

Tentative Tract No. 46018/CUP 85-628-(5)  
Plum Canyon, Saugus

Contents:

- April, 1987 - Draft EIR
- Sept., 1987 - Response to Comments
- Feb., 1988 – Final EIR

See Separate Binders for Oct., 2003 Addendum  
EIR – Volumes I and II and August 9, 2010 MMP  
Compliance Report

TT 46018

**D R A F T**  
**ENVIRONMENTAL IMPACT REPORT**  
**ZONE CASE 85-628**  
**CANYON COUNTRY, CALIFORNIA**

Prepared For  
COUNTY of LOS ANGELES, CALIFORNIA  
Project No. 85-628

**A P P L I C A N T**  
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**APRIL 1987**

DRAFT ENVIRONMENTAL IMPACT REPORT

Zone Case 85-628

Prepared For:

The County of Los Angeles, California  
Project No. 85-628

Applicant

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## INTRODUCTION

The following Environmental Impact Report has been prepared in accordance with the State of California Environmental Quality Act and the County of Los Angeles Environmental Document Reporting Procedure and Outline for a proposed residential development.

Data for the Environmental Impact Report was obtained from onsite field observations, discussions with affected agencies, analysis of adopted plans and policies, and specialized environmental (biota and traffic) assessments.

Future County filings for this project will necessitate additional environmental studies.

SUMMARY

The Proposed Project consists of a zone change from an agriculture designation to residential and commercial designations as follows:

<u>Existing</u>	<u>Proposed</u>	<u>Acres</u>
A-2-1	RPD-1-5U	272.6
A-2-1	RPD-1-4U	199.2
A-2-1	RPD-1-7U	27.6
A-2-1	R-3	151
A-2-1	C-2	21.9

The future filing of a Tentative Tract Map over the site would provide development of single family and multi family dwellings totalling approximately 5,000 units and 21.9 acres of commercial use on approximately 675 acres of presently vacant land. This EIR analyzes the potential impacts of 5,000 dwelling units and 21.9 acres of commercial use. The site is located approximately one mile easterly of Bouquet Canyon Road on Plum Canyon Road, and northerly off Whites Canyon Road in the area of west-central Los Angeles County known as Canyon Country.

A General Plan Amendment No. 282 (SPA019-82) was previously approved in September, 1982 to allow the necessary urban densities and commercial uses.

In order to implement this development proposal and bring the zoning into compliance with the General Plan, and provide accelerated funding and construction of road improvements in Plum Canyon, the project applicant has filed the following case with the County of Los Angeles:

Zone Case 85-628

The Development Agreement Case 86-565 provides, among other things, for the construction of currently unspecified improvements to Plum Canyon Road within the Bouquet Canyon Bridge and Major Thoroughfare Construction Fee District. The Development Agreement and Zone Change will be processed concurrently.

A summary of the environmental analysis and proposed mitigation measures for significant impacts follows:

1. Geotechnical Hazard

Impacts

A primary seismic hazard to any site is the potential for ground surface rupture caused by fault displacement. Two faults are mapped onsite based on research, topography and geologic reconnaissance. However, current data suggest that the potential for future ground surface displacement onsite is low to nil.

Landslides have occurred onsite, primarily within the Saugus Formation. Of the twenty-four landslides identified, only six impact areas proposed for development. Impacted areas include Areas 2 (single family area in northwest) and 5 (multi family area in southeast) - see FIGURE 10, Geology Map.

Mitigation Measures

The following measures have been proposed to reduce the project-wide geotechnical impacts to a level of insignificance. Specific mitigation measures associated with tract design will be addressed in subsequent reports, as acceptable to the County Engineer:

- All grading operations shall be conducted in conformance with the Los Angeles County Grading Ordinance.

- All grading activities shall adhere to the recommendations included within the current and subsequent geotechnical report, including the following:
  - Additional geotechnical studies shall be conducted prior to Tentative Tract Map approval and again during grading operations to correct existing landslide and unstable slope impacts where necessary. The subsequent geotechnical investigations shall also address the potential for hydroconsolidation as a result of liquefaction.

The potential effects of ground shaking on structures can be expected to be satisfactorily mitigated by (earthquake-resistant) design in accordance with the latest Uniform Building Code and current state-of-the-art engineering practices. The ground shaking hazard at the project site is within a level generally considered acceptable by Southern California residents.

## 2. Flood Hazard

### Impacts

Project related flood hazard impacts can be divided into these two categories:

1. Flood hazard related to upstream watershed drainage flowing through the project site is from a 680 acre easterly area contributing approximately 2,560 cfs (bulked) to the site.

2. Development of the Proposed Project will decrease offsite runoff downstream (westerly along Bouquet Canyon Road). Upon development, the Q<sub>25</sub> storm flow would be 3,600 cfs (clear), including upstream contributions - versus 5,500 cfs (bulked) for the undeveloped site. A Q<sub>25</sub> storm flow decrease of approximately 1,900 would result from project development.

#### Mitigation Measures

A Drainage Concept Plan will be prepared and submitted to the Los Angeles County Department of Public Works - FIGURE 11A is a Conceptual Drainage Map. Improvements proposed in the approved Drainage Concept Plan will reduce flood hazards to a level of insignificance, including:

- implement County approved onsite drainage improvements of inlet/outlet structures and storm drains;
- install debris basins, as required;
- cut and fill slopes will be landscaped to reduce potential increases in runoff and erosion;
- inlet structures, debris basins and street maintenance will reduce impacts of sediment and runoff contaminants discharge.

### 3. Air Quality

#### A. Construction Emissions

Project Construction air pollution emissions, such as dust and construction equipment products of combustion, are estimated to

be approximately 917 lbs./day carbon monoxide, 3,911 lbs./day nitrogen oxides, 301 lbs./day sulfur oxides and 274 lbs./day particulates.

B. Project Operation Emissions

Projected SCAQMD 1987, Area 13, tons per year air pollutant emissions are:

<u>Carbon Monoxide (CO)</u>	<u>Nitrogen Oxides (NO<sub>x</sub>)</u>	<u>Reactive Organic Gas (ROG)</u>
7,399	2,179	1,088

The Proposed Project will generate from mobile and stationary sources approximately 2,736 tons/yr. of CO (37% of SCAQMD Projected), 604 tons/yr. of NO<sub>x</sub> (28% of 1987 SCAQMD Projected), 111 tons/yr. of SO<sub>x</sub> and 258 tons/yr. particulates.

Proposed Project plus related area projects will generate cumulative air pollutant emissions approximating 11,731 tons/yr. CO, 3,475 tons/yr. NO<sub>x</sub>, 477 tons/yr. SO<sub>x</sub> and 1,105 tons/yr. particulates. These cumulative emissions exceed projected 1987 SCAQMD, Area 13 emission levels for CO by approximately 58% and levels for NO<sub>x</sub> by approximately 59% - similar exceedance can be expected for SO<sub>x</sub> and particulates.

Mitigation Measures

Mitigation of construction air pollution emissions would include watering to control dust, proper equipment engine maintenance, and construction activity scheduling in accordance with specific AQMD directives.

The developer will comply with Title 24 of the California State Energy Commission to minimize stationary source air pollutants associated with the Proposed Project. Traffic mitigation measures, such as restripping, left-turn lanes and through/left-lanes, have been proposed to promote free-flowing traffic conditions and reduce mobile pollutant sources. The developer will comply with County required public transit access. The Air Quality Management Plan statewide required motor vehicle inspection and maintenance program reduces mobile emissions.

#### 4. Biota

##### Impacts

The proposed development would result in the grading of approximately 63% (425 acres) of the site. The remaining 37% (250 acres) would be undeveloped as natural open space. Generally, the undeveloped portions would include the steep cliffs and inaccessible portions of the property.

The extension of Plum and Whites Canyon Roads and the construction of a flood control channel would eliminate the alluvial scrub habitat in the southern valley. Both plant and animal populations would be reduced by the grading operations. Remaining populations would tend to be restricted to isolated portions of the site. The presence of people would have further direct impact on the remaining plant and animal populations. Domestic cats and dogs would increase the pressure on small native animals. Conversely, large native animals would have a negative impact on small domestic pets. The potential for fire in the undeveloped portions of the site and adjacent properties would pose a threat to residential structures

and may necessitate periodic controlled burning where dense vegetation occurs.

#### Mitigation Measures

The retention of 37% (250 acres) of the site in its natural state as open space would reduce the impact of the proposed development. Plants and animals would be able to exist in the refuges not easily accessible by people.

Landscaping materials should include drought tolerant species, wherever possible, in order to conserve water and energy in the proposed development. The use of California native plants would further encourage the return of some native birds and other wildlife. A landscape plan for the Proposed Project will be submitted for approval to the Regional Planning Commission.

### 5. Scenic Quality

#### Impacts

Grading volumes of approximately 12.5 million cubic yards are planned which will alter the existing natural terrain.

A "line of sight" analysis for the Proposed Project was prepared from the point of view of Plum Canyon Road which will traverse the central portion of the project site. Analysis of views from the developed area south of the site (Langside Ave./Stanley Court) were also evaluated. Views upon entering the site via Whites Canyon Road from the east (Line of Sight A) are of single family units to the

north and multi family to the south. Views from Plum Canyon Road in the center of the site (Line of Sight B) are of commercial use to the northeast and multi family units to the southwest. Views upon entering the site via Plum Canyon Road from the west (Line of Sight C) are of single family units to the north and multi family units to the south. Views from the developed area south of the site at Langside Ave. and Stanley Court would include the central portion of the site eastward through Plum Canyon. There are no views of the site from any designated Scenic Highway.

#### Mitigation Measures

Approximately 265 acres (39%) of the site will consist of natural open space areas after development including the Department of Water and Power right-of-way. All utilities will be placed underground. Extensive use will be made of native vegetation specimens for landscaping throughout the project site. Natural colors and materials will be emphasized in construction of residential, commercial and institutional buildings. Night-lighting will be "directed" to minimize glare to adjacent properties and view corridors. A landscape plan would include street trees and planting on irrigated slopes to mitigate impact in the view shed.

## 6: Traffic/Access

### Impacts

Evaluation of traffic impacts for the Proposed Project required a phasing of buildout intervals. Total daily Phase 1 trip generation is 14,990 vehicles per day and at project buildout, Phase 1 plus Phase 2, total daily trips are 29,980.

A total of 32 proposed related projects have been identified that may impact the roadways in the study area. These projects are all expected to be built by 1991 under current plans. These related projects are expected to generate approximately 9,980 morning and 14,930 evening peak-hour trips, or a total daily trips of approximately 142,085 upon project completion.

All of the key intersections will operate acceptably during the morning peak hour under the 1996 (project buildout) background conditions. However, enough local traffic will still use Bouquet/Soledad, Soledad/Whites Canyon and Soledad/Sierra Hwy. intersections during the afternoon peak hour to cause congested conditions. The three aforementioned already congested afternoon intersections will become more congested with V/C ratios ranging from 0.90 to 0.93. The Bouquet Canyon/Seco Canyon intersection will also deteriorate to a V/C ratio of 0.89.

### Mitigation Measures

Mitigation measures within the Bouquet Canyon Roadway Benefit District are as follows:

1. Restripe the west approach of Bouquet Canyon Road at Seco Canyon to allow a third through lane;
2. Add a second westbound left-turn lane at the Bouquet Canyon/Soledad Canyon intersection;
3. Restripe the northbound approach of Valencia Boulevard at Magic Mountain Parkway to accommodate one left-turn lane, two through lanes, and a through/right lane; and
4. Add a combination through/left lane to the northbound approach of Whites Canyon Road at Soledad Canyon Road.

### 7. Education

#### Impacts

The Proposed Project will generate a total of 1,862 new students in the William S. Hart Union High School District and the Saugus Union

School District - exceeding available capacities in the Saugus District. Cumulative impacts of existing enrollment, the Proposed Project and related area projects will generate 8,171 students in the Saugus Union School District and 18,055 students in the William S. Hart Union High School District - exceeding available capacities in both Districts.

#### Mitigation Measures

The AB 2926 developer fees and an \$800 million state school bond issue passed in November, 1986 provide the primary mechanisms to construct new school facilities. The AB 2926 legislation sets the required school mitigation for new development. The legislation does not, however, preclude the implementation of alternative mitigation for a specific development.

Another funding possibility is a Mello-Roos Community Facilities District. The Mello-Roos Act of 1982 allows school boards and local governmental bodies to create community assessment districts for issuing bonds, redeemable by parcel assessments. Other measures could be negotiated between the school district and the project developer including provision of land and/or improvements, or lease-purchase options.

A site is designated for an onsite elementary school. The Applicant is negotiating with local school districts to arrange dedication of these needed facilities.

## 8. Water Supply

### Impacts

Project related water consumption is estimated to be 1,463 acre feet/year.

Combined with the SCWC's existing level of demand, 13,775 acre feet/year, project development would result in a total water demand of 15,238 acre feet/year. Upon completion of the treatment plant expansion and resulting SCWC total supply of 19,400 acre feet/year, the Company would have a remaining supply of 4,162 acre feet/year above existing demand.

Cumulative water supply impacts associated with this and other proposed developments within the Santa Clarita Water Company are estimated to be 21,367 acre feet/year.

The total estimated future demand for the company of 21,367 acre feet would exceed existing supplies of 19,400 acre feet/year by approximately 2,000 acre feet/year.

### Mitigation Measures

Future water demands can be met by State Water Project expansion, participation in the Los Banos Grande Reservoir Project, implementation of the Coordinated Operating Agreement, participation in Kern County Water Banking and Delta Channel Improvements. Additional, as yet, unexploited ground water resources such as the

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\* Project list and information sources included in APPENDIX 6.

alluvial aquifer and the Saugus Formation will supplement future supplies. Water conservation measures can save as much as 33% of existing usage.

## 9. Solid Waste Disposal

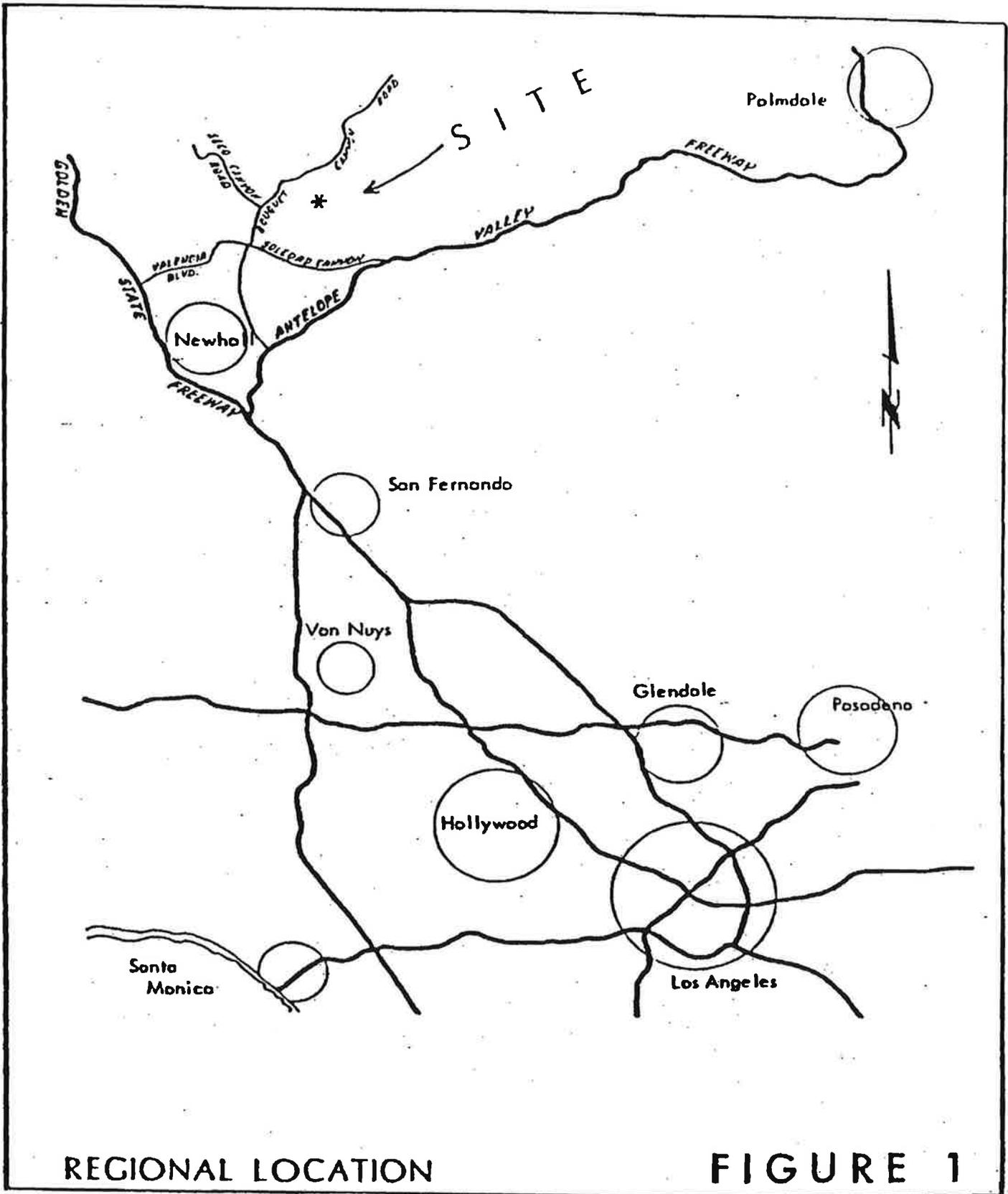
### Impacts

The Proposed Project will generate approximately 25,550 tons of solid waste per year at buildout.

Other planned projects within the Santa Clarita Valley plus the Proposed Project and existing demand will generate approximately 350,144 tons of solid waste per year at buildout, or approximately 2% of the area landfill remaining capacity.

### Mitigation Measures

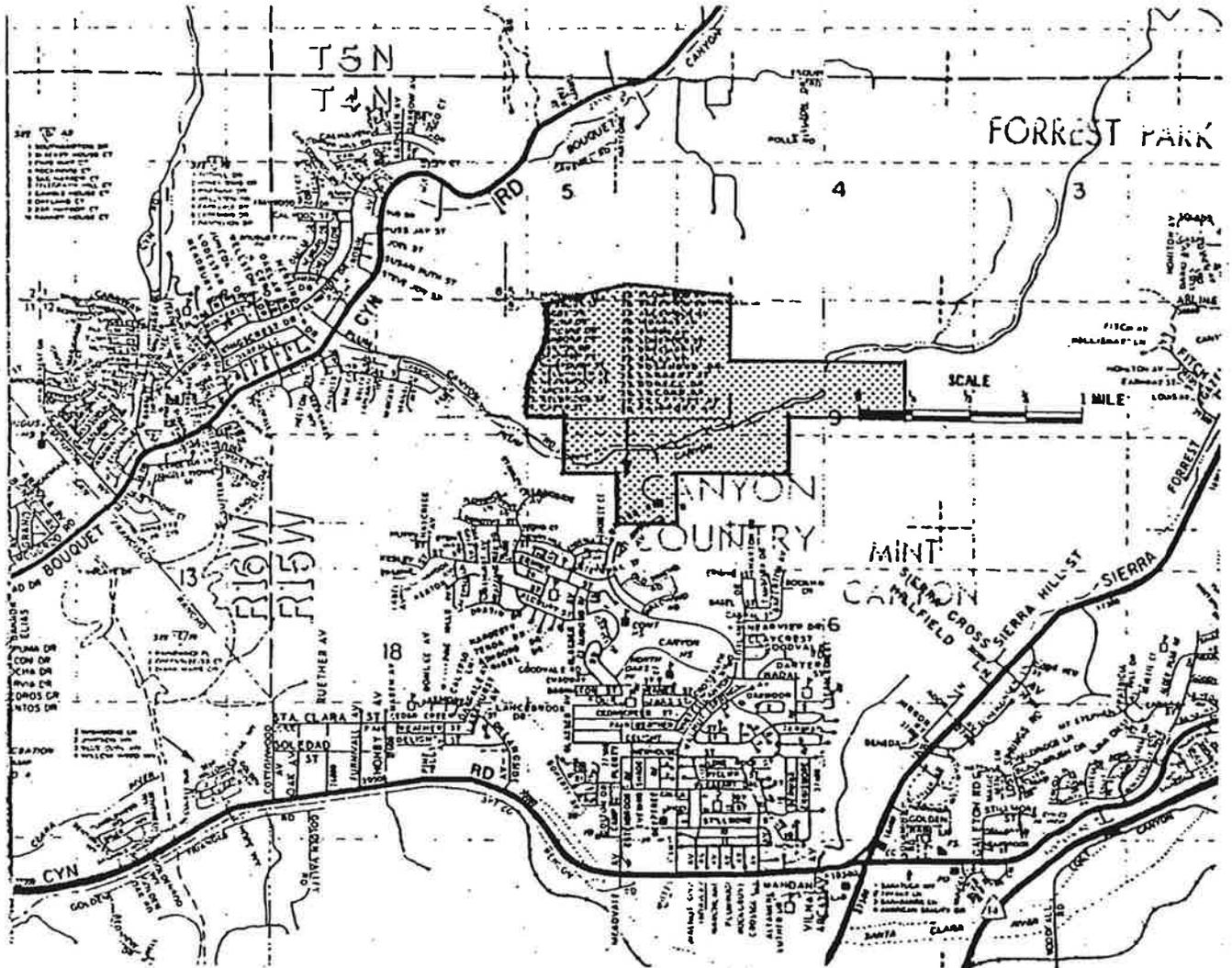
No specific mitigation measures are proposed. No significant project related or cumulative impacts to area solid waste disposal capacities are anticipated. Current and future landfill expansions will mitigate impacts. Residents are encouraged to practice source-separation and volume reduction.



REGIONAL LOCATION

FIGURE 1

# VICINITY MAP



TENTATIVE TRACT 33987



FIGURE 2

The Development Agreement provides for the early financing and construction of improvements to Plum Canyon Road, within the Assessment District. The County is presently unable to require accelerated financing and construction of a major thoroughfare at this geographic location under any of its police power or land use exaction powers. The Development Agreement proposes to guarantee for a period of thirteen years the density for construction of residential units by the Applicant at the project site in exchange for the Applicant agreeing to, among other things, the early financing and construction of the Plum Canyon Road improvements.

The objective of the Proposed Project is to bring the site zoning into compliance with the General Plan and to develop approximately 675 acres of vacant land into approximately 5,000 single family and multi family dwelling units and 21.9 acres commercial.

In order to achieve these goals, Zone Case 85-628 has been submitted to the County of Los Angeles, Department of Regional Planning and contains the following:

Zone Change Request

<u>Existing</u>	<u>Proposed</u>	<u>Density</u>	<u>Acres</u>
A-2-1	RPD-1-5U	5 DU/AC	272.6
A-2-1	RPD-1-4U	4 DU/AC	199.2
A-2-1	RPD-1-7U	7 DU/AC	27.6
A-2-1	R-3	30 DU/AC	151
A-2-1	C-2	-----	21.9

Maximum allowable number of units would be approximately 6,883.

A subsequent filing of a tentative tract map will provide the ultimate development proposal.

C. Project Characteristics

The Proposed Project would provide construction of approximately 5,000 units including: single family units, multi family units, patio homes, apartments, town home units, town house flat units, and 21.9 acres commercial use. The project site encompasses a total of approximately 675 acres, see FIGURE 4 - Site Plan. In order to create building pads and required streets and slopes, approximately 12.5 million cubic yards of grading will be required. Primary site access will be provided via Plum Canyon Road and Whites Canyon Road west to east through the site. Secondary access will be provided from the south via Santa Catarina Road and interior collector streets. The development will include a school site and park site.

The project is planned so that the early financing and construction of the Plum Canyon Road improvements will precede construction of residential units contemplated in the areas covered by the Zone Change.

The following is a unit breakdown that corresponds to the 5 areas shown on the Conceptual Site Plan, FIGURE 4.

<u>Area</u>	<u>Approx. Acreage</u>	<u>Units</u>	<u>Unit Type</u>
1	151	3,247	Apartments, Condos, Flats and Town houses
2	272.6	1,200	Single Family Detached, Detached Patio Homes, Duplexes
3	21.9	----	Commercial
4	27.6	153	Town houses
5	199.2	400	Single Family Detached, Detached Patio Homes, Duplexes, School

## II. DESCRIPTION OF ENVIRONMENTAL SETTING

### A. Existing Conditions

The project site is located in west-central Los Angeles County within the Santa Clarita Valley and, more specifically, in the community of Canyon Country. The Santa Clarita Valley is an area undergoing rapid urban expansion through the development of various land uses. Population growth within the Santa Clarita Valley is experiencing one of the fastest growth rates in the Southern California Association of Governments (SCAG) region.

Project site topography consists of ridgelines running along the northern and southern boundaries of the site. A moderately sloping plain runs west to east through the center of the site and slopes toward the south and Plum Canyon. Existing site topography is shown in FIGURE 5. Onsite drainage is along central Plum Canyon flowing westerly toward an existing inlet just east of Tract 32615. Onsite elevations range from 1,500 feet in the west to 2,000 feet in the north of the project site.

Noise sources in the area consist of vehicular traffic along Bouquet Canyon Road, one mile west of the site.

