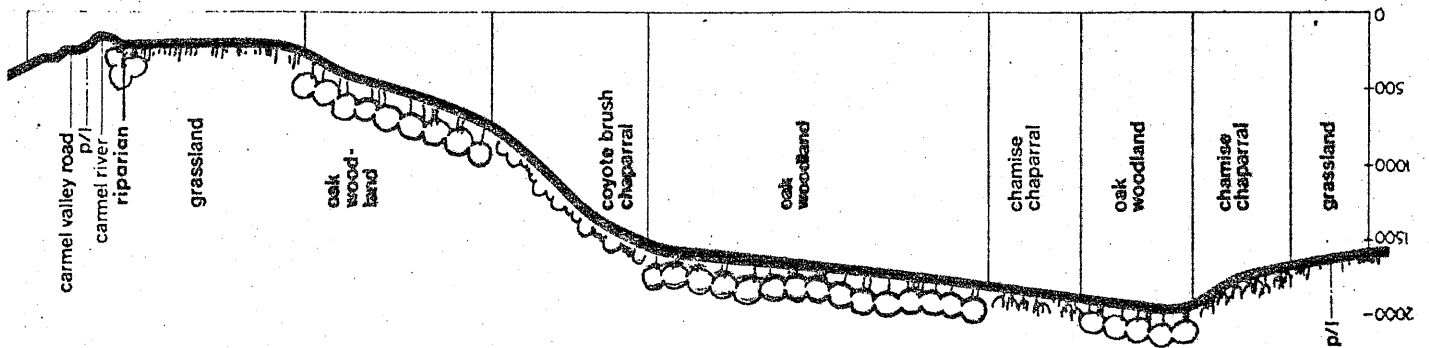


FIGURE 2.12



they have a broad shallow root system the source of water is usually from surface runoff (which is Snivley's Creek) and the percolation of water into a drainage bottom (Snivley's Gulch). The judgement that there will not be a significant impact on these trees is based on the following assumptions: this is a well-developed grove, that Snivley's Creek could be separate from the Synclinal Aquifer, that this structural trap for water extends nearly to Highway 1, and that the seepage of water down to Snivley's Gulch (even during the summer) will not be affected by withdrawal from the Synclinal Aquifer. Obviously, more extensive investigation is needed to determine the exact source of water for the Redwoods and the structural characteristics of the Synclinal Aquifer (whether it is an open aquifer or confined aquifer, and whether withdrawal from the Synclinal Aquifer will affect surface or subsurface flow in Snivley's Creek).

2.10 Views

The property is currently an undeveloped tract except for 3 houses located on the valley floor and the Holt Subdivision located in the middleground area. Generally, the south side of Carmel Valley is undeveloped.

The visual characteristics of the property are defined by landforms and vegetation. The foreground area is composed of the riparian vegetation along Carmel River and the gently sloping grassland of the valley floor. Across this area fence lines have been laid. The remaining middleground and background provide an irregular backdrop of oak-woodland and chaparral on steep slopes.

Views from the lower sections of the property are restricted to views down the valley and across to the south facing slopes of the valley, where conspicuous scars have been left from road cuts. Views from Snivley's Ridge are unrestricted and include the Monterey Peninsula, Santa Cruz and the Salinas Valley.

It should be noted that Laureles Grade Road is an officially "designated" county scenic route and Carmel Valley Road is a "proposed" County scenic corridor according to the Scenic Highway Element of the Monterey County General Plan. (See Figure 2.13 for visual sensitivity map)

IMPACT:

The placement of residential clusters on the valley floor and moderate slopes adjacent to the valley floor will significantly change the rural character of the site. Distant views of the property from Laureles Grade Road and the western edge of Carmel Valley will probably include the residential cluster on Snivley's Ridge. The mid-elevation plateau clusters will not be visible from the surrounding area.

The placement of roads will also detract from the present visual assets of the property. An additional impact could be the scars left from road cuts, especially the access road to Snivley's Ridge.

2.11 Noise

Current noise levels on the ranch are low due to the undeveloped nature of the property. The ambient noise level is in the 30 to 40 dbA range, more than 50% of the time. The intrusive noise events, predominantly from Carmel Valley Road, are infrequent and low due to the distance between the ranch and the noise sources. Only aircraft events regularly exceed 50 dbA, typically between 50 and 60 dbA depending on distance. (See Appendix D for sound levels on the property and additional data on noise)

IMPACT:

There will be increased noise on the site due to construction and the addition of people, traffic, pets and mechanical devices. The major impact on noise levels will be associated with traffic. Based on HUD acceptability criteria, projected traffic volumes will necessitate placement of suitable noise barriers or setbacks of 250 feet from Carmel Valley Road and 50 feet from Robinson Canyon Road and the main road of the development.

Increased traffic associated with growth in Carmel Valley will increase noise levels adjacent to Carmel Valley Road. The project will have adequate setback from Carmel Valley Road, however, other development along Carmel Valley Road will also be affected by increasing noise levels.

2.12 Population

Carmel Valley Ranch presently has a permanent population of approximately 10 people. There are 3 dwelling units occupied on site and a hunting shack on Snivley's Ridge that is occasionally used.

