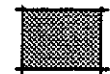
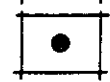


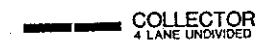

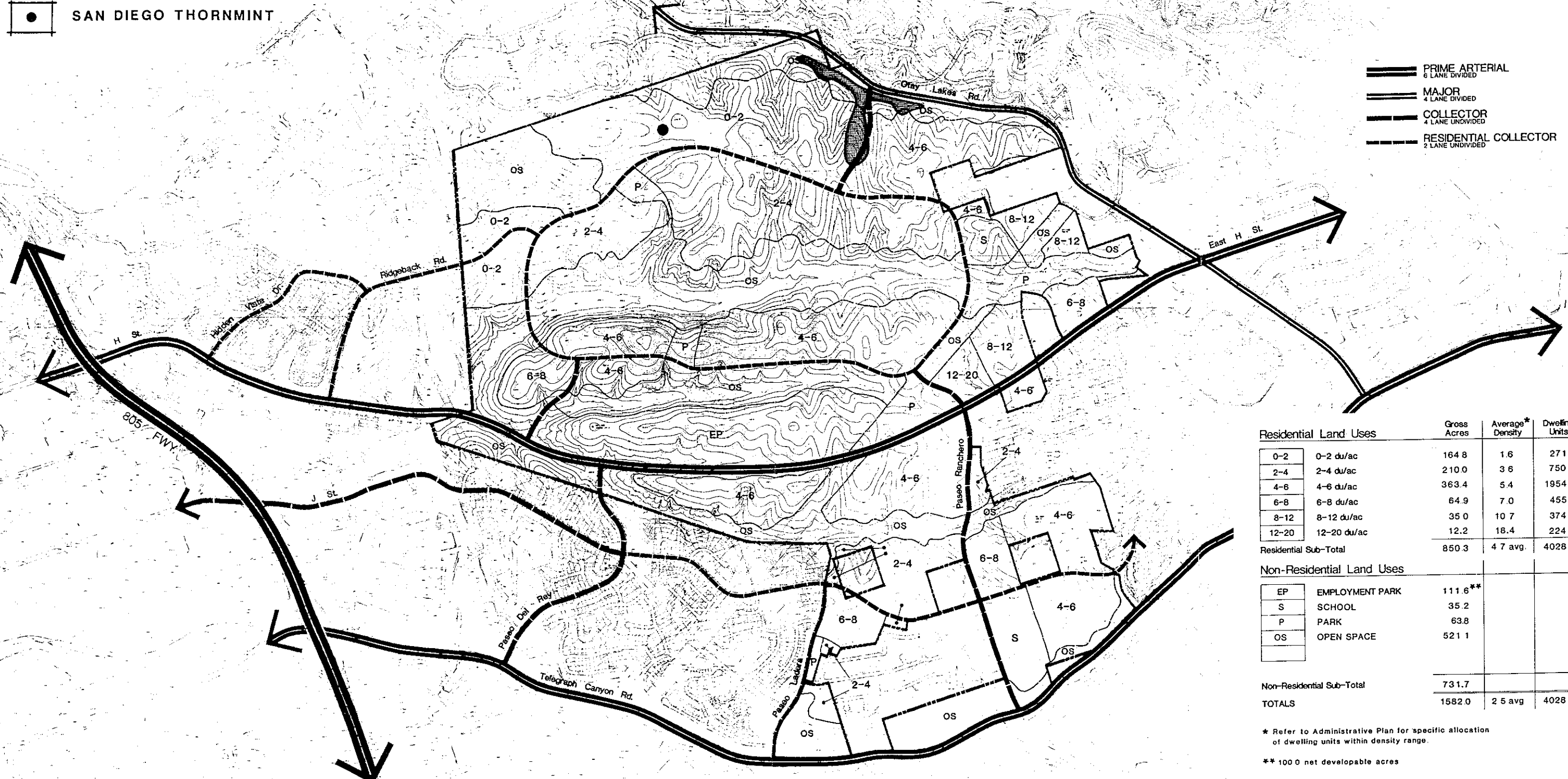


EL RANCHO DEL REY PROPOSED SPECIFIC PLAN GERSTEN AMENDMENT AREA

LEGEND

-  OTAY TARWEED
-  SAN DIEGO THORN MINT

-  PRIME ARTERIAL
6 LANE DIVIDED
-  MAJOR
4 LANE DIVIDED
-  COLLECTOR
4 LANE UNDIVIDED
-  RESIDENTIAL COLLECTOR
2 LANE UNDIVIDED



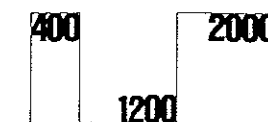
Residential Land Uses		Gross Acres	Average* Density	Dwelling Units
0-2	0-2 du/ac	164.8	1.6	271
2-4	2-4 du/ac	210.0	3.6	750
4-6	4-6 du/ac	363.4	5.4	1954
6-8	6-8 du/ac	64.9	7.0	455
8-12	8-12 du/ac	35.0	10.7	374
12-20	12-20 du/ac	12.2	18.4	224
Residential Sub-Total		850.3	4.7 avg.	4028
Non-Residential Land Uses				
EP	EMPLOYMENT PARK	111.6**		
S	SCHOOL	35.2		
P	PARK	63.8		
OS	OPEN SPACE	521.1		
Non-Residential Sub-Total		731.7		
TOTALS		1582.0	2.5 avg	4028

* Refer to Administrative Plan for specific allocation of dwelling units within density range.

** 100.0 net developable acres

DISTRIBUTION OF TWO ENDANGERED PLANT SPECIES

7/12/85



Cinti & Associates

3151 Arway Avenue, Suite C-3
Costa Mesa, California 92626



EXHIBIT 3-1

3.1.2 Impacts

The proposed Specific Plan Amendment, as presently designed with the retention of much of the north leg of Rice Canyon in open space, is similar from a biological resources perspective to the adopted Specific Plan. Slight modifications to the proposed plan, added since submittal of the Specific Plan Amendment Final EIR and Addendum, will have a negligible effect on the biological resources of the site. Therefore, with respect to existing conditions, as described in the Final EIR, discussions of project impacts in that document are adequate. As additional information on sensitive biological resources obtained by MBA was not available at the time the EIR was being prepared, and, as this additional information has not been analyzed with respect to the modified Specific Plan Amendment, a discussion of project impacts resulting from the modified plan in light of this new information is necessary.

Overall ecological values would be similarly impacted by both the adopted Specific Plan and proposed Specific Plan Amendments. Both plans provide similar amounts and configurations of open space, including contiguous open space and wildlife corridors.

With respect to habitats, less coastal sage scrub is retained in the northern portion of the site in the proposed Specific Plan Amendment; however, more coastal sage scrub is retained in the southern portion of the site. A small net loss of coastal sage scrub would result from implementation of the proposed Specific Plan Amendment. Roughly equal proportions of grassland and riparian woodland habitats are retained in each plan and more of the mima mound annual forb community would be retained in the proposed Specific Plan Amendment.

The impacts upon sensitive species resulting from implementation of either specific plan are summarized in Table 3-1. Impacts to sensitive species would be similar with respect to implementation of either plan, with a slightly greater collective impact resulting from implementation of the proposed amendment.

TABLE 3-1

IMPACT ANALYSIS - ADOPTED SPECIFIC PLAN VS. PROPOSED
SPECIFIC PLAN AMENDMENT

<u>Species</u>	<u>Status</u>	<u>Impact (Loss)</u>	
		<u>Adopted Plan</u>	<u>Amendment</u>
San Diego sunflower	357 acres	246	247
pygmy spike-moss	264 acres	231	232
snake cholla	140 acres	119	121
coast barrel cactus	100 acres	80	85
Otay tarweed	14 acres	4	6
California adder's-tongue fern	29 populations	27	29
Orcutt's bird's beak	5 populations	4	5
Palmer's goldenbush	3 populations	1	1
variegated dudleya	3 populations	1	1
velvet cactus	2 populations	2	1
San Diego thornmint	1 population	1	1
Palmer's grapling hook	1 population	1	1
black-tailed gnatcatcher	33 sightings	18	20
cactus wren	22 sightings	13	13

With respect to ecological values, sensitive habitats and sensitive species, both the adopted and proposed specific plans present similar impacts, with the proposed plan only slightly less favorable. With respect to impacts upon biological resources the differences between the two plans are considered insignificant.

Specific impacts upon the San Diego thornmint and the Otay tarweed resulting from implementation of the proposed Specific Plan Amendment are analyzed in detail below:

The thornmint population is in an area designated for residential land use with 0 to 2 dwelling units per acre, and is within 50 meters of the loop road connecting various proposed subdivisions within the El Rancho del Rey planning area. The bulk of the Otay tarweed population is located in proposed open space adjacent to Otay Lakes Road. While open space contains only 8 of the 14 acres of tarweed, the densest

populations are all contained within open space. The more sparsely distributed plants on the hillside south of the main population, however, are either in the right-of-way for a proposed connector road between Otay Lakes Road and the proposed loop road, or in an area presently designated for low density residential development.

3.1.3 Mitigation

Mitigation efforts, other than those presented in the Specific Plan Amendment Final EIR and Addendum (WESTEC 1985), should be directed toward the preservation of the two state-listed endangered plant species on the site — the San Diego thornmint and the Otay tarweed — both of which were located subsequent to the preparation of the EIR. The mitigation measures outlined below are designed to retain as much of the existing populations of these two plants as feasible and to assure their future survival on the site through plant transportation programs.

- o Retain the thornmint population by designating an open space buffer area 50 meters wide to the east, west and south of the thornmint population, and to the ridgeline north of the population.
- o Revegetate the graded shoulder of the loop road in the vicinity of the thornmint with native perennial species such as coyote bush (Baccharis pilularis spp. pilularis), white sage (Salvia apiana) or jojoba (Simmondsia chinensis) to discourage the establishment of weeds.
- o Relocate the connector road a minimum of 75 meters east of its presently proposed location to avoid impacting the bulk of the tarweed population.
- o Include the hillside population of Otay tarweed in open space contiguous with currently proposed open space areas adjacent to Otay Lakes Road.
- o Protect populations of the San Diego thornmint and Otay tarweed from unauthorized human encroachment through the establishment of pathways and bikeways that lead around or away from these critical areas, by the creation of appropriate barriers to prevent access of motor bikes, and through the establishment of additional walls or fencing where necessary.



- o Provide for a qualified botanist to be onsite during the grading phase of road construction in the vicinity of the San Diego thornmint and the Otay tarweed; such botanist to be selected by the City of Chula Vista and to be responsible for establishing a temporary exclusion area around these two plant populations to insure their safety during the period construction equipment is being operated in the vicinity.

- o Allow for the establishment of a responsible rare plant transplantation program to be conducted by a qualified botanist or conservation organization. Provisions of this program would include access by a botanist to all rare or endangered plant species populations at least one calendar year prior to construction, as well as access to suitable relocation areas in the designated open space elsewhere on the property. Specifically, existing populations of rare or endangered plants, notably the San Diego thornmint and Otay tarweed, but also other species such as Orcutt's bird's beak and variegated dudleya, would serve as natural reservoirs of source material for transplantation to other sections of the property where suitable habitat exists. Creation of additional populations of these species on the site will offset potential losses in the source areas due to unforeseen or unavoidable circumstances, natural or otherwise, and ensure their long-term survival on the property.

Further details of the above mitigation measures should be established during the development phase of each sectional planning area, as appropriate.

SECTION 4
ALTERNATIVES TO THE PROPOSED PROJECT

Alternatives to the proposed specific plan amendment have been adequately addressed (WESTEC 1985).



SECTION 5
UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL IMPACTS

Unavoidable significant environmental impacts were addressed in the original specific plan amendment EIR (WESTEC 1985). Inasmuch as implementation of the project will impact recently discovered sensitive plant species on the property, these regionally significant plant populations will be diminished. The loss of sensitive plant resources can be largely mitigated through the retention of natural open space in areas where these species occur; however, the loss of a small fraction of the Otay tarweed population during construction of a connector road, and the inevitable loss of a few additional plants of this and other species from unauthorized trespass and encroachment of nonnative nuisance species such as mustard and European grasses, will constitute unavoidable adverse impacts.

SECTION 6
REFERENCES CITED

- California Department of Fish and Game (CDFG). 1984. "Designated Endangered or Rare Plants." Summary list from Section 1904 Fish and Game Code (Native Plant Protection Act). Revised July 1, 1984. State of California Resources Agency, Sacramento, California. 5 pp.
- Fish and Wildlife Service (FWS). 1984. Endangered and Threatened Wildlife and Plants. Federal Register 50 CFR 17.11 and 17.12. U.S. Department of the Interior, Reprint. 13 pp.
- Michael Brandman Associates, Inc. (MBA). 1985. A Comparative Evaluation of Specific Plans for El Rancho del Rey with Respect to Sensitive Biological Resources. Prepared for The Gersten Companies.
- Munz, P. A. 1974. A Flora of Southern California. University of California Press, Berkeley, California. 1086 pp.
- WESTEC Services. 1985. El Rancho del Rey Specific Plan Amendment Final Environmental Impact Report. Prepared for the City of Chula Vista.

ADDENDUM

EIR-83-2
EL RANCHO DEL REY

Prepared in Accordance with Section 15164
of the State CEQA Guidelines

Section 1. Introduction

This addendum to the Environmental Impact Report for the El Rancho del Rey Specific Plan (EIR-83-2) is intended to determine if the development of the subject property could result in any significant environmental impacts that were not evaluated in the previous EIR.

Section 2. Project Description

The property is a vacant 9 1/2 acre site located on the north side of East 'H' Street, just west of the proposed extension of Buena Vista Way. The site is at approximately the same elevation as East 'H' Street and dropping some 75 feet into a canyon floor at the north end.

The applicant is proposing to develop a church sanctuary of nearly 9,000 sq.ft. having a seating capacity for 435. In addition, a school building that would accommodate some 700 students, first grade through junior high, together with a gymnasium, various miscellaneous structures including living quarters, would constitute a total building area of just over 52,000 sq.ft. It is the applicant's intent to build this facility in a phased program; Phase I would consist of the construction of the pre-school and parish hall together with the storage building and garage and a portion of the parking lot to meet the City standards; Phase II would involve the construction of the school excluding the junior high wing, with the third phase to follow calling for the construction of the main sanctuary. The fourth and final phase would involve construction of the gymnasium and junior high wing and the associated athletic field shown at the north end of the property.

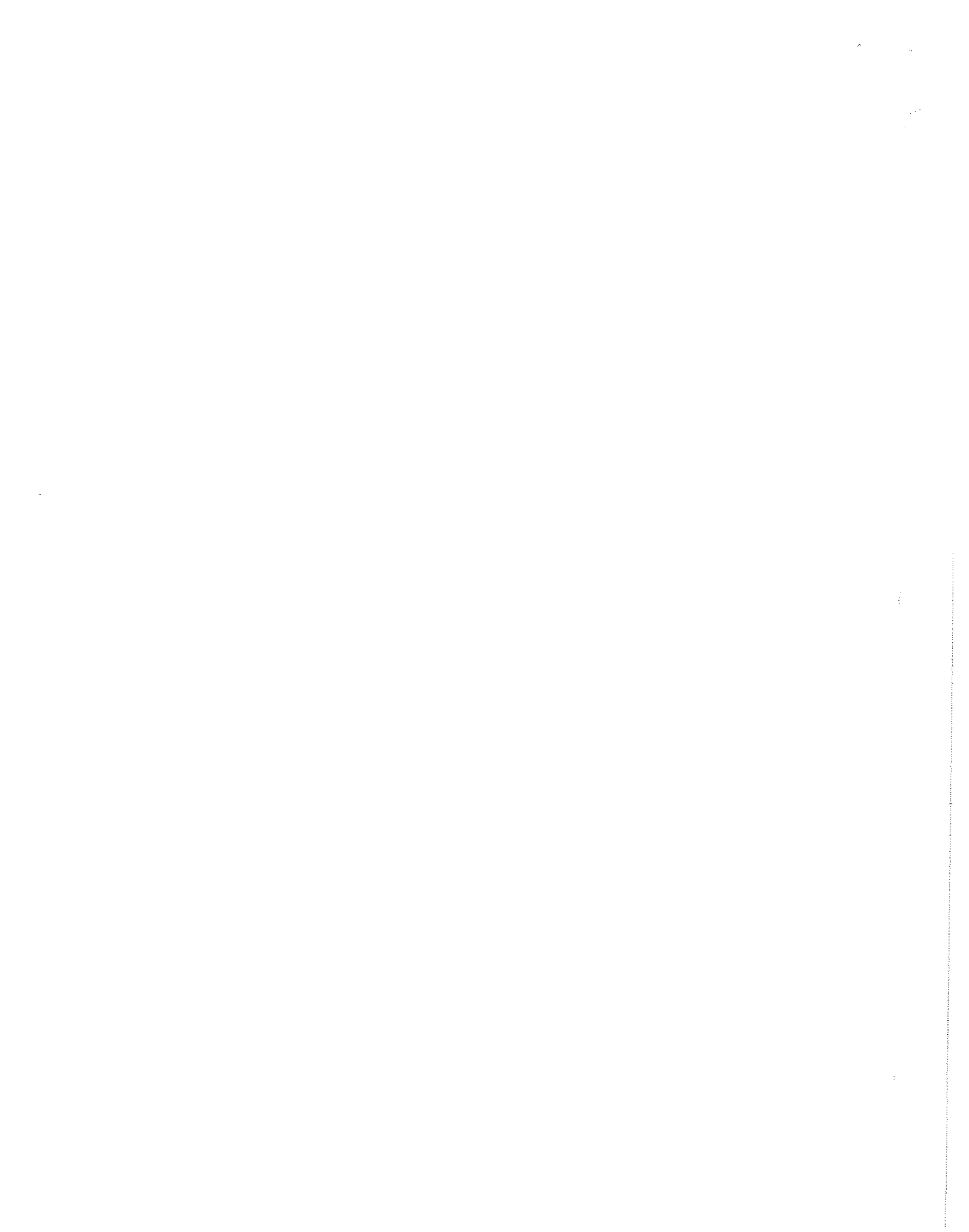
Section 3. Analysis

The proposed project is to be developed in accordance with the land use assumptions for the El Rancho del Rey EIR. This site is identified in the now certified final EIR as a public facilities location, and it was anticipated that a church type facility would utilize the property.

Subsequent to the preparation of the EIR a more detailed biological survey was conducted on the site which concluded:

SIGNIFICANT BIOLOGICAL RESOURCES

The Inland Sage Scrub vegetation, as seen on-site, is considered to be sensitive due to the extensive destruction of that vegetation type and because of the several sensitive plant or animals often found there.



The Scrub vegetation on-site is of moderate to good quality, based on the low level of disturbance, and does contain several sensitive plants. The small size of the site, however, speaks against its sensitivity.

Similarly, the low numbers of coast barrel cacti and lack of young plants suggests that the population is declining or static in size. It would be useful if the plants on-site would be salvaged for cultural purposes. Transplantation in the area may be useful, however, receptor sites are becoming filled. One site in Spring Valley is known. That site should be available in late spring of 1986.

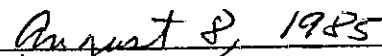
RECOMMENDED MITIGATION TO REDUCE BIOLOGICAL IMPACT

Due to the small size of the parcel, low numbers of rare plants and animals and low sensitivity of those plants and animals, no significant biological impacts appear to be associated with this development project; therefore, no mitigation recommendations are made.

All other impacts associated with this project have been evaluated in EIR-83-2 and no further environmental review is required.



Douglas D. Reid
Environmental Review Coordinator



Date

EL RANCHO DEL REY
SPECIFIC PLAN AMENDMENT
FINAL ENVIRONMENTAL IMPACT REPORT

City of Chula Vista Number: EIR-83-2
State Clearinghouse Number: 83060803

Prepared For:

City of Chula Vista
Planning Department
P.O. Box 1087
Chula Vista, California 92012

Prepared By:

WESTEC Services Inc.
Project No. 30142
3211 Fifth Avenue
San Diego, California 92103

DRAFT
October 1984

FINAL
March 1985

PREFACE

This three-volume document comprises the Final EIR for the El Rancho del Rey Specific Plan Amendment (Volume 1 consists of the addendum, Volume 2 consists of the EIR and the response to comments, in addition to the supplemental traffic report, and Volume 3 consists of the EIR Appendices which is on file at the City of Chula Vista Planning Department). A Notice of Preparation was circulated to allow public comment prior to EIR preparation. Subsequently, a Draft EIR was completed for the proposed project and circulated for a 45-day public review in October 1984. Additional information regarding the project is available for review at the City of Chula Vista Planning Department.

After the public review period was completed, the project was altered in response to public concerns and planning recommendations. An Evaluation of Adequacy analysis and report was completed in order to determine if the EIR adequately addresses environmental concerns of the revised project. Responses were prepared for comments received during the public review period. The evaluation of adequacy report, the EIR, and the response to comments, together, constitute the Final EIR. Additional information regarding the project is available for review at the City of Chula Vista Planning Department.

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ADDENDUM TO EIR-83-2
Prepared in Accordance With
Section 15164 of the State CEQA Guidelines

EVALUATION OF ADEQUACY OF
ENVIRONMENTAL IMPACT REPORT FOR
REVISED EL RANCHO DEL REY
SPECIFIC PLAN AMENDMENT

City of Chula Vista Case Number: EIR-83-2
State Clearinghouse Number: 83060803

Prepared For:

City of Chula Vista
Planning Department
P.O. Box 1087
Chula Vista, California 92012

Prepared By:

WESTEC Services, Inc.
Project No. 30142
3211 Fifth Avenue
San Diego, California 92103

March 1985

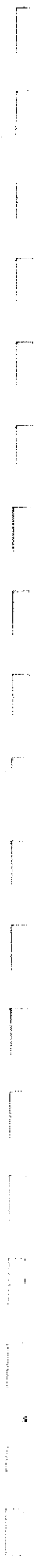


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2	PROJECT DESCRIPTION	2-1
3	ISSUE ANALYSIS AND COMPARISON	3-1
4	CERTIFICATION OF ACCURACY	4-1



SECTION 1 INTRODUCTION

This report has been prepared to determine if the EIR, prepared for the original El Rancho del Rey Specific Plan Amendment proposal, adequately addresses the potential environmental effects of the revised project proposal and revisions proposed by the Planning Department staff.

The original project involved a specific plan amendment for 1673.5-acres within the existing 2450-acre El Rancho del Rey Specific Plan. Since the El Rancho del Rey Specific Plan is the official land use designation for this property in the Chula Vista General Plan, the proposed amendment to the specific plan will in effect also amend the General Plan. A Draft EIR was prepared and circulated for public review in October 1984. Subsequent to public review of the DEIR, several proposed land use designations were altered and a 10.2-acre out parcel was excluded from the project. The proposed project revisions are described in Section 2 of this report, along with a summary of the original project. The original project was revised to reduce environmental impacts to the project area.

The City of Chula Vista's planning staff proposed further revisions to the revised project plan. These revisions are also described (in Section 2) and analyzed in this Evaluation of Adequacy report.

Under Section 15067 of the Administrative Guidelines to CEQA and Sections 5.8 and 5.9 of the City of Chula Vista Environmental Review Procedures, no additional EIR need be prepared for project changes unless those changes would result in new significant environmental impacts not considered in a previous EIR on the project. The purpose of this analysis is to present the basis for determining whether the previous EIR is adequate for the revised project.

This evaluation is an addendum to EIR-83-2. It has concluded that there is no need for any significant new information to be added to the text of the EIR. Therefore, in accordance with Section 21092.1 of the Public Resources Code (California Environmental Quality Act), no further notification or public/agency review is required.



SECTION 2 PROJECT DESCRIPTION

The El Rancho del Rey project area is a 1663.3-acre site located in the eastern sector of the City of Chula Vista, east of Interstate 805. The subject property is bounded for the most part on the west, north and east by residential development with land to the south of Telegraph Canyon Road being primarily agricultural land of the Otay Ranch. The property is vacant, with the exception of a water tank, and primarily covered by native scrub plant communities. The EIR includes a detailed discussion and maps of the project location and existing site conditions.

SUMMARY OF ORIGINAL PROJECT CHARACTERISTICS

The original project involved a Specific Plan Amendment for 1673.5-acres of the 2450-acre El Rancho del Rey Specific Plan. Figure 2-5 on page 2-8 of the EIR text depicts the originally proposed land use configuration. The original amendment proposal involved an increase in the maximum permitted dwelling units from 4220 to 5928. Subsequent to the completion of the draft EIR, the reported land use acreages and number of dwelling units allowed of the adopted plan were checked and discrepancies were discovered. The adopted plan could allow a maximum of about 4500 dwelling units to be constructed in the plan area as opposed to the previously reported total of 4220 units. The revised land use acreages of the adopted Specific Plan are presented in Table 2-1. The original project proposed a shift from predominantly low-density single-family units to more small lot single-family homes and multiple-family units. The Plan also provided a 93.4-acre employment park designation adjacent to East H Street. Other land use changes proposed by the original plan included the addition of a public facilities designation to accommodate community service uses (9.9-acres), an increase in acreage designated for parks/recreation uses (from 31.0-acres to 90.5-acres), and a decrease in natural open space acreage. The decrease in natural open space and increase in parks/recreation acreage was associated with the north leg of Rice Canyon which was planned to be partially filled for active parks/recreational uses. The center leg of Rice Canyon was planned for a natural open space area in place of the north leg. A slightly greater total quantity of grading would have been required to implement the originally proposed amendment than the adopted plan. The circulation system for the previous project involved a modification in the adopted plan's "grid" system. The proposed amendment created a loop system, in the northern plan area, with fewer direct connections through the site to reduce through trips to the area. The west connection of the loop system to H Street was planned to run along the bottom of the north leg of Rice Canyon.

Table 2-1
 REVISED LAND USE ACREAGES FOR THE ADOPTED SPECIAL PLAN

Land Use	Gersten Property		Out Parcels		Total Both Acres	
	Acres	Units	Acres	Units	Acres	Units
Residential (du/ac):						
1-2	250.7	502	—	—	250.7	502
2-3	211.9	634	10.0	32	221.9	666
3-5	375.4	1,879	30.3	150	405.7	2,029
6-10	110.1	1,103	10.0	102	120.1	1,203
11-18	5.4	97	5.1	91	10.5	188
0-2						
2-4						
4-6						
6-8						
8-12						
12-20						
Subtotal	953.5	4,215	55.4	375	1,008.9	4,588
Du/Ac		4.4		6.7		4.5
Employment Park						
Schools	50.0		20.0		70.0	
Public Facilities						
Parks/Recreation	31.0		—		31.0	
Open Space	547.5		5.9		553.4	
Subtotal	628.5		25.9		654.4	
TOTAL	1,582.0		81.3		1,663.3	

*Includes only those portions affected by the proposed amendment. Averages include streets (gross area).

REVISED PROJECT

Subsequent to public review of the draft El Rancho del Rey Specific Plan Amendment EIR and in conjunction with the City of Chula Vista staff recommendations, the applicant has submitted a revised project. The original Specific Plan Amendment was revised in order to further minimize environmental effects associated with the development of this natural area.

The open space system of the revised plan has been changed to more closely follow the proposed open space system in the adopted specific plan. The north leg of Rice Canyon had been proposed to be filled in order to provide an extensive active parks/recreation area. The revised plan proposed to designate the entire canyon as a natural open space area with the exception of the property located east of the "loop road." This area would be designated for park/recreation land uses. The designated open space area provided by the revised plan would total 513.2-acres. The increase in natural open space would substantially reduce biological impacts identified with the previously proposed plan. As a result of the increase in natural open space, the previously proposed parks/recreation land uses would be decreased by approximately 34-acres, for a total of 56.3-acres; however, the revised plan still allows for a substantial increase in parks/recreation land uses from the adopted specific plan.

The maximum potential number of proposed dwelling units was reduced from the previously proposed 5928 units to 5141 units and the employment park was expanded from 93.4-acres to 151.6-acres. Because the employment park area may be in excess of the market demand, a maximum of 34-acres may be used for up to a maximum of 400 dwelling units, subject to City Council approval. Other minor land use changes from the previously proposed project included a 2-acre reduction in designated public facilities land uses and a 1-acre increase in potential school land uses.

The circulation system was also slightly altered in order to provide a more biologically sensitive plan and a smoother circulation network. The two southern connector roads from the loop road were realigned; the southwestern connector road was shifted to the east, out of the north leg of Rice Canyon and the southeastern connector road was aligned with Paseo Ranchero Road in order to create a four-way intersection instead of two, three-way intersections. An oversized culvert would be placed under the loop road where it crosses the main leg of Rice Canyon to allow uninhibited wildlife movement. Figure 1 depicts the proposed Specific Plan and Table 2-2 includes the land use acreages and maximum number of dwelling units allowed by the plan.

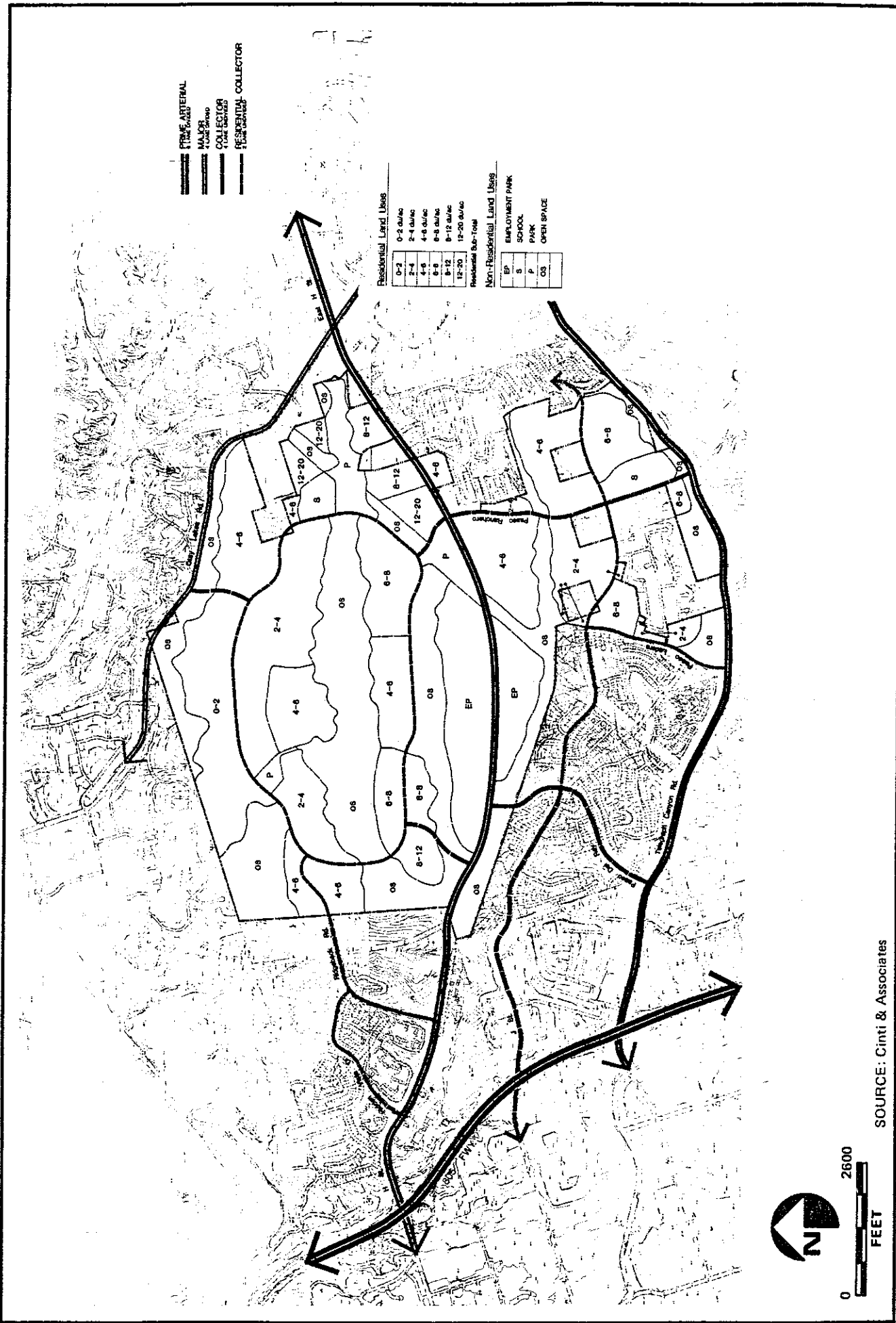


FIGURE 1

Proposed Specific Plan for the El Rancho del Rey Plan Amendment Area

Table 2-2

LAND USE ACREAGES FOR THE PROPOSED SPECIFIC PLAN *

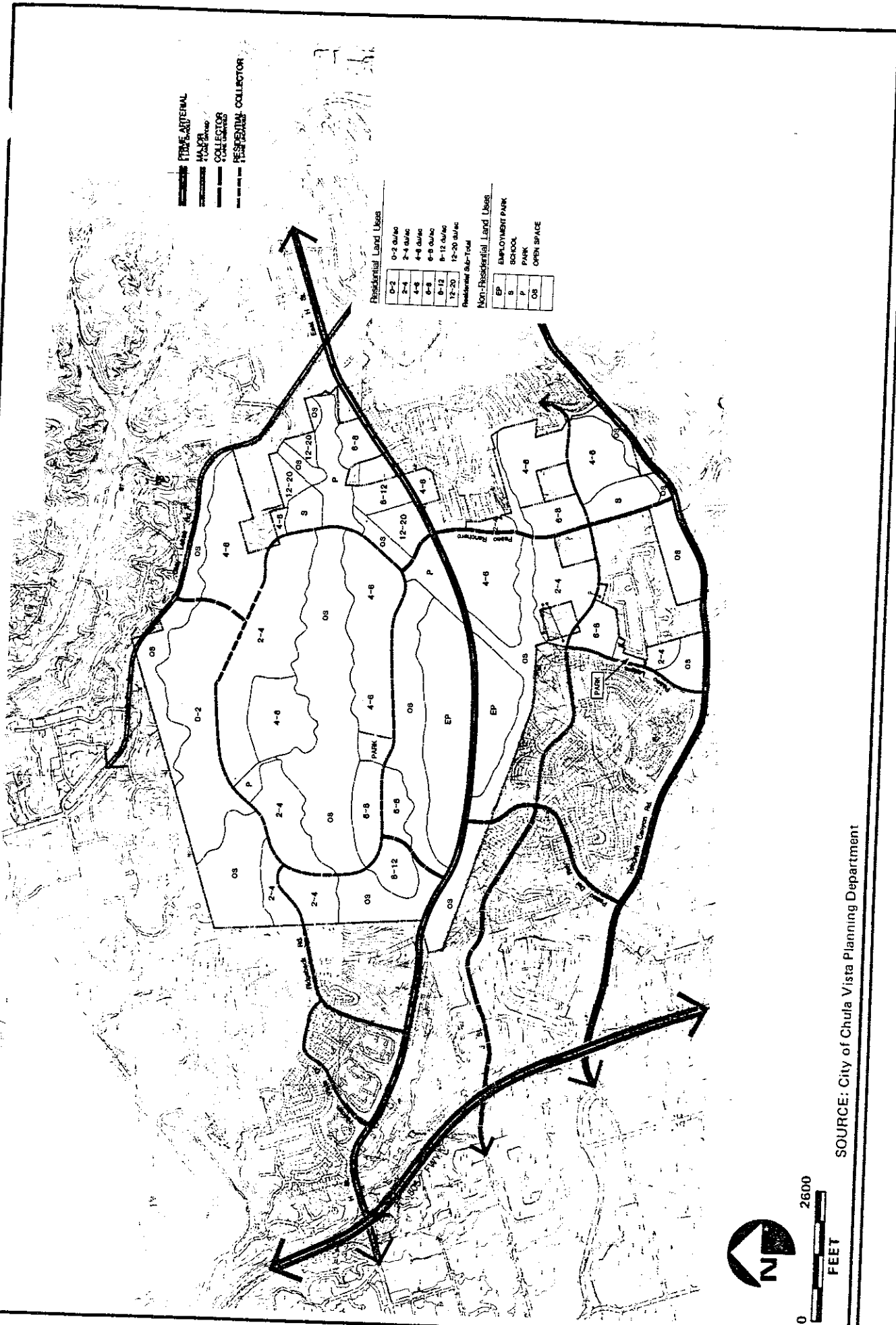
Land Use	Gersten Property		Out Parcels		Total Both Acres	
	Acres	Units	Acres	Units	Acres	Units
0-2	109.4	214	—	—	109.4	214
2-4	196.7	711	10.0	40	206.7	751
4-6	299.9	1,579	13.7	85	313.6	1,664
6-8	147.8	1,026	12.5	100	160.3	1,126
8-12	46.4	484	25.1	282	71.5	766
12-20	<u>32.6</u>	<u>620</u>	<u>—</u>	<u>—</u>	<u>32.6</u>	<u>620</u>
Subtotal Du/Ac	832.8	4,634 5.6	61.3	507 8.3	894.1	5,141 5.7
Employment Park	151.6		—		151.6	
Schools	30.2		10.0		40.2	
Public Facilities	—		7.9		7.9	
Parks/Recreation	56.3		—		56.3	
Open Space	<u>511.1</u>		<u>2.1</u>		<u>513.2</u>	
Subtotal	749.2		20.0		769.2	
TOTAL	1,582.0		81.3		1,663.3	

*Includes only those portions affected by the proposed amendment. Averages include streets (gross area).

STAFF-MODIFIED SPECIFIC PLAN

The City of Chula Vista planning staff has proposed further modifications to the revised Specific Plan Amendment which will be addressed in the following section (Issue Analysis and Comparison). From an environmental point of view, the modifications proposed by the staff would not result in a substantially different project. Therefore, the Issue Analysis and Comparison Section considers the revised plan, proposed by the project proponent and the City modified plan as the same project, in most instances.

The modifications would result in 543 fewer dwelling units than the revised plan. The reduction in dwelling units was achieved by lowering the density of some of the residential land uses proposed in the revised plan and redesignating previously assigned residential land uses for parks/recreational, open space and public facilities land uses. As a result, parks/recreational land uses would consist of 65.1-acres instead of 56.3-acres which were proposed in the revised plan and open space land uses would consist of 518.1-acres instead of 513.2-acres. The Specific Plan text stated that 34-acres of employment park land uses could be redesignated for residential land uses to allow up to 400 dwelling units, subject to City Council approval. The City modified text excluded the alternative land use potential. The circulation element would be identical to the revised plan's system. Figure 2 shows the City-modified plan and Table 2-3 presents the land use acreages.



PRIMARY ARTERIAL
 MAJOR COLLECTOR
 COLLECTOR
 RESIDENTIAL COLLECTOR

Residential Land Uses

0-2	0-2 a/u/a
2-4	2-4 a/u/a
4-8	4-8 a/u/a
8-12	8-12 a/u/a
12-20	12-20 a/u/a
Residential Sub-Total	

Non-Residential Land Uses

EP	EMPLOYMENT PARK
S	SCHOOL
P	PARK
OS	OPEN SPACE



SOURCE: City of Chula Vista Planning Department

FIGURE 2

Staff Recommended Specific Plan for the El Rancho del Rey Plan Amendment Area

Table 2-3

LAND USE ACREAGES FOR PROPOSED STAFF-MODIFIED PLAN SPECIFIC*

Land Use	Gersten Property		Out Parcels		Total Both Acres	
	Acres	Units	Acres	Units	Acres	Units
Residential (du/ac):						
0-2	**	200	—	—	**	200
2-4	**	764	17.6	6.6	**	830
4-6	**	1,738	23.7	142	**	1,880
6-8	**	592	—	—	**	515
8-12	**	450	15.1	162	**	788
12-20	**	<u>484</u>	<u>—</u>	<u>—</u>	**	<u>382</u>
Subtotal	824.0	4,228	56.4	370	880.4	4,598
Du/Ac		5.1		6.6		5.2
Employment Park	151.6		—		151.6	
Schools	30.2		10.0		40.2	
Public Facilities	—		7.9		7.9	
Parks/Recreation	65.1		—		65.1	
Open Space	<u>511.1</u>		<u>7.0</u>		<u>518.1</u>	
Subtotal	758.0		24.9		782.9	
TOTAL	1,582.0		81.3		1,663.3	

*Includes only those portions affected by the proposed amendment. Averages include streets (gross area).

**Gross acreage breakdowns for individual residential development areas not available at time report was written - du/ac were derived from net development areas.

SECTION 3
ISSUE ANALYSIS AND COMPARISON

The project site area is identical for the original and revised projects with the exception of a 10.2-acre out parcel which was removed in the revised projects. The environmental setting/existing conditions are the same as described in the EIR. This section addresses each environmental topic analyzed in the EIR and presents a summary of the impacts identified for the original project, followed by a discussion of the revised projects' impacts. Since both the revised plan and the staff modified proposed plan are nearly identical in terms of environmental issues, they will be discussed together.

LAND USE

Original Project: The land use designation changes proposed by the original Specific Plan Amendment would increase the potential residential density of the project from the Adopted Specific Plan density of 4588 units to 5928 units and would introduce 93.4-acres of employment park uses. The proposed land use designations would be compatible with existing and planned developments surrounding the project site, and would also be internally compatible. The central community spine proposed in the north leg of Rice Canyon, as well as the road system, would help to create a sense of community in the plan area. No significant land use impacts would be associated with the compatibility of internal uses or adjacent offsite uses.

Revised Projects: The revised Specific Plan Amendment would provide a 151.6-acre employment park and reduce to originally proposed number of dwelling units by 787 for a total of 5141 units. The staff-modified plan proposed a total of 4598 dwelling units. The north leg of Rice Canyon would be preserved as natural space and as a result the amount of natural open space would be significantly increased. The proposed land use designations would remain compatible with both internal and surrounding land uses.

Finding: EIR analysis adequate; the revised project provides a balanced land use plan and provides a larger natural open space system in Rice Canyon.

TRAFFIC CIRCULATION

Original Project: Development according to the originally proposed Specific Plan Amendment would result in traffic generation that is substantially higher than the adopted plan. Total trips would increase from 44,000 ADT to 73,900 ADT with the originally proposed amendment. Subsequent to the traffic analysis of the adopted specific plan, the adopted plan land use acreages were recalculated and discrepancies were discovered. The acreages of existing designated residential areas increased; therefore the number of allowed dwelling units increased by approximately 370 units. This difference will result in an increase in total traffic generation from the originally predicted 44,000 trips; however, the increase would not significantly affect the analysis. A revised traffic study was completed and is located in the appendices to the EIR. The project trips when considered on a cumulative basis with other development in the area, would require the improvement of roads throughout the project vicinity. Potential impacts would be associated with this traffic if required improvements were not provided, or were not phased in accordance with need. However, all potential impacts could be mitigated to insignificance by providing a combination of road improvements as outlined in Section 3.2.3 of the EIR.

The major road improvements needed to avoid significant impacts include construction of onsite roads, and some offsite segments, to their designated widths. Several changes in these widths would be required by the cumulative traffic volumes. These are the internal roadways "A" and "C" which are shown as two-lane collectors but should be upgraded to four-lane collectors, and East H Street which should be upgraded from four lanes to six lanes. The segment of East H Street between I-805 and Ridgeback Road would require a change in classification from a major road to a prime arterial, due to the originally proposed project's increase in traffic generation.

If project development was phased with needed circulation improvements, potential impacts would be reduced to insignificance. If improvements were not made, a significant adverse traffic impact would result.

Revised Projects: The revised project resulted in a 787-unit reduction in the proposed total number of dwelling units and a substantial increase in the area of employment park. These changes have resulted in a slight reduction in the number of automobile trips generated (73,900 vs 73,000). The difference would not significantly affect the original analysis presented in the EIR. However, traffic circulation in the area would be incrementally improved from the original project predictions.

The circulation system would remain unchanged from the original project with the exception of the realignment of two connector roads between "H" Street and the loop road. The southwestern connector road was realigned in order to allow for a biologically more sensitive area around the north leg of Rice Canyon. The southeastern connector road would be realigned to connect with Paseo Ranchero; thus creating a four-way intersection with "H" Street. This alteration would result in a smoother circulation network.

The supplemental traffic report is included at the end of this EIR and provides detailed information concerning impacts from the revised project to existing facilities and evaluates the effectiveness of the proposed facilities at reducing significant impacts.

Finding: The revised project did not significantly differ of the originally proposed project; the EIR analysis is adequate. A supplemental traffic report was prepared to analyze new issues raised during the public review period in addition to the previous concerns, and is attached to the response to comments section of this Final EIR.

FISCAL ANALYSIS

Original Project: The operating costs and revenues for the development of El Rancho del Rey under the originally proposed plans were projected to determine the approximate fiscal effect of the project on the City of Chula Vista. Revenues exceed costs for the plan for all phases of the project. The original proposed plan would provide substantially greater net revenues to the City than the adopted plan (a total of \$12-\$14 million in 20 years plus about \$825,000 per year thereafter). This would result in significant beneficial fiscal effects to the City with the proposed project.

Revised Projects: Although the operating costs and revenues for the revised projects and staff recommendations were not projected, the anticipated fiscal effect would be similar to the originally proposed project. The expansion of the employment park would represent a financial benefit of the revised plans.

Finding: EIR analysis adequate.

BIOLOGICAL RESOURCES

Original Project: The originally proposed Specific Plan Amendment would reduce the natural habitats of the project site and would retain substantially less sensitive habitats and species than the adopted plan.

Given the unique character of the low scrub vegetation (Maritime Desert Scrub) in the area, the rapidly declining status of this habitat along the coastal plains of San Diego County, and the use of this habitat by a number of declining plant and animal species, the implementation of both the originally proposed and the adopted plans would cause significant biological effects.

The EIR determined that although the originally proposed project would potentially retain more natural open space in the central and southern legs of Rice Canyon, it would not have the long-term potential to preserve the local ecosystem that a more complete retention of the north leg of Rice Canyon would have. The spatial difference or location of natural habitats retained by the open space system in the adopted plan was considered a biologically preferred alternative. The significant biological effect of development of El Rancho del Rey by the originally proposed plan was essentially cumulative. It was a combination of the loss of a variety of declining regional habitats and species. The long-term viability of the open space system in the originally proposed plan was considered substantially less than the adopted plan.

A revegetation plan was included as part of the original project. Elements of this plan included revegetation of manufactured slopes adjacent to natural areas with native vegetation, reestablish canyon bottom biota in the north leg of Rice Canyon, modify natural slopes through brush removal and transplantings of indigenous cacti, and create a cacti refuge on the south facing slope of the canyon south of East H Street. The mitigation program for the originally proposed plan would have only partially mitigated the significant effects of development of the project area. The original proposal did not preserve an adequate baseline system and could not mitigate to insignificance the cumulative effects of urbanization of the project area. It preserved pieces of habitat which, albeit substantial, when added up did not have the potential biological value of the open space of the adopted plan. The EIR determined that the significant biological impacts of the originally proposed plan could be mitigated only through design alternatives.

Revised Projects: The revised project would be significantly biologically more sensitive than the original project. The north leg of Rice Canyon would be retained as natural open space; thereby, eliminating impacts associated with the development of Rice Canyon. Since the revised projects would retain the north leg of Rice Canyon as natural open space the following measures should be implemented to ensure the long-term protection of the north leg:

- . Development of an erosion reversal plan which includes improvements to the north or main leg of Rice Canyon.
- . Development of a long-term erosion control plan for the canyon area.
- . Development of a plan to keep out off-road vehicles.

The mitigation measures associated with the other areas of the site and discussed in the EIR would also need to be implemented in order to achieve an overall biologically sensitive project.

Finding: The revised plan would be substantially more sensitive to the existing biological environment and was revised in response to impacts identified in the EIR. The EIR analysis is adequate.

CULTURAL RESOURCES

Original Project: A total of six archaeological sites are located within the project boundaries. Development of the plan area under the adopted or proposed plans could result in potentially significant adverse impacts to these resources. A mitigation program would be necessary as part of subsequent project approvals and prior to grading of the property. This would include a testing program and subsequent preservation or data recovery mitigation program as recommended.

Revised Projects: Ultimate development of the property according to the revised plans would have the same potential for impacting cultural resources on the project site, as identified in the EIR. The mitigation measures identified for the original project would pertain to the revised projects. Such measures would be conditions of subsequent project approvals and would mitigate potentially significant impacts to a level of insignificance.

Finding: EIR analysis adequate.

PALEONTOLOGICAL RESOURCES

Original Project: The project site includes extensive paleontological resources within the rich fossiliferous San Diego Formation which occurs over much of the plan area. Large-scale grading operations could adversely impact any resources present in areas with a high potential for occurrence. Mitigation measures are available to avoid significant impacts to paleontological resources. These include a program of onsite monitoring and fossil salvage which should be made a condition of subsequent project approvals.

Revised Projects: Grading of areas where the San Diego Formation is likely to be encountered could adversely impact paleontological resources. Such impacts would be the same as discussed for the original project, as would the mitigation measures. The measures would mitigate potential impacts to insignificance.

Finding: EIR analysis adequate.

GEOLOGY/SOILS

Original Project: The project site is generally geologically suitable for development. Onsite geotechnical conditions would not pose major constraints to the originally proposed development. Potential seismic activity would be no greater at the site than elsewhere in southern California. Construction in accordance with the Uniform Building Code would minimize the effects of earthquake shaking. Prior to final project design, a detailed geologic investigation would be required to provide grading, foundation and construction recommendations.

Revised Projects: Under the revised projects, the site would be developed with urban uses similar to those proposed under the original plan. Potential geologic hazards would be similar to those identified in the EIR. The staff recommendation is to designate the area around the branch of the La Nacion earthquake fault system just to the east of Paseo Ladera as parks and open space. This affords a higher level of seismic safety than the developer's proposed plan. As identified for the previous project, subsequent detailed geologic investigations would be required to provide grading, foundation and construction recommendations.

Finding: EIR analysis adequate.

HYDROLOGY/WATER QUALITY

Original Project: There are no significant differences in hydrology/ water quality impacts between the adopted and originally proposed plans. Impacts due to site runoff are not significant from the standpoint of quantity of flows affecting capacity of existing offsite facilities. Problems could occur at Bonita Basin since the offsite drainage is unimproved downstream. Mitigation of this impact is possible through provision of a retention basin to control runoff volumes in the natural drainage. To assure that the drainage system for the Specific Plan area works effectively, numerous onsite flood and runoff conveyance facilities will need to be constructed. The extent of these facilities is indeterminable at this stage of plan definition; however, concepts to be considered at the time of actual project design have been given in the Hydrology/Water Quality section of the EIR.

Revised Projects: Urbanization of the project site according to the revised plans would have hydrology/water quality effects similar to those addressed in the EIR. Further studies would also be required for the revised projects since the extent of drainage system facilities cannot be determined at the specific plan stage. Measures to ensure appropriate site drainage are available and would be implemented during the future discretionary approvals.

Finding: EIR analysis adequate.

LANDFORM/AESTHETICS

Original Project: Development of the project site according to the adopted and original plans would substantially change the visual character of the site from a rural area to an urbanized community. The proposed landform alteration included major grading of ridgetops which would be similar to grading required for development under the adopted Specific Plan. However, the proposed plan would have resulted in filling the bottom of the north leg of Rice Canyon whereas the adopted plan would not. The filling of the bottom of the north leg of Rice Canyon would have been a significant impact of the proposed amendment that would have been mitigable only through an alternative project design.

The Specific Plan incorporates requirements for grading and design review as part of subsequent project actions, such as Sectional Planning Area plans and tentative maps, which will permit appropriate mitigation measures to be incorporated should adverse impacts be identified.

Revised Projects: The revised projects would permit development of the site similar to the original and adopted plans. The resulting visual character of the area would, therefore, be similar to that identified in the original proposed plan. However, the retention of the north leg of Rice Canyon as an undisturbed open space area would eliminate the significant impact identified

for the originally proposed project. The revised Specific Plan also incorporates requirements for grading and design review as part of subsequent project actions. The staff proposal would also retain more open space at the northwest corner of Paseo Ranchero and Telegraph Canyon Road. This would prevent an intrusion into the Telegraph Canyon Road Scenic Route viewshed.

Finding: EIR analysis adequate; the revised plans mitigate the originally identified significant land form/aesthetic impact associated with the north leg of Rice Canyon.

AIR QUALITY

Original Project: The original Specific Plan Amendment would incrementally increase pollutant emissions due to the increased density of land use beyond the levels anticipated by regional forecasts. By itself, this increase is not considered significant, but on a cumulative basis it represents an unavoidable adverse impact. This can be partially mitigated through the incorporation of measures to reduce trip generation during subsequent site planning; however, the cumulative impacts cannot be reduced to insignificance.

Revised Projects: Air quality impacts associated with the revised plans would be cumulatively significant and unmitigable as addressed in the EIR. Development of the site as a mixed use community would help to minimize vehicle miles traveled, thereby reducing vehicle emissions. Other specific mitigation measures available to reduce project-related emissions are discussed in the EIR and are included in the revised El Rancho del Rey Specific Plan.

Finding: EIR analysis adequate.

NOISE

Original Project: Ambient noise levels in the project vicinity would increase over the existing low levels as a result of urban development of the property. The major source of noise affecting the project site would be from future years' traffic on the existing and planned roadway network. Future residential development in some portions of the plan area would be subject to noise levels that exceed standards for exterior and/or interior uses. However, the noise levels can be feasibly reduced to acceptable levels through the use of barriers, building shell modifications and siting of structures. Specific noise mitigation should be determined for each project as part of subsequent approvals.

Revised Projects: The noise environment generated by the revised plan land uses would be similar to the environment described in the EIR. The incremental changes in traffic volumes generated in the plan area would result in an incremental change in the noise environment. The realignment of the two roadways, connecting the south loop area to 'H' Street, would result in different land uses being exposed to noise along the connector roads. Mitigation measures are available to reduce potential noise impacts to a level of insignificance. These measures would be determined for each project as part of subsequent approvals, if significant impacts were identified.

Finding: Traffic volumes along the previously analyzed roads would be similar to the previously predicted volumes; therefore the noise environment will be similar. The EIR analysis is adequate.

SCHOOLS

Original Project: The precise number of students to be generated by the original project proposal was not determined, however, the additional 1340 dwelling units would generate more students than would result under existing land use designations. Due to the magnitude of the development, four school sites totalling 39.2-acres have been identified within the Specific Plan area. Adequate school facilities are expected to be provided in conjunction with the proposed development. Details regarding school facilities phasing construction and capacity would be resolved at the time SPA plans and tentative maps are filed.

Revised Projects: Ultimate requirements for schools on the project site will vary depending upon the type and timing of development. The revised projects would generate less students than previously expected due to the decrease in the residential densities. Negotiations between the developer and the school district will determine which of the proposed school sites would be dedicated for school use and how funding would be accomplished. The developer is committed to providing adequate school facilities concurrent with need in accordance with applicable City policies and the plan has designated 40.2-acres for potential school sites within the plan area as does the staff plan.

Finding: Since the developer is committed to providing adequate school facilities concurrent with need and potential school sites have been provided in the revised plans, the EIR analysis is adequate.

PARKS, RECREATION AND OPEN SPACE

Original Project: The original proposed Specific Plan Amendment includes substantially more parks/recreation designated land than the adopted plan. Designated parks/recreational land uses were to be located primarily within the "community spine" in the north leg of Rice Canyon, with smaller park designations in other portions of the plan area. The total acreage for parks exceeded the City's standard requirement, thus no park impacts would have been associated with the project.

The original proposed plan retained less natural open space than the adopted plan. The major area of change was the filling of the north leg by the proposed plan, which was not consistent with the open space goals of the General Plan, and was thus considered a significant impact of the proposed project. The designation of a larger portion of the central leg of Rice Canyon as open space reduced this impact, although not to insignificance.

Revised Projects: The proposed specific plan has reserved 56.3-acres for parks/recreational land uses as opposed to 31.0 acres which were reserved in the adopted specific plan. The staff proposed modified specific plan would expand the parks and recreation land area to 65.1 acres. Although the parks/recreational land uses would be reduced from the originally proposed 90.3-acres; natural open space would be substantially increased. The retention of the north leg of Rice Canyon as open space represents a significant improvement from the original project and reduces impacts identified in

the EIR. The total amount of open space is approximately 40.2-acres under the amount of open space provided by the adopted plan; however, this is not considered a significant reduction because the revised plans provide an increase in park/recreation area.

Finding: The revised plans provide an adequate amount of parks, recreation and open space areas; the EIR analysis is adequate.

WATER SERVICE

Original Project: The original project would incrementally increase regional water consumption as a result of increased development of the property. However, measures to reduce water consumption will be incorporated into the project, and no significant water availability impacts would occur. A Water Supply Master Plan was prepared for the entire Specific Plan area that identifies facilities required for full development of the project area. Several new facilities will be required to serve El Rancho del Rey and adjacent developments. If the facilities are provided in conjunction with need, no significant impacts would result.

Revised Projects: The demand for water associated with revised project would be less than that considered in the EIR. Based on water consumption rates provided by the El Rancho del Rey Water Supply Master Plan for the original project, the revised project could require approximately 3,171,370 gallons per day (622,690 gallons per day fewer than the originally proposed project). The City's revised plan would require slightly smaller amounts of water since the residential density would be further reduced.

Finding: Since the revised projects would require smaller amounts of water than the original project, the EIR analysis is adequate.

SEWER SERVICE

Original Project: Development under the originally proposed Specific Plan amendment as opposed to the adopted plan would incrementally increase sewage generation from the project site. The project is within four sewage drainage basins, all of which are designed with adequate capacity to serve the increased level of development. Construction of onsite sewer facilities at the time of actual development would avoid any significant impacts.

Revised Projects: Since the residential densities would be reduced by the revised plans, sewage generation from the project site would also be reduced. As stated in the EIR, adequate sewer facilities are planned to be available to serve the development.

Finding: The report considered a higher sewage generation rate than will result from the revised plans; EIR analysis adequate.

SOLID WASTE DISPOSAL

Original Project: The proposed project development would generate additional solid waste over what would be generated under existing land use designations in the adopted plan. This would not significantly impact solid waste disposal facilities but would represent an incremental reduction in landfill capacity.

Revised Projects: Solid waste generation rates from development according to the revised plans would be similar to those projected for the original plan. Therefore, solid waste disposal facilities would be similarly impacted by the revised plans.

Finding: EIR analysis adequate.

FIRE PROTECTION

Original Project: The originally proposed amendment would incrementally increase demand for fire protection services. However, no constraints are anticipated in providing fire protection to development under the proposed project, and no significant impacts would result.

Revised Projects: Demands for fire protection services from development according to the revised plans would be essentially the same as those considered in the EIR. The change in land use designations would not be significant enough to warrant additional considerations.

Finding: EIR analysis adequate.

POLICE PROTECTION

Original Project: The changes in the density and level of development on the project site would not significantly impact police protection to the site. Any development would result in increased demand which would be mitigated through the addition of employees and equipment as necessary.

Revised Projects: The changes in land uses according to the revised plans would not significantly change police protection needs. As stated in the EIR, the increase service demand would be mitigated through the addition of employees and equipment as necessary.

Finding: EIR analysis adequate.

ENERGY CONSUMPTION AND CONSERVATION

Original Project: Development of the project would not have a significant adverse impact on regional energy supplies by itself, but would result in an incremental increase in regional energy consumption. Measures to reduce energy consumption will be incorporated into development projects of the Specific Plan. These measures will reduce on-site consumption and no significant impact to energy resources would occur.

Revised Projects: Development according to the revised plans would require similar energy supplies. Measures to reduce energy consumption would also be incorporated into development projects of the revised Specific Plan.

Finding: Since the energy consumed by the revised plans would be essentially the same, the original EIR analysis is adequate.

SOCIOECONOMICS

Original Project: The proposed Specific Plan amendment would result in an eventual increased population on the property. This increase would not affect the overall Chula Vista Planning Area. Housing types under the proposed amendment would be at a higher density and would allow development of the property to be in closer conformance to current market demands. The additional employment base added to the plan area is considered a beneficial effect of the project. No significant socioeconomic impacts would be associated with the proposed amendment.

Revised Projects: The revised project plans would not be different enough to significantly affect the outcome of the analysis considered in the EIR. The population of the plan area would be reduced due to the reduction in residential densities. The revised plans would offer even more employment opportunities due to the increase in employment park acreage. The revised plan does provide for the inclusion of 5% of the housing units to be provided for low income families and 5% for moderate income families.

Finding: The socioeconomic conditions generated by the revised plans would be similar to those predicted in the EIR; the EIR analysis is adequate.

SECTION 4
CERTIFICATION OF ACCURACY

This Environmental Impact Report Review was prepared by the City of Chula Vista and WESTEC Services, Inc. of San Diego, California. We hereby affirm that, to the best of our knowledge, the statements and information in this analysis are true and correct, and that all known information concerning the potentially significant environmental effects of the revised project have been included and fully evaluated.



Thomas Larkin
Project Manager



Douglas D. Reid
Environmental Review Coordinator

EL RANCHO DEL REY
SPECIFIC PLAN AMENDMENT
ENVIRONMENTAL IMPACT REPORT

City of Chula Vista Number: EIR-83-2
State Clearinghouse Number: 83060803

Prepared For:

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March 1985

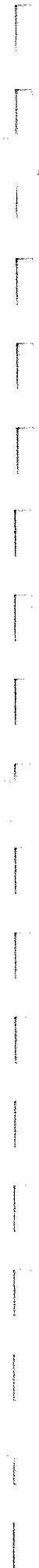


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APPENDICES

(under separate cover)

<u>Letter</u>	<u>Title</u>
A	Transportation Analysis
B	Fiscal Impact Analysis



SECTION 1
INTRODUCTION AND SUMMARY

1.1 PURPOSE

This Environmental Impact Report (EIR) addresses the proposed El Rancho del Rey project which involves an amendment of 1673.5 acres within the existing 2450-acre El Rancho del Rey Specific Plan. The subject property is located east of Interstate 805, south and west of Otay Lakes Road, and north of Telegraph Canyon Road in the City of Chula Vista. A total of 1582 acres of the Specific Plan Amendment area are owned by the Gersten Companies. The remaining 91.5 acres of the proposed Specific Plan Amendment are comprised of 11 parcels under separate, private ownerships.

The only discretionary action addressed in this report is the Specific Plan Amendment for the 1673.5-acre area. The El Rancho del Rey Specific Plan is the official land use designation for this property in the Chula Vista General Plan. Thus, the proposed amendment to the specific plan will in effect also amend the General Plan. Ultimate development of the El Rancho del Rey property will require subsequent Planning Commission and City Council approval of: 1) Sectional Planning Areas within the overall Specific Plan area; and 2) Tentative Maps. The Chula Vista Design Review Committee will also have jurisdiction over portions of the property which will be determined to require a Precise Plan.

No development plans for the property or precise plans for the project parcels within the property have been submitted and no specific construction activities would occur as part of this proposal. The objective of this report is to provide a base of information regarding the resources and constraints of the project site and to discuss the environmental effects of the proposed land use changes. The analysis within the EIR has focused on the direct and indirect environmental impacts of the proposed specific plan amendment. Impacts associated with the proposed amendment and land use changes as they relate to future development are discussed to the fullest extent possible.