Geologically, the site is located within the Soledad basin, between the San Gabriel and Sierra Pelona Mountains. Project site soils are primarily silty sand/clayey silty sand exhibiting low expansive characteristics. No faults or fault traces have been identified



onsite. The major geologic hazard to the project site is ground shaking related to earthquake activity originating along the regionally located San Andreas or San Gabriel fault system. This hazard is within a level generally considered acceptable by Southern California residents.

Many of the onsite plant species are ephemeral in nature, developing with winter rains and becoming dormant during the summer months. Low-growth shrubs and chaparral are found along the steeper slopes, with grassland dominating the lower elevations. Resident wildlife populations associated with these plant communities are typical of the project area and include various small mammals, reptiles and avifauna. See Biota Report, APPENDIX 3.

A City of Los Angeles Department of Water and Power right-of-way (fee ownership) traverses the site on the northeast. Utilities serving the site include the Santa Clarita Water Company and Los Angeles County Sanitation District No. 26. These affected utilities have been notified and are considering annexation of the site.

Lands surrounding the site are planned or "under construction" residential uses and planned commercial.

Tentative Tract No. 31158 on the western boundary of the site is proposed as single and multi family development. Lands to the north, east and south are vacant.

Regional points of interest include Dry Canyon Reservoir, three miles to the northeast of the site; Castaic Lake, seven miles to the northwest; and Magic Mountain Amusement Park located six miles west of the site. Additionally, the Angeles National Forest is approximately four miles north, and six miles south of the project site.

B. Zoning and Adopted Plans

The Land Use Element of the Los Angeles County General Plan designates the project site as "1", Low Density Residential (1 - 6 DU/AC), and "R", Residential (1 DU/5 AC to 1 DU/20 AC) as shown in FIGURE 6.

The Santa Clarita Valley Areawide Plan designates the site as Urban 1 (U1 = 1.1 - 3.3 DU/AC), Urban 2 (U2 = 3.4 - 6.6 DU/AC), Urban 3 (U3 = 6.7 - 15 DU/AC), Urban 4 (U4 = 15.1 - 50 DU/AC), Hillside Management (HM = 1 DU/AC - 1 DU/20 AC) and Commercial (C-2), as shown in FIGURE 7. The existing Areawide Plan categories are summarized in the following table:

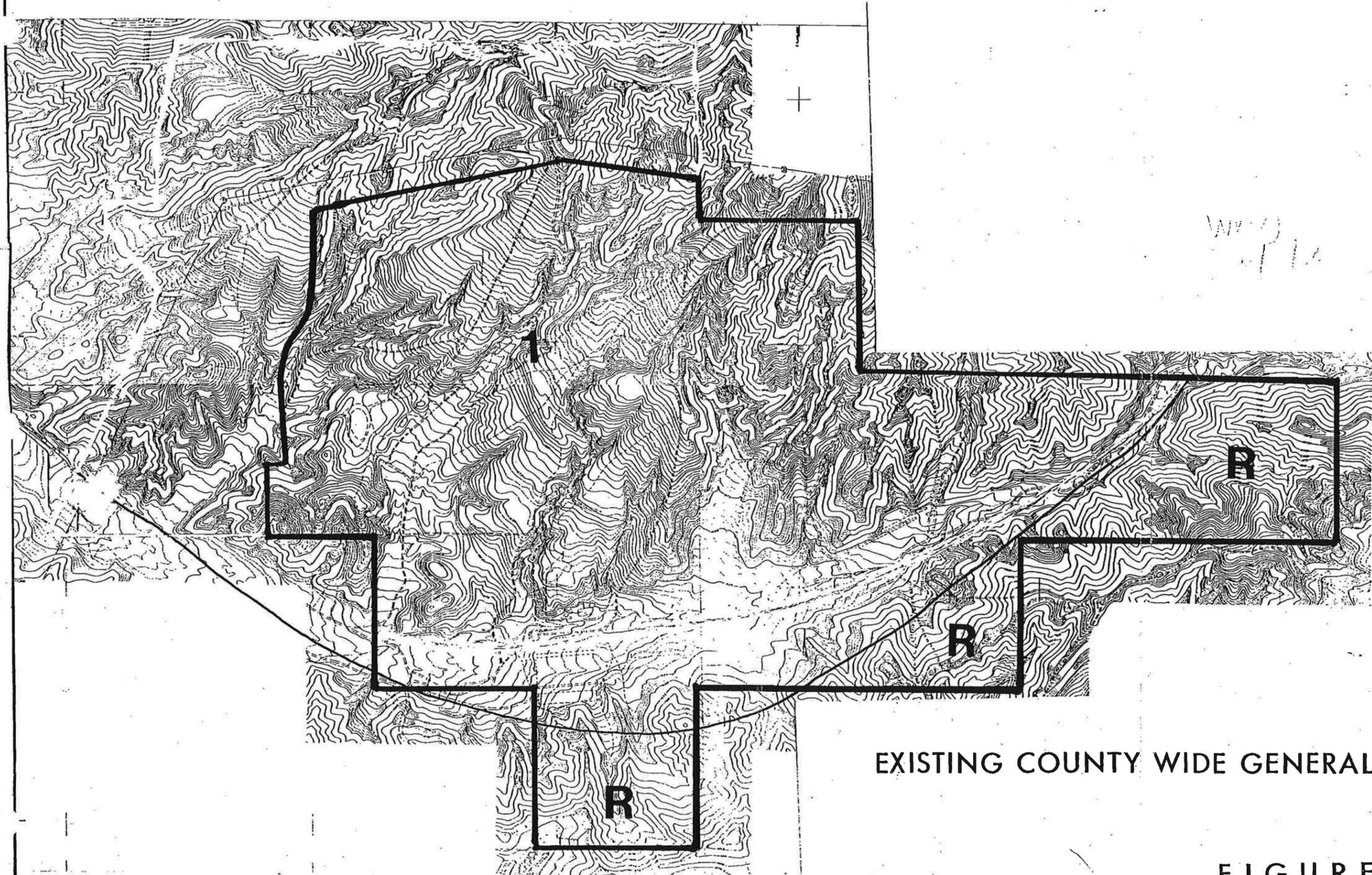
Existing Santa Clarita Valley  
Areawide Plan Designations

<u>Designation</u>	<u>Approximate Acres</u>
U1	90
U2	235
U3	165
U4	50
HM	120
C2	15

OS REQ.

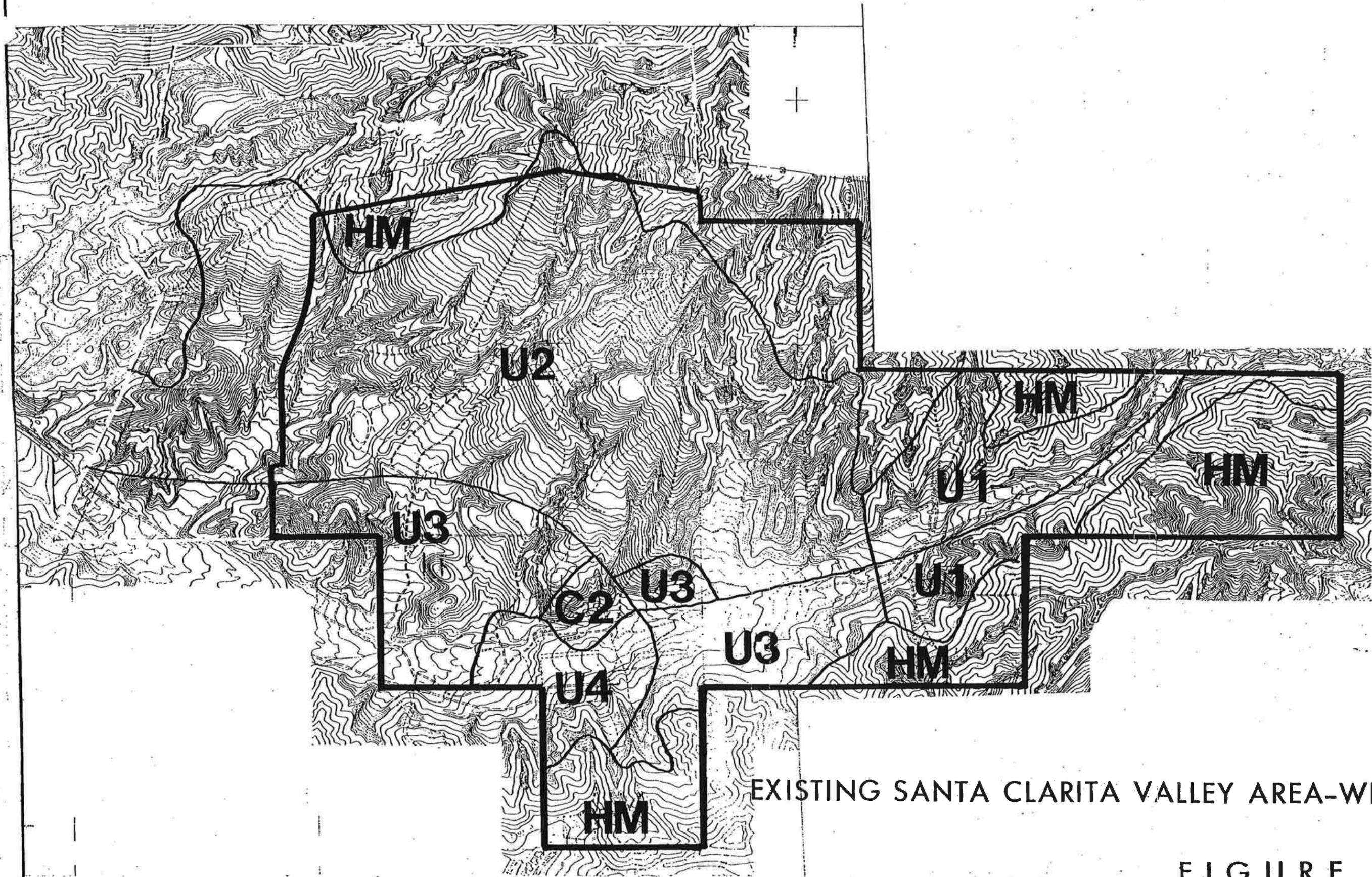
165 }  
84 } 249 AC  
0 }

The existing zoning on the project site is A-2-1 (1 DU/AC) as shown in FIGURE 8. A request has been filed with the County of Los



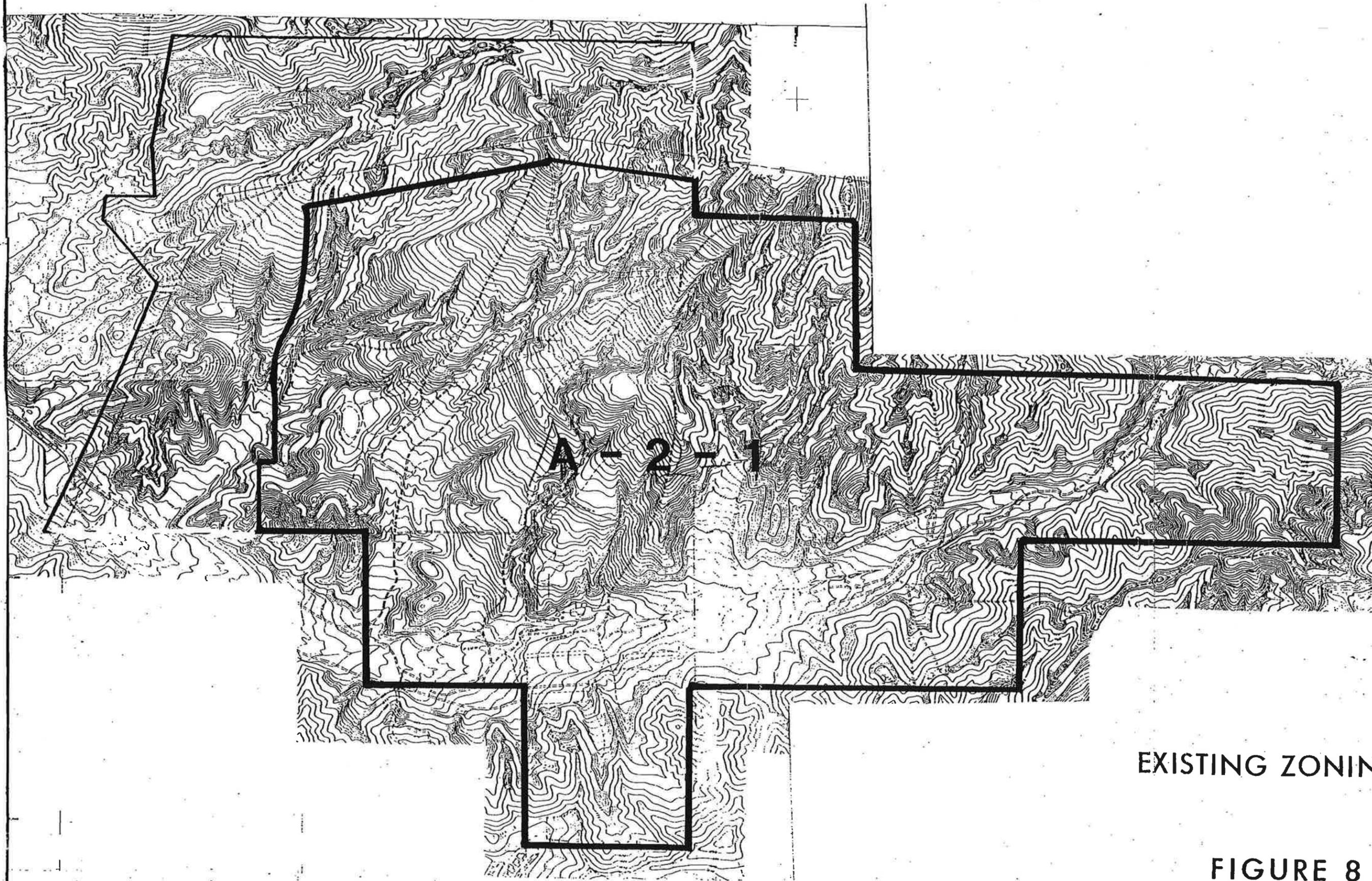
EXISTING COUNTY WIDE GENERAL PLAN

FIGURE 6



EXISTING SANTA CLARITA VALLEY AREA-WIDE PLAN

FIGURE 7



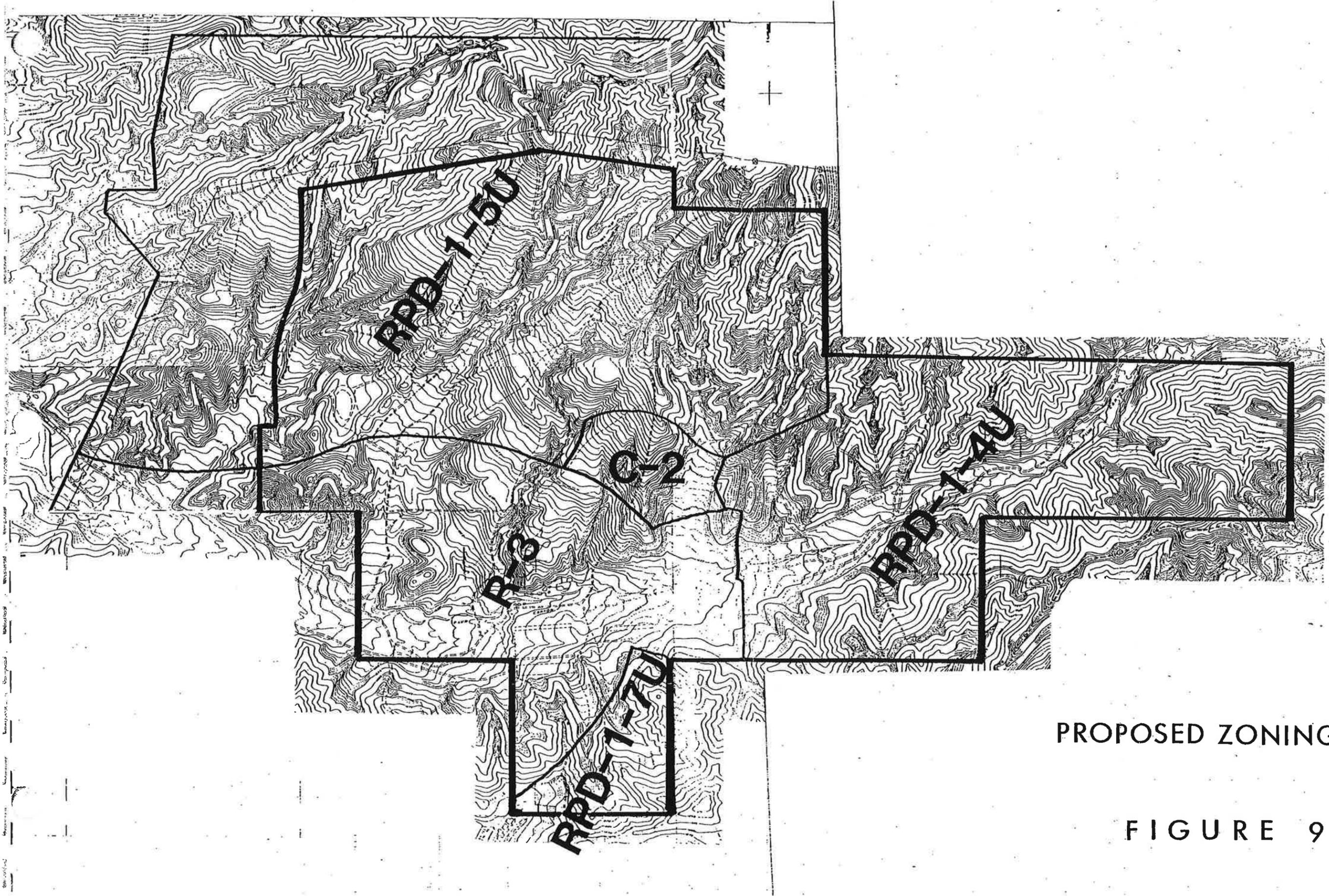
EXISTING ZONING

FIGURE 8

Angeles, Department of Regional Planning under Zone Case 85-628, to amend the existing zoning to RPD-1-5U (5 DU/AC), RPD-1-4U (4 DU/AC), RPD-1-7U (7 DU/AC), R-3 (30 DU/AC maximum) and C-2, Commercial.

FIGURE 9 shows proposed zoning. The table below shows the proposed zoning categories:

<u>Proposed Zoning Designations</u>	
<u>Designation</u>	<u>Approximate Acres</u>
RPD-1-5U	272.6
RPD-1-4U	199.2
RPD-1-7U	27.6
R-3	151
C-2	21.9



PROPOSED ZONING

FIGURE 9

### III. ENVIRONMENTAL IMPACT STATEMENT

#### A. Significant Environmental Effects of the Proposed Project

The following environmental impacts have been determined by the County of Los Angeles Impact Analysis Section to be potentially significant.

##### 1. Geotechnical Hazard

###### Environmental Setting

A geotechnical investigation has been conducted for the Proposed Project by Leighton & Associates, Inc. The entire report is included in APPENDIX 2. Future specific soils and geologic investigations will be required as development plans become available.

The study area is underlain by nonmarine sedimentary bedrock of Cenozoic age. These coarse-grained sediments consist of sandstone and conglomerate of the Miocene Mint Canyon Formation, sandstone, conglomerate, and silty sandstone of the upper Miocene Castaic Formation, and sandstone, conglomerate, and mudstone of the Plio-Pleistocene Saugus Formation. Mudstone beds were not observed within the Mint Canyon and Castaic Formations exposed onsite, but are anticipated to be present based on previous experience in other nearby locations. Mudstones represent the weakest materials within the onsite bedrock. Bedding observed within the bedrock is thick (up to 10 feet as observed), undulatory, and poorly developed.

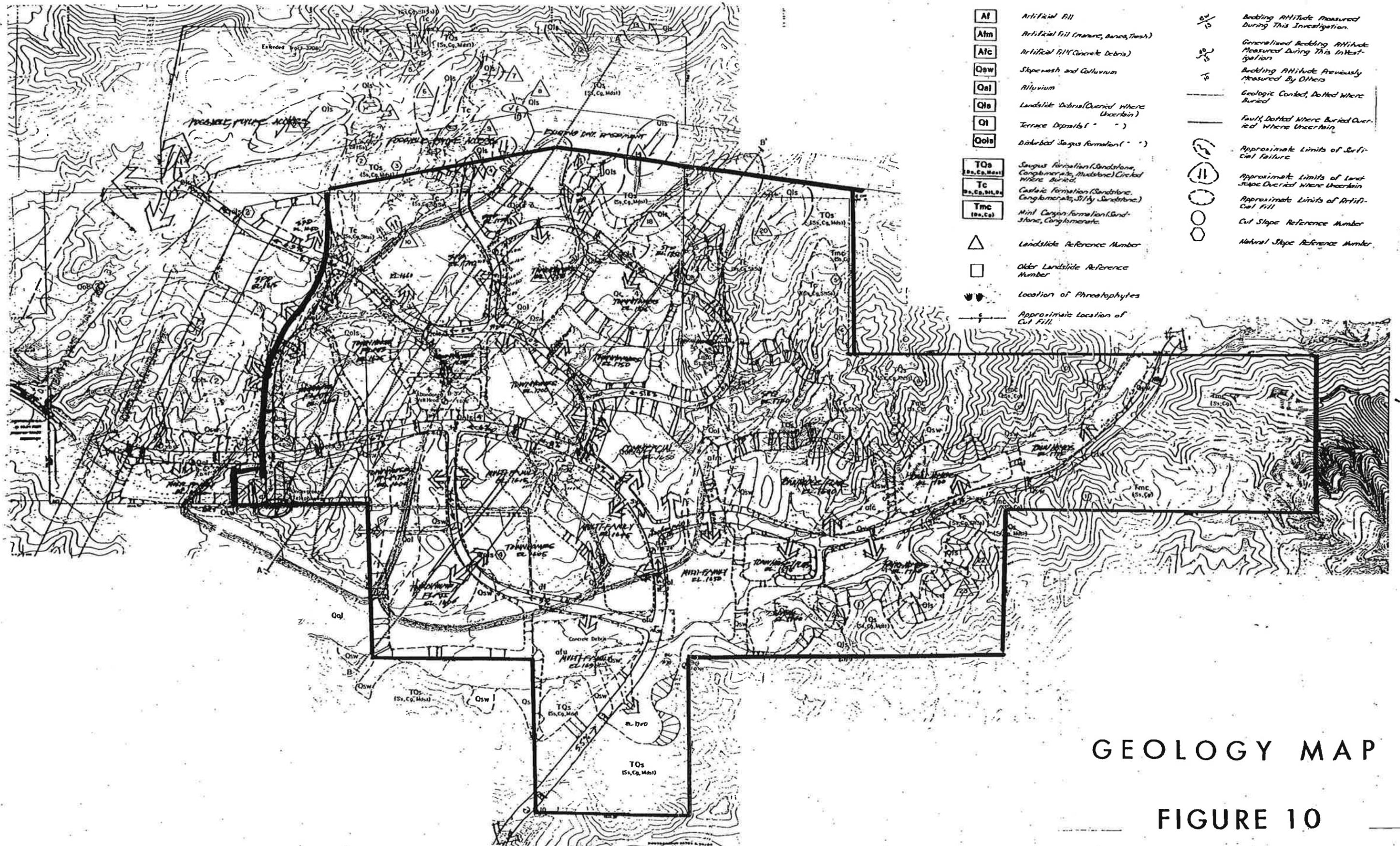
The predominant geologic structure within the study area is a

southwesterly dipping homocline. Bedding within the three onsite formations is subparallel and generally dips 10° to 20° degrees southerly to westerly. The homoclinal structure is locally interrupted by a north-south trending fault located in the easterly portion of the site. This fault has placed the Castaic Formation in contact with the underlying Mint Canyon Formation. No evidence of faulting was observed within the overlying Saugus Formation or surficial soils. A northwesterly trending fault in the central portion of the study area is suspected due to the observation of an anomalous linear ravine located across a terrace surface.

Regional ground water levels are anticipated to be at a depth of approximately 75 feet below the lower portions of the site. Phreatophytes indicating shallow ground water were observed in the western area of the site, adjacent to the Department of Water and Power right-of-way. This shallow ground water is anticipated to represent a localized and seasonal perched condition and persistent, shallow ground water levels are not anticipated.

The surficial soils overlying bedrock and delineated on the accompanying Geotechnical Map (see FIGURE 10) include terrace deposits (Qt), recent landslide debris (Qls), alluvium (Qal), slope wash and colluvium (Qsw), and artificial fill (af, afc, afm). These materials are typically medium to coarse-grained and are anticipated to have high shear strengths with low cohesion. Expansion potentials are anticipated to be low due to a relatively low clay content.