From Hatton Canyon and Highway 1 to Tassajara Road, a distance of 22 miles, the population in Carmel Valley is approximately 8,200. In the vicinity of Carmel Valley Ranch, a 6 mile distance along Carmel Valley Road between Valley Greens Drive and Laureles Grade Road, there are approximately 1,450 residents (based on 2.6 people in 558 dwelling units).

IMPACT:

Full development of Carmel Valley Ranch is expected by 1990. At that time there will be 2,200 residents, 133 employees and an average of 250 resort lodge guests added to the population of Carmel Valley. The project will also employ approximately 160 craftsmen and construction workers during 1976, decreasing thereafter through buildout. By 1990 Carmel Valley will have an estimated population of 16,400 (based on an annual growth rate of 4.4%). Carmel Valley Ranch would represent 13% of the valley population at that point.

Implementation of the Specific Plan will also result in the displacement of 3 families.

2.13 Traffic and Circulation

According to a rating system used by the Monterey County Department of Public Works and the Monterey County Transportation Study (formerly SMATS), Carmel Valley Road both west and east of the Robinson Canyon Road intersection is operating at a level of service "C" ("stable flow"). The Annual Average Daily Traffic (AADT) west of Robinson Canyon Road is 7,500, and the level of service will fall to "D" ("approaching unstable flow") when an additional 680 movements per day are added. The AADT east of Robinson Canyon Road is 5,000, and the level of service in this section of Carmel Valley Road will fall to "D" when an additional 2,920 movements per day are added. The Monterey County Transportation Study considers any road

below a service level "C" as deficient.

Laureles Grade Road is at a level of service "C" from Carmel Valley Road to Miramonte Road, and will remain at that level until 3,780 additional movements per day are added. North of Miramonte Road the level of service falls to "D."

The Department of Public Works has rated the "Practical Capacity" for Robinson Canyon Road as being 800 movements during the peak hour. The present peak hour traffic for Robinson Canyon Road is approximately 70 movements.

Carmel Valley Road is four lanes divided in the lower 2 miles, from Carmel Rancho Boulevard to Via Petra. In 1978 the County plans to improve the next 1.7 miles to four lanes, from Via Petra to Valley Greens Drive. The effect of improving a road to four lanes doubles the capacity of the road in that particular section.

In the Monterey County Recreational Trails Plan a bicycle trail is proposed along Carmel Valley Road.

IMPACT:

Full development of Carmel Valley Ranch is expected by 1990. At that time the development will generate a total of 7,871 movements per day, of which 26% will be internal and 74% will be external. The following is a summation of traffic generated by implementation of the Specific Plan:

	<u>Internal Movements Per Day</u>	<u>External Movements Per Day</u>
Resort Lodge	323	627
Golf Club	44	29
Patio Homes	657	1,971
Townhouses	435	1,305
Single Family Homes	471	1,411
Employees	<u>150</u>	<u>448</u>
TOTAL	2,080	5,791

There will be a major impact on Carmel Valley Road west of Robinson Canyon Road. Approximately 90% of the external movements, or 5,212 movements, will be west on Carmel Valley Road. This development alone will reduce the level of service in this area to "D."

The remaining 10% of the external movements, or 579 movements, will be east of Robinson Canyon Road and will use Laureles Grade Road. This will affect a portion of Laureles Grade Road which already has a level of service "D." The movements from Laureles Grade Road onto Highway 68 will be evenly divided to the east and west.²¹

The project will bring the peak hour traffic on Robinson Canyon Road to approximately 580 movements, which is below the "Practical Capacity." This addition represents a significant increase. Robinson Canyon Road also serves as an alternate access to the 20,000 acre Rancho San Carlos, which has an adopted master plan indicating a satellite city development concept for between 5,500 and 11,000 households.

Approximately 60% of the movements west of Robinson Canyon Road are expected to use Highway 1. The addition of approximately 3,127 movements per day will increase congestion at the mouth of the valley and will severely aggravate an already congested traffic situation on Highway 1.

According to the Department of Public Works: "The Robinson Canyon/Carmel Valley intersection is the major concern in the traffic section of this EIR. Acceptable intersection design could likely be developed, and could range from minor intersection modification to a major interchange"²²

Several road construction projects are presently under consideration, although exact dates cannot be predicted due to financial restraints. These include replacement of a two lane section of Highway 1 with a full freeway in Hatton Canyon, widening Carmel Valley Road to four lanes through to Robinson Canyon Road, and, although unlikely, Canada de la Segunda Road connecting Carmel Valley Road with Highway 68. Construction of these roads would reduce the impacts of this development. It should be noted, however, that this project could cause a growth inducing impact by making the widening of Carmel Valley Road to Robinson Canyon Road a necessity. (See Figure 2.14 for circulation map and Appendix E for additional information on traffic)