Persons reviewing this document should keep in mind that the material provided herein is, under State law, informational in nature. It is intended to enable appropriate public agencies and the public to evaluate environmental impacts associated with the project as proposed. The affected public agencies remain obligated to balance possible adverse effects against other public objectives, including economic and social factors, in determining whether the project is approved.

This report is being submitted to the City of Chula Vista in accordance with their procedural guidelines for implementation of the California Environmental Quality Act and State CEQA Guidelines including the most recent amendments.

1.2 EXECUTIVE SUMMARY

1.2.1 Project Description

The proposed project involves a Specific Plan Amendment for 1673.5 acres of the 2450 acre El Rancho del Rey Specific Plan. Of this, 1582 acres are under ownership of the Gersten Companies and the remaining 91.5 acres are under various other private ownerships. The property is located east of Interstate 805 in the City of Chula Vista, and is surrounded primarily by residential development. Existing topography of the site consists of east-west trending ridges and intervening valleys. Major roads in the project area include Telegraph Canyon Road on the south, East H Street (which is presently constructed to two lanes) through the central portion of the property, and Otay Lakes Road along the eastern and northeastern portion of the site.

The proposed Specific Plan Amendment would involve an increase in the maximum permitted dwelling units from 4220 to 5928. This increase would reflect a shift from predominantly low-density single family units as envisioned by the adopted plan to more small lot single family and multiple family units. The proposed plan would provide a 93.4-acre Employment Park designation adjacent to East H Street. This would permit the development of industrial, office and commercial support uses within the plan area, which were not provided for under the adopted plan. Other land use changes proposed by the project include the addition of a public facilities designation to accommodate community service uses (9.9 acres), an increase in acreage designated for parks/recreation uses (from 27.0 acres to 90.5 acres), and a decrease in natural open space acreage.

The north leg of Rice Canyon, which was shown as natural open space in the adopted plan, would be partially filled under the proposed plan, and used for active parks/recreation uses. The center leg of Rice Canyon would include designation of a larger open space area under the proposed plan, with this canyon envisioned as the natural open space area in place of the north leg. This shift in open space location would allow grading of the property to be brought into balance. A slightly greater total quantity of grading would occur with the proposed plan, but the substantial export required by the adopted plan (approximately 3 million cubic yards) would not be necessary.

The circulation system for the project site would be changed from the adopted plan's modified grid system. The proposed amendment would create a loop system with fewer direct connections through the site, which will reduce through trips in this area, and provide the opportunity for a greater sense of community within the Specific Plan area.

Future approvals required for development within the Specific Plan area will include Sectional Development Plans, Site Plans and Tentative Tract Maps. Some areas of the site will also require approval by the Design Review Committee.

1.2.2 Environmental Analysis

The environmental impacts of the proposed project are summarized below. More detailed discussions of impacts and mitigation measures for each issue are included in Section 3 of this report.

Land Use

The land use designation changes proposed by the Specific Plan Amendment would increase the residential density of the project, in order to conform with current market demand, and would introduce Employment Park uses which would create a more balanced community. The proposed land use designations would be compatible with existing and planned developments surrounding the project site, and would also be internally compatible. The central community spine "proposed in the north leg of Rice Canyon, as well as the road system would help to create a sense of community in the plan area. No significant land use impacts would be associated with the compatibility of internal uses or adjacent offsite uses.

Traffic Circulation

Development according to the proposed Specific Plan Amendment would result in traffic generation that is substantially higher than the adopted plan. Total trips would increase from 44,000 ADT to 73,900 ADT with the proposed amendment. The project trips when considered on a cumulative basis with other development in the area, would require the improvement of roads throughout the project vicinity. Potential impacts would be associated with this traffic if required improvements are not provided, or are not phased in accordance with need. However, all potential impacts can be mitigated to insignificance by providing a combination of road improvements as outlined in Section 3.2.3.

The major road improvements needed to avoid significant impacts include construction of onsite roads, and some offsite segments, to their designated widths.

Several changes in these widths are required by the cumulative traffic volumes including the proposed project. These are the internal roadways "A" and "C" which are shown as two-lane collectors but should be upgraded to four-lane collectors, and East H Street which should be upgraded from four lanes to six lanes. The segment of East H Street between I-805 and Ridgeback Road would require a change in classification from a major road to a prime arterial, due to the proposed project's increase in traffic generation.

If project development is phased with needed circulation improvements, potential impacts would be reduced to insignificance. If improvements are not made, a significant adverse traffic impact would result.

Fiscal Analysis

The operating costs and revenues for the development of El Rancho del Rey under both the adopted and proposed plans were projected to determine the approximate fiscal effect of the project on the City of Chula Vista. Revenues exceed costs for both plans for all phases of the project. However, the proposed plan would provide substantially greater net revenues to the City than the adopted plan (a total of \$12-\$14 million in 20 years plus about \$825,000 per year thereafter). This would result in significant beneficial fiscal effects to the City with the proposed project.

Biological Resources

The proposed Specific Plan amendment would reduce the natural habitats of the project site and retains substantially less sensitive habitats and species than the adopted plan.

Given the unique character of the low scrub vegetation (Maritime Desert Scrub) in the area, the rapidly declining status of this habitat along the coastal plain of San Diego County, and the use of this habitat by a number of declining plant and animal species, the implementation of both the proposed and the adopted Plans would cause significant biological effects.

The difference between the two plans is due primarily to the retention of the north leg of Rice Canyon and the majority of the canyon in the northwestern corner of the site in the adopted Plan. The proposed Plan would potentially retain more natural open space in the central and southern legs of Rice Canyon. While this is positive biologically, it would not have the long-term potential to preserve the local ecosystem that a more complete retention of the north leg of Rice Canyon would have. While both Plans adversely affect the resources of the project area, the spatial difference or location of natural habitats retained by these two Plans is considered

significant with the adopted Plan being preferred biologically. The significant biological effect of development of El Rancho del Rey by the proposed Plan is essentially cumulative. It is a combination of the loss of a variety of declining regional habitats and species. The long-term viability of the open space system in the proposed Plan is considered substantially less than the adopted Plan.

A revegetation plan is included as part of the proposed project. Elements of this plan include revegetation of manufactured slopes adjacent to natural areas with native vegetation, reestablish canyon bottom biota in the north leg of Rice Canyon, modify natural slopes through brush removal and transplantings of indigenous cacti, and create a cacti refuge on the south facing slope of the canyon south of East H Street. The mitigation program for the proposed Plan only partially mitigates the significant effects of development of the project area. The proposed Plan does not preserve an adequate baseline system and cannot mitigate to insignificance the cumulative effects of urbanization of the project area. It preserves pieces of habitat which, albeit substantial, when added up do not have the potential biological value of the open space of the adopted Plan. The significant biological impacts of the proposed Specific Plan can be fully mitigated only through design alternatives.

Cultural Resources

A total of six archaeological sites are located within the project boundaries, and development of the plan area under the adopted or proposed plans would result in potentially significant adverse impacts to these resources. Mitigation would be necessary as part of subsequent project approvals and prior to grading of the property. This would include a testing program and subsequent preservation or data recovery program mitigation as recommended.

Paleontological Resources

The project site includes extensive paleontological resources within the rich fossiliferous San Diego Formation which occurs over much of the plan area. Significant impacts would occur for either the adopted or proposed plan from exposure and possible destruction of fossil material during grading. Mitigation measures are available to avoid significant impacts to paleontological resources. These include a program of onsite monitoring and fossil salvage which should be made a condition of subsequent project approvals.

Geology/Soils

The project site is generally geologically suitable for development. Onsite geotechnical conditions would not pose major constraints to development as proposed.

Potential seismic activity would be no greater at the site than elsewhere in southern California. Construction in accordance with the Uniform Building Code will minimize the effects of earthquake shaking. Prior to final project design, a detailed geologic investigation will be required to provide grading, foundation and construction recommendations.

Hydrology/Water Quality

There are no significant differences in hydrology/water quality impacts between the adopted and proposed plans. Impacts due to site runoff are not significant from the standpoint of quantity of flows affecting capacity of existing offsite facilities. Problems could occur at Bonita Basin since the offsite drainage is unimproved downstream. Mitigation of this impact is possible through provision of a retention basin to control runoff volumes in the natural drainage. To make the drainage system for the Specific Plan area work, numerous onsite flood and runoff conveyance facilities will need to be constructed. The extent of these facilities is indeterminate at this stage of plan definition, however, concepts to be considered at the time of actual project design have been given in the Section 3.8.3.

Urbanization as proposed would not have a significant adverse impact on water quality though incremental increases in urban pollutants leads to long-term degradation of receiving waters.

Landform/Aesthetics

The proposed landform alteration includes major grading of ridgetops which is similar to grading required for development under the existing Specific Plan. However, the proposed plan would result in filling the bottom of the north leg of Rice Canyon whereas the current plan would require export of a substantial amount of cut material from the property. The filling of the bottom of the north leg of Rice Canyon is a significant impact of the proposed amendment that is mitigable only through an alternative project design.

The Specific Plan incorporates requirements for grading and design review as part of subsequent project actions, such as Sectional Planning Area plans, tentative maps, etc. which will permit appropriate mitigation measures to be incorporated should adverse impacts be identified.

Air Quality

The proposed Specific Plan Amendment would incrementally increase pollutant emissions due to the increased density of land use, beyond the levels anticipated by regional forecasts. By itself, this increase is not considered significant, but on a

cumulative basis it represents an unavoidable adverse impact. This can be partially mitigated through the incorporation of measures to reduce trip generation during subsequent site planning, although the cumulative impacts cannot be reduced to insignificance.

Noise

The major source of noise affecting the project site will be from future years' traffic on the existing and planned roadway network. Future residential development in some portions of the plan area would be subject to noise levels that exceed standards for exterior and/or interior uses. However, the noise levels can be feasibly reduced to acceptable levels through the use of barriers, building shell modifications and siting of structures. Specific noise mitigation should be determined for each project as part of subsequent approvals.

Schools

The precise number of students to be generated by project development has not been determined, however, the additional 1708 dwelling units would generate more students than would result under existing land use designations. Four school sites have been identified within the Specific Plan area. Adequate school facilities are expected to be provided in conjunction with the proposed development. Details regarding school facilities phasing construction and capacity would be resolved at the time SPA plans and tentative maps are filed.

Parks, Recreation and Open Space

The proposed Specific Plan Amendment includes substantially more parks/recreation designated land than the adopted plan. This is located primarily within the "community spine in the north leg of Rice Canyon, with smaller park designations in other portions of the plan area. The total acreage for parks exceeds the City's standard requirement, thus no park impacts would be associated with the project.

The proposed plan retains less natural open space than the adopted plan. The major area of change is the filling of the north leg by the proposed plan, which is not consistent with the open space goals of the General Plan, and is thus considered a significant impact of the proposed project. The designation of a larger portion of the central leg of Rice Canyon as open space reduces this impact, although not to insignificance.

Water Service

The proposed project would incrementally increase regional water consumption as a result of increased development of the property. However, measures to

reduce water consumption will be incorporated into the project, and no significant water availability impacts would occur. A Water Supply Master Plan was prepared for the entire Specific Plan area that identifies facilities required for full development of the project area. Several new facilities will be required to serve El Rancho del Rey and adjacent developments. If the facilities are provided in conjunction with need, no significant impacts would result.

Sewer Service

Development under the proposed Specific Plan amendment would incrementally increase sewage generation from the project site. The project is within four sewage drainage basins, all of which are designed with adequate capacity to serve the increased level of development. Construction of onsite sewer facilities at the time of actual development would avoid any significant impacts.

Solid Waste Disposal

The proposed project development would generate additional solid waste over what would be generated under existing land use designations. This would not significantly impact solid waste disposal facilities but would represent an incremental reduction in landfill capacity.

Fire Protection

The proposed amendment would incrementally increase demand for fire protection services. However, no constraints are anticipated in providing fire protection to development under the proposed project, and no significant impacts would result.

Police Protection

The changes in the density and level of development on the project site would not significantly impact police protection to the site. Any development would result in increased demand which would be mitigated through the addition of employees and equipment as necessary.

Energy Consumption and Conservation

Development of the project would not have a significant adverse impact on regional energy supplies by itself, but would result in an incremental increase in regional energy consumption. Measures to reduce energy consumption will be incorporated into development projects of the Specific Plan. These measures will reduce onsite consumption and no significant impact to energy resources would occur.

Socioeconomics

The proposed Specific Plan amendment would result in an eventual increased population on this property. This increase would not affect the overall Chula Vista

Planning Area. Housing types under the proposed amendment would be at a higher density and would allow development of the property to be in closer conformance to current market demands. The additional employment base added to the plan area is considered a beneficial effect of the project. No significant socioeconomic impacts would be associated with the proposed amendment.

1.2.3 Alternative Specific Plan Amendment

During the preliminary planning process for the El Rancho del Rey project, an Alternative Specific Plan was developed in conjunction with City staff, which retains the north leg of Rice Canyon as natural open space, similar to the adopted plan, but incorporates changes in the land use mix and intensity similar to the proposed Specific Plan Amendment.

The key area of change with the alternative plan is in the north leg of Rice Canyon. By retaining this area as natural open space, the impacts to land use and landform alteration would be eliminated. Biological impacts would be substantially reduced by retaining additional natural habitat including sensitive species. Other impact areas would have no substantive differences between the proposed and alternative plans. Greater detail regarding this alternative is possible in Section 4.2.



SECTION 2
PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND SETTING

The subject property is located in the eastern sector of the City of Chula Vista, east of Interstate 805. The regional location of the site is shown in Figure 2-1. The project site is within the boundaries of the El Rancho del Rey Specific Plan area illustrated on Figure 2-2 and includes the 1673.5 acres within the 2450-acre Specific Plan which remain undeveloped. The property which is the subject of this amendment is irregularly shaped, and is generally bounded on the east by Otay Lakes Road, on the south by Telegraph Canyon Road, on the west by existing and approved developments within the El Rancho del Rey planning area, and on the north by existing low density residential development. East H Street extends through the central portion of the property. The majority and highest density of Chula Vista's urban area lies west of Interstate 805, although recent development projects have extended the urban development farther to the east.

The subject property is bounded for the most part on the west, north and east by residential development with land to the south of Telegraph Canyon Road being primarily agricultural land of the Otay Ranch. An in-pocket within the southerly sector of the site adjacent to Telegraph Canyon Road, as well as land along the east of the site (southeast of Otay Lakes Road) consists of residential development. Southwestern College is located northwest of the intersection of Otay Lakes Road and Telegraph Canyon Road, approximately 1000 feet east of the property. Bonita Vista Junior High School is located within an in-pocket into the study area west of Otay Lakes Road. East of Otay Lakes Road, land uses include a variety of residential developments and Bonita Vista High School. Land to the west of the property contains residential development, with homes currently under construction, implemented through the Rice Canyon Sectional Planning Area.

The topography of the project site consists primarily of east-west trending ridges with 15-30 percent gradient and intervening valleys (Figure 2-3). A noteworthy topographic feature on the property is Rice Canyon, which extends across the property in an east-west direction. Rice Canyon is comprised of three major tributaries as it crosses the site. Throughout this report they are referred to as the north leg, center leg, and south leg of Rice Canyon (indicated on Figure 2-3). Onsite drainage generally flows to the west. There are currently no structures on the property with the exception

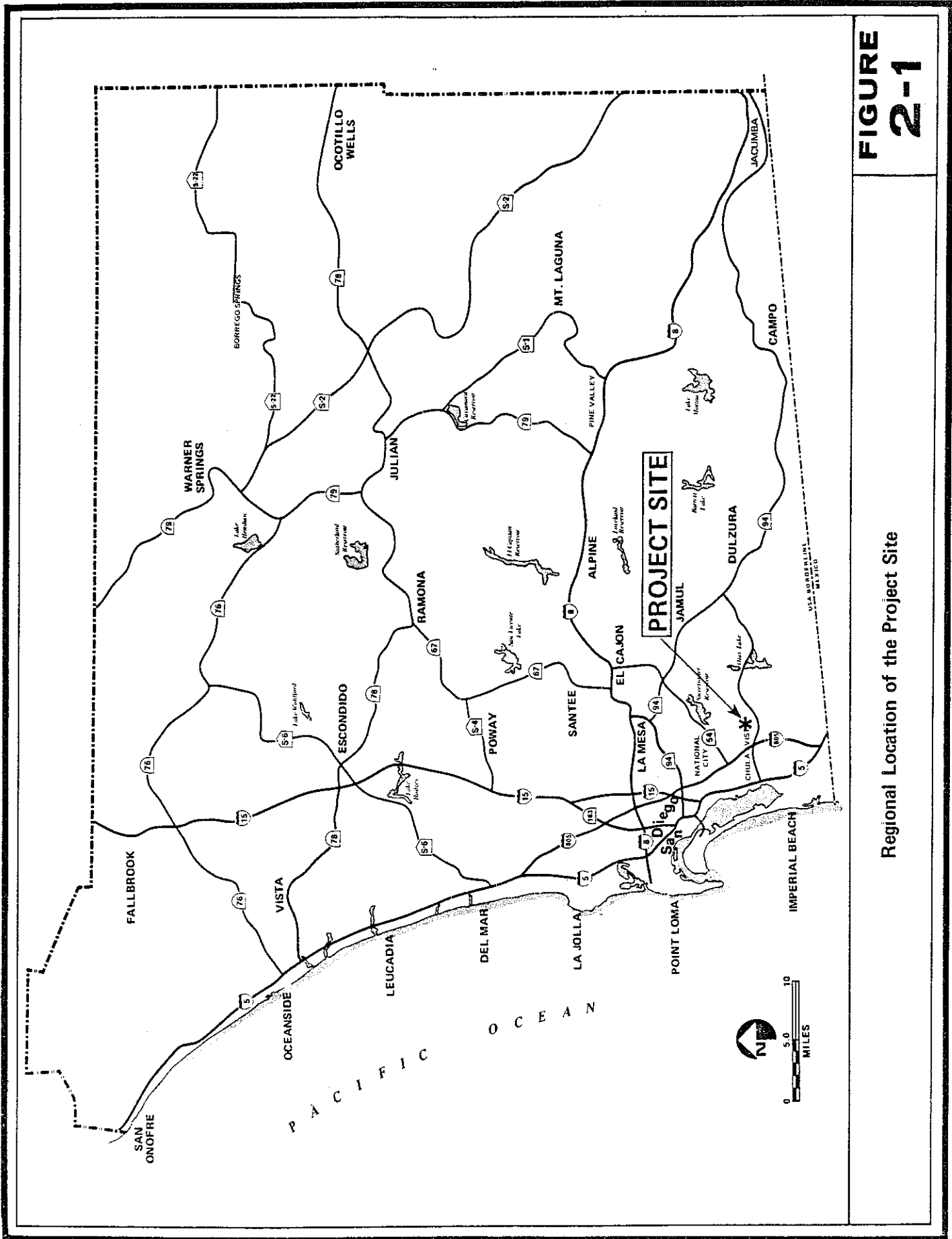


FIGURE 2-1

Regional Location of the Project Site

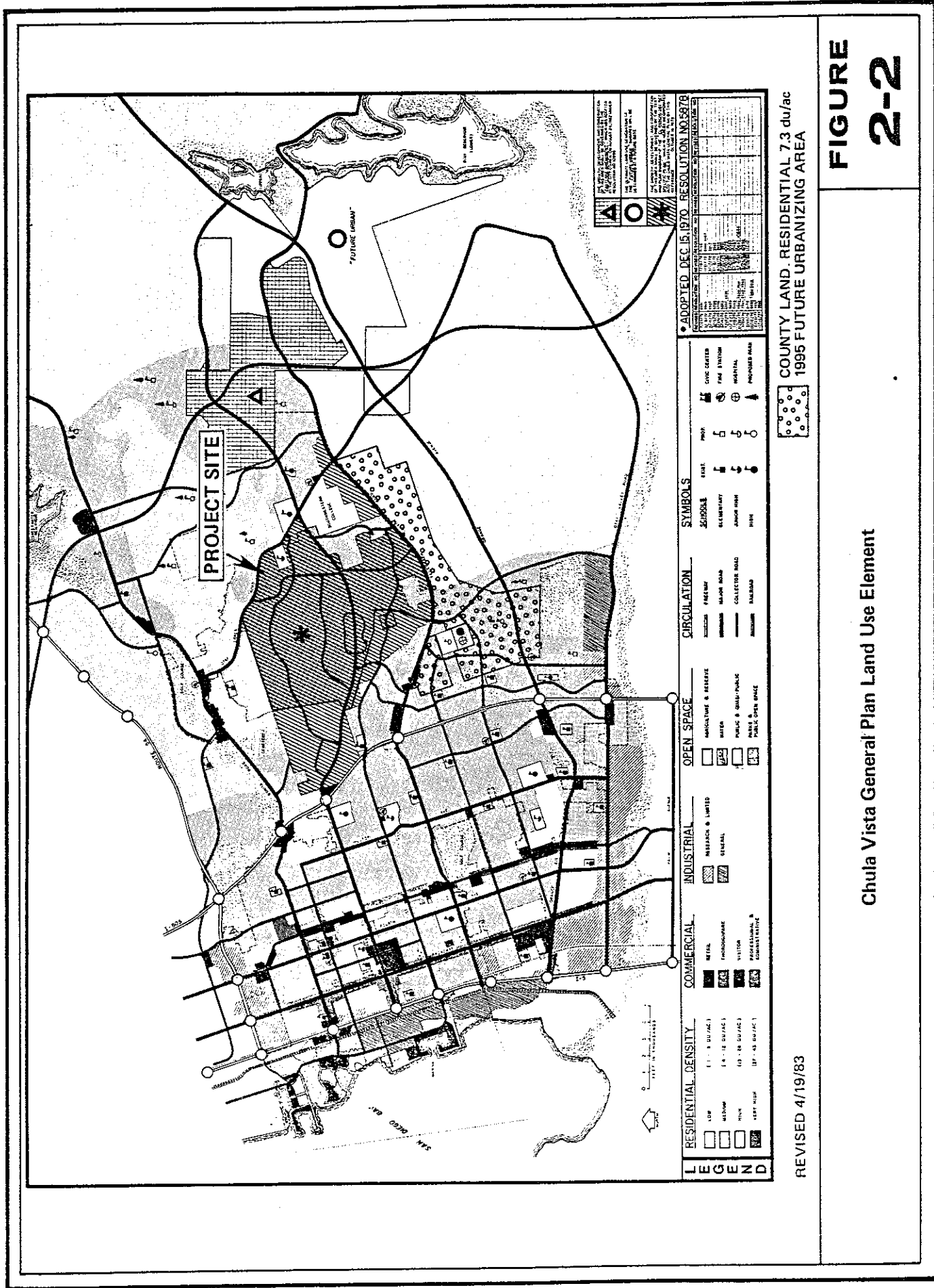
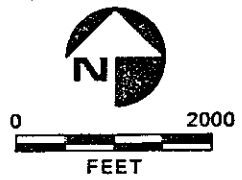
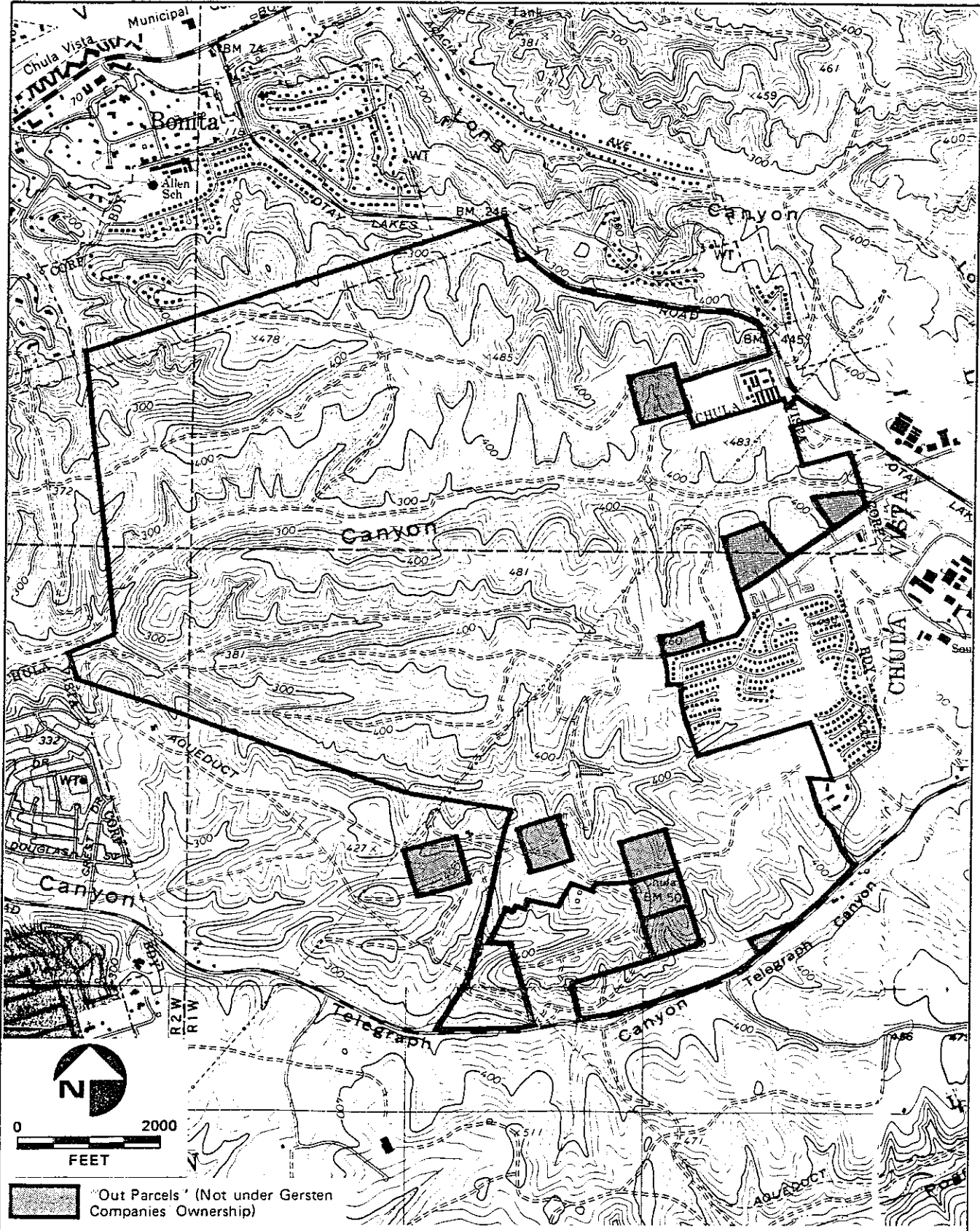


FIGURE 2-2

Chula Vista General Plan Land Use Element



'Out Parcels' (Not under Gersten Companies Ownership)

Topographic Map of Project Site and Vicinity

**FIGURE
2-3**

of a water tank. The property is covered primarily by native scrub plant communities and various dirt roads traversing much of the site. East H Street (two lanes of the ultimate six lanes) traverses the south leg of Rice Canyon in an east-west direction connecting with an interchange at I-805 and an intersecation with Otay Lakes Road.

2.2 PROJECT CHARACTERISTICS

The proposed project involves an amendment to the existing 2450-acre El Rancho del Rey Specific Plan. The existing Specific Plan was adopted in 1978 and revised most recently in 1983. The portion of the adopted Specific Plan to be amended is shown on Figure 2-4A. The area to be amended corresponds with the project area shown in Figures 2-4B and 2-5. Those areas within the boundaries of the adopted El Rancho del Rey Specific Plan which are not being amended as part of the current proposal consist of areas with approved projects, most of which have been constructed.

A total of 1582 acres of the entire 1673.5-acre specific plan amendment are under the ownership of the Gersten Companies. The remaining 91.5 acres are comprised of 11 "out parcels," under various private ownerships, which range in size from 2.0 to 10.2 acres. These are shown on Figures 2-3 and 2-4A. There are three primary areas of change involved with the specific plan amendment, including land use, circulation and grading. Each of these is described below, and discussed in detail in Section 3.

Land Use

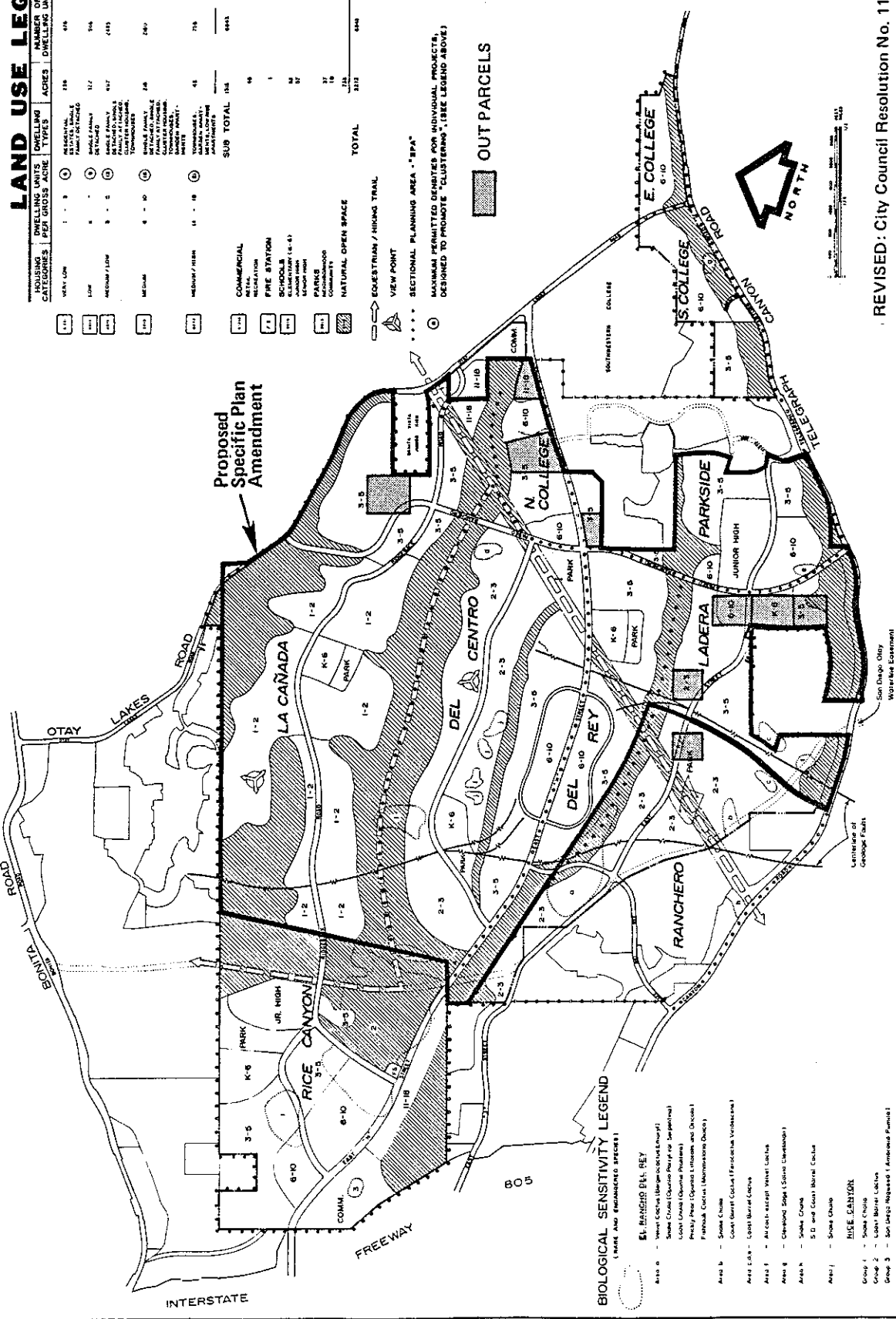
The proposed plan includes changes in the density of residential development to be designated for the property. The intended development would shift from a predominantly single-family homesite plan (densities of 1-5 du/ac) with some higher density products, to a development with a greater emphasis on small lot single-family uses and multi-family uses. The maximum number of dwelling units permitted in the Specific Plan amendment area would increase from 4220 to 5928. Proposed land uses for the El Rancho del Rey Specific Plan amendment area are shown in Figure 2-5 and detailed in Table 2-1. Land uses for that portion of the El Rancho del Rey project area owned by the Gersten Companies have been proposed by the applicant. Land use designations for the out parcels have been proposed by the City of Chula Vista Planning Department based on adjacent uses.

The proposed amendment involves a revision in the density categories from those used by the adopted Specific Plan. When the adopted plan includes categories of 1-2, 2-3, 3-5, 6-10 and 11-18 du/ac, the proposed amendment would have categories of 0.1-4, 4-6, 6-8, 8-12 and 12-20 du/ac. In order to maintain consistency between all Sectional Planning Areas of the overall Specific Plan, the map will be reformatted to

LAND USE LEGEND

HOUSING CATEGORIES	DWELLING UNITS PER 100 SQ. ACRES	DWELLING TYPES	ACRES	NUMBER OF DWELLING UNITS	POPULATION
VERY LOW	1 - 3	RESIDENTIAL SINGLE-FAMILY	218	476	1,629
LOW	4 - 7	RESIDENTIAL SINGLE-FAMILY	177	364	1,264
MEDIUM-LOW	8 - 15	RESIDENTIAL SINGLE-FAMILY, APARTMENTS, TOWNHOUSES	417	893	3,059
MEDIUM	16 - 30	RESIDENTIAL APARTMENTS, TOWNHOUSES, MULTIFAMILY HOUSING	148	287	1,146
MEDIUM-HIGH	31 - 100	RESIDENTIAL APARTMENTS, TOWNHOUSES, MULTIFAMILY HOUSING	45	76	448
SUB TOTAL			104	2,046	8,770
TOTAL			312	644	2,196

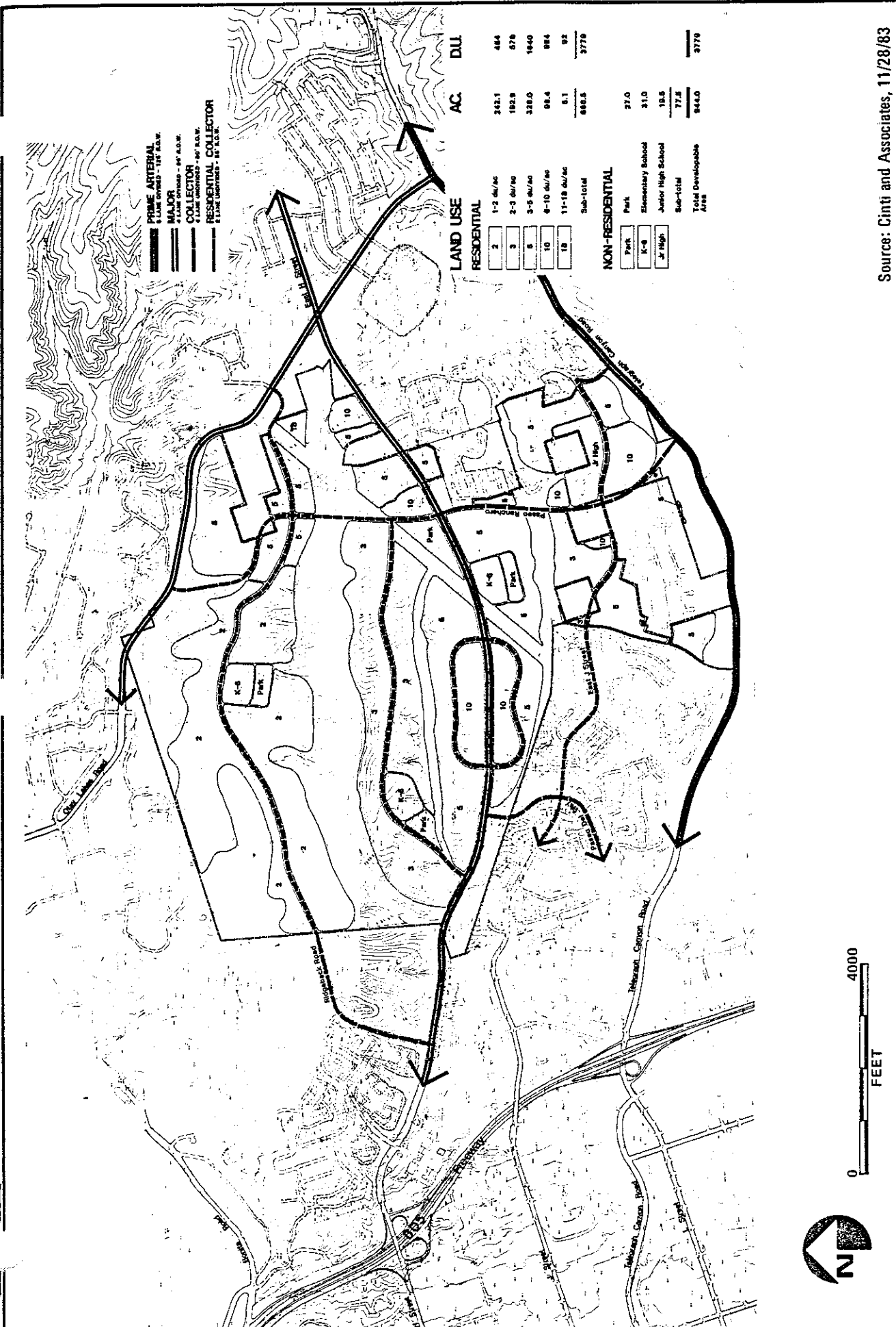
- COMMERCIAL RETAIL, RECREATION
- FIRE STATION
- SCHOOLS (K-12)
- UNIVERSITY
- INDUSTRIAL
- COMMUNITY
- NATURAL OPEN SPACE
- EQUESTRIAN / HIKING TRAIL
- VIEW POINT
- SECTIONAL PLANNING AREA - "SPA"
- MAXIMUM PERMITTED DENSITIES FOR INDIVIDUAL PROJECTS, DESIGNED TO PROMOTE "CLUSTERING". (SEE LEGEND ABOVE)
- OUT PARCELS



REVISED: City Council Resolution No. 11103, 1/1/83

FIGURE 2-4A

Existing El Rancho del Rey Specific Plan



PRIME ARTERIAL
 1 LANE DIVIDED - 120' R.O.W.
MAJOR
 2 LANE DIVIDED - 80' R.O.W.
COLLECTOR
 2 LANE UNDIVIDED - 60' R.O.W.
RESIDENTIAL COLLECTOR
 2 LANE UNDIVIDED - 40' R.O.W.

LAND USE

RESIDENTIAL	AC.	D.U.
2	242.1	484
3	102.9	308
5	328.0	984
10	98.4	984
15	5.1	92
Sub-Total	868.5	3770

NON-RESIDENTIAL

Park	27.0
Elementary School	31.0
Junior High School	19.5
Sub-Total	77.5
Total Developable Area	946.0

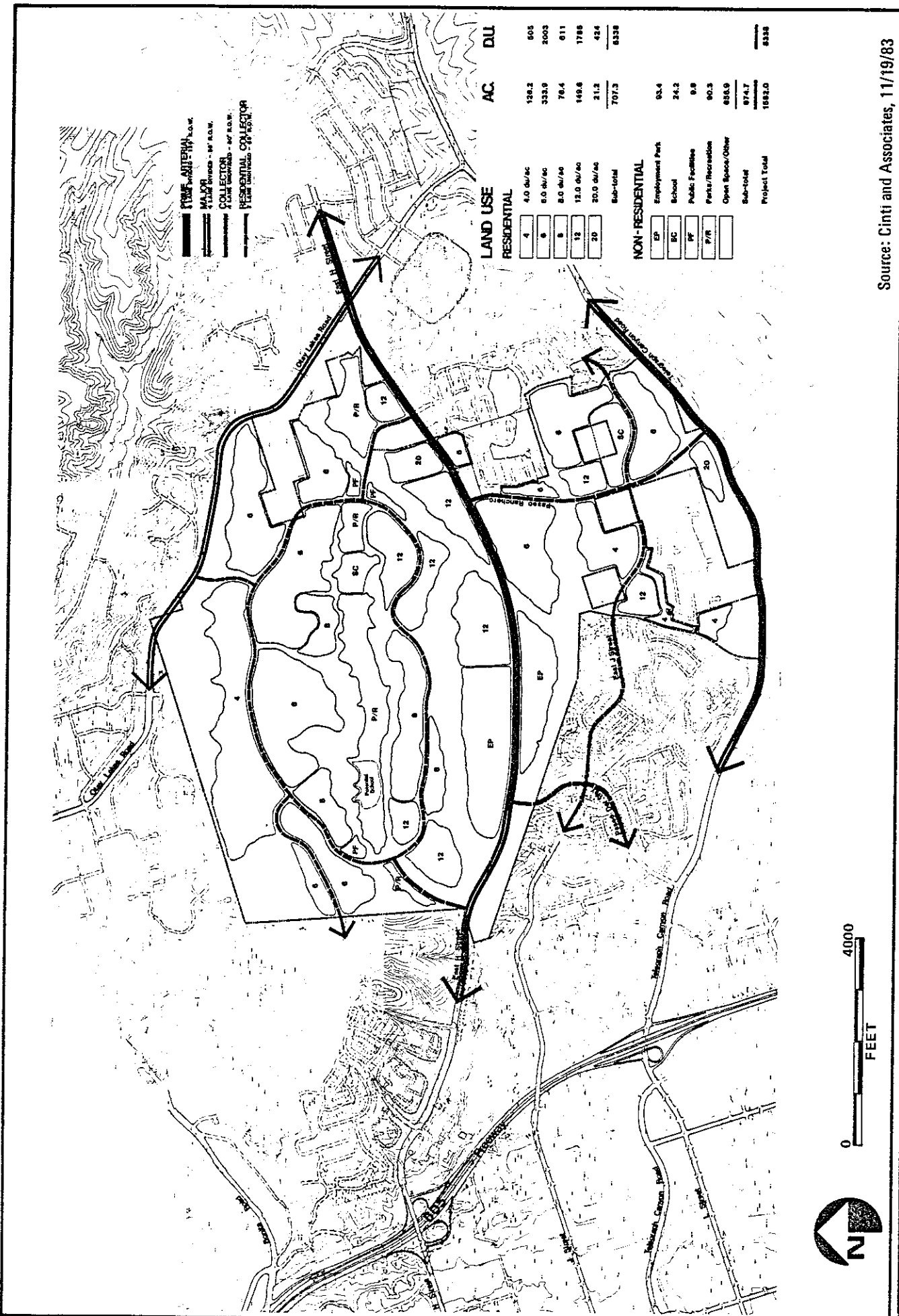


0 4000
 FEET

Source: Cinti and Associates, 11/28/83

FIGURE
2-4B

Adopted Specific Plan and Traffic Circulation Features



Source: Cinti and Associates, 11/19/83

FIGURE 2-5

Proposed Specific Plan and Traffic Circulation Features

Table 2-1

LAND USE ACREAGES FOR EXISTING AND PROPOSED SPECIFIC PLANS

Land Use	Existing Specific Plan*				Proposed Specific Plan Amendment				Total	
	Gersten Property		Out Parcels		Gersten Property		Out Parcels		Both Areas	
	Acres	Units	Acres	Units	Acres	Units	Acres	Units	Acres	Units
Residential (du/ac):										
1-2	242.1	484	0.0	0	242.1	484				
2-3	192.9	579	20.7	62	213.6	641				
3-5	328.0	1,640	38.7	194	366.7	1,834				
6-10	98.4	984	10.0	100	108.4	1,084				
11-18	5.1	92	4.7	85	9.8	177				
0.1-4							126.2	505	22.4	66
5-6							333.9	2,003	27.0	162
7-8							76.4	611		
9-12							149.6	1,795	10.0	102
13-20							21.2	424	14.7	260
Subtotal	866.5	3,779	74.1	441	940.6	4,220	707.3	5,338	74.1	590
Commercial										
Employment Park				0.0			93.4			93.4
Schools:							24.2		15.0	39.2
Elementary	31.0		15.0		46.0					
Junior High	19.5				19.5					
Public Facilities							9.9			9.9
Parks/Recreation	27.0				27.0		90.3			90.3
Natural Open Space	638.0		2.4		640.4				2.4	2.4
Open Space/Other							656.9			656.9
Total	1,582.0		91.5		1,673.5		1,582.0		91.5	1,673.5

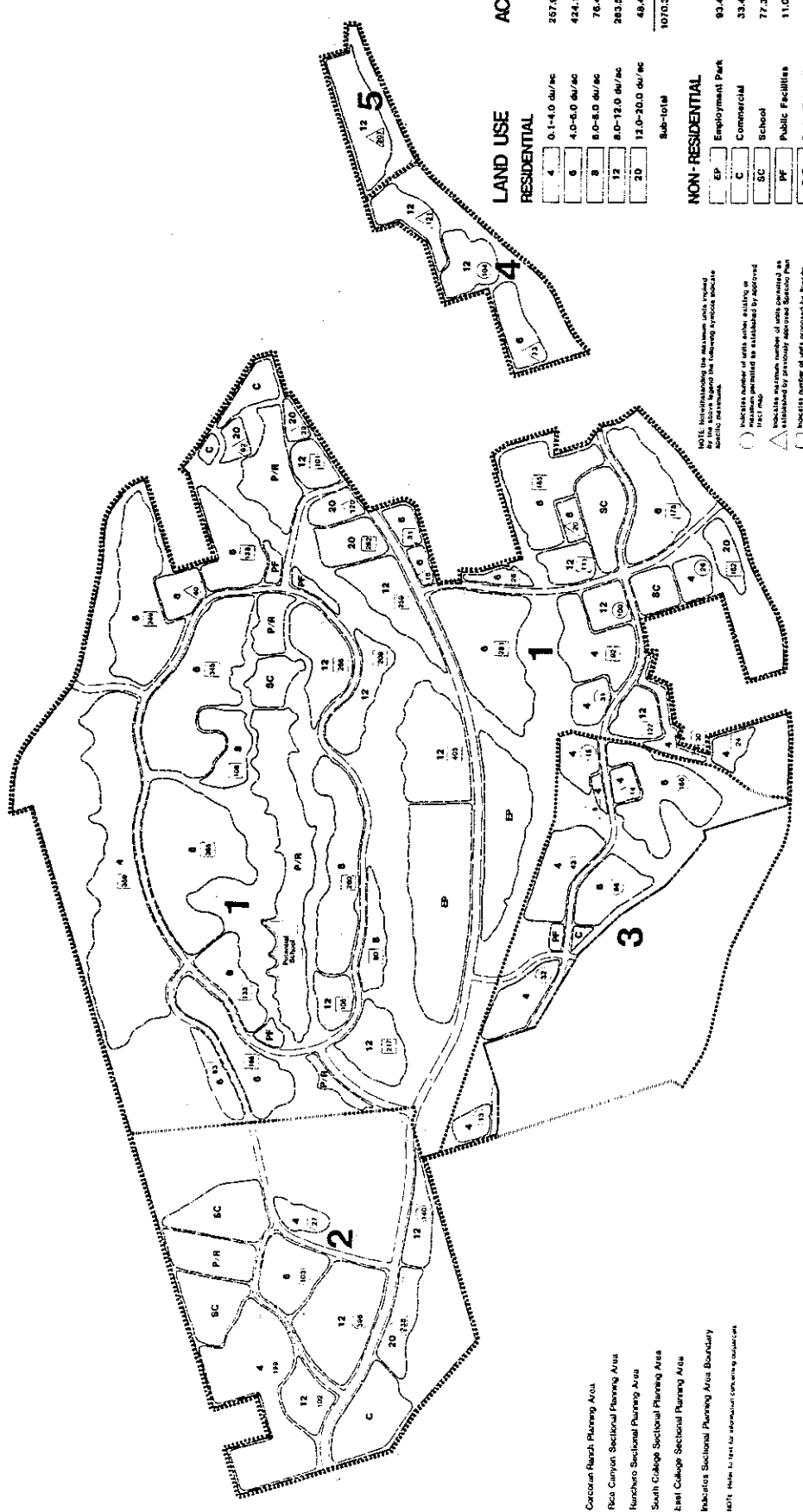
*Includes those portions affected by the proposed amendment, as outlined on Figure 2-3. Acreages include streets.

indicate the same density categories for the entire 2450-acre Specific Plan as the currently proposed amendment area. This modification will not affect the development potential for any portion of the Specific Plan outside the 1673.5-acre amendment area. Rather, the maximum number of units permitted by the adopted plan and approved maps will be indicated and will take precedence over the general land use categories shown on the map. Figure 2-6 illustrates the overall Specific Plan with reformatted density categories.

The proposed amendment area land uses include residential development at densities varying from 2.5 dwelling units per acre (du/ac) (an out-parcel) to 20 du/ac. According to the Specific Plan text (Cinti & Associates, 1984) the 4 du/ac classifications are intended to be single-family detached homes. The 6 du/ac residential category is intended for small lot, single-family, zero and double zero lot line patio homes, duplexes, multiplexes, and residential cluster developments. The 8 du/ac classification is intended for townhomes, patio homes, mobile home parks and subdivisions, condominiums, and cluster developments which would frequently consist of attached dwellings. The 12 du/ac classification is similar to 8 du/ac except the uses would be in more efficient spacial relationships including group parking and stacked units. The 20 du/ac classification would allow stacked condominiums, garden apartments, and other similar multi-family residential uses. The combining of several density classifications within a residential area would be permitted by the proposed plan providing the maximum density for the plan area is not exceeded. The maximum number of dwelling units permitted for the entire Specific Plan amendment area is 5928.

A major land use change of the proposed plan is the addition of a 93.4-acre Employment Park designation. This acreage is located adjacent to East H Street on the north and south sides of the road. Allowable uses within this designation would include industrial, office, and commercial support uses (Cinti & Associates, 1984). The adopted specific plan does not include any Employment Park designation or provisions for similar type uses.

A total of 3 parcels, comprising 39.2 acres of the Specific Plan amendment area (including 1 out parcel) are designated as future school sites. Of the two school sites within the Gersten Companies' ownership, one will be for an elementary school and the other for a junior high. The third school site is located in the southern sector of the property. A fourth "potential school site" is designated in the central aspect of the site.

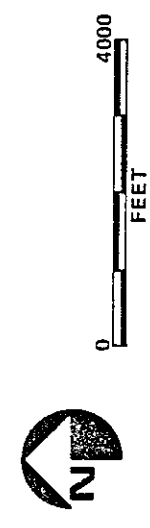


LAND USE	AC.	DU.
RESIDENTIAL		
4 0.1-4.0 du/ac	257.8	910
6 4.0-6.0 du/ac	424.1	2618
8 6.0-8.0 du/ac	76.4	611
12 8.0-12.0 du/ac	283.5	2665
20 12.0-20.0 du/ac	48.4	913
Sub-total	1070.3	7918
NON-RESIDENTIAL		
EP Employment Park	93.4	
C Commercial	33.4	
SC School	77.3	
PF Public Facilities	11.0	
P/R Parks/Recreation	107.9	
Open Space/Other	1056.7	
TOTAL	2450.0	7918

NOTE: Notwithstanding the maximum units required hereby, the following symbols indicate:

- indicates number of units within existing or past use
- △ indicates maximum number of units permitted as established by previously approved Sectional Plans
- indicates number of units proposed by applicant

- 1 Corcoran Ranch Planning Area
 - 2 Boca Canyon Sectional Planning Area
 - 3 Rancho Sectional Planning Area
 - 4 South College Sectional Planning Area
 - 5 East College Sectional Planning Area
- ***** indicates Sectional Planning Area Boundary
- NOTE: Refer to text for additional governing ordinances



Source: Cinti and Associates, 3/24/84

FIGURE 2-6

Overall Specific Plan with Reformatted Density Categories

Several sites totaling 9.9 acres have been indicated on the Specific Plan map as Public Facilities. These sites are to serve as public facilities which may include places of worship, day care centers, governmental facilities, or other similar community service uses. In addition to these specific sites, public facilities would be permitted in any area of the plan which is deemed appropriate. No public facilities are designated on the adopted Specific Plan.

Circulation

Regional access to the project area is provided by Interstate 805 to the west. The primary east-west roads through the project area are Telegraph Canyon Road on the south, and East H Street through the central portion of the site both of which intersect Otay Lakes Road east of the amendment plan. Proposed circulation features are shown on Figure 2-5.

The adopted Specific Plan includes a series of north-south and east-west residential collectors which traverse the amendment area (Figure 2-4B). These roads would function as a modified grid system to carry traffic through the project site. The adopted plan also includes a small loop configuration off of East H Street.

Under the proposed plan, the only major changes in the circulation system between Telegraph Canyon Road and East H Street would be deletion of the southern section of the East H Street loop road in the vicinity of the Employment Park. North of East H Street, the system of residential collector roads would be substantially modified. Paseo Ranchero would not function as a direct north/south link between Telegraph Canyon Road and Otay Lakes Road through elimination of the segment between East H Street and Otay Lakes Road. A new collector road providing access to the area north of East H Street would be located between Paseo Ranchero and Otay Lakes Road.

The two east/west roads would also be modified and would not serve as direct through routes. Ridgeback Road would connect with a new loop road which would be located around the community spine, serving more for internal use rather than as a through traffic route. The same number of major access points into the amendment area would be retained, but the orientation of the roads would be modified to link with the large central loop road. The primary entry to the northern portion of the amendment area will shift from Ridgeback Road to the collector road further east of East H Street.

Grading

Development of the El Rancho del Rey property could be implemented with a large range of options for grading and detailed site layout. The applicant prepared one

preliminary grading concept to develop land uses under the adopted specific plan, which was estimated to involve approximately 19 million cubic yards of earth, with 3 million cubic yards having to be exported from the site. The proposed specific plan has been designed such that total grading onsite would likely increase slightly, but would balance onsite. No detailed grading plans are proposed at this time, but would be required as part of subsequent project actions. For purposes of this EIR, it was assumed that the entire area within each land use "bubble" would be graded, with the remaining open space areas retained. A more detailed review of precise grading plans will be conducted as part of subsequent project evaluation.

The major area of change onsite is the north leg of Rice Canyon which was natural open space on the adopted plan, and would be partially filled under the proposed plan. The easternmost portion of Rice Canyon would be designated for residential development, with the majority being designated for Parks/Recreation as a central open space spine. It is intended that active public and private recreation uses occur in this area, with commercially-oriented facilities such as equestrian centers, health clubs, etc. permitted. One school site and a potential school site are also designated in the north leg of Rice Canyon. The western portion of the north leg would be developed with two collector roads and additional Parks/Recreation area which will also require some filling in the bottom of the canyon.

The center leg of Rice Canyon is shown to be largely developed on the adopted plan, with a narrow strip of open space designated along the canyon bottom. The proposed amendment designates a larger portion of this canyon for open space linking the transmission line easement and East H Street. The proposed plan also indicates a larger area of open space along the south leg of Rice Canyon, south of East H Street and the Employment Park, which will preserve more of the steep slopes in this area.

Two areas which the proposed amendment would require more grading than was indicated by the adopted plan are in the northwestern portion of the project, where a finger canyon would be partially filled, and adjacent to Telegraph Canyon Road at Paseo Ranchero. The proposed plan includes development of high density residential rather than the open space designation of the adopted plan.

A vegetation plan for the El Rancho del Rey Specific Plan (excluding the out parcels) has been prepared which includes undisturbed natural vegetation and a number of treatment areas featuring revegetated areas, cacti refuges, and other areas with introduced plant species. The vegetation plan emphasizes active conservation more than preservation of existing onsite resources. The vegetation plan is discussed in more

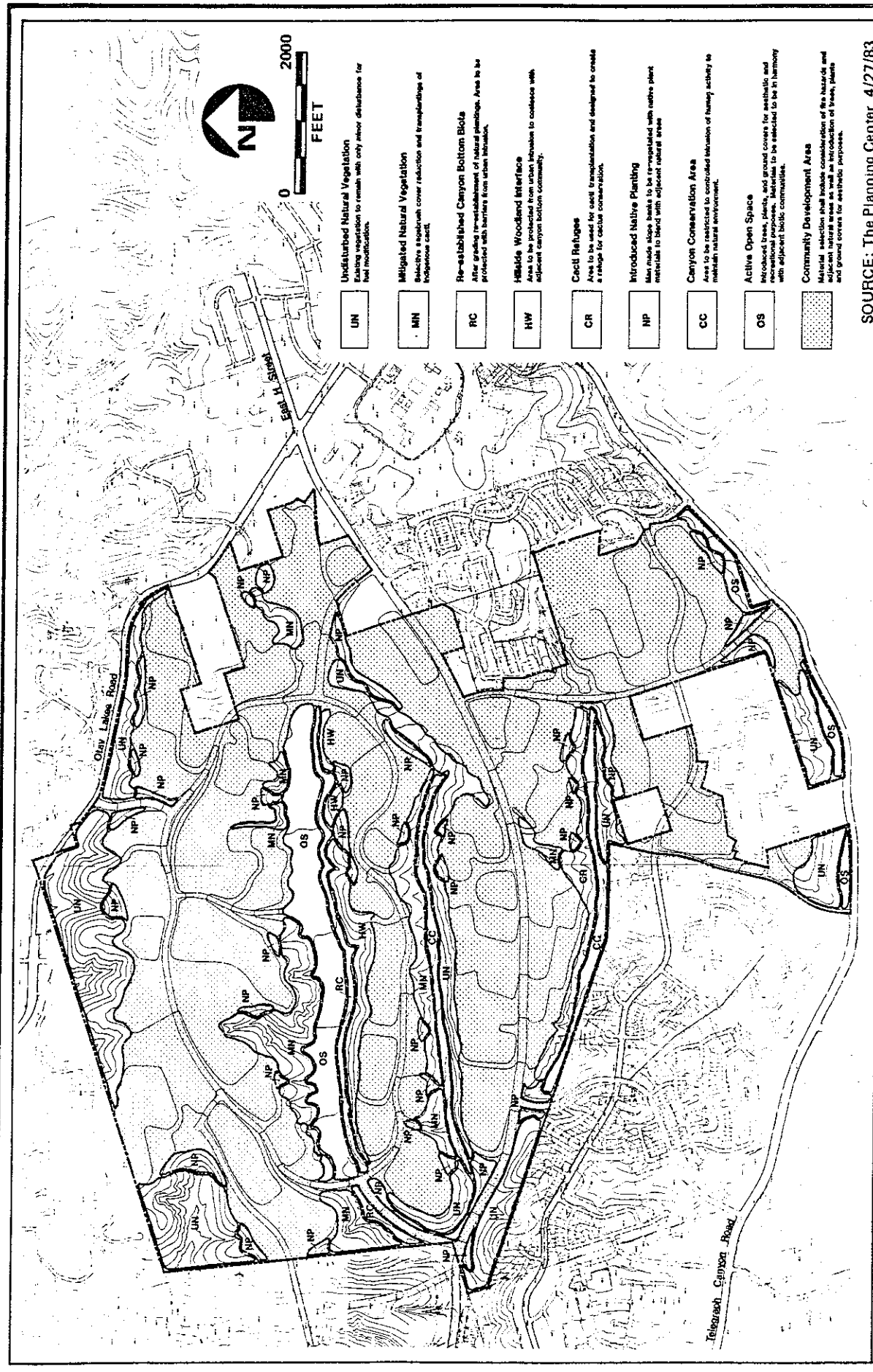
detail in Section 3.4. The areas indicated as open space on Figure 2-4A are generally intended for more passive forms of open space uses. The vegetation plan, Figure 2-7, provides some definition of the restrictions on urban intrusion into open space areas. Open space uses could include agriculture, active and passive open space, natural open space, bodies of water, public and private parks, community facilities, and other uses of a similar nature.

Future Project Approvals

All development within the Specific Plan area shall be subject to Sectional Development Plans, and Site Plan and/or Tentative Tract Map approval. Additionally, at least some areas will require approval by the Design Review Committee. Sectional Development Plans or Sectional Planning Areas (SPA) shall guide in the form of specific development concepts and approvals, the sequential implementation of the plan and the preparation of site plans. The Specific Plan text (Cinti & Associates, 1984) states the following with regard to SPAs:

The extent of each Sectional Development Plan or Specific Planning Area (SPA) shall be based on the pre-application discussions between the applicant and the Planning Department. The extent of actual construction proposed, infrastructure, community facilities, circulation, continuity of community structure, and both public and private economic considerations shall be considered in determining each SPA boundary. By not predetermining SPA boundaries it will allow the boundary to be more responsive to the particular issues that may vary from time to time. Should the applicant and the Planning Department not be able to agree on the SPA boundary then the City Council shall have the final determination of the appropriate planning area.

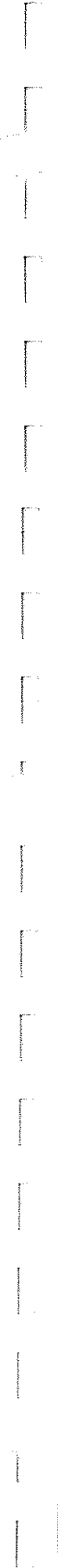
Each SPA will be required to have a site plan; grading plan; landscape plan; lighting and signing programs; a recreation, open space and trails plan; utility service plan; community fencing plan; design concepts; public facilities plan; implementation plan; traffic analysis; and a noise analysis.



SOURCE: The Planning Center, 4/27/83

FIGURE 2-7

Vegetation Plan



SECTION 3
ENVIRONMENTAL ANALYSIS

This impact analysis is structured to evaluate the potential effects of the proposed project, including short-term and long-range considerations. The development permitted by the proposed Specific Plan Amendment is compared to the current undeveloped condition of the property, as well as to development that would be permitted by the adopted Specific Plan as appropriate to each issue. Thus the total change from existing conditions is presented as well as the incremental changes resulting from the proposed amendment.

Each topic in this section includes the following subsections: Existing Conditions - describes the environmental setting for each topic; Impacts - an assessment of the effects related to the project; Mitigation - discussion of measures which would avoid or reduce any adverse impacts identified; and Analysis of Significance - conclusion regarding what the significance of any impacts would be after mitigation has been implemented.

During the formulation of plan designations in preliminary planning meetings, an alternative land use plan was formulated by City staff. This alternative plan incorporates some features from both the adopted and proposed Specific Plan, and is described in detail in Section 4.2 of this EIR. The impact analysis of the alternative plan amendment emphasizes areas where the potential project effects would vary from the proposed plan, and the reader should refer to Section 4, Alternatives, for the evaluation of the Alternative Plan.

3.1 LAND USE

3.1.1 Existing Conditions

3.1.1.1 Onsite and Surrounding Land Uses

The subject property is currently vacant, and for the most part is covered with native scrub vegetation. The topography of the project site is dominated by steep east-west trending ridges and intervening drainages. Drainage on the property generally flows to the west. A number of unimproved dirt roads and motorcycle trails traverse the site. East H Street extends across the mid-southerly sector of the property with two lanes currently constructed. A large water tank is located just south of East H Street, approximately mid-way across the site.