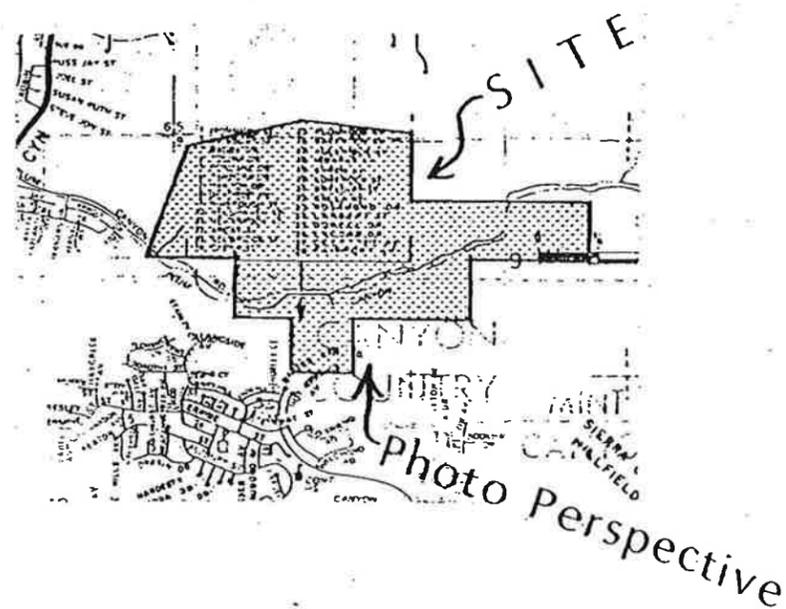
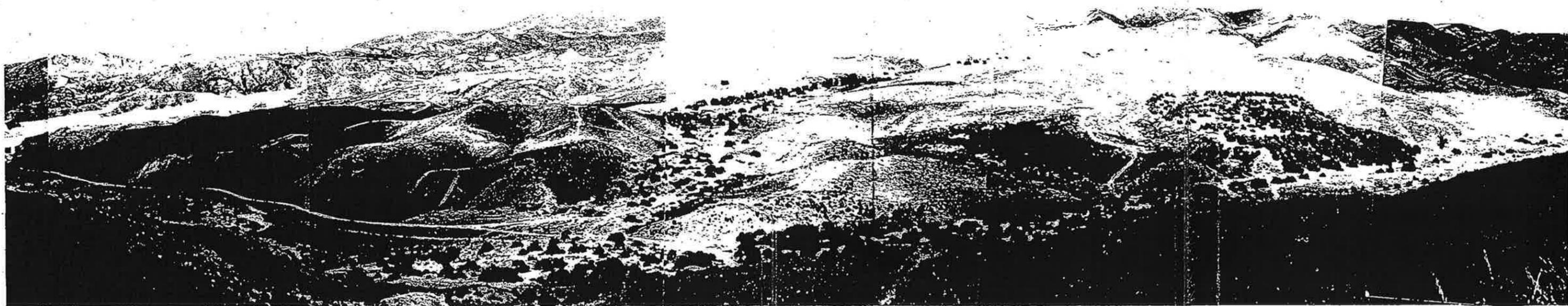
# LEGEND



- |                               |   |  |   |
|-------------------------------|---|--|---|
| <b>AI</b>                     | Artificial Fill   |  | Bedding Attitude Measured During This Investigation             |
| <b>Alm</b>                    | Artificial Fill (Manure, Bones, Trash)                                    |  | Generalized Bedding Attitude Measured During This Investigation |
| <b>Aic</b>                    | Artificial Fill (Concrete Debris)   |  | Bedding Attitude Previously Measured By Others                  |
| <b>Qsw</b>                    | Slackwash and Colluvium   |  | Geologic Contact, Dotted Where Buried                           |
| <b>Qal</b>                    | Alluvium  |  | Fault, Dotted Where Buried Overlain Where Uncertain             |
| <b>Qls</b>                    | Landslide Debris (Overlain Where Uncertain)                               |  | Approximate Limits of Surface Failure                           |
| <b>Ql</b>                     | Terrace Deposits  |  | Approximate Limits of Landscape Overlain Where Uncertain        |
| <b>Qols</b>                   | Disturbed Saguos Formation  |  | Approximate Limits of Artificial Fill                           |
| <b>TQs</b><br>(Ss, Cg, Msh)   | Saguos Formation (Sandstone, Conglomerate, Mudstone) Circled Where Buried |  | Cut Slope Reference Number                                      |
| <b>Tc</b><br>(Ss, Cg, Msh, L) | Castalia Formation (Sandstone, Conglomerate, Silt, Sandstone)             |  | Natural Slope Reference Number                                  |
| <b>Tmc</b><br>(Ss, Cg)        | Mint Canyon Formation (Sandstone, Conglomerate)                           |  |   |
|                               | Landslide Reference Number  |  |   |
|                               | Older Landslide Reference Number  |  |   |
|                               | Location of Phreatophytes   |  |   |
|                               | Approximate Location of Cut Fill  |  |   |

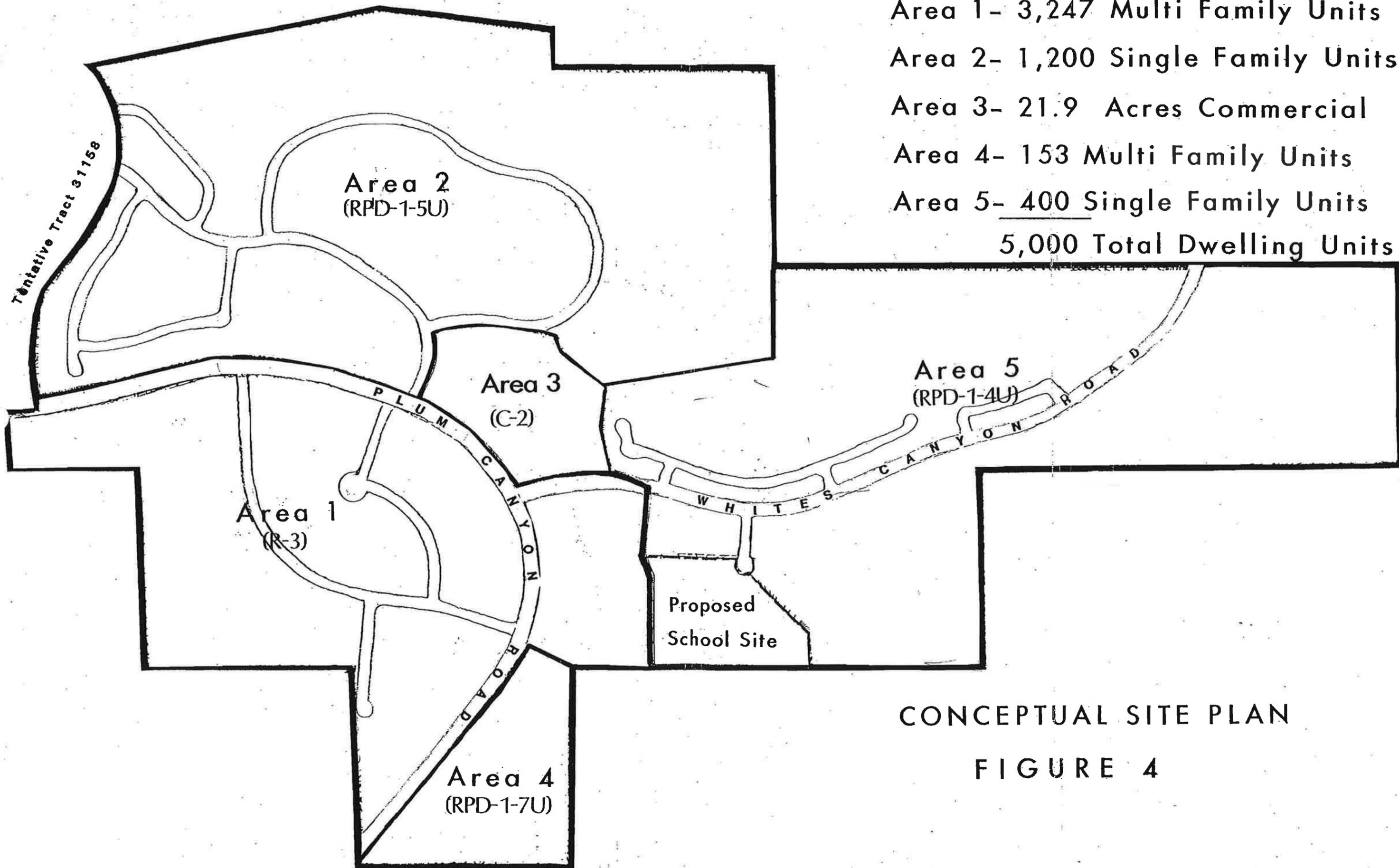
## GEOLOGY MAP

FIGURE 10



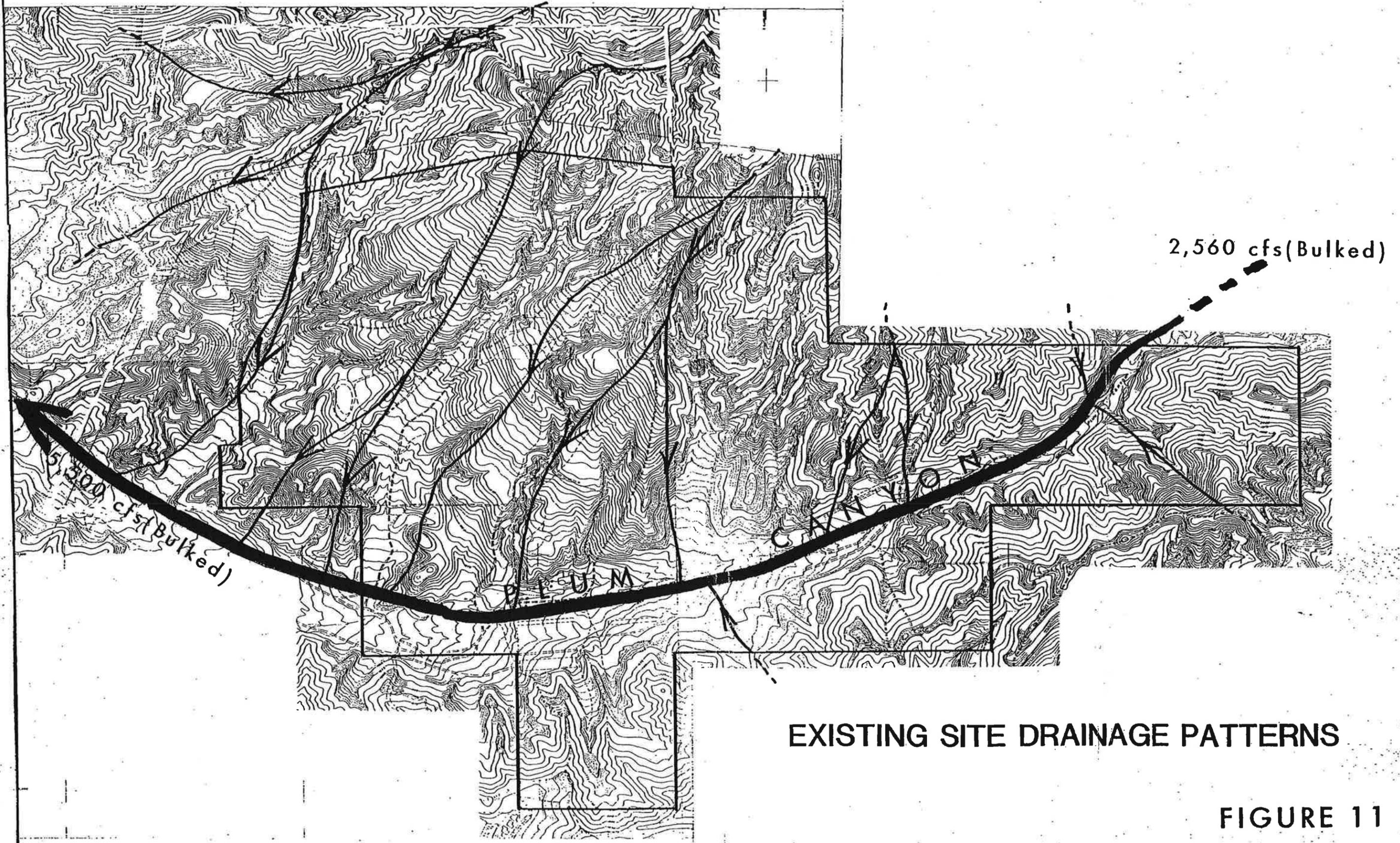
SITE PHOTOS

FIGURE 3



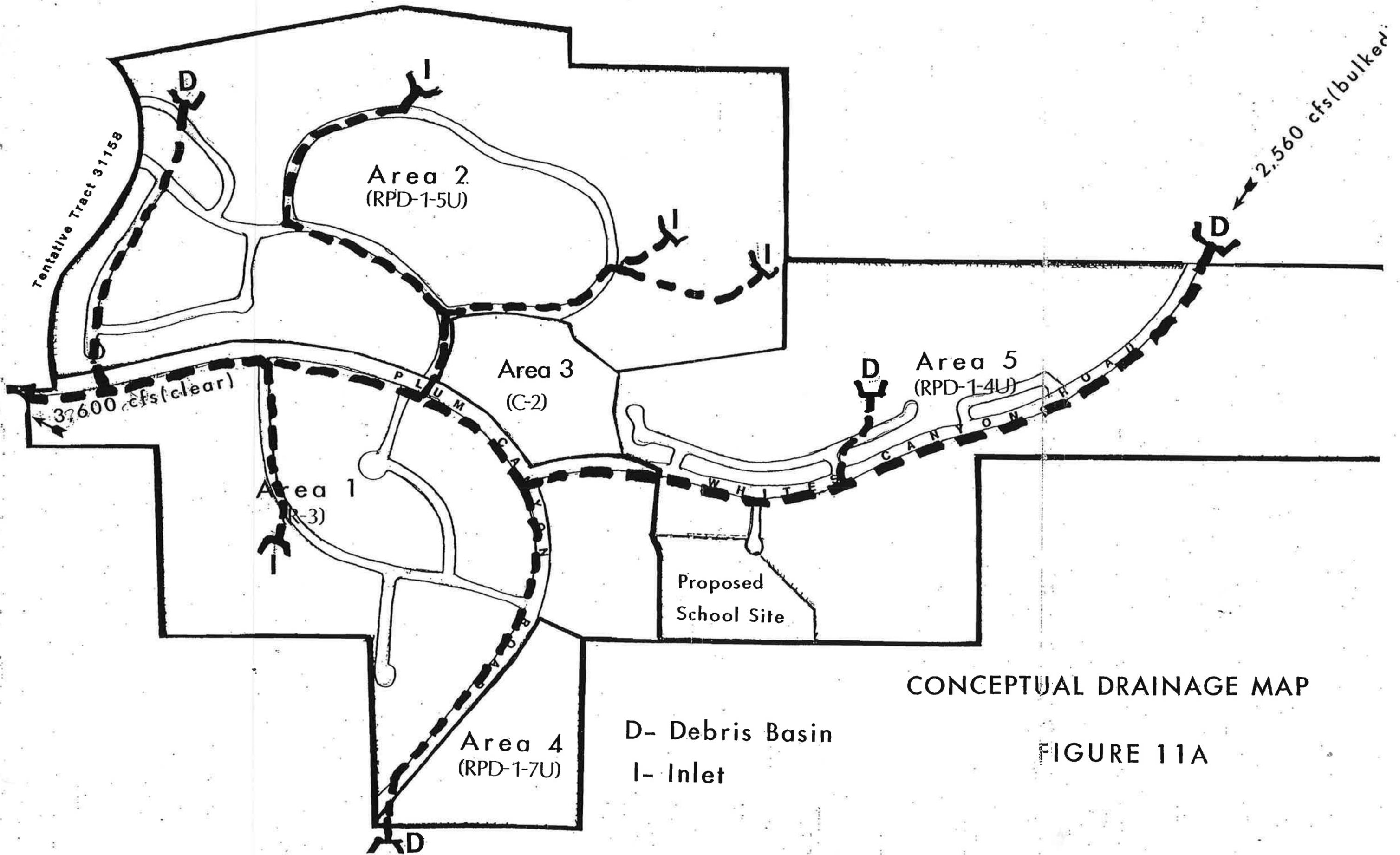
CONCEPTUAL SITE PLAN

FIGURE 4



EXISTING SITE DRAINAGE PATTERNS

FIGURE 11



CONCEPTUAL DRAINAGE MAP

FIGURE 11A

D- Debris Basin  
 I- Inlet

# VEGETATION MAP

-  GRASSLAND
-  COASTAL SAGE SCRUB
-  CHAPARRAL
-  ALLUVIAL SCRUB
-  TREES

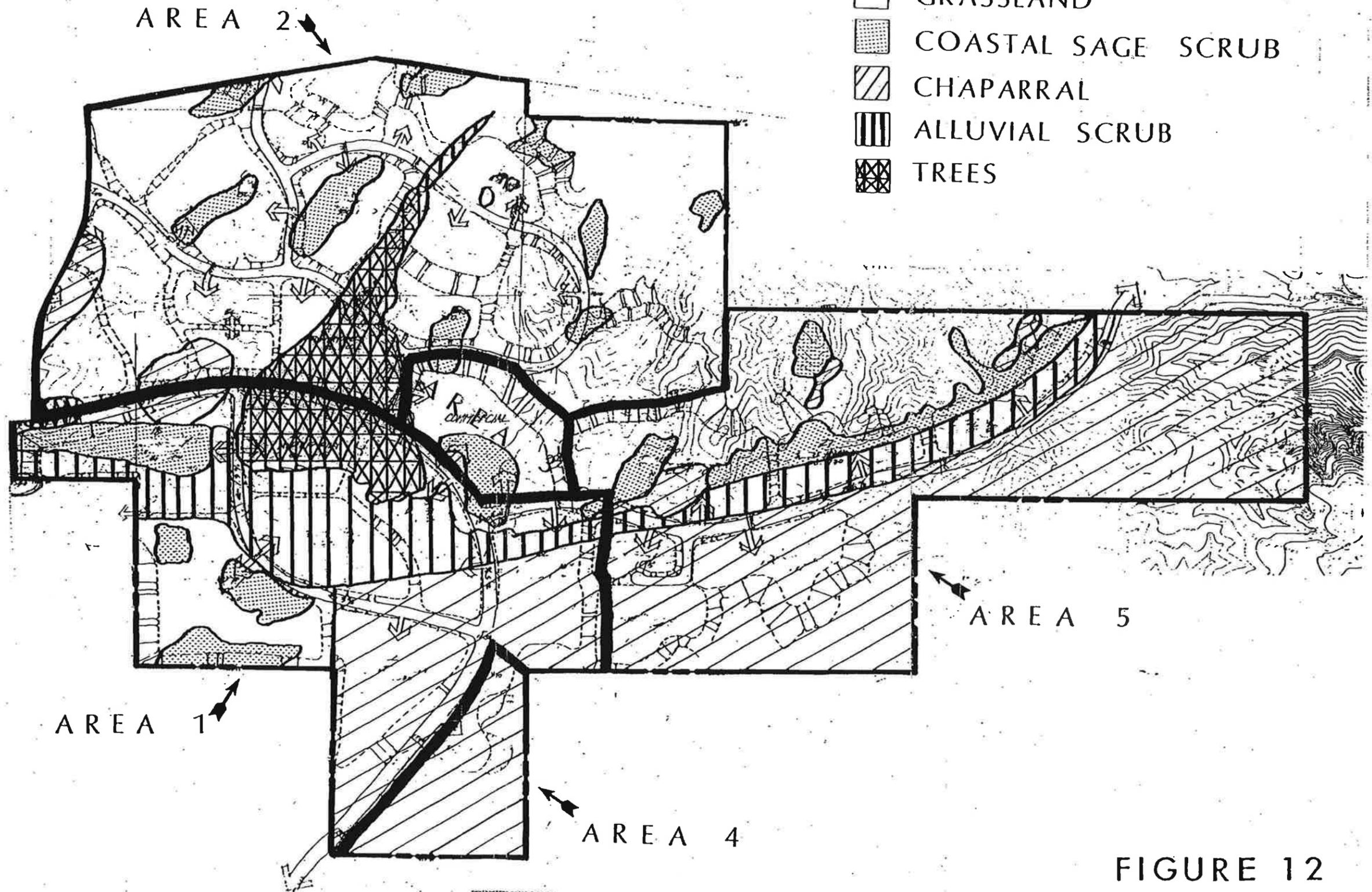
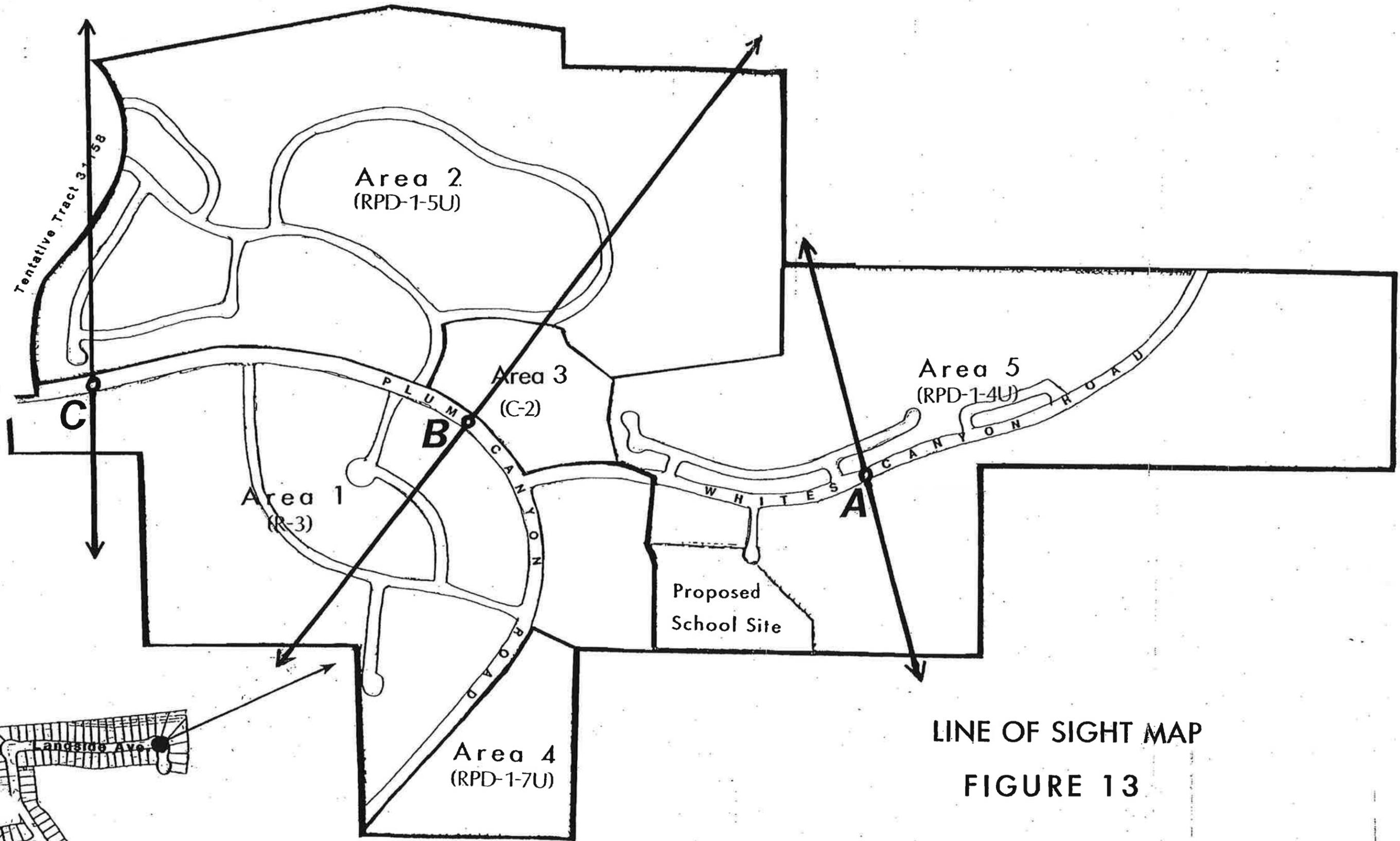
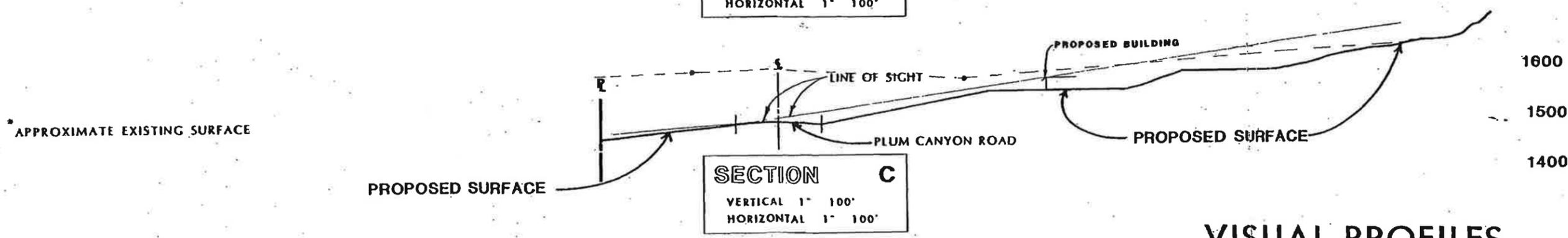
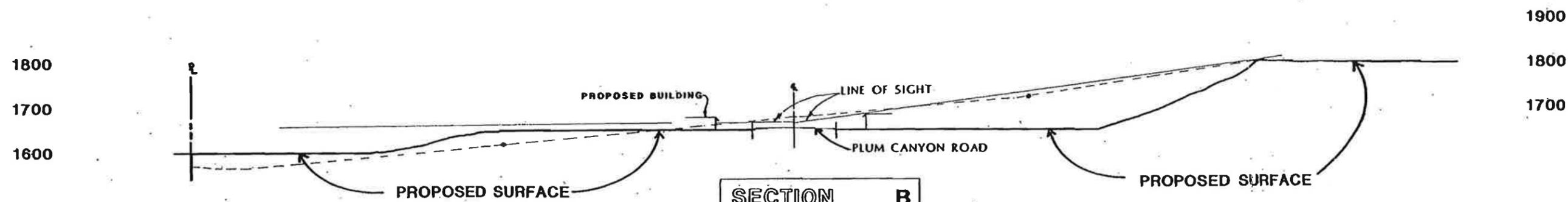
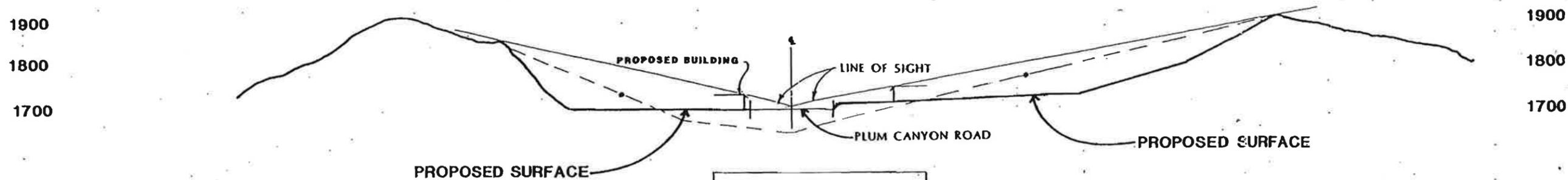