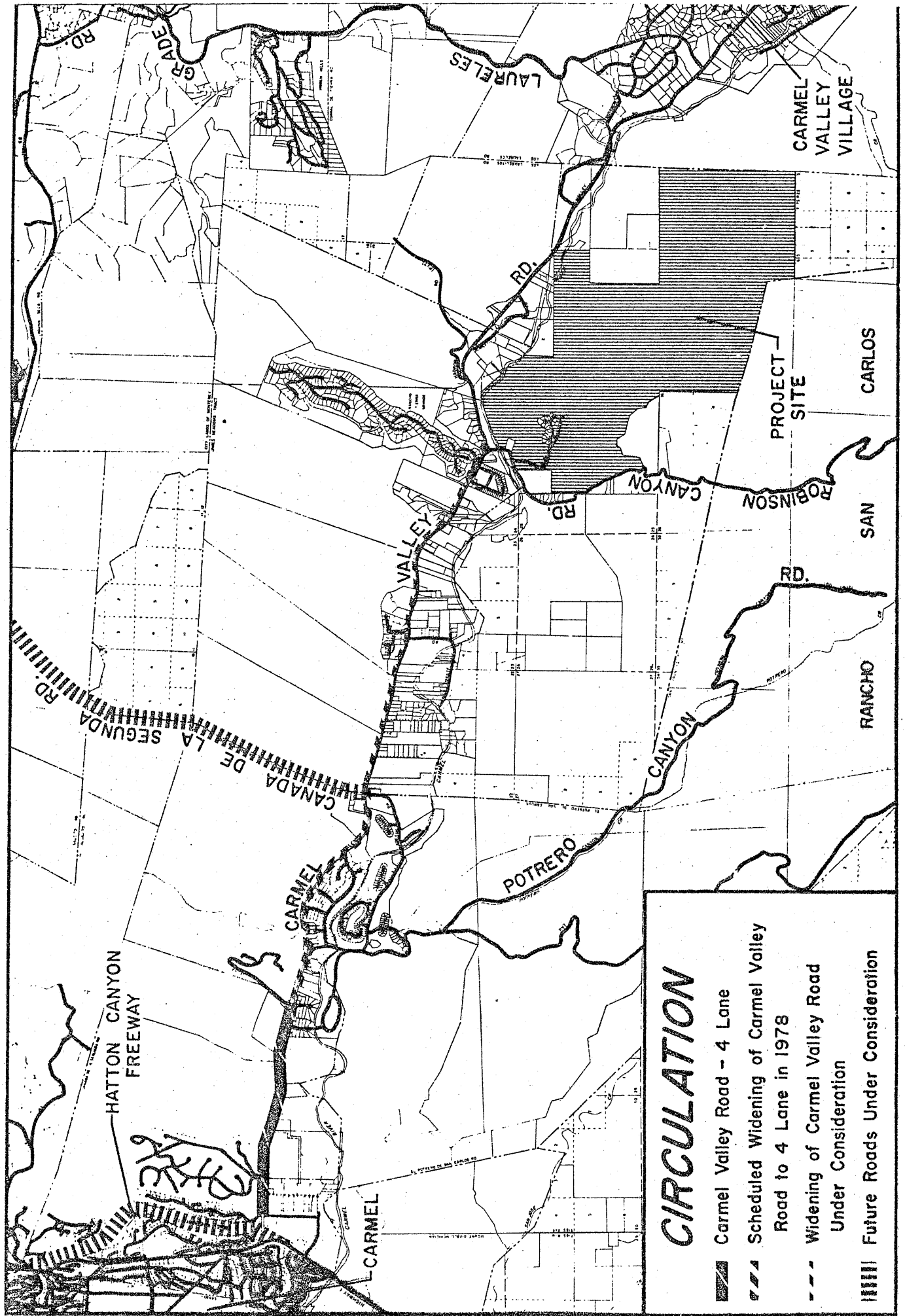


FIGURE 2.14

2.14 Air Quality

In general, air quality in Carmel Valley is better than that experienced in other parts of the Monterey Bay Unified Air Pollution Control District. Oxidant measurements at the Mid-Valley Shopping Center monitoring station exceeded the Federal Standard (.08 ppm) on 37 days for a total of 121 hours between 1973 and 1974. By using the State Air Resources Board unofficial correction factor of .78 for these figures*, only 2 days for a total of 2 hours exceeded the Federal standard between 1973 and 1974.

IMPACT:

Additional air pollution sources from this development include: dust from construction, which is temporary; emissions from natural gas, which are comparatively small; and the more significant amounts of emissions from fireplaces and vehicles.

The following chart indicates the total emissions at full development of the Specific Plan (in pounds per day).

	<u>Co</u>	<u>Hc</u>	<u>NOx</u>	<u>PM</u>
Space Heating ¹	34	14	86	32
Fireplaces ²	1228	352	19	299
Vehicles ³	<u>500</u>	<u>38</u>	<u>104</u>	<u>39</u>
TOTAL	1762	404	209	370

1. 855 D.U. x 2000 feet³/day natural gas consumption x EPA emission factors.
2. 855 fireplaces in D.U.'s plus 1 each at golf clubhouse and lodge x 25 pounds per day wood consumed x ARB emission factors.
3. 24,900 VMT/day off-site at highway speed of 50 mph plus 7700 VMT/day on site at speed of 30 mph x EPA emission factors for year 1990 vehicle mix.

* Preliminary findings (November, 1973) indicate that those monitoring stations using the ARB methodology, which includes this station, have been currently over estimating the measured values by 25 to 30 percent.²³

Emissions from fireplaces and vehicles are potentially significant sources of local pollution when a low-level temperature inversion confines the emissions to the area. Emission rates for vehicles are expected to decline in response to emission control regulations.