Other uses on the site include three SDG&E transmission lines, consisting of a 138 kV line within a 250-foot right-of-way which traverses the approximate center

of the site in a northeast-southwest direction (dotted line in Figure 2-3) and two 69 kV lines within 20-foot rights-of-ways, one of which parallels Otay Lakes Road along the northerly border of the site and another which crosses the northwestern sector of the property.

The subject property is surrounded on all sides but the far south (opposite Telegraph Canyon Road) by primarily residential development. Existing residences and graded residential pads on both sides of Paseo del Rey, north of Telegraph Canyon Road, were developed as part of the Ranchero Sectional Planning Area (see existing Specific Plan, Figure 2-4A). The Rice Canyon SPA is located west of the project site and is currently being developed with residential uses at varying densities. Residences located to the north and east of the subject property are not located within the El Rancho del Rey Specific Plan. These areas are primarily low density single-family residential development.

Non-residential land uses in the project vicinity include Bonita Vista Junior High School, situated within an inpocket into the property adjacent to Otay Lakes Road, and Bonita Vista High School, located east of Otay Lakes Road. Southwestern College is situated west of Otay Lakes Road and north of Telegraph Canyon Road. Vacant land to the south of Telegraph Canyon Road comprises part of the large Otay Ranch. The nearest major commercial development in the vicinity is the Vons/Sav-on shopping center located north of Telegraph Canyon Road and east of I-805. Another major commercial development in the area is located at the Bonita Road/Otay Lakes Road intersection to the north of the property.

Major land use proposals in the project vicinity, in addition to those discussed above, include the following projects:

Bonita Meadows Estates: Consists of a planned 263-acre planned development comprised of 544 manufactured homes. The site is located south and west of Proctor Valley Road, north of Bonita Long Canyon.

Bonita Long Canyon: Consists of a 650-acre site in the City of Chula Vista. Implemented under the Long Canyon Sectional Area Plan. Ultimate development will include 768 single-family residences and 56 apartment units. Project is located opposite Otay Lakes Road from El Rancho del Rey.

EastLake I Planned Community: This project involves development of 1268 acres at the eastern limit of the City of Chula Vista, on both sides of Telegraph Canyon Road. The PC Zoning and General Development Plan for the property permits a maximum 3683 dwelling units on 620 acres, as well as employment park, office,

commercial, schools and open space/recreation uses. Specific site plans and development proposals are currently being reviewed by the City of Chula Vista.

3.1.1.2 General Plan Policies

The subject property is located within the Chula Vista General Plan area (City of Chula Vista, 1983) (see Figure 2-2). The subject property is included within the area governed by the text and plan diagram of the El Rancho del Rey Specific Plan, which is incorporated by reference into the Chula Vista General Plan. Thus, General Plan policies for the subject property are identical to policies in the existing Specific Plan.

The majority of the property surrounding the site is designated for residential use at low and medium densities. The large, undeveloped Otay Ranch property south of Telegraph Canyon Road is designated Agriculture and Reserve, and Medium Residential (4-12 du/ac). Although it is included within the Chula Vista General Plan, the property is within County of San Diego jurisdiction. A strip of land approximately 1500 to 2500 feet wide along Telegraph Canyon Road is designated in the County Otay Subregional Planning Area as Residential (7.3 du/ac) with a Future Urban Development 1995 overlay designation. The 1995 Future Urban Development Area category is intended to encourage ultimate development at urban densities by holding the land in reserve until services are available and it becomes desirable for urban development.

The Chula Vista General Plan contains a number of elements, including Housing, Scenic Highways, Noise, Conservation, Seismic Safety, Open Space, Parks and Recreation, and bike routes. The various elements are discussed in the applicable sections of this document.

3.1.1.3 El Rancho del Rey Specific Plan

The El Rancho del Rey Specific Plan shown in Figure 2-4A was adopted in 1978 and most recently amended on January 4, 1983. The Plan encompasses a total of 2450 acres. As shown on Figure 2-4A, the existing Specific Plan is divided into Sectional Planning Areas (SPAs). The Rice Canyon SPA in the western end of the Specific Plan was approved for residential development which is currently under construction. The Rancho SPA (see Figure 2-4A) contains existing residential development as well as homes under construction. The eastern end of this SPA, which contains an out parcel, is presently undeveloped. The South College and East College SPAs are located north of Telegraph Canyon Road on both sides of Otay Lakes Road. The East College SPA and the western end (portion designated 3-5 du/ac) of the South College SPA are currently undeveloped. That portion of the South College SPA designated 6-10 du/ac

(northwest of the Telegraph Canyon Road/Otay Lakes Road intersection) is being graded for home construction. The remaining SPAs have not been developed and are within the limits of the proposed Specific Plan Amendment, as shown on Figure 2-4A.

The area included in the amendment has been the subject of numerous city and property owner planning efforts beginning with a June 1970 plan for Rancho Bonita and most recently in the August 15, 1978 approval of the Specific Development Plan which is the "adopted" or "existing" plan discussed in this report.

When adopted, the Specific Plan was intended as a "local district plan", charged with the direct application of the policy and strategy of the City's "structure plan" - the Chula Vista General Plan. The Specific Plan was intended as far more detailed and definitive than the General Plan, while remaining a statement of the City Council of the policies for land use development. As such it was more succinct in text and more schematic in diagram than the General Development Plan and site utilization plans of the Planned Community Zones. The brief, schematic format was designed to provide sufficient flexibility in the El Rancho del Rey Plan so that it might remain a viable and effective plan over a prolonged period of time. The Specific Plan is readily amendable, and thus capable of meeting the demands of a changing society, and it is also susceptible of administrative adjustment of the plan through the transfer of development intensity which would retain the overall density and land use requirements but would allow a restructuring of the location and particular housing site.

Within the El Rancho del Rey Specific Plan boundary the few projects that have been implemented have required changes to the adopted plan, generally involving increased density.

The existing Specific Plan text includes policies, principals and standards of the adopted plan. Some of the key points applicable to the analysis of land use impacts are presented below. Certain categories are discussed elsewhere in this report. For example, conservation policies are discussed in Section 3.4, Biology; and Section 3.13, Parks, Recreation, and Open Space. The adopted Specific Plan envisioned development of the area to be suburban in character. While a variety of housing types were considered desirable, single-family homes were anticipated to be the predominant land use. Within the amendment area, existing land use designations are almost exclusively estate and low density residential, with some areas of medium density uses. Non-residential uses include only schools, parks and open space.

The adopted plan emphasizes the preservation of the north leg of Rice Canyon as public open space, with the canyon floors of the middle and south legs also

retained as natural open space. These latter two canyon areas were anticipated to have common open space developed adjacent to the natural area.

The circulation system includes designated roads, and encourages development of equestrian and hiking trails, bicycle routes and transit facilities.

3.1.1.4 Zoning

The subject property is zoned PC - Planned Community. The purpose of the Planned Community zone is to provide a mechanism for the orderly preplanning and long-term development of large tracts of land which may contain a variety of land uses but are under unified ownership or control so that the entire tract may be developed in an orderly fashion. Specific plans can be implemented through the PC zone. The City of Chula Vista Zoning Ordinance requires a detailed plan diagram and text as part of the submittal for a Planned Community Development, as well as the formation of Sectional Planning Areas within the Planned Community.

Residential development which flanks the subject property to the east (between East H Street and Telegraph Canyon Road) and west is also zoned PC. Land adjacent to the northern boundary is zoned RE-P (Residential Estate, requiring a Precise Plan). This area has been developed with single-family homes. Land north of East H Street and east of Otay Lakes Road is zoned R 1-15-P, which allows residential development under a precise plan on lots of a minimum size of 15,000 square feet. Land south of East H Street on both sides of Otay Lakes Road is zoned R-1 (single-family residential).

3.1.2 Impacts

The area of the existing El Rancho del Rey Specific Plan that is being amended by the proposed project is shown on Figure 2-4A. The proposed land uses for the Specific Plan Amendment are shown on Figure 2-5. A comparison of land use acreages and units between the existing and proposed specific plans is presented in Table 2-1.

As shown in Table 2-1, the proposed Specific Plan Amendment will result in an increase in the maximum allowable number of residential units within the amendment area from 4220 to 5928 (40 percent). Concurrently, the area of residential use will decrease from 940.6 acres to 781.4 acres (17 percent), resulting in an increase in the overall average residential density per residential acre of 69 percent. This increased density has been proposed in response to changes in market characteristics, and provides the opportunity for a more comprehensive mixture of residential products

than the adopted plan. The proposed amendment also includes a land use and circulation pattern, including a central community spine, which would serve to focus community activities. The open space concept of the proposed amendment emphasizes the active recreation opportunities of the central spine, in the north leg of Rice Canyon, rather than the passive natural open space envisioned by the adopted plan. The proposed plan does retain natural open space areas in the center and south legs of Rice Canyon, linked with a hiking path to provide a diversity of recreational amenities.

The use of a loop road system with connecting entry roads also serves to create a sense of community, with neighborhoods being linked together rather than being separated from each other. The system of bicycle, pedestrian, hiking and equestrian trails would also encourage activity within the community.

The addition of Employment Park uses adjacent to East H Street would provide an employment base within the Specific Plan area, and would result in a more balanced community. Specific areas for Public Facilities were not designated under the adopted plan, but have been included in the proposed plan. The overall changes which provide a more diverse mixture of land uses within the amendment area are considered to be a beneficial change in the Specific Plan.

While the overall density of the residential designations has increased, the proposed land uses are largely compatible with adjacent uses, both outside the amendment area boundary and internal to the plan area. There is a gradual transition of densities, with the lowest density categories adjacent to existing low density development to the north, and along East J Street. Higher density land uses are located along the major traffic corridors of Telegraph Canyon Road and East H Street. The Employment Park is also centered on East H Street, and would be buffered topographically from adjacent residential development by open space slopes.

Several areas within the Specific Plan amendment should be subject to more detailed evaluation at the time development plans are formulated to avoid potential impacts. These include the interface between: the employment park and 12 du/ac area north of East H Street; the northernmost portion of the 4 du/ac area adjacent to existing offsite development; and the 20 du/ac area adjacent to Telegraph Canyon Road and the low density uses designated for the out parcel to the north. Each of these areas could be buffered adequately through setbacks, topographic separation, landscaping or street layout, and such measures should be incorporated into specific site design to insure compatibility.

The proposed amendment will result in a decrease in the acreage of land reserved for schools from 65.5 to 39.2 acres (40 percent). It should be noted that additional acreage for a "potential school" not included in the 39.2 figure is indicated on the proposed Specific Plan (see Figure 2-5). The provision of school sites is not expected to be a significant impact, as discussed in more detail in Section 3.12. Other community facilities include several sites totaling 9.9 acres which have been indicated on the Specific Plan map as public facilities. The proposed Specific Plan allows for development of public facilities in other areas as necessary.

It is intended that a major "spine" of land designated parks and recreation will be created in the filled area of Rice Canyon. The "spine" is located within the major loop road in the approximate center of the site, and is expected to serve as the focal point for the community. The new plan will include 42 additional acres of land designated for parks and recreation. It should be noted that the parks designation under the existing Specific Plan refers to neighborhood and community parks, while the parks/recreation designation includes both passive park uses as well as commercial recreational areas.

The 250-foot SDG&E easement which traverses the plan area is designated open space on the Specific Plan, which would mitigate impacts at the specific plan level. Potential impacts on a more site-specific basis such as access problems or runoff impacts on the easement should be addressed at the development plan level. The 20-foot easement in the northwest aspect of the site crosses several areas designated for residential use. Utility facilities located in this area will be undergrounded in future streets which will avoid potential land use impacts in the existing easement area.

Land uses surrounding the subject property are primarily residential, with the exception of nearby Southwestern College and several primary schools. The vacant Otay Ranch property located south of Telegraph Canyon Road constitutes a major agricultural holding in the County. The increased urbanization of the subject property is not expected to result in any significant land use impacts since the portion of Otay Ranch adjacent to Telegraph Canyon Road is designated for residential use and is a 1995 Future Urbanizing Area on the County General Plan. The uses for the proposed Specific Plan are compatible with surrounding land uses and thus would not result in any significant land use conflicts.

Nearby retail commercial uses would be provided to future residents by existing shopping centers located at the northeast corner of the Telegraph Canyon Road/I-805 intersection, and at the Otay Lakes Road/Bonita Road intersection. An

additional retail center is planned to the east at the H Street/I-805 intersection as part of the Rice Canyon SPA development approval. Thus, future residents of the Specific Plan area would appear to be well served by existing and planned commercial facilities. Provision of additional services within the plan area would potentially reduce the number and length of vehicular trips and should thus be encouraged.

3.1.3 Mitigation

The proposed Specific Plan is not expected to result in any significant land use impacts in terms of compatibility of adjacent uses both internally and at the interface of the project with offsite development. The proposed residential densities and 91.5-acre employment park would result in substantial increases in traffic. Related impacts such as noise, air quality, and energy conservation, as well as incremental increases in the demand for public services and utilities are discussed in more detail in the appropriate sections of this document.

An adverse effect of the project is the proposed distribution of land uses and proposed grading which would result in major modifications to existing natural topography and native vegetation coverage, particularly in the north leg of Rice Canyon, which conflicts with the stated policies of the existing Specific Plan, and Chula Vista Open Space and Conservation Elements. Mitigation of this impact would require a project redesign featuring an alternate grading scheme (see Section 4).

A beneficial effect of the project is the increased employment opportunities for onsite residents and the rapidly developing surrounding communities that would be provided by the Employment Park.

More site-specific land use issues, such as development adjacent to SDG&E easements, should be addressed at subsequent stages of environmental review (Sectional Development Plans, Site Plans, and review by the Design Review Committee).

3.1.4 Analysis of Significance

The proposed project land uses would be compatible with surrounding development and land use designations, and no internal conflicts are projected. Subsequent project review will address site specific issues and avoid any potential adverse land use effects.

3.2 TRAFFIC CIRCULATION

A transportation analysis for the proposed project was conducted by Urban Systems Associates, Inc. Included in this analysis is an assessment of a cumulative impacts study prepared by the San Diego Association of Governments (SANDAG). The SANDAG study projected traffic for the East Chula Vista Area and assumed the development of all projects already approved in the area by both Chula Vista and the County.

The current study by Urban Systems Associates, Inc. used similar trip generation rates and assumptions to determine the comparative traffic that could be generated by the proposed development. The data on existing conditions was obtained through a review of available traffic counts and field surveys which were conducted in April and May of 1984. Estimates of the number of trips that could be generated by the proposed project were developed and distributed to the street system, then intersection capacity analyses were completed for key intersections to identify potential problem areas. The full transportation analysis report is included as Appendix A to this EIR which is available for review at the City of Chula Vista's Planning Department. A supplemental traffic report was prepared by Urban Systems Associates, Inc. to address additional considerations raised during the public review period and subsequent project revisions. The report evaluated revised project impacts on the existing and proposed circulation system and included an analysis of impacts to I-805 and the associated interchanges. The supplemental report is included in the Final EIR, following the Response to Comments.

3.2.1 Existing Conditions

The El Rancho del Rey project area lies on the eastern fringe of the City of Chula Vista, about 1.5 miles east of Interstate Highway 805. That highway traverses the western portion of the San Diego Metropolitan area in a northwest/southeast direction for approximately 26 miles, connecting the Otay Mesa and Mexican border area with the north county coastal areas and Highway 5, as well as many areas in between.

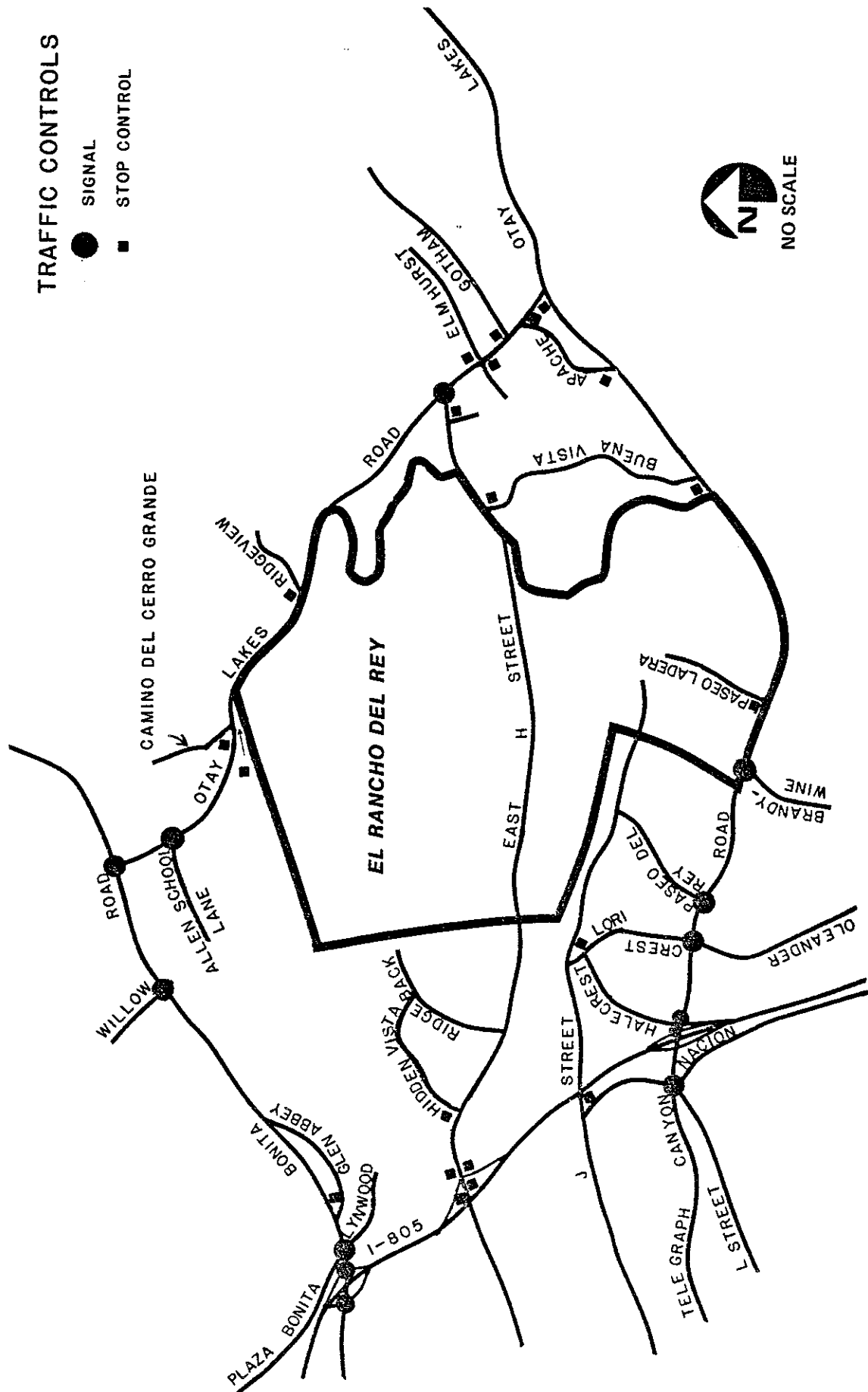
The existing road system in the vicinity of the project is shown in Figure 3-1. The project area is bisected by East H Street, which provides access onto I-805 to the west. Otay Lakes Road borders a portion of the eastern part of the project area and provides access to both Bonita Road to the north and Telegraph Canyon Road to the south, both of which access I-805. J Street, another east to west ingress and egress route, also provides access to the project area but does not access I-805. Existing traffic control facilities are shown in Figure 3-1.

The primary access roads for the plan area, as well as for much of the surrounding area, are Telegraph Canyon Road; Otay Lakes Road; and East H Street. The existing ADT on streets which may carry El Rancho del Rey traffic is shown in Figure 3-2.

Otay Lakes Road between Bonita Road and Telegraph Canyon Road is currently carrying 17,900 trips per day. East H Street in the project area is carrying 9000 trips per day. East J Street east of I-805 has 3700 ADT. Volumes on Telegraph Canyon Road vary from 12,000, just west of Otay Lakes Road, to about 24,800, just east of I-805. Bonita Road carries a range of from 25,700 east of Willow to 34,100 just east of I-805. The volume on I-805 between East H Street and East J Street is 69,700.

TRAFFIC CONTROLS

- SIGNAL
- STOP CONTROL



Source: Urban Systems Associates, Inc., 1984

FIGURE 3-1

Existing Traffic Circulation System in the Project Vicinity

LEGEND

Project Boundaries

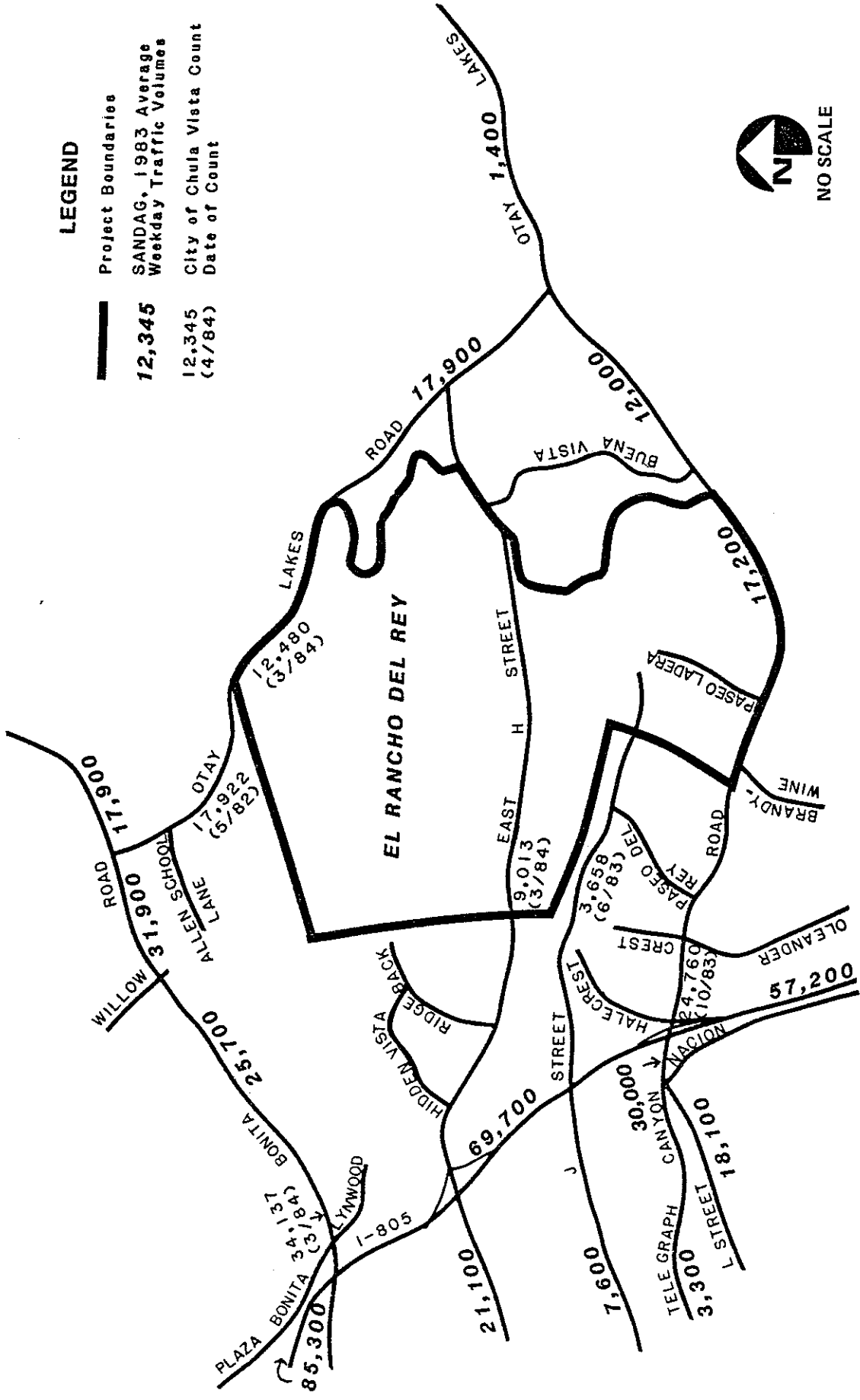
12,345

SANDAG, 1983 Average
Weekday Traffic Volumes

12,345 City of Chula Vista Count
(4/84)



NO SCALE



Source: SANDAG, 1983 Average Weekday Traffic Volumes, San Diego Metropolitan Area, City of Chula Vista, 1984

Existing ADT in the Project Vicinity

FIGURE 3-2

Along the project's southern boundary, Telegraph Canyon varies from a two-lane road (one lane each way with no passing) just west of its intersection with Otay Lakes Road, to a six-lane road (two lanes each way plus left turn lanes) with a raised median at Halecrest. A bike lane is reserved along the south side of Telegraph Canyon Road in the vicinity of the Oleander at Crest intersection. The portion of Telegraph Canyon Road between Halecrest and Paseo Ladera includes a landscaped median.

Otay Lakes Road in the vicinity of the project area varies from a two-lane road (one lane each way) just north of Bonita Vista Junior High School to a four-lane road (two lanes each way) with separate left turn lanes at various locations a long its length. The maximum width of Otay Lakes Road is reached at its intersection with East H Street. At that point, there are two lanes going in each direction (north and south) plus a right turn lane for southbound traffic and a left turn lane for northbound traffic.

East H Street connects Otay Lakes Road to I-805 and areas in Chula Vista. It varies from two lanes (one lane each way) between Ridgeback and Buena Vista to four lanes (two lanes each way) plus a right turn lane and a planted median at Otay Lakes Road and between I-805 and Ridgeback. The portion of East H Street east of Ridgeback is currently being widened and is under construction. Ridgeback Road itself was recently connected to East H Street and open to the public.

Numerous roads within the project area are designated in the Circulation Elements of the City of Chula Vista and San Diego County General Plans. These include: Telegraph Canyon Road; Otay Lakes Road; East H Street; East J Street; Ridgeback; Paseo del Rey; Paseo Ladera; Buena Vista; and Paseo Ranchero. In some cases, the Chula Vista designations are different from County designations. Table 3-1 contains a list of project area roads, their designations, and their existing conditions. Where County and City of Chula Vista designations vary, both designations are given. This is the case with Telegraph Canyon Road; Paseo del Rey; Buena Vista Way; and Paseo Rancho.

The following roads are currently not developed to their designated ultimate width: East H Street between Ridgeback and Buena Vista; East J Street, east of Paseo del Rey; Paseo Ranchero between Telegraph Canyon Road and Otay Lakes Road; Ridgeback Road between East H Street and Otay Lakes Road; and Otay Lakes Road between Camino del Cerro Grande and Bonita Vista Junior High School. Design capacities for the various types of roads in the area are included in Table 3-2. Street design standards are included in Appendix A.

There are many transit facilities available in the general project vicinity and to the west (see Figure 3-3). Local/feeder routes serve Bonita Road; Otay Lakes

TABLE 3-1
Designations and Existing Conditions of Project Area Roads

<u>STREET/SEGMENT</u>	<u>DESIGNATION</u>	<u>EXISTING</u>
Telegraph Canyon Rd. I-805 to Paseo Ranchero	Prime Arterial (Co)	4 lanes - divided
Paseo Ranchero to Otay Lakes Rd.	Prime Arterial (Co)	2 lanes*
East "H" Street (East of I-805) I-805 to Ridgeback	Major Road	4 lanes
Ridgeback to Buena Vista	Major Road	2 lanes*
Buena Vista to Otay Lakes Rd.	Major Road	4 lanes
East "J" Street I-805 to Paseo Ranchero	Collector	2 lanes
Paseo Ranchero to Buena Vista	Collector	2 lanes
Paseo Del Rey Telegraph Canyon Rd. to East "J" St.	{ Collector (Co) Light Collector (CV)	4 lanes
East "J" St. to East "H" St.	{ Collector (Co) Light Collector (CV)	Non-existent*
Paseo Ranchero Telegraph Canyon Rd. to East "H" Street	{ Collector (CV) Light Collector (Co)	Only 1 small segment 2 lanes
Paseo Ladera Telegraph Canyon Rd. to Paseo Entrada	Collector	2 lanes
Paseo Entrada to East "J" St.	Collector	Westernmost section 4 lanes; rest non-existent*
Buena Vista Telegraph Canyon Rd. to East "H" Street	{ Collector (CV) Light Collector (Co)	2-4 lanes
Ridgeback Road East "H" St. to Otay Lakes Rd.	Collector	Only 1 small segment*
Otay Lakes Rd. Bonita Rd. to Camino Del Cerro Grande	Major Road	4 lanes
Camino Del Cerro Grande to Bonita Vista Jr. High School	Major Road	2 lanes*
Bonita Vista Jr. High School to Telegraph Canyon Rd.	Major Road	4 lanes

*Roads currently less than their designated width.

TABLE 3-2

Design Capacities for Classified Roads

<u>Road Classification</u>	<u>ADT Design Capacity</u>
Primary Arterial - 6 lanes	50,000 ³
Major Road - 4 lanes	25,000 ¹
Collector - 4 lanes	13,000 ²
Collector - 2 lanes	6,300 ²

¹City of Chula Vista Street Standards, June, 1982.

²County of San Diego, "Public Road Standards - Draft," April, 1983, number given assumes Level of Service C.

³City of San Diego Street Design Standards, 1980.

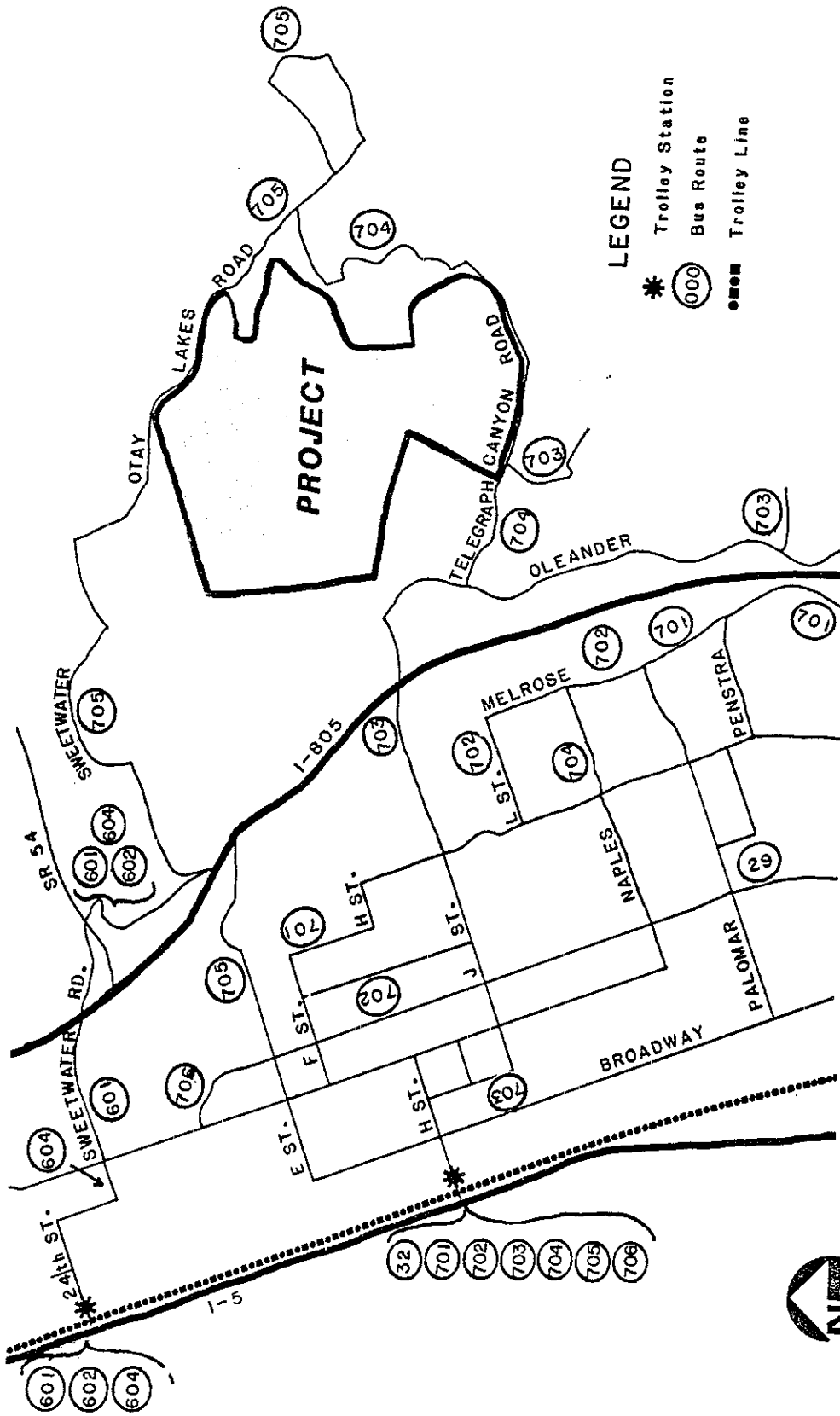


FIGURE 3-3

Transit Routes and Facilities in the Project Vicinity

Source: MTDB, Regional Transit Guide, 1984



Road; Buena Vista Way; Telegraph Canyon Road; Crest; Lori; and portions of East H Street. An urban route exists on Third Avenue, approximately 2.3 miles to the west. A station for the San Diego Trolley which connects downtown San Diego with the Mexican Border area is located adjacent to I-5 at H Street, approximately 3.5 miles to the west.

3.2.2 Impacts

A manual trip generation, distribution and assignment was completed for the proposed project. The trip generation rates, traffic zones, loading points, links and distribution used in this analysis are presented in Appendix A. A supplemental traffic report was prepared which addresses the circulation improvements associated with the revised project and is included in the Final EIR. A cumulative 1995 traffic forecast was completed by SANDAG for the east Chula Vista area. This study assumed development of all projects already approved in the area by both the City of Chula Vista and the County of San Diego as well as major proposed projects (including El Rancho del Rey) in the study area and therefore serves as a cumulative analysis. Details regarding this forecast are included in Appendix A and in the supplemental traffic report prepared for the revised project.

The land uses and densities assumed for the project proposal are those contained in Table 2-1. Land use (whether it be dwelling units or acres) was multiplied by the generation rates to obtain total traffic generation for each land use (refer to Table 3-3). Based on the foregoing process it is estimated that the Adopted Plan would generate about 44,100 ADT and the proposed plan will generate about 73,900 ADT. The manual assignment of these trips to the street system is shown in Figure 3-4.

As noted previously, the circulation system for the proposed plan is different from that shown by the adopted plan and the City's General Plan. The major change in the circulation system between Telegraph Canyon Road and East H Street would be deletion of the southern section of the East H Street loop road in the vicinity of the Employment Park. North of East H Street, the system of residential collector roads would be substantially modified. Paseo Ranchero would not function as a direct north/south link between Telegraph Canyon Road and Otay Lakes Road through elimination of the segment between East H Street and Otay Lakes Road. A new collector road providing access to the area north of East H Street would be located between Paseo Ranchero and Otay Lakes Road. Two east/west roads would also be modified and would not serve as direct through routes. Ridgeback Road would connect with a new loop road which would be located around the community spine, serving more for internal use rather than as a through traffic route. The same number of major access points into the amendment area would be retained, but the orientation of the roads would be modified

TABLE 3-3

Summary of Project ADT for the Adopted, Proposed and Alternative Plans

<u>Land Use</u>	<u>Adopted Plan</u>	<u>Proposed Plan</u>	<u>Alternative Plan</u>
Residential	39,700	52,900	52,500
Employment Park	0	14,000	15,000
Schools	3,400	2,800	2,300
Public Facilities	0	600	200
Parks/Recreation	1,000	3,600	1,200
Open Space	0	0	0
TOTALS	44,100	73,900	71,200

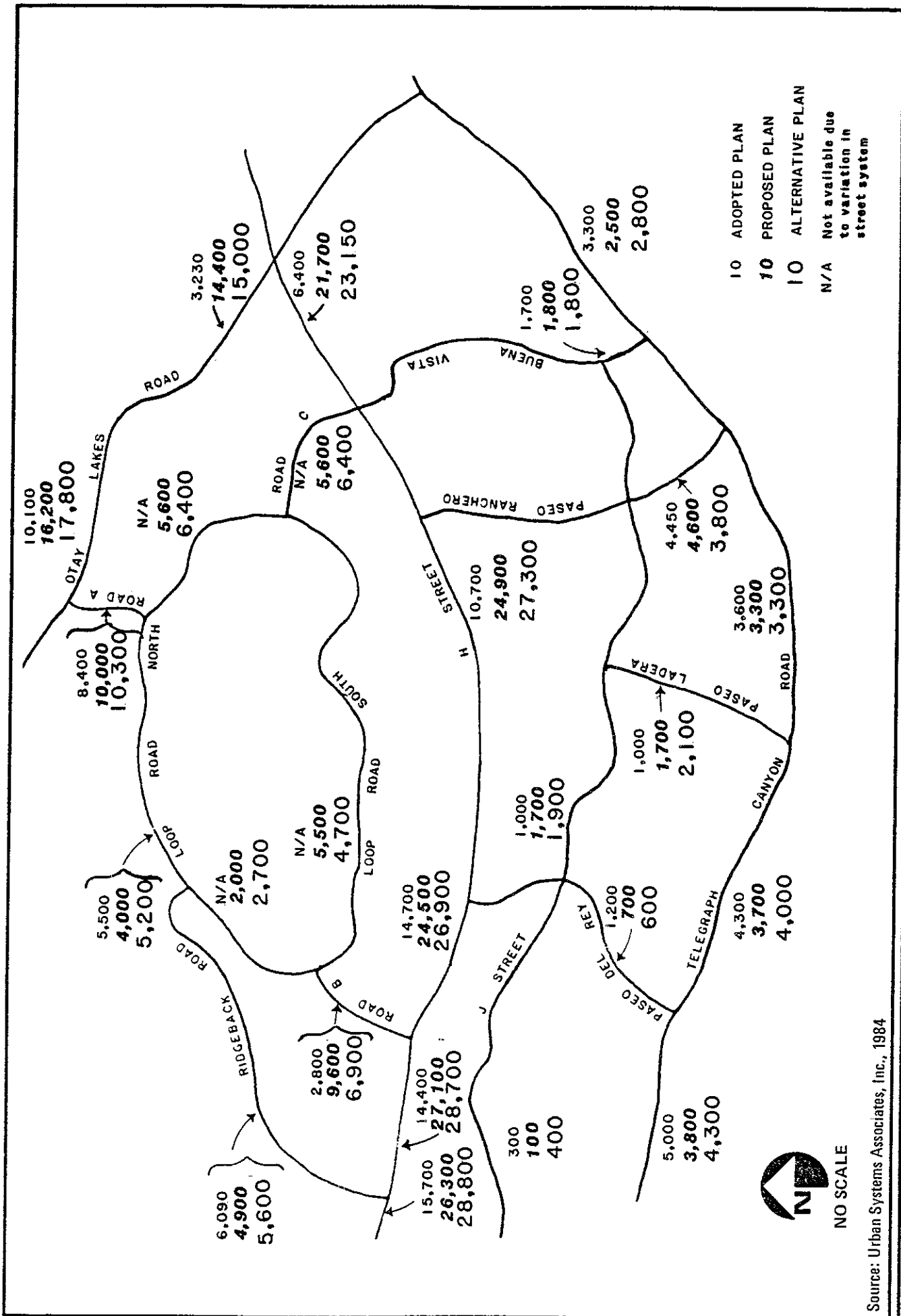


FIGURE 3-4

Comparison of Assignment of ADT for the Adopted, Proposed and Alternative Plans

to link with the large central loop road. The primary entry to the northern portion of the amendment area will shift from Ridgeback Road to the collector road further east of East H Street.

The currently Adopted Plan would generate approximately 44,000 trips per day or 62 percent of the trips expected to be generated by the proposed project. The higher intensity uses that are included in the northern half of the proposed plan results in a proportionately higher number of trips on roads in the northern half when compared to the adopted plan. It is difficult to compare the traffic assignments in the northern half of the plans because the street layouts vary between the adopted and the proposed Plan. However, it is possible that some of the project roads might be sized smaller than currently proposed if the adopted plan were implemented. Since the major streets will be sized based on the cumulative forecast for the east Chula Vista area, there would probably be no change in the width of East H Street, Telegraph Canyon Road, Otay Lakes Road, Paseo Ranchero, and the portion of East H Street between I-805 and Paseo Ranchero.

A comparison of the project traffic, cumulative traffic forecasts and road classifications is included in Table 3-4. As shown in that table, development of the proposed project could largely be accommodated by the currently adopted road classifications. Only one small portion of one road, the portion of East H Street between I-805 and Ridgeback Road, would have to be reclassified; that segment would require a six-lane prime arterial instead of major road. However, East H Street will continue to be a primary access route to I-805 and it is estimated that only about 9 to 10 percent of the eventual traffic on this road will be generated by the project. The remaining 90 percent will come from existing and future developed areas east of I-805.

The proposed project will, upon buildout, require the improvement of roads to the sizes listed in Table 3-4, with one exception. As noted in that table, the proposed project would only require a four-lane major road along Telegraph Canyon Road, although the cumulative traffic from east Chula Vista could require a six-lane prime arterial.

Intersection Capacity Utilization (ICU) analysis was completed for key intersections. All ICU calculations are included in Appendix A. These showed that the Otay Lakes Road and East H Street intersection will operate at a Level of Service "A" if East H Street has six lanes (three eastbound, three westbound), with the other lanes also serving as right turn lanes and a separate left turn lane. Otay Lakes Road at this point should be four lanes (two northbound, two southbound) with the outer lanes also serving for right turns and separate left turn lanes.

TABLE 3-4
Existing and Proposed Road Classifications

Street/Segment	Existing Designation	Current ADT	USA Project Only ADT Assignment	Project Existing ADT	SANDAG 1995 Cumulative Forecast	Proposed Classification	Proposed Design Capacity
Telegraph Canyon Road 1-805 to Otay Lakes Rd.	Major Road (CV) Prime Arterial (Co)	17,200- 24,760	3,300- 3,700	20,500 28,500	8,600 40,700	6-lane Prime Arterial ²	50,000
East "H" Street 1-805 to Ridgeback Ridgeback to Otay Lakes Road	Major Road Major Road	NA 9,013	26,300 27,100- 22,500	26,300+ 32,500 36,100	47,800 17,100 30,100	6-lane Prime Arterial 6-lane Prime Arterial	50,000 50,000
East "J" Street 1-805 to Buena Vista	Collector	3,658	4,300- 5,400	8,000- 9,100	500 5,900	2-lane Collector	6,300
Paseo Del Rey Telegraph Canyon Road to East "H" Street	Collector (Co.) Light Collector (CV)	NA	700	700+	17,100	4-lane Collector	13,000
Paseo Rancho Telegraph Canyon Road	Collector (CV) Light Collector (Co)	NA	4,600	4,600+	800-11,700	4-lane Collector	13,000
Paseo Ladera Telegraph Canyon Road To East "J" Street	Collector	NA	1,500-1,700	1,500 1,700	700	2-lane Collector	6,300
Buena Vista Telegraph Canyon Road to "J" Street	Collector (CV) Light Collector	NA	3,000	3,000+	1,200	4-lane Collector	13,000
"J" Street to Santiago	Collector (CV) Light Collector (Co)	NA	700	700+	3,800	2-lane Collector	6,300
Santiago to East "H" Street	Collector (CV) Light Collector (Co)	NA	700	700+	3,800	4-lane Collector	13,000
Ridgeback Road East "H" Street to North Loop Road	Collector	NA	4,900	4,900	400-21,800	4-lane Collector	13,000
Otay Lakes Road Bonita Road to Telegraph Canyon Road	Major Road	12,480 17,922	12,900 14,500	25,400 32,400	15,500 24,500	4-lane Collector	40,000
North Loop Road	Collector	NA	4,000	4,000	11,300	2-lane Collector	6,300
South Loop Road	Collector	NA	5,500	5,500	6,600	2-lane Collector	6,300
Road A	Collector (CV) Light Collector (Co)	NA	10,300	10,300	11,800	4-lane Collector	13,000
Road B	Collector	NA	9,600	9,600	7,000	4-lane Collector	13,000
Road C (Extension of Buena Vista)	Collector (CV) Light Collector (Co)	NA	5,600	5,600	6,300	4-lane Collector	13,000

NA Not available

1 Rounded to nearest hundred.

2 The logical breaking point along Telegraph Canyon Road is at Otay Lakes Road. However, the El Rancho Del Rey project by itself would not warrant the construction of a six-lane Arterial; four lanes would be adequate. Therefore, the recommended mitigation for El Rancho Del Rey includes the improvement of Telegraph Canyon Road to a four-lane road west of Paseo Rancho.

The Otay Lakes Road at Road "A" intersection will operate at a Level of Service "C/D" if Otay Lakes Road has four lanes (two northbound, two southbound) and Road "A" has four lanes (two eastbound, two westbound). In order to bring the road up to a full Level of Service "C", there should be a dual left turn from Road "A" onto Otay Lakes Road.

The East H Street at Buena Vista intersection will operate at a Level of Service "A" with East H Street as a six-lane prime arterial. This includes a separate left turn and Buena Vista designated as a four-lane collector, even when allowing Buena Vista to omit a separate left turn lane.

The East H Street at Ridgeback Road will operate at a Level of Service "C" with six lanes on East H Street plus dual left turn lanes. Ridgeback will need four lanes plus dual left turn lanes.

Conclusions and Recommendations

As noted earlier, the manual traffic assignment by USA Inc., was conservative. That is, a "worst case" was assumed, and all trips were considered to be external. In reality, 10 to 15 percent of the trips generated will probably remain localized to the project area.

It is recommended that an adjusted SANDAG cumulative travel forecast be used for the sizing of arterial streets: Otay Lakes Road, East H Street, Telegraph Canyon Road, and the portion of East J Street between I-805 and Paseo Ranchero. It is recommended that the USA Inc. manual forecast be used for all other streets, regardless of which plan is developed.

The change in the circulation system proposed by the project, which would delete several direct east-west and north-south links and replace them with a modified loop system, would not create any unmitigable cumulative traffic impacts. Road improvements will be required as development proceeds, but the change in street layout does not create any unavoidable adverse traffic impacts.

The proposed plan would generate significantly more traffic than the adopted plan. However, since the arterial streets should be sized based on the cumulative traffic, and not just project traffic, the size of the streets will depend as much on other forthcoming projects to the east as on the proposed project. The one street segment where the development of the adopted plan might make a difference in the sizing of roads is the portion of East H Street between I-805 and Ridgeback Road. This is the only road segment which will require a change in classification from a major road to a prime arterial. If the adopted plan were implemented, this change would probably not be required, if the SANDAG cumulative forecast is assumed. However, if the SANDAG cumulative forecast is low, this reclassification might be required anyway.

3.2.3 Mitigation

The potential traffic impacts associated with the proposed Specific Plan Amendment could be mitigated to insignificance by providing a combination of road improvements as outlined below. These improvements would be necessary for ultimate development of the project site in combination with other existing and planned development in the area.

- Widen Telegraph Canyon Road in phases to four lanes between Paseo Ladera and Paseo Ranchero as required for future development projects

This improvement would be a requirement for the proposed project only. The ultimate improvement of Telegraph Canyon Road for cumulative traffic volumes would be a six-lane prime arterial all the way to I-805, and development within El Rancho del Rey adjacent to this road should reserve adequate right-of-way for this ultimate width.

- Designate East H Street between I-805 and Ridgeback Road as a six lane prime arterial

This road segment is currently designated and constructed as a four-lane major road. Additional widening offsite up to the I-805 bridge would be required for 1995 cumulative traffic including the proposed project. It would not be necessary to widen the bridge over I-805 itself, as the existing width would be adequate to accommodate the projected future traffic.

- Designate East H Street between the western property boundary and Buena Vista Way a six-lane prime arterial with dual left turn lanes at Ridgeback and with separate left turn lanes at Otay Lakes Road and Buena Vista as required for future development projects

East of Buena Vista, East H Street is constructed as a four-lane road, narrowing to two lanes between Buena Vista and Ridgeback Road. This road segment is currently designated as a four-lane major road. The proposed Specific Plan would amend this designation to a six-lane prime arterial.

- Designate Paseo Ranchero as a four-lane collector from Telegraph Canyon Road to East H Street

This is the current designation for the road, and needs only to be constructed through the project site.

- Widen the portion of Otay Lakes Road between East H Street, Camino del Cerro Grande and Bonita Road to four lanes wide, with separate lanes for right and left turns at major intersections

This road is currently designated as a four-lane collector. The segment between Camino del Cerro Grande and Bonita Vista Junior High is only built to two lanes with the remainder constructed to four lanes.

- Designate Roads "A", "B" and "C" as four lane collectors

Road "B" is designated as a four-lane collector by the proposed Specific Plan Amendment, and needs to be constructed as development proceeds, Roads "A" and "C" are proposed to be designated as only two-lane collectors by the amendment. These roads would need to be designated and built to four-lane collector standards to accommodate project traffic without adverse impacts.

- Designate Ridgeback Road as a four-lane collector with dual left turn lanes at East H Street

This road is currently designated as a four-lane collector but is not built to this width through the project site. The Specific Plan Amendment proposes to change this designation to a two-lane collector, which would not be sufficient to handle projected traffic volumes. The designation of Ridgeback Road should be changed on the proposed Specific Plan to be a four-lane collector.

- Designate the North and South Loop Road as a two- or four-lane collector with precise widths to be determined at a later date

Two lanes is the designated configuration for these roads and they need only to be constructed as part of project development.

- Review specific projects on an individual basis to determine required extension or widening of access roads

- Require further traffic studies for the SPA or sub-area plan as recommended in the proposed Specific Plan text

Such analysis shall be used to define internal and external circulation system needs and phasing.

3.2.4 Analysis of Significance

The proposed Specific Plan Amendment has the potential for adverse traffic impacts when combined with traffic from other developments in the project vicinity. If the mitigation measures outlined in Section 3.2.3 are implemented in conjunction with need as development proceeds, these potential impacts can be reduced to insignificance.

3.3 FISCAL ANALYSIS

3.3.1 Existing Conditions

An analysis of the financial condition of the City of Chula Vista was conducted in consideration of the proposed El Rancho del Rey project and is presented in

its entirety in Appendix B. Operating expenditures and revenues were examined to determine current and expected fiscal conditions. Since this project is expected to extend over a 10 to 18 year period, assumptions and base figures could vary substantially over the life of the project.

The analysis of municipal expenditures was prepared based on information gathered from a review of the City of Chula Vista's 1982-83 actual expenditures, the 1983-84 preliminary operating budget and discussions with various department heads. Ten "direct service" expenditure activities were examined: Legislative and Administrative Services, Community Development, Park and Recreation, Planning, Building and Inspection, Engineering, Public Works Operations, Fire, Library Operations and Police.

City revenue conditions were analyzed based on existing revenue sources. Incorporated into the analysis were revenues from the general fund and special fund. General fund sources include the following: property tax; sales and use tax revenues; franchise taxes; property transfer tax; utility users tax; business, bicycle and animal licenses; motor vehicle in-lieu taxes; cigarette tax; fines, forfeitures and penalties; municipal swimming pool fees; recreation programs; and investment earnings. Special fund revenue sources include the traffic safety fund, state library act fund, sewer service revenue fund, special gas tax fund and federal revenue sharing.

3.3.2 Impacts

The following fiscal analysis has attempted to take into consideration all operating costs and revenues that would be attributable to the development of El Rancho del Rey under both the existing plan and the proposed plan. Each plan would require additional public services from the city, thereby increasing operating costs, and would provide increased revenues to the City through assessed fees and taxes. The final net fiscal condition under both plans was determined to be a positive net revenue, with the proposed plan providing the greatest overall increase to the City's general fund. Appendix B provides a complete analysis.

To determine the full costs of providing City services, a model was formulated that allocates indirect and overhead costs to ten "direct service" activities. In this manner, the projections of added costs attributed to El Rancho del Rey will in fact reflect the full costs of accomodating this significant addition to the present City. Of the 10 activities reviewed for possible impact, eight activities were identified as being affected. Four of these would be subject to a single, one-time cost and include Planning, Building Inspection, Engineering and Fire Prevention. Since fees are collected from the applicant to compensate for the cost of these services, no impact to the first three activities is associated with adoption of the proposed plan. While fees are also

collected for Fire Prevention, they may only partially offset the cost of the inspection services. A possible incremental impact to Fire Prevention may therefore result.

The remaining four affected activities would be subject to on-going costs. These activities include Public Works Operations (i.e., street maintenance, traffic operations), Parks and Recreation, Police Services, and Library Operations.

City operating revenues were projected based on computer modelling of the relationships of individual revenue accounts to population, land use and other factors to simulate the changes in revenue that could be expected over the development of this project. As discussed in the section on expenditures, single one-time costs associated with the processing of building inspection permits, planning reviews, etc. will be collected as fees to offset the City's expenditures. Therefore, no net revenue or net cost are associated with these activities.

Revenues from the general fund and special funds comprise the remainder of the revenue sources. These were identified previously in the Existing Conditions section. Scenarios of general fund revenues vary considerably between the existing and proposed plans over a 20 year buildout. Revenues to the City's general fund are the lowest overall under the existing plan. Revenue contributions to the general fund under the proposed plan would be greater than under the existing plan. For a more detailed analysis and breakdown of individual revenue source contributions to the general fund, refer to Appendix B.

Based on this analysis, the projected net fiscal change for both plans is presented below. The table shows the difference between annual operating revenues and costs for both the existing and proposed plans at 5 year intervals.

NET FISCAL CONDITION
(Revenues* less Expenditure)

	<u>Year 5</u>	<u>Year 10</u>	<u>Year 15</u>	<u>Year 20</u>
Existing	224,581	497,915	957,883	1,254,934
Proposed	622,441	1,372,018	1,706,387	2,080,658
Difference	397,860	874,103	748,504	825,724

*Revenues used in this grouping are from the General Fund, Sewer Service Fund, Traffic Safety Fund and the State Library Fund. Costs and revenues are stated in constant 1984 dollars. The rate of property appreciation was assumed at 5 percent.

As can be seen, revenues exceed costs in both scenarios. However, the proposed plan would provide substantially greater net revenues to the City than the existing plan in each of the scenario years selected for representation. If all years are considered, the proposed plan would provide more than \$12,000,000 more to the City than the existing plan over a 20 year period. Additionally, about \$825,000 more would be provided by the proposed plan in comparison to the existing plan, for each year thereafter.

The above table does not reflect the revenues that might be expected in the Revenue Sharing Fund and Gas Tax Fund. Over a 20 year period the proposed plan would generate an additional \$1,495,000 more than the existing plan from these two sources. If these revenues are included, the difference in net fiscal benefit to the City approaches \$14,000,000 over a 20 year period, in favor of the proposed plan.

It should be noted that actual net revenues will vary from the projections shown above. These variances can be caused by many things such as new legislation regarding revenues and/or changes in City operations. The value of this type of analysis lies in comparing land use decisions with existing conditions or with one another.

3.3.3 Mitigation

As no significant impacts were identified, no mitigation measures are required.

3.3.4 Analysis of Significance

Implementation of the proposed plan would result in significant fiscal benefits to the City of Chula Vista. Between \$12,000,000 and \$14,000,000 net (revenues less costs) would be generated by the proposed plan. This money would be used to provide services to the City as determined by legislative process.

3.4 BIOLOGICAL RESOURCES

The project area or portions of it have been previously reviewed for biological resources by Evans and Beauchamp (1972), City of Chula Vista (1973), WESTEC Services (1976a), Pacific Southwest Biological Services (1981), and Chambers Consultants and Planners (1983). Biological studies of adjacent lands which are pertinent to the following discussion and analysis include WESTEC Services (1976b) for Rancho Robinhood, Patterson and Brand (1978) for Bonita Long Canyon Equestrian Estates and Beauchamp and Montgomery (1979) for the Rice Canyon Sectional Planning Area.

A field reconnaissance of the study area was conducted by Stephen B. Lacy, Senior Biologist with WESTEC Services, during December 1983 and February 1984. This reconnaissance consisted of driving and walking over the majority of the site. Detailed

transecting or quantitative field studies were not conducted as a part of this reconnaissance level effort. The following discussion utilizes the earlier studies of the area and recent field overviews to establish existing conditions and analyze the effects of the proposed Specific Plan Amendment. It is noted that while a variety of previous biological overviews of the property have been conducted, precise locations of specific plant and animal species including animals and herbaceous perennials were not available for reference in analyzing differences in the adopted versus the proposed Plans.

Nomenclature throughout this section of the text follows Munz (1974) for plants, A.O.U. (1983) for birds, Jennings (1983) for amphibians and reptiles, and Jones et al. (1982) for mammals.

3.4.1 Existing Conditions

3.4.1.1 Vegetation

The majority of the property is covered by a mosaic of low scrub vegetative communities. These include southern coastal sage scrub and maritime desert scrub (Thorne, 1976). Southern coastal sage scrub is the low, open scrubby vegetation found along the cismontane slopes and coastal plains of San Diego County primarily on south-facing slopes. It is less dense, evergreen and thick-leaved than chaparral and is often called impoverished chaparral. Many of its component species are drought-deciduous. Thorne (1976) divides this community into three phases. That phase present onsite is maritime sage scrub. This phase is rich in species diversity and includes California sagebrush (Artemisia californica), white sage (Salvia apiana), California buckwheat (Eriogonum fasciculatum), black sage (Salvia mellifera), lemonadeberry (Rhus integrifolia), common encelia (Encelia californica), toyon (Heteromeles arbutifolia), and laurel sumac (Rhus laurina). This vegetative cover occupies primarily the ridgetops and north-facing slopes of the property. On some north-facing slopes and in some of the draws the larger shrubs such as toyon and lemonadeberry form dense thickets.

Maritime desert scrub is scattered throughout the site occupying primarily the south-facing slopes. This vegetative cover is found predominantly in Baja California and extends into the United States only in southern San Diego County. The species composition reflects this southern affinity. It is made up of many of the species noted above along with goatnut (jojoba) (Simmondsia chinensis), snake cholla (Opuntia parryi var. serpentina), coastal fishhook cactus (Mammillaria dioica), bladderpod (Isomeris borea), San Diego sunflower (Viguiera laciniata), velvet cactus (Bergerocactus emoryi), and water jacket (Lycium andersonii). Cactus species such as coast cholla (Opuntia prolifera) and prickly pear (Opuntia littoralis, Opuntia oricola), are relatively common in this cover also.

Three additional vegetative communities are present in the study area. These are southern California grassland, riparian woodland, and vernal pool ephemeral (Thorne, 1976). Grasslands are scattered throughout the site, and occur on both the mesa tops and lower canyon slopes. Some of these grassland habitats have been altered by past grazing activities and are dominated by nonnative grasses and forbs. Native grassland habitats do remain within the study area and are characterized by native bunch grass (Stipa lepida), gum plant (Grindelia robusta), blue-eyed grass (Sisyrinchium bellum), wild hyacinth (Dichelostemma pulchella), shooting stars (Dodecatheon clevelandii), checkers (Sidalcea malvaeflora ssp. malvaeflora), and snakeroot (Sanicula arguta).

Riparian woodland is not well developed onsite. That which does exist is possibly a reflection of upstream urban development and a number of particularly rainy seasons over the past number of years. The riparian habitat is composed predominantly of elderberry (Sambucus mexicana), and young willows (Salix sp.) and is located in the lower western reaches of the north leg of Rice Canyon. Most of the major drainages are filled with large native shrubs and the naturalized California pepper tree (Schinus molle) is common in the north leg of the Rice Canyon drainage.

The vernal pool ephemeral plant community occupies seasonal pools which are located on the mesas of southern California. These pools are slight depressions often associated with mima mound topography that fill with rainwater which does not drain off or percolate away due to mesa topography and soil conditions. The pools, dry during most of the year, exist as highly specialized plant habitat and support a unique succession of species distinct from that of the surrounding area (Purer, 1939). Species which are recorded for a vernal pool in the Rice Canyon Sectional Planning Area include dwarf woolly heads (Psilocarphus brevissimus), popcorn flower (Plagiobotrys acanthocarpus), toad rush (Juncus bufonius), quillwort (Lilaea scilloides), water pygmy-weed (Crassula aquatica), and water startwort (Callitriche longipedunculata). Most of these species could be expected within the few pools on the subject property, but the onsite pools are only marginally developed compared to other pool complexes in the region and are in many cases disturbed by dumping and off-road vehicles.

Disturbed habitats are present on the property also but these are not extensive. These areas are adjacent to the many dirt roads which traverse the site and adjacent to existing development. These areas are covered by mostly weedy introduced grasses and forbs or broom baccharis (Baccharis sarathroides).

3.4.1.2 Wildlife

The property is expected to support a representative contingent of wildlife commonly associated with low scrub habitats in southwestern San Diego County. The large natural character of the site and the presence of water from local urban areas, dense protective cover, and extensive adjacent open areas all contribute to the maintenance of a viable wildlife population on the property. A standard assortment of amphibians, reptiles, birds and mammals are recorded for the area in the documents noted above. Species expected onsite on a regular basis include the following:

Amphibians: Pacific Treefrog, California Toad, and Pacific Slender Salamander.

Reptiles: Great Basin Fence Lizard, San Diego Horned Lizard, Western Skink, Orange-throated Whiptail, Coastal Whiptail, California Side-blotched Lizard, San Diego Alligator Lizard, California Striped Racer, San Diego Gopher Snake, San Diego Ring-necked Snake, California Kingsnake, Two-striped Garter Snake, Red Diamond Rattlesnake, and Southern Pacific Rattlesnake.

Birds: American Kestrel, Black-shouldered Kite, Red-tailed Hawk, Loggerhead Shrike, California Quail, Mourning Dove, Greater Roadrunner, Anna's Hummingbird, Black-chinned Hummingbird, Rufous Hummingbird, Western Kingbird, Ash-throated Flycatcher, Scrub Jay, Common Raven, Bushtit, Wrentit, House Wren, Bewick's Wren, Cactus Wren, Mockingbird, California Thrasher, Black-tailed Gnatcatcher, Western Meadowlark, House Finch, Lesser Goldfinch, Brown Towhee, Rufous-sided Towhee, White-crowned Sparrow, Sage Sparrow, and House Sparrow.

Mammals: Desert Cottontail, Black-tailed Jackrabbit, California Ground Squirrel, Botta's Pocket Gopher, Pacific Kangaroo Rat, San Diego Pocket Mouse, Dusky-footed Woodrat, Deer Mouse, California Vole, Coyote, Gray Fox, Striped Skunk, Western Spotted Skunk, Long-tailed Weasel, and Bobcat.

3.4.1.3 High Interest Species/Habitats

Plants

No plant species recorded for the property are listed as rare, endangered or threatened by the U.S. Fish and Wildlife Service (USFWS, 1980) or the California Department of Fish and Game (CDFG, 1982). One federally listed and state-listed plant species from the San Diego area is San Diego mesa mint (Pogogyne abramsii). This species, however, is only found in vernal pools north of Mission Valley. Two additional state-listed endangered vernal pool plant species, Orcutt grass (Orcuttia californica) and San Diego coyote-thistle (Eryngium aristulatum var. parishii) have been recorded

from vernal pools on Otay Mesa to the south as well as Kearny Mesa to the north. However, both species occur in larger and deeper pools than occur onsite. One state-listed plant species not recorded for the site but for which habitat does exist is San Diego thornmint (Acanthomintha ilicifolia). This species is found in heavy soils associated with vernal pools and grassland habitats. It could be expected in the native grassland habitats throughout the site.