FIGURE 12



LINE OF SIGHT MAP  
FIGURE 13



VISUAL PROFILES

FIGURE 14

# PHASE 1 TRAFFIC(1991) CONCEPTUAL DEVELOPMENT

250 Single Family

1,375 Townhouse

875 Apartments

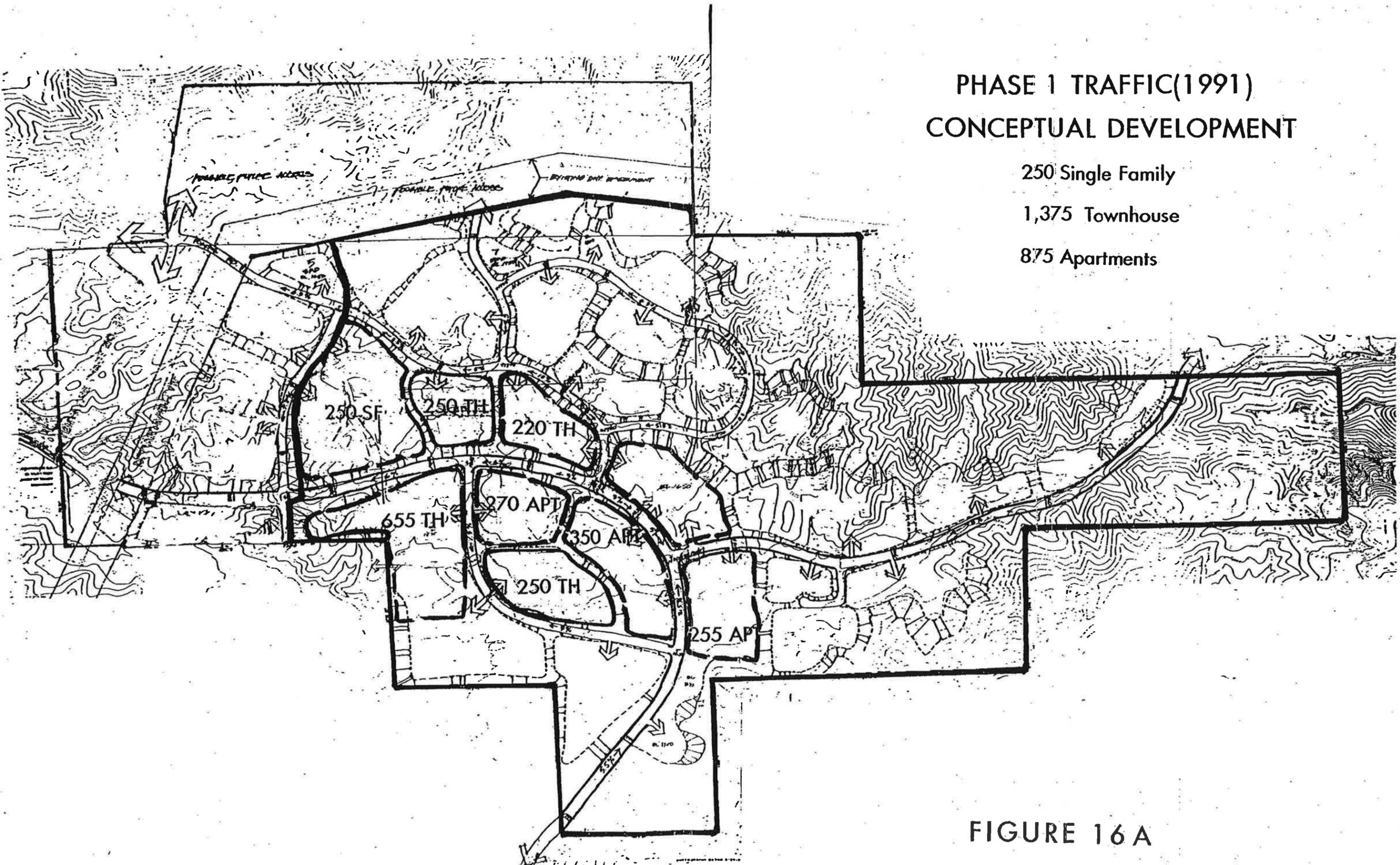
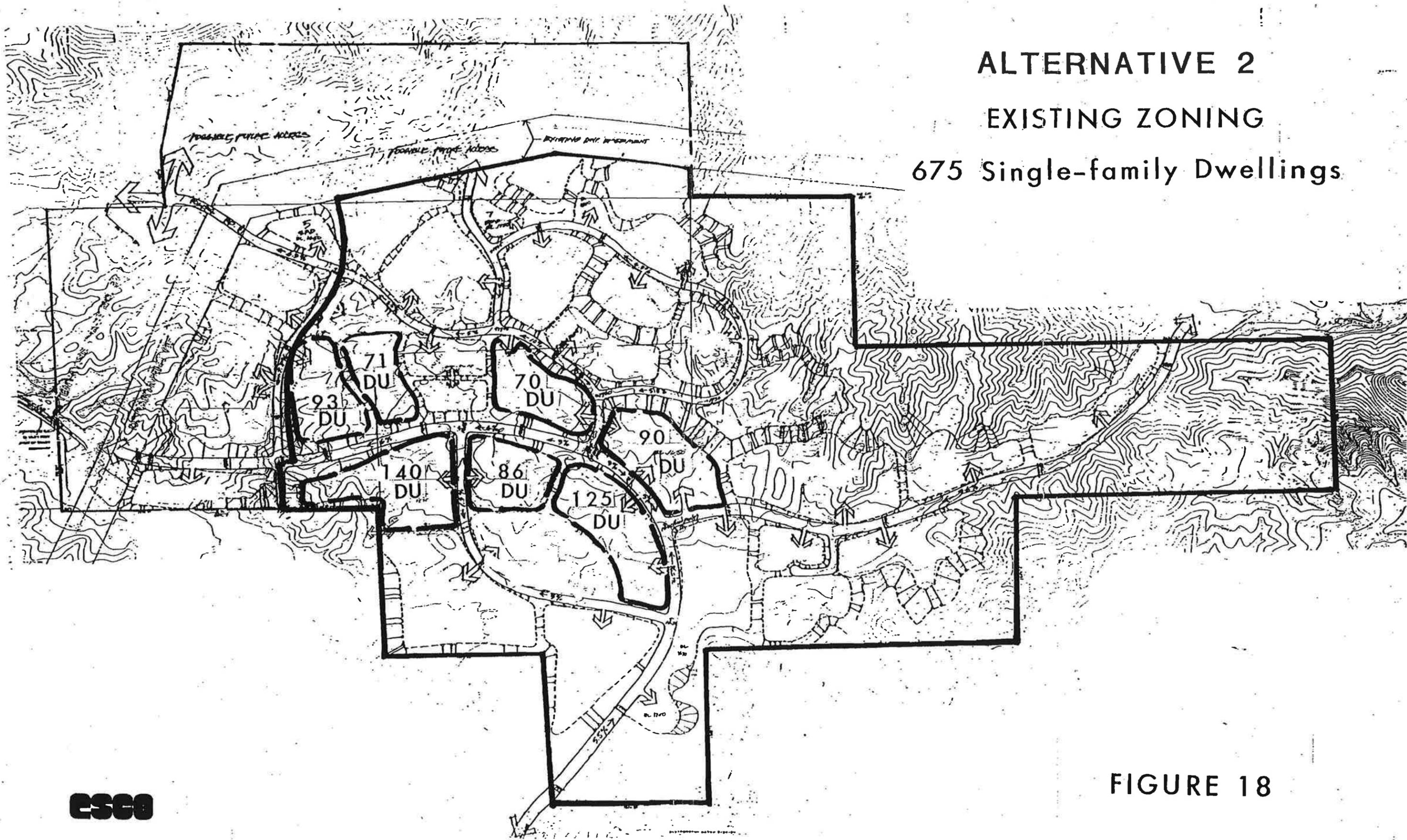


FIGURE 16 A

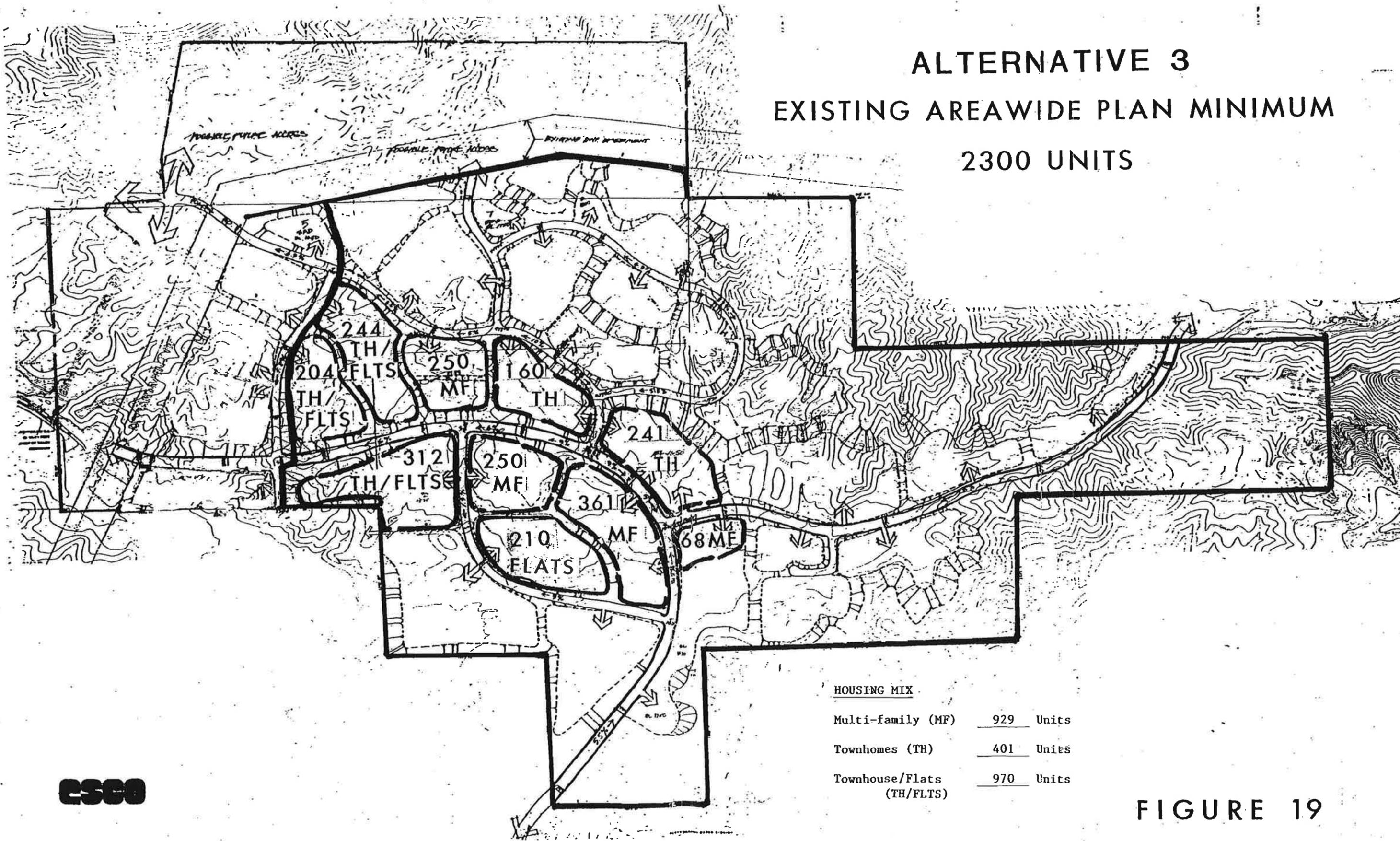
ALTERNATIVE 2  
EXISTING ZONING  
675 Single-family Dwellings



ES&C

FIGURE 18

# ALTERNATIVE 3 EXISTING AREAWIDE PLAN MINIMUM 2300 UNITS



HOUSING MIX		
Multi-family (MF)	929	Units
Townhomes (TH)	401	Units
Townhouse/Flats (TH/FLTS)	970	Units

FIGURE 19



The recent landslide debris delineated on the Geotechnical Map is anticipated to consist primarily of intense fractured and disturbed Saugus Formation. This material is anticipated to be potentially compressible. Collapse and compressibility potentials are anticipated to be high within the alluvium, and slope wash and colluvium. The artificial fill is also anticipated to have a high settlement potential.

#### Environmental Impacts

A primary seismic hazard to any site is the potential for ground surface rupture caused by fault displacement. Two faults are mapped onsite based on research, topography and geologic reconnaissance. A north-south trending fault was observed in the westerly portion of the site. The fault was not observed within the Plio-Pleistocene Saugus Formation or within the overlying surficial deposits and is anticipated to be inactive. A potential northwesterly trending fault is located onsite, and possible expression of this fault was observed on the terrace surface. However, current data suggest that the potential for future ground surface displacement onsite is low to nil.

Landslides have occurred onsite, primarily within the Saugus Formation. Of the twenty-four landslides identified (see Geology Map, FIGURE 10), only six impact areas proposed for development. Impacted areas include Area 2 and Area 5.

### Mitigation Measures

The following measures have been proposed to reduce the project-wide geotechnical impacts to a level of insignificance. Specific mitigation measures associated with tract design will be addressed in subsequent reports, as acceptable to the County Engineer:

- All grading operations shall be conducted in conformance with the Los Angeles County Grading Ordinance.
- All grading activities shall adhere to the recommendations included within the current and subsequent geotechnical report, including the following:
  - All uncertified artificial fill, and alluvium shall be removed and recompactd to the required maximum density;
  - All organic material shall be removed or hydroconsolidated prior to grading certification;
  - Proposed cut and fill slopes shall be stabilized to the satisfaction of the County Engineer;
  - Existing landslides of a potentially hazardous nature shall be properly stabilized, removed, or left in open space per the requirements of subsequent Geology Reports;
  - All future cut/fill slopes will be landscaped to reduce potential increases in erosion;
  - All onsite drainage shall conform to the future Drainage Concept Plan to reduce potential erosion impacts;
  - Slopes over 30' high shall be designed with a concrete drainage device to carry water off graded slopes to minimize erosion;

- Subdrains shall be installed if ground water is encountered during excavation operations, or if future shallow ground water is expected.
- Additional geotechnical studies shall be conducted prior to Tentative Tract Map approval and again during grading operations to correct existing landslide and unstable slope impacts where necessary. The subsequent geotechnical investigations shall also address the potential for hydroconsolidation as a result of liquefaction.

The potential effects of ground shaking on structures can be expected to be satisfactorily mitigated by (earthquake-resistant) design in accordance with the latest Uniform Building Code and current state-of-the-art engineering practices. The ground shaking hazard at the project site is within a level generally considered acceptable by Southern California residents.

Because areas containing low density soils will be removed and shallow ground water was not encountered, the potential for such ground failure hazards is rated as low to nil. Therefore, no special mitigation measures other than earthwork construction in accordance with code requirements are expected to be necessary.

## 2. Flood Hazard

### Environmental Setting

The site's natural drainage course runs along the floor of Plum Canyon through an east to west trending wash that traverses the length of the site and connects to drainage systems to the west of

the project site south of Plum Canyon Road to a Bouquet Canyon channel (see FIGURE 11). Existing Q<sub>25</sub> storm flow values of 5,500 cubic feet per second (cfs) presently pass through the project site as sheet flow and along natural drainage courses central to Plum Canyon and trending westerly, including a Q<sub>25</sub> offsite flow contribution from eastern Plum Canyon of 2,560 cfs. Onsite soils and vegetative cover indicate that the site is subject to moderate levels of erosion. This is not a high mud flow area. A U.S.G.S. designated "blue-line" water course is within the project site. The Applicant will comply with State and Federal requirements for "blue-line" water courses.

#### Environmental Impacts

Project related flood hazard impacts can be divided into these two categories:

1. Flood hazard related to upstream drainage flowing through the site is limited to an easterly drainage area of approximately 680 acres that contributes approximately 2,560 cfs (bulked) to the site;
2. Development of the Proposed Project will decrease offsite runoff downstream (westerly along Bouquet Canyon Road). Upon development, the Q<sub>25</sub> storm flow would be 3,600 cfs (clear), including upstream contributions. A Q<sub>25</sub> storm flow decrease of approximately 1,900 (bulked to clear differential) would result from project development. Onsite runoff will be collected according to the proposed Conceptual Drainage Map, which includes inlet structures, and debris basins as shown in FIGURE 11A.

Flood hazards on and offsite, as well as erosion potentials will be reduced by implementation of the approved Drainage Concept Plan. No mud flow hazard was identified on the site.

#### Mitigation Measures

A Conceptual Drainage Map is shown in FIGURE 11A. A Drainage Concept Plan has been submitted to and approved by the Los Angeles County Department of Public Works. Improvements proposed in the approved Drainage Concept Plan will reduce flood hazards to a level of insignificance, including:

- implement County approved onsite drainage improvements of inlet/outlet structures and storm drains;
- install debris basins, as required;
- cut and fill slopes will be landscaped to reduce potential increases in runoff and erosion;
- inlet structures, debris basins and street maintenance will reduce impacts of sediment and runoff contaminants discharge.

### 3. Air Quality

#### Environmental Setting

The Proposed Project is located in the South Coast Air Quality Management District's (SCAQMD) Source - Receptor Area 13. The SCAQMD monitors and regulates air quality impacts within 38 source receptor areas in Southern California. No current monitoring data exists for Area 13, except for ozone whose 1985 maximum concentration was 0.24 parts per million (ppm). Ozone

concentrations in Area 13 for 1985 exceeded the State Standard (0.1 ppm) 141 days and the Federal Standard (0.12 ppm) 93 days.\* Projected SCAQMD 1987, Area 13, tons per year air pollutant emissions are:

<u>Carbon Monoxide (CO)</u>	<u>Nitrogen Oxides (NOx)</u>	<u>Reactive Organic Gas (ROG)</u>
7,399	2,179	1,088

Source: SCAQMD - Air Quality Data 1985.

### Environmental Impacts

#### A. Construction Emissions

Project Construction air pollution emissions such as dust and construction equipment products of combustion are estimated to be approximately 917 lbs./day carbon monoxide, 3,911 lbs./day nitrogen oxides, 301 lbs./day sulfur oxides and 274 lbs./day particulates.

#### B. Project Operation Emissions

Based upon 1990 model vehicle trips per day, as determined in the Project's Traffic Study and 10-mile trip distances averaging 45 MPH, the following project and cumulative, mobile and stationary emissions of carbon monoxide, nitrogen oxides, sulfur oxides and particulates are estimated as tons per year:\*\*

\* Contact 8/5/86 with Brian Ferris AQMD, EIR Coordinator citing "Air Quality Handbook", revised December, 1983.

\*\* These estimates are derived from methodologies of the "Air Quality Handbook," revised Dec. 1983, and may not reflect a 365 days per year operating basis.

TABLE 1

Summary of Air Pollutant Emissions  
(tons/yr.)

	Mobile Sources			Stationary Sources			Source Totals					
	CO	NOx	SOx	Part.	CO	NOx	SOx	Part.	CO	NOx	SOx	Part.
Proposed Project 1,600 single family and 3,400 multi family dwelling units 21.9 acres commercial*	2,733	591	111	258	3.1	12.8	0.03	0.03	2,736	604	111	258
Related Area Projects 142,085 trips per day	8,987	1,943	366	847	7.9	41.9	0.09	0.09	8,995	2,871	366	847
Total Cumulative	11,720	2,534	477	1,105	11	54.7	0.12	0.12	11,731	3,475	477	1,105

\* Net commercial use area is determined to contribute insignificantly to total project air quality impacts.

As shown in the above table, the Proposed Project will generate from mobile and stationary sources approximately 2,736 tons/yr. of CO (37% of SCAQMD Projected), 604 tons/yr. of NO<sub>x</sub> (28% of 1987 SCAQMD Projected), 111 tons/yr. of SO<sub>x</sub> and 258 tons/yr. particulates.

#### Cumulative Impacts

The above table indicates that Proposed Project plus related area projects will generate cumulative air pollutant emissions approximating 11,731 tons/yr. CO, 3,475 tons/yr. NO<sub>x</sub>, 477 tons/yr. SO<sub>x</sub> and 1,105 tons/yr. particulates. Cumulative emissions exceed projected 1987 SCAQMD, Area 13 emission levels for CO by approximately 58% and emission levels for NO<sub>x</sub> by approximately 59% - similar exceedance can be expected for SO<sub>x</sub> and particulates.

#### Mitigation Measures

Mitigation of construction air pollution emissions would include watering to control dust, proper equipment engine maintenance, and construction activity scheduling in accordance with specific AQMD directives.

The developer will comply with Title 24 of the California State Energy Commission to minimize stationary source air pollutants associated with the Proposed Project. Traffic mitigation measures, such as restripping and left-turn lanes, have been proposed to promote free-flowing traffic conditions and reduce

mobile pollutant sources. These AQMD mitigation measures, in addition to the statewide required inspection and maintenance program, help reduce air pollutant emissions.

#### 4. Biota

##### Environmental Setting

The proposed development site is approximately 675 acres of hills, valleys, and mountains. A broad valley runs from east to west through the southern portion of the property. The proposed extension of Plum Canyon and Whites Canyon Roads would pass through this valley. Residential developments occur to the west of the site. High mountains lie to the south of the property offsite. Other mountains form the northern boundary of the property. Numerous valleys and lesser drainage courses empty into Plum Canyon from these mountains.

The hillsides are covered with grassland, coastal sage scrub, and chaparral vegetation. The valley bottoms support various alluvial scrub plant species. Most of the site is treeless. However, trees occur along the southern portion and were either planted or are volunteer specimens. An old abandoned olive grove is the most noteworthy. No oak trees exist on the site. A complete list of flora is found in APPENDIX 3.

##### Flora

Most of the site is covered by grassland vegetation composed of annual weeds and grasses such as wild oats, black mustard,

foxtail, tarweed, horseweed, doveweed, cheeseweed, thistle, wheat grass, and stephanomeria. These species indicate past disturbances such as livestock grazing and fire.

Coastal sage scrub vegetation occurs in irregular patches on steep slopes and ridges. This vegetation type is composed of low-statured perennial shrubs and is dominated by California sagebrush, saltbush, chaparral aster, tree tobacco, California encelia, California buckwheat, goldenbush, deerweed, sages, elderberry, and yucca.

Isolated stands of chaparral occur on deeper soils and protected slopes. This vegetation is composed of large, woody shrubs and is dominated by chamise, mountain mahogany, buck brush, yerba santa, toyon, mallow, prickly pear and scrub oak.

Alluvial scrub occupies the bottoms of major canyons. This type of vegetation is composed of scattered medium to large shrubs such as scalebroom, valley cholla, big basin sagebrush, holly-leaved cherry, redberry, creek senecio, and squaw bush.

Some trees occur on the site, but in most cases were planted by man. In the southwest corner of the property there is a grove of Texas umbrella and tree of heaven trees. A few eucalyptus trees are found in scattered locations in the southern sector. Numerous olive, pepper and tamarisk trees have become established in the broad valley that bisects the property. An old abandoned olive orchard persists in the south-central sector.

None of the plant species observed or expected to occur on the site are classified as rare or endangered. No riparian habitat identified onsite.

#### Fauna

The lack of water and the limited types of habitats on the site restrict the number of kinds and population sizes of animal species. Population sizes and animal activity sink to their lowest ebb during August when the field survey was conducted. During spring months the number and activity of various animal species would be much greater. Therefore, APPENDIX 3 lists both animals observed as well as those expected to occur on the site. Also, many reptiles and mammals are nocturnal and would not be observable during the daylight hours.