The following chart indicates the estimated emissions from vehicular traffic on Carmel Valley Road (in pounds per day):

	<u>Co</u>	<u>Hc</u>	<u>NOx</u>	<u>PM</u>
1973	7997	911	1935	117
Carmel Valley Ranch (1990)	342	26	83	30
1990 Total ^{1*}	2073	157	507	180

1. Includes Carmel Valley Ranch contribution.

The following chart notes vehicular emissions within Monterey County. The vehicular emissions from Carmel Valley Ranch are insignificant compared to the vehicular emissions within the County.

AVERAGE VEHICULAR EMISSIONS OF AIR POLLUTANTS
(Tons Per Day)

	<u>Co</u>	<u>Hc</u>	<u>NOx</u>	<u>PM</u>
1970	275	53.1	21.9	2.2
1971	265	51.6	28	2.3
1972	271.8	53.1	30.7	2.3
1973	227.6	38.4	27.8	2.1
1974	221.8	35.5	23.6	2.1

2.15 Municipal Services and Utilities

2.15.1 Water

The California-American Water Company serves approximately 27,000 customers

* Based on approximately 30% increase in estimated daily vehicle miles travelled (VMT) from 1973 to 1990. In 1990 there will be an estimated 151,200 VMT per day on Carmel Valley Road.²⁴

on the Monterey Peninsula and in Carmel Valley. The service area on Carmel Valley Ranch extends to 300 feet MSL. Currently there is a P.U.C. ruling prohibiting Cal-Am from extending mains to service new customers. As stated in the groundwater section of this report (Section 2.8.1), the applicant proposes to withdraw water for residential use from the newly discovered Synclinal Aquifer.

IMPACT:

Upon total development of the project (1990), water consumption will be divided into the following amounts:

	Peak Day (gallons)	Annual Consumption (acre-feet)
Golf Course Irrigation	440,000	340
Hotel Irrigation	16,000	12
Hotel Domestic	42,000	35
Golf Club Domestic	5,000	4
Residential	<u>440,000*</u>	<u>308*</u>
TOTAL	943,000 g.p.d.	699 acre-feet/year

Assuming there is an adequate supply of water in the Synclinal Aquifer, and that this newly discovered aquifer is separate from the Carmel Valley Aquifer, this development will not compete with Cal-American for the available water from the Carmel Valley Aquifer. Prior to domestic use reaching full capacity most of the water for golf course irrigation must be withdrawn for the Carmel Valley Alluvium Aquifer. The peak will be 340 acre-feet per year during the initial phase, decreasing to approximately 60 acre-feet upon full development. The result will be a decrease from the amount presently used.

Based on selected water quality standards utilized by the U.S. Public Health Service, the quality of water from Holt #1 (drawing from the Synclinal Aquifer) is acceptable as drinking water. The exception is a high iron content indicated for Holt #1 (1.3 p.p.m. versus 0.3 p.p.m. allowable). (See Appendix B for water quality)

* Residential use based on 120 gallons per person per day average, with peak usage of 200 gallons per person per day.²⁵

According to Bill Parsons, Monterey Peninsula Sanitation District, the landfill at Marina is currently utilizing the initial 25 acres, servicing approximately 130,000 people, and there will be no significant impact from this development.²⁷ Elio Chiappe of the Carmel Valley Disposal Service states that no additional manpower will be needed until 800 units are developed, at which point the addition of 2 men and 1 truck will be required.²⁸

2.15.4 Natural Gas and Electricity

Service is provided by Pacific Gas and Electric Company. Facilities are currently serving the Holt Subdivision.

IMPACT:

According to Ray Benson of P.G. & E., facilities necessary to serve this development will not require additional staff.²⁹ The applicant states that all existing and proposed transmission lines will be placed underground where feasible.

2.15.5 Telephone

Carmel Valley is served by Pacific Telephone and Telegraph Company.

IMPACT:

Pacific Telephone and Telegraph Company anticipates no significant problems servicing Carmel Valley Ranch, and no increase in the work force is expected.³⁰

2.15.6 Schools

Carmel Valley Ranch is located within the Carmel Unified School District. Schools that would presently serve this project are the Tularcitos Elementary School (5 miles east), Carmel Middle School (5 miles west) and Carmel High School (6 miles west).

The following chart illustrates the present situation at the various schools:

	Current Enrollment	Capacity
Tularcitos School	374	475
Carmel Middle School	813	800
Carmel High School	1,145	1,000

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The following chart illustrates the present situation at the various schools:

	Current Enrollment	Capacity
Tularcitos School	374	475
Carmel Middle School	813	800
Carmel High School	1,145	1,000

IMPACT:

The proposed Specific Plan would add 413 students to the school district upon full implementation in 1990. According to Dr. Harris Taylor, Superintendent of the Carmel Unified School District, the major impact of increased attendance will be felt at the Middle School and high school. Specifically, this development will require the addition of 7 rooms at the high school, 6 rooms at the Middle School and 3 rooms at the elementary school level. Development will also require 17 additional teachers, 2 additional support personnel and 2 additional classified personnel.³¹ Based on the project phasing plan, approximately 29 new students will be added per year. (See Figure 1.10 for School District revenue and cost analysis)

2.15.7 Police Protection

Police protection is provided by the Monterey County Sheriff's Department, with coverage of Carmel Valley originating at the courthouse in Monterey, approximately 12 miles from the ranch.