An additional state-listed endangered plant species known from the general region is Otay tarplant (Hemizonia conjugens). This species is known from along Proctor Valley Road to the east of El Rancho del Rey (WESTEC Services, 1979) and it occurs "at very high frequency on the disturbed areas" in Long Canyon just east of the subject property (Patterson and Brand, 1978). This late spring annual species has not been recorded on the property but could potentially be found on the mesas and open areas onsite.

In addition to the latter three species noted above, the U.S. Fish and Wildlife Service (USFWS, 1980) has listed close to 70 additional species from San Diego County as under federal status review. The great majority of these species would not be expected onsite due to range and habitat preference. The California Native Plant Society (CNPS, 1980, 1981) lists species they consider rare and endangered. The CNPS listing is recognized by the California Department of Fish and Game as the state's "species of concern list" (CNPS, 1980). All of the taxa under federal status review are listed by the CNPS. Those species under status review as well as CNPS-listed species relevant to the project area are discussed below.

Ambrosia pumila
San Diego Ragweed

CNPS rating: 2-3-2-2, rare and endangered (see Table 3-5 for explanation of rating scheme)
This species occurs at a limited number of locations (seven) from Bonsall in northern San Diego County to Laguna Chapala in Baja California. It is most often found on old floodplain habitats but has also been recorded away from such habitat in heavy soils. This species is an herbaceous perennial and is difficult to observe out of season. It is a summer flowering species. Where it is found the species exhibits a certain tenacity and tolerance to disturbance, but, unlike the common western ragweed (Ambrosia psilostachya), it shows no invasive or weedy tendencies. The species has been recorded at three locations within Rice Canyon west of the property (Beauchamp and Montgomery, 1979; Pacific Southwest Biological Services, 1981). If present

Table 3-5

CALIFORNIA NATIVE PLANT SOCIETY
RARITY-ENDANGERMENT-VIGOR-DISTRIBUTION CODE

Rarity (R)

1. Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.
2. Occurrence confined to several populations or one extended population.
3. Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

Endangerment (E)

1. Not endangered.
2. Endangered in a portion of its range.
3. Endangered throughout its range.

Vigor (V)

1. Increasing or stable in number.
2. Declining in number.
3. Approaching extinction or extirpation.

General Distribution (D)

1. More or less widespread outside California.
2. Rare outside California.
3. Endemic to California.

Source: CNPS (1980).

in the project area, it would most likely occur along the north leg of the Rice Canyon drainage.

Brodiaea orcuttii

Orcutt's Brodiaea

CNPS rating: 1-2-2-2, rare and endangered

This species is an herbaceous perennial from a corm. It is found only in northern Baja California and San Diego County. It is found within and in close association with vernal pools and is also present along streams and about seeps from the coast to the mountains. This species is common in vernal pools on Kearny Mesa and Mira Mesa in the San Diego area but has not been recorded for the El Rancho del Rey vernal pools (Pacific Southwest Biological Services, 1979).

Muilla clevelandii

San Diego Golden Star

CNPS rating: 2-2-2-2, rare and endangered

This herbaceous perennial from a corm is found only on dry mesas and hillsides in southwest San Diego County and northwestern Baja California. This species has been recorded from the Sweetwater area and Otay Mesa. This species was not observed on-site but could not potentially exist in the grassland habitats.

Dudleya variegata

Variegated Dudleya

CNPS rating: 1-2-2-2, rare but not endangered

This species is a small herbaceous perennial from a corm. It ranges from southwest San Diego County into northern Baja California. It has been observed nearby along Proctor Valley Road (WESTEC Services, 1979). This species is most readily observed from May to June. If present in the study area it would be expected on the mesas and the drier cobbly south-facing slopes.

Ferocactus viridescens

Coast Barrel Cactus

CNPS rating: 1-2-2-1, rare in California, common elsewhere (Baja California)

This species ranges from Oceanside in San Diego County southward along the coastal plain into northern Baja California. This species is scattered throughout the subject property amongst the low scrub on south-facing slopes. It was well developed at a few locations in the southern aspect of the property (WESTEC Services, 1976). Of interest is the fact that many of the specimens are much taller

than the norm for this species with some on the order of 1.5 to 2 feet in height.

Opuntia parryi var. serpentina

Serpent Cholla, San Diego Cholla

CNPS rating: 2-3-2-2, rare and endangered

This species is found in southwestern San Diego County and northern Lower California. It is scattered throughout the low scrub habitat on south-facing slopes and is particularly well-developed at the west end of the ridge which parallels East H Street on the south.

Ericameria palmeri ssp. palmeri

Palmer's Ericameria

CNPS rating: 2-2-1-1, rare in California, common elsewhere (Baja California)

This shrub is found from Mission Valley south into Lower California. It is found in dry canyons and drainages. It is sparingly present in the upper reaches of the north leg of Rice Canyon onsite.

The following plant species relevant to the project area are listed by the California Native Plant Society (CNPS, 1980; 1981) but are not currently under federal status review.

Artemisia palmeri

San Diego Sagewort

CNPS rating: 1-1-1-1, rare in California, common elsewhere (Baja California)

This species ranges from Poway southward along the coast into northern Baja California. It is found along drainage courses and on adjacent slopes. This species was not observed along the drainages onsite, but has been recorded in Rice Canyon west of the property (Beauchamp and Montgomery, 1979) and in Long Canyon to the east (Patterson and Brand, 1978). This species would be expected along the north leg of Rice Canyon onsite.

Selaginella cinerascens

Pygmy Spike-moss

CNPS rating: 1-2-1-1, rare in California, common elsewhere (Baja California)

This prostrate species forms an ashen carpet underneath chaparral on mesa tops and on arid south-facing slopes. It ranges from about Lake Hodges in northern San Diego County south along the coastal plain into adjacent Baja California. It is present throughout the site especially where the vegetation is sparse on slopes and mesas.

Adolphia californica

California Adolphia

CNPS rating: 1-2-1-1, rare in California, common elsewhere (Baja California)

Low spiny shrub is naturally found in washes and in heavy soils in southwest San Diego County and northern Baja California. It has not been recorded onsite but was observed in Long Canyon to the east (Patterson and Brand, 1978).

Viguiera laciniata

San Diego Sunflower

CNPS rating: 1-2-1-1, rare in California, common elsewhere (Baja California)

Small shrub found primarily on arid south-facing slopes throughout the site. Species ranges from Mission Valley south into northern Baja California and eastward to Potrero.

Bergerocactus emoryi

Golden-spined Cereus

CNPS rating: 2-2-2-1, rare in California, common elsewhere (Baja California)

This species is found at only a few locations in San Diego County such as at the University of California at San Diego, Point Loma, Boundary Monument and the project site. It is found more extensively in Lower California and on Santa Catalina and San Clemente Islands. It is found at two locations onsite; at the west end of the ridges on the south of the north leg of Rice Canyon and south of East H Street.

Cordylanthus orcuttianus

Orcutt's Bird's Beak

CNPS rating: 3-3-1-1, rare in California, common elsewhere (Baja California)

This species is an annual and is found primarily in northwestern Baja California. It is found at only a few locations in the United States. It is present at two locations onsite in disturbed areas along an SDG&E easement north of the north leg of Rice Canyon.

An additional plant species is of interest locally and was considered but not listed by the CNPS (1980; 1981). This species is discussed below:

Fritillaria biflora

Chocolate-lily, Mission Bells

This herbaceous perennial from a bulb is found from Mendocino County southward to northwestern Baja California. This species is found in heavy soils of

grassland habitats. This species is of interest locally due to the reduction of habitat. Onsite it could be expected in the grassland habitats in the north leg of Rice Canyon and in the canyon in the northwestern corner of the site.

A number of additional sensitive plant species have been recorded from the general area or are associated with the maritime desert scrub vegetation of extreme southwesterly San Diego County. These species include Cleveland or fragrant sage (Salvia clevelandii), San Diego bur-sage (Ambrosia chenopodiifolia), and cliff spurge (Euphorbia misera). None of these species are known from the subject property although Cleveland sage is found in the vicinity. San Diego bur-sage and cliff spurge are found further south (Otay Mesa) and closer to the coast, respectively.

Animals

No federal or state-listed animal species were observed or are expected on the subject property (USFWS, 1979; CDFG, 1980).

A number of animal species are considering declining, sensitive or of local concern. These species are not presently officially listed by wildlife agencies, but if they continue to decline they will become candidates for official status review and listing consideration. They are discussed below by species group.

Birds - Three listings of birds are usually referred to when evaluating species effects in the San Diego area: Everett (1979) compiled a list of threatened, declining and sensitive bird species in San Diego County, Remsen (1979) lists statewide breeding species of special concern, Tate and Tate (1982) compiled the most recent national Audubon Blue List which also includes a listing of species with special concerns and local problems species. Bird species which are listed by these authors and are pertinent to the study area are listed in Table 3-6. Some additional species pertinent to the project area should also be noted. Black-shouldered Kites are expected to forage over the site. This species is a fully protected species by the CDFG (1983). A couple of decades ago the species was in trouble, but it has recovered and is doing well in the San Diego region.

Mammals - One mammal species of interest is the bobcat (Felis rufus). The bobcat is of interest due to recent increased trapping pressures on the species because of escalation in value of the fur. The species was not observed onsite, but it has a moderate probability of occurrence. Urbanization is gradually eliminating this species from along the coastal plain, but given the size of the project site, it may still remain in small numbers in the area.

Table 3-6

DECLINING BIRD SPECIES OBSERVED OR EXPECTED TO UTILIZE THE
EL RANCHO DEL REY PROJECT SITE

<u>Species</u>	<u>Everett (1979)¹</u>	<u>Remsen (1979)²</u>	<u>Tate and Tate (1979)³</u>	<u>Comments</u>
Turkey Vulture <u>Cathartes aura</u>	Declining	—	Of Special Concern	May have been extirpated as a breeding species in County. Expected to forage onsite.
Cooper's Hawk <u>Accipiter cooperii</u>	Declining	Second Priority	Of Special Concern	Sensitive to reduction of riparian woodland and chaparral-oak woodland habitats. Has been observed onsite. Not expected to nest but may forage over property.
Cactus Wren <u>Campylorhynchus brunneicapillus</u>	Declining			Declining in the county due to the reduction of specific nesting habitat. Requires cactus thickets for nesting. Coastal population is considered a unique subspecies and is one of the most threatened of all local species (Rea, 1981). Species has been observed onsite (WESTEC Services, 1976; Pacific Southwest Biological Services, 1981) and on properties to the west and east (Beauchamp and Montgomery, 1979; Patterson and Brand, 1978). Nesting habitat exists for this species in all of the canyons onsite.
Black-tailed Gnatcatcher <u>Polioptila melanura californica</u>	Declining	Second Priority	Of Special Concern	Species breeds in coastal sage scrub habitat, (Atwood, 1980). Susceptible to cowbird parasitism. Low scrub habitat throughout property represents potential habitat for this species. Has been reported as common onsite (Pacific Southwest Biological Services, 1981).
Grasshopper Sparrow <u>Ammodramus savannarum</u>	Sensitive	—	Blue-listed	Requires open grassland with sparse shrubs for nesting and foraging. Has been reported to the east of the property. Potential habitat exists in the larger grasslands onsite.

LEGEND

1. Everett (1979)

Threatened: Species has undergone dramatic non-cyclical, long-term population declines, situation critical.
Declining: Local breeding populations have been steadily reduced, some extirpated.

Sensitive: Declines not documented but of extremely localized or limited distribution, sensitive to disturbance, or impending destruction of critical habitat.

2. Remsen (1979)

Highest Priority: Species faces immediate extirpation.

Second Priority: Species definitely on decline throughout large part of range but danger not immediate.

Third Priority: By virtue of their small populations they are potentially vulnerable.

3. Tate and Tate (1982)

Blue-Listed: Shows clear, recent signs of population decline in all or a major portion of its range.

Of Special Concern: Species recovering from a past decline of transition status.

Local Problem Species: Species which are locally declining but overall population decline is not documented and species does not occupy large contiguous area.

Amphibians and Reptiles - No sensitive amphibian species are expected on the subject property (Scheidt, 1980). McGurty (1980) recently compiled a list of endangered and threatened reptiles in San Diego County. He defines an endangered species as one whose population and habitat have been reduced to the extent that the species cannot reproduce at a normal rate throughout the majority of its range. He defines a threatened reptile as one which has experienced a significant population and habitat reduction but still reproduces normally where it occurs. Of the eight species McGurty discusses, three are likely inhabitants of the property. They are discussed below:

San Diego Coast Horned Lizard

Phrynosoma coronatum blainvillei

This species is considered locally endangered. An estimated one-half of its historical range has been eliminated. This species has a high probability of occurrence in the more open habitats onsite.

Orange-throated Whiptail

Cnemidophorus hyperythrus beldingi

This species is considered threatened locally. This species occupies a variety of habitats but seems to prefer wash bottoms, flat sparsely vegetated mesas and associated hillsides. An estimated 65 to 75 percent of the historical distribution of this species has been lost. It is locally abundant and was commonly observed in the canyon followed by East H Street (Pacific Southwest Biological Services, 1981). The species could also occur along the mesa tops and throughout sparse low scrub vegetation onsite.

Two-striped Garter Snake

Thamnophis couchi hammondi

This species is considered threatened in the County. It is widespread but is confined to moist conditions. It is usually found along stream courses or in association with permanent or vernal ponds. It is a probable inhabitant of the north leg of the Rice Canyon drainage.

Habitats

Sensitive habitats within the study area include grasslands, floodplains, coastal sage scrub (maritime and desert scrub) habitat and vernal pools.

Grassland - Grasslands are a declining vegetative and wildlife habitat within the San Diego region. This is especially true for native grasslands. Native grasslands onsite possess the potential to support the aforementioned high interest plant species Acanthomintha ilicifolia, Muilla clevelandii and Fritillaria biflora as well as the declining Grasshopper Sparrow. Grassland habitats would be expected to support

healthy populations of prey species which larger predators that seek cover in adjacent habitats depend upon. Grassland habitats situated within a mosaic of coastal sage scrub habitats such as is the case onsite would be expected to increase the species diversity and carrying capacity of the adjoining habitats. Open grassland habitat attracts raptors to the area and can be important in maintaining local raptor populations.

Floodplains - Natural floodpains and drainages are rapidly being developed or channelized. This habitat onsite contains the sensitive plant species Ericameria palmeri ssp. palmeri and is potential habitat for the declining plant species Artemisia palmeri and Ambrosia pumila. This habitat possesses more structural diversity than the surrounding low scrub with the development of arboreal shrubs and a limited riparian woodland. The structural diversity and the presence of water makes this an important usable wildlife habitat and an effective wildlife corridor.

Coastal Sage Scrub (Maritime Desert Scrub) - Low scrub habitat is still fairly common in San Diego County but is rapidly declining along the coastal plain. It has been suggested that on the order of 70 percent of this habitat within the County has been lost or modified by man (Oberbauer, 1979). The extent of maritime desert scrub is naturally limited to the southwestern corner of the County and remains only in the project area, and on limited areas of Rancho Otay, western Otay Mesa, and a couple of isolated points along the coast. With the advent of the Second Border Crossing and increasing growth in the local area, this habitat is substantially threatened. Declining species associated closely with and dependent on coastal low scrub habitat include the Cactus Wren and Black-tailed Gnatcatcher.

Vernal Pools - This specialized habitat is rapidly disappearing from the San Diego area. Less than 10 percent is estimated to remain in the region (Beauchamp, 1979). The pools in the study area were previously reviewed from a regional perspective by a technical subcommittee which presented their results to the City of San Diego for incorporation into its Vernal Pool Preservation Program (Balko, 1979). The pools in the project area were considered of low preservation priority due to the small number of pools and lack of rare or endangered species associated with the pools.

Resource Conservation Area

The County of San Diego has identified Resource Conservation Areas (RCAs) throughout the County. These overlay zones are meant to draw attention of planners and decisionmakers to the presence of unique resources. The subject property is covered by a number of areas delineated as RCAs in the Sweetwater Community Plan. These areas identify habitat for Ferocactus viridescens, Opuntia parryi var. serpentina, coastal sage scrub, and high quality wildlife habitat.

3.4.2 Impacts

Given the unique character of the low scrub vegetation (Maritime Desert Scrub) in the area, the rapidly declining status of this habitat along the coastal plain of San Diego County, and the use of this habitat by a number of declining plant and animal species, the implementation of both the proposed and the adopted Plans would cause significant biological effects. The following discussion reviews the perceived biological impacts associated with both the adopted and proposed Specific Plans. The review compares both Plans' effects on observed and expected high interest plant and animal species and specialized or unique habitats, as well as the natural open space design of the Plans. The difference between the two plans regarding natural open space is due primarily to the retention of the north leg of Rice Canyon and the majority of the canyon in the northwestern corner of the site in the adopted Plan, while the proposed Plan potentially retains more natural open space in the center and south legs of Rice Canyon. While both Plans would adversely affect the resources of the project area, the spatial difference or location of natural habitats retained by these two Plans is considered significant with the adopted Plan being preferred biologically.

A comparison between the proposed and adopted Specific Plans on the disposition of the observed high interest plant and animal species and specialized habitats as discussed in the preceding section follows:

- Snake Cholla (Opuntia parryi var. serpentina) - Both plans would substantially reduce the distribution and abundance of this species on the property. The adopted Plan would, however, preserve a well-developed stand at the westernmost end of the ridge south of the north leg of Rice Canyon and would preserve more habitat for this species in the northwestern corner of the site and elsewhere onsite.
- San Diego Barrel Cactus (Ferocactus viridescens) - This species is particularly difficult to preserve due to its usual occurrence high on south-facing slopes. Both Plans eliminate the majority of onsite habitat for this species. Both Plans preserve this species in part in two previously identified key areas (WESTEC Services, 1976a). These areas are in the most southwesterly corner of the property above Telegraph Canyon Road and at the west end of the ridge south of East H Street.
- Velvet Cactus (Bergerocactus emoryi) - This species would be preserved by both Plans on the slope southeast of the intersection of East H Street and Paseo del Rey. The stand observed by Chambers Consultants and Planners (1982) at the west end of the ridge south of the north leg of Rice Canyon would be eliminated by both Plans.

- Mesa Clubmoss (Selaginella cinerascens) - This species would be adversely affected by both Plans since it occurs principally on mesa tops or high on south-facing slopes. More potential habitat for this species would be retained, however, by the adopted Plan.

- San Diego Sunflower (Viguiera laciniata) - This species would be adversely affected by both Plans, but the adopted Plan would retain more available habitat for the species.

- Orcutt's Bird's Beak (Cordylanthus orcuttianus) - This species would be lost by both Plans although more potential habitat would remain in the adopted Plan.

- Palmer's Ericameria (Ericameria palmeri ssp. palmeri) - This species would be retained in the canyon bottom of the north leg of Rice Canyon just west of the powerline easement. The alteration of the north leg of Rice Canyon by the proposed Plan would eliminate habitat for this species which would be retained by the adopted Plan.

- Orange-throated Whiptail (Cnemidophorus hyperythrus beldingi) - The adopted Plan, in retaining the north leg of Rice Canyon, would maintain substantially more habitat for this declining species.

- Black-tailed Gnatcatcher (Polioptila melanura californica) - Both Plans substantially reduce available local habitat for this species, but the adopted Plan, in retaining more acres within the project area, has less potential effect on the species.

- Cactus Wren (Campylorhynchus brunneicapillus) - Both of the Plans would adversely affect this species but the proposed Plan would potentially have less effect by retaining both more nesting habitat as well as foraging and buffering habitat.

- Vernal Pools - This habitat would be lost by the development of the mesa tops on the site by both Plans.

- Native Grasslands - The adopted Plan would retain a substantially greater extent of this habitat by maintaining the north leg of Rice Canyon and the canyon in the northwest corner of the property in their natural state.

A comparison between the proposed and adopted Specific Plans on the deposition of unrecorded but expected high interest species by habitat follows:

- North Leg of Rice Canyon Drainage/Floodplain - The adopted Plan would retain the north leg of Rice Canyon and potential habitat for San Diego Ragweed (Ambrosia pumila) and two-striped Garter Snake (Thamnophis couchi hammondi), while the proposed Plan would not.

- Native Grassland - The adopted Plan, in retaining grassland habitat in the north leg of Rice Canyon and in the northwest corner of the site, will preserve potential habitat for the following species: San Diego Golden Star (Muilla clevelandii); Chocolate-lily (Fritillaria biflora); and Grasshopper Sparrow (Ammodramus savannarum). The proposed Plan would eliminate the majority of this habitat onsite.

- Open Low Scrub Habitat - Both the proposed and adopted Plans would equally affect habitat for Variegated Dudleya (Dudleya variegata) onsite. The adopted Plan would preserve substantially more habitat for the San Diego Horned Lizard (Phrynosoma coronatum blainvillei) onsite.

The adopted and proposed Plans can be compared with regard to biological design also. Such a comparison deals with the concept of open space continuity within the property and with adjacent projects, the maintenance of wildlife corridors, and the overall size of the open space habitats retained. The configuration and size of an open space system along with the diversity of cover types retained all combine to determine the species diversity and abundances and the long-term viability of the system. The design of the open space system will also determine its manageability. Such open space habitats as are proposed within El Rancho del Rey are ultimately urban preserves and must absorb both a certain degree of human impact and an alteration in the occurrences of natural disturbances such as fire and flooding. The open space system design should be scrutinized also to determine if the important biological issues identified for the specific project area have been adequately addressed. An evaluation of the biological design of the open space network follows.

The proposed Specific Plan is considered more impactful and less desirable biologically than the adopted Plan for the following reasons:

- It retains less natural open space than the adopted Plan. Preliminary grading studies indicated the possibility of substantially more open space (upwards of 30 percent) retained by the adopted Plan versus the proposed Specific Plan with larger contiguous areas of open space. The preservation of the whole ecosystem with a full complement of indigenous species and genetic diversity would be the ideal end result of the planning process (Noss, 1983). While it is generally not possible to achieve the ideal biological situation due to socioeconomic factors, it is normally assumed that the larger the preserve the more viable the system. The diversity of habitats within the north leg of Rice Canyon, however subtle, is integral to the preservation concept. Size with accompanying diversity contributes to preserve viability in a number of ways. Larger preserves can more effectively accommodate species which habitually move among

different habitats and whose life history strategy includes a size or habitat diversity component. Natural systems do seem to have a minimum critical size (Lovejoy and Oren, 1981; Nilsson, 1978). The preservation of larger contiguous natural areas attempts to keep the system above the threshold required for colonization or persistence of populations of area-dependent species (Noss, 1983). Chambers Consultants and Planners (1983) reported that much of the bottom of Rice Canyon had apparently been mechanically treated for brush removal. Our observations indicate that only the western one-third of the bottom of Rice Canyon north of the existing drainage currently supports weedy disturbance-related vegetation. The areal extent of this disturbed area is very limited in relation to the other habitats within the north leg of Rice Canyon. While fire, grazing pressures, and mechanical brush removal have probably affected the project area including the north leg of Rice Canyon, the north leg remains predominantly natural and the past disturbances have not significantly lessened its biological attributes.

- It retains less open space in the northwestern corner of the property where dense cactus thickets are present and grassland habitat lines the canyon bottom. This area connects with dedicated open space to the west and the larger this open space zone the more likely it can continue to support such species as the Black-tailed Gnatcatcher and the Cactus Wren.

- The adopted Plan retains more natural habitat in the north of the property where a connecting road intersects with Otay Lakes Road. Some native grasslands in this area are eliminated by the proposed Plan and the open space is less contiguous.

- The proposed Plan retains much less of the critical south-facing slopes of the north leg of Rice Canyon. Less of the cholla thickets required by the Cactus Wren are retained and the continuity of natural vegetation is broken up. Fragmented habitats may gradually lose area-sensitive species (Faaborg, 1980; Noss, 1981; Samson, 1980; Samson and Knopf, 1982). Since detailed size requirements for most common and sensitive species are not known, the conservative approach is recommended in designing the natural areas onsite.

- The adopted Plan retains the north leg of the Rice Canyon drainage and thereby retains the canyon as a major wildlife area while retaining habitat for a number of declining plant species as well as some grasslands. The north leg of the Rice Canyon drainage corridor is integral to the maintenance of diversity in the natural open space and allows dispersal of terrestrial and aquatic organisms. The accommodation of wildlife movement is important, especially in an area subject to urban pressures and perturbations (i.e., fire).

- The adopted Plan only crosses the north leg of Rice Canyon at its eastern end. The loop road in the proposed Plan crosses it in two locations in addition to altering it substantially. The additional crossings break up the natural open space more and create natural wildlife hazards. Roads may present at least partial barriers to small mammal movement (Oxley et al., 1974; Schreiber and Graves, 1977) and could disrupt normal dispersal patterns and population dynamics (Noss, 1983).

- The proposed Plan substantially breaks the natural open space corridor along Telegraph Canyon Road by grading west of Paseo Ranchero.

The proposed Plan is considered less responsive to the concepts of ecosystem preservation than the existing plan. The most prudent approach to long-term conservation of the unique low scrub habitat of the project area and its component species is to protect as much contiguous critical natural habitat as possible and to "insulate" species (Noss, 1983) with high extinction probabilities. The insulation of species involves large preserve size, management of human impacts, and protection of habitat continuity. The proposed Plan would potentially retain more natural open space in the central and southern legs of Rice Canyon. It is felt that while this is positive biologically, it would not have the long-term potential to preserve the local ecosystem that a more complete retention of the north leg of Rice Canyon would have. The adopted Plan allows more opportunity to effectively protect the local system. The significant biological effect of development of El Rancho del Rey by the proposed Plan is essentially cumulative. It is a combination of the loss of a variety of declining regional habitats and species. The long-term viability of the open space system in the proposed Plan is considered substantially less than the adopted Plan. Methods to mitigate effects and overcome perceived deficiencies in the Plan are reviewed in the following subsection.

3.4.3 Mitigation

The proposed plan would revegetate man-made slopes adjacent to natural areas with native vegetation, reestablish canyon bottom biota in the north leg of Rice Canyon, modify natural slopes through brush removal and transplantings of indigenous cacti, and create a cacti refuge on the south-facing slope of the canyon south of East H Street (Chambers Consultants and Planners, 1983). These mitigation elements are reviewed below:

- Revegetation of man-made slopes - This element would seem to be an integral part of the adopted Plan. It is a common practice to recommend native revegetation on slopes which integrate with natural areas.

- Reestablish canyon biota in the north leg of Rice Canyon - This element involves reestablishing canyon bottom woodland and riparian habitat about a

natural rock-lined drainage channel adjacent to the south slope of Rice Canyon. This is proposed to be conducted on a step by step basis. It is difficult to effectively evaluate this element without details of the natural rocky channel. While this is more positive biologically than piping the drainage, it does not mitigate the loss of the natural drainage within the natural canyon situation. The proposed Plan could replace the drainage but, given the proposed alteration and uses of the canyon floor, the wildlife use of the drainage habitat would be expected to be substantially less than it would be under the adopted Plan. Riparian vegetation would be expected to increase naturally as runoff increases due to the buildout of the adjacent areas although possibly not to the extent envisioned in the reestablishment plan.

- Modify natural slopes through brush removal and transplantings of indigenous cacti and;

- Create a cacti refuge on the south-facing slope of the canyon south of East H Street - The concept of creating cactus preserves and thinning native vegetation to encourage expansion of cactus areas are interesting forms of mitigation. However, the proposed cactus program is impactive by further altering the remaining natural areas which are already both limited and fragmented in the proposed Plan. The number of Cactus Wrens retained in the area could potentially be limited more by the lack of open space than by nesting habitat. It is felt that because the proposed cacti mitigation program is experimental in nature it should not involve all of the south-facing slopes in the three central canyons of the property. However, it is expected that cacti can be transplanted with a fair degree of success and this mitigation element could partially mitigate losses of sensitive cacti species onsite. Cactus thickets would appear to remain within the adopted Plan within the north leg of Rice Canyon and the canyon in the northwest corner of the planning area. It would also seem that this mitigation program could more appropriately be instituted during the review of specific projects within the planning area. If a specific project would eliminate a stand of cactus, then it could, if appropriate, be transplanted as mitigation into the nearest natural area.

The mitigation program for the proposed Plan only partially mitigates the significant effects of development of the project area. The problem lies in the adequacy of the baseline system. The adopted Plan, in preserving substantially more natural open space in the north leg of Rice Canyon establishes a baseline system more capable of preserving the local ecosystem and thereby mitigating the effects of the Plan. The preservation of the local ecosystem is warranted based on the inclusive unique species and habitats present onsite. The proposed Plan in not preserving an adequate baseline system cannot mitigate to insignificance the cumulative effects of

urbanization of the project area. While the proposed Plan focuses on reestablishing indigenous cacti, it misses the opportunity to preserve a regionally declining ecosystem. In so doing, it preserves pieces of habitat albeit substantial which when added up do not have the potential biological value of the open space of the adopted Plan. It is felt the significant biological impacts of the proposed Specific Plan can be fully mitigated only through design alternatives.

3.4.4 Analysis of Significance

The proposed Plan significantly reduces the natural habitats of El Rancho del Rey and retains substantially less sensitive habitats and species than the adopted Specific Plan. The significant difference in the Plans is the alteration of the north leg of Rice Canyon and the canyon in the northwestern corner of the property by the proposed Plan. The subject property is one of the most sensitive terrestrial habitats in southwestern San Diego County and should be protected accordingly. The project area is one of the few large blocks of native scrub habitat remaining in southwestern San Diego County capable of supporting the variety of declining habitat types and specific declining plant and animal species known from the local area. The proposed Specific Plan Amendment would result in significant biological impacts which cannot be mitigated to insignificance.

3.5 CULTURAL RESOURCES

3.5.1 Existing Conditions

Over the years numerous archaeological investigations have been conducted in the vicinity of the proposed El Rancho del Rey project, locating over 20 archaeological sites. The San Diego State University records show one archaeological site, SDi-960/961 (originally recorded as two sites), within the project boundaries. An intensive archaeological survey of the El Rancho del Rey project site was completed in August 1983 by WESTEC Services. The current archaeological survey of the subject property revealed five previously unrecorded sites within the boundaries of the project: W-3430, W-3431, W-3432, W-3433, and W-3434.

SDi-960/961

Site SDi-960/961 is situated upon a marine terrace in the southeastern corner of the subject property and contains crudely manufactured core tools fashioned from quartzite cobbles exposed in low lying areas between mima mounds and in roads. Dr. Bernard Reeves, University of Calgary, British Columbia, collected artifacts from this site and has used them to postulate a long, pre-San Dieguito occupation for southern California. Considerable discussion has arisen over these findings, with major criticism leveled at the speculated antiquity of the artifacts. Others suggest the quartzite

cobble implements are not tools, but occur naturally due to thermal fracturing caused by periodic brush fires. An examination of the artifacts by Mr. Cerrutti, Mr. Richard Carrico, and the author found no cause for doubt that the majority of the quartzite cobble specimens at SDi-960/961 were manufactured by humans. The actual age of the site is, at the present time, unknown. More refined means for placing this site in a temporal framework, other than by development of type collections through analytical comparisons, is necessary.

W-3430

Site W-3430 is located approximately 100 m north of SDi-960/961 and extends east-west across a ridge on the eastern edge of the property. This site contained a wide variety of stone tools including core tools, scrapers, a mano, metate, and flakes. An apparent subsurface component may exist at W-3430. Artifacts were revealed below the surface in an area on the site that had been dug out by individuals freeing a vehicle caught in the mud. Artifacts collected from this site by Richard Cerrutti are presently on display at the Chula Vista Public Library.

W-3431

W-3431 is a small site located atop a ridge just south and west of Bonita Junior High School. A small number of flakes and a core were noted in this location. Currently, off-road vehicle activity focused in this area is seriously impacting the site.

W-3432

W-3432 is situated upon the same ridge system as W-3431, but lies at least 2 km to the west, and overlooks the north leg of Rice Canyon to the south. This site contains a mano fragment, shellfish, and flakes. Artifacts are currently exposed in dirt roads that cross the ridge. Dense vegetation prevented complete examination of the ground surface and the exact dimensions of the site are unknown. As with W-3430, an intact subsurface deposit may be present at W-3432.

W-3433

Site W-3433 is situated on a ridge south of, and across the north leg of Rice Canyon from, W-3432. Flakes, debitage, and shellfish remains were noted along the ridge, particularly on and adjacent to the dirt road that crosses the ridge.

W-3434

The final site recorded within the subject property is located upon a ridge due south, and approximately 500 m from W-3433. Like W-3433, site W-3434 consists of flakes, debitage and shellfish remains; the majority exposed in dirt roads that cross the ridge east and west.

Cultural Resource Interpretation

Cultural resources recorded within the current study differ in location, size, age, and cultural components. Sites W-3431, W-3433, and W-3434 appear to be small seasonal encampments of short-term occupation. As evidenced by the presence of intact subsurface deposits, sites W-3430 and W-3432 probably represent larger seasonal encampments of long-term occupation. The actual periods of occupation represented at each of the above five sites is unknown. SDi-960/961 is an extensive site of undetermined age. It has been suggested by several researchers that the site contains an artifact assemblage predating San Dieguito peoples, circa 10,000 years before present. Quarrying and tool manufacturing appears to be the major cultural activity focused at this location.

3.5.2 Impacts

The archaeological sites identified on the El Rancho del Rey property are located on ridgetop areas. Development of the project site under either the proposed or adopted Specific Plan would require extensive grading of these ridgetops, which would impact the identified resources. Impacts could also result if grading of access roads, equipment staging areas or similar activities occurred on or near site locations prior to major grading activities.

Under recently adopted CEQA Guidelines (Public Resources Code Section 21083.2, Appendix K) only sites demonstrated to be "important archaeological resources" are to be considered for impact and mitigation analysis. Archaeological resources that are significant and important to the scientific or archaeological community are not necessarily considered to be unique, significant or worthy of study within the environmental review process. Because no subsurface testing was undertaken as part of this survey effort, the significance of each of the sites cannot be fully evaluated. However, the loss of these onsite resources as a result of grading activities necessary to implement the Specific Plan would be a potentially significant impact.

3.5.3 Mitigation

In order to avoid potentially significant impacts to onsite archaeological resources resulting from project development, a testing program is recommended to assess each site's potential significance with respect to specific criteria established under Section 21083.2. The techniques recommended below are designed to evaluate the significance of each site recorded within the El Rancho del Rey property. This testing should be implemented prior to any ground surface modifications within the subject property.

SDi-960/961

The principle question to be addressed at SDi-960/961 is the antiquity of the deposits. The artifacts are imbedded in cobble horizons exposed in low lying areas (often vernal pools) between "mima" mounds, and in roads and trails where the underlying cobble strata has been exposed. Researchers claiming great antiquity for these artifacts point to the fact that they are embedded in the cobble horizon, and are therefore contemporaneous. To address this issue, and to clarify the age of these artifacts, the following program is recommended. A number of "mima" mounds should be removed using a backhoe, and excavated to the level of the cobble horizon. The number of sample mounds to be investigated should be determined at random. Once exposed by machine, final clearing of the soil above the cobble horizon should be accomplished by hand, ensuring in situ providence of underlying cobbles and, presumably, artifacts. These procedures would determine if the artifacts are located below and therefore are older than the mounds. Should the opposite be true; that is, if the artifacts are not located below the mounds, then the artifacts are younger than the mounds and the cobble horizon, and thus are of less antiquity. Considerable work has already been completed on "mima" mounds and vernal pools, and could serve as a comparative data base for this investigation. The proposed investigations may well answer the more important questions of antiquity for the quartzite cobble tool tradition in San Diego County, and their place in prehistory.

W-3430 and W-3432

Sites W-3430 and W-3432 appear to represent seasonal encampments with prolonged settlement and varied cultural activities. Each appears to contain intact subsurface strata. To better understand these sites, it is recommended that each be mapped and surface collected. The excavation of at least one 1 m by 1 m test unit at each site is necessary to assess subsurface deposits evident at each site. Upon completion of this field work, specific recommendations for mitigation of impacts can be developed if the sites prove to be significant.

W-3431, W-3433 and W-3434

The potential significance of sites W-3431, W-3433, and W-3434 is predicated upon the presence of intact subsurface deposits. Therefore, in addition to surface mapping, and collection, excavation of a posthole series at each of these sites is recommended to determine the presence of subsurface components, and thus clarify questions of significance. Should these postholes prove negative, no further consideration would need to be given to the sites.

Additional mitigation recommendations are predicated on the results of the testing programs. Should sites be found to be significant it is recommended that the sites be avoided in the manner prescribed in Section 21083.2, Appendix K:

A. In-situ preservation of a site is the preferred manner of avoiding damage to archaeological resources. Preserving the site is more important than preserving the artifacts alone because the relationship of the artifacts to each other in the site provides valuable information that can be lost when the artifacts are removed. Further, preserving the site keeps it available for more sophisticated future research methods. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.

B. Avoiding damage may be accomplished by many approaches including:

1. Planning construction to miss archaeological sites;

2. Planning parks, greenspace, or other open space to incorporate archaeological sites;

3. "Capping" or covering archaeological sites with a layer of soil before building tennis courts, parking lots, or similar facilities. Capping may be used where:

a. The soils to be covered will not suffer serious compaction;

b. The covering materials are not chemically active.

c. The site is one in which the natural processes of deterioration have been effectively arrested; and

d. The site has been recorded.

4. Deeding archaeological sites into permanent conservation easements.

Should the above procedures for preservation not be feasible, an extensive, site-specific Data Recovery Program should be implemented in accordance with Public Resources Code Section 21083.2, Appendix K.

3.5.4 Analysis of Significance

Development of the project site according to proposed Specific Plan Amendment would not result in any greater potential for impacts to archaeological resources within the project boundaries than the existing Specific Plan, and approval of the proposed Specific Plan would not itself impact the onsite resources. However, implementation of the Specific Plan would result in potentially significant adverse impacts to six archaeological sites, and mitigation would be necessary as part of subsequent project approvals and prior to grading of the property. If the testing program is completed and

any required mitigation recommendations are implemented, the potential impacts can be mitigated to insignificance.

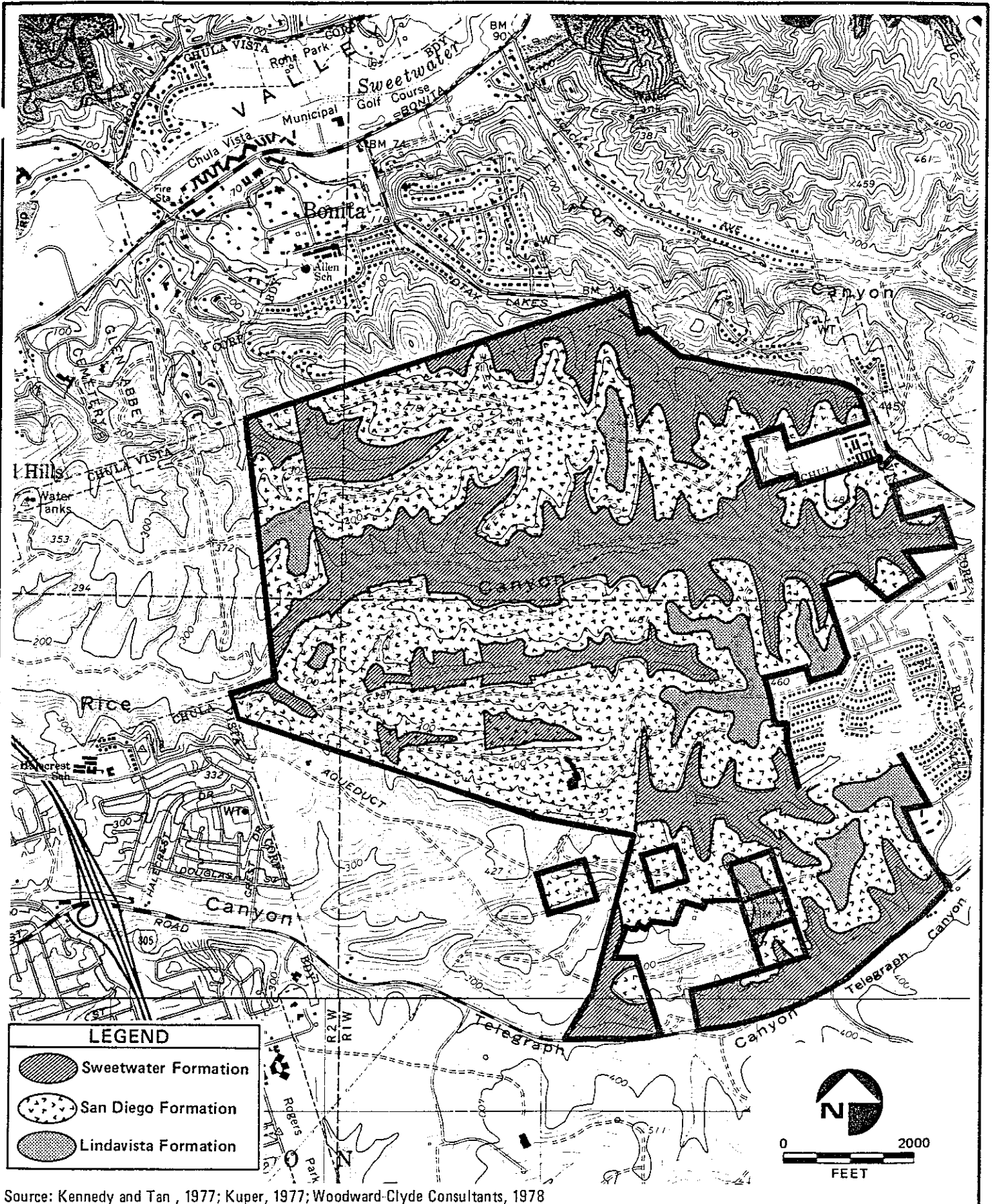
3.6 PALEONTOLOGICAL RESOURCES

The following analysis is based on a paleontological resources study conducted by Thomas A. Demere, Paleontologist, in September of 1983. The report is on file with the City of Chula Vista, Planning Department.

3.6.1 Existing Conditions

The distribution of fossils in an area is directly tied to the distribution of the geological rock units within which they are preserved. The project site is underlain by a series of bedrock units or formations including, from oldest to youngest, the middle Eocene (40-45 million years old) Mission Valley Formation, the middle Miocene Sweetwater Formation, the upper Miocene (14 million years old) Rosarito Beach Formation, the upper Pliocene (2-3 million years old) San Diego Formation and the lower Pleistocene (1.0-1.5 million years old) Lindavista Formation. The distribution of these formations within the study area is summarized in Figure 3-5.

Of the four geologic formations within the study area, only the upper Pliocene San Diego Formation is considered to contain significant paleontological resources. Although there is poor surface preservation of fossil material, it is still possible to recognize the rich fossiliferous nature of the San Diego Formation within the study area. This recognition is based in part upon earlier observations and collection of well-preserved vertebrate and invertebrate fossils during grading for the East H Street extension, the El Rancho Del Rey, Unit 6B development and the Hidden Vista Village (Terra Nova) development. These resources include important fossil remains of fish, shark, sea bird, walrus, fur seal, sea cow, dolphin and baleen whale. The fossil record for these animals, especially the marine mammals, is rather incomplete primarily due to the small number of specimens in museum collections. The recent salvage projects mentioned above have done much to increase the number of available specimens and provide an idea of the variety and richness of the prehistoric marine life of 2 to 3 million years ago. Based on preliminary study of these specimens by paleontologists both in San Diego and across the nation it is becoming obvious that the San Diego Formation contains the largest and most varied assemblage of Late Pliocene marine vertebrates in North America. Further collection and study of these fossils will add considerably to our understanding of the evolution of marine vertebrates. Additional indications of the extensive paleontological resources in the area are based upon: the discovery of fossil material as far east as Otay Lakes Road; the discovery of isolated



Source: Kennedy and Tan , 1977; Kuper, 1977; Woodward-Clyde Consultants, 1978

Distribution of Geologic Formations within the Project Site

FIGURE
3-5

fossiliferous localities along all the major ridges; and reports of vertebrate and invertebrate fossils being unearthed during grading activities in the early 1970s from sites adjacent to Telegraph Canyon Road as far east as its intersection with Otay Lakes Road.

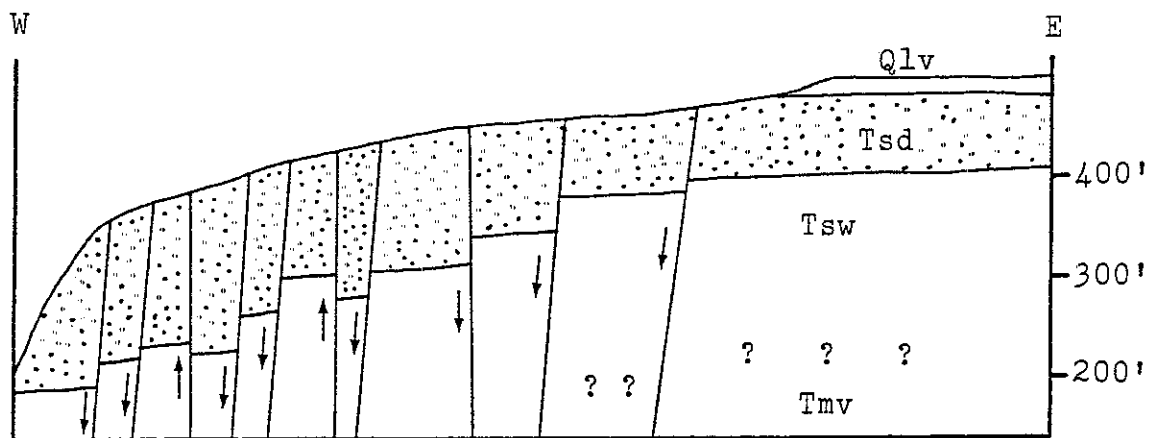
A series of parallel and subparallel high-angle normal faults (the La Nacion Fault Zone) serve to break the area up into numerous fault blocks as depicted in Figure 3-6, thereby explaining the varying heights of each formation. The distribution of fossiliferous sandstone of the San Diego Formation has been controlled by faulting, topography and the 3-9° southwesterly tilt of the rock unit itself.

The base of the San Diego Formation drops in elevation from 420 feet in the east to close to 200 feet in the west. To the east the formation is confined to the ridges and upper canyon slopes (above 400-420 feet elevation) while to the west the formation extends from the ridges down almost to (and in places onto) the canyon floors. In a few areas on the ridges the San Diego Formation is capped by up to 30 feet of Lindavista Formation (Figure 3-5) but for the most part uplift and erosion have removed this younger rock unit (Figure 3-6).

3.6.2 Impacts

The proposed Specific Plan Amendment would change the types and densities of land uses permitted under the existing Specific Plan. Ultimate development under either the existing or proposed Specific Plan would require substantial grading within the San Diego Formation, thereby impacting fossil resources on site. Thus, although the proposed Amendment would not result in any change in impacts to paleontological resources, significant impacts will occur to these resources as a result of future grading activities.

Based upon the widespread distribution of the rich fossiliferous San Diego Formation over much of the study area and the extensive amount of grading required to implement the Specific Plan land uses, it is certain that significant impacts to paleontological resources will occur during the development of El Rancho del Rey. Wherever grading activities encounter the San Diego Formation resource impacts will be created. These impacts will result from exposure and possible destruction of significant fossil material during grading, in addition to the loss of future access to sites where buildings are constructed. When grading activities cut into either the Rosarito Beach Formation (which occurs below the San Diego Formation along the lower margins of the canyon slopes) or the Lindavista Formation (which overlies the San Diego Formation on some of the ridges) no direct significant resource impacts will occur. However, since the



(elevations above sea level).

- Qlv - Lower Pleistocene Lindavista Formation
(approximately 1.0-1.5 million years old)
- Tsd - Upper Pliocene San Diego Formation
(approximately 2-3 million years old)
- Tsw - Upper Miocene Sweetwater Formation
(approximately 14 million years old)
- Tmv - Middle Eocene Mission Valley Formation
(approximately 40-45 million years old)

Source: Kennedy and Tan, 1977; Kuper, 1977; Woodward-Clyde Consultants, 1978

General East-West Cross-Section Across the Study Area Showing
Block Faulting within the La Nacion Fault Zone and Related
Changes in Thickness of the Fossiliferous San Diego Formation

FIGURE
3-6

Lindavista Formation is quite thin in places, it is conceivable that grading activities might completely remove this rock unit, thereby exposing the underlying San Diego Formation.

The distribution of the San Diego Formation varies by elevation from a base of 420 feet in the east to 340 feet moving westward and finally to almost 200 feet within and west of the La Nacion Fault Zone. Wherever grading activities are conducted above this elevation, where the San Diego Formation occurs, there is a potential for significant impacts to paleontological resources.

3.6.3 Mitigation

Mitigation measures are available to avoid significant impacts to paleontological resources occurring as a result of grading. These involve a program of onsite monitoring and fossil salvage including the following:

a. A qualified paleontologist should receive a time table and grading plans and be present at the pre-grade meeting to consult with the grading and excavation contractors. (A qualified paleontologist is defined as an individual with a Bachelor's or higher degree in paleontology or geology who is experienced in paleontological techniques and procedures.)

b. A qualified paleontological monitor should be present at all times during the original cutting of previously undisturbed sediments of the San Diego Formation. (A qualified paleontological monitor is defined as an individual with some background in paleontology and geology who is experienced in the recognition and collection of fossils. This monitor should be under the supervision and direction of a qualified paleontologist.)

c. The paleontological monitor should be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains. (The occasional use of machinery on site may be required to insure timely removal of fossil remains.)

d. Remains collected during this salvage program, with the owner's permission, should be deposited in a scientific institution with paleontological collections such as the San Diego Natural History Museum or the Natural History Museum of Los Angeles County.

Implementation of these measures will mitigate potential paleontological impacts to insignificance. These measures should be made conditions of subsequent project approvals prior to issuance of grading permits (e.g., at the tentative map stage).

3.6.4 Analysis of Significance

Paleontological resources on the El Rancho del Rey property are extensive and would be significantly impacted by grading activities under both the adopted or proposed amended plans. Implementation of the mitigation measures described above is sufficient to avoid these impacts.

3.7 GEOLOGY/SOILS

A geotechnical study has not been prepared specifically for the project site, although a number of geotechnical studies have been prepared for portions of the subject property. Geologic studies for the project vicinity consulted during preparation of the following analysis include Scheidemann and Kuper (1979); Kuper (1977); Kennedy and Tan (1977); Woodward-Gizienski & Associates (1972); WESTEC Services (1976); Woodward-Clyde Consultants (1981); and Geocon (1979).

3.7.1 Existing Conditions

3.7.1.1 Landform

The project site is situated on an ancient marine terrace which has been greatly dissected by streams that have graded their channels to the present sea level. The site lies north of the well-developed Otay Mesa, which is a remnant of a gently westward-sloping marine wave-cut terrace that formed during the gradual emergence of the land surface that began some 3 to 4 million years ago. Stream flow has incised numerous steep-sided narrow canyons into the mesa surface, as indicated on the topographic map, Figure 2-3.

Elevations on the subject property range from 500 feet above MSL on the mesa top in the southern aspect of the site to 200 feet above MSL in the canyon bottom at the far western portion of the property. The predominately east-west trending drainages on the property are highlighted by Rice Canyon, the largest canyon onsite, which extends all the way across the central aspect of the property. Elevations in the bottom of the north leg of Rice Canyon range from 380 feet above MSL in the east end to 200 feet above MSL in the west end. Typical stream gradients are approximately 2 to 4 percent. Elevations on the majority of the mesa top areas range from 460 to 485 feet above MSL. The canyon walls form the steepest slopes on the site, becoming nearly vertical in localized areas. Typical canyon side slopes are approximately of 20 to 30 percent.

3.7.1.2 Geologic Units

The geologic units exposed within the subject property have been mapped and briefly described by Scheidemann and Kuper (1979); Kuper (1977); and Kennedy and

Tan (1977). Although there has been some disagreement and confusion among geologists concerning the property's geological makeup, the best available data provides the following geological formations. These units are, from oldest to youngest, the Mission Valley Formation from the Eocene, the Sweetwater and Rosarito Beach Formations from the Miocene, the sandstone part of the San Diego Formation from the Pliocene, the Lindavista Formation from the Pleistocene, and Alluvium from the Holocene. The units are shown on Figure 3-5 and discussed briefly in the following subsections (from Kennedy and Tan, 1977).

Mission Valley Formation (Tmv): The Mission Valley Formation is a predominately marine sandstone unit which lies upon stadium conglomerate. It is exposed only in three streambed locations onsite.

Sweetwater Formation: The Sweetwater Formation is composed of three facies; gritstone, sandstone and mudstone, which make up an alluvial fan model. Outcrops are massive and structureless (Scheidemann and Kuper 1979).

Rosarito Beach Formation (To): The Rosarito Beach Formation is composed of light-gray and light-brown, moderately well-sorted, poorly indurated, massive sandstone and claystone. This unit forms the walls of the tributary canyons crossing the property, and contacts the overlying San Diego Formation at an elevation of approximately 400 to 410 feet above MSL.

San Diego Formation (Tsdss, sandstone part): Overlying the Rosarito Beach Formation is the San Diego Formation of Late Pliocene age (approximately 2.3 to 4 million years old). The sandstone part of the San Diego Formation is marine and fine- to medium-grained and lies generally east and below its closely related conglomeratic facies. The sandstone is typically yellowish-brown, poorly indurated, and locally cemented with limy cement. Locally rich fossiliferous segments are characteristically weak and susceptible to rapid erosion.

Lindavista Formation (Q1): The next youngest stratigraphic unit in this area is the early Pleistocene Lindavista Formation which forms a cap over the bedrock units. The Lindavista is a marine terrace deposit consisting of nearly flat-lying reddish-brown conglomerate, reaching a thickness of up to 80 feet in the mapped area.

Alluvium: Alluvium is not differentiated on Figure 3-5. Holocene alluvial deposits are found thinly mantling the bottoms of major drainages crossing the area. The alluvial materials range from essentially impermeable clays to relatively pervious sands and gravels. This unit is generally less than 10 feet in thickness.

3.7.1.3 Seismicity

Major segments of the La Nacion Fault system are known to traverse the project site. The La Nacion Fault system is the dominant structure in the Chula Vista and National City area. This system comprises a number of steeply dipping, subparallel faults that offset Tertiary and Quaternary age strata. The La Nacion system is classified as potentially active and has been mapped from the Mexican border north to the Mission Valley area. It is estimated that there is a minimum of 210 feet of normal displacement along the La Nacion fault zone in the project area. At least 110 feet of this displacement has been interpreted to have occurred since the late Pleistocene time (past 100,000 years) (Woodward-Gizienski and Associates, 1972).

The La Nacion Fault system shows no evidence of activity during historic time nor any evidence of movement within the last 11,000 years (Elliott and Hart, 1977). However, because the La Nacion Fault displaces sediments younger than 1 million years, it is considered potentially active and capable of producing a maximum credible earthquake of 6.5 on the Richter Scale (Leighton and Associates, 1983)). An earthquake of this magnitude could result in a Modified Mercalli Intensity of VIII or IX. Nonetheless, since there is no evidence of recent movement along the La Nacion Fault Zone, the probability of a major earthquake on this fault is very remote. The Chula Vista area has had a low historic seismicity record and is considered relatively stable tectonically. No earthquakes greater than 4 on the Richter Scale have been recorded within a 40-mile radius of the project site (Real, et al., 1978).

The nearest active fault to the project site is the Coronado Banks Fault in the Pacific Ocean. This fault has a maximum credible earthquake rating, on the Richter Magnitude, of 6.5 and a maximum probable earthquake rating (functional basis earthquake) of 6.0. A review of geologic literature conducted by Woodward-Clyde Consultants (1981) indicates that seismic events of Magnitude 4 or greater have been recorded in the Elsinore Fault zone, mapped some 42 miles to the northeast. The southern extension of the potentially active Rose Canyon Fault zone is mapped approximately 6 miles west of the site. No Magnitude 4 or larger earthquakes have been recorded on either the Rose Canyon or La Nacion Faults (Woodward-Clyde Consultants, 1981).

Earthquake damage occurs primarily from ground shaking, the severity of which depends on several factors including: earthquake magnitude and duration of shaking, distance from causative fault, local soil conditions, and building design and construction. Another phenomenon associated with earthquake activity is ground rupture. Movement along a fault can result in displacement or rupture of the ground surface along the fault trace. Generally it is not technically or economically feasible to design and construct a building capable of withstanding the seismic rupture of its foundation. Thus, an area traversed by a fault or fault zone considered capable or potentially capable of displacement is best avoided. A number of fault traces cross the subject property. As previously stated, these faults are considered potentially active and potentially capable of inducing ground rupture should a significant earthquake occur on the La Nacion Fault zone.

3.7.1.4 Landslides/Slope Stability/Liquefaction

No landslides were noted or reported to exist on portions of the property for which geotechnical studies have been conducted, although several large landslides have been noted in similar geologic formations below the westerly edge of the Otay Mesa (Kennedy and Tan, 1977).

During an earthquake, ground shaking tends to compact loose deposits of cohesionless soil. Such unstable soils may settle differently or fail by cracking. If the soils are water saturated, they may fail by liquefaction and lateral flow on gentle slopes, or by landsliding on steep slopes. The necessary conditions for liquefaction, loose, poorly graded silty strata combined with a shallow water table, do not appear to exist on the majority of the subject property, so seismic-induced soil failure by liquefaction is not likely. However, due to the relatively steep topography along the canyon walls, a potential for landsliding triggered by a large (7.0 Richter) earthquake exists. The loose, compressible portions of the alluvial soils present on the site within the canyon bottoms have a potential for liquefaction in association with high groundwater conditions which may occur for short periods of time.

3.7.1.5 Soils

Based on field reconnaissance and a number of test borings, surface and subsurface soils on the subject site have been divided into five main units, as follows (Woodward-Clyde and Associates, 1969):

Residential Soil Mantle: This material, which blankets much of the site, is primarily composed of clayey soils that are potentially expansive, and range in thickness from 1 to greater than 10 feet.

The thicker areas exist on the lower side slopes and in the upper ends of tributary canyons. It is generally thicker on the north-facing slopes. Over most of the site, the average thickness is on the order of 3 feet.

Alluvial Soils: These loose, compressible soils exist on the bottoms of all major canyons and extend partway up the tributary canyons. The materials range from clean sands to hard impermeable clays. Individual strata show very little vertical or horizontal continuity.

Terrace Deposits: These soils consist of reddish-brown sandstone and conglomerate capping many of the ridges. The terrace materials are generally dense, non-expansive and moderately well indurated.

San Diego Formation: San Diego Formation soils consist of sandstones and minor pebble conglomerates. The sandstone is fine-grained and poorly sorted. These soils are generally highly permeable and lack the expansive soils characteristic of the Rosarito Beach Formation.

Rosarito Beach Formation: These soils are well suited, poorly indurated, tuffaceous sandstones which contain horizons of pure bentonite. The bentonite is highly expansive and forms a hummocky topography, known locally as mimamounds, where exposed at the surface.

The Soil Conservation Service of the U.S. Department of Agriculture (1973) has mapped soils on the subject property as belonging predominantly to five soil series: the Linne Series, Olivenhain Series, Diablo Series, Salinas Series and Carlsbad Series. A brief description of each of these series, their location onsite, and their engineering properties is provided in Table 3-7.

3.7.2 Impacts

The project site is generally geologically suitable for development. Onsite geotechnical conditions would not pose major constraints to development as proposed, although the following potential problem areas should be considered during future site planning.

3.7.2.1 Geologic Structure

The sandstone formations which underlie the majority of the project site would generally provide adequate foundation support for future development and could be graded without great difficulty. However, claystone interbeds of the Rosarito

Table 3-7

DESCRIPTION OF SOIL PROPERTIES (USDA-SCS, 1973)

Soil Series	Description	Location Onsite	Slopes (%)	Shrink-Swell Behavior	Erodibility	Suitability For Topsoil
Linne	Well-drained, moderately deep clay loams derived from soft, calcareous sandstone and shale.	Most onsite canyon slopes	9-50	Moderate	Moderate to Severe	Fair
Olivenhain	Well-drained, moderately deep to deep cobbly clay with a very cobbly clay subsoil.	Most mesa tops	2-30	Moderate	Severe	Fair to Poor
Diablo	Well-drained, moderately deep to deep clays derived from soft calcareous sandstone and shale.	Underlying some canyon slopes	9-30	High	Moderate	Poor
Salinas	Well-drained and moderately well-drained clay loams that formed in sediments washed from Diablo, Linne, Las Flores, Huerhuero, and Olivenhain soils.	Canyon bottom alluvium	2-9	Moderate	Slight to Moderate	
Carlsbad	Moderately well-drained and well-drained gravelly loamy sands that are moderately deep over a hardpan.	Single mesa top	9-15	Low	Moderate	Poor

Beach Formation may exhibit expansive characteristics and require some remedial foundation measures.

Unfavorable geologic conditions at the site are primarily associated with potential seismic impacts. There is a possibility that future earthquake activity would produce moderate ground shaking on the project site. This is a hazard existing throughout Southern California. The closest fault zone to the site along which earthquakes greater than a Richter Magnitude of 4.0 have been recorded is more than 40 miles from the site.

Known fault traces of the La Nacion Fault system traverse portions of the project site. Although this fault system is potentially capable of producing significant ground shaking, it is designated potentially active (not active) and possesses an estimated recurrence interval of 10,000 to 20,000 years for its maximum probable earthquake. A study conducted on the La Nacion Fault system by Woodward-Gizienski and Associates (1972) recommended that development of permanent structures be prohibited within two 250-foot wide bands surrounding the major "active" fault zones due to potential hazard from ground rupture. Subsequent studies have categorized the La Nacion faults as "potentially active" since the most recent activity is set at 13,375 ±275 years ago. The City of Chula Vista Seismic Safety Element (1974) agrees with the classification of the La Nacion Fault system as potentially active. Because the fault is not considered active, the 250-foot restricted area does not appear to be appropriate, although the potential for ground rupture along the known fault traces does exist.

Landslide features have not been identified from the subject property and would not appear to represent a significant constraint to development. The depth to the regional groundwater table on the site is estimated to be greater than 180 feet below the project site ground surface.

3.7.2.2 Soils

Preliminary soil investigations indicate that areas of adverse soils exist on the subject property. These adverse soils include loose, compressible alluvial materials in canyon bottoms and highly expansive soils in areas underlain by the Rosarito Beach Formation. The soils on the property would not represent a significant constraint to development provided that a soil investigation report is conducted and recommended mitigation measures are incorporated into project designs.