Coast Horned Lizard and California Legless Lizard occur in sandy wash areas such as those common to the site. The property is within the range of the extremely rare and endangered California Condor. This large bird uses open rangeland for scavenging dead carcasses. The cliffs on the site are suitable for nesting of the Golden Eagle and Peregrin Falcon, but no nests were observed nor were any individuals sighted.

Electric transmission lines (Dept. of Water and Power) pass across the northern and western sectors of the property. One of the smaller canyons in the eastern sector of the site has been used as a sanitary landfill in the past. Numerous dirt roads dissect the

property. The major road is used by power company vehicles to maintain the electric transmission lines and towers.

There is no permanent water on the site. All stream courses only carry off water during rainstorms. There are steep cliffs associated with the higher mountains and deep canyons both on and offsite. Fire scars indicate previous fire on the site. A controlled burn by the Los Angeles County Fire Department was carried out this year along the southern boundary of the property to reduce fire danger.

#### Environmental Impacts

The proposed development would result in the grading of approximately 63% (425 acres) of the site (see FIGURE 12). The remaining 37% (approximately 250 acres) would be undeveloped as natural open space. Generally, the undeveloped portions would include the steep cliffs and inaccessible portions of the property on the northern and southern boundaries. The extension of Plum and Whites Canyon Roads and the construction of a flood control channel would eliminate the alluvial scrub habitat in the southern valley. Both plant and animal populations would be reduced by the grading operations. Vegetative community losses would include approximately 217 (70% of total) grassland acres, 76 (80% of total) coastal sage scrub, 78 (50% of total) chaparral, 51 (90% of total) alluvial scrub and 28 (80% of total) acres of trees. Remaining populations would tend to be restricted to isolated portions of the site. The presence of people would have further direct impact on the remaining plant and animal populations.

scrub. Scenic characteristics of the surrounding area include vacant lands to the north and east, and single family development to the west and south.

#### Environmental Impacts

The Proposed Project conceptual site plan is shown in FIGURE 4. Grading volumes of approximately 12.5 million cubic yards are planned which will alter the existing natural terrain.

A "line of sight" analysis for the Proposed Project was prepared from the point of view of Plum Canyon Road which will traverse the central portion of the project site. Analysis of offsite views into Plum Canyon from the developed area south of the site (Langside Ave./Stanley Court) were also evaluated. FIGURE 13 is a Line of Sight Map showing the perspectives A, B and C for this analysis along Plum Canyon Road. These perspectives were chosen to represent east and west site entry views and central project site views from Plum Canyon Road. FIGURE 14 is a plot of visual profiles from the lines of sight.

Perspective A to the northwest would provide a succession of views in Area 5 of single family units, to major ridgeline and sky. Perspective A to the southeast would provide a succession of views in Area 5 of single family units, to natural hillside to major ridgeline and sky.

Perspective B to the northeast would provide a succession of views from Area 1, to Commercial Area 3, to single family units in Area

Domestic cats and dogs would increase the pressure on small native animals. Conversely, large native animals would have a negative impact on small domestic pets.

#### Mitigation Measures

The retention of 37% (approximately 250 acres of grassland, sage scrub and chaparral) of the site in its natural state as open space would reduce the impact of the proposed development. Plants and animals would be able to exist in the refuges not easily accessible by people.

Landscaping materials should include drought tolerant species, wherever possible, in order to conserve water and energy in the proposed development. The use of California native plants would further encourage the return of some native birds and other wildlife. A landscape plan for the Proposed Project will be submitted for approval to the Regional Planning Commission, along with subsequent filings.

### 5. Scenic Quality

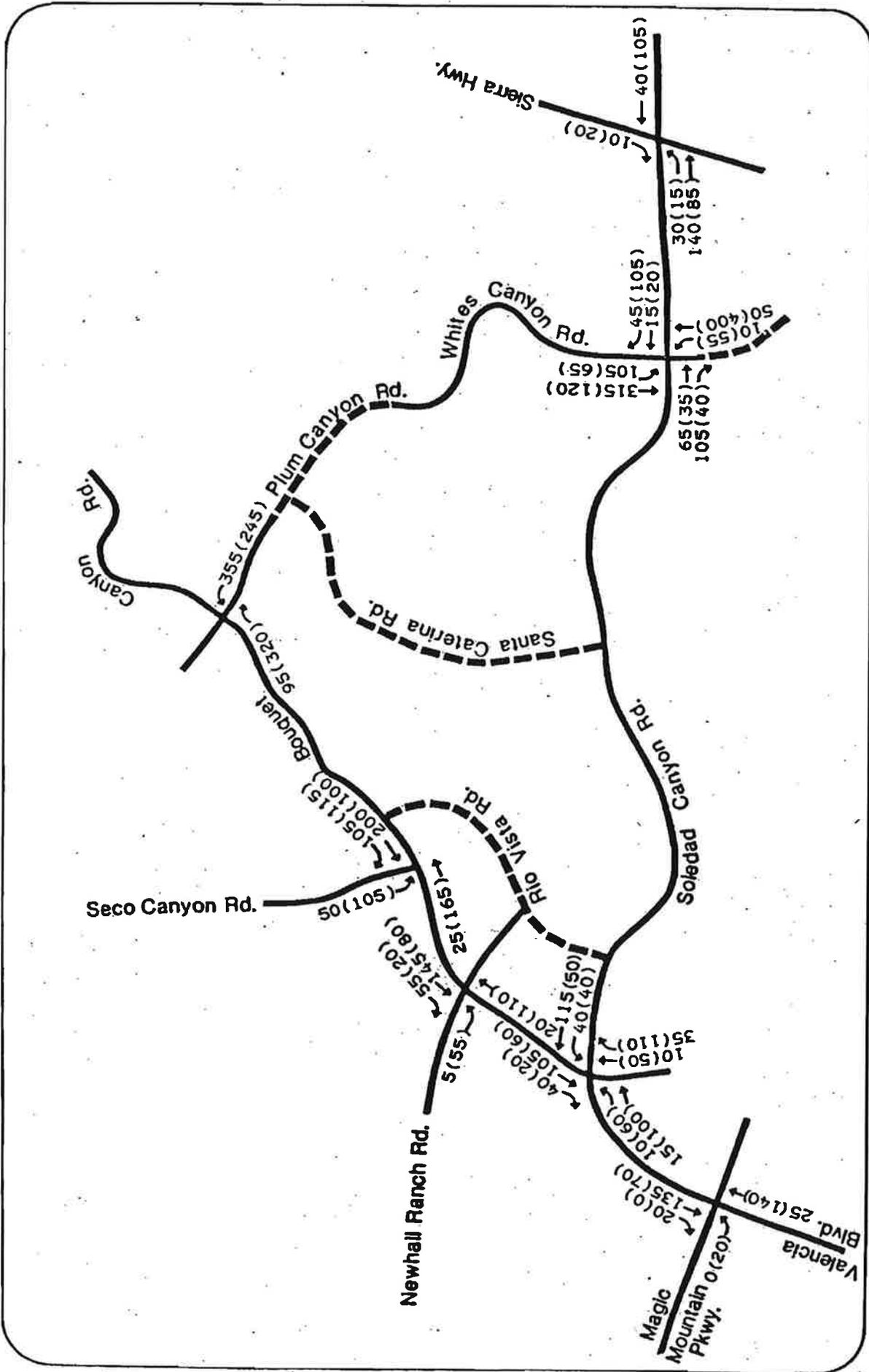
#### Environmental Setting

The Proposed Project site is located approximately one-half mile east of Bouquet Canyon Road on Plum Canyon Road. The site lies north and south of Plum Canyon for approximately two miles. Site terrain consists of gently sloping grassland and scrub immediately lateral to Plum Canyon (min. elev. 1,600 ft.) as a valley running east to west. Higher elevations (max. elev. 2,000 ft.) include two major ridgelines along the southern and northern boundaries of the site. Higher elevations are covered with chaparral and sage



# REGIONAL ROAD NETWORK

## FIGURE 15



2, to natural hillside, to ridgeline and sky. Perspective B to the southwest would provide a succession of views in Area 1, to multi family units, to vacant hillside, to existing single family development offsite on Langside Avenue and Stanley Court.

Perspective C to the north would provide a succession of views in Area 2 of single family units, to Dept. of Water and Power right-of-way to ridgeline and sky. Perspective C to the south would provide a succession of views in Area 1 of multi family units, to natural hillside offsite, to existing single family development offsite on Langside Avenue and Stanley Court.

Views from the perspective of existing single family dwellings on Langside Avenue will be that of the length of Plum Canyon through the Proposed Project site. The majority of the site's parks, town homes, single family units, multi family units, town house flats, patio homes, commercial lots and open space would comprise the northern view shed from the Langside Avenue and Stanley Court perspective.

There are no views of the site from Bouquet Canyon Road, a designated Scenic Highway, because it is approximately three-fourths of a mile west of the project site.

#### Mitigation Measures

Approximately 265 acres (39%) of the site will consist of natural open space areas after development including the Department of Water and Power right-of-way to the northwest of the site and

major ridgelines (see Conceptual Site Plan, FIGURE 4). All utilities will be placed underground. Extensive use will be made of native vegetation specimens for landscaping throughout the project site. Natural colors and materials will be emphasized in construction of residential, commercial and institutional buildings. Night-lighting will be "directed" to minimize glare to adjacent properties and view corridors. A landscape plan would include street trees and planting on irrigated slopes to mitigate impact in the view shed.

## 6. Traffic/Access

### Environmental Setting

A traffic study has been prepared for the Proposed Project by Barton-Aschman Associates, Inc. and is included in APPENDIX 4. Regional access to the project site is provided by Bouquet Canyon Road, Seco Canyon Road, Soledad Canyon Road, Whites Canyon Road and Valencia Boulevard. Local access will be provided by Plum Canyon Road, Santa Catarina Road and Whites Canyon Road - FIGURE 15 shows regional road network.

Key roadways servicing the site are as follows:

Bouquet Canyon Road, running in a southwest-to-northeast direction, has a cross section that varies between six lanes just north of Soledad Canyon Road to two lanes north of Plum Canyon Road. This major arterial has signals at intersections with Soledad Canyon, Newhall Ranch and Seco Canyon roads. South of Plum Canyon Road, Bouquet Canyon Road carries approximately 15,000

vehicles on an average weekday, while farther south (near Soledad Canyon Road), it carries over 44,000 vehicles on an average weekday.

Seco Canyon Road, a north-south four-lane collector that ends at its intersection with Bouquet Canyon Road, carries approximately 17,000 vehicles during an average weekday.

Soledad Canyon Road is a major east-west arterial serving the Bouquet Canyon area. This facility has a signal at Whites Canyon Road in addition to the one at Bouquet Canyon Road and carries between 29-32,000 vehicles on the average weekday. The cross section of Soledad Canyon Road varies from four lanes near Bouquet Canyon Road to six lanes near Whites Canyon Road.

Whites Canyon Road, running in a north-south direction, presently has a four-lane cross section. On an average day about 22,000 vehicles use this roadway.

Valencia Boulevard, a major east-west collector street, serves the project area and usually carries between 33,000 and 42,000 vehicles per day depending on location. This four-lane divided facility begins at I-5 on the western end and ends at Bouquet Canyon Road at the eastern end where it turns into Soledad Canyon Road.

Based on discussions with the County of Los Angeles, seven existing intersections were identified as receiving potentially significant traffic impacts due to the Proposed Project. These intersections are:

- Bouquet Canyon Road/Plum Canyon Road;
- Bouquet Canyon Road/Seco Canyon Road;
- Bouquet Canyon Road/Newhall Ranch Road;
- Bouquet Canyon Road/Soledad Canyon Road;
- Valencia Boulevard/Magic Mountain Parkway;
- Soledad Canyon Road/Whites Canyon Road; and
- Soledad Canyon Road/Sierra Highway.

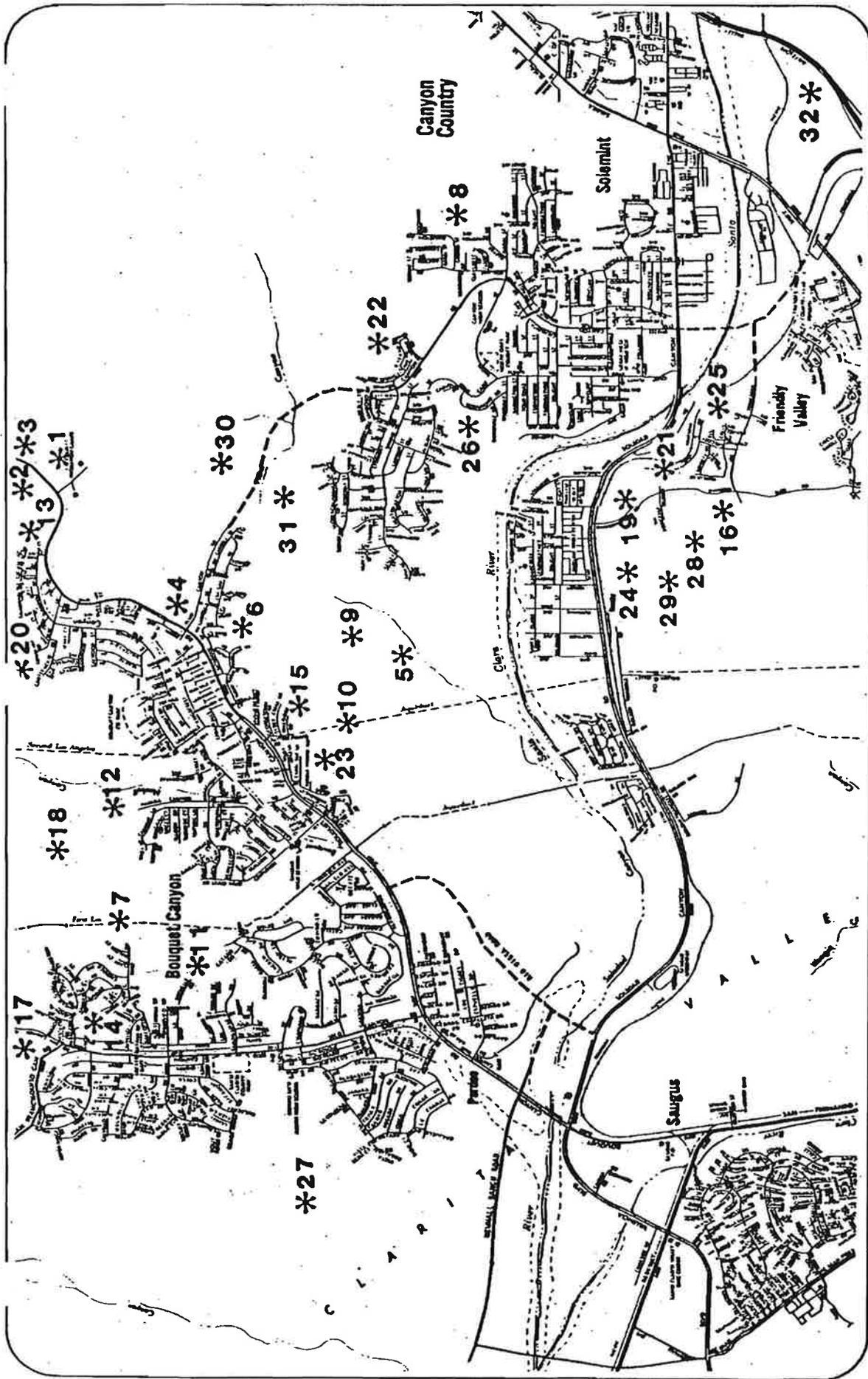
Under existing conditions, only the intersections of Bouquet Canyon Road/Plum Canyon Road and Valencia Boulevard/Magic Mountain Parkway and Soledad Canyon Road/Whites Canyon Road are presently operating efficiently for both the morning and evening peak hours. The Bouquet Canyon/Soledad Canyon, Soledad Canyon/Whites Canyon and Soledad Canyon/Sierra Highway intersections operate acceptably during the morning peak hour but deteriorate to unacceptable levels (vol./capacity ratio greater than 0.85) during the evening peak hour. Conversely, the intersection of Bouquet Canyon/Newhall Ranch Roads operates within acceptable levels of service in the evening but does not operate acceptably during the morning peak hour. Presently, the Bouquet Canyon/Seco Canyon and Bouquet Canyon/Newhall Ranch intersections operate at unacceptable levels for both peak periods.



A total of 32 proposed related projects have been identified, in consultation with the L.A. County Road Department, that may impact the roadways in the study area. These projects are all expected to be built by 1991 under current plans. The approximate location of these projects is shown in FIGURE 16 and listed in the table that follows. These related projects are expected to generate approximately 9,980 morning and 14,930 evening peak-hour trips, or total daily trips of approximately 142,085 upon project completion. The 21.9 acres of commercial uses are not considered to generate significant traffic volumes.

In 1991 (Phase I) several intersections will experience some operational problems even without any new developments. These intersections will experience congestion due in part to the ambient growth of traffic offsetting the advantages gained by adding additional roadways. The Bouquet Canyon/Seco Canyon intersection will operate better than it does today, but will still experience minor congestion during the morning peak hour ( $V/C = 0.89$ ). Santa Catarina Road is assumed to be completed in Phase 1.

With a  $V/C$  ratio of 0.76, the Bouquet Canyon/Soledad Canyon intersection will operate acceptably in the morning but deteriorate to a Level of Service F ( $V/C = 1.02$ ) during the afternoon peak hour, about the same as it operates now.



RELATED PROJECTS MAP



FIGURE 16

TABLE  
RELATED PROJECTS  
TRIP GENERATION SUMMARY

Project No.	Land-Use	Trip Rates					Trips				
		Daily	AM Peak Hour		PM Peak Hour		Daily	AM Peak Hour		PM Peak Hour	
			In	Out	In	Out		In	Out	In	Out
1	139 single-family	10.0	0.21	0.55	0.63	0.37	1,390	30	75	90	50
2	54 single-family	10.0	0.21	0.55	0.63	0.37	590	10	30	35	20
3	131 single-family	10.0	0.21	0.55	0.63	0.37	1,310	30	75	85	50
4	113 single-family	10.0	0.21	0.55	0.63	0.37	1,130	25	60	70	40
5	84 single-family	10.0	0.21	0.55	0.63	0.37	840	20	45	55	30
	1,380 multifamily	6.1	0.10	0.40	0.45	0.25	8,420	140	550	620	345
6	117 single-family	10.0	0.21	0.55	0.63	0.37	1,170	25	65	75	45
7	255 single-family	10.0	0.21	0.55	0.63	0.37	2,550	55	140	165	95
8	11 single-family	10.0	0.21	0.55	0.63	0.37	110	5	5	5	5
9	46 single-family	10.0	0.21	0.55	0.63	0.37	460	10	25	30	15
10	13 single-family	10.0	0.21	0.55	0.63	0.37	130	5	5	10	5
11	446 single-family	10.0	0.21	0.55	0.63	0.37	4,460	95	295	280	165
12	423 single-family	10.0	0.21	0.55	0.63	0.37	4,230	90	235	265	160
13	289 single-family	10.0	0.21	0.55	0.63	0.37	2,890	60	160	180	105
14	46 single-family	10.0	0.21	0.55	0.63	0.37	460	10	25	30	15
15	3 single-family	10.0	0.21	0.55	0.63	0.37	30	5	5	5	5
16	317 multifamily	6.1	0.10	0.40	0.45	0.25	1,935	30	125	145	80
17	900 single-family	10.0	0.21	0.55	0.63	0.37	9,000	190	495	565	335
18	19 single-family	10.0	0.21	0.55	0.63	0.37	190	5	10	10	5
19	668 multifamily	6.1	0.10	0.40	0.45	0.25	4,075	65	265	300	165
20	103 single-family	10.0	0.21	0.55	0.63	0.37	1,030	20	60	65	40
21	206 multifamily	6.1	0.10	0.40	0.45	0.25	1,255	20	80	95	50
22	53 single-family	10.0	0.21	0.55	0.63	0.37	530	10	30	35	20
23	32 single-family	10.0	0.21	0.55	0.63	0.37	320	5	20	25	15
24	323 multifamily	6.1	0.10	0.40	0.45	0.25	1,970	35	130	150	80
25	59 single-family	10.0	0.21	0.55	0.63	0.37	590	15	35	40	20
26	42 single-family	10.0	0.21	0.55	0.63	0.37	920	10	25	30	15
27	1,635 single-family	10.0	0.21	0.55	0.63	0.37	16,350	345	900	1,030	605
28	183 multifamily	6.1	0.10	0.40	0.45	0.25	1,115	20	75	80	45
29	283 multifamily	6.1	0.10	0.40	0.45	0.25	1,725	30	115	125	70
30	166 multifamily	6.1	0.10	0.40	0.45	0.25	1,015	20	65	75	40
	500 single-family	10.0	0.21	0.55	0.63	0.37	5,005	105	275	315	185
31	173 single-family	10.0	0.21	0.55	0.63	0.37	1,725	40	95	110	65
	606 multifamily	5.2	0.07	0.37	0.37	0.18	3,150	80	225	225	110
32	2,875 multifamily(A)	6.1	0.10	0.40	0.47	0.23	17,540	290	1,150	1,350	660
	1,548 multifamily(T)	8.0	0.17	0.44	0.50	0.30	12,385	265	680	775	465
	452,800 S.F. retail	50.6	0.40	0.20	2.30	2.50	22,910	180	90	1,040	1,130
	515 single-family	10.0	0.21	0.55	0.63	0.37	5,150	110	285	325	190
	236,000 S.F. office	10.9	1.93	0.20	0.24	1.80	2,580	455	45	55	425
TOTAL:							142,085	2,960	7,020	8,965	5,965

The intersection of Soledad Canyon/Whites Canyon roads will operate at Levels of Service D and E during both AM and PM peak hours (0.85 and 0.97, respectively).

Both the Bouquet Canyon/Newhall Ranch and Bouquet Canyon/Plum Canyon intersections will operate well within acceptable levels.

With the addition of the Phase 1 project traffic, four of the seven intersections (Bouquet/Plum, Bouquet/Newhall Ranch, Magic Mountain/Valencia and Soledad/Sierra) will continue to operate within acceptable standards.

The intersection of Bouquet Canyon and Seco Canyon Roads will have its Level of Service decrease from D (0.89) to E (0.93) during the morning peak hour and from C (0.75) to D (0.85) during the evening peak hour.

The Bouquet Canyon/Soledad Canyon Roads intersection will continue to operate efficiently with the addition of project traffic during the morning peak hour. The afternoon peak hour will stay at a Level of Service F ( $V/C = 1.07$ ).

Lastly, the congestion (due to background traffic) is slightly increased due to project traffic at the Soledad Canyon/Whites Canyon intersection for both peak hours. The Levels of Service decrease from E to F in both instances.

With the addition of the traffic generated by the related projects, three intersections (Bouquet/Seco, Bouquet/Soledad and Soledad/Whites) deteriorate to unacceptable Levels of Service (LOS F) during both peak hours. In addition, the evening peak hours deteriorate to LOS E (0.92), F (1.10), and F (1.05) at the Bouquet Canyon/Newhall Ranch, Magic Mountain/Valencia and Soledad Canyon/Sierra Highway intersections, respectively. The Bouquet Canyon/Plum Canyon intersection will also deteriorate to LOS E (V/C = 0.93) during the afternoon peak hour.

TABLES 2A and 2 show Phase 1 and Phase 2 intersection capacity utilization (ICU) impacts.

Phase 2 daily trip generation would be 29,980. Upon Phase 2, total 1996 buildout, project traffic and the 15 percent increase in background volumes, the intersection volumes will significantly decrease - see TABLES 2A and 2.

This will be due to the diversion of traffic from surface arterials to the proposed Santa Clara Expressway. It should be noted, however, that these volumes reflect a conservative analysis of the possible redistribution, and a higher usage of the proposed expressway could easily be reached.

As shown in TABLES 2A and 2, all of the key intersections will operate acceptably during the morning peak hour under the 1996 background conditions. However, enough local traffic will still use three of the key intersections during the afternoon peak hour

TABLE 2 A

INTERSECTION OPERATING CONDITIONS

Intersection	Existing			1991 Background			1991 Background + Phase 1			1991 Background + Phase 1 + Related Projects						
	AM V/C	LOS	FM V/C	AM V/C	LOS	FM V/C	AM V/C	LOS	FM V/C	AM V/C	LOS	FM V/C	LOS			
Bouquet/Plum Canyon	0.24	A	0.35	A	0.23	A	0.35	A	0.49	A	0.51	A	0.80	C	0.93	E
Bouquet/Seco Canyon	1.02	F	0.90	D	0.89	D	0.75	C	0.93	E	0.85	D	1.24	F	1.25	F
Bouquet/Newhall Ranch	0.92	E	0.87	D	0.62	B	0.65	B	0.66	B	0.69	B	0.84	D	0.92	E
Bouquet/Soledad Canyon	0.81	D	1.01	F	0.79	C	1.02	F	0.84	D	1.07	F	1.16	F	1.61	F
Magic Mountain/Valencia	0.57	A	0.73	C	0.62	B	0.79	C	0.63	B	0.84	D	0.78	C	1.10	F
Soledad/Whites Canyon	0.74	C	0.84	D	0.85	D	0.97	E	1.02	F	1.06	F	1.39	F	1.62	F
Soledad Canyon/Sierra Highway	0.71	C	1.05	F	0.69	B	0.77	C	0.72	C	0.81	D	0.85	D	1.05	F

MITIGATION:

1. Restripe the existing westbound approach for one left turn lane, one through/left lane, and one right turn lane.
2. Restripe existing westbound approach for two through lanes and one through/right lane.
3. Add additional westbound left-turn lane.
4. Restripe northbound approach for one left lane, two through lanes, and one through/right lane.
5. With addition of a northbound through/left lane.