IMPACT:

Don Ennis, Monterey County Assistant Sheriff, states there is no immediate need for additional staff. The cumulative impact from additional growth in Carmel Valley, however, will eventually require additional manpower.³²

2.16 Fire Hazard and Fire Protection

Fire protection for Carmel Valley Ranch is currently provided by the State Division of Forestry. Beginning July 1, 1975 fire protection for the area on the ranch up to the Holt Subdivision will convert to the Mid-Valley Fire District, which is in the process of being formed. The Carmel Valley Ranch development will have to meet various requirements of the Mid-Valley Fire District before the entire property could be annexed to the district.³³

The State of California Resources Agency has established criteria to classify fire hazard areas within the state. Vegetation, fire weather and slope are the factors to be considered when classifying a given area. The project site ranges

from moderate to high hazard, with one-half of the site in the high hazard range due to the steepness of slopes and the nature of vegetation.³⁴

IMPACT:

Residential areas in a high fire hazard area must be carefully planned for fire protection. Should a fire occur at this site, it is probable that damage would result to some of the homes. In addition, the increased human activities could result in an even greater fire danger than the site is now exposed to. Fire represents an additional hazard by removing vegetation and increasing the erosion rate.

2.17 Archaeological Resources

A reconnaissance of Carmel Valley Ranch was undertaken by archaeological consultants and no indication of archaeological resources were found.³⁵ There are, however, several sites recorded near the ranch. These are located near the mouth of Robinson Canyon (4-Monterey-26), adjacent to Carmel Valley Road (4-Monterey-27), and at the junction of Carmel Valley Road and Robinson Canyon Road (4-Monterey-499). (See Appendix F for brief history of the site)

IMPACT:

The project will have little impact on known archaeological resources. The applicant states that if artifacts are unearthed during construction an archaeologist will be contacted for assessment.

2.18 Housing Needs of Monterey County

The Housing Element of the Monterey County General Plan forecasts the housing needs for the residents of Monterey County. There are not enough units being constructed at this time to take care of the normal population growth of the County. As an example, it is predicted that between 1970 and 1975 approximately 20,000 housing units will be needed to meet growth demands; included in this number are replacement of older housing units, renovating substandard housing units and construction of additional housing units. These new units must meet the needs of all segments of the population, with a special emphasis placed on supplying the needs

of the County's low and moderate income families.

The following chart illustrates the need for various types of new housing.³⁶

Income Group	Gross Family Income	Number	Percentage
Low (under \$20,000 dwelling unit)	0 - 2,999	4,904	8.6%
	3,000 - 4,999	5,896	10.3%
	5,000 - 7,999	11,242	19.7%
Moderate (under \$37,500 dwelling unit)	8,000 - 9,999	7,533	13.2%
	10,000 - 14,999	15,622	27.4%
Upper (over \$37,500 dwelling unit)	15,000 - 25,000	9,147	16.0%
	25,000 - Over	2,761	4.8%
TOTAL		57,105	100.0%

To find the housing unit affordable the gross family income was multiplied by 2.5. For example, a family income of \$8,000 x 2.5 equals a maximum affordable unit of \$20,000.

It is estimated that the least expensive unit on the Carmel Valley Ranch will cost approximately \$75,000. Units on Carmel Valley Ranch will, therefore, be made available to upper income group families, and probably to those families with gross income of \$25,000 or more. Thus, development of Carmel Valley Ranch would not be meeting the more pressing need of low or moderate income group housing. It should also be noted, however, that units in Carmel Valley have the highest market value of any area in Monterey County.

2.19 Competitive Facilities

Based on Monterey Peninsula Chamber of Commerce figures there are 5,462 transient rooms available on the Peninsula as of February, 1975. At the present time there are also 16 public and private golf courses.

The following list gives the name of the 12 largest hotels or motels and the number of units for each:

1.	Hyatt House	416
2.	Asilomar	285
3.	Royal Inn	200
4.	Holiday Inn on the Beach	196
5.	Holiday Inn in Carmel	165
6.	Hotel San Carlos	149
7.	Del Monte Lodge	135
8.	Highlands Inn	133
9.	Casa Munras	131
10.	Fairgrounds Travelodge	100
11.	Quail Lodge	96
12.	Ramada Inn	80

IMPACT:

When completed the Resort Lodge in the Carmel Valley Ranch development will be the third largest on the Peninsula in terms of guest rooms.

3. ENVIRONMENTAL IMPACT ANALYSIS

3.1 Adverse Environmental Effects That Cannot Be Avoided if the Proposed Plan Is Implemented

The following is a summary of the adverse environmental effects expected to result from implementation of the proposed Specific Plan:

1. Loss of wildlife habitat.
2. Loss of grazing land.
3. Increased load on schools.
4. Increase in traffic.
5. Increase in noise.
6. Increased runoff from site.
7. Visual impact on area from the loss of a natural environment.
8. Increased commitment of energy and resources.
9. Increased erosion potential.
10. Location of residences within the 100-year flood plain of the Carmel River.
11. Growth inducing impact of the addition of 2,200 people in Carmel Valley.
12. Increased demand for water.
13. Increased fire potential.
14. Removal of natural vegetation.
15. Visual and physical impacts on landforms from the cut and fill operations.
16. Short-term increase in air pollution.