3.7.3 Mitigation

A detailed subsurface soil and engineering geology investigation should be conducted to provide grading, foundation, and construction recommendations prior to final project design. Such an investigation should include:

- Drilling, logging, and sampling of drill holes to evaluate the bedrock composition and structure.
- Excavation, logging, and sampling of test pits and trenches in areas of suspected landslides or fault traces.
- In situ and laboratory testing of soils to establish engineering characteristics.
- Preparation of grading specifications and foundation design criteria.
- Definition of areas where slope buttressing may be required and provide buttress designs.
- Determination of the relevancy of groundwater conditions in relation to grading and slope stability and provide subdrain requirements.
- Definition of areas requiring soil removal and recompaction.
- Recommendations for seismic design parameters, including setbacks from known fault traces if necessary.

The design and construction of buildings in conformance with the State 1976 Uniform Building Code would effectively minimize the hazards on ground shaking on the site. The potential for liquefaction or differential compaction during seismic events which may be found in some of the valley areas of the site can be mitigated or eliminated by following recommendations provided by the recommended geotechnical investigation.

3.7.4 Analysis of Significance

Available geological data indicates that there are no major geologic constraints on the project site that would preclude development and no significant impacts are anticipated. However, geologic constraints often cannot be disclosed by a surface reconnaissance. A detailed subsurface investigation is necessary to determine definitively whether constraints are present. Following the recommendations of the investigation report would avoid significant impacts.

3.8 HYDROLOGY/WATER QUALITY

3.8.1 Existing Conditions

3.8.1.1 Drainage Basins

The subject property is located within portions of four major drainage basins as defined in the Special Study of Storm Drainage Facilities (The Fogg Report; 1964). The northerly portion of the site is drained by streams of the Bonita Basin and the Otay Lakes Road Basin. Both of these basins drain to the Sweetwater River. The central portion of the site, and also the majority, is within the Rice Canyon Basin. The

southernmost portion of the property is located in the Telegraph Canyon Basin. These latter two basins drain to the San Diego Bay although they are within the Sweetwater River hydrographic unit as defined by the Regional Water Quality Control Board (RWQCB, 1978). The location of these basins in relation to the site is shown in Figure 3-7, along with the estimated natural runoff volumes calculated by Fogg. It should be noted that the runoff was calculated in 1964 for existing and ultimate conditions, with ultimate runoff, "based on land uses presented in the General Plan Studies" (Fogg, 1964). The runoff coefficients are based on a 50-year flood and include consideration of such factors as relief, soil classification, vegetal cover, and surface storage. The City of Chula Vista uses the Fogg Report to size its major flood control improvements.

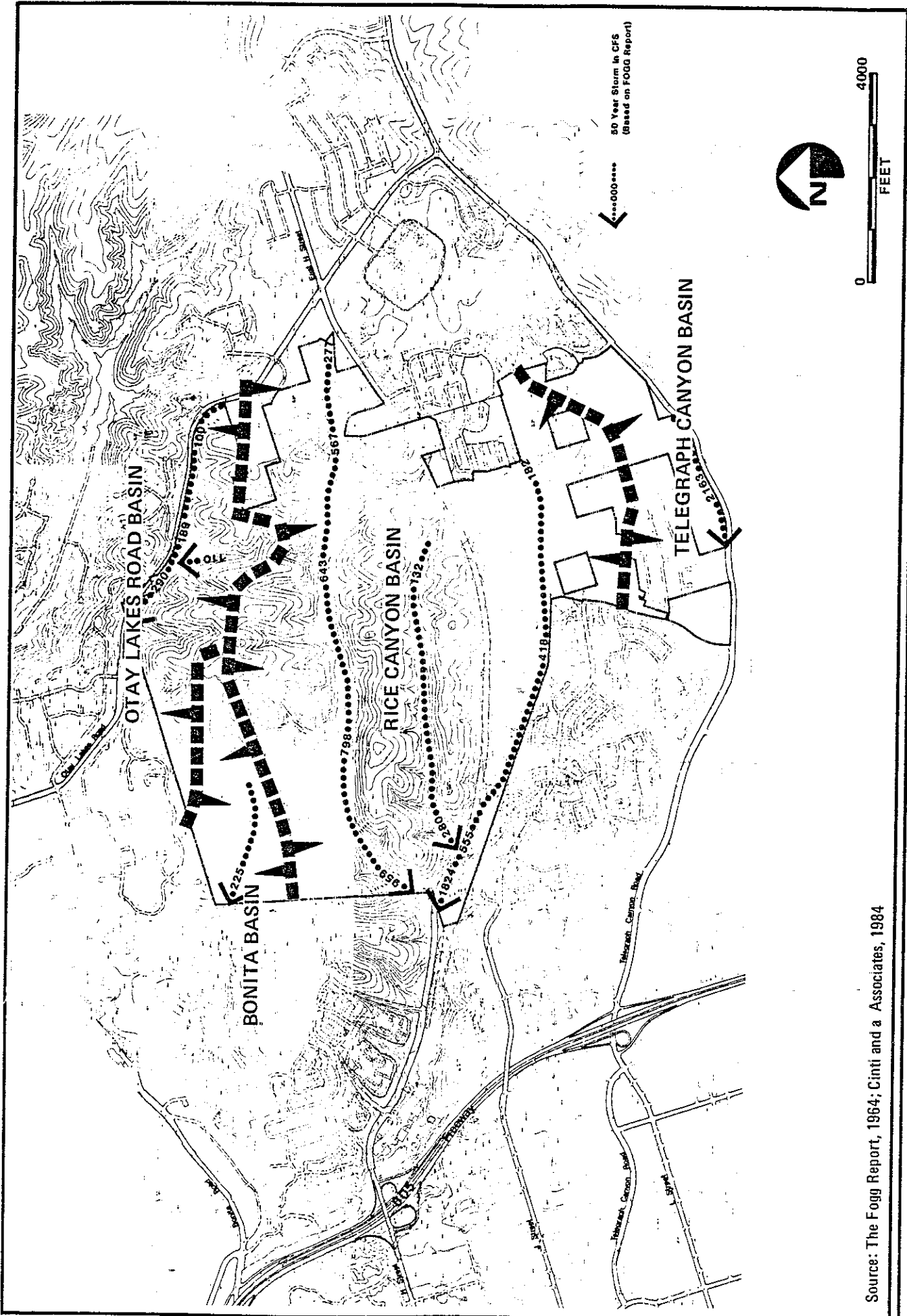
As shown on Figure 3-7, the three major east-west trending streams in Rice Canyon will ultimately contribute 1824 cubic feet per second (cfs) of storm flow at a point near H Street based on a 50-year frequency event, according to Fogg. A siltation basin has been constructed at that point and a double 96-inch storm drain has been constructed westerly to an open channel outlet adjacent to I-805 freeway to handle this ultimate 50-year flow. The various legs of Rice Canyon will contribute flows as follows:

- The north leg of Rice Canyon is calculated to ultimately contribute 959 cfs (vs 806 cfs natural).
- The center leg of Rice Canyon, just north of the employment park, is calculated to contribute 280 cfs (ultimate and natural).
- The south leg of Rice Canyon, along the western portion of the south boundary is calculated to contribute 555 cfs (ultimate and natural). A portion of a 66-inch pipe carrying this flow has been constructed in H Street from Paseo del Rey westerly to near the western boundary.

In Telegraph Canyon, 50-year storm flows are calculated at 2163 cfs (vs 1268 cfs natural) near Paseo Ranchero where the creek crosses from the south side of Telegraph Canyon Road to the north side as it flows westerly to the San Diego Bay. The flow increases to 2446 cfs (vs 1354 cfs natural) at the western jog in the boundary at Paseo Ladera.

Flows from the Bonita Basin are calculated at 225 cfs (ultimate and natural) where they exist near the northwest corner of the plan area.

A small canyon west of Otay Lakes Road at the north boundary contributes 290 cfs (vs 274 cfs natural) at that point.



Source: The Fogg Report, 1964; Cinti and a Associates, 1984

FIGURE 3-7

Drainage Basins and Runoff Volumes on the Project Site

Extensive drainage improvements have been made or are being made at locations surrounding the specific plan area. All of the aforementioned drainages flow into channels sized to carry ultimate projected flows according to Fogg. The exception is the Bonita basin drainage which flows into an existing natural canyon channel. The area downstream of the project area in Bonita Basin has been developed thus there is some concern for downstream effects in this channel.

A minor flooding problem occurs in Telegraph Canyon in numerous locations between the eastern Chula Vista city limits and the San Diego Bay. The flooding problems are due primarily to reduced capacity of culverts at street crossings. The City of Chula Vista has undertaken a public works project to increase the capacity of Telegraph Canyon Channel between 4th Avenue and I-5 to a capacity equal to the 100-year flood under ultimate conditions. Additional improvements in the form of retention basins or other channel modifications are likely to be made as development in the tributary area continues. Such measures should alleviate the flooding problems in Telegraph Canyon.

3.8.1.2 Water Quality

Qualitative information on the water quality characteristics of surface runoff or groundwater at the project site has not been gathered. However, the quality of surface water is expected to be typical of runoff occurring within an ephemeral system draining agrarian and natural grassland/sage scrub landscape. Further, the basin plan (RWQCB, 1978) gives water quality data for the hydrographic unit indicating that runoff is probably high in suspended and dissolved solids load, in part due to runoff over agricultural areas. Groundwater in marine sedimentary rocks in the San Diego region is typically saline in character (California Department of Water Resources, 1967).

The San Diego Regional Water Quality Control Board (RWQCB), in its "Comprehensive Water Quality Control Plan Report, 1978 Amendments, San Diego Basin (9)," identifies existing beneficial uses for inland surface waters within the entire Lower Sweetwater hydrographic subunit as industrial service supply, non-contact water recreation, warm freshwater habitat, wildlife habitat, and preservation of rare and endangered species. No future potential beneficial uses of surface water for the Lower Sweetwater subunit tributary to the project site are given by RWQCB.

The RWQCB does identify existing beneficial uses for groundwater within the Lower Sweetwater subunit as municipal and domestic supply, agricultural supply, and industrial service supply. The subunit has a future potential beneficial use for groundwater recharge.

3.8.2 Impacts

3.8.2.1 Drainage Basins

Development of the project site for urban use will create large areas of impervious ground with the overall effect of facilitating water runoff during rainy periods. The key consideration with respect to this impact analysis is whether the existing downstream or offsite facilities can accommodate this runoff since it is assumed that the onsite drainage system will be properly designed to handle such flows within the confines of the site. Since offsite improvements have been designed according to Fogg's original calculations, runoff volumes consistent with Fogg should not result in significant adverse impacts if the downstream improvements are in-place.

Given that the onsite street and drainage system has not yet been designed, it is impossible at this point in project development to determine emphatically that the Fogg ultimate flows will not be exceeded. However, two factors lead to a preliminary conclusion that the Fogg flows will not be exceeded. One of these factors has to do with site soils. Existing soils are clays with low permeability and high runoff coefficients. Coupled with site topography, which is characterized by relatively steep sloped canyons, the natural runoff volumes for the site are high in relation to "normal" undeveloped areas. Secondly, the ultimate development of the site envisioned by Fogg was a standard development pattern of the time which would not include consideration of open space requirements or planned development techniques. Because of these factors it appears that only minor differences in expected storm flows would occur between Fogg's assumptions and the proposed Specific Plan. These minor differences are expected to be less than 5 percent plus or minus at the boundaries and can be influenced by street layout and section design (The Planning Group, 1983). Thus the Fogg runoff values appear to be achievable as a function of subsequent project design (Hutchison, 1984). Development according to the proposed amendment is not anticipated to be significantly different than development as currently designated by the existing Specific Plan.

Of the drainages to receive flows from the Specific Plan area, only the Bonita basin drainage is unimproved to the extent that drainage flows could create erosion and sedimentation impacts downstream, potentially impacting recently developed areas. Further, modifications and maintenance of existing facilities where site facilities connect offsite will be required to ensure facilities remain operable and no adverse effects occur. Discussion of facilities and maintenance measures to mitigate such impacts is contained in the next section.

The proposed project would not exacerbate any of the existing minor flooding problems in offsite areas of Telegraph Canyon, and would not create any new impacts. Currently planned improvements within the Telegraph Canyon tributary area would alleviate existing problems, thus no additional mitigation would be required in conjunction with development of El Rancho del Rey.

3.8.2.2 Water Quality Impacts

Development of the site for urban uses under the adopted or proposed amended Specific Plan would result in a change in the type of contaminants contained in surface runoff eventually flowing through the flood control system. Concentrations of dissolved solids such as nutrients and bacteria levels associated with agricultural use would be expected to be decreased while contaminants such as oil, grease, and heavy metals from automotive sources would be greatly increased. The impervious surfaces, storm drains and planted lawns associated with urban land use would afford greater soil erosion protection than the bare or partially vegetated ground associated with the existing land use. Though the water quality impact is not significant by itself, it must be viewed in relation to its cumulative effect. The contaminants derived from the project site would represent a very small incremental contribution to the total contaminant load carried into San Diego Bay from the South San Diego County area. Nonetheless, continued urban expansion including buildout of the proposed project and development of adjacent areas will generate larger and larger quantities of these wastes, the net result of which will be to slowly change the character of receiving waters. In this particular instance, receiving waters are not used for domestic purposes and thus there are no pertinent regulations or requirements for the control of the non-point source surface runoff discharges occurring at the site.

3.8.3 Mitigation Measures

Numerous flood and runoff conveyance facilities will need to be constructed within the Specific Plan area, as site development proceeds. As part of the current planning for the site, design concepts for onsite drainage facilities have been developed. Rather than provide specific sizings and locations for facilities, they provide some overall goals to govern the future design integrating both function and amenity.

Drainage concepts that should be implemented include the following:

- At the western end of Rice Canyon, maintain the existing desilting basin.

- Implement open channel concept on northern property boundary for flows in Otay Lakes Road basin. This channel may need to be lined due to the steepness of the road grade in this area.
- Support concept plan for widening of Telegraph Canyon Road and drainage channel to include open facility.
- Consider construction of retention/siltation basin onsite above the Bonita Basin drainage to reduce potential for downstream impact. Location of a retention/siltation basin at this location should be subject to biological resource review and land use feasibility review.
- Consider open channel drainage concepts for major interior flood control and drainage facilities. The feasibility of such concepts is influenced by channel slope (about 2 degrees is optimal) and the ability to control channel flow, by either structural means such as drop structures, turn-outs, basins, etc.; or by diverting a portion of the flow to a bypass structure (normally an underground culvert). The benefit of implementing such concepts is that some wildlife habitat can be maintained and the visual amenity of the development can be enhanced.

With regard to water quality, no mitigation measures are proposed since there are no sensitive downstream receivers of surface water flows.

3.8.4 Analysis of Significance

Impacts due to site runoff are not significant from the standpoint of quantity of flows affecting capacity of existing offsite facilities. To make the drainage system for the Specific Plan area work, numerous onsite flood and runoff conveyance facilities will need to be constructed. The extent of these facilities is indeterminate at this stage of plan definition, however, concepts to be considered at the time of actual project design have been given in the mitigation section. Problems could occur at Bonita Basin since the offsite drainage is unimproved downstream. Mitigation of this impact is possible through provision of a retention basin to control runoff volumes in the natural drainage.

Urbanization as proposed would not have a significant adverse impact on water quality through incremental increases in urban pollutants leads to long-term degradation of receiving waters.

3.9 LANDFORM/AESTHETICS

3.9.1 Existing Conditions

3.9.1.1 Site Description

The most prominent feature of visual interest on the project site is the highly-diverse topography, which is described in Section 3.7.1.1. The property is comprised of a series of east-west trending ridges and intervening drainages, the largest of which is the north leg of Rice Canyon (see Figure 2-3). Elevations on the ridge tops located immediately north and south of the canyon range from 400 feet above MSL in the west end to 480 feet above MSL in the east. Elevations at the bottom of the north leg of Rice Canyon range from 200 to 360 feet above MSL. Two other major east-west trending canyon systems, the center and south legs of Rice Canyon, traverse the entire site and are smaller than the north leg. East H Street has been constructed in the southernmost canyons (south leg of Rice Canyon).

The mesa tops form an irregularly shaped surface which generally runs in an east-west direction. The ridge crests offer clear, unobstructed views of the canyon walls and valleys. Higher elevations along the ridges offer sweeping views of the ocean, Point Loma, downtown San Diego, mountain ranges to the east and Mexico to the south. The major undeveloped, cultivated hillsides of the Otay Ranch are visible to the south of Telegraph Canyon Road from the southerly sector of the property. The Chula Vista Community Hospital is visible along the skyline of the Otay Ranch ridgetop.

Due to the highly irregular topography, views from almost all areas of the project site except ridgetops and outside slopes, are confined within the project area. Likewise, views from outside the project are confined to outside slopes and certain ridgetops. Views of the property from the major roadways Telegraph Canyon Road and Otay Lakes Road are limited due to the location of these roadways in valley bottoms. Surrounding residential areas are visible in nearly all directions but the south from onsite ridgetops.

Visible structures on the subject property include a water tank located just south of the East H Street alignment, a 138 kV SDG&E transmission line which traverses the site in a northeast/southwest alignment, a 69 kV transmission line in the northwestern aspect of the site, and another 69 kV line along the northern border. Dirt roads traverse many of the ridgetops and valley bottoms onsite.

Vegetation on the site consists of low scrub on most slopes, larger shrubs and small trees in canyon bottoms, and sparser scrub or grassland on ridgetops.

3.9.1.2 Existing El Rancho del Rey Specific Plan

The existing Specific Plan contains policies which relate to aesthetics and landform. The plan recognizes that substantial grading will be necessary due to the site topography, but encourages that such grading remain sensitive to the natural environment, minimizing the exposure of manufactured slopes. The plan considers the north leg of Rice Canyon as public open space to be preserved almost in its entirety. The center and south legs of Rice Canyon are intended to have the canyon floor preserved, with common open space areas adjacent to them. Grading estimates prepared for the amendment area of the adopted Specific Plan indicate that approximately 3 million cubic yards of material would need to be exported from the property in order to preserve the canyon areas and develop the site in conformance with the plan designations.

3.9.1.3 Designated Scenic Resources

The City of Chula Vista (1974) Scenic Highways Element lists three streets within the project area as Potential Unofficial Scenic Highways and describes them as follows:

Telegraph Canyon Road: Perhaps the most scenic route within Chula Vista. Telegraph Canyon Road passes through sparsely settled areas offering clear views of distant hills and nearby agricultural acres.

Otay Lakes Road: Extending northerly from its intersection with Telegraph Canyon Road, Otay Lakes Road passes by Southwestern College and new residential developments along nearby ridgelines, and descends through sparsely developed areas to the Sweetwater Valley, offering at various points panoramic views of the hills to the east, the valley to the north and downtown San Diego to the northwest.

H Street: H Street east of Hilltop Drive, when connected to the existing section of East H Street at Otay Lakes Road, travels through undeveloped property that offers potential for scenic highway development.

The Scenic Highways Element includes policies with regard to development near scenic routes that address design review, beautification of scenic routes, landscaping and maintenance requirements adjacent to scenic routes.

The Scenic Highway Element of the County of San Diego General Plan (County of San Diego, 1975) lists only two official scenic highways in the County. However, an extensive priority listing of roadways for consideration and future study as possible scenic highways shows "Telegraph Canyon/Otay Lakes Road from Chula Vista City limits east to Proctor Valley Road" as a Second Priority Scenic Route.

3.9.2 Impacts

Development of the project site under either the adopted Specific Plan or the proposed amendment would require substantial landform alteration. This would involve cutting of the ridge areas onsite, and filling of the lower elevations, including tributary canyons. The major difference between the two plans in terms of grading, involves the north leg of Rice Canyon. Under the adopted plan, this canyon would be largely retained as natural open space, with development occurring on the ridges to the north and south. The proposed amendment would utilize this canyon for more active recreational uses, requiring that the canyon bottom be filled. Under the proposal, the steep upper slopes would still be largely retained as natural open space.

While development within the canyon bottom would require a substantial quantity of fill, it would also permit the grading to balance onsite, within the amendment area. Conceptual grading studies conducted for each of the plans indicated that the adopted plan would require approximately 3 million cubic yards of export. For the proposed project, the total amount of grading is expected to increase slightly, but would be balanced onsite. This change to a balanced grading operation is considered a beneficial effect of the project, and the increase in total grading is considered insignificant. However, the substantial topography change in the north leg of Rice Canyon conflicts with the intent of the adopted plan to retain this canyon as natural open space, and is therefore considered a significant impact of the proposed amendment. It should be recognized that these grading estimates are based on only one concept from a large range of options for site development under each plan. At the time specific maps and site plans are prepared, detailed grading studies will be conducted which could vary from these projections. Actual grading proposals will be evaluated as part of subsequent review of development plans.

The proposed plan will retain natural open space in the center and south legs of Rice Canyon, to a greater extent than the adopted plan. The center leg of Rice Canyon would serve as the primary natural open space area within the proposed amendment, rather than the north leg, and includes more acreage than indicated for this area by the adopted plan. There is also an increase in natural slope areas retained along the south leg of Rice Canyon, south of East H Street and the employment park area. The inclusion of these areas helps to maintain the character of the canyon/ridge topography of the site.

Development and associated grading adjacent to the open space areas can create manufactured slopes which do not blend visually with the adjacent open space.

The proposed Specific Plan includes standards and policies for design and landscaping which will minimize the potential for adverse impacts. Review of the project design, including grading, landscaping and placement of structures will be conducted at the time SPA plans are prepared. Some of the measures incorporated into the Specific Plan are as follows:

Grading Standards: Grading within this Specific Plan shall be subject to Chapter 15.04 -- Excavation, Grading and Fills -- of the Municipal Code.

Grading Design: It is the intent of this Specific Plan that graded areas will be contoured to blend with natural landform characteristics. Rounding both vertical and horizontal intersections of graded planes, obscuring slope drainage structures with a variety of plant material massing, incorporating the use of variable slope ratios for larger slope banks, use of landscape planting for erosion control and to obscure man-made banks, architectural solutions to topographic changes, and other similar techniques should be used. Artificially appearing slope banks with rigid angular characteristics shall not be permitted.

Grading Policies: General policies with regard to development within this Specific Plan are as follows:

- a. Visually significant slope banks should be preserved in their natural state by clustering development.
- b. The natural character of the hillsides should be retained where practical.
- c. A variety of housing types, padding techniques, grading techniques, lot sizes, site design, density, arrangement, and spacing of homes and developments should be encouraged.
- d. Innovative architectural, landscaping, circulation and site design should be encouraged.
- e. Safety against unstable slopes or slopes subject to erosion and deterioration should be provided.
- f. Grading may be accomplished beyond the boundaries of an approved SPA plan where necessary to implement the SPA plan uses or infrastructure facilities.

East H Street, a designated scenic route, will be a major travel corridor through the project site. Development areas adjacent to this road under the proposed

amendment are similar to those of the adopted plan, although the land use intensities would be increased. The employment park and high density residential development would occur in this corridor, and the proposed amendment includes some additional open space adjacent to the westernmost portion of East H Street within the project boundaries. The development proposed by the amendment would be subject to the Scenic Highway standards discussed below, which would minimize the potential for adverse visual effects.

The northeastern portion of the project fronts Otay Lakes Road, which is considered to be a scenic roadway in the Chula Vista Scenic Highway Element. The existing Specific Plan includes an open space belt of approximately 200 feet in width at its narrowest point along Otay Lakes Road (Figure 2-4A). The proposed amendment includes an open space buffer of approximately the same minimum width preserving the slope areas adjacent to this street. The primary panoramic views from Otay Lakes Road are not in the direction of the project site, as noted in the Scenic Highways Element, but the retention of open space slopes will add to the scenic amenities along this road.

The other road from which views are a concern is Telegraph Canyon Road, which is listed as a potential scenic highway by both the City of Chula Vista and the County. The existing Specific Plan provides an open space belt along Telegraph Canyon Road of about 400 feet in width. Under the proposed amendment, this open space designation would be expanded to approximately 600 feet in width along the westernmost segment of the property frontage on Telegraph Canyon Road. The open space adjacent to Telegraph Canyon Road for the frontage east of the intersection of Paseo Ranchero would be slightly wider than the existing plan. Immediately west of Paseo Ranchero, the proposed amendment designates a high density (20 du/ac) residential area which includes a setback from Telegraph Canyon Road of approximately 50 feet. The open space designation of the existing plan is retained to the west of this area. Existing bands of residential development along the north side of Telegraph Canyon Road to the east and west of the project is comprised of residential development situated in close proximity to the roadway.

The Specific Plan includes Scenic Highway standards to insure review of specific development proposals at later stages of project approval.

Highways shall be reviewed for conformance to the Scenic Highways Element of the General Plan during the plan review process for the applicable Section Development Plans. This review should include: architectural design of structures; siting of structures; height of structures; landscaping; signs; and utilities.

In connection with any tentative map submitted on properties abutting a scenic route, the applicant shall be required to submit a proposal for beautification of the portion of the scenic route adjacent to his development. Each proposal shall consider such factors as: the treatment given to the scenic route outside the boundaries of the particular tentative map area; creation of a pleasing streetscape through special landscaping techniques and varied building setbacks; and creation of open areas adjacent to scenic routes through the use of clustering and innovative concepts.

3.9.3 Mitigation

The proposed landform alteration includes major grading of ridgetops which is similar to grading required for development under the existing Specific Plan. However, the proposed plan would result in the filling of Rice Canyon whereas the current plan would require export of cut material from the property. The filling of Rice Canyon is a significant impact of the proposed amendment that is mitigable only through an alternative project design. The impact of filling Rice Canyon as it relates to biology and open space issues is discussed in Sections 3.4 and 3.13, respectively.

The Specific Plan incorporates requirements for grading and design review as part of subsequent project actions, such as Sectional Planning Area plans, tentative maps, etc. which will permit appropriate mitigation measures to be incorporated should adverse impacts be identified.

3.9.4 Analysis of Significance

The proposed Specific Plan amendment would require grading and landform modification similar to that required under the adopted Specific Plan. However, the proposed amendment would involve filling of the north leg of Rice Canyon, which is considered a significant impact that is mitigable only through a project redesign (see Alternatives, Section 4). Other potential site-specific impacts associated with grading and development should be addressed as part of subsequent project review, and mitigation measures adopted as necessary.

3.10 AIR QUALITY

3.10.1 Existing Conditions

Climate

The climate in the vicinity of El Rancho del Rey and all of San Diego County is dominated by a semi-permanent high pressure cell located over the Pacific Ocean. This high pressure cell maintains clear skies for much of the year, drives the dominant onshore circulation and creates two types of temperature inversions that act to degrade local air quality.

The closest and most representative weather monitoring station to the project site is the Chula Vista station located approximately 3.5 miles west of the site. The mean temperature in Chula Vista is 59.9°F; the mean maximum and mean minimum temperatures are 67.3°F and 52.5°F, respectively. Precipitation in the vicinity of the study area averages 10 inches annually, 90 percent of which falls between November and April (University of California, 1970).

Subsidence and radiation inversions act to degrade air quality in the vicinity of El Rancho del Rey. Subsidence inversions occur during the warmer months as descending air associated with the Pacific high pressure cell comes into contact with cool marine air. The boundary between the two layers of air represents a temperature inversion which traps pollutants. The radiation inversion develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. A shallow inversion layer is formed between the two air masses which can trap vehicular pollutants such as carbon monoxide and oxides of nitrogen.

Regulatory Framework

Ambient Air Quality Standards (AAQS) represent the maximum level of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. The five primary pollutants of concern for which standards have been established are sulfur dioxide, carbon monoxide, nitrogen oxides, ozone and suspended particulate matter. National Ambient Air Quality Standards (NAAQS) were promulgated by the Environmental Protection Agency (EPA) in 1971 with states retaining the option to develop different (more strict) standards. Due to unique air quality problems in California, the California Air Resources Board (ARB) has developed additional AAQS. Table 3-8 lists the currently applicable state and federal standards.

In San Diego County, it is the responsibility of the Air Pollution Control District (APCD) to ensure that state and national air quality standards are achieved. APCD's current air quality plan, the 1982 SIP Revisions, documents the necessary overall strategy and individual tactics by which the San Diego air basin can meet its attainment goal. The SIP Revisions state that if necessary emission reductions are enacted and if regional growth does not exceed anticipated levels, then the basin will no longer experience unhealthy air quality due to emissions generated in the basin. The 1982 SIP Revisions employed the San Diego Association of Governments (SANDAG) Series 5 growth forecasts which are based on Community and General Plan land use designations to project regional growth. The more recent Series 6 growth projections are being used to update the SIP Revisions. Development that seriously departs from these forecasts

TABLE 3-8
Current State and Federal Air Quality Standards

POLLUTANT	AVERAGING TIME	CALIFORNIA STANDARDS		NATIONAL STANDARDS		
		CONCENTRATION	METHOD	PRIMARY	SECONDARY	METHOD
OXIDANT	1 HOUR	0.10 ppm (200 ug/m ³)	ULTRAVIOLET PHOTOMETRY	-	-	-
OZONE	1 HOUR	-	-	240 ug/m ³ (0.12 ppm)	SAME AS PRIMARY STANDARDS	CHEMILUMINESCENT METHOD
CARBON MONOXIDE	12 HOUR	10 ppm (11 mg/m ³)	NON-DISPERSIVE INFRARED SPECTROSCOPY	-	SAME AS PRIMARY STANDARDS	NON-DISPERSIVE INFRARED SPECTROSCOPY
	8 HOUR	-		10 mg/m ³ (9 ppm)		
	1 HOUR	40 ppm (46 mg/m ³)		40 mg/m ³ (35 ppm)		
NITROGEN DIOXIDE	ANNUAL AVERAGE	-	SALTZMAN METHOD	100 ug/m ³ (0.05 ppm)	SAME AS PRIMARY STANDARDS	GAS PHASE CHEMILUMINESCENCE
	1 HOUR	0.25 ppm (470 ug/m ³)		-		
SULFUR DIOXIDE	ANNUAL AVERAGE	-	CONDUCTIMETRIC METHOD	80 ug/m ³ (0.03 ppm)	-	PARAOSANILINE METHOD
	24 HOUR	0.05 ppm (131 ug/m ³)		365 ug/m ³ (0.14 ppm)	-	
	3 HOUR	-		-	1300 ug/m ³ (0.5 ppm)	
	1 HOUR	0.5 ppm (1310 ug/m ³)		-	-	
SUSPENDED PARTICULATE MATTER	ANNUAL GEOMETRIC MEAN	60 ug/m ³	HIGH VOLUME SAMPLING	75 ug/m ³	60 ug/m ³	HIGH VOLUME SAMPLING
	24 HOUR	100 ug/m ³		260 ug/m ³	150 ug/m ³	
SULFATES	24 HOUR	25 ug/m ³	AIHL METHOD NO. 61	-	-	-
LEAD	30 DAY AVERAGE	1.5 ug/m ³	AIHL METHOD NO. 54	-	-	-
	CALENDAR QUARTER	-	-	1.5 ug/m ³	1.5 ug/m ³	ATOMIC ABSORPTION
HYDROGEN SULFIDE	1 HOUR	0.03 ppm (42 ug/m ³)	CADMIUM HYDROXIDE STRACTAN METHOD	-	-	-
VINYL CHLORIDE (CHLOROETHENE)	24 HOUR	0.010 ppm (26 ug/m ³)	GAS CHROMATOGRAPHY	-	-	-
ETHYLENE	8 HOUR	0.1 ppm	-	-	-	-
	1 HOUR	0.5 ppm				
VISIBILITY REDUCING PARTICLES	ONE OBSERVATION	IN SUFFICIENT AMOUNT TO REDUCE THE PREVAILING VISIBILITY TO LESS THAN 10 MILES WHEN THE RELATIVE HUMIDITY IS LESS THAN 70%		-	-	-

ppm - PARTS PER MILLION ug/m³ - MICROGRAMS PER CUBIC METER mg/m³ - MILLIGRAMS PER CUBIC METER

could generate emissions in excess of what is necessary to attain state and federal standards.

In order for a development such as El Rancho del Rey to not interfere with the attainment schedule, any increase in air pollutant emissions attributable to the project must be correctly anticipated by the Series 6 growth projections. These growth projections assumed that development within El Rancho del Rey would occur according to the Chula Vista General Plan designations (the adopted Specific Plan).

Ambient Air Quality

Ambient air quality is monitored by the San Diego APCD at the Chula Vista monitoring station. In the absence of site specific air quality data, data from the Chula Vista station is assumed to be representative of the site. Table 3-9 summarizes air quality data at the Chula Vista station from 1979 through 1982. More recent data is not yet available from APCD. Table 3-9 indicates that standards for ozone and particulate matter are occasionally exceeded near El Rancho del Rey.

3.10.2 Impacts

On a regional scale, El Rancho del Rey will generate an additional 29,800 daily vehicle trips with their associated air pollutant emissions. At an average trip length of 5.8 miles for combined purpose trips (SANDAG, Series 6), the project will add another 172,840 vehicle-miles-traveled (VMT) to the basinwide traffic burden. Compared to the approximately 40 million VMT driven each day in San Diego County, the project's regional mobile source impact is incrementally small. To the extent that the project accommodates the future demand for residential and employment development, these regional source emissions have already been included in the regional air quality planning process and they will not interfere with future clean air standard attainment. To the extent that any traffic causes "new" emissions, the project may have a significant impact on regional air quality even if that impact is very small.

The California ARB has recently developed a computer model to calculate the emission volumes associated with various urban land uses. This model, part of the ARB's AQAT (Air Quality Analysis Tools) series is called URBEMIS #1. The model uses emissions data from the EMFAC6C California vehicle emissions code and combines it with average trip length, hot and cold start and other San Diego specific trip characteristics. The annual emissions of carbon monoxide (CO), reactive hydrocarbons (RHC) and nitrogen oxides (NO_x) (the three principal automotive pollutants) from El Rancho del Rey traffic are shown in Table 3-10. Project-related traffic will generate about 773 tons per day of CO and around 170 tons per day of RHC and NO_x. Emission levels

Table 3-9

AMBIENT AIR QUALITY SUMMARY
CHULA VISTA MONITORING STATION

Pollutant	Air Quality Standard	Days Over Standard				Maximum Hourly Concentration			
		1982	1981	1980	1979	1982	1981	1980	1979
Carbon Monoxide	1 Hour > 35 ppm	0	0	0	0	9	8	8	11
Nitrogen Dioxide	1 Hour > 0.25 ppm	0	0	0	0	.18	.15	.17	.17
Ozone	1 Hour > 0.12 ppm	5	3	6	6	.20	.17	.16	.22
Sulfur Dioxide	1 Hour > 0.5 ppm	0	0	0	0	.13	.12	.13	.09
Total Suspended Particulates	24 Hours > 100 $\mu\text{g}/\text{m}^3$	5	3	12	2	112*	160*	194*	102*

* Maximum 24 hour concentration
ppm = parts per million
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

Source: San Diego APCD, 1982, 1981, 1980, 1979.

Table 3-10

REGIONAL ANNUAL AIR POLLUTANT EMISSIONS ATTRIBUTABLE
TO EL RANCHO DEL REY TRAFFIC

<u>Pollutant Species</u>	1995 Project Emissions (tons/year)		<u>Increase</u>
	<u>Adopted Specific Plan</u>	<u>Proposed Specific Plan</u>	
Carbon Monoxide (CO)	455	773	318
Reactive Hydrocarbons (RHC)	101	167	66
Oxides of Nitrogen (NO _x)	103	172	69

<u>Pollutant Species</u>	1995 Project Emissions (percent of basinwide levels)		<u>Change</u>
	<u>Adopted Specific Plan</u>	<u>Proposed Specific Plan</u>	
Carbon Monoxide (CO)	0.141	0.240	0.099
Reactive Hydrocarbons (RHC)	0.127	0.211	0.084
Oxides of Nitrogen (NO _x)	0.206	0.344	0.138

Source: ARB AQAT URBEMIS #1 Computer Model, 1983, and SDAPCD, 1982 SIP Revision, November 1982.

will drop below these quantities in the future as older, polluting cars continue to be retired. The comparison with average annual basinwide emissions demonstrates that, on a regional basis, the project contribution to basin CO, RHC and NO_x as forerunners to photochemical smog totals less than 0.35 percent of forecast Countywide levels. Assuming that downwind ambient air quality is proportional to upwind emission levels, the project-related regional impact is similarly in the range of a few hundredths of 1 percent of allowable standards. As previously noted, it is not the magnitude of that impact, but whether the impact has been correctly anticipated that determines its significance. Because the proposed El Rancho del Rey development is at least nominally inconsistent with the SIP Revisions based on the current land use designations for the project site, it places an added responsibility on project proponents to find effective mitigation measures to reduce the level of any unanticipated impacts.

3.10.3 Mitigation

The proposed El Rancho del Rey Specific Plan includes some general measures to reduce vehicle travel which will result in a corresponding decrease in air quality emissions. The proposed plan will add employment park uses, and additional parks and recreation acreage which will create a more balanced community than the adopted Specific Plan. Vehicle trips and trip lengths can be expected to be reduced by providing this mix of land uses in close proximity to each other.

Any negative air quality impact associated with the proposed increase in the density of site development can be at least partially offset by using transportation control measures (T-tactics) outlined in the SIP. The following measures would reduce the use of the private automobile, thereby reducing the consumption of fuel and the generation of air pollution. Future review of SPA plans and tentative maps should incorporate these features to the extent feasible.

(T-1) Ridesharing: Ridesharing techniques include carpool and vanpool programs, which would be particularly effective within the Employment Park area of the Specific Plan.

(T-2) Transit: Use of public transportation systems such as bus and light rail would reduce private automobile trips and associated emissions. The project site is situated in an area with good access and facilities to encourage transit ridership (such as convenient turnouts, shelters, etc.) should be encouraged at the SPA plan level.

(T-3) Bicycling: The use of bicycles by persons commuting to work would reduce the use of the private automobile and generation of air pollution. Bicycle routes and secured parking at destination areas (employment centers and recreational facilities) would encourage bicycle ridership in the project area.

(T-7) Walking: The specific project designs should include pedestrian-oriented facilities including sidewalks, paths through the recreation spine, and attractively landscaped areas to encourage walking.

3.10.4 Analysis of Significance

The proposed Specific Plan Amendment would incrementally increase pollutant emissions due to the increased density of land use, beyond the levels anticipated by regional forecasts. By itself, this increase is not considered significant, but on a cumulative basis it represents an unavoidable adverse impact. This can be partially mitigated through the incorporation of measures to reduce trip generation during subsequent site planning, although the cumulative impacts cannot be reduced to insignificance.

3.11 NOISE

3.11.1 Existing Conditions

The project site is presently undeveloped, and is not subject to substantial noise effects. The only important noise source is vehicular traffic on existing roads through and adjacent to the project site, including Telegraph Canyon Road, East H Street and Otay Lakes Road. The site is not within the flight path of any local airports, and there are no important stationary sources of noise in close proximity to the site.

The City of Chula Vista requires that the CNEL of exterior living areas (yards and patios) for residential land uses does not exceed 65 dB(A). In addition, for multi-family residential projects, the California Noise Insulation Standard (California Administrative Code, Title 25, Chapter 1, Subchapter 1, Article 4) requires that interior noise levels in multi-family residential living spaces not exceed a CNEL of 45 dB. The City of Chula Vista also applies this interior noise standard to single-family residential homes. Since typical residential structures with windows open only yield 12 dB of exterior noise exclusion, any units in environments above 57 dB CNEL would require noise control design. With windows closed, typical residential units can be expected to yield up to 22 dB of exterior noise exclusion. Therefore, residential development in areas above 65 dB CNEL could be inappropriate. Exterior noise levels generally considered acceptable for non-residential land uses are as follows: outdoor recreation (parks), 65 dB CNEL; offices, 70 dB CNEL; industrial and commercial, 75 dB CNEL.

3.11.2 Impacts

To assess the potential for noise impacts on the designated land uses as shown in the proposed El Rancho del Rey Specific Plan, future (1995) noise levels were calculated and compared with the land use compatibility criteria previously discussed.

Roadway Noise

The major source of noise affecting the project site will be from future years' traffic on the internal circulation roadways, and the existing and planned surrounding roadway network. In order to determine maximum onsite levels, the projections of 1995 traffic volumes for roadways affecting the site were used in the noise calculations. The calculations were performed using a proprietary computer program version of the Federal Highway Administration's FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108. Each roadway was separated into general links to more precisely analyze potential noise effects.

This model provides for ground absorption effects when the line-of-sight path between cars (source height 0 feet above pavement), medium trucks (source height 4.5 feet above pavement), and heavy trucks (source height 8 feet above pavement) and the receiver averages less than 10 feet above the ground. For line-of-sight noise propagation paths which average over 10 feet above the ground no ground absorption effects are present and the noise impacts can reach out further from the roadway. The results of the roadway noise impact calculation are shown in Table 3-11 which indicates the distance to the 57, 60, 65 and 70 dB CNEL contours for unshielded conditions without ground absorption effects. As indicated on this table, future roadway noise levels on the project site could result in noise levels which exceed the land use compatibility standards in some portions of the plan area. It should be noted that interposing topographic or structural shielding (i.e., walls, berms, buildings) will also screen noise from receptor locations as development occurs, thus the noise levels as calculated represent worst-case conditions.

As indicated by Table 3-11, there are a number of parcels within the El Rancho del Rey plan area that could be subject to incompatible noise levels for worst case unshielded conditions. Without mitigation, future residential development located within the areas of noise exposure indicated on Table 3-11 could be subject to significant noise impacts and will require additional site specific acoustical analysis prior to development. High noise levels for future traffic conditions will be of particular concern for residential areas immediately adjacent to East H Street and Telegraph Canyon Road, and to a more limited extent for those areas adjacent to other roadways through the project site.

The potentially impacted area would generally be only a small portion of the parcel immediately adjacent to the major roadways up to the distances indicated on Table 3-11. For parcels that are substantially lower than the roadway noise source, the

Table 3-11

CNEL NOISE CONTOUR DISTANCES FROM MAJOR ROADWAYS
FOR ULTIMATE TRAFFIC CONDITIONS
ON EL RANCHO DEL REY PROJECT
(unshielded conditions)

Roadway (Segment)	Ultimate ADT	Distance to CNEL Contour From Centerline Nearest Lane			
		70 dB(A)	65 dB(A)	60 dB(A)	57 dB(A)
TELEGRAPH CANYON ROAD					
I-805 to Paseo del Rey	50,500	199	619	1,955	3,900
Paseo del Rey to Paseo Ranchero	21,600	92	267	837	1,669
(Paseo Ranchero to Otay Lakes)	18,600	81	231	721	1,437
EAST H STREET					
I-805 to Ridgeback	47,800	189	586	1,851	3,692
Ridgeback to Road B	30,100	123	370	1,166	2,325
Road B to Paseo del Rey	20,600	88	255	798	1,591
Paseo del Rey to Paseo Ranchero	30,100	123	370	1,166	2,325
Paseo Ranchero to Otay Lakes	20,000	86	248	775	1,545
EAST J STREET					
I-805 to Paseo del Rey	2,500	7	11	28	56
Paseo del Rey to Paseo Ranchero	5,900	9	22	66	131
Paseo Ranchero to Buena Vista	5,000	8	19	56	111
PASEO DEL REY					
Telegraph Canyon to East H St.	20,100	48	142	447	891
PASEO RANCHERO					
Telegraph Canyon to East J St.	8,000	25	59	179	355
East J St. to East H St.	11,700	32	84	260	519
RIDGEBACK ROAD					
East H St. to North Loop Rd.	21,800	52	154	484	966
OTAY LAKES ROAD					
Bonita Road to Road A	24,000	57	173	544	1,086
Road A to East H St.	15,500	39	110	345	687
East H St. to Telegraph Canyon	10,300	29	75	229	457
NORTH LOOP ROAD					
	4,000	8	15	45	89
SOUTH LOOP ROAD					
	5,500	9	20	61	222
ROAD A					
	10,300	29	75	229	457
ROAD B					
	9,600	28	70	214	426
ROAD C					
	5,600	22	43	126	249

area of potential impact could be increased slightly. The appropriate use of setbacks, topographic or structural shielding would effectively reduce noise to acceptable levels on each parcel, and appears to be feasible throughout the entire plan area.

Industrial and commercial developments within El Rancho del Rey would be compatible with noise levels up to 75 dB CNEL and no significant noise impacts would be associated with development in the Employment Park areas of the site.

The proposed Specific Plan Amendment would result in increased traffic on area roadways, beyond that projected for the adopted plan. Generally, a doubling of traffic volume is required to increase noise levels adjacent to a road by 3 dB CNEL. Based on the 1995 cumulative traffic projections, the increase in total traffic attributable to the proposed amendment would not result in significant increases in noise levels.

Construction Noise

The proposed project site is located in a largely undeveloped area where initial construction (development) phases are expected to have minimal effects/impacts on the surrounding areas. The potential for construction noise impact would exist on a short-term basis when construction is proposed immediately adjacent to a developed parcel.

Despite the variety in type and size of construction equipment, similarities in the dominant noise sources and in patterns of operation allow the assignment of all equipment to a very limited number of categories. The most prevalent noise source in construction equipment is the prime mover, i.e., the internal combustion engine (usually of the diesel type) used to provide motive and/or operating power. Engine-powered equipment may be categorized according to its mobility and operating characteristics, as (1) earthmoving equipment (highly mobile), (2) handling equipment (partly mobile), and (3) stationary equipment.

Construction noise should be considered at the SPA plan level on the basis of the location of the receivers (i.e., residents) and the type and magnitude of the construction project to be accomplished.

3.11.3 Mitigation

There are two separate areas of noise impact of concern; indoor areas and outdoor areas. Both receive noise intrusion from the same sources, however, indoor areas have a greater capacity for noise mitigation since the exterior shell of most buildings provides the ability to form an airtight barrier between the source and receiver. In areas where the exterior noise exposure at the outside surface of a building is greater than would be attenuated by standard building materials, the windows, doors,

and finally the walls and ventilation systems may be improved to reduce exterior noise intrusion. This measure may require the use of a planned development to implement mitigation. In addition to building structure changes, both the outside and indoor noise environment may be improved by increasing the setback or spacing between noise sensitive uses and the noise source. Various methods are also available for shielding noise sensitive areas by blocking the direct line of sight (noise path) from the source to receiver by means of natural topography (i.e., taking advantage of existing landform) or through the use of man-made barriers such as masonry walls, earthen berms, and buildings (either individually, or in rows, or arrays).

To assure compliance with noise requirements, individual noise impact/mitigation studies will have to be performed to account for shielding, ground absorption effects and the orientation of buildings (indoor uses) and outdoor uses with respect to the roadway sources. Additionally, where necessary, acceptable indoor noise levels may be maintained by incorporation of designed exterior curtain (exterior building shell) walls. These building shell walls would be expected to have upgraded glazing materials, doors, and certain opaque wall components depending on the exact environmental noise exposure determined for each building facade. It is therefore expected that the proposed land uses are developable under the City of Chula Vista's noise criteria, however, acoustical engineering/design may be required prior to development within the portions of each parcel that would potentially be affected by noise levels above the City's compatibility standards.

3.11.4 Analysis of Significance

In either plan residential development will be subject to similar significant adverse noise levels from future traffic conditions unless mitigation is provided. Site-specific acoustical analysis will be necessary at the time SPA plans and tentative maps are prepared, to define the need for and type of mitigation required for each parcel to achieve acceptable interior and exterior noise levels.

3.12 SCHOOLS

3.12.1 Existing Conditions

The planning area is located under the jurisdiction of two school districts. The Chula Vista Elementary School District serves grades kindergarten through six and the Sweetwater Union High School District provides education to middle school and high school students. Schools in the project vicinity presently operate at or slightly below capacity. The Chula Vista Elementary School District owns two school sites in the project area which are currently undeveloped.

3.12.2 Impacts

The project applicant is currently discussing the need for school facilities with the school districts and other local developers. The precise number of students to be generated by project development has not been determined, however, the additional 1708 dwelling units would generate more students than would result under existing land use designations.

Due to the magnitude of the proposed development, it is estimated that school facilities would be required onsite. Thus, four school sites have been identified within the Specific Plan area. Two sites, one on an out parcel, are located in the southeastern portion of the Plan area. An additional site is located in the east central portion of Corcoran Ranch while a "potential school" site has been designated in the east central plan area.

Negotiations between the developer and the school district will determine which of the sites will be dedicated for school use and how funding will be accomplished. The developer is committed to providing adequate school facilities concurrent with need in accordance with applicable City policies.

3.12.3 Mitigation

Prior to the acceptance of a SPA application as complete, the developer will be required to have a signed agreement with the school districts. Adequate school facilities are expected to be provided in conjunction with the proposed development. Details regarding school facilities phasing, construction and capacity should be resolved at the time SPA plans and tentative maps are filed. No additional mitigation is required.

3.12.4 Analysis of Significance

The provision of adequate school facilities, to be determined in association with the school districts, will ensure that no adverse effects occur in regard to existing school facilities.

3.13 PARKS, RECREATION AND OPEN SPACE

3.13.1 Existing Conditions

The subject property is currently undeveloped and consists of rugged, east-west trending ridges and valleys covered with low scrub vegetation. Existing vegetation, topography, and land uses are discussed in their appropriate sections elsewhere in this document.

3.13.1.1 Parks and Recreation Element

Portions of the site are within neighborhood park districts established under the Chula Vista General Plan Parks and Recreation Element (1979). The policies established in the General Plan call for a system of parks designed to serve as many diverse areas and needs in the community as possible. Parks are to be located adjacent to elementary school playgrounds when possible to promote multiple use of facilities, and within close proximity to those they are designed to serve. Since regional park needs are met outside the City, Chula Vista is mainly concerned with developing community and neighborhood parks. The site is within two community park districts. The standards established in the Parks and Recreation Element for community and neighborhood parks are as follows:

Community Parks:

Area: 2 acres for every 1000 persons served

Minimum Desirable Size: 15 acres

Population Served: 7500 persons or more, depending on the acreage of the park

Service Radius: 1.5 miles

Purpose: To provide recreation facilities which require more space than neighborhood park sites can accommodate, such as tennis courts, swimming pools, multi-purpose courts, community centers or recreation centers.

Neighborhood Parks:

Area: 2 acres for every 1000 persons served

Minimum Desirable Size: 5 acres when adjacent to an elementary school, 10 acres when not adjacent to an elementary school

Population Served: 2500-5000 persons

Service Radius: Maximum 1/2-mile

Purpose: To provide near at-hand recreation facilities and to serve as a neighborhood focal point.

The Parks and Recreation Element also states that "wherever possible, parks should be linked together by a system of trails and/or open space. In addition, it

shall be the objective of the City to achieve a trail system which would connect the central core area of the community with the Southwestern College area to the east..." The subject property is located between Southwestern College and the urban center of Chula Vista.

3.13.1.2 Existing El Rancho del Rey Specific Plan

The existing Specific Plan includes a total of approximately 40 acres of land reserved for community and neighborhood parks. The parks include three neighborhood parks adjacent to elementary schools, and one community park. With regard to trails and open space, the Specific Plan includes the following policies:

- East-west equestrian and hiking trails within the three legs of Rice Canyon already exist and some should be preserved as development of adjacent lands occurs. It is the policy of the City to also make provision for at least one north-south trail which should utilize such existing rights-of-way as the San Diego Otay Water Line and the SDG&E easement. Additional north-south routes or variations and adaptations of the basic north-south route may become apparent at such time as development proposals are made and grading plans are developed.
- Greenbelts should be established and maintained along Telegraph Canyon and Otay Lakes Roads and the north leg of Rice Canyon, in accordance with the Open Space General Plan Element.
- The natural open space and landforms of El Rancho del Rey should determine the subject territory's structure and basic design. Although the north leg of Rice Canyon should be preserved almost in its entirety, the preservation of the middle and south leg could be confined to their natural floors. As the land is subdivided, however, the preserved floors of the middle and south legs of Rice Canyon should be complemented by adjacent common greens, promenades or landscaped pedestrian ways.
- The City of Chula Vista regards the north leg of Rice Canyon as vital public open space, and recognizes the need for public participation in the maintenance, development, and conservation of the subject territory. The City does not regard the maintenance, development, or conservation of other open space within El Rancho del Rey as being, at the present time, within the public charge. The

latter should take the form of private open space reserves, common greens, open space easements, or open space maintenance districts.

3.13.1.3 Open Space Element

The Chula Vista General Plan Open Space Element (1979) includes a map which designates as open space areas all of the major canyons onsite and frontage along Otay Lakes Road and Telegraph Canyon Road. Policies of the Open Space Element which are applicable to the proposed project include the following:

- As hill lands develop, canyons and steep slope areas shall be preserved as open space to the maximum extent feasible, thereby providing a natural buffer and definition to developed areas.
- The City will endeavor to develop a system of hiking, riding, and bicycling trails (in areas such as the SDG&E power line easements) to serve as links between major open spaces and recreational areas, to make them readily accessible from all parts of the community.

3.13.2 Impacts

3.13.2.1 Parks and Recreation

As shown on Figure 2-5, the proposed Specific Plan Amendment includes approximately 90.3 acres of land designated for Parks and Recreation. This represents an increase of 63.3 acres over the 27 acres of parks/recreation land within the project boundaries under the adopted plan. The proposed parks and recreation land is oriented as a "spine" which runs in an east-west direction over what is currently the north leg of Rice Canyon. The recreational spine is intended to include active public and private recreational uses, in addition to commercially oriented recreational facilities such as equestrian centers, health clubs, etc. The proposed amendment would permit up to 5928 dwelling units with a population of 15,295 assuming 2.58 persons per dwelling. Use of the City's General Plan standard of 5 acres of neighborhood and community parks per 1000 population with 1 acre provided on an adjacent school site would result in a requirement of 61.2 acres of neighborhood and community parks with 15.3 acres of adjacent school fields. The Specific Plan proposes 90.3 acres exclusive of school sites, thus exceeding the City's parkland standard.

The proposed project designates 656.9 acres for "open space/other" uses, of which approximately 67 acres would be used for roads. The remaining acreage would comprise natural open space, and landscaped open space, including manufactured slopes.

According to the Specific Plan text (Cinti & Associates, 1984), the areas indicated as open space are generally intended for more passive forms of open space uses. The vegetation plan (Figure 2-7) provides some definition of the restrictions on urban intrusion into open space areas. The final use, ownership, and maintenance responsibilities for open space area will occur during the SPA plan process. Open Space uses would include agriculture, active and passive open space, natural open space, bodies of water, public and private parks, community facilities, and other uses of a similar nature.

The adopted Specific Plan included open space which was primarily passive, natural areas, with some neighborhood park development within the project area. The major feature in the open space system was the north leg of Rice Canyon, which was to include a hiking trail that could be linked with a trail within the SDG&E easement. Public greenbelt areas were recommended adjacent to the natural bottom of the center leg of Rice Canyon. Slopes adjacent to Otay Lakes Road and Telegraph Canyon Road were to be retained in open space. The adopted Specific Plan parkland designations would not meet the City's standard for parks per population served. Additional park areas would be required as part of subsequent Sectional Planning Area plans and tentative maps during specific site development planning.

The proposed Specific Plan includes substantially more designated parks/recreation land, provided primarily in the "community spine" to be developed in the north leg of Rice Canyon. This area is intended to serve as a focus for the community, including a variety of recreational amenities. The natural open space features within the community are provided in the center leg of Rice Canyon and a hiking trail is designated to be located in this open space. It would connect with the open space south of East H Street, and link with a trail in the SDG&E easement. Other open space areas are similar to the existing Specific Plan, such as along Otay Lakes Road and Telegraph Canyon Road.

The development of the north leg of Rice Canyon is considered a beneficial effect with respect to the parks/recreation amenities provided onsite. However, the substantial fill required, and the active use of this area conflicts with the Open Space goals of the General Plan and the adopted Specific Plan, and is considered a significant impact of the proposed amendment.

3.13.3 Mitigation

No mitigation with regard to parks is required since an adequate acreage of park-designated land is provided in the proposed Specific Plan. It should be noted that commercially oriented recreational facilities are permitted within the parks/recreation

category designated on the proposed Specific Plan. Development of excessive recreational commercial uses could impact the intent of the types of recreation uses called for in the General Plan. Discretionary review of future development plans will occur at a later stage.

A significant impact was identified due to filling of the upper leg of Rice Canyon. Full mitigation of the loss of natural open space and canyon features of the north upper leg of Rice Canyon would require a project redesign which does not alter the canyon.

3.13.4 Analysis of Significance

The proposed Specific Plan amendment would result in the development of the north leg of Rice Canyon, considered to be a significant impact of the project. Full mitigation of this impact would require a project redesign featuring an alternative grading scheme in which Rice Canyon is not used as a fill site for cut material.

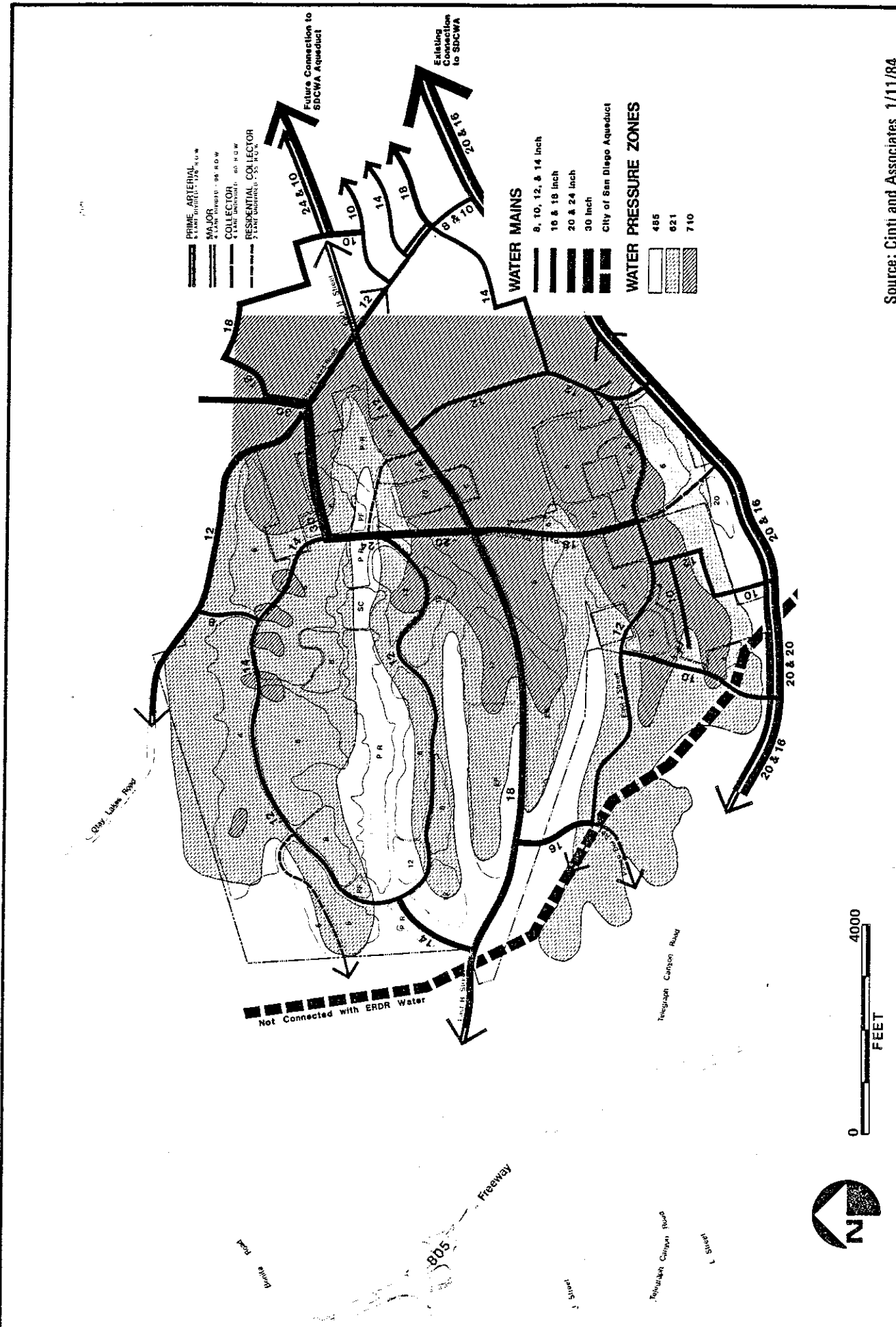
3.14 WATER SERVICE

3.14.1 Existing Conditions

The Specific Plan area is located within the Otay Water District's (OWD) Improvement District 22. OWD is one of 24 member agencies of the San Diego County Water Authority. CWA imports 90 percent of San Diego County's annual water demand via the Metropolitan Water District (MWD). MWD derives its water from the Colorado River and the California Aqueduct.

California's water supply will be reduced by 600,000 acre-feet per year in 1985 when the Central Arizona Project diverts Arizona's entire allocation of Colorado River water. In order to offset this loss, plans are being formulated to transport additional water through the Sacramento delta. If approved, this project would compensate for the loss of Colorado River water and enable the CWA to adequately serve its member agencies through the year 2000.

The planning area is served by three water pressure zones (Figure 3-8). Pressure Zone 710 serves onsite elevations over 450 feet above MSL and comprises the eastern portion of the planning area. The 710 Pressure Zone receives water by gravity flow from a 20 inch water main connected to a three million gallon reservoir (22-1) located adjacent to Telegraph Canyon Road, east of Otay Lakes Road. Water is also pumped to the 710 Pressure Zone from a 0.75 million-gallon reservoir (5-1) located 2400 feet southwest of reservoir 22-1. Sixteen- and eighteen-inch water mains transport water from this reservoir to and along Telegraph Canyon Road. Pressure Zone 621 serves locations in the project vicinity ranging from 360 to 450 feet above MSL in



Source: Cinti and Associates, 1/11/84

FIGURE 3-8

Water Facilities in the Project Site

elevation. Pressure Zone 621 comprises the majority of the central and western portion of the planning area. Pressure Zone 621 receives water by gravity from reservoir 5-1 and 10.4 million-gallon Patzig reservoir located approximately 700 feet north of reservoir 5-1.

A limited area along the western margin of El Rancho del Rey is served by Pressure Zone 485. Zone 485 serves elevations ranging from 150 to 360 feet above MSL. Water flows to Pressure Zone 485 from reservoir 22-2. This reservoir has a capacity of 1.0 million gallons and is located near East H Street in the central portion of the planning area.

3.14.2 Impacts

A Water Supply Master Plan was prepared for El Rancho del Rey (Montgomery, 1982) to define a phased planned development of a water system for the entire El Rancho del Rey plan area and adjacent areas including Bonita Long Canyon Estates and existing Improvement Districts 5, 10 and 22. The Master Plan identifies facilities required for full development of the project area specifying sizes and locations of pipelines, reservoirs, and pressure-reducing valves. A number of new water facilities will be required to serve El Rancho del Rey and adjacent developments. These include a 3 million-gallon reservoir (22-3) adjacent to the Second San Diego Aqueduct, and an additional connection to the aqueduct and transmission mains. Also, some existing pipelines may need to be enlarged to meet the fire flow demands of the project. It is anticipated that funding for the water facilities would be provided by local developers and that the water supply infrastructure will be provided consistent with the Master Plan at the time of site developments.