TABLE 2

INTERSECTION OPERATING CONDITIONS  
ULTIMATE ROADWAY SYSTEM

Intersection	Existing		1996 Background (1)		1996 Background		Project Buildout					
	AM V/C	PM LOS	AM V/C	PM LOS	AM V/C	PM LOS	AM V/C	PM LOS				
Bouquet/Plum Canyon	0.24	A	0.35	A	0.54	A(2)	0.68	B(2)	0.60	A(2)	0.72	C(2)
Bouquet/Seco Canyon	1.02	F	0.90	D	0.72	C	0.83	D	0.74	C	0.89	D
Bouquet/Soledad Canyon	0.81	D	1.01	F	0.65	B	0.91	E(2)	0.65	B	0.93	E(2)
Magic Mountain/Valencia	0.57	A	0.73	C	0.56	A	0.68	B	0.58	A	0.69	B
Soledad/Whites Canyon	0.74	C	0.84	D	0.74	C(2)	0.88	D(2)	0.81	D(2)	0.93	E(2)
Soledad Canyon/Sierra Hwy.	0.71	C	1.05	F	0.72	C	0.88	D	0.73	C	0.90	D

NOTES:

1. Includes Phase 1 project traffic.
2. Includes roadway changes described in TABLE 2A

TABLE 2 provides a summary of Project, existing, related project and mitigated ICU's for Phase 1 and Phase 2. The 1996 analyses are based upon a very conservative approach to the redistribution of future traffic onto the ultimate roadway system. The figures illustrated in TABLE 2 reflect that "worst case" approach and future levels of service are very likely to be better than those shown. In addition, the three most congested intersections under the 1996 background plus project scenario are already congested due to background traffic. Given these facts, no specific mitigation measures have been identified for the 1996 scenario.

## 7. Education

### Environmental Setting

The Proposed Project is located in the Saugus Union School District, grades K-6, and the William S. Hart Union High School District, grades 7-12. The elementary level schools which are located nearest the site are the following:

Skyblue Mesa Elementary  
28040 Hardesty Avenue  
Canyon Country, CA

Emblem Elementary  
22635 Espuella Drive  
Saugus, CA

Existing enrollment data and other information pertaining to these schools is shown in the following table:

<u>Elementary School Data</u>			
<u>School</u>	<u>Distance From Site</u>	<u>Existing Enrollment</u>	<u>Permanent Capacity</u>
Skyblue Mesa	1/2 mile	412	475
Emblem	3 miles	589	535

The Saugus School District has a total of 8 elementary schools, with a permanent District capacity of 4,521 students and existing enrollment of 4,178. Three of the schools are currently operating over capacity and students are being bused to outlying District schools.

A new school, which will accommodate 600 students, is planned in Bouquet Canyon, and scheduled to open Fall, 1988. Although this will help alleviate existing impacted conditions in the District, projections indicate the need for a new school about every three years -- a total of five additional schools to meet twenty-year growth requirements.\*

It is uncertain at this time which schools within the Hart School District will be assigned to serve the development. The project will be served either by:

Sierra Vista Junior High School  
 19425 West Stillmore Street  
 Canyon Country, CA 91351

Grades 7-8

AND

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\* Areawide School Enrollment and Facilities Study, Santa Clarita Valley School Districts, January, 1986.

Canyon High School  
19300 West Nadal Street  
Canyon Country, CA 91351

Grades 9-12

OR

Arroyo Seco Junior High School  
27171 N. Vista Delgado Drive  
Valencia, CA 91355

Grades 7-8

AND

Saugus High School  
21900 West Centurion Way  
Saugus, CA 91350

Grades 9-12

FIGURE 17 is a School Location Map.

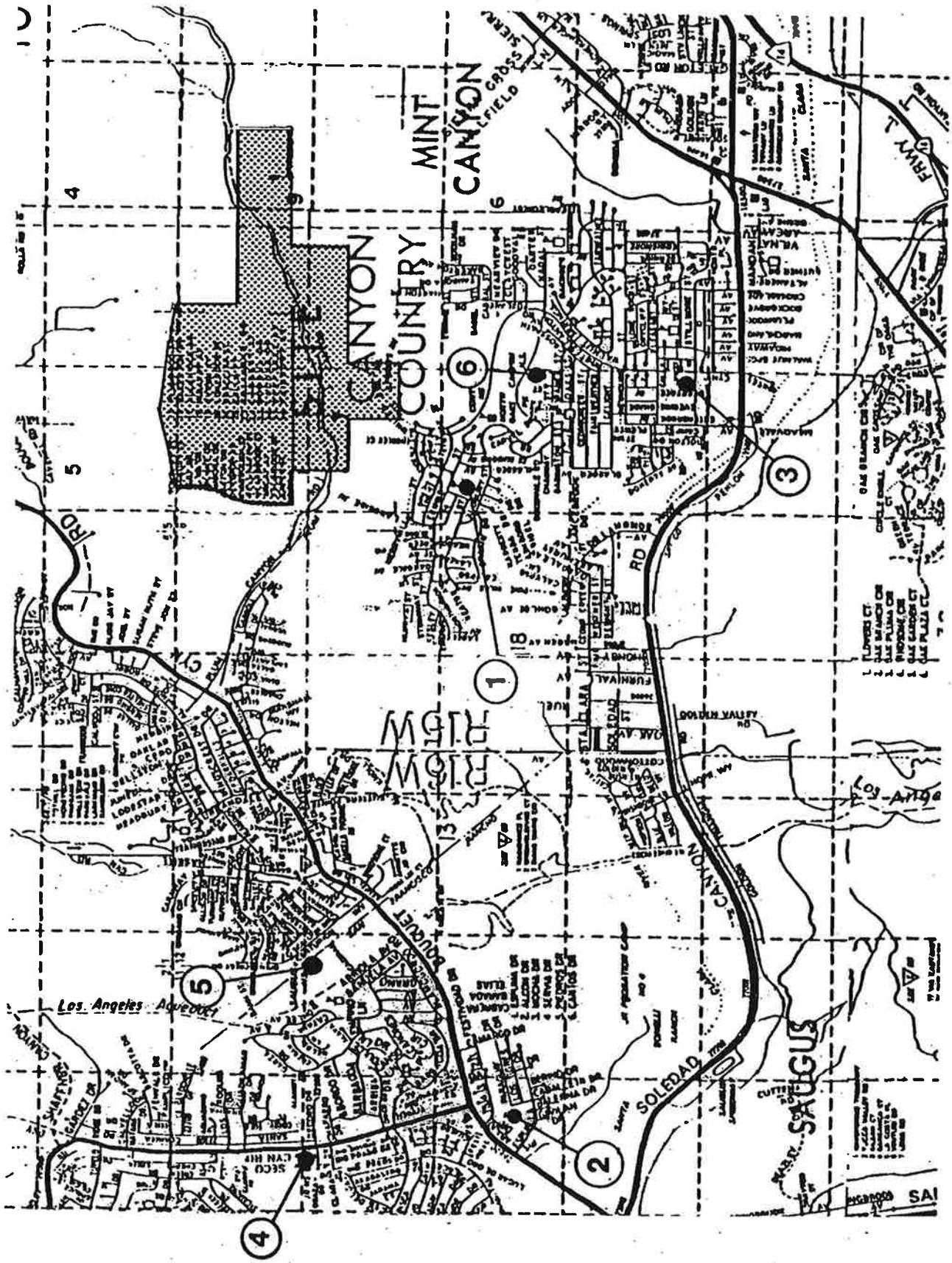
Existing enrollment data and other information pertaining to the affected schools is shown in the following table:

Junior High and High School Data

<u>School</u>	<u>Distance From Site</u>	<u>Existing* Enrollment</u>	<u>Permanent* Capacity</u>	<u>Temporary Facilities</u>
Sierra Vista Jr. High School	1 1/2 miles	981	1,161	NO
Arroyo Seco Jr. High School	3 miles	792	1,013	NO
Canyon High School	3/4 mile	2,200	1,875	240
Saugus High School	1 1/3 miles	1,954	1,866	120

William S. Hart Union High School District has space for an additional 180 students at Sierra Vista Junior High School and space for 221 more students at Arroyo Seco Junior High School.

\* Areawide School Enrollment and Facilities Study, Santa Clarita Valley School Districts, January, 1986.



- 1. SKYBLUE MESA ELEM.
- 2. EMBLEM ELEMENTARY
- 3. SIERRA VISTA JR. HIGH
- 4. ARROYO SECO JR. HIGH
- 5. SAUGUS HIGH
- 6. CANYON HIGH

SCHOOL LOCATION MAP

FIGURE 17

Canyon High School, with a permanent capacity of 1,866 students, is currently operating over capacity with 6 temporary classrooms. Saugus High School is currently operating near capacity. In addition to the existing portable classrooms, in January, 1986, the District was granted a total of 8 portable classrooms from the State Office of Local Assistance. Canyon High School and Saugus High School have each been assigned two of these classrooms.

#### Environmental Impacts

The number of new students which can be expected as a result of the development was estimated based on generation factors by housing type. For grades K-6, pupil yield factors were provided by the Saugus Union School District -- 0.40 students per single family dwelling and 0.10 students per condominium or multi family dwelling.\*

Generation factors for junior and senior high level students were provided by the County of Los Angeles.\*\* For grades 7-8, the factors used were: 0.12 students per single family unit and 0.03 students per multi family unit. Students for grades 9-12 were estimated based on generation factors of 0.24 students per single family and 0.06 students per multi family unit.

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\* James M. Foster, Superintendent of Special Projects, Telephone conversation of August 5, 1986.

\*\* County of Los Angeles, Department of Regional Planning, Demand Parameters for Schools, 1/27/87.

The following number of students are expected to be generated by the proposed development:

Project Related Student Generation

<u>Level</u>	<u>Land Use</u>	<u>Units</u>	<u>Factor</u>	<u>No. of Students</u>
K-6	Single Family*	1,600	0.40	640
	Multi Family*	3,400	0.10	340
7-8	Single Family	1,600	0.12	192
	Multi Family	3,400	0.03	102
9-12	Single Family	1,600	0.24	384
	Multi Family	3,400	0.06	204
Total Students:				1,862

Based on the table, total project related student generation at project buildout will be approximately 1,862 students. This project specific student generation would exceed existing capacities within the Saugus Union School District. Without impacts from other area related projects, the combined remaining available capacity of 401 for Sierra Vista and Arroyo Seco Junior High Schools could accommodate the estimated 294 students generated at this level. The two area high schools, Canyon and Saugus, are currently operating at near or over capacity and could not house the 588 students generated by this development.

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\* For this analysis project town homes were considered as single family dwellings and one-story town homes ("flats") were included as multi family units.

Cumulative Impacts

Cumulative student generation impacts of this and other projects within Saugus Union School District and William S. Hart Union High School District were estimated. Estimates for the number of students, which will be generated by area tentative tracts, were obtained from the County of Los Angeles Department of Regional Planning. Data on the related zone change and/or plan amendment cases filed with the County of Los Angeles was obtained from the County's Land Data Management Agency. Project information and student generation estimates are outlined in APPENDIX 6.

Based upon the methodology and assumptions explained in APPENDIX 6, the following tables summarize cumulative student generation and enrollment capacity information for the affected school districts:

Saugus Union School District  
Cumulative Analysis

	<u>Students</u>	<u>District Capacity</u>	<u>Expanded Capacity*</u>	<u>Remaining Capacity/ Deficit</u>	<u>Additional Classrooms Required (1)</u>
Existing	4,178	4,521	5,121	943	0
Existing + Project	5,158	4,521	5,121	-37	1.1
Existing + Related Projects	7,191	4,521	5,121	-2070	62.7
Existing + Project + Related Projects	8,171	4,521	5,121	-3050	92.4

(1) Based on 33 students per Classroom.

Source: Los Angeles County Department of Regional Planning, Demand Parameters for Schools, 1/29/87.

\* Bouquet Canyon Area School, scheduled to open Fall, 1988, capacity 600.

Wm. S. Hart Union High School District  
Cumulative Analysis  
Junior High School (7 and 8)

	<u>Students</u>	<u>District Capacity</u>	<u>Remaining Capacity/ Deficit</u>	<u>Additional Classrooms Required (1)</u>
Existing	2,722	3,024	302	0
Existing + Project	3,016	3,024	-8	0.3
Existing + Related Projects	5,181	3,024	-2157	77.0
Existing + Project + Related Projects	5,475	3,024	-2451	87.5

(1) Calculated at 28 students per classroom.  
Source: Los Angeles County Department of Regional Planning, Demand Parameters for Schools, 1/27/87.

Wm. S. Hart Union High School District  
Cumulative Analysis  
Senior High School (9 - 12)

	<u>Students</u>	<u>District Capacity</u>	<u>Deficit</u>	<u>Additional Classrooms Required (1)</u>
Existing	6,258	5,768	-490	17.5
Existing + Project	6,846	5,768	-1078	38.5
Existing + Related Projects	11,992	5,768	-6224	222.3
Existing + Project + Related Projects	12,580	5,768	-6812	243.3

(1) Calculated at 28 students per classroom.  
Source: Los Angeles County Department of Regional Planning, Demand Parameters for Schools, 1/27/87.

A total of 3,993 students and 9,075 students can be expected to be generated by new development for Saugus Union and Hart School Districts, respectively.

Existing capacity for Saugus Union School District, including the new school scheduled to open Fall, 1988, would be exceeded by 3,050 students. The District projects that a new elementary school will be required about every three years; a total of five additional schools to meet the District's twenty year growth needs.\*

The additional 9,075 students estimated to be generated by new development within the Hart District will more than double the existing district enrollment of 8,980 students. The District plans their grades 7-8 schools for a capacity of 1,000 - 1,200 students, and high schools, grades 9-12, for a capacity of 1,800 - 2,000.\* At these capacities, 2 new junior high schools and 2 or 3 new high schools will be required to house students generated by new development.

#### Mitigation Measures

The project developer will work with both the Saugus and Hart School Districts to mitigate project-related impacts on school facilities.

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\* Source: "Areawide School Enrollment and Facilities Study, Santa Clarita Valley School Districts," EdGroup International, January, 1986.

As shown in the Proposed Site Plan, FIGURE 4, a site is designated for an onsite elementary school. The Applicant is negotiating with local school districts to arrange land dedication and improved graded sites for needed facilities.

The Applicant will contribute to new construction for schools in accordance with a new State law, AB 2926, which became effective January 1, 1987. The law allows the Districts to impose a maximum of \$1.50 per square foot for new homes and 25 cents per square foot for commercial and industrial development. The fees collected for each project are to be divided among the affected Districts. The current District agreement for splitting the \$1.50/sq.ft. fee for new residential development is: \$0.75/sq.ft. to Sulphur Springs District and \$0.75/sq.ft. to Hart School District. The Districts have also agreed to a 50/50 split of the \$0.75/sq.ft. fee collected for commercial development within their boundaries.

The AB 2926 developer fees and an \$800 million state school bond issue passed in November, 1986 provide the primary mechanisms to construct new school facilities. The AB 2926 legislation sets the required school mitigation for new development. The legislation does not, however, preclude the implementation of alternative mitigation measures or combinations of measures to provide equivalent mitigation for a specific development.

Another funding possibility is a Mello-Roos Community Facilities District. The Mello-Roos Act of 1982 allows school boards and local governmental bodies to create community assessment districts for issuing bonds, redeemable by parcel assessments. Other measures could be negotiated between the school district and the project developer including provision of land and/or improvements, or lease-purchase options.

#### 8. Water Supply

##### Environmental Setting

The project site is located within the service area of the Santa Clarita Water Company (SCWC). Water supplies for the Company are obtained from the Castaic Lake Water Agency (CLWA) and 13 local ground water wells. In 1986, water use for SCWC was 13,775 acre feet, of which 8,366 acre feet (61%) was State Project water and 5,000 acre feet was produced from local ground water wells.\*

Since the SCWC obtains the majority of its supplies from the CLWA, future water availability for the company depends on the level of State Project water delivered to the CLWA. State legislation (AB 4175) became effective January 1, 1987 and will establish future allocation between the CLWA and four local purveyors. The 1986 allocation of water to Santa Clarita Water Company was 8,375 acre feet.

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\* Telephone conversation with Dennis Rolfe, Santa Clarita Water Company, January 7, 1987.

The water supply features of the State Water Project (SWP), such as aqueducts, reservoirs and pump stations, are 55% complete and presently have the capability to supply CLWA with a dependable supply of 24,000 acre feet per year.\* This level of supply ("Firm Yield"), is the minimum delivery to CLWA, and could occur if no further improvements to the SWP delivery system are constructed.

In addition to State Project water availability, large quantities of ground water are present within two aquifer systems within the Santa Clarita Valley ground water basin: the Saugus Formation and the overlying strips of alluvium. The alluvial aquifer ranges in thickness from a few feet to about 200 feet and is located primarily along the Santa Clara River. Approximately 40-50% of the total water storage for this aquifer lies within the Santa Clarita Water Company service area.

Based on a 1987 study prepared for the Upper Santa Clara Water Committee,\*\* this aquifer has an estimated recoverable volume of 142,000 - 210,000 acre feet. Annual recharge of this aquifer is estimated at 32,500 acre feet/year. In 1984, total well-produced water for the four area purveyors was approximately 15,400 acre feet (a portion of this water was pumped from the Saugus formation).

The Saugus Formation is a deep aquifer estimated by the U.S. Geological Survey to contain approximately six million acre feet of

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\* Telephone conversation with Robert Sagehorn, General Manager, Castaic Lake Water Agency, January 21, 1987.

\*\* Preliminary study prepared by Richard Slade.

recoverable ground water. However, some of this water may be of unsuitable mineral quality. A study is currently being conducted to determine potential water supply of this aquifer.\*

Water availability for development within the SCWC service district is also dependent upon water treatment facility capacity. State Project water is treated at the Earl Schmidt Filtration Plant, with a present capacity to treat approximately 12-1/2 million gallons/day. However, scheduled plant expansion will double this capacity and is planned to be operational October 1, 1987. Beyond 1987, the recommended plan is to expand capacity to permit filtration of the total firm yield available to the Agency under its State Project Contract.

The following table summarizes a conservative estimate for SCWC's existing water supply. The estimate is based on minimum yield deliveries of State Project water to CLWA, the SCWC's existing level of ground water use, and completion of the Earl Schmidt Treatment Plant expansion by October, 1987.

Existing Water Supply  
SANTA CLARITA WATER COMPANY  
(All figures in acre feet/year)

<u>State Water Project Entitlement to CLWA</u>	<u>Oct. '87 Treatment Capacity</u>	<u>Estimated SCWC Allocation**</u>	<u>Well Water</u>	<u>Total Supply</u>
24,000	28,000	14,400	5,000	19,400

\*\* Based on contracted 60% of CLWA entitlement (24,000 x 60% = 14,400)

\* Study contracted by Upper Santa Clara Water Committee scheduled for completion by approximately June, 1987.

Environmental Impacts

Project-related water demand can be estimated by applying consumption factors to the proposed land uses. The residential consumption factors used in the following analysis were recommended for use by the Department of Regional Planning.\* Commercial and industrial water consumption factors were provided by the Valencia Water Company.

Project-Related Water Consumption  
(All demand figures in Acre Feet/Year)

<u>Land Use</u>	<u>No. of Units</u>	<u>Acres</u>	<u>Factor</u>	<u>Demand</u>
Single Family	1,600	----	0.48	768
Multi Family	3,400		0.19	646
Commercial	-----	21.9	2.24	49
TOTAL:	5,000	21.9		1,463

As shown, approximately 1,463 acre feet/year of water will be consumed at project buildout. Combined with the SCWC's existing level of demand, 13,775 acre feet/year, project development would result in a total water demand of 15,238 acre feet/year. Upon completion of the treatment plant expansion and resulting SCWC total supply of 19,400 acre feet/year, the Company would have a remaining supply of 4,162 acre feet/year above existing demand. Therefore, this project demand of 1,463 acre feet/year would not individually have a significant impact on water supplies.

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\* Factors provided by Bill Miller, Dept. of Regional Planning, 2/3/87.

### Cumulative Impacts

Cumulative impacts of this and other proposed developments within the Santa Clarita Water Company were estimated. Related project water demand includes projected consumption for the following cases filed with the County of Los Angeles within the Company's service boundaries.\*

- Residential Tentative Tracts
- Residential Plan Amendments and Zone Changes
- Commercial and Industrial Tracts
- Commercial and Industrial Zone Changes and Plan Amendments

The following table outlines other projects in the service area which may cumulatively impact available water supplies:

Cumulative Water Demand - Related Projects  
Santa Clarita Water Company  
(Acre Feet/Year)

<u>Land Use</u>	<u>No. of Units</u>	<u>Acres</u>	<u>Factor**</u>	<u>Demand</u>
Single Family	7,424	-----	0.48	3,563
Multi Family	17,062	-----	0.19	3,242
Commercial	-----	239.56	2.24	537
Industrial	-----	36.62	3.19	117
TOTAL:	24,486	276.18	----	7,459

As shown, a cumulative demand of approximately 7,459 acre feet/year for new development could occur at project buildout. A summary of total future water demand for the SCWC is as follows:

\* Project list and information sources included in Appendix 6.

\*\* Residential: acre feet/year/unit, provided by Dept. of Regional Planning  
Commercial: acre feet/year/gross acre, provided by Valencia Water Company

Water Demand  
Santa Clarita Water Company  
(All figures in Acre Feet/Year)

<u>1986</u> <u>Demand</u>	<u>Project</u> <u>Demand</u>	<u>Related Project</u> <u>Demand</u>	<u>Total Demand</u>
13,775	1,463	7,459	22,697

The projected cumulative demand level, 22,697 acre feet/year, based on buildout of the Proposed Project and all other related projects, would exceed the existing SCWC supplies of 19,400 acre feet/year by approximately 3,300 acre feet/year.

Mitigation Measures

Existing committed water supplies for the Santa Clarita Water Company and Castaic Lake Water Agency do not reflect the potential water availability for future services. Both entities are seeking additional water supplies to meet projected future demands. It is infeasible for the water companies to stockpile water resources or produce excess water based upon a future projected demand because today's subscribers would bear the cost.\* The Santa Clarita Water Company commits water supply for a specific development at the time of tract recordation. Therefore, SCWC production expansion is only feasible in anticipation of reliable near term demands. Water supply and delivery system capacities are expanded only as required to serve recorded planned growth in the Valley.

Efforts to obtain more water from ground water resources and also from the State Water Project are underway. The following section summarizes feasible mitigation measures which are now being pursued.

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\* Bill Manetta, Santa Clarita Water Co., Jan. 1987.

## State Water

There are basically four projects, which are now being studied, which have the potential to increase the safe yield of the State Water Project:\*

Los Banos Grande Reservoir Project: An offstream reservoir which would allow additional surface storage of water during the winter wet season.

Coordinated Operating Agreement: A 1986 agreement signed by the California Department of Water Resources (DWR) and the U.S. Bureau of Reclamation. The purpose of the agreement is to define how the agencies will meet obligations for delta water quality. The agreement also provides the mechanism for the Bureau's Central Valley Project and the DWR's State Water Project to share facilities. The additional storage capacity available has the potential to increase the SWP yield by 500,000 acre feet. CLWA's one-percent allocation of this additional yield would be 5,000 acre feet per year.

Kern County Water Banking: Purchase of approximately 30-40 acres of land in Kern County with high recharge potential for use as underground water storage. Storage potential is estimated to increase SWP yield by as much as 300,000 acre feet - resulting in a possible 3,000 acre feet for CLWA.

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\* Information provided by Robert Sagehorn, General Manager, Castaic Lake Water Agency, telephone conversation 1/27/87.

Delta Channel Improvements: Delivery system improvements which would allow the export of more water. The potential increase has not yet been quantified.

#### Ground Water

Alluvial Aquifer. As previously referenced, a 1987 geological study prepared for the Upper Santa Clara Water Committee estimates the annual recharge potential of this aquifer to be 32,500 acre feet/year. Presently, less than half this quantity is being pumped annually.

Saugus Formation. This deep aquifer underlies approximately 80 square miles of the Santa Clarita Valley and has a storage capacity estimated as high as 6,000,000 acre feet. A study, scheduled for completion mid-1987, will provide more information regarding the capacity and potential use of this water supply. Future studies will be required to detail water quality and production feasibility of this source.

Solutions to water availability problems can also be approached with measures to reduce water demand. A detailed water conservation program for the region is outlined in the Santa Clarita Valley Urban Water Management Plan.\* The report projects that all implementation of the conservation measures outlined, such as low flush toilets, low volume shower heads, graywater usage, and estimated savings from existing laws and current trends could result in savings ranging up to 33%.