3.2 Mitigating Measures Proposed to Minimize the Impact of the Specific Plan as Proposed

Specific environmental studies have been undertaken by the applicant to aid in preparation of the Specific Plan for development of Carmel Valley Ranch. Many of the following mitigating measures have been proposed by the applicant.

3.2.1 Geological Mitigation

- a. Placement of golf course and tennis facilities on stabilized landslides.

- b. Talus cones and aprons on greater than 30% slope and the active landslide will be placed in Open Space.
- c. More extensive soils and drainage studies to recommend mitigation for placement of cut and fill and adequate drainage for landslide areas, and locating exactly where liquefaction can occur.
- d. Down cutting access road to Snivley's Ridge rather than side cutting which would create a larger scar.
- e. Methods used to increase slide stability, such as: buttressing the "toe" area, removal of upper portions of the slide to reduce weight, portions of the slide removed to permit the old slick sliding surface to be broken up and replaced by uniform compacted fill, avoid ponding and having adequate drainage. Consideration should also be given to the influence of earthquake induced lateral forces.

3.2.2 Seismic Mitigation

- a. All structures to be designed to withstand shaking and peak acceleration levels in various parts of the property.³⁷
- b. Investigation by a qualified geologist to pin-point exact fault locations relative to the golf club, valley floor residential clusters and the resort lodge. Included should be recommendations for adequate setbacks and proper foundation design. The applicant states that these recommendations will be included in construction specifications for structures and improvements.

3.2.3 Soils Mitigation

- a. The placement of residential clusters in relatively gentle sloping areas will reduce potential cut and fill amounts.
- b. Complete analysis by a soils engineer to recommend methods to reduce erosion and to locate special problem areas.
- c. Upon completion of grading operations the topsoil should be returned to aid in revegetation. Revegetation should be completed prior to each rainy season.

- d. Use of temporary erosion and sedimentation control devices.
- e. Grading for golf course implemented so as not to affect normal river bank stability.

3.2.4 Climatic Mitigation

- a. Proper tree placement and foundation design to reduce the effects of high winds.

3.2.5 Energy Mitigation

There are several ways in which Carmel Valley Ranch may be designed and operated to make efficient and wise use of energy. Among these are:

- a. Insulation and other protection from heat loss and heat gain.
- b. Alternative means of transportation such as organized car pooling and bicycle lanes on roads.
- c. Use of solar energy for water and space heating.
- d. Building design relative to climatic conditions, such as building orientation to capitalize on natural heating and cooling effects.

3.2.6 Hydrology Mitigation

- a. Using gravelly surfaces for parking lots and driveways.
- b. Use of golf course ponds (separated from wastewater storage ponds) or construction of surge detention siltation ponds that will limit flows to approximately the peak of rate prior to development.
- c. A detailed hydrology study to recommend adequate surface drainage facilities.
- d. Golf course irrigation operated with timers, and consideration of the use of tensiometers.
- e. Location of all residential clusters above the 100-year flood plain.
- f. Heavy construction equipment prohibited from operating in the Carmel River-bed except during period of low flow.
- g. Minimizing surface drainage into the Carmel River reduces the impact the runoff water quality will have on the river.

- h. Floor levels in houses constructed within the 100-year flood plain to be one foot above the 100-year flood level.

3.2.7 Vegetation and Wildlife

- a. The use of vegetation native to Carmel Valley in revegetation of the site.
- b. Revegetation to occur immediately following construction activities and before the rainy season.
- c. A tree removal and vegetation management plan be developed in site plan preparation for the resort lodge and residential clusters in the oak-woodland area. Based on this plan better quality tree specimens, especially those in visually sensitive areas, can be protected.
- d. Use of fire retardant vegetation.
- e. Revegetation of Riparian areas.
- f. Use of cluster type development compared to low density sprawl development.
- g. Avoiding development of areas immediately around existing springs, seeps, streams and watering ponds. Also, providing additional water sources.
- h. Scenic easement coverage of open space.

3.2.8 Traffic and Circulation Mitigation

- a. Use of a shuttle system between the airport and the resort lodge.
- b. A system of golf cart/pedestrian pathways to reduce automobile use. This will also reduce energy consumption.
- c. Extension of public transport down Carmel Valley.
- d. Private shuttle system from Carmel Valley Ranch to existing public transport in the Carmel Rancho Shopping Center.
- e. Extension of Center Street in the Mid-Valley Shopping Center to provide alternative access to Robinson Canyon Road from Carmel Valley Road.
- f. Mitigation for traffic hazards caused by fog include reflective or lighted traffic control markings.

3.2.9 Noise Mitigation

- a. Establishment of a maximum speed limit of 25 - 35 mph within the development.
- b. Plant appropriate vegetation along roadways.
- c. Strategic placing of housing on building sites.

3.2.10 Air Quality Mitigation

- a. Consideration of limiting the number of fireplaces.
- b. Use of golfcart/pedestrian pathways limits automobile use.
- c. Dust generated during construction can be controlled by wetting down the site and stabilizing exposed surfaces.
- d. Reduction in air pollution from vehicles due to more stringent emission regulations.