The projected daily onsite water requirement under existing and proposed land use designations is tabulated in Table 3-12. As shown in Table 3-12, the proposed Specific Plan Amendment would increase the daily water demand by 1,197,946 gallons (32 percent). No problems are foreseen in supplying water to the planning area provided that the water facilities outlined above are constructed. However, due to the limited availability of water throughout Southern California, measures to reduce water consumption should be incorporated into all new developments.

All development within El Rancho del Rey will adhere to City of Chula Vista and State of California policies and regulations regarding water conservation. These include landscape techniques such as the utilization of drought resistant plants, drip irrigation systems, subsurface multiporous tubing and moisture sensors. Other water saving techniques include implementation of low-flow shower and faucet restrictors and

Table 3-12

EL RANCHO DEL REY PROJECTED WATER CONSUMPTION
UNDER EXISTING AND PROPOSED LAND USE DESIGNATIONS

Land Use	Consumption Rate*	Existing Specific Plan		Proposed Specific Plan Amendment	
		Amount	Total Consumption (gal/day)	Amount	Total Consumption (gal/day)
Residential	180/person	10,888** persons	1,959,840	15,294* persons	2,752,920
Employment Park	3500/acre	0	0	93.4 acres	326,900
Schools	1340/acre	65.5	87,700	39.2	52,528
Public Facilities	1340/acre	0	0	9.9	13,266
Parks/Recreation	1340/acre	27	36,180	90.3	121,002
Open Space/Other	800/acre	640.4	512,320	659.3	527,440
TOTAL			2,596,110		3,794,056

*Source: ERDR Supplemental Report.

**Based on 2.58 persons per dwelling unit.

toilet dams. These measures will help reduce water consumption within El Rancho del Rey.

3.14.3 Mitigation

The provision of the water facilities outlined in the El Rancho del Rey Master Plan (Montgomery, 1982) in conjunction with site development will enable OWD to adequately serve the planning area. At the time SPA plans and tentative maps are filed, specific responsibilities for constructing the water system components should be determined. If these facilities are provided, no adverse impacts would result in regard to the provision of water onsite. The project has also incorporated water conservation measures which will reduce the project's water requirement.

3.14.4 Analysis of Significance

The project would incrementally increase regional water consumption, however, measures to reduce water consumption will be incorporated into the project. The project would represent an insignificant impact to water availability. The water distribution facilities outlined in the Water Supply Master Plan would adequately serve the proposed land uses and provision of those facilities would avoid any significant impacts.

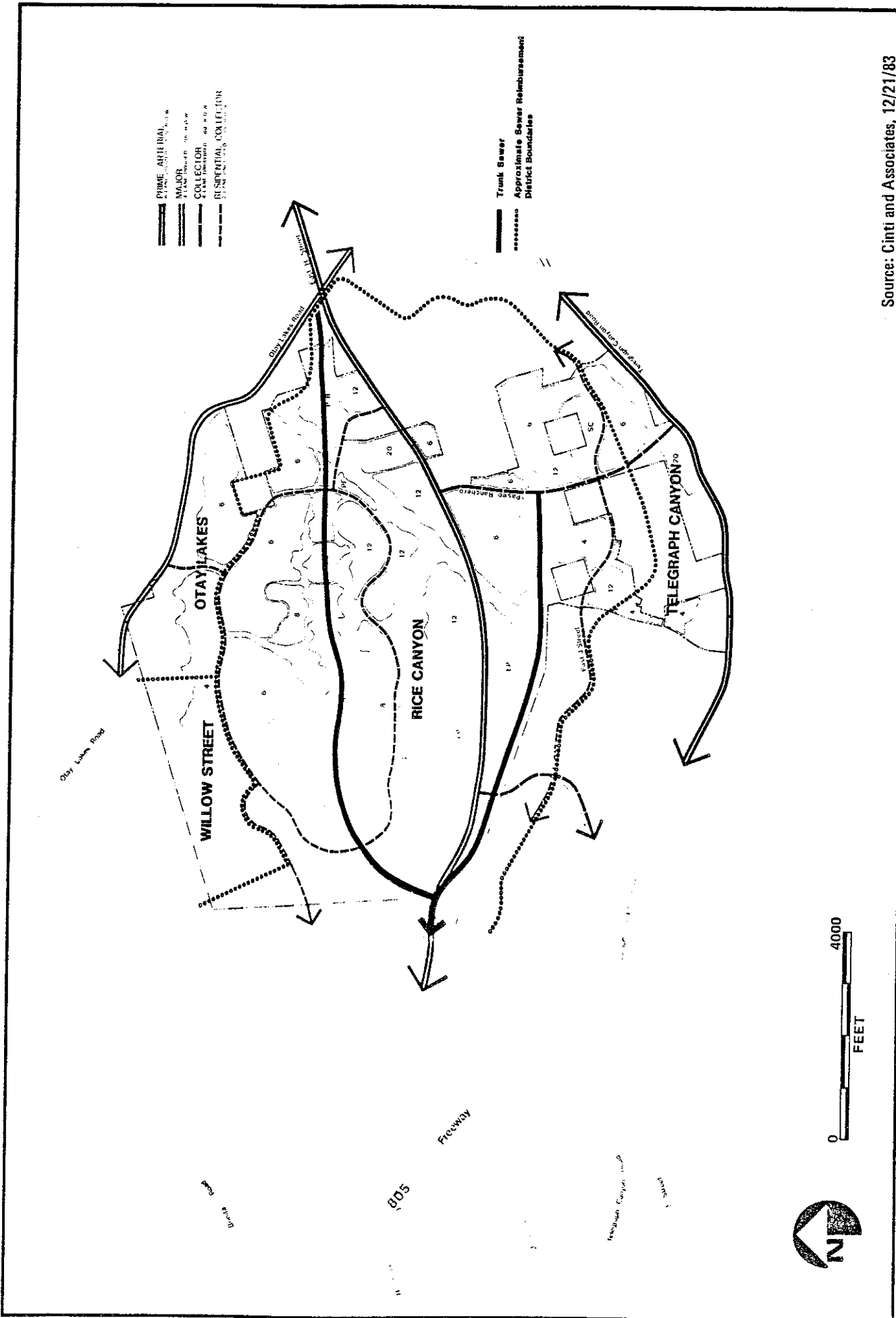
3.15 SEWER SERVICE

3.15.1 Existing Conditions

The City of Chula Vista provides sewer service in the project vicinity. The City transports its sewage to the San Diego Metropolitan Sewage System (METRO) which treats and discharges sewage at the Point Loma Regional Plant. The City of Chula Vista currently holds in excess of 19 million gallons per day capacity on the METRO system.

The Supplemental Report prepared for the El Rancho del Rey Specific Plan Amendment identifies four sewage drainage systems onsite. These include the Willow Street system in the northwestern portion of the planning area, the Otay Lakes system in the northwestern portion, the centrally located Rice Canyon system, and the Telegraph Canyon system comprising the area south of East H Street.

Existing sewer facilities in the planning area include a 15-inch sewer at Telegraph Canyon Road and an 8-inch sewer at Allen School Lane (Figure 3-9). Additional sewer trunk lines are located in Otay Lakes Road, Telegraph Canyon Road and East H Street west of the planning area. The residential neighborhood to the northwest also contains several sewer lines.



Source: Cinti and Associates, 12/21/83

FIGURE 3-9

Sewer Facilities in the Project Site



3.15.2 Impacts

The Willow Street, Otay Lakes Rice Canyon and Telegraph Canyon sewer systems have adequate capacity to serve development within the northern and southern margins of the planning area (Hutchinson, 1984). However, capacity in the connecting sewers is limited. Thus, an increase in population could adversely affect the capacity of existing sewage infrastructure.

In order to determine whether the proposed project would generate sewage in excess of what could be accommodated by the Rice Canyon outfall, the proposed population density was compared with the design capacity of the sewer. As outlined in the Supplemental Report, the Rice Canyon Sewer was designed to serve an equivalent population of 22,547 persons.

The City of Chula Vista calculates equivalent population, strictly for sewage generation purposes, based on the following rates:

<u>Residential Density (du/ac)</u>	<u>Projected Population (Persons/du)</u>
4	3.38
6	2.66
8	2.50
12-20	2.30

Based on these generation rates, residential development under the proposed Specific Plan would generate 15,153 residents. The equivalent of an additional 5558 persons would be generated by the proposed school, public facilities and employment park land uses. Development according to the proposed Specific Plan Amendment would thus generate a total equivalent population of 20,711 which is within the design capacity of the Rice Canyon sewage infrastructure. This represents a population density of 12.4 persons per acre over a total area of 1673.5 acres.

The developer will be responsible for construction of the onsite sewage infrastructure in accordance with the planned facilities. The phasing and detailed location of sewer facilities will be established during subsequent review of SPA plans and tentative maps. A recent study conducted by the City of Chula Vista on the Rice Canyon Trunk indicated that a portion of the 15-inch line west of Hidden Vista Drive would be under pressure during peak flows. Using these projections, a cumulative impact would occur with full buildout of areas utilizing the Rice Canyon Trunk, including the proposed project.

3.15.3 Mitigation

The only potential adverse impact to the City's sewage infrastructure would be the 15-inch Rice Canyon Trunk west of Hidden Vista Drive, which is projected to flow under pressure during peak flows. As buildout occurs in the area using the Rice Canyon Trunk, it may be appropriate to monitor the flow to determine the need for and timing of new improvements. This could include a parallel sewer line for the segment of the 15-inch trunk between Hidden Vista Drive and I-805. The developer is currently involved in four offsite sewer improvement districts for the purpose of funding major trunk lines and facilities that would serve the project site, and no additional mitigation is necessary at this time.

3.15.4 Analysis of Significance

Adequate sewer facilities are planned to be available to serve the proposed development although on a cumulative basis at buildout of the areas using the Rice Canyon trunk, a portion of the line west of Hidden Vista Drive would flow under pressure, and could require additional facilities to accommodate peak flows. Construction of the onsite sewer facilities at the time of actual development will avoid any significant impacts.

3.16 SOLID WASTE DISPOSAL

3.16.1 Existing Conditions

Refuse collection would be provided onsite by Sani-Tainer, Inc., a private disposal company (Massman, 1983). Fees for collection service are paid by each customer. Rates would be based on individual contracts.

Project-generated waste would be taken to the Otay landfill located on Otay Valley Road, 1 mile east of Highway 805. Opened in February, 1966, Otay landfill has a projected service life through the year 2006. The landfill currently receives 900 tons of refuse per day and has a remaining volume of 33,600,000 cubic yards (Solid Waste Management Plan, 1982).

3.16.2 Impacts

Based on an estimated refuse generation rate of 60 pounds per dwelling unit per week (San Diego County, 1978), the proposed 5928 dwelling units would generate 178 tons of refuse per week. This represents a 29 percent increase over what would be generated under existing land use designations. Other land use modifications, including the 93.4-acre employment park, would generate additional refuse as well. However, this amount cannot presently be determined since the precise amount of development is not known.

The increased solid waste resulting from the proposed land use modifications would not adversely impact the collection service capabilities of Sani-Tainer, Inc. However, disposal of project refuse would incrementally shorten the life of the Otay landfill. Project waste would represent less than 3 percent of the refuse currently disposed at Otay landfill and is not considered significant.

3.16.3 Mitigation

No mitigation is required for the proposed project. However, the California Waste Management Board encourages the development of alternative disposal methods. According to the San Diego County Solid Waste Management Plan, 96 percent of the solid waste generated throughout the County is disposed of at eight existing landfills. It is estimated that only three of these landfills, Borrego, Sycamore and Otay, will have remaining capacity in the year 2000. Therefore, the County of San Diego is looking into replacing or extending the lives of some existing landfills. However, as the technique of landfilling becomes increasingly costly in economic and environmental terms, alternative solid waste disposal methods are being explored. The San Diego Energy Recovery Project (SANDER) is a 1200 ton per day solid waste-to-energy facility currently proposed for development at the Miramar landfill in the City of San Diego. SANDER is expected to come on-line in the late 1980s. The implementation of alternative disposal methods is beyond the capability of individual projects, requiring a regional approach.

3.16.4 Analysis of Significance

The proposed Specific Plan Amendment would not significantly impact to current solid waste disposal facilities but would represent an incremental reduction in landfill capacity.

3.17 FIRE PROTECTION

3.17.1 Existing Conditions

Onsite fire protection would be provided by the Chula Vista Fire Prevention Bureau. Depending on the location of an onsite fire, response would come from Fire Station #2 currently located at 80 East J Street, or Fire Station #4, located at 861 Otay Lakes Road. The response time to the project site would range from 1.5 to 5 minutes depending upon the location of the incident within the site (Monsell, 1983).

3.17.2 Impacts

The proposed Specific Plan Amendment would increase the total development on the project site, which would incrementally increase demand for fire protection services. This could result in an extended fire response time onsite (beyond the current 1.5 to 5 minutes). The optimum fire response time is 3 minutes or less (Monsell,

1984). Fire Station #2 is planned to be relocated to East H Street and Ridgeback Road, nearer the project site, in the future and the eventual relocation of Fire Station #2 should improve the first-in response time (Monsell, 1983). No constraints are foreseen in providing fire protection to development under the proposed Specific Plan Amendment. The proposed amendment would not represent a significant adverse impact to fire protection services.

3.17.3 Mitigation

None required.

3.17.4 Analysis of Significance

Development under the proposed Specific Plan Amendment would not represent a significant adverse impact to fire protection services.

3.18 POLICE PROTECTION

3.18.1 Existing Conditions

The Chula Vista Police Department provides police protection in the project vicinity. The Department operates out of a single station located at 276 Fourth Avenue in Chula Vista.

The project site is located in an area designated "Patrol Beat 32" by the Department. Beat 32 is patrolled by one 24-hour squad car which is broken into 3 one-man watches. The average police response time in Patrol Beat 32 is 4.5 minutes on priority calls and 20 minutes on routine calls (Winters, 1983). Optimum response times are normally considered to be 3 minutes for priority calls and 15 minutes for routine calls.

3.18.2 Impacts

It is anticipated that potential development of the project site under proposed land use designations will not create an unusually high demand for police services. Current police staffing levels are adequate to serve the existing population within Beat 32, however, any increase in the City's population would reduce the Police Department's service capabilities. Although onsite development under the proposed Specific Plan Amendment would not singularly impact police services, the cumulative effect of this and other similar developments would eventually require splitting Beat 32 in two and employing additional patrol officers and Investigative Division staff (Winters, 1983).

The proposed land use designations would allow a greater intensity of development than is allowed by the existing Specific Plan. The employment center and the additional 1708 residential units that would result from the Specific Plan Amendment represent the most substantial differences between the two Plans. However, the

potential changes resulting from these incremental increases in onsite population would not directly affect police protection services.

3.18.3 Mitigation

Whether or not the proposed Amendment is approved, development of this and other similar projects would result in a significant cumulative adverse impact to law enforcement services. Mitigation of this impact is beyond the control of the developer. However, the Chula Vista Police Department anticipates that as development progresses, it will add employees and equipment to the police force, as necessary.

3.18.4 Analysis of Significance

It is anticipated that additional police staff would ultimately be added in response to new development. Therefore, no significant impacts would occur as a result of development.

3.19 ENERGY CONSUMPTION AND CONSERVATION

3.19.1 Existing Conditions

The Specific Plan Area is presently undeveloped and does not generate an energy requirement. San Diego Gas & Electric Company (SDG&E) would provide natural gas and electricity to development of the project site.

3.19.2 Impacts

As shown on Table 3-13, development according to the proposed Specific Plan Amendment would generate a daily requirement for 230,938 kilowatt hours (kWh) of electricity and 14,671 therms of natural gas. This represents a 33 to 38 percent increase in energy over what would be consumed under the existing Specific Plan.

Based on an average daily trip generation rate of 73,900, an average fuel consumption rate of 24 miles per gallon (mpg) and an average trip length of 5.8 miles (SANDAG, 1984), the proposed Amendment would generate a requirement for 17,859 gallons of fuel per day. This represents a 67 percent increase over what would be consumed under existing land use designations.

Pursuant to regulations filed with the Public Utilities Commission, SDG&E will provide natural gas and electricity to the planning area. This is contingent upon the continued availability of fuel and government approval of new facilities construction. It is also anticipated that motor vehicle fuel will be available onsite. Thus, no adverse impacts to energy suppliers would result from project implementation. However, due to the uncertain and finite availability of fossil fuels, any increase in energy consumption represents an incremental adverse effect to regional energy consumption.

Table 3-13

PROJECTED DAILY NATURAL GAS AND ELECTRICITY CONSUMPTION
UNDER EXISTING AND PROPOSED LAND USE DESIGNATIONS

Land Use	Consumption Rates		Existing Specific Plan		Proposed Specific Plan Amendment		
	Electricity (kWh/day)	Natural Gas (therms/day)	Amount	kWh/day	Amount	kWh/day	th/day
Residential	12.5/du ¹	2.07/du ¹	4,220 du	52,750	5,928 du	74,100	12,271
Employment Park	959/ac ²	16.5/ac ²	0	0	93.4 ac	89,571	1,541
Schools	1,370/ac ²	17.5/ac ²	65.5 ac	89,735	39.2 ac	53,704	686
Public Facilities	1,370/ac ²	17.5/ac ²	0	0	9.9 ac	13,563	173
Parks/Recreation*	---	---	27 ac	---	90.3 ac	---	---
Open Space/Other*	---	---	640.4 ac	---	659.3 ac	---	---
TOTAL				142,485		230,938	14,671

¹ Energy/LA Action Plan, 1983; these consumption rates represent an overall average for residential development at varying densities. More specific rates based on unit size cannot be used at this time because no detailed information on unit sizes for this project are currently available.

² WESTEC Services, 1982

* For comparison purposes, these land uses were assumed to consume a negligible amount of energy.

In order to minimize onsite energy consumption and reduce the project's effect on energy resources, measures to conserve energy should be implemented wherever possible. Certain measures, such as siting residences to maximize solar access and installing weatherstripping, caulking and insulation are required by law and would be incorporated in development within El Rancho del Rey. Other energy saving measures such as developing attached housing to reduce the number exterior walls, siting buildings to reduce the impact of wind and implementing landscaping which provides shade in summer and full sun in winter are incorporated into the Specific Plan. Additional energy-saving measures will be promoted including utilization of double pane windows, skylights, pilotless gas appliances and fluorescent lighting.

3.19.3 Mitigation

Development of the project would not have a significant negative impact on regional energy supplies by itself, but it would result in an incremental increase in regional energy consumption. Measures to reduce energy consumption will be incorporated into development projects within the Specific Plan wherever possible and no other mitigation is considered necessary.

3.19.4 Analysis of Significance

Implementation of the conservation measures cited above will reduce onsite consumption and help preserve energy resources. Thus, the project would not represent a significant impact to energy resources.

3.20 SOCIOECONOMICS

3.20.1 Existing Conditions

Population

Based on SANDAG's 1984 Housing Study for the City of Chula Vista, the City of Chula Vista had a total population of 83,927 according to the 1980 Census (SANDAG, 1984:27). This population accounted for 4.5 percent of the 1,861,846 people in the San Diego Region. From 1970 to 1980, the City of Chula Vista has increased in population by 16,026 people. The San Diego Region has increased by 50,399 from 1970 to 1980. The Chula Vista General Planning Area (GPA) had an estimated population of 116,700 in 1980; GPA areas outside the City of Chula Vista had a population of approximately 32,800.

In 1984, the City of Chula Vista had a total population of 89,370 (SANDAG, 1984:27). This population accounted for 4.4 percent of the 2,040,888 people in the San Diego Region in 1984.

Estimated population for the year 2000 for the City of Chula Vista is 102,100 people, an increase of 12,730 people from 1984, or a 14.2 percent increase. Estimated population for the year 2000 for the San Diego Region is 2,699,200 people, an increase of 658,312 people from 1984, or a 32.2 percent increase. The population growth of the City of Chula Vista accounts for 1.9 percent of the San Diego Region population growth for the year 2000 (SANDAG, 1984:49).

Housing

Housing within the City of Chula Vista consisted of 33,021 housing units as of 1984 (SANDAG, 1984:14). Housing within the San Diego Region consisted of 764,122 housing units as of 1984. The City of Chula Vista's housing units represent 4.3 percent of the San Diego Region's housing. Of the City of Chula Vista housing units, single-family homes represent roughly 57 percent of all dwelling units within the city (SANDAG, 1984:17). The vacancy rate for dwelling units within the city is approximately 1.4 percent for 1983 (SANDAG, 1984:24).

Based on SANDAG's 1984 Housing Study for the City of Chula Vista, between 1984-2000, occupied housing will increase by approximately 6779 units to a total of 39,800 units (SANDAG, 1984:49).

Employment

Median household income within the City of Chula Vista during 1980 was \$17,997, which was roughly 5.2 percent higher than the San Diego Region of \$17,107 (SANDAG, 1984:33). Within the City of Chula Vista 8.3 percent of the work force are military personnel. Military personnel represent 3.6 percent of the total City of Chula Vista population.

Assuming population within the Chula Vista GPA will increase in the year 2000 to 185,700, then the following employment projection can be made. Non-military employment would increase from 34,409 in 1978 to 57,139 by the year 2000. This would represent an additional 22,730 non-military workers, or an increase of 66 percent in the labor force within the Chula Vista GPA by the year 2000.

The existing Specific Plan offers few employment opportunities. Neighborhood convenience centers and schools offer the only onsite jobs aside from mainly temporary ones associated with project development.

3.20.2 Impacts

Population

The proposed El Rancho del Rey plan would allow a maximum of 5928 dwelling units to be developed onsite, 1708 units more than the adopted plan. Based on

a population generation rate of 2.58 persons per unit (SANDAG, 1984), full development according to the proposed plan would ultimately result in 15,294 people residing on the project site (see Table 3-14). Of this total site population, approximately 4406 residents would be added as a result of the proposed project (1708 units x 2.58 persons/unit).

In 1984, population within the City of Chula Vista is estimated to be 89,370 and by the year 2000, to be 102,100 (SANDAG, 1984). The increase of 4406 to the Chula Vista population associated with the proposed plan represents approximately 34.6 percent of the projected city growth for the year 2000. However, not all development within the El Rancho del Rey plan area is projected to be built out by the year 2000, and a later completion date would most likely decrease the ratio of project population to city-wide population. No adverse population impacts are anticipated as a result of the proposed project.

Table 3-14

POPULATION PROJECTION - EL RANCHO DEL REY

<u>Dwelling Units Per Acre</u>	<u>Dwelling Units</u>	<u>Acres</u>	<u>Estimated Population at 2.58 Persons Per Dwelling Unit</u>
0.1 - 4	571	148.6	1,473
5 - 6	2,165	360.9	5,586
7 - 8	611	76.4	1,576
9 - 12	1,897	159.6	4,894
13 - 20	<u>684</u>	<u>35.9</u>	<u>1,765</u>
TOTAL	5,928	781.4	15,294

Housing

The Specific Plan Amendment would allow for the development of 5928 units on 781.4 acres over a period of approximately 20 years. The plan proposes an increase in the number of residential units from 4220 to 5928, a decrease in the number of residential acres from 940.6 to 781.4 acres, and a density increase from 4.5 dwelling units per acre (du/ac) to 7.6. These changes reflect a 40 percent increase in housing units, a 16.9 percent decrease in residential acreage, and a 69 percent increase in residential density. Specifically, the number of a low-density single-family residential units would decrease while higher-density development would become more prevalent.

By providing more multi-family residential units, the new plan is more responsive to market conditions for housing. Purchases of single-family dwelling units are giving way to an increased demand for attached multi-family residences such as the ones indicated below in the greater than 4 du/ac categories. The decrease in single-family residential units would not, therefore, represent an adverse impact, but would provide a more appropriate reflection of actual market demand.

Based on the SANDAG 1984 Housing Study for the City of Chula Vista, El Rancho del Rey would comprise approximately 14.9 percent (5928 units) of the total 39,800 estimated housing units in the City of Chula Vista for the year 2000.

Employment

The Specific Plan Amendment proposes development of an employment park on both sides of East H Street and encompassing approximating 93.4 acres. The park would be buffered on the north, south and west by open space. Adjacent to the north-east border of the park would be residential development built to a density of 12 dwelling units per acre.

Development of the park would represent a significant increase in employment opportunities, as the existing plan offers only school-related employment, a very low employment generator and convenience store jobs. The employment park would serve industrial, office and commercial support uses. Light industry generates 25 employees per acre, office generates 55 employees per acre and commercial generates 36 employees per acre. Since a breakdown of land use types within the employment park has not yet been formulated, a worst-case scenario of light industry land use was assumed for purposes of analysis. At a low employment generation rate of 25 employees per acre, 2335 jobs would be available in the employment park. The jobs the park would generate represents a significant increase to employment opportunities under the proposed Specific Plan. These jobs would be filled by the projected increase in population in the Chula Vista Planning Area, which is, in part, attributable to the increasing number of El Rancho del Rey residents. The growth in employment potential may be considered a beneficial impact.

3.20.3 Mitigation

No significant impacts would be associated with the proposed Specific Plan Amendment, thus not mitigation measures are necessary.

3.20.4 Analysis of Significance

No significant socioeconomic impacts would result from the proposed Specific Plan Amendment.

SECTION 4 ALTERNATIVES

The analysis of the proposed El Rancho del Rey Specific Plan amendment identified areas of significant impacts which cannot be mitigated to insignificance. These include (1) biological impacts resulting from the elimination of natural habitat, including sensitive species; (2) landform alteration involving filling of the north leg of Rice Canyon; (3) cumulative effects of air quality degradation due to growth beyond that anticipated in regional forecasts used in air quality planning; and (4) elimination of the natural open space of the north leg of Rice Canyon. Alternatives which would reduce or eliminate these adverse effects are addressed below.

4.1 NO PROJECT (EXISTING SPECIFIC PLAN) ALTERNATIVE

This alternative would involve retaining existing land use designations of the adopted Specific Plan for the property as shown on Figure 2-4A. This plan includes predominantly residential uses at lower densities, and development would not meet current market demands. Additionally, the community would be less balanced than with the proposed or alternative specific plans, since there would be no Employment Park uses. However, the adopted plan would retain substantially more natural open space acreage, particularly in the northern portion of the area, including the north leg of Rice Canyon and the canyon area in the northwest. This avoids land use, topographic alteration and biological resources impacts associated with the filling that would occur with the proposed project. Significant air quality impacts would also be eliminated with this alternative since forecasts utilized the adopted plan in the assumptions. The implementation of the adopted plan would have adverse effects associated with grading, and the potential need to export approximately 3 million cubic yards of cut material. This would require substantial construction traffic, which could have secondary impacts (such as noise and air quality) depending on the location of the offsite fill area(s).

Other effects of the adopted plan would be the same or similar to those discussed for the proposed project in Section 3. These would include cultural resources, paleontological resources, geology and soils, hydrology and water quality. Potential noise impacts could occur adjacent to roadways, and subsequent analysis would be required at the SPA plan stage to determine any required mitigation. Ultimate development under the adopted plan would be subject to specific site plan review and details regarding specific project-related impacts would be addressed at that time.

4.2 ALTERNATIVE SPECIFIC PLAN AMENDMENT

During the preliminary planning process for the El Rancho del Rey project an Alternative Specific Plan was developed in conjunction with City staff, which retains the north leg of Rice Canyon as natural open space, similar to the adopted plan, but incorporates changes in land use mix and increases intensity similar to the Proposed Plan Amendment. The following analysis presents the potential impacts that would be associated with the Alternative Specific Plan emphasizing areas of difference between each of the plans.

Project Description

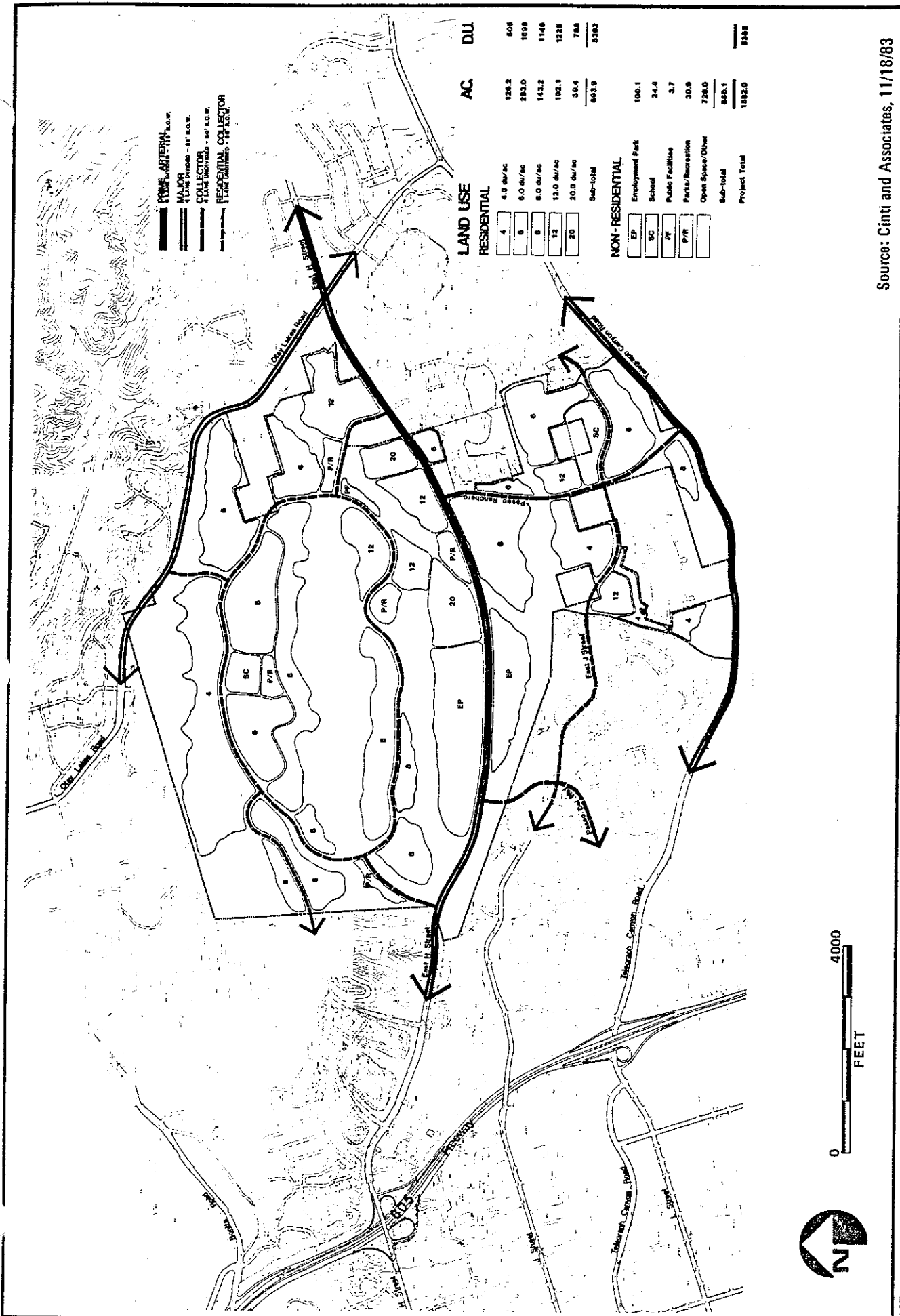
The Alternative Specific Plan would encompass the same area as the proposed project, including 1673.5 acres of which 1582 acres are owned by The Gersten Companies, and the remaining 91.5 acres are under various private ownerships. The land use designations are shown on Figure 4-1 and listed in Table 4-1. The designations for the "out parcels" under this alternative would be the same as the Proposed Plan Amendment.

Density categories for residential uses would be changed as planned by the proposed project. The total number of units permitted by the Alternative Plan would be 5952, which is slightly higher than the Proposed Plan's 5928 units. The total acreage of residential uses would decrease slightly (from 781.4 to 768 acres) resulting in an increased overall residential density (from 7.59 du/ac to 7.75 du/acre).

Nonresidential designations would also be changed. The employment park use would increase slightly (from 93.4 to 100.1 acres) and the Public Facilities acreage would be reduced. The Alternative Plan would provide less parks/recreation area, but would increase the acreage of open space. This change is reflective of the retention of the north leg of Rice Canyon as natural open space in the Alternative Plan.

The land uses north of the north loop road and adjacent to Ridgeback Road are the same as the Proposed Plan, including 4 du/ac and 6 du/ac densities. South of the north loop road and north of Rice Canyon, the 6 and 8 du/ac categories are retained, but the distribution is modified to include the 8 du/ac designation lining the canyon edge. The school and park sites which are shown within the north leg of Rice Canyon on the Proposed Plan would be located adjacent to the loop road in the Alternative Plan.

Uses adjacent to the south loop road are largely similar to the Proposed Plan with development at 8 and 12 du/ac. The center leg of Rice Canyon is shown as open space in both plans, although the eastern end adjacent to the SDG&E easement would be graded for residential development under the Alternative Plan.



LAND USE		AC	DU
RESIDENTIAL			
4	4.0 du/ac	126.2	505
6	6.0 du/ac	283.0	1099
8	8.0 du/ac	143.2	1148
12	12.0 du/ac	102.3	1225
20	20.0 du/ac	36.4	728
Sub-total		692.9	2362
NON-RESIDENTIAL			
EP	Employment Park	100.1	
SC	School	24.4	
PR	Public Facilities	3.7	
P/R	Parks/Recreation	30.9	
	Open Space/Other	726.0	
Sub-total		885.1	
Project Total		1578.0	2362

Source: Cinti and Associates, 11/18/83

FIGURE 4-1

Alternative Specific Plan



WESTEC Services, Inc.

Table 4-1

LAND USE ACREAGES FOR EXISTING PROPOSED AND ALTERNATIVE SPECIFIC PLANS

Land Use	Existing Specific Plan*				Proposed Specific Plan Amendment				Total			
	Gersten Property		Out Parcels		Gersten Property		Out Parcels		Both Areas			
	Acres	Units	Acres	Units	Acres	Units	Acres	Units	Acres	Units		
Residential (du/ac):												
1-2	242.1	484	0.0	0	242.1	484						
2-3	192.9	579	20.7	62	213.6	641						
3-5	328.0	1,640	38.7	194	366.7	1,834						
6-10	98.4	984	10.0	100	108.4	1,084						
11-18	5.1	92	4.7	85	9.8	177						
0-2.5									10.0	26	10.0	26
2.5-4									12.4	40	138.6	545
5-6									27.0	162	360.9	2,165
7-8											76.4	611
9-12									10.0	102	159.6	1,897
13-20									14.7	260	35.9	684
Subtotal	866.5	3,779	74.1	441	940.6	4,220	707.3	5,338	74.1	590	781.4	5,928
Commercial				0.0								
Employment Park											93.4	
Schools:									15.0		39.2	
Elementary	31.0		15.0		46.0							
Junior High	19.5				19.5							
Public Facilities											9.9	
Parks/Recreation	27.0				27.0						90.3	
Natural Open Space	638.0		2.4		640.4				2.4		2.4	
Open Space/Other											656.9	
Total	1,582.0		91.5		1,673.5		1,582.0		91.5		1,673.5	

*Includes those portions affected by the proposed amendment, as outlined on Figure 2-3. Acreages include streets.

Table 4-1

LAND USE ACREAGES FOR EXISTING PROPOSED AND ALTERNATIVE SPECIFIC PLANS (Continued)

Land Use	Alternative Specific Plan Amendment					
	Gersten Property		Out Parcels		Both Areas	
	Acres	Units	Acres	Units	Acres	Units
Residential (du/ac):						
1-2			10.0	26	10.0	26
2-3			12.4	40	138.6	545
3-5			27.0	162	310.0	1,860
6-10					143.2	1,146
11-18			10.0	102	112.1	1,327
0-2.5			14.7	260	54.1	1,048
2.5-4	126.2	505				
5-6	283.0	1,698				
7-8	143.2	1,146				
9-12	102.1	1,225				
13-20	39.4	788				
Subtotal	693.9	5,362	74.1	590	768.0	5,952
Commercial						
Employment Park	100.1				100.1	
Schools:						
Elementary	24.4		15.0		39.4	
Junior High						
Public Facilities	3.7				3.7	
Parks/Recreation	30.9				30.9	
Natural Open Space			2.4		2.4	
Open Space/Other	729.0				729.0	
Total	1,582.0		91.5		1,673.5	

The Employment Park along East H Street would be retained under both plans, and the residential development would increase in density from 12 du/ac under the Proposed Amendment to 20 du/ac under this alternative. The area east of the SDG&E easement would have designations similar to the Proposed Plan, except that the large park/recreation site would be developed with residential uses (12 du/ac) and the park/recreation would be located in two areas of the power line easement.

South of East H Street and north of Telegraph Canyon Road, land use designations would be identical under the Proposed and Alternative Plans, with one exception. The residential parcel at the northwest corner of Telegraph Canyon Road and Paseo Ranchero would be developed at a density of 8 du/ac under the Alternative Plan, rather than 20 du/ac as proposed.

The circulation system for this Alternative Plan would be the same as the Proposed Plan including the loop road system in the northern area, rather than the more grid-like system of the Adopted Plan.

Environmental Analysis

Land Use: The Alternative Specific Plan Amendment differs from the Proposed Amendment by altering land use designations and densities. The most substantial change would be the expansion of natural open space within the north leg of Rice Canyon by approximately 72 acres. This alternative design, similar to the design of the north leg of Rice Canyon in the Adopted Plan, is intended to avoid the impacts created by partially filling the canyon and designating parks, recreation and school land uses within the canyon. Impacts occur here with the filling of the land, since, according to the existing El Rancho del Rey Specific Plan of 1978, development should proceed in a manner which protects the topographic character of the area. The Alternative Amendment would retain the canyon in a natural open space condition. The Alternative Plan would preserve less of the canyon than the Adopted Plan, by developing the eastern portion of the canyon, east of the loop road. The western end would also be disturbed by placement of the loop road, the collector road from East H Street and parks/recreation designation. This alternative would retain the open space connection between the north and center legs of Rice Canyon at the western end, but would not be linked at the SDG&E easement.

The placement of residential areas north of Rice Canyon under the Alternative Plan would be substantially different from the Proposed Plan. Rather than following the canyon topography, the 8 du/ac areas could create a straighter, more continuous border of development at the canyon interface. There is a potential for isolating the

canyon area rather than making it a community feature. The interface between the residential and open space uses should be reviewed at the time of subsequent project design.

Under the Alternative Amendment the combined average density of the 12 and 20 dwelling units per acre designation would be 14.23 du/ac, up from 12.99 du/ac under the Proposed Amendment. The lower density designations of 4, 6 and 8 dwelling units per acre would experience a similar increase, from 5.81 du/ac under the Proposed Amendment to 6.06 du/ac under the Alternative Amendment. Impacts directly associated with higher density, such as traffic, public services, air quality, fiscal considerations and energy conservation are evaluated in their appropriate sections elsewhere. Since the main concern of the existing El Rancho del Rey Specific Plan (1978) regarding density appears to be that a minimum density is attained, the Alternative Amendment would comply with this intent.

The Alternative Amendment, in increasing the density and natural open space, makes several other land use designation changes that are illustrated in Figure 4-1 and described in the Project Description section. Although no impacts are created by these changes, it is within the scope of each Sectional Planning Area (SPA) to assure the development of compatible uses in continuous land use designations.

Traffic: Total ADT projected for the project area would be decreased slightly under this alternative. The total trips would be 71,200 compared to 73,900 for the Proposed Plan. This is still substantially higher than the Adopted Plan (44,100 ADT).

Development according to this Alternative Plan would result in a minor decrease in trips on the roadway system, but overall there would be no significant difference between the Proposed Plan and the Alternative Plan in terms of traffic issues. The improvements and mitigations required would be the same for both plans (see Section 3.2.3).

Fiscal: Implementation of the alternative plan would provide substantially more net funds to the City than the adopted plan, and slightly more than the proposed plan as shown in the following table.

NET FISCAL CONDITION
(Revenues less expenditures)

	<u>Adopted</u>	<u>Proposed</u>	<u>Alternative</u>
Year 5	224,581	622,441	708,819
Year 10	497,916	1,372,018	1,484,464
Year 15	957,883	1,706,387	1,752,379
Year 20	1,254,934	2,080,658	2,124,282
Cumulative (yrs. 1-20)*	11,850,000	24,200,000	25,550,000

*These are approximate totals (50,000 + or -).

The revenues for the above calculations include the operating funds and exclude the Gas Tax Fund and the Revenue Sharing Fund. Inclusion of those two sources would add about \$1.5 million based on current estimates, to the proposed and alternative cumulative totals.

The impact would be to make available to the City significantly more funds for their budget with both the alternative plan and the proposed plan than with the adopted plan.

Biological Resources: The Alternative Specific Plan has two major differences from the proposed Plan. The largest difference and most important biologically is the retention of the bottom of the north leg of Rice Canyon in a natural state. The other difference is the breaking of the natural open space linkage of the canyon south of Rice Canyon with the powerline easement. Smaller differences between the Plans include less natural open space at the east end of the north leg of Rice Canyon and a slight increase of south-facing slopes in the north leg of Rice Canyon in the Alternative Plan.

Overall the Alternative Plan would have fewer biological impacts than the proposed Plan, not only in the amount of additional natural habitat retained (approximately 30 acres) but in the diversity of habitats protected. The difference of approximately 30 acres belies the significance between the two Plans. Additional south-facing slope habitat for Viguiera laciniata, Opuntia parryi var. serpentina, Selaginella cinerascens, Ferocactus viridescens, Black-tailed Gnatcatcher and Cactus Wren, canyon bottom habitat for Ambrosia pumila, Artemisia palmeri, Ericameria palmeri ssp. palmeri, and grassland habitat for Acanthomintha ilicifolia, Muilla clevelandii, and Fritillaria biflora is protected by the Alternative Plan in the north leg of Rice Canyon. Some low

scrub habitat (approximately 9 acres) is lost in the connection of the more southern canyon to the powerline easement in the Alternative Plan, but this interconnection is not as important as preserving more habitat within the north leg of Rice Canyon. The Alternative Plan is substantially better biologically than the proposed Plan.

The Alternative Plan is still less acceptable biologically than the adopted Specific Plan. The adopted Plan retains a significant amount of acreage in a more contiguous pattern and it is considered a more viable open space complex capable of absorbing the effects of surrounding urbanization. The differences between the Alternative Plan and the adopted Plan are considered cumulatively significant. The Alternative Plan retains the two road crossings of the north leg of Rice Canyon as in the proposed Plan. These crossings and the breaking up of open space continuity in the canyon south of Rice Canyon are considered adverse effects of the Alternative Plan. The Alternative Plan also reduces the tributary canyon acreage extending north off the north leg of Rice Canyon over both the adopted and proposed Plans. These tributary canyons usually contain denser cover for wildlife and such areas are particularly important when the main canyon will be increasingly utilized by wildlife as the adjacent properties are developed. These elements along with the reduced retention of open space is the northwest corner of the property combine to create a significant effect.

The Alternative Plan could be modified to overcome these deficiencies to mitigate biological effects. This could include measures such as providing oversized culverts where major roadways cross canyons to allow wildlife movement.

Cultural Resources: The Alternative Plan would have the same effects as the Proposed Plan on cultural resources (see Section 3.5). The six sites identified on the property would be adversely affected by ultimate site development and a program of testing and mitigation would be required prior to grading.

Paleontological Resources: Paleontological resources have been identified on the El Rancho del Rey property (see Section 3.6). The geologic unit known as the San Diego Formation of the upper Pliocene contains the largest and most varied assemblage of Late Pliocene marine vertebrates found in North America to date. Grading, as suggested by either the Proposed or Alternative Specific Plan Amendment, will significantly impact these fossil materials. Thus the same mitigation measures that are required for the Proposed Amendment will be required of the Alternative Amendment (see Section 3.6.3).

Geology/Soils: Several geological and soil-related impacts were identified with development of El Rancho del Rey (see Section 3.7). All could be mitigated to

insignificance with proper design incorporated in the early phases of project development. However, an analysis of geological and soil-related constraints cannot be considered complete until a subsurface geotechnical investigation is conducted. Therefore, a detailed subsurface soil and engineering geology investigation should be conducted to provide grading, foundation, and construction recommendations prior to final project design. This mitigation program, as outlined in Section 3.7.3, would be necessary for the Alternative Specific Plan Amendment as well as the Proposed Amendment.

Hydrology/Water Quality: Runoff from ultimate development under the Alternative Plan would be similar to that of the proposed project. Slightly more natural open space would be retained by the alternative, although no substantial variations in runoff quantities are anticipated. The drainage facilities in the project area are planned to be sized in accordance with the flows assumed by the Fogg study. Future study of hydrological characteristics will be necessary at the individual SPA plan and tentative map stage, but no significant impacts are anticipated and no changes in sizing of planned drainage facilities would be required.

The Alternative Plan development will result in a change in the types of contaminants due to urban development of the property just as under the Proposed and Adopted Plans. No significant water quality impacts would be associated with the Alternative Plan.

Landform/Aesthetics: The development of El Rancho del Rey will require substantial landform modification to accommodate urban development. The Alternative Plan would require more cut and fill than the Adopted Plan (and slightly less than the Proposed Plan) with grading balanced onsite. The Alternative Plan, in retaining most of the north leg of Rice Canyon as natural open space, would involve less topographic alternation than the Proposed Plan, and would avoid the significant impact identified for the Proposed Project.

Air Quality: The increased density of the Alternative Plan would be similar to the Proposed Plan, and would exceed the assumptions used in formulating air quality plans. Total 1995 emissions from all development under the Alternative Plan would be: Carbon monoxide - 753 tons/year; Reactive Hydrocarbons - 163 tons/year; and Oxides of Nitrogen - 167 tons/year (compare to Table 3-10). This increase in emissions (primarily from vehicular sources) would be significant on a regional cumulative basis. The Alternative Plan includes a mixture of land uses similar to the Proposed Plan which creates a more balanced community than the Adopted Plan. This will contribute to a reduction in total vehicle miles traveled, and a corresponding reduction in emissions.

Specific tactics to minimize air emissions can be incorporated into detailed SPA plans and tentative maps at the time of these future approvals (see Section 3.10.3).

Noise: Potential noise impacts would occur for residential, school and park development within the 65 dB CNEL contour, office development within the 70 dB CNEL contour, and industrial and commercial development within in 75 dB CNEL contour as indicated in Table 3-11. Subsequent noise analysis would be required at the SPA plan level in these areas, and implementation of mitigation (such as setbacks or barriers) could be necessary. The Alternative and Proposed Plans would not have substantially different impacts related to noise.

Schools: The Alternative Plan designates school sites in locations equivalent to the Proposed Plan. However, the potential school site located in the proposed community spine would not be included in the Alternative Plan. Specific requirements for school facility siting, sizing and phasing will need to be coordinated with the school districts at the time SPA plans are prepared, in order to avoid potential impacts.

Parks/Recreation/Open Space: The Alternative Plan would include less recreational park land (30.9 acres) than the Proposed Plan (90.3 acres) but slightly more than the Adopted Plan (27 acres). The designated parkland on the Alternative Plan would not meet the City's parkland standard. However, as individual SPA plans and tentative maps are filed, parkland acreage would be required to be provided in accordance with the City standard. The acreage of natural open space is greater than the Proposed Plan and similar to the Adopted Plan's concept for retaining the north leg of Rice Canyon undeveloped. The Alternative Plan would conform with the open space goals of the General Plan, and avoid significant impacts associated with development of the north leg of Rice Canyon as indicated in the Proposed Plan. The Alternative Plan would eliminate the beneficial effects of the community spine in providing a central focus for the community.

Water: Development according to the alternative plan would generate a demand for water of approximately 3,798,710 gal/day. This is only slightly higher (an increase of 4654 gal/day) than the proposed plan (3,794,056 gal/day). This would represent a portion of the regional demand for water. The water distribution facilities needed to serve the alternative plan uses would be the same as the proposed plan and would have to be in accordance with the Water Supply Master Plan (see Section 3.14.2). The incremental increase in consumption would not be significant, and if the required facilities were provided, no adverse impacts to water supply would occur.

Sewer Facilities: The alternative plan would have the same equivalent density (12.4 persons/acre) as the proposed plan and effects on the sewer facilities would be as described in Section 3.15.2. The project-related sewage flows would represent an incremental increase on a cumulative, regional basis. New sewer facilities and connections would be required in the immediate area to serve the project development, and would avoid any significant impacts.

Solid Waste: Based on the generation rates listed in Section 3.16.2, and the alternative plan uses, a total of 178.6 tons/week of solid waste would be generated from the residential areas of the site. This would result in an incremental reduction in landfill capacity on a cumulative, regional basis, and would be substantially the same as the proposed project.

Fire Protection: Development under the alternative plan would be the same as the proposed project. An incremental increase in demand for fire protection services would occur as the specific plan area built out, but no significant impacts would result.

Police Protection: Additional staff and equipment would be required to serve the added population as development occurs, but the incremental increase in demand would not be significant. The effects of the alternative plan development on police protection would be similar to the proposed plan.

Energy: Energy requirements for the alternative plan would be similar to the proposed plan, total projected energy use would be 229,443 kWh/day of electricity, 14,728 therms/day of natural gas, and 19,669 gal/day of fuel for vehicular use. No unique or unusual demand would be associated with the project development and no mitigation measures would be necessary. Conservation measures should be implemented at the specific project level to minimize energy use to the extent feasible.

Socioeconomics: No substantial differences exist between the alternative and proposed plans. Population would increase slightly under the alternative plan due to the increase in total dwelling units (from 15,294 to 15,356). The alternative plan provides more multi-family units than the adopted plan, which is more consistent with current market demands. The Employment Park use is also retained in the alternative plan to provide onsite employment and a more balanced community. No significant impacts would be associated with this issue.

4.3 NO DEVELOPMENT ALTERNATIVE

This alternative would involve leaving the property in its current, undeveloped condition. If no development occurs on the site at this time, the potential adverse

impacts associated with the project would be avoided. However, the property is designated and zoned for urban development, and this alternative would not implement the City's General Plan. Beneficial effects associated with development, including the provision of housing and employment opportunities, would also not be achieved. The potential for development in accordance with the adopted Specific Plan would remain unless a General Plan Amendment or zone change were initiated.

SECTION 5
UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL IMPACTS

The proposed Specific Plan Amendment will change the land use designations on the El Rancho del Rey property. Development according to the proposed plan would have significant impacts which cannot be reduced to an insignificant level if the project is implemented. These are described below.

Biological Resources

The proposed project would result in the elimination of existing sensitive habitats and species within the project area. This loss can be partially mitigated through the retention of natural open space as shown on the plan, and the proposed revegetation program. However, mitigation to insignificance could only be achieved with an alternative that retained additional sensitive habitat (see Section 4 for specific alternatives).

Landform

The filling of the north leg of Rice Canyon would not conform with the General Plan goals for maintaining this canyon in its natural condition. This significant impact can only be mitigated through design alternatives that would not require filling of the canyon.

Air Quality

Increased density and population associated with the proposed plan amendment would exceed the projections anticipated by regional forecasts used in air quality planning. On a cumulative basis this could adversely affect the attainment of air quality goals in the San Diego region. Mitigation measures are available to reduce project generated emissions, but if development is not reduced elsewhere in the region to offset the project increase, the impact cannot be mitigated to insignificance.

SECTION 6
RELATIONSHIP BETWEEN LOCAL SHORT-TERM USE OF THE
ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT
OF LONG-TERM PRODUCTIVITY

The proposed Specific Plan Amendment and ultimate development would change the land use onsite from primarily low-density residential designations to a higher density mixed residential project with opportunities for employment, educational and recreational uses in an area that is growing rapidly.

The General Plan designates the property for uses as indicated by the adopted Specific Plan, thus envisions the long-term use of this site for urban development. The key difference with the proposed amendment involves the development of the north leg of Rice Canyon. The proposed fill in this canyon would preclude the long-term use as natural open space, and retention of biological habitats as encouraged by the General Plan. The proposed project would provide recreational use in this area, while retaining smaller areas of natural open space in other portions of the plan.

The following discussion is a summary of the project-related impacts that are significant on a cumulative basis (when combined with other existing, approved, and reasonably foreseeable future projects). A more detailed impact analysis for each issue is included in Section 3 of this EIR. Please refer back to the appropriate subsection for the complete analysis.

Traffic Circulation

The total project traffic in combination with 1995 development within the eastern Chula Vista area was evaluated in a travel forecast and the traffic analysis for this project. The impacts associated with cumulative traffic were identified, and the road improvements needed to accommodate the total traffic generation were identified. All of the cumulative impacts can be mitigated to insignificance if the road improvements are provided in conjunction with need. The improvements required for the proposed project will be provided at the time specific development projects within the plan area are processed.

Air Quality

The San Diego Air Basin currently exceeds air quality standards. In order to meet air quality goals, a State Implementation Program (SIP) has been developed based on projected growth in the region. The proposed project would exceed the assumptions used in developing the SIP, and represents an increase beyond planned regional growth, project-related emissions would have an incremental, cumulative impact on regional air quality.

SECTION 7
IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WILL RESULT
FROM THE PROPOSED PROJECT

Implementation of either the adopted or the proposed project would commit the project site to long-term urban development (residential, employment park, recreational, educational and public facilities uses). Development of the project site will require commitment of several types of limited resources for both actual construction and long-term operation. These include such resources as lumber and other forest products, sand and gravel, asphalt, petrochemical construction material, various metals, equipment and fuels. Many of these nonrenewable or nonrecyclable resources and their consumption represents a minor addition to the cumulative use of such resources nationwide.

Development of the site would result in an increased incremental demand on energy and water resources, waste water treatment facilities, solid waste disposal services, and community services such as police and fire services. Grading of the site for development would alter the existing site topography and ambient noise levels in the project vicinity would increase due to higher traffic volumes as well as other noise sources associated with urban activities.

SECTION 8
GROWTH INDUCING IMPACT OF THE PROPOSED ACTION

This section considers the ways development of the site could encourage economic or population growth, either directly or indirectly, in the surrounding environment. The considerations in this section include project effects on the location, extent or timing of growth in the area.

The project site is currently designated for urban levels of development as indicated by the adopted Specific Plan and is surrounded by developed or approved residential projects. There are circulation element roadways bordering and crossing the property which provide excellent access to the site. The proposed project would require the development of an internal roadway network, but no new offsite roadway extensions would be necessary. Improvements to the circulation system will be in conformance with those needed to serve total 1995 traffic for planned developments in the eastern Chula Vista area and would not be growth inducing.

The project would also require onsite facility improvements including water and sewer infrastructure, schools and other public services. The increased project density proposed by the amendment would not require changes in the sizing of existing and planned infrastructure improvements, thus no new unanticipated growth would be accommodated as a result of this project.

Based on the project's location in the City of Chula Vista, within an area which is currently developing, and which has been planned for urban development, no new unanticipated growth is anticipated due to the proposed project.

SECTION 9
ORGANIZATIONS AND PERSONS CONSULTED

City of Chula Vista

Engineering Department

Charles H. Glass - City Traffic Engineer

Fire Prevention Bureau

T.R. Monsell - Fire Marshall

Planning Department

Douglas D. Reid - Environmental Review Coordinator

Police Department

William J. Winters - Director of Public Safety

Cinti & Associates

Gary Cinti
Kim Chapman

The Gersten Companies

Louis Cohen
William J. Robens

James A. Hutchinson & Associates

James A. Hutchinson - Project Engineer

Otay Water District

Manuel Arroyo - District Planning Engineer

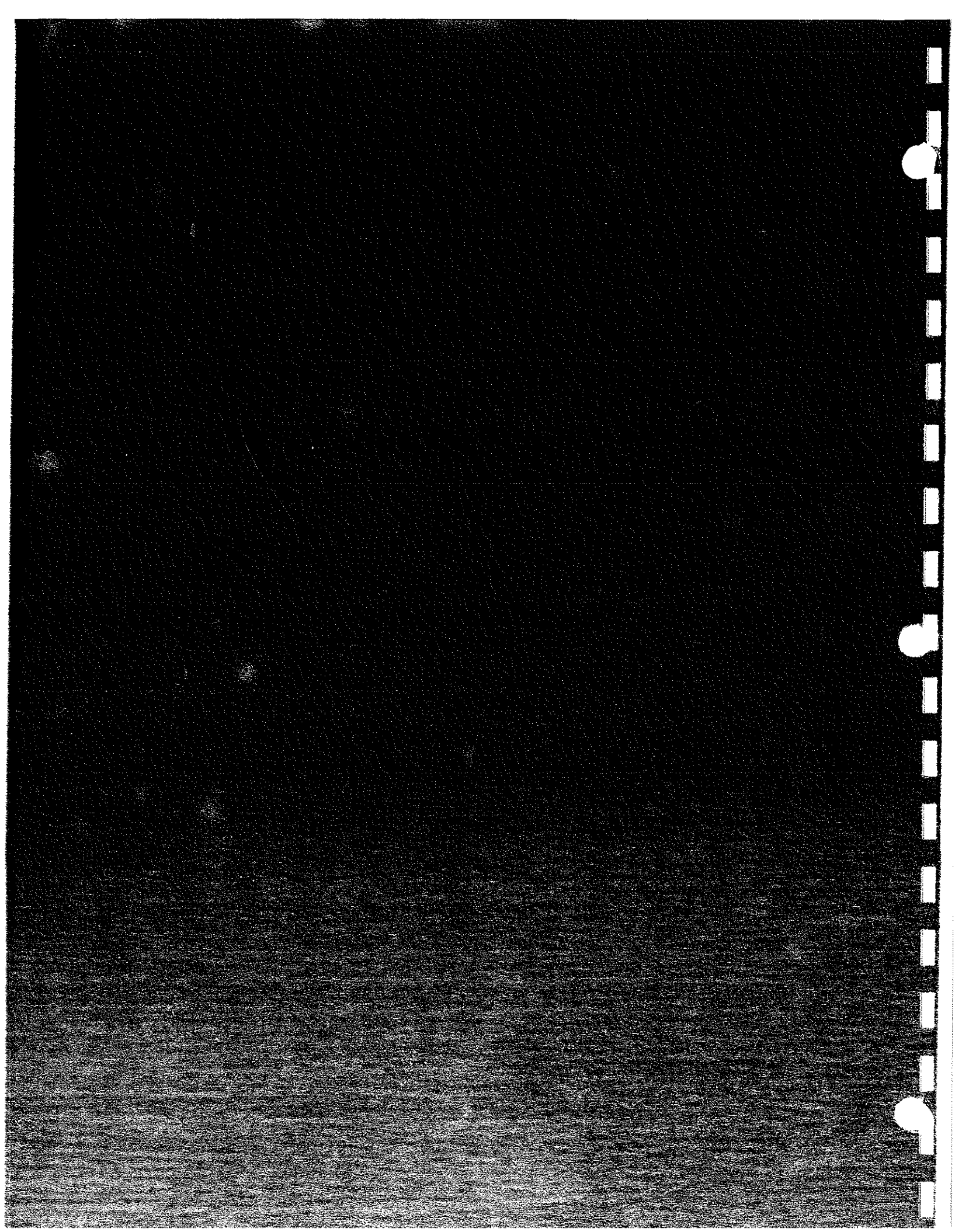
County of San Diego

Department of Public Works

R.J. Massman, Director

San Diego Association of Governments

Robert Parrott



SECTION 10

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SECTION 11
CERTIFICATION OF ACCURACY AND QUALIFICATIONS

This report was prepared by WESTEC Services, Inc. of San Diego, California. Members of the WESTEC Services' professional staff contributing to the report are listed below:

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Thomas A. Demere, M.S. Geology - Paleontological Resources

Public Affairs Consultants, John J. McTighe, M.P.A. - Fiscal Analysis

Urban Systems Associates, Andrew P. Schlaefli - Transportation/Circulation

I hereby affirm that to the best of our knowledge and belief, the statements and information contained herein are in all respects true and correct and that all information concerning the potentially significant environmental effects of the project has been included and fully evaluated in this draft EIR.

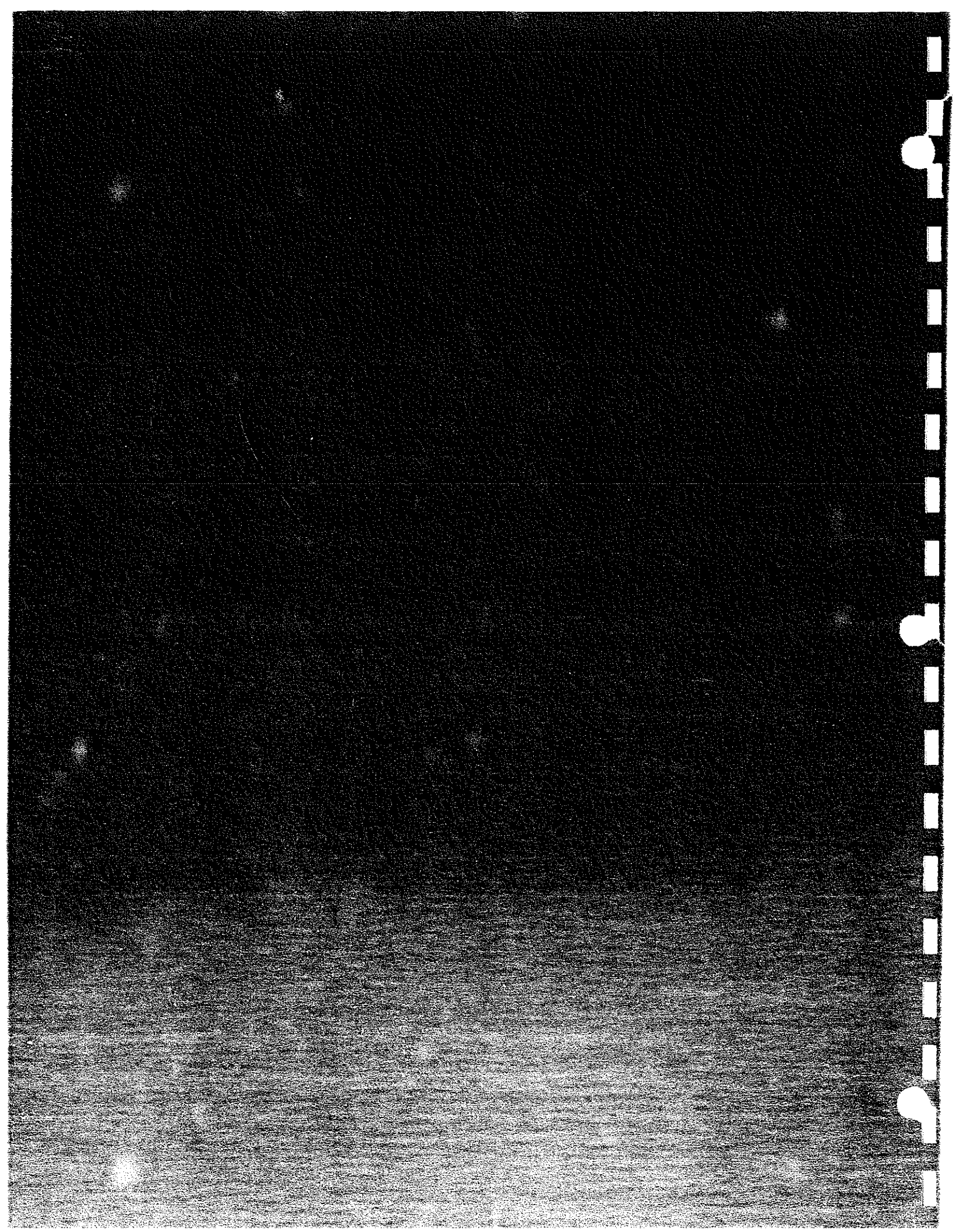

Ann M. Nussbaum
Project Manager



RESPONES TO PUBLIC COMMENTS

EL RANCHO DEL REY
SPECIFIC PLAN AMENDMENT EIR

Section 15132 of the State of CEQA Guidelines requires that the lead agency respond to comments received as a result of public review of a Draft EIR. The City of Chula Vista received seven letters of comments which required responses, and these are reproduced verbatim with responses directly following them. The letters of comment and responses, the findings and statement of overriding considerations, and the evaluation of adequacy report, in conjunction with the EIR text, comprise the Final EIR for the El Rancho del Rey project.