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\* Gram/Phillips Associates, Inc., November, 1985

9. Solid Waste Disposal

Environmental Setting

The project site is located within the service areas of two landfills: Sunshine Canyon Landfill, approximately 5-1/2 miles southwest of the site and Chiquita Canyon Landfill, approximately 8-1/2 miles southwesterly of the site. A summary of conditions of the landfills is as follows:

<u>Site</u>	<u>Landfill Data*</u>		
	<u>Current Demand (tons/day)</u>	<u>Remaining Capacity (M tons)</u>	<u>Contract Expiration Year</u>
Sunshine Canyon	6,000	8.58	1991
Chiquita Canyon	1,600	11.5	1997

The County of Los Angeles currently is proposing ten new landfill expansions and six new landfill sites to meet future demands. These plans include the proposed 217 million ton expansion of the Sunshine Canyon Landfill as shown in the table, and Elsmere Canyon, a new 75 million ton capacity landfill located across from Sunshine Canyon.

Environmental Impacts

Project related solid waste generation can be determined by applying a generation factor to the total number of project site

\* Source: Michael Mohanjer, L.A. County Dept., Public Works, contact 4/7/87.

residents. The generation factor used is an overall per capita factor used by the County of Los Angeles to estimate combined solid waste generation for residential, commercial and industrial land uses. Project related solid waste generation is shown in the following table:

Solid Waste Generation

<u>No. of Dwelling Units</u>	<u>No. of Persons/DU</u>	<u>Total No. of Persons</u>	<u>Generation* Factor</u>	<u>Total Generation</u>
5,000	2.8	14,000	1.825 tons/capita/year	25,550 tons/year

The Proposed Project will generate approximately 25,550 tons of solid waste per year at buildout and would not individually impact remaining capacities at the two landfills.

Cumulative impacts of the subject project and other proposed developments within the Santa Clarita Valley were estimated. Related projects in the service area will generate approximately 226,194 tons per year of solid waste. Combining the existing (1985) solid waste generation of 98,400 tons per year for the Santa Clarita Valley, plus Proposed Project generated solid wastes would result in the cumulative generation of 350,144 tons per year, or approximately 2% of the combined remaining capacity of the two landfills.

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\* Source: Alice Chung, County of Los Angeles Dept. of Public Works, Solid Waste Management Section, February, 1987.

### Mitigation Measures

No specific mitigation measures are proposed. No significant project related or cumulative impacts to area solid waste disposal capacities is anticipated. Current and future landfill expansions will mitigate impacts. Residents are encouraged to practice source-separation and volume reduction measures.

### B. Significant Adverse Environmental Effects Which Cannot Be Avoided

The following are project impacts for which mitigation measures exist, however, their impacts cannot be totally eliminated.

#### 1. Geotechnical Hazard

A primary seismic hazard to any site is the potential for ground surface rupture caused by fault displacement. Two faults are mapped onsite based on research, topography and geologic reconnaissance. A north-south trending fault was observed in the westerly portion of the site. The fault was not observed within the Plio-Pleistocene Saugus Formation or within the overlying surficial deposits and is anticipated to be inactive. A potential northwesterly trending fault is located onsite, and possible expression of this fault was observed on the terrace surface. However, current data suggest that the potential for future ground surface displacement onsite is low to nil.

#### 2. Flood Hazard

Development of the Proposed Project will decrease runoff downstream (westerly along Bouquet Canyon Road). Upon development the  $Q_{25}$  storm flow would be 3,600 cfs. A  $Q_{25}$  storm flow decrease of approximately 1,900 would result from project development.

Onsite runoff will be collected according to the proposed Conceptual Drainage Map, which includes inlet structures and debris basins. These facilities will control potential mud flow and erosion hazards within the Plum Canyon flood plain on the project site and minimize these hazards downstream toward Bouquet Canyon Road.

### 3. Air Quality

Project construction will generate air pollution emissions, such as dust and construction equipment products of combustion, estimated to be 917 lbs./day CO, 3,911 lbs./day NO<sub>x</sub>, 301 lbs./day SO<sub>x</sub> and 274 lbs./day particulates. Occupation of the Proposed Project will generate, from mobile and stationary sources, approximately 2,736 tons/yr. of CO, 604 tons/yr. of NO<sub>x</sub>, 111 tons/yr. of SO<sub>x</sub> and 258 tons/yr. particulates.

### 4. Biota

The proposed development would result in the grading of approximately 63% of the site. The remaining 37% would be undeveloped open space. Generally, the undeveloped portions would include the steep cliffs and inaccessible portions of the property. The extension of Plum and Whites Canyon Roads and the construction of a flood control channel would eliminate the alluvial scrub habitat in the southern valley. Both plant and animal populations would be reduced by the grading operations.

5. Scenic Quality

The Proposed Project will require grading of approximately 12.5 million cubic yards on vacant lands and convert existing vacant lands to residential and commercial uses.

6. Traffic/Access

Total daily Phase 1 and Phase 2 trip generation is 29,980. All 7 key intersections will operate acceptably during morning peak hour; however, during afternoon peak, the intersections of Bouquet/Soledad Cyn., Bouquet/Seco Cyn., Soledad/White Cyn. and Soledad Cyn./Sierra Hwy. will be below acceptable levels.

7. Education

The Proposed Project will generate a total of 1,862 new students in the William S. Hart Union High School District and the Saugus Union School District exceeding available capacities in the Saugus District.

8. Water Supply

Project related water demand is estimated to be 1,463 acre feet/year. When combined with existing area demand, the project does not exceed currently available supplies.

9. Solid Waste Disposal

Project related solid waste generation is estimated to be 25,550 tons per year. When combined with existing area tonnages, the project does not exceed currently available disposal capacities.

C. Mitigation Measures Proposed to Minimize the Significant Effects

For purposes of clarity and simplicity, mitigation measures for each impact are discussed concurrently with the impact itself (see Section III).

The developer will comply with Title 24 of the California State Energy Commission, which deals with thermal and sound insulation, to implement the conservation of the heat or cooling within buildings. During specific individual building design, the applicant should contact the Southern California Edison Company and Southern California Gas Company for additional energy conservation techniques.

D. Alternatives to the Proposed Actions

1. No Project

Under this alternative, construction of the proposed development would not occur and the property would remain in its present condition as vacant land. No additional traffic would be generated and, therefore, any potential cumulative congestion at the critical intersections would be reduced. No additional students would be generated, and the cumulative impact to the School District would be incrementally reduced. This alternative also would place no additional demand on local utilities and services.

The "No Project" alternative, however, would mean that 5,000 dwelling units would not be constructed, thus reducing the potential housing supply of this area. Plum Canyon Road would not be constructed. The housing need in this area is evidenced by

Canyon Country's low vacancy rate of 1.79% compared to the overall vacancy rate for Los Angeles County of 3.63%.\* An increase of 179,700 housing units between the years 1984 and 2010, in the Santa Clarita Valley has been projected.\*\*

The "No Project" alternative would cause a shifting of the proposed housing stock to another area. The impacts associated with the development of another location would depend upon the ultimate design and physical characteristics of the alternative site.

## 2. Existing Zoning Alternative

The existing zoning of the entire site is agricultural, A-2-1. Development of the property consistent with the zoning designation would allow approximately 675 single family dwellings (See FIGURE 18).

A conceptual 675 single family unit site plan pursuant to this alternative is shown in FIGURE 18. Development under this low density alternative would logically occur within the areas of gentle topography. The design, as shown on the conceptual site plan for this alternative, locates development along the planned Plum Canyon Road alignment, avoiding steep topography and any potential geotechnical hazards of the site.

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\* County of Los Angeles, DRP Bulletin, May, 1985.

\*\* SCAG, Dec. 1986 Projections.

A comparison of related service and traffic impacts for the Alternatives and the Proposed Project is provided in TABLE 3. Development of 675 single family units on the property would result in the generation of an estimated 270 elementary students and a total of 160 junior and senior high level students. The elementary and grades 9-12 students generated from this alternative could not all be accommodated within the existing schools. Adequate capacity now remains to house the junior high level students anticipated from this development.

Water demand for the development of 675 single family units would be an estimated 198 acre feet/year. The project could be served without significantly impacting existing water supplies.

Project related solid waste generation would be approximately 2,253 tons/year. Daily traffic trips for the development would be approximately 6,750 compared to 29,980 average daily trips for the Proposed Project - see TABLE 8 for LOS values.

Flood hazard impacts for this single family alternative would be less than the Proposed Project because fewer people would be exposed to onsite drainage flows upon occupation.

Air quality impacts from construction of Alternative 2 would be approximately 32% of the Proposed Project. Mobile and stationary air pollutant emissions would be approximately one-eighth of the Proposed Project.

Impacts to biota from this alternative would be approximately 32% of the Proposed Project in terms of vegetation disturbance and faunal displacement.

Scenic impacts would also be reduced for this alternative because fewer roof tops and associated amenities would be visible from existing adjacent residences to the south. Grading for this Alternative would be approximately 4 million cubic yards.

Substantial grading would be required for the improvement of Plum Canyon Road through the project site. The expense of this grading and other improvements, in addition to increased per unit infrastructure costs and fixed land costs, would result in exclusively high priced single family houses. This alternative was determined to be economically infeasible due to the lack of a market demand for single family housing priced above \$200,000 in this area. Current single family housing market prices in the area are approximately \$150,000.00.

### 3. Existing Areawide Plan Minimum

The minimum threshold of the existing Santa Clarita Areawide Plan would permit the development of approximately 2,300 dwelling units (See Figure 19).

A conceptual site plan pursuant to this alternative is shown in FIGURE 19. The plan consists of 929 multi family units, 970 town home "flats" and 401, 2-story town houses. The plan, as shown,

clusters medium to high density development along the Plum Canyon Road alignment and avoids areas of potential geologic hazard.

Related service and traffic impacts for this alternative are quantified in TABLE 3. Student generation under this alternative, 898 students, compares to 1,862 students for the Proposed Project. The estimated 350 elementary students and 334 high school students generated by the alternative could not be accommodated within existing school facilities. Project-related junior high students, 214, could be housed in the combined remaining capacity at Sierra Vista and Arroyo Seco Junior High Schools.

Development of the site under this alternative would result in a project water demand of 310 acre feet/year and solid waste generation of approximately 7,676 tons/year.

An estimated 18,400 traffic trips would be generated by the 2,300 units compared to 29,980 average daily trips for the Proposed Project - see TABLE 8 for LOS values.

Flood hazard impacts for this alternative would be less than the Proposed Project because fewer people would be exposed to onsite drainage flows upon occupation.

1.4 Noise

**SETTING/IMPACT:**

- a.  <sup>Y</sup>  <sup>N</sup> Is the project site located near a high noise source (airports, railroads, freeways, industry)?
- b.   Will the project substantially increase ambient noise levels, including those associated with special equipment (such as air conditioning units) or parking areas associated with the project?
- c.   Is the proposed use considered sensitive (school, hospital, senior citizen facility)?
- d.   Other factors? \_\_\_\_\_

**MITIGATION MEASURES:**

- Standard mitigation measures are:  Building Ordinance No. 2225-- Chapter 35
- Noise Ordinance No. 11,778
- Other considerations:  Lot Size  Project Design
- Compatible Use

**CONCLUSIONS:**

Considering the above information, could the project have a significant impact on, or be adversely impacted by, noise?

Yes  No

2.0 Natural Resources

2.1 Water Quality

SETTING/IMPACT:

- a.  Y  N Will the proposed project require the use of a private sewage disposal system?  
\_\_\_\_\_
- If the answer is yes, is the project site located in an area having known septic tank limitations due to high groundwater or other geotechnical limitations?  
\_\_\_\_\_
- Is the project proposing on-site systems located in close proximity to a drainage course?  
\_\_\_\_\_
- b.   Will the proposed project place industrial waste (corrosive or toxic materials) into a private sewage disposal system or a community system?  
\_\_\_\_\_
- c.   Is the project site located in an area having known water quality problems and proposing the use of individual water wells?  
\_\_\_\_\_
- d.   Other factors? \_\_\_\_\_  
\_\_\_\_\_

MITIGATION MEASURES:

- Standard mitigation measures are:  Plumbing Code--Ordinance No. 2269
- Health Ordinance No. 7583--Chapter 5  Industrial Waste Permit
- Other considerations:  Lot Size  Lot Design
- \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CONCLUSIONS:

Considering the above information, could the project have a significant impact on, or be impacted by, water quality problems?

- Yes  No

2.2 Air Quality

**SETTING/IMPACT:**

- a.  <sup>Y</sup>  <sup>N</sup> Will the proposed project exceed the State's criteria for regional significance (generally (a) 500 dwelling units for residential uses or (b) 40 gross acres, 650,000 square feet of floor area, or 1,000 employees non-residential uses)?  
\_\_\_\_\_
- b.   Is the proposal considered a sensitive use (schools, hospitals, parks) and located near a freeway or heavy industrial use?  
\_\_\_\_\_
- c.   Will the project increase local emissions to a significant extent due to increased traffic congestion or use of a parking structure?  
\_\_\_\_\_
- d.   Will the project generate or is the site in close proximity to sources which create obnoxious odors and/or hazardous emissions?  
\_\_\_\_\_
- e.   Other factors: \_\_\_\_\_  
\_\_\_\_\_

**MITIGATION MEASURES:**

Standard mitigation measures are:  Health and Safety Code, Section 40506

Other considerations:  Project Design  Air Quality Management Plan  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CONCLUSIONS:**

Considering the above information, could the project have a significant impact on, or be impacted by, air quality? :-

Yes  No

2.3 Biota

**SETTING/IMPACTS**

- a.   Is the project site located within a Significant Ecological Area or Significant Ecological Area Buffer?  
\_\_\_\_\_
- b.   Does the project site contain a major riparian habitat?  
\_\_\_\_\_
- c.   Does the project site contain oak or other unique native trees?  
\_\_\_\_\_
- d.   Other factors?  
\_\_\_\_\_

**MITIGATION MEASURES:**

Other considerations:  Lot Size  Project Design  
 Oak Tree Permit

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CONCLUSIONS:**

Considering the above information, could the project have a significant impact on biotic resources?

Yes  No

3.0 Cultural Resources/Visual

3.1 Archaeological/Historical/Paleontological

SETTING/IMPACTS

- a.  <sup>Y</sup>  <sup>N</sup> Is the project site in or near an area containing known archaeological resources or containing features (drainage course, spring, knoll, rock outcroppings, or oak trees) which indicate potential archaeological sensitivity?  
\_\_\_\_\_
- b.   Does the project site contain rock formations indicating potential paleontological resources?  
\_\_\_\_\_
- c.   Does the project site contain known historic structures or sites?  
\_\_\_\_\_
- d.   Other factors? \_\_\_\_\_  
\_\_\_\_\_

MITIGATION MEASURES:

Other considerations:  Lot Size  Project Design  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CONCLUSIONS:

Considering the above information, could the project have a significant impact on archaeological, historical, or paleontological resources?

Yes

No

3.2 Visual Qualities

SETTING/IMPACTS:

- a.  <sup>Y</sup>  <sup>N</sup> Is the project site substantially visible from or will it obstruct views along a scenic highway (as shown on the Scenic Highway Element) or located within a scenic corridor?
- b.   Is the project substantially visible from or will it obstruct views from a regional riding or hiking trail?
- c.   Is the project site located in an undeveloped or undisturbed area which contains unique aesthetic features?
- d.   Is the proposed use out-of-character in comparison to adjacent uses because of height, bulk, or other features?
- e.   Will the project obstruct unique views from surrounding residential uses?
- f.   Will the project create substantial sun shadow or glare problems?
- g.   Other factors: \_\_\_\_\_

MITIGATION MEASURES

- Other considerations:  Lot Size       Lot Design  
 Compatible Use
- \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CONCLUSION:

Considering the above information, could the project have a significant impact on scenic qualities.

- Yes       No

4.0 Services

4.1 Traffic/Access

SETTING/IMPACTS:

- a.  <sup>Y</sup>  <sup>N</sup> Does the project contain 25 dwelling units, or more and located in an area with known congestion problems (mid-block or intersections)?  
*Bouquet Canyon Road*
- b.   Will the project result in any hazardous traffic conditions?
- c.   Will the project result in parking problems with a subsequent impact on traffic?
- d.   During an emergency (other than fire hazards), will inadequate access result in problems for emergency vehicles or residents/employees in the area?
- e.   Other factors? \_\_\_\_\_

MITIGATION MEASURES:

Other considerations:  Project Design

*Cumulative impacts*

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CONCLUSION:

Considering the above information, could the project have a significant impact on the physical environment due to traffic/access?

Yes  No

4.2 Sewage Disposal

SETTING/IMPACTS:

- a.  Y  N If served by a community sewage system, are there any known capacity problems at the treatment plant?  
*Plant site has capacity for expansion.*
- b.   Are there any known capacity problems in the sewer lines serving the project site?
- c.   Other factors? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

MITIGATION MEASURES:

Standard mitigation measures are:

- Plumbing Code--Ordinance No. 2269 ;
- Sanitary Sewers and Industrial Waste Ordinance No. 6130

Other considerations: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CONCLUSION:

Considering the above information, could the project have a significant impact on the physical environment due to sewage disposal facilities?

- Yes  No

4.3 Education

**SETTING/IMPACTS:**

- a.  <sup>Y</sup>  <sup>N</sup> Are there known capacity problems at the district level?  
*Project will provide one school site in next*
- b.   Are there known capacity problems at individual schools which will serve the project site? *Chase.*
- c.   Are there any known student transportation problems?
- d.   Other factors? *Langus Union School District*

**MITIGATION MEASURES:**

Other considerations:  SB 201 Funds  Site Dedication

**CONCLUSION:**

Considering the above information, could the project have a significant impact on the physical environment due to educational facilities/services?

- Yes  No

4.4 Fire/Sheriff Services

SETTING/IMPACTS:

a.  Y  N Are there any known staffing or response time problems at the fire station or sheriff's substation serving the project site? \_\_\_\_\_

b.  Y  N Are there any special fire or law enforcement problems associated with the project or the general area? \_\_\_\_\_

c.  Y  N Other factors? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

MITIGATION MEASURES:

Other considerations: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CONCLUSION:

Considering the above information, could the project have a significant impact on the physical environment due to fire/sheriff services?

Yes

No

4.5 Utilities/Other Services

SETTING/IMPACTS:

- a.  <sup>Y</sup>  <sup>N</sup> Is the project site in an area known to have an inadequate water supply to meet domestic needs?  
*Cumulative impacts*
- b.   Is the project site in an area known to have an inadequate water supply and/or pressure to meet fire fighting needs?
- c.   Are there any known problems with providing other utility services, such as electricity, gas, propane?
- d.   Are there any known service problem areas?
- e.   Other factors? *Landfill capacity*

MITIGATION MEASURES:

Standard mitigation measures are:

- Plumbing Code (Ordinance No. 2269)  
 Water Ordinance No. 7834

Other considerations:  Lot Size  Project Design

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CONCLUSION:

Considering the above information, could the project have a significant impact on the physical environment due to utilities/services?

- Yes  No

PROJECT CHANGES/CONDITIONS

- Prior to ( ) recordation of the final map ( ) issuance of a building permit and as a means of mitigating potential environmental impacts, it must be demonstrated to the satisfaction of the Regional Planning Commission that sewer connection permits can be obtained from ( ) County Sanitation District No. \_\_\_ ( ) Las Virgenes Municipal Water District or its legal successor that meet the requirements of the California Regional Water Quality Control Board pursuant to Division 7 of the Water Code.
- Prior to alteration of any streambeds, and as a means of mitigating potential environmental impacts, the applicant shall enter into an agreement with the California State Department of Fish and Game, pursuant to Sections 1601 through 1603 of the State Fish and Game Code.
- Prior to ( ) tentative approval ( ) scheduling before the Zoning Board ( ) scheduling before the Regional Planning Commission, and as a means of mitigating potential environmental impacts, the applicant shall submit an archaeology report for the entire project site (unless otherwise noted) prepared by a qualified archaeologist, and comply with mitigation measures suggested by the archaeologist and approved by the Department of Regional Planning.
- Prior to ( ) tentative approval ( ) scheduling before the Zoning Board ( ) scheduling before the Regional Planning Commission, and as a means of mitigating potential environmental impacts, the applicant shall agree to suspend construction in the vicinity of a cultural resource encountered during development of the site, and leave the resource in place until a qualified archaeologist can examine them and determine appropriate mitigation measures. The applicant shall agree to comply with mitigation measures recommended by the archaeologist and approved by the Department of Regional Planning.
- As a condition of ( ) final approval ( ) the grant ( ) approval of the zoning ordinance, and as a means of mitigating potential environmental impacts, the applicant shall dedicate to the County of Los Angeles, ( ) the right to prohibit construction over an area demarcated on the ( ) tentative map ( ) plot plan, ( ) construction of more than one residence of commercial unit and related accessory building on any one lot on the project site. A note to this effect shall be ( ) placed on final map or on the Grant Waiver ( ) recorded on the title.
- Prior to ( ) tentative approval ( ) recordation of the final map ( ) scheduling before the Zoning Board ( ) scheduling before the Regional Planning Commission, and as a means of mitigating potential environmental impacts, the applicant shall drill and test flow a well(s) to the satisfaction of the Department of County Engineer-Facilities. A warning note shall be ( ) placed on the final map and in the CC&Rs ( ) recorded on the title, indicating that the area has a limited groundwater supply and that water may not be available during periods of severe drought. A copy of the ( ) CC&Rs shall be submitted to the Department of Regional Planning and subsequently recorded with the final map ( ) title shall be submitted to the Department of Regional Planning for approval.
- As a condition of ( ) final approval ( ) the grant ( ) approval of the zoning ordinance, and as a means of mitigating potential environmental impacts, a warning note shall ( ) be placed in the CC&Rs ( ) recorded on the title, indicating that the area has a limited groundwater supply during periods of severe drought. A copy of the ( ) CC&Rs shall be submitted to the Department of Regional Planning for approval and subsequently recorded with the final map ( ) title shall be submitted to the Department of Regional Planning for approval.
- Prior to the recordation of the final map, the subdivider shall be required to enter into an agreement with the County to pay to the County a sum no to exceed \$3,500.00 per residential unit, and not to be less than \$2,000.00 per residential unit for the purpose of contributing to the proposed Road Benefit District prior to occupancy or upon demand of payment by the County Road Commission. Security for the performance of said agreement shall be guaranteed by the filing of a bond by a duly authorized surety.
- Prior to scheduling for public hearing, and as a means of mitigating any environmental impacts associated with the distance of the project to the nearest fire station, the applicant shall agree to comply with all conditions imposed by the County Forester and Fire Warden including—if appropriate—contribution to the acquisition of additional facilities/equipment.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

See attached page for additional Project Changes/Conditions

ENVIRONMENTAL ANALYSIS

1.0 Hazard Factors

1.1 Geotechnical

SETTING/IMPACTS:

a.  <sup>Y</sup>  <sup>N</sup> Is the project site located in an active or potentially active fault zone?

b.   Is the project site located in an area containing a major landslide(s)?

*on northerly portions of site*

c.   Is the project site located in an area having high slope instability?

*Moderately unstable to unstable*

d.   Is the project site subject to high subsidence, high groundwater level, or hydrocompaction?

e.   Is the proposed project considered a sensitive use (school, hospital, public assembly site) located in close proximity to a significant geotechnical hazard?

f.   Other factors? \_\_\_\_\_

MITIGATION MEASURES:

Standard mitigation measures are:  Building Ordinance No. 2225-- Sections 308B, 309, 310 and 311 and Chapters 29 and 70.

Other considerations:  Lot Size  Project Design

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CONCLUSION:

Considering the above information, could the project have a significant impact on, or be impacted by, geotechnical factors?

Yes  No

1.2 Flood

**SETTING/IMPACTS:**

- a.  <sup>Y</sup>  <sup>N</sup> Is a major drainage course, as identified on USGS quad sheets by a dashed line, located on the project site?  
Plum Canyon is a major wash
- b.   Is the project site located within or does it contain a floodway or floodplain?  
Flood Hazard area
- c.   Is the project site located in or subject to high mudflow conditions?
- d.   Will the project contribute, or be subject to, high erosion and debris deposition from run-off?  
Very high erosion potential
- e.   Other factors? \_\_\_\_\_

**MITIGATION MEASURES:**

Standard mitigation measures are:

- Building Ordinance No. 2225--Section 308A
- Flood Control District Drainage Concept
- Ordinance No. 12,114 (Floodways)

Other considerations:  Lot Size  Project Design

\_\_\_\_\_

\_\_\_\_\_

**CONCLUSION:**

Considering the above information, could the project have a significant impact on, or be impacted by, flood (hydrological) factors?

Yes

No

1.3 Fire

**SETTING/IMPACTS**

- a.  <sup>Y</sup>  <sup>N</sup> Is the project site located in a high fire hazard area (Fire Zone 4 or Quinton/Redgate fire classification)?
- b.   Is the project site in a high fire hazard area and served by inadequate access due to length, width, surface material, turnarounds, or grade?
- c.   Is the project site in a high fire hazard area and has more than 75 dwelling units on a single access?
- d.   Is the project site located in an area having inadequate water and pressure to meet fire flow standards?
- e.   Is the project site located in close proximity to potential dangerous fire hazard conditions/uses (such as refineries, flammables, explosives manufacturing)?
- f.   Does the proposed use constitute a potentially dangerous fire hazard condition/use?
- g.   Other Factors? \_\_\_\_\_

**MITIGATION MEASURES:**

- Standard mitigation measures are:  Fire Ordinance No. 2947
- Water Ordinance No. 7834  Fire Prevention Manual Regulation No. 12
- Other considerations:  Project Design
- \_\_\_\_\_
- \_\_\_\_\_

**CONCLUSION:**

Considering the above information, could the project have a significant impact on, or be impacted by, fire hazard factors?