3.2.11 Visual Mitigation

- a. Down cutting of access road to Snivley's Ridge will minimize visual impact. Sight angles from the valley floor to the elevation of the new road will obscure new cut surfaces.
- b. All utilities will be underground.
- c. Areas of unusual aesthetic value, such as the palisades, will be designated for open space.
- d. Proper site selection and house placement on lots.
- e. Design review by an Architectural Control Committee.
- f. Extensive landscaping throughout the property. Especially the sewage treatment plant, the resort lodge and residences on the valley floor.
- g. Scenic Easement coverage of open space in perpetuity.
- h. Limited development and construction along ridgelines.

3.2.12 Sewage Treatment Plant Mitigation

- a. Lining of sewage storage ponds.

- b. Location of treatment plant so that any odors are not carried directly to any existing or proposed residences or the resort lodge.
- c. Satisfactory visual screening of facility.
- d. Location in a flood proof area.
- e. No discharge is made to the Carmel River or the underground aquifer.
- f. Storage ponds large enough to handle peak flows.
- g. No accessibility by the public to the sewage treatment ponds.

3.2.13 Archaeological Mitigation

- a. The applicant states that if artifacts are unearthed during construction an archaeologist will be contacted for assessment. This should be through the South Central Coast Clearinghouse at U.C. Santa Cruz.

3.3 Alternatives of the Proposed Specific Plan

3.3.1 No Project

This alternative would have the least impact on the natural environment. With no development on this site it would retain its usefulness as a grazing area and wildlife habitat. This alternative would also preserve the ranch for future land use options.

3.3.2 Another Site

The relocation of this project closer to an urban center is a viable alternative. This alternative would reduce the effects of non-contiguous growth.

3.3.3 Carmel Valley Master Plan Alternative

According to the Carmel Valley Master Plan, adopted by the Board of Supervisors in 1961, the portion of the property below Snivley's Ridge was designated for Rural Residential Expansion (based on 3.2 persons per net acre). This alternative could potentially create a greater disruption of the environment. "Low density sprawl" communities compared to higher density developments result in higher economic costs, environmental costs and natural resource consumption for a given number of dwelling units.³⁸

3.3.4 Del Monte Carmel Valley Ranch Plan Alternative

The Del Monte Carmel Valley Ranch Plan, which is the existing plan for the property, calls for a range of from 500 units to 1500 units. A reduction in density to 500 units could reduce the impact on the site by requiring less grading, which would result in less potential for erosion. This alternative might present itself as an excellent way to mitigate the adverse impacts of Section 3.1. An increase in density to 1500 units would result in greater degradation of the natural environment. It should be noted that the Del Monte Carmel Valley Ranch Plan does not restrict development on the three landslides, in areas of steep slope or in the palisades area.

3.3.5 Monterey Peninsula Area Plan Alternative

The Monterey Peninsula Area Plan, which is superceded by the Carmel Valley Ranch Plan, designates the valley floor area as Rural with 1 family per net acre, the area adjacent to the valley floor is designated as greenbelt, and the remaining areas of the property are designated as Agriculture and Grazing. This plan limits development to the relatively flat valley floor, and comparatively, the effects on other areas of the property would be less. This plan and the Specific Plan would have a similar visual impact from Carmel Valley Road.

3.3.6 Design Alternatives

Other design configurations and operational procedures include:

- a. Less intensive structural development on the valley floor.
- b. More intensive development of the Snivley's Ridge area.
- c. Different access road arrangements.
- d. Variations in golf course routing.
- e. Connection to the Carmel Sanitary District trunk line.
- f. Alternate means of access to Carmel Valley Road.

3.4 The Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

The property is presently useful for grazing and as a scenic and open space

resource supporting a natural and interesting plant and animal community. Implementation of the proposed Specific Plan will commit 600 acres of the land to an urban use for an indefinite number of years.

If this proposed plan is implemented it will enhance the long-term productivity of the property in terms of social and cultural benefits, however, it will replace a natural self-perpetuating environment with low maintenance requirements (in terms of energy and material) for a non-perpetuating human environment with high maintenance requirements. Therefore, a decision has to be made as to whether the need for this project is greater than the need of this land for grazing and wildlife habitat.

3.5 Irreversible Environmental Changes That Would Be Involved in the Proposed Plan Should it be Implemented

The proposed project will commit this property to a specific urban use for an essentially permanent period of time. Grading and the construction of buildings and roads are virtually irreversible uses of the land. The project will alter the visual and aesthetic resources of the site. Also, a reduction of resident wildlife population and damage to vegetation and wildlife habitat will occur.

3.6 Growth Inducing Impact of the Proposed Plan

An estimated 2,200 people will live in the 855 housing units. The project itself will induce population growth in Carmel Valley, although not by 2,200 people as some families would choose to live elsewhere in the valley if the project was not built. However, a portion of the families will be induced to live in Monterey County because of this project. (See Figure 3.1 for growth patterns on the Monterey Peninsula and in Carmel Valley)

There will be additional population growth inducement from this project other than the people who will live there. The 133 jobs created will support about 106 households, bringing some families to the area and enabling some other families, who would otherwise move elsewhere to find work, to remain in the area.

The additional residents will also require the creation of new jobs to pro-

vide them with the services they need. For example, it is estimated that 21 new teachers and support personnel are required to educate the children. The induced jobs will include bank clerks, mechanics, barbers, painters, store clerks, carpenters and dentists. Most of these jobs will not be held by residents of Carmel Valley Ranch, as a household income of over \$25,000 is needed to live there. Few of the created jobs will provide this income and additional growth will result.