SUPPLEMENTAL TRAFFIC REPORT

SUPPLEMENT TO THE
TRANSPORTATION ANALYSIS FOR
EL RANCHO DEL REY
PREPARED FOR: THE GERSTEN COMPANY

MARCH 20, 1985

PREPARED BY:
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I A B L E S

<u>TABLE NUMBER</u>	<u>SUBJECT</u>	<u>PAGE</u>
TABLE 1	COMPARISON OF TRAFFIC GENERATED ADOPTED VS MODIFIED PLAN.	3-A
TABLE 2	COMPARISON OF PROJECT AND CUMULATIVE ADTs AT VARIOUS LOCATIONS	5-B

A P P E N D I C E S

<u>APPENDIX</u>	<u>SUBJECT</u>	<u>PAGE</u>
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<u>FIGURE NUMBER</u>	<u>SUBJECT</u>	<u>PAGE</u>
FIGURE 1	1995 SANDAG PROJECT ONLY ADT FORECAST TO REFLECT MODIFIED PROJECT.	4-A
FIGURE 2	1995 SANDAG CUMULATIVE ADT FORECAST. . .	5-A

SUPPLEMENT TO THE TRANSPORTATION ANALYSIS
FOR EL RANCHO DEL REY

INTRODUCTION

THIS SUPPLEMENT TO THE AUGUST 20, 1984 EIR TRANSPORTATION ANALYSIS WAS PREPARED FOR THE GERSTEN COMPANY FOR THE PURPOSE OF ADDRESSING THREE BASIC ISSUES. FIRST, THE IMPACTS OF A MODIFIED SPECIFIC PLAN WHICH PROPOSES 5141 RESIDENTIAL UNITS AND PROVIDES 141.3 ACRES OF EMPLOYMENT PARK WAS TO BE DETERMINED. SECOND, CUMULATIVE IMPACTS OF THE MODIFIED PLAN AND OTHER PROJECTS ON THE H STREET I-805 AND TELEGRAPH CANYON I-805 INTERCHANGES WERE TO BE EVALUATED. THIRD, THE CUMULATIVE IMPACTS OF THE EL RANCHO DEL REY AND OTHER PROJECTS ON THE INTERCHANGES WITH I-805 AND ON THE FREEWAY ITSELF WERE TO BE IDENTIFIED.

IN ORDER TO IDENTIFY MODIFIED PLAN IMPACTS, THE TOTAL NUMBER OF TRIPS WHICH ARE LIKELY TO BE GENERATED WERE CALCULATED. THE CALCULATIONS WERE BASED ON THE TRAFFIC GENERATION RATES USED IN THE ORIGINAL EIR TRANSPORTATION ANALYSIS (SEE **APPENDIX A**). THEN THE TOTAL TRAFFIC WAS COMPARED TO THE TOTAL TRAFFIC GENERATED BY THE ADOPTED PLAN (CORRECTED)[1] AND AN ADJUSTMENT FACTOR BASED ON THE RATIO OF TOTAL TRAFFIC GENERATION WAS CALCULATED. THIS ADJUSTMENT FACTOR WAS THEN APPLIED TO THE SANDAG PROJECT ONLY TRAVEL FORECAST FOR KEY STREET SEGMENTS IN THE PROJECT AREA. THE

1. THE ORIGINAL ADOPTED PLAN LAND USE NUMBERS WERE CORRECTED TO REFLECT THE ACTUALLY ADOPTED PLAN.

EL RANCHO DEL REY
MARCH 20, 1985

URBAN SYSTEMS ASSOCIATES, INC.

RESULTING ADTs WERE THEN USED AS THE BASIS FOR IDENTIFYING AND EVALUATING IMPACTS FOR BOTH CUMULATIVE AND PROJECT ONLY PURPOSES.

SANDAG FORECAST DATA WAS EXCLUSIVELY USED FOR THIS ANALYSIS. BOTH 1995 CUMULATIVE FORECASTS AND PROJECT ONLY FORECASTS FOR EL RANCHO DEL REY WERE REVIEWED AND WHERE NECESSARY ADJUSTED TO REFLECT THE MODIFIED PLAN. FOR FREEWAY LINKS, THE PERCENTAGE OF PROJECT TO TOTAL TRAFFIC WAS THEN CALCULATED.

AT THE H STREET INTERCHANGE WITH I-805, INTERSECTION CAPACITY UTILIZATION (ICU) AND LEVELS OF SERVICE (LOS) WERE CALCULATED. MITIGATION ALTERNATIVES TO MAINTAIN A GOOD LEVEL OF SERVICE ARE ALSO IDENTIFIED AND DISCUSSED BUT DETAILED MITIGATION FEASIBILITY EVALUATIONS WERE NOT CONDUCTED. SPECIFIC IMPROVEMENTS OF A LONG TERM PERMANENT NATURE WILL BE THE SUBJECT OF FUTURE MONITORING AND REVIEW EFFORTS FOR ICU AND LOS DEFINITIONS AND CRITERIA SEE **APPENDIX B.**

EL RANCHO DEL REY
MARCH 20, 1985

URBAN SYSTEMS ASSOCIATES, INC.

THE MODIFIED PLAN

TABLE 1 SUMMARIZES THE LAND USES FOR THE ADOPTED (CORRECTED) AND MODIFIED PLAN. ALSO SHOWN IN TABLE 1 TRAFFIC GENERATED AS A RESULT OF THESE REVISIONS. AS CAN BE OBSERVED FROM THE TABLE, AN INCREASE OF 3288 ADT RESULTS FROM THE INCREASE OF 553 DWELLING UNITS. THE INCREASE OF 141.3 ACRES OF EMPLOYMENT CENTER RESULTS IN THE GENERATION OF AN ADDITIONAL 21,195 ADT. THE NET CHANGE IN TRIPS GENERATED FROM THE PROJECT TO BE USED FOR FACTORING THE SANDAG PROJECT ONLY TRAVEL FORECAST IS THEREFORE 24,483 ADT.

TABLE 1
**COMPARISON OF TRAFFIC GENERATED
 ADOPTED VS MODIFIED PLAN**
EL RANCHO DEL REY

<u>USE</u>	<u>ADOPTED PLAN*</u>	<u>ADT</u>	<u>MODIFIED PLAN*</u>	<u>ADT</u>	<u>CHANGES IN ADT</u>
Low Density Residential (0.6)	3197 D.U.	31,970	2629 D.U.	26,290	-5680
Medium Density Residential (6+)	<u>1391 D.U.</u>	<u>11,128</u>	<u>2512 D.U.</u>	<u>20,096</u>	<u>+8968</u>
Subtotal	4588	43,098	5141	46,386	+3288
Employment Park	0	0	141.3	21,195	<u>+21,195</u>
				NET ADT INCREASE	24,483

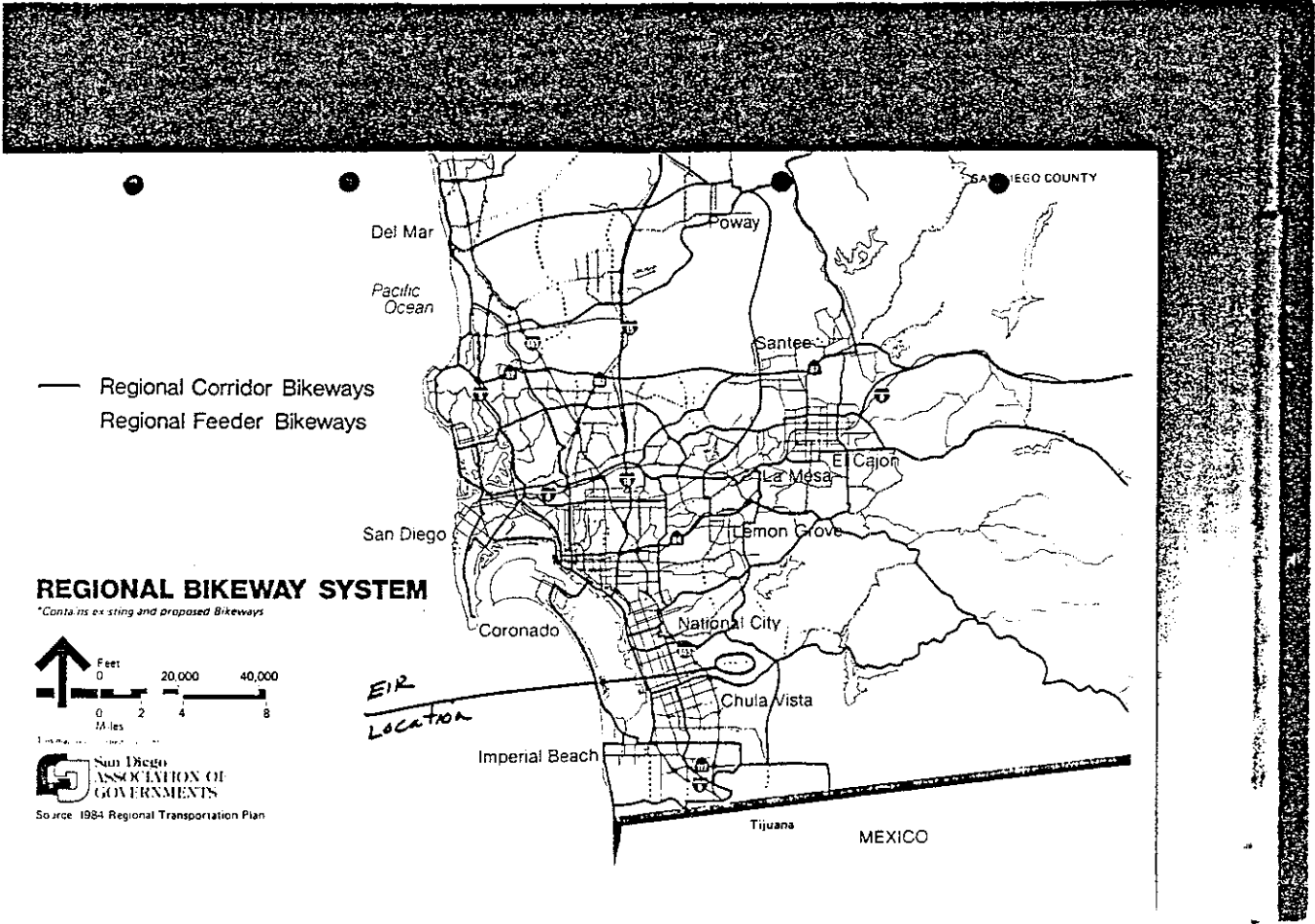


FREEWAY AND STREET IMPACTS

TO DETERMINE PROJECT IMPACTS ON THE STREET SYSTEM, THE SANDAG PROJECT ONLY TRAVEL FORECAST FOR 1995 WAS ADJUSTED TO REFLECT THE CHANGE IN TRAFFIC GENERATED AS A RESULT OF THE MODIFIED PLAN. **FIGURE 1** SHOWS THE ADJUSTED SANDAG PROJECT ONLY FORECAST FOR 1995. IT SHOULD BE NOTED THAT ONLY ARTERIALS AND FREEWAY VOLUMES WERE ADJUSTED. ALSO, THE FACTOR (1.57) WAS DERIVED FROM THE RATIO OF TOTAL TRIPS GENERATED FROM THE RESIDENTIAL AND EMPLOYMENT PARK LAND USES AS SHOWN IN **TABLE 1**. IT COULD BE ARGUED THAT THE FACTORING METHOD USED IN THIS ANALYSIS IS INAPPROPRIATE BECAUSE IT DOES NOT TAKE INTO ACCOUNT THE LOCATION OF THE LAND USE CHANGES. HOWEVER SINCE THE IMPACTS BEING ADDRESSED IN THIS SUPPLEMENTAL EVALUATION ARE ON I-805 AND AT ITS INTERCHANGES WITH H STREET AND TELEGRAPH CANYON, THE FACTORING METHOD USED IS APPROPRIATE. THIS IS DUE TO THE FACT THAT THE PROJECT TRAFFIC ACCUMULATES BY THE TIME THE FREEWAY IS REACHED AND THEREFORE THE LOCATIONAL DISTORTIONS ASSOCIATED WITH FACTORING METHODS WILL NOT AFFECT THIS ANALYSIS.

FIGURE 1 SHOWS THAT THE MODIFIED PROJECT TRAFFIC ON H STREET EAST OF I-805 IS 34,200 ADT. MODIFIED PROJECT TRAFFIC ON TELEGRAPH CANYON ROAD EAST OF I-805 IS 11,100 ADT. ON I-805 PROJECT TRAFFIC BETWEEN BONITA ROAD AND H STREET IS 26,800 ADT; BETWEEN H STREET AND TELEGRAPH CANYON ROAD IT IS 6100 ADT AND SOUTH OF TELEGRAPH CANYON ROAD IT IS 9300 ADT.

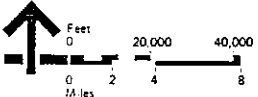
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— Regional Corridor Bikeways
 - - - Regional Feeder Bikeways

REGIONAL BIKEWAY SYSTEM

**Contains existing and proposed Bikeways*



San Diego ASSOCIATION OF GOVERNMENTS

Source: 1984 Regional Transportation Plan

*EIR
 LOCATION*

MEXICO



Metropolitan Transit Development Board

520 F Street, Suite 400 San Diego, California 92101 (619) 441-1444

November 7, 1984

G-E 4

Mr. Douglas Reid
Environmental Review Coordinator
City of Chula Vista
P.O. Box 1087
Chula Vista, CA 92012

Dear Mr. Reid:

SUBJECT: EL RANCHO DEL REY SPECIFIC PLAN AMENDMENT -
DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) EIR 83-2

Thank you for the opportunity to comment on this DEIR. Our comments concern transit impacts and mitigations associated with implementation of the proposed plan.

The EIR states that the "proposed Specific Plan Amendment has the potential for adverse traffic impacts when combined with traffic from other developments in the project vicinity." A number of road improvements are outlined as mitigations to reduce impacts to insignificance. However, the EIR neglects to consider transit mitigations for traffic impacts. The proposed plan amendment would permit 5,928 dwelling units, as well as a 93.4 acre employment park. The EIR should consider the issue of transit access for residents and employees in the plan area. Consideration should be given to a plan policy requiring developer participation in enhancing transit facilities and operations as an integral part of plan implementation. Such developer participation would help mitigate traffic impacts, and help ensure that adequate transit facilities and service are available for potential project-generated transit users.

Please contact me if I may be of assistance in addressing these comments.

Sincerely,

Helene B. Kornblatt
Senior Environmental/Transportation Planner

HBK:dkd

cc: Mr. Bill Gustafson, SC00T

Member Agencies: City of Chula Vista, City of El Cajon, City of Imperial Beach, City of La Mesa, City of Lemon Grove, City of National City, City of San Diego, County of San Diego, State of California

Memorandum

To : Mrs. Terry Roberts
Manager, State Clearinghouse
Office of Planning and Research

Date: November 20, 1984
File : 11-SD-805-6.1

From : DEPARTMENT OF TRANSPORTATION
District 11

Subject: SCI#83060803, EJ Rancho del Rey Specific Plan Amendment

13

Caltrans District 11 comment on the draft EIR for this amendment is as follows:

Page 1-3 acknowledges an increase in traffic from 44,000 ADT to 73,900 ADT but concludes that all potential impacts can be mitigated to insignificance. That conclusion, however, is flawed by the failure of the EIR to consider impacts to interstate Route 805.

The traffic generated by the proposed amendment and by other developments in the area has the potential to overload the interchanges and main lanes of Interstate 805. The final EIR should analyze peak-hour impacts to the freeway and identify any additional mitigation needed. Mitigation measures generally require funding by local government or project proponents.

If you wish to consult us regarding traffic information, our contact person is Kurth Barnes, District Project Studies Engineer, (619)237-6952.

James T. Cheshire
James T. Cheshire, Chief
Environmental Planning Branch

JTC:jk

A supplemental report was prepared by Urban Systems Associates, Inc. in response to this comment and the revised project changes. The project impacts on the freeway system would be relatively minor. The traffic volumes from the project, in addition to the forecasted volumes, can be accommodated by the eight-lane freeway, Interstate-805.

The project will impact the 'H' Street/I-805 Interchange; however, these impacts can be mitigated to an acceptable level of service through measures discussed in the supplemental report.

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& RESEARCH

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OFFICE OF PLANNING AND RESEARCH

1400 TENTH STREET
SACRAMENTO, CA 95814



November 30, 1984

Douglas D. Reid
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA. 92010

Subject: El Rancho del Rey Specific Plan Amendment, SCH #83060803

Dear Mr. Reid:

The State Clearinghouse submitted the above named draft Environmental Impact Report (EIR) to selected state agencies for review. The review period is closed and the comments of the individual agency(ies) is(are) attached. If you would like to discuss their concerns and recommendations, please contact the staff from the appropriate agency(ies).

When preparing the final EIR, you must include all comments and responses (CEQA Guidelines, Section 15132). The certified EIR must be considered in the decision-making process for the project. In addition, we urge you to respond directly to the commenting agency(ies) by writing to them, including the State Clearinghouse number on all correspondence.

In the event that the project is approved without adequate mitigation of significant effects, the lead agency must make written findings for each significant effect and it must support its actions with a written statement of overriding considerations for each unmitigated significant effect (CEQA Guidelines Section 15091 and 15093).

If the project requires discretionary approval from any state agency, the Notice of Determination must be filed with the Secretary for Resources, as well as with the County Clerk. Please contact Mark Boehme at (916) 445-0613 if you have any questions about the environmental review process.

Sincerely,

John B. Ohanian
Chief Deputy Director

cc: Resources Agency
attachment

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DEC 3 1984

OFFICE OF PLANNING AND RESEARCH
CHULA VISTA, CALIFORNIA



DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 2111
LOS ANGELES, CALIFORNIA 90033-2111

January 14, 1985

RE: 110
ATTENTION OF
SPLPD-RP

Mr. Douglas Reid
Environmental Review Coordinator
City of Chula Vista
P.O. Box 1087
Chula Vista, California 92102

Dear Mr. Reid:

This is in response to a notice from your office, dated October 19, 1984, which requested review and comments on the Draft Environmental Impact Report for the El Rancho del Rey Specific Plan Amendment.

The proposed El Rancho del Rey project is in the vicinity of proposed Corps flood control projects in Telegraph Canyon and Sweetwater Channel; however the El Rancho del Rey Project would not conflict with the Corps projects.

We are concerned with project-related loss of sensitive habitat, especially vernal pools. Although no individual permit, pursuant to section 404 of the Clean Water Act, is required for the filling of these pools at this time, the Corps is currently reevaluating the regulations to determine if the nationwide permit applies to vernal pools.

Thank you for the opportunity to review and comment on this document.

Sincerely,

[Signature]
Cari F. Enson
Chief, Planning Division

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BY _____

JAN 24 1985

PLANNING DEPARTMENT
CHULA VISTA, CALIFORNIA

1

Comment noted, no response necessary.

2

The vernal pools located on the project site were considered of low preservation priority due to the small number of pools and lack of rare or endangered species associated with these pools. Since the onsite vernal pools were considered low priority for preservation as part of the Vernal Pool Preservation Program, and since the onsite pools were only marginally categorized as vernal pools, the nationwide permit should apply.

DEPARTMENT OF FISH AND GAME

245 W. Broadway, Suite 350
Long Beach, CA 90802-4467
(213) 590-5113



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December 3, 1984

BY.....

DEC 4 1984

PLANNING DEPARTMENT
CIBOLA VISTA, CALIFORNIA

Mr. Douglas D. Reid
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 92010

Dear Mr. Reid:

We have reviewed the Draft EIR describing a proposed amendment to the El Rancho del Rey Specific Plan (SCH 83060803) for the express purpose of increasing the maximum permitted dwelling units from 4,220 to 5,928 within the 1,673-acre project site. Also, the proposed amendment would allow development of industrial, commercial, and office uses that are not provided for in the adopted Specific Plan. The subject property is located east of Interstate 805, south and west of Otay Lake Road and north of Telegraph Canyon Road.

The document adequately assesses the biological resources that could be affected by the proposed project. However, the proposed mitigation measures are inadequate to reduce cumulative impacts to a level of non-significance.

We agree with the assessment on pages 3-39 through 3-43 identifying impacts that the proposed specific plan could have on biological resources as compared to the adopted plan. That assessment clearly indicates that the proposed plan would be substantially more detrimental to biological resources than the adopted plan. Additionally, our field biologist familiar with the project site reports that the proposed plan significantly reduces the biological resources within the project site and provides less protection to sensitive wildlife habitat than does the adopted Specific Plan. For these reasons, we recommend that the proposed Specific Plan be denied and that the adopted plan remain in effect.

The project sponsor should be advised that diversion of the natural flow or changes in the channel, bed, or banks of any river, stream, or lake will require notification to the Department of Fish and Game as called for in the Fish and Game Code. This notification (with fee) and the subsequent agreement must be completed prior to initiating any such changes. Notification should be made after the project is approved by the lead agency.

3

The proposed amendment has been revised to allow a maximum of 4634 dwelling units. Refer to the Revised Project Description in Section 2 of the Evaluation of Adequacy of the El Rancho del Rey Specific Plan Amendment EIR.

4

The revised project proposes to retain the north-leg of Rice Canyon as open space. In addition, a large earthen-bottomed culvert would be provided under the east side of the "loop road" to allow wildlife movement along the extensive open space corridor. The changes to the proposed project would substantially reduce biological impacts associated with development of the rural area.

5

The revised plan proposed an open space system that would be very similar to the adopted plan. For this reason, biological impacts would also be very similar. Refer to the revised plan for the exact alignment of the revised open space system.

6

Comment noted, no response necessary.

Mr. Douglas D. Reid

-2-

December 3, 1984

Thank you for the opportunity to review and comment on this project. If you have any questions, please contact Jack L. Spruill at (213) 590-5137.

Sincerely,

Bruce E. Shinn

Fred A. Worthley Jr.
Regional Manager
Region 5

cc: ESB, Sacramento
State Clearinghouse
Resources Agency
H. McKinnie



Dedicated to Community Service

10555 JAMACHIA BOULEVARD, SPRING VALLEY, CALIFORNIA 92078
TELEPHONE 462-2222, AREA CODE 619

August 29, 1984

Mr. Douglas Reid
Environmental Review Coordinator
City of Chula Vista
Planning Department
276 Fourth Avenue
Chula Vista, CA 92010

Subject: El Rancho Del Rey Specific Plan Amendment EIR
Work Order No. 1102.3

Dear Mr. Reid:

We appreciate the opportunity you have given us to review the check print draft EIR for the El Rancho Del Rey Specific Plan Amendment. All of the statements made in the water service section (3.14) are correct except for the anticipated funding to construct the required water facilities. It is not anticipated that funding will be provided by the Otay Water District. It is assumed that funding will be by local developers only.

If you have any questions please call me.

Very truly yours,

Manuel Arroyo

Manuel Arroyo
District Planning Engineer

MA:CP

7

Comment noted. The EIR states that specific responsibilities for constructing the water system components would be addressed at the time SPA plans and tentative maps are filed. Local developers would be responsible for onsite improvements.

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BY.....

AUG 30 1984

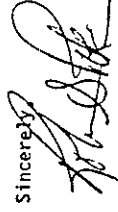
PLANNING DEPARTMENT
CHULA VISTA, CALIFORNIA

Mr. D. Reid

- 2 -

June 7, 1983

If you have any questions regarding this letter, please call the Land Planning Section of the Land & Environmental Department at 232-4252, extension 1253. If you have any questions about distribution of energy to or within the project site, please call the South Bay Planning Department at 425-7673. Questions on distribution would probably be more appropriate when the project is further along.

Sincerely,

Robin S. Pike
Land Assistant

RSP:dc
Attachment

cc: J.S. Espinoza
M.W. Danna
H.E. Richmond
D.L. Rose

APPENDIX A
TRIP GENERATION RATES
EL RANCHO DEL REY

<u>Land Use</u>	<u>Trip Generation Rate</u>
Residential 0-5 units/acre ¹	10 trips/unit/day
Residential 6+ units/acre ²	8 trips/unit/day
Employment Park	150 trips/acre/day
Public Facilities	60 trips/acre/day
Parks and Recreation	40 trips/acre/day
Open Space	0 trips/acre/day
Schools	1 trip/student/day

¹0-6 units/acre for proposed and alternative plans

²7+ units/acre for proposed and alternative plans

SOURCE: City of San Diego Engineering and Development Dept.,
Transportation and Traffic Engineering Division,
"Recommended Weekday Trip Generation Rates Summary",
January 10, 1983.

APPENDIX B

LEVEL OF SERVICE AND INTERSECTION CAPACITY UTILIZATION (ICU)

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Level of Service concept denotes any one of a number of differing combinations of operating conditions which may take place as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the Highway Capacity Manual of 1965. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements regardless of present signal timing. The capacity per hour of green time for each approach is calculated based on the methods of the Highway Capacity Manual. The proportion of total signal time needed by each movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the Highway Capacity Manual) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

<u>Level of Service</u>	<u>Load Factor</u>	<u>Equivalent ICU</u>
A (free flow)	0.0	0.0 - 0.6
B (rural design)	0.0 - 0.1	0.61 - 0.70
C (urban design)	0.1 - 0.3	0.71 - 0.80
D (maximum urban design)	0.3 - 0.7	0.81 - 0.90
E (capacity)	0.7 - 1.0	0.91 > 1.00
F (forced flow)	Not Applicable	Not Applicable

SERVICE LEVEL A

There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

SERVICE LEVEL B

This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

SERVICE LEVEL C

At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

SERVICE LEVEL D

This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

SERVICE LEVEL E

This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

SERVICE LEVEL F

Jammed conditions. Traffic backed up from a downstream location on one of the streets restricts or prevents movement of traffic through the intersection under consideration.

San Diego
ASSOCIATION OF
GOVERNMENTS

Suite 624 Security Pacific Plaza
1200 Third Avenue
San Diego, California 92101
(619) 236-5300

November 2, 1984

Mr. Douglas Reid
Environmental Review Coordinator
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 92010

Dear Mr. Reid:

The SANDAG staff has reviewed the draft EIR for the El Rancho del Rey Specific Plan amendment and has the following comments. The comments have not been reviewed by the SANDAG Board of Directors.

1. There is no mention of the Regional Feeder Bikeway planned along H Street through the Specific Plan area. If this link is to be provided, it should be made a part of the Specific Plan. (See map enclosed)
2. The Water Consumption (Table 3-12) for parks/recreation indicates 1,340 gallons/acre/day, or 1.5 acre feet/year. This appears to be somewhat low for fully developed, largely turfed playgrounds and park area. Perhaps the ERDR Supplemental Report justifies this amount through specific water conservation techniques. If not, they should be added to the EIR, because water use in public parks is a major (and increasing) cost to park operation and maintenance budgets. It is assumed that the open space areas will not be provided with water service, except as required for protection from wildfire in the canyons.

Thank you for the opportunity to review this EIR.

Sincerely,



STUART R. SHAFER
Director of Land Use & Public Facilities

SRS/RR/ice

Enclosure

C-85-9

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NOV 05 1984

PLANNING DEPARTMENT
CHULA VISTA, CALIFORNIA

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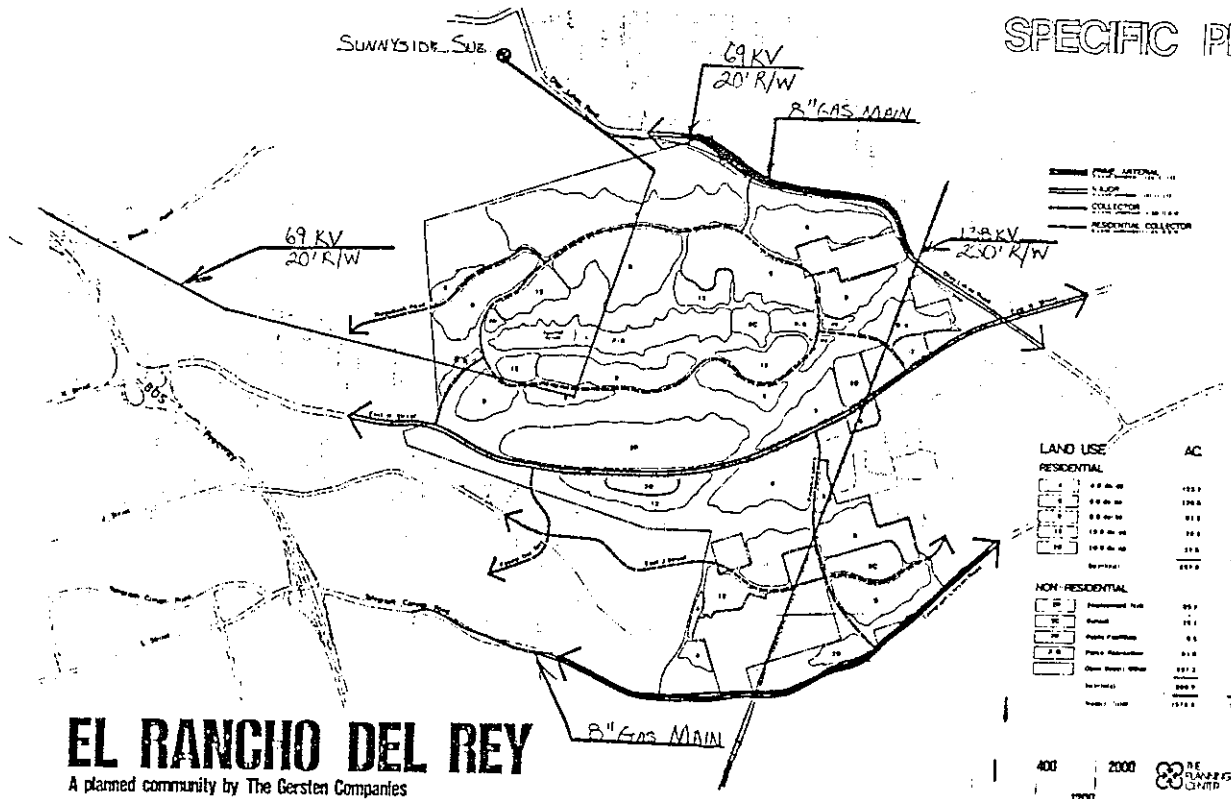
The Regional Feeder Bikeway along H Street is recognized as being part of the City's bike route system in the Circulation Element of the General Plan and, therefore, will be part of the Specific Plan. East H Street will include a bikeway designed to City of Chula Vista standards.

11

The revised plan has significantly reduced the amount of parks/recreation area by retaining the north leg of Rice Canyon as natural open space, thereby reducing the amount of water consumption associated with park maintenance. The water consumption rate of 1.5 acre-feet/year was used due to the fact that unwatered, impermeable surfaces were not subtracted from the gross park acreage. Higher consumption rates are often associated with extensively watered areas, such as golf courses. It is not anticipated that the park areas would need to be watered as extensively as golf courses.

MEMBER AGENCIES: Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santerre and Vista ADVISORY/LIAISON MEMBERS: Calif. Dept. of Transportation/U.S. Dept. of Defense and Tijuana/Bahia City, Mex.

SPECIFIC PLAN

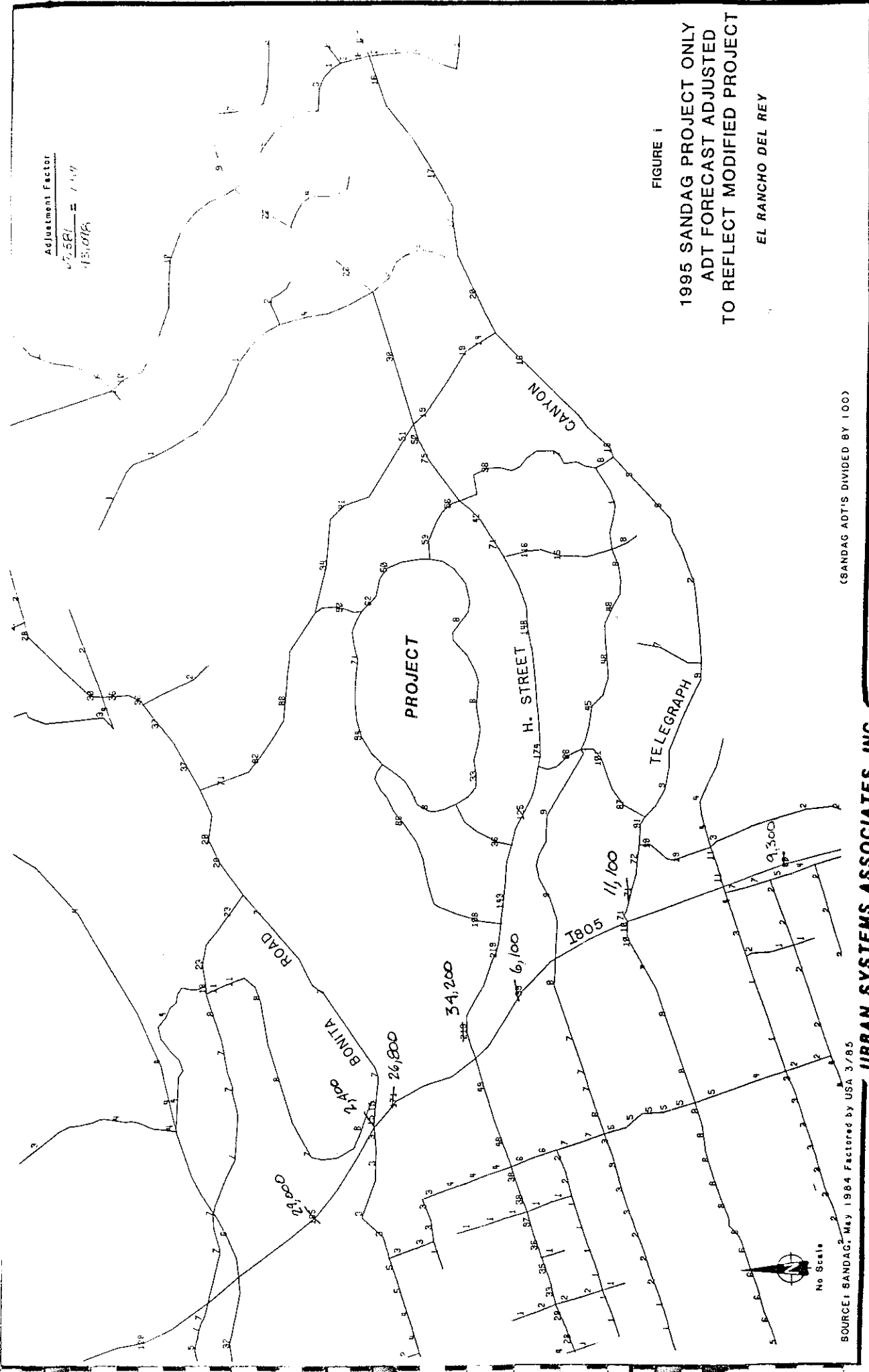


EL RANCHO DEL REY
 A planned community by The Gersten Companies

400 2000
 1200
 THE GERSTEN COMPANIES
 EXHIBIT A

APPENDIX





Adjustment Factor
 $\frac{13,581}{15,016} = 0.904$

FIGURE 1

1995 SANDAG PROJECT ONLY
 ADT FORECAST ADJUSTED
 TO REFLECT MODIFIED PROJECT

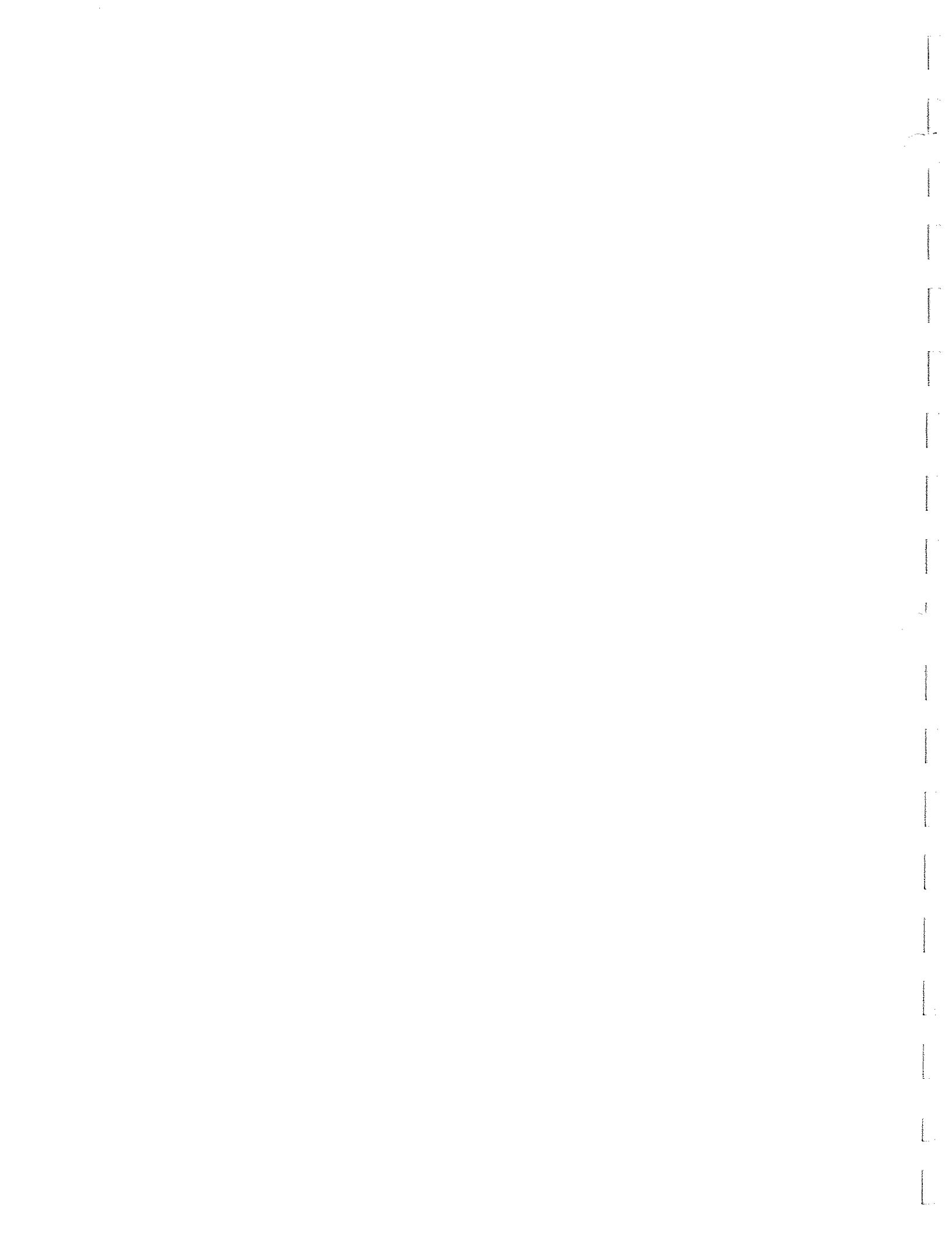
EL RANCHO DEL REY

(SANDAG ADT'S DIVIDED BY 100)

URBAN SYSTEMS ASSOCIATES, INC.

SOURCE: SANDAG, May 1984 Factored by USA 3/85

FIGURE 2 SHOWS THE TOTAL CUMULATIVE TRAFFIC FROM THE SANDAG 1995 TRAVEL FORECAST. THESE VOLUMES WERE NOT ADJUSTED BECAUSE THE PERCENTAGE OF PROJECT TRAFFIC ON THE FREEWAY AND ARTERIAL LINKS BEING EVALUATED IS VERY SMALL. **TABLE 2** COMPARES THE CUMULATIVE AND PROJECT ADTs FOR THE VARIOUS FREEWAY AND ARTERIAL LINKS WHICH ARE SIGNIFICANTLY IMPACTED BY THE PROJECT. AS CAN BE OBSERVED FROM THE TABLE HOWEVER, EXCEPT AT H STREET PROJECT TRAFFIC IS A RELATIVELY SMALL PORTION OF THE TOTAL TRAFFIC PROJECTED FOR 1995. ALSO, THE CUMULATIVE I-805 VOLUMES (121,800 TO 160,700) CAN BE ACCOMMODATED ON THE EIGHT LANE INTERSTATE FREEWAY AT A REASONABLE LEVEL OF SERVICE. AS EXPECTED THE PRIMARY PROJECT IMPACTS ARE AT THE I-805 - H STREET INTERCHANGE.



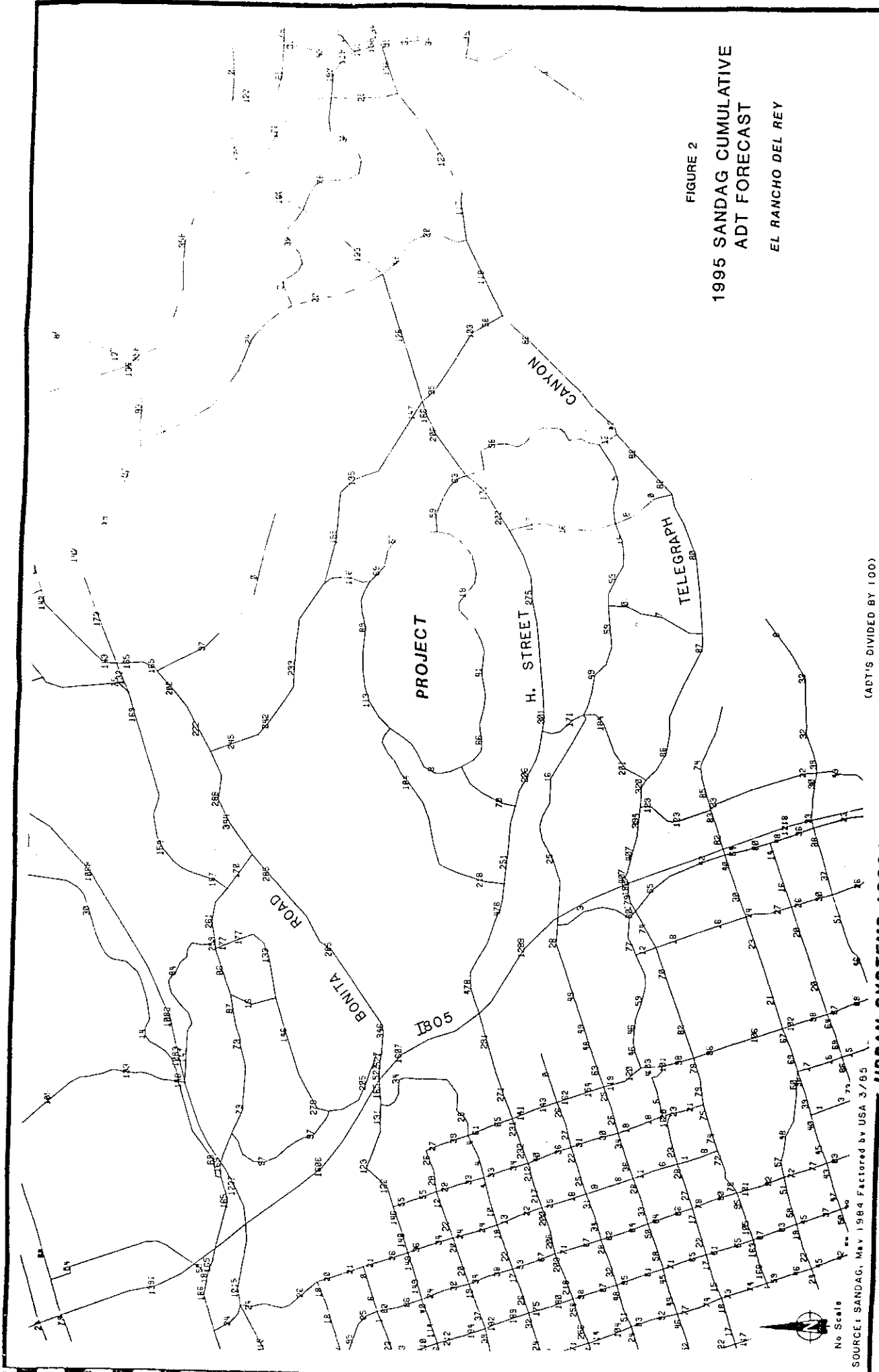


FIGURE 2
 1995 SANDAG CUMULATIVE
 ADT FORECAST
 EL RANCHO DEL REY

(ADT'S DIVIDED BY 100)

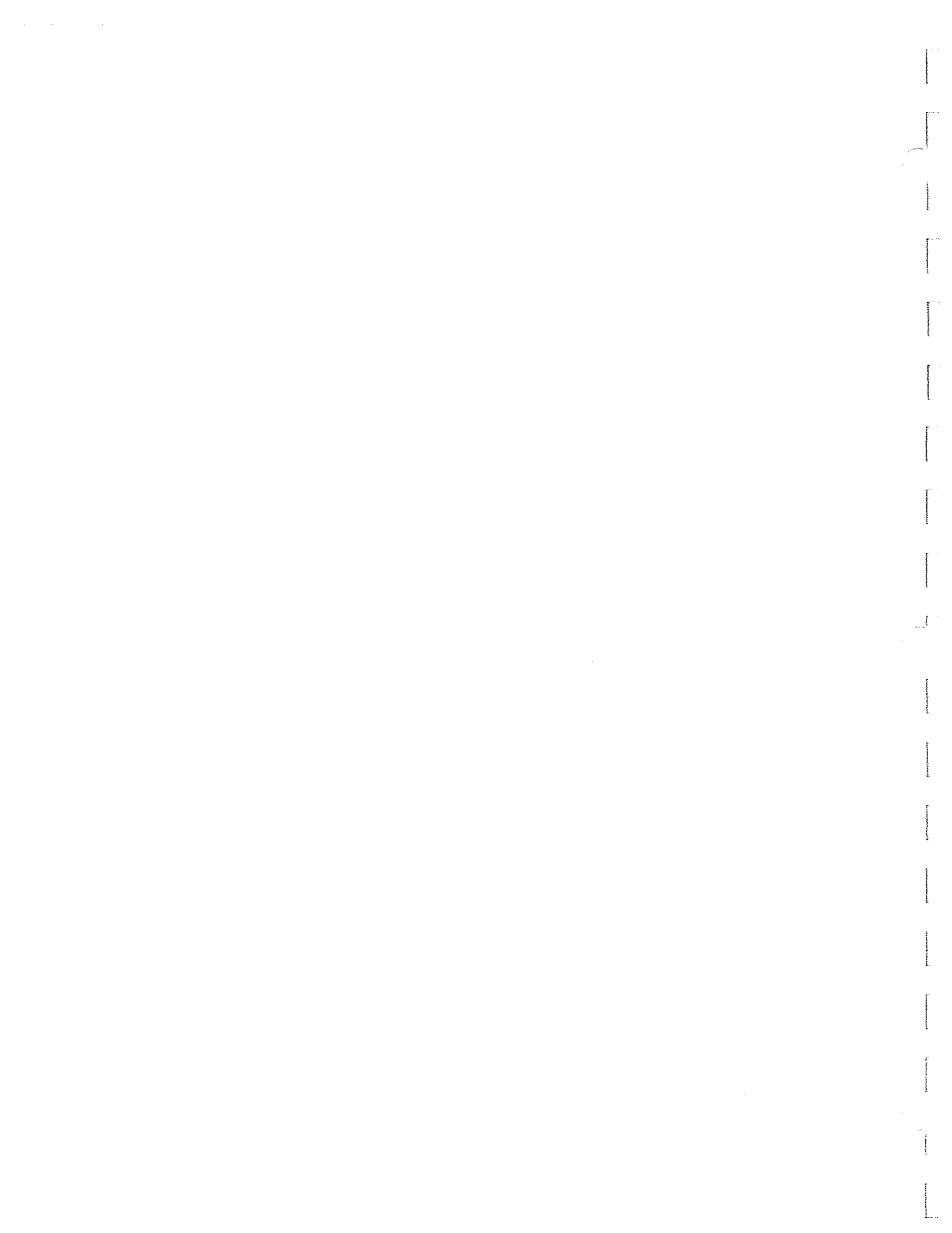
URBAN SYSTEMS ASSOCIATES, INC.

No Scale
 SOURCE: SANDAG, May 1984 Factored by USA 3/85

TABLE 2

**COMPARISON OF PROJECT AND
CUMULATIVE ADT'S AT VARIOUS LOCATIONS
EL RANCHO DEL REY**

<u>LOCATION</u>	<u>PROJECT</u>	<u>CUMULATIVE</u>	<u>PERCENT</u>
I805 N/O Bonita Road	29,000	160,600	18%
Bonita Road E/O I-805	2,400	52,700	5%
I-805 S/O Bonita Rd.	26,800	160,700	17%
H. Street E/O I-805	34,200	47,800	72%
I-805 H. St. to Telegraph	6,100	128,900	5%
Telegraph Canyon E/O I-805	11,100	40,700	27%
I-805 S/O Telegraph Canyon	9,300	121,800	8%



EL RANCHO DEL REY
SUPPLEMENTAL TRAFFIC REPORT ON
EMPLOYMENT PARK IMPACTS TO "H" STREET
PREPARED FOR: THE CITY OF CHULA VISTA

MAY 15, 1985

PREPARED BY:
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EMPLOYMENT PARK IMPACTS TO "H" STREET

A. INTRODUCTION

DURING PUBLIC HEARINGS ON THE EL RANCHO DEL REY SPECIFIC PLAN AMENDMENT, MUCH DISCUSSION FOCUSED ON POTENTIAL IMPACTS OF THE EMPLOYMENT PARK. ALSO, IMPACTS ON "H" STREET PARTICULARLY AT ITS INTERCHANGE WITH I-805 WERE IDENTIFIED AS CONCERNS. THE PURPOSE OF THIS REPORT IS TO DISCUSS IMPACTS ASSOCIATED WITH DEVELOPMENT OF THE EMPLOYMENT PARK AND TO DETERMINE WHAT MITIGATION MEASURES MAY BECOME NECESSARY AS A RESULT OF DEVELOPMENT.

EMPLOYMENT PARK IMPACTS ON TELEGRAPH CANYON ROAD AND ITS INTERCHANGE WITH I-805 ARE VERY MINOR. THIS IS DUE TO THE FACT THAT VERY FEW EMPLOYMENT PARK TRIPS WILL BE ORIENTED TO TELEGRAPH CANYON. ALMOST ALL OF THE TRAFFIC GOING TO OR FROM THE EMPLOYMENT PARK WILL USE "H" STREET. CONSEQUENTLY, TELEGRAPH CANYON ROAD IS NOT EVALUATED IN THIS REPORT.

IN THE NEXT SECTION OF THIS REPORT, TRIP GENERATION AND DISTRIBUTION CHARACTERISTICS ASSOCIATED WITH EMPLOYMENT PARK AND RESIDENTIAL LAND USES ARE QUANTIFIED AND DISCUSSED. IN THE FOLLOWING SECTION SPECIFIC IMPACTS ASSOCIATED WITH EMPLOYMENT PARK ARE IDENTIFIED AND IN THE LAST SECTION OF THE REPORT MITIGATION MEASURES ARE DISCUSSED.

B. TRIP GENERATION

DURING DISCUSSIONS OF THE SPECIFIC PLAN IT WAS POINTED OUT THAT ALTHOUGH THE EMPLOYMENT PARK GENERATES MANY TRIPS ON AN ADT (AVERAGE DAILY TRAFFIC) BASIS, THE IMPACTS WILL BE MUCH LESS DUE TO THE FACT THAT DURING PEAK PERIODS OF TRAFFIC FLOW, EMPLOYMENT PARK TRAFFIC WILL GENERALLY BE MOVING IN A DIRECTION WHICH IS OPPOSITE TO THAT OF RESIDENTIAL TRAFFIC. THIS POINT IS BEST ILLUSTRATED BY FIGURE 1.

INDUSTRIAL PM PEAK HOUR TRAFFIC AS A PERCENTAGE OF ADT IS FOUND IN THE LAST COLUMN. AS CAN BE OBSERVED AT THE TOP PORTION OF FIGURE 1, 12 PERCENT OF THE ADT WILL TYPICALLY BE USING ROADWAYS DURING THE PM PEAK HOUR. A SLIGHTLY LOWER NUMBER OF VEHICLES, 10 PERCENT OF THE ADT, WILL BE FOUND ON THE STREETS DURING THE PM PEAK HOUR FOR RESIDENTIAL AREAS. REFER TO THE LOWER PORTION OF FIGURE 1. THEREFORE TOTAL PEAK HOUR TRAFFIC FOR INDUSTRIAL AREAS IS SLIGHTLY HIGHER (12% VS 10%) FOR INDUSTRIAL AREAS.

THE DIRECTION OF TRAFFIC FLOW (IE: INTO OR OUT OF THE PROJECT) IS ALSO FOUND IN THE LAST COLUMN OF FIGURE 1. AS CAN BE OBSERVED, FOR EMPLOYMENT PARKS 20 PERCENT OF THE P.M. PEAK HOUR TRAFFIC IS INBOUND AND 80 PERCENT OUTBOUND. JUST THE REVERSE IS TRUE, HOWEVER, FOR RESIDENTIAL TRAFFIC. SEVENTY PERCENT OF P.M. PEAK HOUR RESIDENTIAL TRAFFIC IS INBOUND AND 30 PERCENT OUTBOUND. THIS FACT ILLUSTRATES THE POINT THAT DURING THE PM PEAK PERIOD EMPLOYMENT PARK TRAFFIC FLOW IMPACTS ARE IN A DIRECTION WHICH IS

FIGURE 1

**San Diego
ASSOCIATION OF
GOVERNMENTS**

Suite 524 Security Pacific Plaza
1200 Third Avenue
San Diego, California 92101
(619) 236 5300

**BRIEF GUIDE OF VEHICULAR
TRAFFIC GENERATION RATES FOR THE SAN DIEGO REGION**

MARCH 1985

NOTE: This list only represents a guide of average, or estimated, traffic generation rates for land uses (emphasis on acreage and building square footage) in the San Diego region. These rates are subject to change as future documentation becomes available, or as local sources are updated. For more specific information regarding traffic data and trip rates, please refer to the San Diego Traffic Generators manual. Always check with local jurisdictions for their preferred or applicable rates.

LAND USE	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE	HIGHEST PEAK HOUR % (plus IN:OUT ratio)	
		Between 7-9 A.M.	Between 4-6 P.M.
Agriculture (Open Space)	2/acre**		
Airports			
Commercial	12/acre, 100/flight, 70/1000 sq. ft.**	6% (6:4)	7% (5:5)
General Aviation	4/acre, 2/flight, 6/aircraft*		
Heliports	100/acre**		
Automobile			
Car Wash	900/site, 600/acre**	4% (5:5)	9% (5:5)
Gasoline	750/station, 130/pump**	6% (5:5)	12% (5:5)
Repair & Sales (Dealer)	60/1000 sq. ft., 400/acre, 60/service stall*	8% (6:4)	10% (4:6)
Banking			
Walk-in Bank	200/1000 sq. ft., 1000/acre**	3% (7:3)	10% (4:6)
w/Drive through	300(150 one-way)/lane**	3%	13%
Savings & Loan	60/1000 sq. ft., 600/acre**	2%	9%
w/Drive through	100 (50 one-way)/lane**		
Cemeteries	5/acre*		
Church (or Synagogue)	15/1000 sq. ft., 40/acre** (triple rates for Sunday, or days of assembly)	4% (8:2)	8% (5:5)
Commercial/Retail Centers			
Regional Shopping Centers (More than 30 acres, more than 300,000 sq. ft., w/usually 2+ major stores)	50/1000 sq. ft., 500/acre*	2% (7:3)	9% (5:5)
Community Shopping Center (10-30 acres, 100,000-300,000 sq. ft., w/usually 1 major store and detached restaurant)	70/1000 sq. ft., 700/acre**	3% (6:4)	10% (5:5)
Neighborhood Shopping Center (Less than 10 acres, less than 100,000 sq. ft., w/usually grocery store & drug store)	120/1000 sq. ft., 1200/acre**	4% (6:4)	11% (5:5)
Commercial Shops (also strip commercial)	40/1000 sq. ft., 400/acre*	3% (6:4)	9% (5:5)
Grocery Store	150/1000 sq. ft., 1500/acre**	3% (7:3)	11% (5:5)
Convenience Market	600/1000 sq. ft.**	8% (5:5)	8% (5:5)
Discount	70/1000 sq. ft., 700/acre**	2% (6:4)	10% (5:5)
Furniture Store	6/1000 sq. ft., 100/acre**	4% (6:4)	9% (5:5)
Lumber Store	30/1000 sq. ft., 200/acre**	7% (6:4)	9% (5:5)
Hardware/Paints Store	60/1000 sq. ft., 600/acre**	3% (6:4)	9% (5:5)
Garden Nursery	80/1000 sq. ft., 120/acre**	3% (6:4)	10% (5:5)
Education			
University (4 years)	2.5/student, 100/acre*	10% (9:1)	9% (3:7)
Junior College (2 years)	1.5/student, 80/acre*	12% (9:1)	8% (3:7)
High School	1.5/student, 50/acre*	20% (8:2)	14% (3:7)
Middle/Junior High	1.0/student, 40/acre**	24% (7:3)	7% (3:7)
Elementary	1.4/student, 80/acre**	26% (6:4)	6% (3:7)
Hospitals			
General	20/bed, 20/1000 sq. ft., 200/acre*	9% (8:2)	11% (3:7)
Convalescent/Nursing	3/bed**	5%	8%

Industrial			
Commercial Included/Business Park	16/1000 sq. ft., 200/acre*	12% (8:2)	12% (2:8)
No Commercial	10/1000 sq. ft., 120/acre*	14% (8:2)	15% (2:8)
Manufacturing /Assembly	4/1000 sq. ft., 80/acre**	20% (9:1)	20% (1:9)
Warehousing	5/1000 sq. ft., 80/acre**	15% (9:1)	20% (1:9)
Storage	3/1000 sq. ft. 0.3/vault, 50/acre**	5% (5:5)	10% (5:5)
Science Research & Development	8/1000 sq. ft., 80/acre*	16% (9:1)	14% (1:9)
Administration/Corporate Headquarters	7/1000 sq. ft., 100/acre**	18% (9:1)	18% (1:9)
Library	40/1000 sq. ft., 400/acre**	2% (7:3)	10% (5:5)
Lodging			
Hotel			
w/convention facilities/commercial)	10/room, 300/acre**	6% (6:4)	8% (5:5)
Motel	10/room, 200/acre**	8% (4:6)	9% (6:4)
Resort Hotel	10/room, 100/acre**	4% (6:4)	7% (4:6)
Military	2.5/military & civilian personnel*	9% (9:1)	10% (2:8)
Offices			
Standard Commercial Office (less than 100,000 sq. ft.)	20/1000 sq. ft., 300/acre*	14% (9:1)	13% (2:8)
Large (high-rise) Commercial Office (more than 100,000 sq. ft./6 stories)	17/1000 sq. ft., 600/acre*	13% (9:1)	14% (2:8)
Government (Civic Center)	30/1000 sq. ft.**	9% (9:1)	12% (3:7)
Post Office	150/1000 sq. ft., **	7% (5:5)	8% (5:5)
Department of Motor Vehicles	180/1000 sq. ft., 900/acre*	6% (6:4)	11% (4:6)
Medical	90/1000 sq. ft., 800/acre*	4% (8:2)	10% (3:7)
Parks			
City (developed)	50/acre*		
Regional (undeveloped)	5/acre*	4%	8%
Neighborhood	5/acre**		
Amusement (Theme)	80/acre, 130/acre (summer only)**		
San Diego Zoo	115/acre*		
Sea World	80/acre*		
Recreation			
Beach, Ocean or Bay	600/1000 ft. shoreline, 60/acre*		11% (4:6)
Beach, Lake (fresh water)	50/1000 ft. shoreline 5/acre*		
Bowling Center	30/lane, 300/acre**	7% (7:3)	10% (4:6)
Campground	6/campsite**	4%	8%
Golf Course	8/acre, 600/course**	6% (8:2)	9% (3:7)
Marinas	4/berth*	3%	11% (3:7)
Racquetball/Health Club	40/1000 sq. ft., 300/acre, 40/court*	4% (6:4)	9% (6:4)
Tennis Courts	30/court**	4%	11% (5:5)
Sports Facilities			
Outdoor Stadium	50/acre, 0.2/seat*		
Indoor Arena	30/acre 0.1/seat*		
Racetrack	40/acre, 0.6/seat*		
Theaters (multiplex)	80/1000 sq. ft., 1.8/seat*	0.3%	8% (7:3)
Residential			
Single Family Detached (average, 4 DU/acre)	10/dwelling unit*	8% (2:8)	10% (7:3)
Condominium (or any multi-family less than 20 DU/acre)	8/dwelling unit*	8% (2:8)	10% (7:3)
Apartments (or any multi-family units more than 20 DU/acre)	6/dwelling unit*	8% (2:8)	11% (7:3)
Mobile Home	5/dwelling unit, 40/acre*	9% (3:7)	11% (6:4)
Retirement Community	4/dwelling unit**		
Rural Estate	12/dwelling unit**		
Restaurants			
Quality	100/1000 sq. ft., 500/acre**	1% (6:4)	8% (7:3)
Sit down, high turnover	300/1000 sq. ft., 1200/acre**	8% (5:5)	8% (6:4)
Fast Food (w/drive-through)	700/1000 sq. ft., 3000/acre**	4% (6:4)	8% (5:5)
Transportation Facilities			
Bus Depot	25/1000 sq. ft.**		
Truck Terminal	10/1000 sq. ft., 60/acre**	9% (4:6)	8% (5:5)
Waterport	170/berth, 12/acre**		
Transit Station (Rail)	300/acre**	14% (7:3)	15% (3:7)

* Primary source: San Diego Traffic Generators.