Carmel Valley Ranch could initiate a growth inducing effect situation in Carmel Valley. The cumulative effect of residential developments may bring about the extension of municipal services such as gas, water and sewer service. If this happens, a growth inducing effect might occur by merely having these services available for the surrounding undeveloped areas.

The Mid-Valley Shopping Center, located .5 miles from the project, will be the commercial area most likely affected by this development. A positive effect on Carmel Valley could result through the addition of commercial establishments concentrated in this area. By creating a larger shopping complex, people in the valley would not necessarily have to drive to the mouth of the valley or further to find needed goods.

The cumulative effects of growth in Carmel Valley must also be considered. A determining factor will be the supply of water, however, other impacts such as increased traffic, increase in noise associated with traffic, the loss of wildlife habitat, the effects of increased land values on undeveloped lands, and visual impacts from the loss of natural areas will also effect the environmental setting in the valley.

MONTEREY PENINSULA AREA

MAJOR PROPERTIES - 1970

- Parcels 20 Acres And Larger
- ▨ Subdivided* Or Developed Areas
- ▧ Project Site
- Planning Area

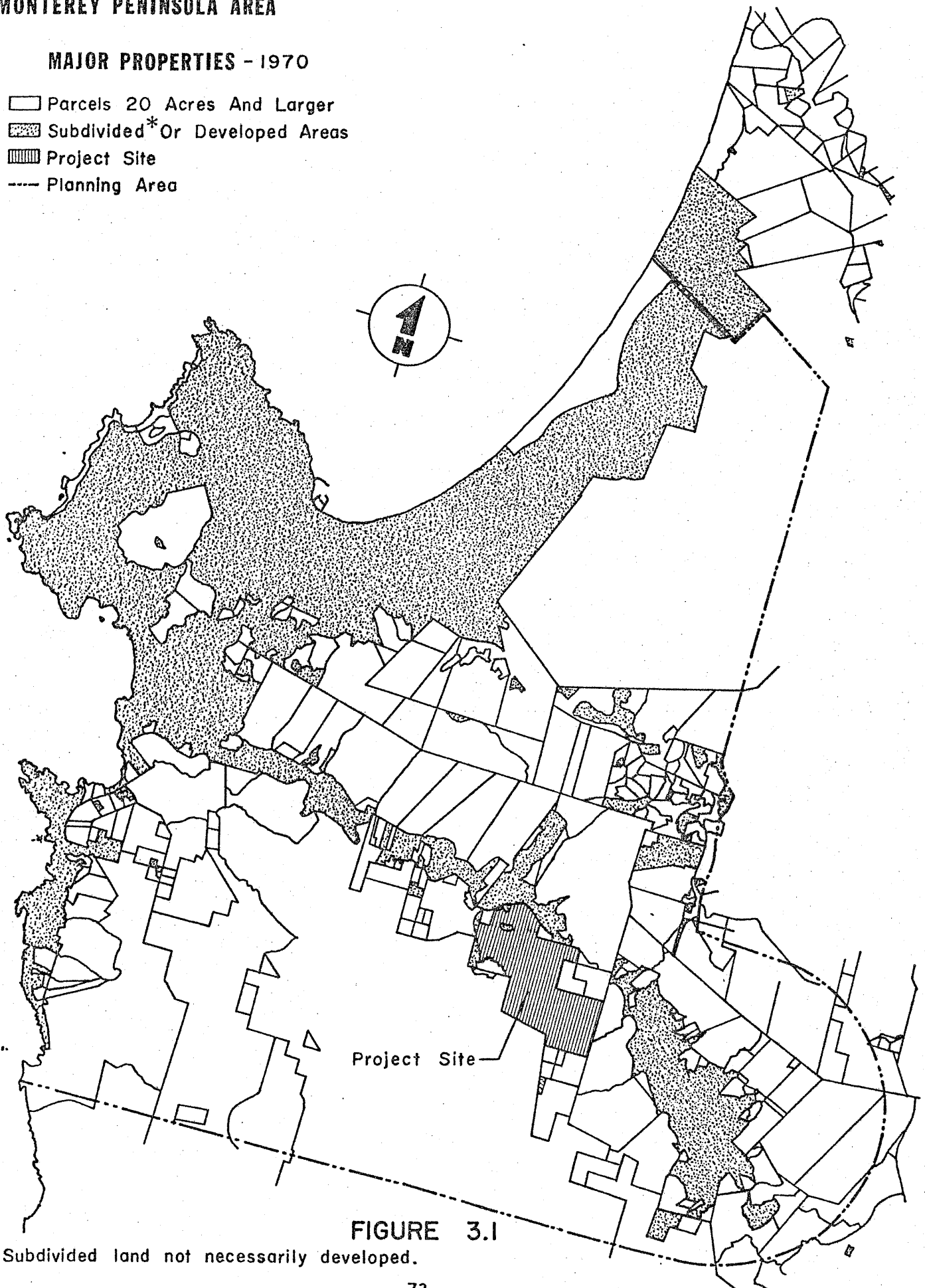


FIGURE 3.1

*Subdivided land not necessarily developed.

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