**Other sources: ITE Trip Generation Report, Trip Generation Rates (Orange County Environment Agency), various SANDAG & CALTRANS studies, reports, and estimates.

OPPOSITE TO THAT OF RESIDENTIAL TRAFFIC FLOW. THEREFORE ON "H" STREET DURING THE P.M. PEAK HOUR, A MAJORITY OF TRAFFIC WILL BE EASTBOUND INTO THE PREDOMINANTLY RESIDENTIAL AREA. THE ADDITION OF EMPLOYMENT PARK TRAFFIC, WHICH WILL PRIMARILY BE TRAVELING WESTBOUND WILL ADD TO EASTBOUND RESIDENTIAL TRAFFIC TO A ONLY A MINOR EXTENT.

TABLE 1 SHOWS THE NUMBER OF PEAK HOUR TRIPS THAT WILL BE BE GENERATED BY THE RESIDENTIAL AND EMPLOYMENT PARK ELEMENTS OF THE PLAN. THE CALCULATION OF PEAK HOUR TRIPS IN AND OUT AGAIN ILLUSTRATES THE PRINCIPLE THAT THE PREDOMINATE DIRECTION OF TRAFFIC FLOW FOR EMPLOYMENT PARK TRIPS IS IN A DIRECTION OPPOSITE FROM RESIDENTIAL TRIPS.

TABLE 1
TRAFFIC GENERATION RESIDENTIAL-EMPLOYMENT PARK
P.M. PEAK HOUR TRAFFIC

USE	1985		ADT	PEAK HOUR	P.H. TRIPS	P.H. IN	P.H. OUT
	ADOPTED PLAN	GENERATION RATE					
LOW DENSITY RESIDENTIAL (0-6)	2243 D.U.	10	22430	10%	2243	1520	673
MEDIUM DENSITY RESIDENTIAL (6+)	1985 D.U.	8	15880	10%	1588	1112	476
EMPLOYMENT PARK	141.3 A.C.	150	21195	12%	2543	509	2034

C. EMPLOYMENT PARK IMPACTS

TO DETERMINE IMPACTS TO "H" STREET WHICH WILL RESULT DIRECTLY FROM THE EMPLOYMENT PARK, PEAK HOUR TRAFFIC WAS ADDED TO TOTAL CUMULATIVE TRAFFIC. THEN INTERSECTION CAPACITIES AT THE I-805 - "H" STREET INTERCHANGE WITH AND WITHOUT EMPLOYMENT PARK TRAFFIC WERE CALCULATED.

CHULA VISTA TRANSPORTATION STUDY 1995 CUMULATIVE TRAFFIC PROJECTIONS AND A 10 PERCENT PEAK HOUR WERE USED TO ESTIMATE TOTAL TRAFFIC. ALSO, MANUAL TRAFFIC COUNT DATA AND CALTRANS RAMP COUNT DATA WAS OBTAINED AND USED AS THE BASIS FOR DETERMINING THE DIRECTIONAL DISTRIBUTION OF TRAFFIC AT THE INTERCHANGE.

FIGURE 2 SUMMARIZES THE EXISTING PM PEAK HOUR TRAFFIC FLOW AT THE I-805 "H" STREET INTERCHANGE IN MARCH 1985. AS MENTIONED PREVIOUSLY, CALTRANS AND MANUAL INTERSECTION COUNT DATA WAS USED TO PREPARE THE FIGURE. EXISTING TRAFFIC FLOW CAN EASILY BE ACCOMMODATED AT THE INTERCHANGE AND ONLY MINOR DELAYS PRESENTLY OCCUR DUE TO QUEUING AT THE EXISTING STOP SIGNS.

FIGURE 3 SUMMARIZES THE 1995 PM PEAK HOUR TRAFFIC FLOW AT THE "H" STREET - I-805 INTERCHANGE. THE RAMP VOLUMES ARE BASED ON BOTH ACTUAL COUNT DATA AND THE DISTRIBUTION OF TRAFFIC FROM THE SANDAG MODEL. THE VOLUMES SHOWN DO NOT HOWEVER, INCLUDE THE TRAFFIC EXPECTED TO BE GENERATED AS A RESULT OF THE EMPLOYMENT PARK. ALL THE PROJECTED TRAFFIC INCREASES RESULTING FROM DEVELOPMENT OF THE



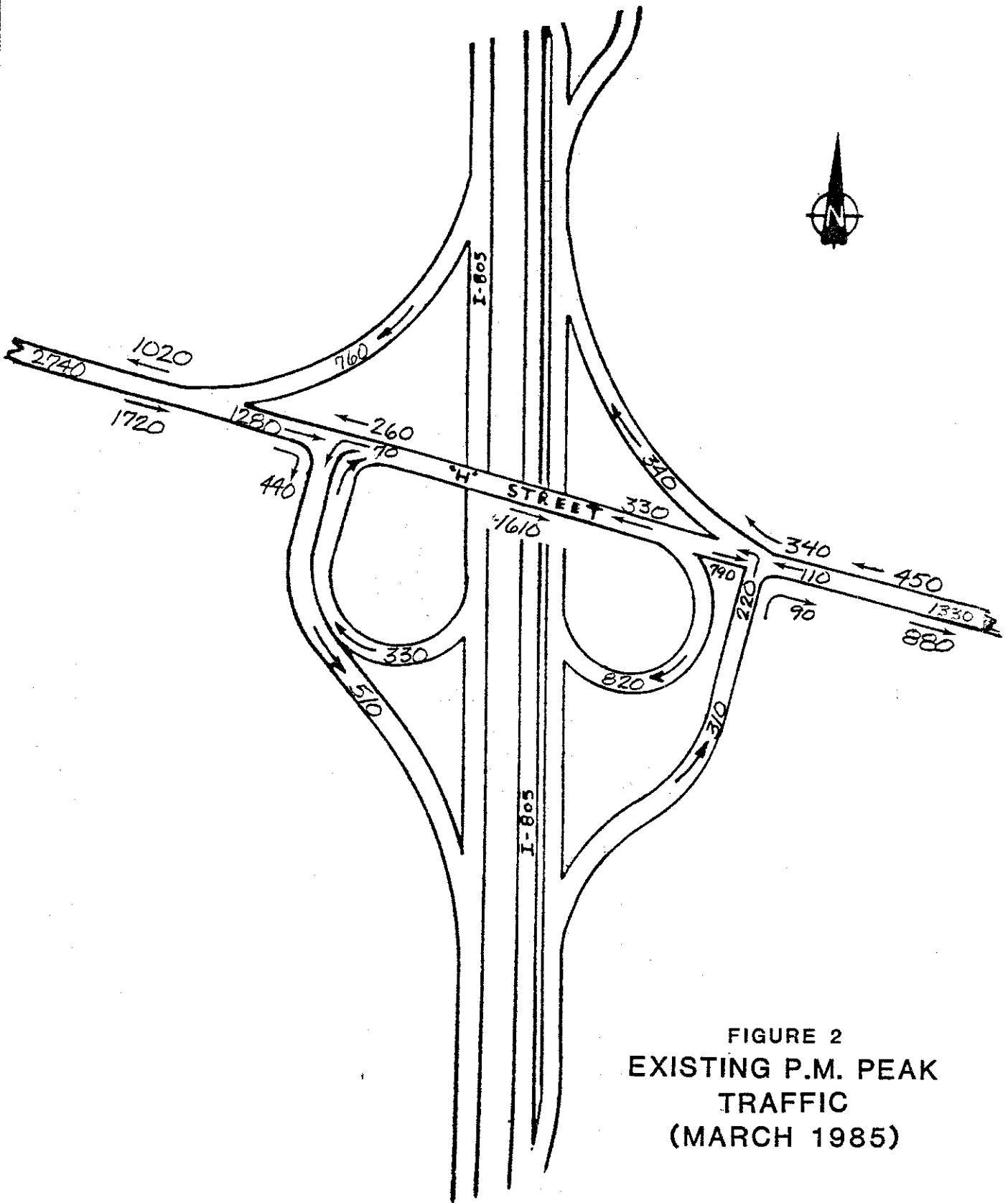


FIGURE 2
 EXISTING P.M. PEAK
 TRAFFIC
 (MARCH 1985)

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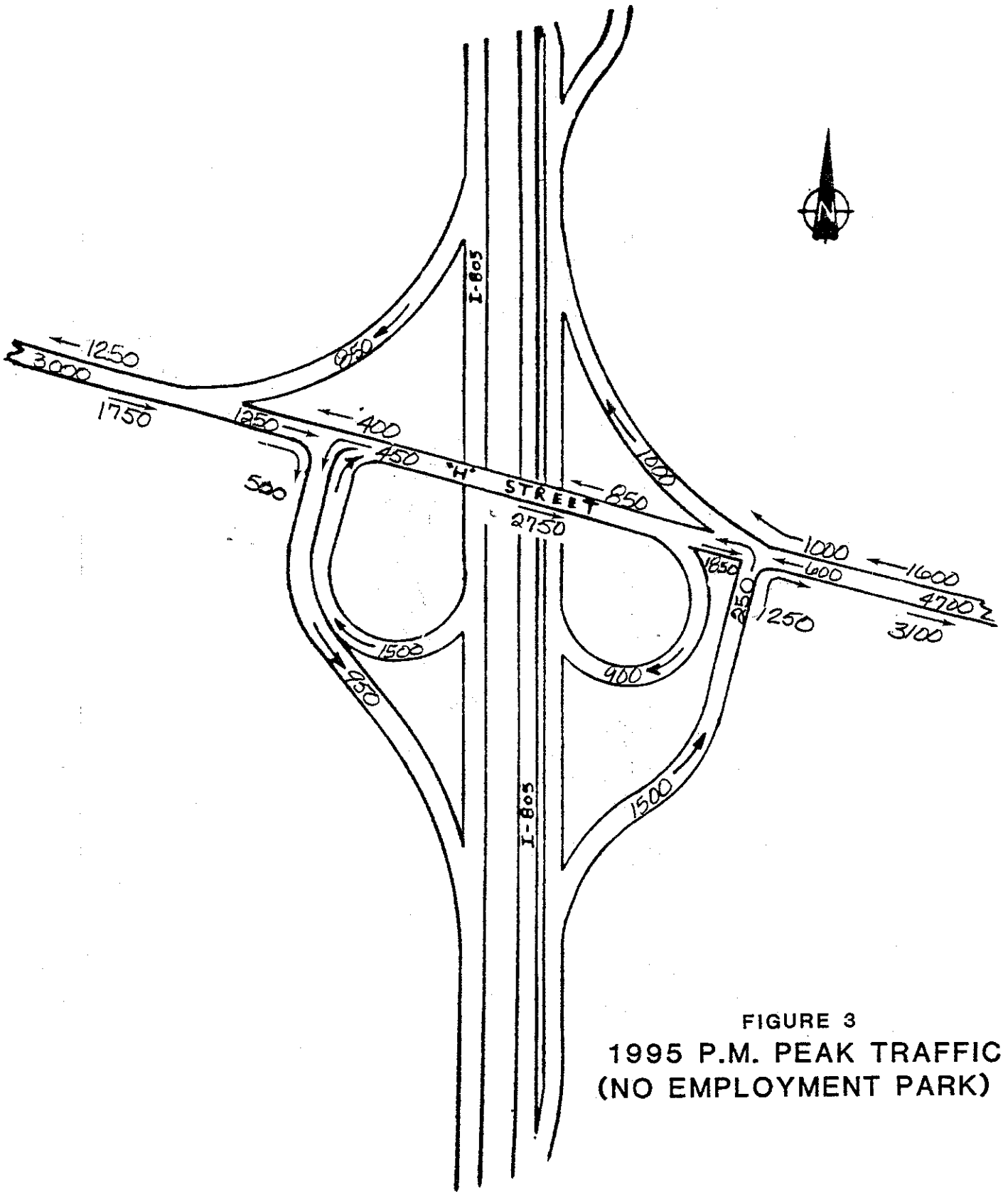


FIGURE 3
 1995 P.M. PEAK TRAFFIC
 (NO EMPLOYMENT PARK)

PROJECT AND OTHER DEVELOPMENT IN THE AREA CAN BE ACCOMMODATED AT THE INTERCHANGE AT A GOOD LEVEL OF SERVICE. MITIGATION REQUIRED AT THE INTERCHANGE IN ORDER TO ACCOMMODATE THE PROJECTED TRAFFIC FLOWS WILL BE THE INSTALLATION OF TRAFFIC SIGNALS AT BOTH FREEWAY RAMPS. ALSO A FREE RIGHT TURN LANE FOR THE NORTHBOUND OFF TO EASTBOUND "H" STREET SHOULD BE INSTALLED. ADEQUATE RIGHT OF WAY WIDTH EXISTS SO THAT THIS IMPROVEMENT CAN BE BUILT. THE ACTUAL TIMING OF INSTALLATION OF THESE IMPROVEMENTS SHOULD BE DETERMINED WHEN PROJECT PHASING IS ESTABLISHED AT THE SPA LEVEL.

FIGURE 4 SHOWS THE TRAFFIC WHICH WILL BE ADDED TO THE INTERCHANGE AS A RESULT OF THE EMPLOYMENT PARK. THE SPLIT OF TRAFFIC FROM THE EMPLOYMENT PARK IS BASED ON THE DIRECTIONAL DISTRIBUTION OF THE SANDAG MODEL. AS CAN BE OBSERVED FROM THE EXHIBIT MOST OF THE EMPLOYMENT PARK TRAFFIC IS WESTBOUND ON "H" STREET (IE: 1420 VEHICLES). ALSO, THERE ARE ONLY TWO ELEMENTS OF THE INTERCHANGE WHICH ARE IMPACTED TO A SIGNIFICANT DEGREE, THE NORTHBOUND ON RAMP (900 VEHICLES) AND THE WESTBOUND TO SOUTHBOUND LEFT TURNS (400 VEHICLES). ALL OTHER ELEMENTS OF THE INTERCHANGE WILL EXPERIENCE ONLY MINOR IMPACTS AS A RESULT OF THE EMPLOYMENT PARK.

FIGURE 5 SHOWS THE COMBINED EFFECT OF TOTAL 1995 CUMULATIVE TRAFFIC WITH THE EMPLOYMENT PARK TRAFFIC ADDED. ALL RAMPS EXCEPT THE NORTHBOUND ON RAMP CAN COMFORTABLY ACCOMMODATE THE PROJECTED TRAFFIC FLOWS. THE WESTBOUND TO NORTHBOUND ON RAMP WILL BE

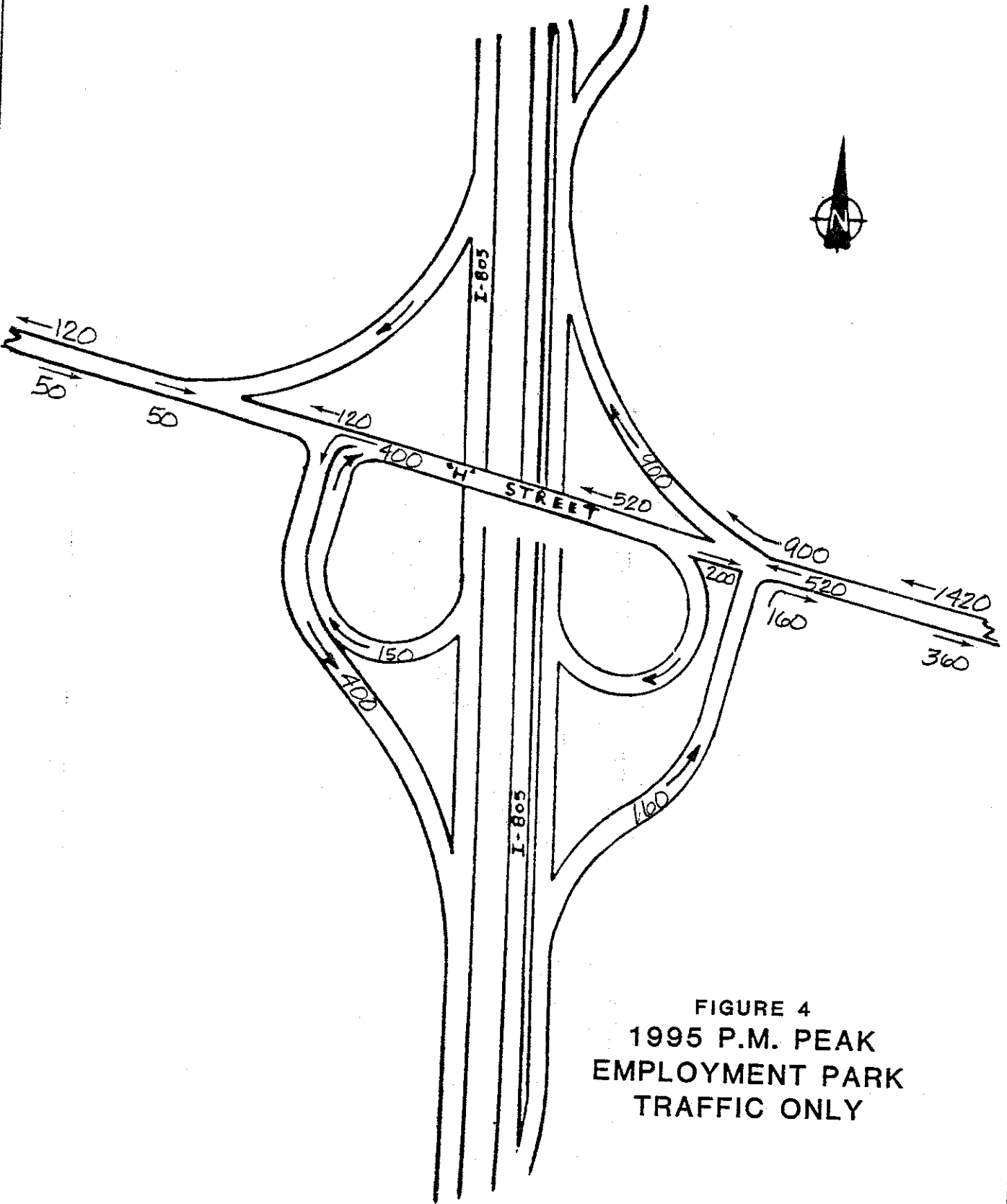


FIGURE 4
 1995 P.M. PEAK
 EMPLOYMENT PARK
 TRAFFIC ONLY

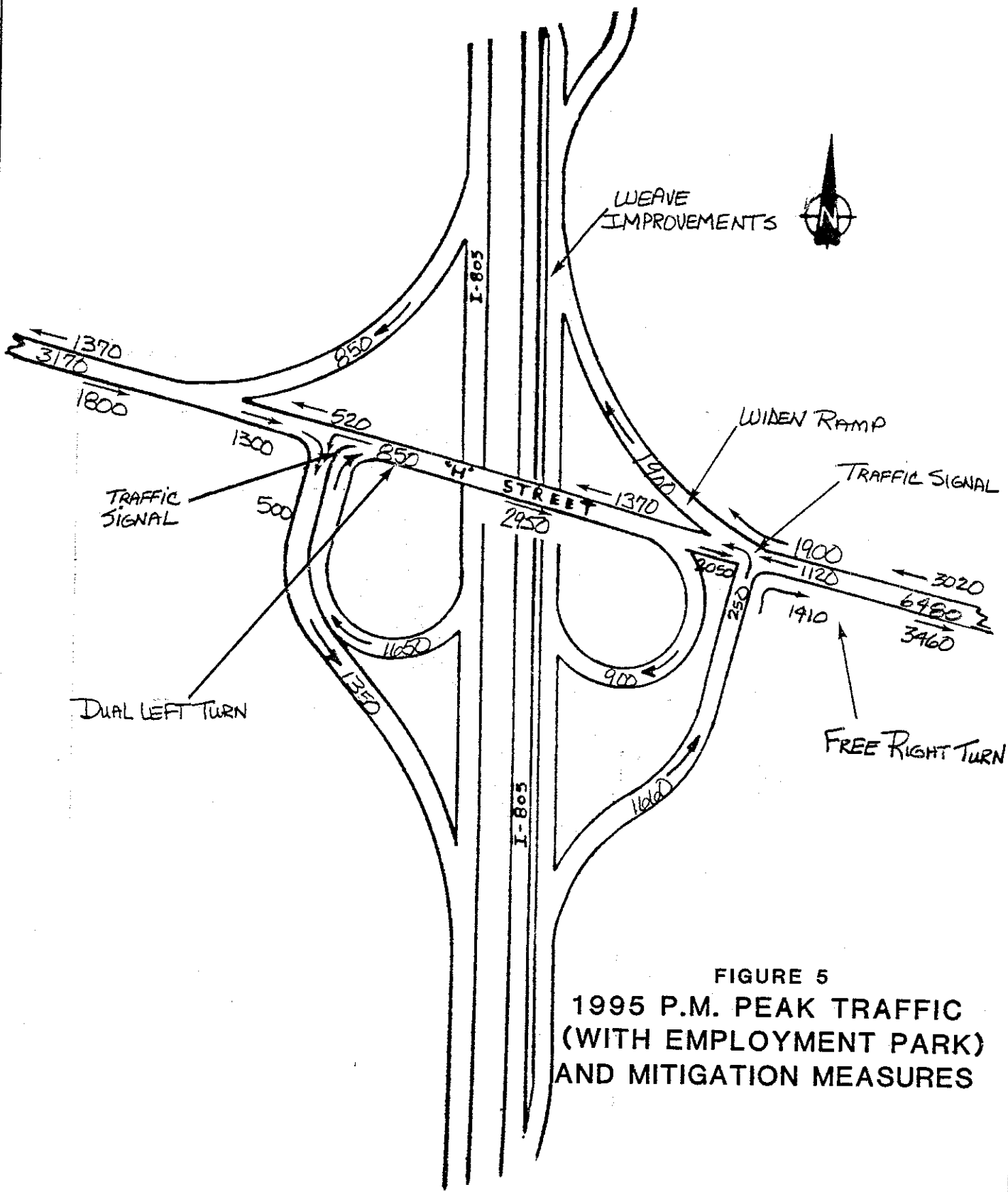


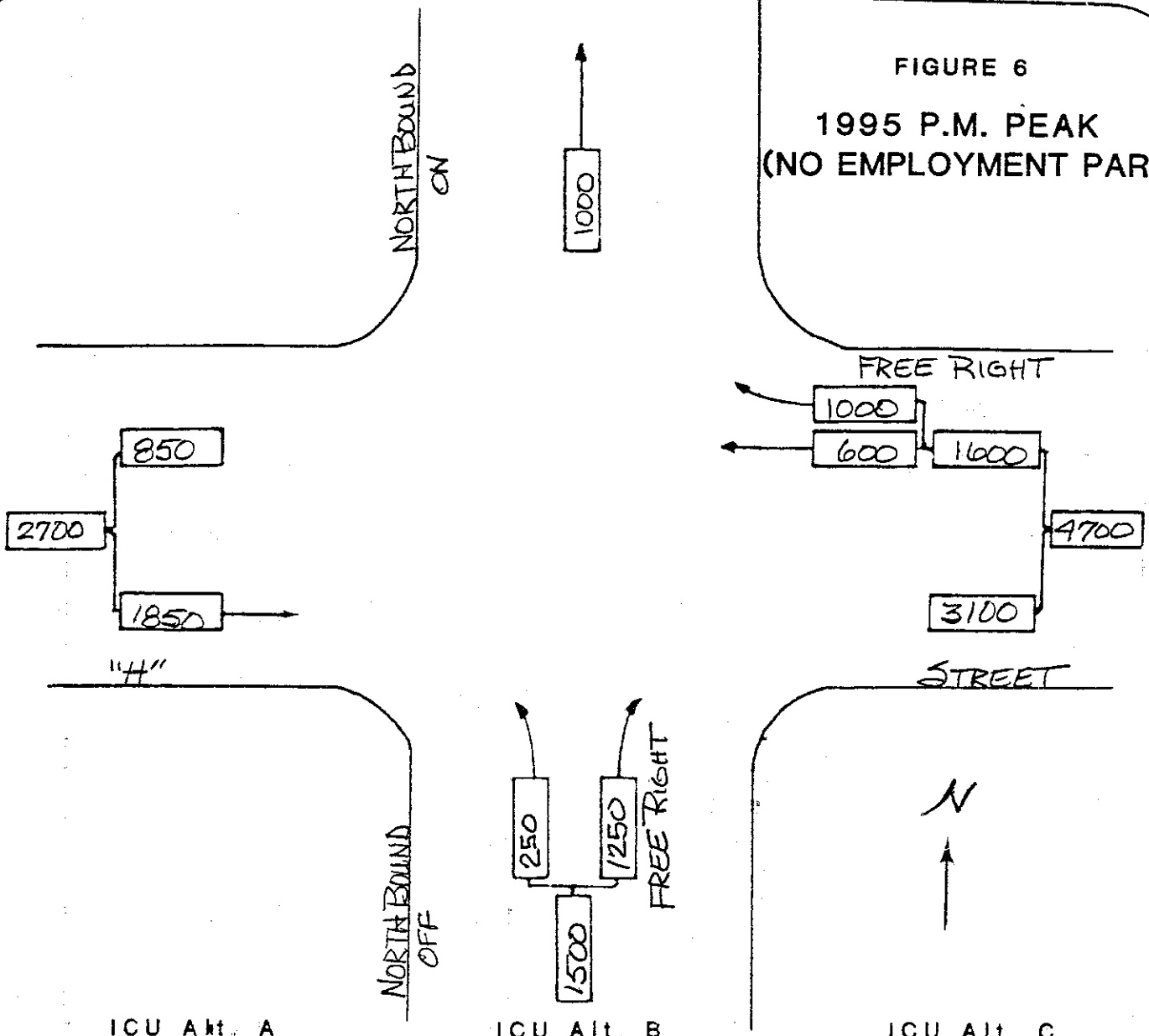
FIGURE 5
 1995 P.M. PEAK TRAFFIC
 (WITH EMPLOYMENT PARK)
 AND MITIGATION MEASURES

OPERATING AT CAPACITY AND MAY REQUIRE AN ADDITIONAL LANE OR WEAVING CAPACITY WHERE THE NORTHBOUND OFF BONITA ROAD TRAFFIC CROSSES THE NORTHBOUND ON "H" STREET TRAFFIC. ALSO, THE WESTBOUND TO SOUTHBOUND ON RAMP MOVE WILL NEED A SECOND LEFT TURN LANE. A SECOND WEAVING MOVE, BETWEEN THE SOUTHBOUND OFF RAMP AND NORTHBOUND ON RAMP MAY ALSO NEED ADDITIONAL CAPACITY.

FIGURE 6 SHOWS THAT THE LEVEL OF SERVICE (SEE **APPENDIX A** FOR DEFINITIONS OF LEVEL OF SERVICE) FOR 1995 CUMULATIVE TRAFFIC AT THE NORTHBOUND OFF RAMP TO "H" STREET WILL BE "B" WHEN THE INTERSECTION IS SIGNALIZED. AS PREVIOUSLY MENTIONED, A FREE RIGHT TURN LANE FOR THE NORTHBOUND TO EASTBOUND MOVE SHOULD BE DEVELOPED. **FIGURE 7** SHOWS HOW THE SAME INTERSECTION WILL OPERATE WITH THE EMPLOYMENT PARK TRAFFIC. WITH THE NORTHBOUND ON RAMP FREE RIGHT TURN, THE INTERSECTION WILL CONTINUE TO OPERATE AT A LEVEL OF SERVICE "B".

FIGURE 8 SHOWS THE SOUTHBOUND "H" STREET ON RAMP WITHOUT EMPLOYMENT PARK TRAFFIC. THE INTERSECTION WILL OPERATE AT A LEVEL OF SERVICE "B" WITH SIGNALIZATION OF THE INTERSECTION. WHEN EMPLOYMENT PARK TRAFFIC IS ADDED (SEE **FIGURE 9**), THE WESTBOUND TO SOUTHBOUND ON RAMP TRAFFIC CAUSES THE LEVEL OF SERVICE TO DROP TO "E". HOWEVER, WITH THE ADDITION OF A SECOND LEFT TURN LANE AT THIS LOCATION, THE LEVEL OF SERVICE CAN BE IMPROVED TO "B".

FIGURE 6
1995 P.M. PEAK
(NO EMPLOYMENT PARK)



ICU Alt. A

ICU Alt. B

ICU Alt. C

Move	Capacity	ICU	Move	Capacity	ICU	Move	Capacity	ICU
→	1850	0.54	→		0.54			
→	3400							
↘	250	0.08	MIN. CYCLE		0.10			
↘	3000							
				TOTAL	0.64			

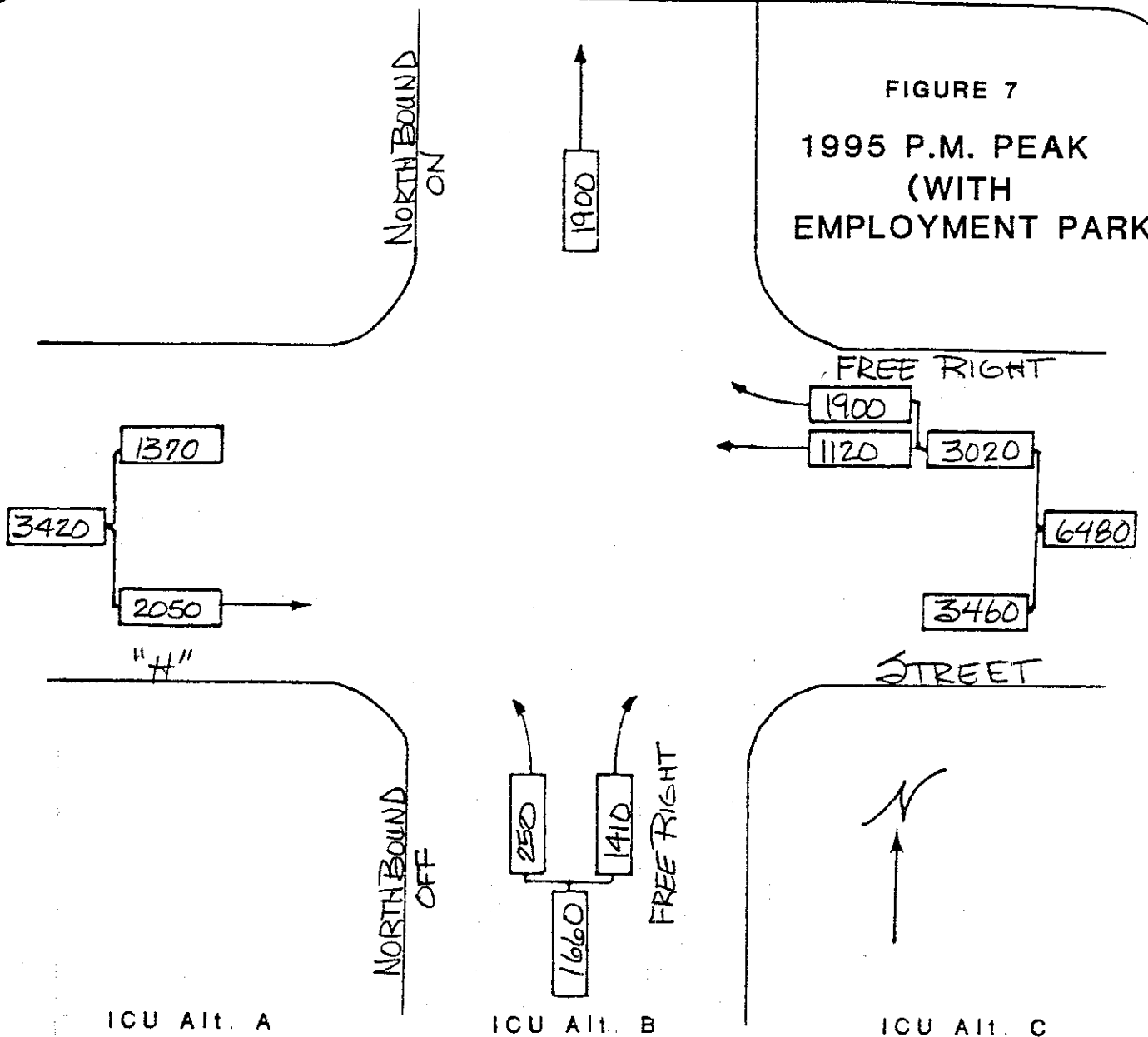
L.O.S.
No Mitigation

L.O.S.
Mitigation "B"

L.O.S.
Mitigation



FIGURE 7
1995 P.M. PEAK
(WITH
EMPLOYMENT PARK)



Move	Capacity	ICU	Move	Capacity	ICU	Move	Capacity	ICU
→	2050	0.60	→		0.60			
→	3400							
↶	250	0.08	MIN. CYCLE		0.10			
	3000							
				TOTAL	0.70			

L.O.S.
No Mitigation

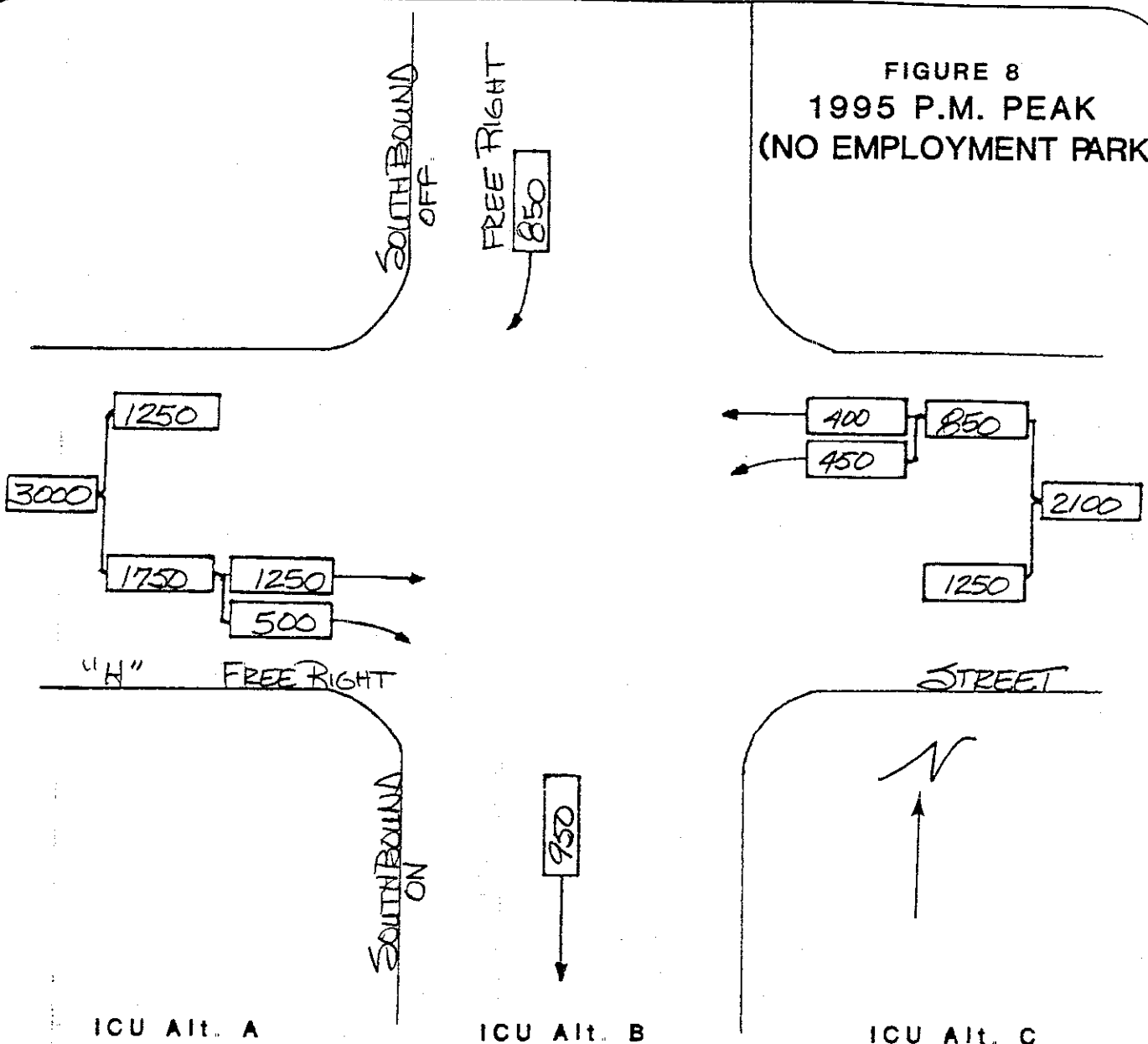
L.O.S.
Mitigation

"B"

L.O.S.
Mitigation



FIGURE 8
1995 P.M. PEAK
(NO EMPLOYMENT PARK)



Move	Capacity	ICU	Move	Capacity	ICU	Move	Capacity	ICU
↙	450							
	1500	0.30						
→	1250							
→	3400	0.37						
	TOTAL	0.67						

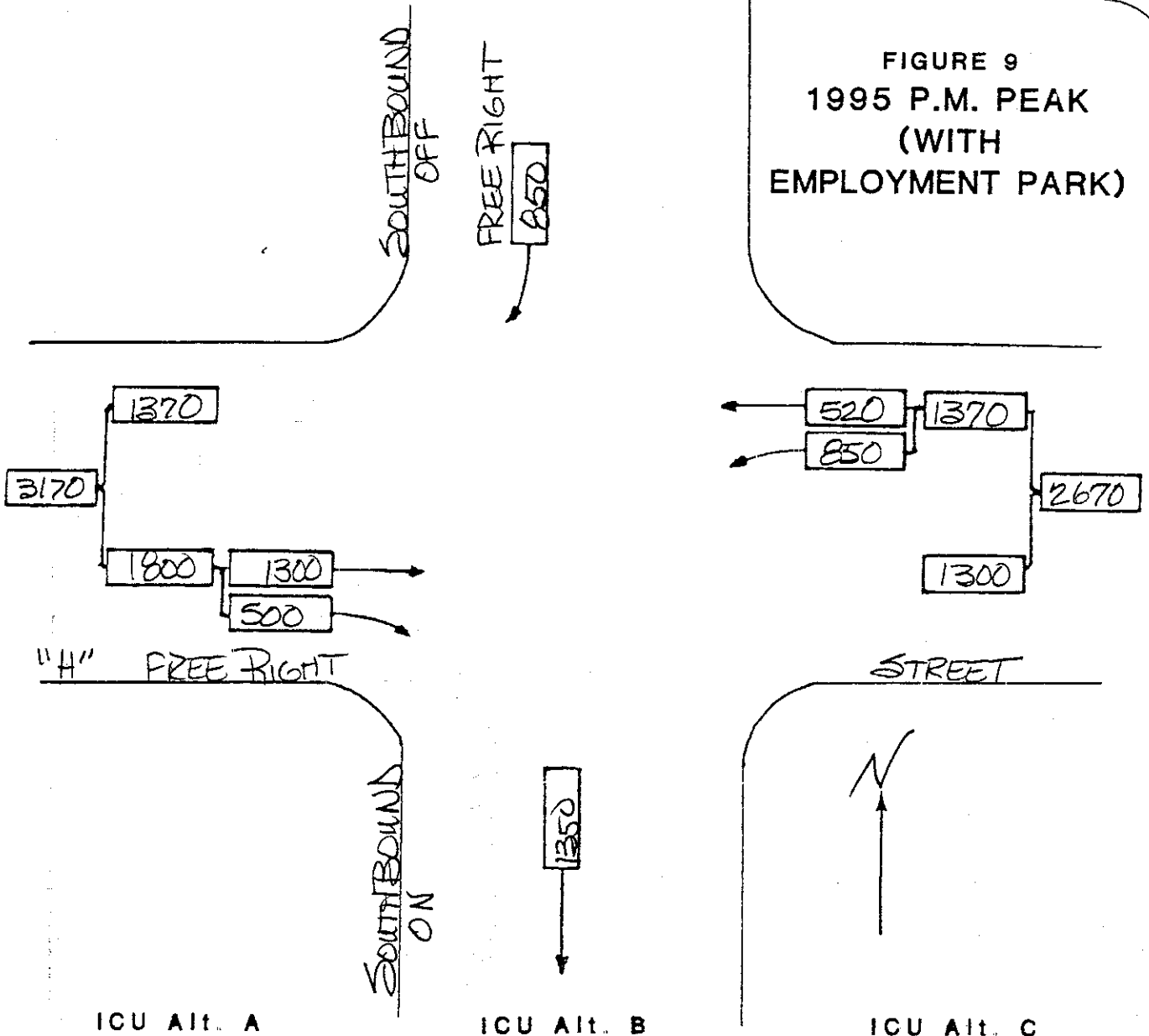
L.O.S.
No Mitigation

"B"

L.O.S.
Mitigation

L.O.S.
Mitigation

FIGURE 9
1995 P.M. PEAK
(WITH
EMPLOYMENT PARK)



ICU Alt. A

ICU Alt. B

ICU Alt. C

Move	Capacity	ICU	Move	Capacity	ICU	Move	Capacity	ICU
↙	$\frac{850}{1500}$	0.57	↙↘	$\frac{850}{3000}$	0.28			
→	$\frac{1300}{3400}$	0.38	→		0.38			
	TOTAL	0.95		TOTAL	0.66			

L.O.S. No Mitigation "E"

L.O.S. Mitigation "B"

L.O.S. Mitigation

D. MITIGATION

PEAK HOUR TRAFFIC FLOWS WERE USED TO IDENTIFY IMPACTS RESULTING FROM DEVELOPMENT OF THE EMPLOYMENT PARK. AVERAGE DAILY TRAFFIC FLOWS AND VOLUME TO CAPACITY RATIOS WERE NOT USED FOR THIS PURPOSE BECAUSE STREET CAPACITY CONSTRAINTS ARE ALMOST ALWAYS FOUND AT INTERSECTIONS AND TO DETERMINE WHAT MITIGATION IS APPROPRIATE, ACTUAL PEAK HOUR DIRECTIONAL FLOWS AND TURNS AT THE INTERSECTION MUST BE KNOWN. AVERAGE TWO WAY DAILY TRAFFIC FLOWS ARE PRIMARILY USEFUL ONLY FOR VERY GENERAL PLANNING PURPOSES.

THE IMPROVEMENTS NECESSARY FOR THE OVERALL PROJECT INCLUDING THE EMPLOYMENT PARK HAVE BEEN IDENTIFIED IN A GENERAL WAY BASED ON THE PLANNING DATA AVAILABLE AT THIS TIME. MORE DETAILED DESIGNS AND CAPACITY CALCULATIONS WILL NEED TO BE DEVELOPED WHEN MORE DETAILED PHASING INFORMATION IS AVAILABLE. ALTHOUGH DETAILED DESIGNS HAVE NOT BEEN PREPARED, IT APPEARS THAT THE MITIGATION MEASURES WHICH HAVE BEEN IDENTIFIED ARE FEASIBLE AND CAN BE IMPLEMENTED.

SINCE THE EMPLOYMENT PARK WILL GENERATE ADDITIONAL 21,200 TRIPS, ADDITIONAL "H" STREET DEVELOPMENT PROGRAM FINANCIAL CONTRIBUTIONS WILL ACCRUE. IF A PER TRIP CONTRIBUTION IS ESTABLISHED THEN ADDITIONAL FUNDS WOULD BE GENERATED AS THE RESULT OF BUILDING THE EMPLOYMENT PARK. THESE FUNDS COULD BE USED TO FINANCE THE POTENTIAL MITIGATION MEASURES WHICH HAVE BEEN IDENTIFIED IN THIS

CITY OF CHULA VISTA
MAY 15, 1985

URBAN SYSTEMS ASSOCIATES INC

REPORT IF MORE DETAILED SPA LEVEL ANALYSIS CONFIRMS THAT AN
IMPROVEMENT IS NEEDED.

APPENDIX A

LEVEL OF SERVICE AND INTERSECTION CAPACITY UTILIZATION (ICU)

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Level of Service concept denotes any one of a number of differing combinations of operating conditions which may take place as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the Highway Capacity Manual of 1965. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements regardless of present signal timing. The capacity per hour of green time for each approach is calculated based on the methods of the Highway Capacity Manual. The proportion of total signal time needed by each movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the Highway Capacity Manual) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e., when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

<u>Level of Service</u>	<u>Load Factor</u>	<u>Equivalent ICU</u>
A (free flow)	0.0	0.0 - 0.6
B (rural design)	0.0 - 0.1	0.61 - 0.70
C (urban design)	0.1 - 0.3	0.71 - 0.80
D (maximum urban design)	0.3 - 0.7	0.81 - 0.90
E (capacity)	0.7 - 1.0	0.91 - 1.00
F (forced flow)	Not Applicable	Not Applicable

SERVICE LEVEL A

There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

SERVICE LEVEL B

This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

SERVICE LEVEL C

At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

SERVICE LEVEL D

This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

SERVICE LEVEL E

This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

SERVICE LEVEL F

Jammed conditions. Traffic backed up from a downstream location on one of the streets restricts or prevents movement of traffic through the intersection under consideration.

**EL RANCHO DEL REY
SPECIFIC PLAN AMENDMENT
FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT**

City of Chula Vista Number: EIR-83-2(B)
State Clearinghouse Number: 83060803

Prepared for:

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October 1985

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LIST OF EXHIBITS

<u>Number</u>		<u>Following Page Number</u>
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SECTION 1 INTRODUCTION

This Supplemental Environmental Impact Report (EIR) for the El Rancho del Rey Specific Plan Amendment is being prepared at the request of the City of Chula Vista (the lead agency) and The Gersten Companies (the project proponent). The existing EIR, along with an Addendum prepared in response to significant modifications to the originally proposed Specific Plan Amendment (WESTEC 1985), has been found to adequately address all appropriate environmental issues known at the time of its preparation. However, a recent study conducted by Michael Brandman Associates, Inc. (MBA) for The Gersten Companies in which sensitive biological resources on the site were quantified and mapped, revealed significant new information pertaining to biological resources onsite (MBA 1985). Additional information obtained subsequent to the completion of both the WESTEC and MBA studies has also been determined to be highly significant.

Principal among these new findings was the discovery of two state-designated endangered species of plants. This supplemental EIR has been prepared in response to concerns raised regarding potential impacts of the proposed project upon these two regionally significant endangered species.

The original El Rancho del Rey Specific Plan Amendment Environmental Impact Report (EIR-83-2) and its Amendment (WESTEC 1985), along with A Comparative Evaluation of Specific Plans For El Rancho del Rey With Respect to Sensitive Biological Resources (MBA 1985), are hereby incorporated by reference into the Supplemental El Rancho del Rey Specific Plan Amendment EIR. Both documents are on file with the City of Chula Vista. Only those impacts resulting from implementation of the proposed Specific Plan Amendment upon sensitive biological resources not known to be present during the preparation of the original EIR are examined in the present document.

SECTION 2 PROJECT DESCRIPTION

The project location remains unchanged. The project setting, as described in the original EIR plus its addendum, remains unchanged with the exception of the discovery of additional sensitive plant species on the site. General project characteristics also remain essentially unchanged.

Subsequent to the preparation of the Addendum in March 1985, a few minor residential and non-residential land use changes have been made. Specifically, modifications have been made in residential housing densities in several areas, and one 18-acre section south of East H Street previously designated for residential development has been added to the proposed employment park north of East H Street. These recent changes in residential and non-residential land uses are summarized in Exhibit 3-1. Additionally, a portion of the residential collector road in the vicinity of the Otay Lakes Road connector road has been realigned. None of these modifications is considered significant from an environmental perspective.

SECTION 3 ENVIRONMENTAL ANALYSIS

With the exception of biological resources, the comprehensive environmental analysis presented in the original EIR and its Addendum remains essentially unchanged. The location of additional sensitive plant species, including two endangered species, on the property subsequent to the preparation of the original EIR requires an additional evaluation of impacts upon these newly discovered resources.

3.1 BIOLOGICAL RESOURCES

Biological resources in the project area were studied extensively by MBA between October 1984 and February 1985. Sensitive biological resources were mapped and quantified at that time (MBA 1985). MBA's findings largely corroborate those of WESTEC (1985) and earlier investigators.

Since February 1985, however, The Gersten Companies have modified the proposed specific plan amendment upon which MBA's investigation was based. Several sensitive plant species not known to occur on the site when the EIR was prepared were discovered during and subsequent to the MBA study. These included the discovery of two state-designated endangered species which are also candidates for federal listing as threatened or endangered. One, the San Diego thornmint (Acanthomintha ilicifolia), was discovered during the MBA study in January 1985. The other, Otay tarweed (Hemizonia conjugens), was discovered in May 1985 subsequent to the completion of the MBA study.

While most of The Gersten Companies' modifications to the proposed El Rancho del Rey Specific Plan Amendment were addressed in the Addendum to the El Rancho del Rey Specific Plan Amendment Final EIR, an analysis of MBA's findings based upon the modified specific plan amendment, has not been accomplished previously. This Supplemental EIR addresses all new findings with respect to the current proposed specific plan amendment, with an emphasis directed toward the state-endangered Otay tarweed and the state-endangered San Diego thornmint.

3.1.1 Existing Conditions

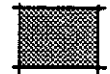

A small (less than one hectare) population of the San Diego thornmint was located in a clay lens grassland on a south-facing slope in the canyon north of the north leg of Rice Canyon in January 1985 (Exhibit 3-1). This species is restricted in occurrence to relatively undisturbed clay depressions in southwestern San Diego County and adjacent northwestern Baja California (Munz 1974).


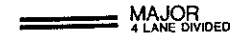
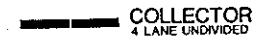

A 14-acre population of Otay tarweed adjacent to Otay Lakes Road was discovered in late May 1985 and mapped by MBA biologists in August 1985. Otay tarweed is known from only a few small colonies in southern San Diego County near the Mexican border. On the site it is confined to deep clay soils in a moderately to rather heavily disturbed area along a foot path paralleling a small gully southwest of Otay Lakes Road and along an exposed north-facing slope south of the drainage gully (Exhibit 3-1). The tarweed is most abundant at the confluence of the two subpopulations near the drainage ditch. Plants become sparser to the east and west of this population center where they are eventually replaced by nonnative grasses (Avena, Lolium) and mustard (Brassica), and also to the south along the north-facing slope where decidedly fewer plants were located. The total Otay tarweed population onsite is estimated at between 10,000 and 50,000 plants (0.2 to 0.9 plants per square meter).

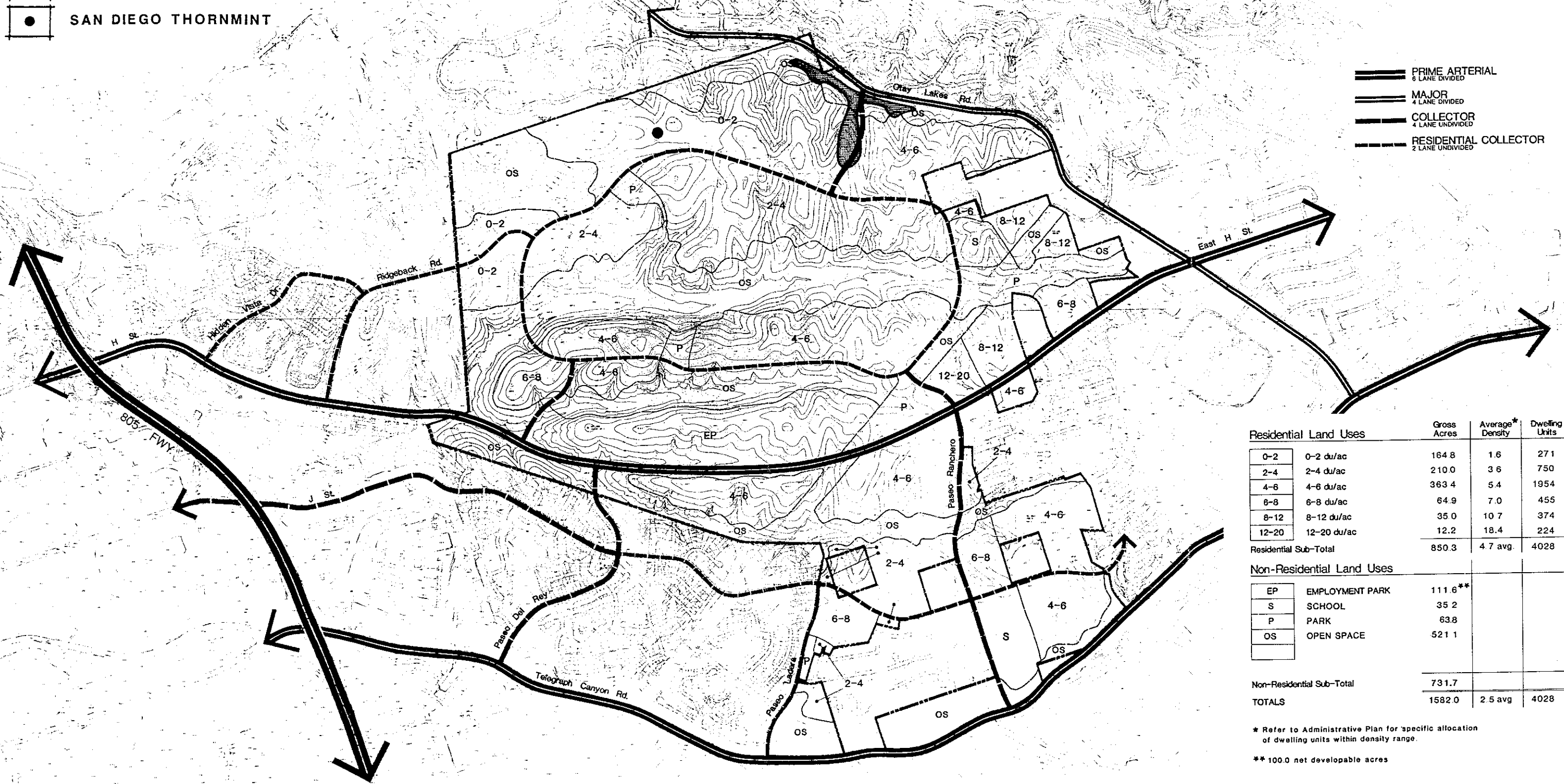
Other sensitive plant species first found on the site during the MBA investigation and, consequently, not considered in the specific plan amendment EIR (WESTEC 1985), are the variegated dudleya (Dudleya variegata) and California adder's-tongue fern (Ophioglossum lusitanicum). Additionally, a small population of Palmer's grappling hook (Harpagonella palmeri var. palmeri) was located among specimens of the San Diego thornmint subsequent to the completion of the MBA study. None of these species is considered rare or endangered by the U.S. Fish and Wildlife Service (FWS 1984) or the California Department of Fish and Game (CDFG 1984). The effects of the proposed specific plan amendment, as modified, upon these three species and other sensitive plant and animal species found on the site, are discussed in the next section.

EL RANCHO DEL REY PROPOSED SPECIFIC PLAN GERSTEN AMENDMENT AREA

LEGEND

-  OTAY TARWEED
-  SAN DIEGO THORN MINT

-  PRIME ARTERIAL
6 LANE DIVIDED
-  MAJOR
4 LANE DIVIDED
-  COLLECTOR
4 LANE UNDIVIDED
-  RESIDENTIAL COLLECTOR
2 LANE UNDIVIDED

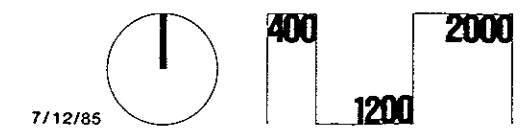


Residential Land Uses		Gross Acres	Average* Density	Dwelling Units
0-2	0-2 du/ac	164.8	1.6	271
2-4	2-4 du/ac	210.0	3.6	750
4-6	4-6 du/ac	363.4	5.4	1954
6-8	6-8 du/ac	64.9	7.0	455
8-12	8-12 du/ac	35.0	10.7	374
12-20	12-20 du/ac	12.2	18.4	224
Residential Sub-Total		850.3	4.7 avg.	4028
Non-Residential Land Uses				
EP	EMPLOYMENT PARK	111.6**		
S	SCHOOL	35.2		
P	PARK	63.8		
OS	OPEN SPACE	521.1		
Non-Residential Sub-Total		731.7		
TOTALS		1582.0	2.5 avg	4028

* Refer to Administrative Plan for specific allocation of dwelling units within density range.

** 100.0 net developable acres

DISTRIBUTION OF TWO ENDANGERED PLANT SPECIES



7/12/85

Cinti & Associates
3151 Airway Avenue, Suite C-3
Costa Mesa, California 92626



EXHIBIT 3-1

3.1.2 Impacts

The proposed Specific Plan Amendment, as presently designed with the retention of much of the north leg of Rice Canyon in open space, is similar from a biological resources perspective to the adopted Specific Plan. Slight modifications to the proposed plan, added since submittal of the Specific Plan Amendment Final EIR and Addendum, will have a negligible effect on the biological resources of the site. Therefore, with respect to existing conditions, as described in the Final EIR, discussions of project impacts in that document are adequate. As additional information on sensitive biological resources obtained by MBA was not available at the time the EIR was being prepared, and, as this additional information has not been analyzed with respect to the modified Specific Plan Amendment, a discussion of project impacts resulting from the modified plan in light of this new information is necessary.

Overall ecological values would be similarly impacted by both the adopted Specific Plan and proposed Specific Plan Amendments. Both plans provide similar amounts and configurations of open space, including contiguous open space and wildlife corridors.

With respect to habitats, less coastal sage scrub is retained in the northern portion of the site in the proposed Specific Plan Amendment; however, more coastal sage scrub is retained in the southern portion of the site. A small net loss of coastal sage scrub would result from implementation of the proposed Specific Plan Amendment. Roughly equal proportions of grassland and riparian woodland habitats are retained in each plan and more of the mima mound annual forb community would be retained in the proposed Specific Plan Amendment.

The impacts upon sensitive species resulting from implementation of either specific plan are summarized in Table 3-1. Impacts to sensitive species would be similar with respect to implementation of either plan, with a slightly greater collective impact resulting from implementation of the proposed amendment.

TABLE 3-1

IMPACT ANALYSIS - ADOPTED SPECIFIC PLAN VS. PROPOSED
SPECIFIC PLAN AMENDMENT

<u>Species</u>	<u>Status</u>	<u>Impact (Loss)</u>	
		<u>Adopted Plan</u>	<u>Amendment</u>
San Diego sunflower	357 acres	246	247
pygmy spike-moss	264 acres	231	232
snake cholla	140 acres	119	121
coast barrel cactus	100 acres	80	85
Otay tarweed	14 acres	4	6
California adder's-tongue fern	29 populations	27	29
Orcutt's bird's beak	5 populations	4	5
Palmer's goldenbush	3 populations	1	1
variegated dudleya	3 populations	1	1
velvet cactus	2 populations	2	1
San Diego thornmint	1 population	1	1
Palmer's grapling hook	1 population	1	1
black-tailed gnatcatcher	33 sightings	18	20
cactus wren	22 sightings	13	13

With respect to ecological values, sensitive habitats and sensitive species, both the adopted and proposed specific plans present similar impacts, with the proposed plan only slightly less favorable. With respect to impacts upon biological resources the differences between the two plans are considered insignificant.

Specific impacts upon the San Diego thornmint and the Otay tarweed resulting from implementation of the proposed Specific Plan Amendment are analyzed in detail below:

The thornmint population is in an area designated for residential land use with 0 to 2 dwelling units per acre, and is within 50 meters of the loop road connecting various proposed subdivisions within the El Rancho del Rey planning area. The bulk of the Otay tarweed population is located in proposed open space adjacent to Otay Lakes Road. While open space contains only 8 of the 14 acres of tarweed, the densest

populations are all contained within open space. The more sparsely distributed plants on the hillside south of the main population, however, are either in the right-of-way for a proposed connector road between Otay Lakes Road and the proposed loop road, or in an area presently designated for low density residential development.

3.1.3 Mitigation

Mitigation efforts, other than those presented in the Specific Plan Amendment Final EIR and Addendum (WESTEC 1985), should be directed toward the preservation of the two state-listed endangered plant species on the site — the San Diego thornmint and the Otay tarweed — both of which were located subsequent to the preparation of the EIR. The mitigation measures outlined below are designed to retain as much of the existing populations of these two plants as feasible and to assure their future survival on the site through plant transportation programs.

- o Retain the thornmint population by designating an open space buffer area 50 meters wide to the east, west and south of the thornmint population, and to the ridgeline north of the population.
- o Revegetate the graded shoulder of the loop road in the vicinity of the thornmint with native perennial species such as coyote bush (Baccharis pilularis spp. pilularis), white sage (Salvia apiana) or jojoba (Simmondsia chinensis) to discourage the establishment of weeds.
- o Relocate the connector road a minimum of 75 meters east of its presently proposed location to avoid impacting the bulk of the tarweed population.
- o Include the hillside population of Otay tarweed in open space contiguous with currently proposed open space areas adjacent to Otay Lakes Road.
- o Protect populations of the San Diego thornmint and Otay tarweed from unauthorized human encroachment through the establishment of pathways and bikeways that lead around or away from these critical areas, by the creation of appropriate barriers to prevent access of motor bikes, and through the establishment of additional walls or fencing where necessary.

- o Provide for a qualified botanist to be onsite during the grading phase of road construction in the vicinity of the San Diego thornmint and the Otay tarweed; such botanist to be selected by the City of Chula Vista and to be responsible for establishing a temporary exclusion area around these two plant populations to insure their safety during the period construction equipment is being operated in the vicinity.

- o Allow for the establishment of a responsible rare plant transplantation program to be conducted by a qualified botanist or conservation organization. Provisions of this program would include access by a botanist to all rare or endangered plant species populations at least one calendar year prior to construction, as well as access to suitable relocation areas in the designated open space elsewhere on the property. Specifically, existing populations of rare or endangered plants, notably the San Diego thornmint and Otay tarweed, but also other species such as Orcutt's bird's beak and variegated dudleya, would serve as natural reservoirs of source material for transplantation to other sections of the property where suitable habitat exists. Creation of additional populations of these species on the site will offset potential losses in the source areas due to unforeseen or unavoidable circumstances, natural or otherwise, and ensure their long-term survival on the property.

Further details of the above mitigation measures should be established during the development phase of each sectional planning area, as appropriate.

SECTION 4
ALTERNATIVES TO THE PROPOSED PROJECT

Alternatives to the proposed specific plan amendment have been adequately addressed (WESTEC 1985).

SECTION 5
UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL IMPACTS

Unavoidable significant environmental impacts were addressed in the original specific plan amendment EIR (WESTEC 1985). Inasmuch as implementation of the project will impact recently discovered sensitive plant species on the property, these regionally significant plant populations will be diminished. The loss of sensitive plant resources can be largely mitigated through the retention of natural open space in areas where these species occur; however, the loss of a small fraction of the Otoy tarweed population during construction of a connector road, and the inevitable loss of a few additional plants of this and other species from unauthorized trespass and encroachment of nonnative nuisance species such as mustard and European grasses, will constitute unavoidable adverse impacts.

1911

1912

1913

1914

1915

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1917

1918

SECTION 6
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