Yes  No

**ANALYSIS SUMMARY (See individual pages for details)**

**IMPACT ANALYSIS MATRIX:**

CATEGORY	Factor	P A No Impact/Insignificant Impact G Significant Impact E Potential Concern	Potential Concern	
			Significant Impact	Potential Concern
NATURAL HAZARDS	Geotechnical	5	/	Unstable slopes; landslide areas
	Flood	6	/	Flood hazard area
	Fire	7	/	
	Noise	8	/	
NATURAL RESOURCES	Water Quality	9	/	
	Air Quality	10	/	Over 500 units
	Biota	11	/	Undisturbed area
CULTURAL RESOURCES/ VISUAL	Cultural Resources	12	X	State says handle as separate 4/3/86
	Visual Qualities	13	/	Undisturbed area
SERVICES	Traffic/Access	14	/	Impact at build out
	Sewage Disposal	15	/	
	Education	16	/	District overcrowding
	Fire/Sheriff	17	/	
	Utilities	18	/	Water availability, solid waste generated
	General	19	/	
OTHER	Environ. Safety	20	/	

**DETERMINATION:** On the basis of this Initial Study, the Department of Regional Planning finds that this project qualifies for the following environmental document:

Preliminary FINAL

- NEGATIVE DECLARATION**, inasmuch as the proposed project will not have a significant effect on the environment.
- NEGATIVE DECLARATION**, inasmuch as the changes required for the project will reduce impacts to insignificant levels (see "Conditions", page 4).
- ENVIRONMENTAL IMPACT REPORT**, inasmuch as there is substantial evidence that the project may have a significant impact due to factors listed above as "significant".

3-20-86

Determination appealed—see attached sheet.

**Environmental Finding (Negative Declarations):**

- ND** An Initial Study was prepared on this project in compliance with the State CEQA Guidelines and the environmental reporting procedures of the County of Los Angeles. It was determined that this project will not exceed the established threshold criteria for any environmental/service factor and, as a result, will not have a significant effect on the physical environment.
- NDC** An Initial Study was prepared on this project in compliance with the State CEQA Guidelines and the environmental reporting procedures of the County of Los Angeles. It was originally determined that the proposed project may exceed established threshold criteria. The applicant has agreed to modification of the project so that it can now be determined that the project will not have a significant effect on the physical environment. The modification to mitigate this impact(s) is identified on the Acceptance Letter included as part of this Initial Study.

**NOTE:** Findings for Environmental Impact Reports will be prepared as a separate document following the public hearing on the project.

Reviewed by: Carol J. Nelson

Date: 1-25-86  
RL 2-1-86

5.0 Other Factors

5.1 General Factors

SETTING/IMPACTS:

- a.  <sup>Y</sup>  <sup>N</sup> Will the project result in an inefficient use of energy resources?  
\_\_\_\_\_
- b.   Will the project result in a major change in the pattern, scale, or character of the general area or community?  
*(To be discussed with 3.2 Visual)*
- c.   Will the project result in a significant increase in light and/or glare?  
\_\_\_\_\_
- d.   Will the project result in a significant reduction in the amount of agricultural land?  
\_\_\_\_\_
- e.   Other factors? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

MITIGATION MEASURES:

Standard mitigation measures are:

- State Administrative Code, Title 24, Part 5, T-20 (Energy Conservation)

Other considerations:  Lot Size  Project Design  
 Compatible Use

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CONCLUSION:

Considering the above information, could the project have a significant impact on the physical environment due to \_\_\_\_\_?

Yes  No

5.2 Environmental Safety

**SETTING/IMPACTS:**

- a.  <sup>Y</sup>  <sup>N</sup> Are any hazardous materials used, produced, or stored on-site?  
\_\_\_\_\_
- b.   Are any hazardous wastes stored on-site?  
\_\_\_\_\_
- c.   Are any pressurized tanks to be used on-site?  
\_\_\_\_\_
- d.   If answer is "yes" to a., b., or c: Are any residential units, schools, or hospitals located within 500 feet?  
\_\_\_\_\_
- e.   Other factors? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ALIC

**MITIGATION MEASURES:**

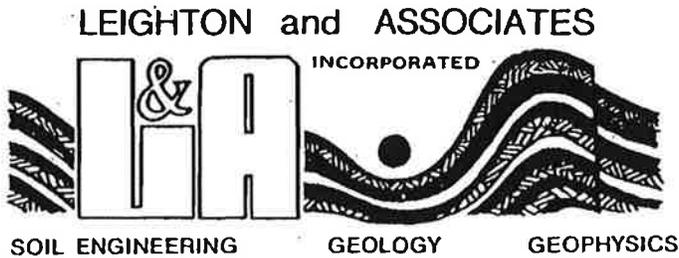
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CONCLUSION:**

Considering the above information, could the project have a significant impact on public safety?

- Yes  No

## APPENDIX 2



RECEIVED  
SEP 5  
ENGINEERING SERVICE  
CORPORATION



GROUND WATER      HAZARDOUS WASTES

May 29, 1985

Project No. 7850285-01

TO:            S & S Construction Company  
                 8383 Wilshire Boulevard, Suite 700  
                 Beverly Hills, California 90211

ATTENTION:   Mr. Dave Hasson

SUBJECT:      Geotechnical Evaluation of the Preliminary Study for Tentative Tract  
                 33987, Plum Canyon, Saugus Area, County of Los Angeles, California

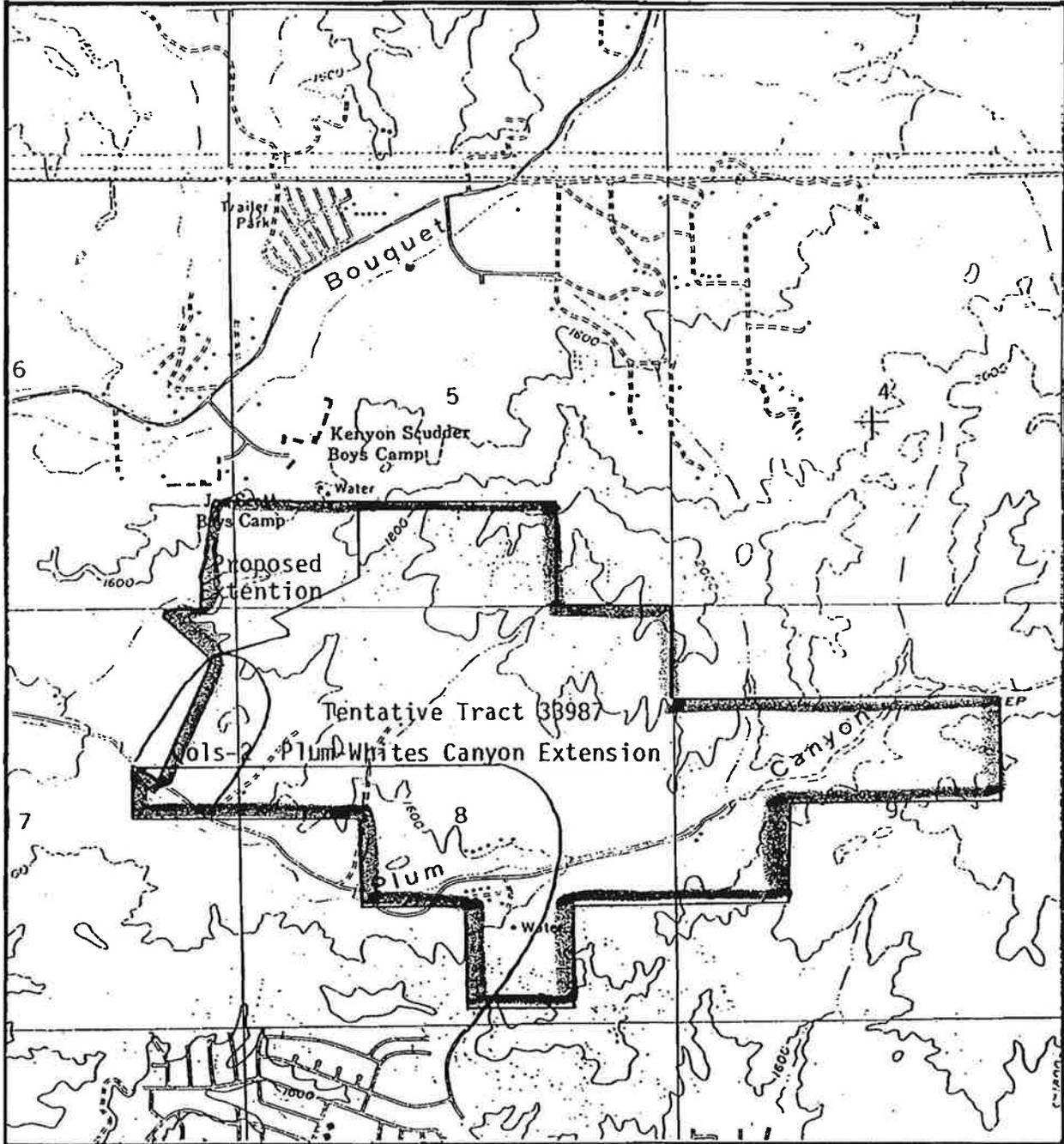
### Introduction

In accordance with your request, we have conducted a geotechnical evaluation of the preliminary study for Tentative Tract 33987 located in the Saugus area of the county of Los Angeles as shown on the Index Map. This study was directed toward delineation of salient geotechnical features onsite in view of the 200-scale preliminary development plan prepared by Engineering Service Corporation and dated August 15, 1984. This report summarizes our findings and provides our preliminary conclusions and recommendations regarding development.

As requested by you, the scope of our study utilized preliminary methods without subsurface exploration and included review of available data, reports, maps, and analysis of stereoscopic aerial photographs, geologic reconnaissance of the site, analysis of data with respect to the proposed development, and preparation of this report and accompanying maps, illustrations, and appendices.

### Accompanying Maps, Illustrations, and Appendices

Index Map - Page 2  
Geotechnical Map - (200-scale; 1 Sheet) - In Pocket  
Appendix A - References  
Appendix B - Earth Units  
Appendix C - Summary of Slopes



INDEX MAP  
 OF  
 TENTATIVE TRACT 33987  
 (Subject Site Shown in Yellow)

Base Map: USGS 7½-Minute Mint Canyon Quadrangle

## Site Conditions and Proposed Development

The study area includes approximately 700± acres within westerly-draining Plum Canyon. Topographically, the site consists of southerly descending 6:1± to 3:1± (horizontal to vertical) slopes along the northerly side of the canyon which have been deeply incised by southerly draining tributaries and northerly descending 2.5:1± slopes along the south side of the canyon. The property is bounded on the north by an east-west trending, narrow ridge line.

Existing improvements on the site consist of a water and power transmission line extending along the westerly and northerly portion of the site and an underground telephone line located along the southerly portion of the site. Lower portions of the property were formerly utilized for hog ranching activities. Concrete debris, remnants of foundations, and animal debris are located onsite as shown on the accompanying Geotechnical Map. This area is sparsely to moderately covered with grasses, shrubs, and trees.

The preliminary development plan proposes conventional cut and fill mass grading to provide pads for the construction of 1240 single-family residences, 220 duplexes, and 2572 condominiums, apartments, and townhomes. A 13±-acre commercial site is proposed in the central part of the property and a park and school site is planned at the westerly end of the study area. The plan also proposes to extend Plum Canyon Road to join with the existing Whites Canyon Road to the south thus providing secondary access to both canyons.

## Geologic Conditions

The study area is underlain by nonmarine sedimentary bedrock of Cenozoic age. These coarse-grained sediments consist of sandstone and conglomerate of the Miocene Mint Canyon Formation (Tmc), sandstone, conglomerate, and silty sandstone of the upper Miocene Castaic Formation (Tc), and sandstone, conglomerate, and mudstone of the Plio-Pleistocene Saugus Formation (TQs). Mudstone beds were not observed within the Mint Canyon and Castaic Formations exposed onsite, but are anticipated to be present based on previous experience in other nearby locations. Mudstones represent the weakest materials within the onsite bedrock. Bedding observed within the bedrock is thick (up to 10 feet as observed), undulatory, and poorly developed.

The predominant geologic structure within the study area is a southwesterly dipping homocline. Bedding within the three onsite formations is subparallel and generally dips 10± to 20± degrees southerly to westerly. The homoclinal structure is locally interrupted by a north-south trending fault located in the easterly portion of the site. This fault has placed the Castaic Formation in contact with the underlying Mint Canyon Formation. No evidence of faulting was observed within the overlying Saugus Formation or surficial soils. A northwesterly trending fault in the central portion of the study area is suspected due to the observation of an anomolous linear ravine located across a terrace surface.

Portions of the Saugus Formation may be landslide affected in areas delineated on the accompanying Geotechnical Map. This landsliding is believed to have occurred during topographic and climatic conditions unique to those prevalent today.

Detailed descriptions of the bedrock and landslide affected bedrock are provided in Appendix B.

Regional ground water levels are anticipated to be at a depth of approximately 75± feet below the lower portions of the site. Phreatophytes indicating shallow ground water were observed in the vicinity of Proposed Cut Slope 8 as shown on the Geotechnical Map. This shallow ground water is anticipated to represent a localized and seasonal perched condition and persistent, shallow ground water levels are not anticipated.

### Soil Conditions

The surficial soils overlying bedrock and delineated on the accompanying Geotechnical Map include terrace deposits (Qt), recent landslide debris (Qls), alluvium (Qal), slope wash and colluvium (Qsw), and artificial fill (af, afc, afm). These materials are typically medium to coarse-grained and are anticipated to have high shear strengths with low cohesion. Expansion potentials are anticipated to be low due to a relatively low clay content.

The extent of the terrace deposits, if present, is not well defined. If present, these deposits are anticipated to have similar appearance and engineering properties to the underlying Saugus Formation which may account for their elusiveness. The recent landslide debris delineated on the Geotechnical Map is anticipated to consist primarily of intensely fractured and disturbed Saugus Formation. This material is anticipated to be potentially compressible. Collapse and compressibility potentials are anticipated to be high within the alluvium, and slope wash and colluvium. The artificial fill is also anticipated to have a high settlement potential. Detailed descriptions of the surficial soils are presented in Appendix B.

## Conclusions and Recommendations

### General Conclusions

The planned development of the study area appears to be geologically feasible. The salient geotechnical conditions which are anticipated to have the greatest effect on the proposed grading include existing landslides and to a lesser extent proposed cut slope stability. Preliminary conclusions and recommendations regarding planned development are based upon our observations during this study and are provided below.

### Recommendations

#### Slope Stability

The stability of onsite natural and proposed cut slopes is dependent upon the existence of unsupported, weak bedding planes which are inclined in an out-of-slope orientation. Landslides have occurred primarily within the Saugus Formation and are described in detail in Appendix B. Landslides have been numbered for correlation between the text and the accompanying Geotechnical Map. Preliminary mitigation measures for existing recent landslides are recommended in Table 2 of Appendix B. Larger ancient landslides could be potentially unstable due to loading by proposed fills in the upper areas and excavation proposed in the toe areas. If redesigns are not attempted to alleviate or minimize this condition, large-scale buttressing may be necessary. The existence and extents of the older landslides should be verified by further subsurface investigation. Preliminary mitigation measures are provided in Table 1 of Appendix B.

Major cut slopes, categorized herein as being greater than 30± feet high, have been given corresponding numbers and are summarized in Appendix C. In general, south to westerly facing slopes are anticipated to be potentially unstable where weak bedding planes are encountered and may require stabilization. Several of these slopes could be redesigned to reduce slope heights, gradients, and reorient slope-facing directions.

Major natural slopes have also been numbered and are summarized in Appendix C. South to westerly facing slopes are anticipated to be underlain by potentially unstable geologic conditions and may require mitigation.

In addition to gross stability hazards, steeper slopes with thick soil accumulations may be surficially unstable and would thus require minor stabilization.

The highest fill slope onsite is 120± foot high proposed at a gradient of 2.5:1±. Based upon slopes previously analyzed under similar geologic conditions in the vicinity, the proposed major fill slopes designed with 2:1 or flatter gradients are anticipated to be grossly and surficially stable. All proposed fill slopes should be designed no steeper than 2:1. However, fill slope gradients of up to 1.5:1 (horizontal to vertical) may be constructed if the outer 15± feet of slope materials are compacted to 95 percent relative compaction.

### Erosion Potential

The low cohesive strength of on-site soils present an erosion potential on manufactured slopes, particularly fill slopes. Measures to provide temporary surficial erosion protection during development or vegetation protection should be planned.

### Settlement Potential

The alluvium, slope wash, recent landslide debris, and artificial fill may be susceptible to hydrocompaction and/or potential collapse based upon our experience in nearby areas with similar geotechnical conditions. Typically, the alluvium does not possess a significant collapse potential below 20 to 30± feet. Mitigation measures for the settlement of the alluvium typically include removal and recompaction methods and/or presaturation/surcharging. Presaturation/surcharging of surficial deposits such as slope wash, colluvium, recent landslide debris, and existing fill materials is typically not appropriate due to their extreme low density and localized distribution.

### Faulting and Seismicity

The primary seismic hazards present on any site is the potential for high intensity ground shaking, seismically-induced ground settlement, and the possibility of ground surface rupture caused by fault displacement. Two faults are mapped onsite based on research, topography, and geologic reconnaissance. A north-south trending fault was observed in the westerly portion of the site. This fault was observed within the Mint Canyon and Castaic Formations. However, the fault was not observed within the Plio-Pleistocene Saugus Formation or within the overlying surficial deposits and is anticipated to be inactive. A potential northwesterly trending fault is located onsite based on an observed topographic lineation. Possible expression of this fault was observed on the terrace surface. The existence, exact location, and state of activity of this fault should be further evaluated by subsurface exploration. Therefore, at this time the collected data suggests that the potential for future ground surface displacement onsite is low to nil.

The San Gabriel fault is expected to represent the potential source for the strongest ground shaking onsite due to its proximity (3± miles). Repeatable horizontal ground acceleration values generated by a major earthquake along the San Gabriel fault (assuming a maximum probable earthquake of 6.5 Richter magnitude) could reach 0.38 at the site. The potential effects of ground shaking on structures is expected to be satisfactorily mitigated by (earthquake-resistant) design in accordance with the latest Uniform Building Code and current state-of-the-art practices.

Secondary earthquake hazards, such as liquefaction, flow landsliding, seismically induced settlement, and ground lurching or cracking are associated with the areas containing low density, saturated soils which are intended to be removed or otherwise mitigated. Therefore, the potential for seismically-induced ground failure is considered low to nil. No special mitigation measures other than earthwork construction in accordance with code requirements are expected to be necessary at this time.

### Ground Water

Regional persistent shallow ground water levels are not anticipated onsite. However, localized areas of perched ground water may be encountered. Site development often creates a local perched, seasonal ground water table by infiltration of landscape and irrigation water. Localized area of surface seepage can present nuisance-type problems where adequate subsurface drainage is not provided during site grading. Available mitigation measures generally include construction of subdrains beneath fills to prevent ground water from reaching the surface, capping the surface with provision for adequate collection, control, and disposal of surface runoff by means of paved, nonerosive devices.

### Rippability

The majority of materials onsite can be readily excavated by modern earthwork equipment in good operating condition. No blasting is anticipated to be necessary during grading, although heavy ripping may be necessary in areas of deeper excavation within areas underlain by the Castaic and Mint Canyon Formations. Any oversize material should to be properly disposed of offsite or placed by special handling during grading, such as windrowing and placement in deep fills.

### Future Geotechnical Studies

Geotechnical studies should be undertaken as the grading plan is refined and should entail subsurface exploration as follows:

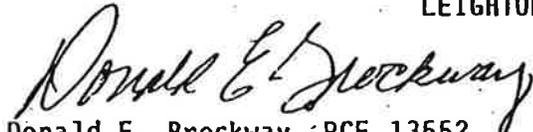
1. Detailed evaluation of ancient landslides (Q01s) and recent landslides (Q1s) which impact the proposed development.
2. Potential onsite faulting should be trenched to reveal their relationship to overlying surface deposits, thus assessing their state of activity.
3. Proposed cut slopes and natural slopes anticipated to be unstable as addressed herein.
4. Depth and composition of potentially deleterious artificial fill.
5. Compressibility, collapse, and hydroconsolidation potentials of onsite alluvial and slope wash soils.

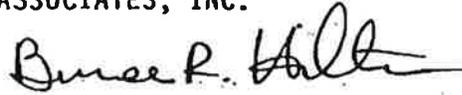
7850285-01

Thank you for the opportunity to be of service to you. If you have any questions please do not hesitate to call.

Respectfully submitted,

LEIGHTON AND ASSOCIATES, INC.

  
Donald E. Brockway, RCE 13552  
Project Manager

  
Bruce R. Hilton, CEG 1151  
Chief Engineering Geologist

RCH/BH/DEB/jm

Distribution: (4) Addressee  
(1) Sikand Engineering  
Attention: Mr. John Peña

## APPENDIX A

REFERENCES

1. Oakshott, Gordon B., 1958, Geology and mineral deposits of San Fernando Quadrangle, Los Angeles County, California Division of Mines and Geology, Bulletin 172.
2. Jennings, C. W. and R. G. Strand, 1969, Geologic map of California, Los Angeles Sheet, Scale 1:250,000.
3. Saul, R. B. and T. M. Wooten, 1983, Geology of the south half of the Mint Canyon Quadrangle, Los Angeles County, California, California Division of Mines and Geology, Open-File Report 83-24 LA.
4. Jahns, R. H. and Muehl Berger, W. R. 1954, Geology of the Soledad Basin, Los Angeles County, California, California Division of Mines and Geology, Bulletin 170, Map Sheet No. 6.
5. Saul, R. B., Unpublished, Geology of the north half of the Mint Canyon Quadrangle, Los Angeles County, California, California Division of Mines and Geology.
6. Thomas, R., Unpublished, Environmental impact study, Plum Canyon Road, Source: Department of Public Works.
7. Leighton and Associates, Inc., 1984, Geotechnical review of grading plans, Tracts 43529 and 43530 (Tentative Tract 37081) Bouquet Canyon and Plum Canyon Roads, Saugus Area, County of Los Angeles, California.

Aerial Photographs

<u>Source</u>	<u>Photograph Number</u>	<u>Scale</u>
Aerial Surveying and Engineering Co., 1965	19-36	1"=1500'+
S & S Construction, 1984	1-5	1"=2000'+

## APPENDIX B

EARTH UNITS

The earth units mapped within the study area include sedimentary bedrock of the Miocene Mint Canyon and Castaic Formations and, the Plio-Pleistocene Saugus Formation and surficial deposits including landslide affected bedrock, terrace deposits, landslide debris, alluvium, slopewash and colluvium, and artificial fill. These units are distributed onsite as shown on the Geotechnical Map. The descriptions for each mapped unit presented below are based upon this study, our studies on adjacent tracts, and previous work done by others locally or regionally within the vicinity.

Mint Canyon Formation (Tmc)

The Miocene Mint Canyon Formation crops out primarily in the easterly portion of the study area and is the oldest of the bedrock units exposed onsite. This unit, as observed onsite, consists of interbedded sandstone and coarse conglomerate. The sandstone is tan to grey, firm to hard, locally well-cemented, and medium to coarse-grained. The conglomerate consists of well-rounded boulders, cobbles, and pebbles in a coarse sandstone matrix. Bedding within the sandstone and conglomerate is up to 10± feet thick, poorly developed, and undulatory. Bedding predominately dips 10± to 20± degrees southwesterly. Red-brown mudstones were not observed within the Mint Canyon Formation exposed onsite, but are present within this formation at other nearby locations. Therefore, the presence of mudstones within the onsite Mint Canyon Formation should be anticipated.

Castaic Formation

The upper Miocene Castaic Formation unconformably overlies the Mint Canyon Formation and is exposed in the easterly portion of the study area and along the bottom of the deeper canyons in the northerly portion of the site. This unit, as observed within the study area, consists of interbedded sandstone, conglomerate, and silty sandstone. The sandstone is tan, firm to very firm, locally well-cemented, and medium to coarse-grained. The conglomerate is composed of well-rounded cobbles and pebbles in a cemented medium to coarse-grained sandstone matrix. The silty sandstone is grey, moderately firm to firm, and very fine to fine-grained. Bedding within this formation is up to 10± feet thick, undulatory, and poorly developed. Bedding dips predominately 10 to 20± degrees southwesterly which is parallel or subparallel to the bedding within the underlying Mint Canyon Formation.

Saugus Formation (TQs)

The Saugus Formation is the youngest of the bedrock units onsite and unconformably overlies the Castaic and Mint Canyon Formations. These nonmarine clastic sediments consist of interbedded sandstone, conglomerate, and mudstone. The sandstones are the predominant member of this unit and are light brown to red, massive, fine to coarse-grained, and friable. Sandstone beds are often up to 10± feet thick. The conglomerate consists of pebbles, cobbles, and level

boulders in a medium to coarse grained sandstone matrix. Individual conglomerate beds are massive and were observed to be up to 10± feet thick. The red mudstone beds consist of a mixture of clay, silt, and sand. The individual mudstone beds are massive and, although up to 8± feet thick, are typically only one to two feet thick and spaced at approximately 10±-foot intervals comprising 20± percent of the bedrock encountered. Bedding within this unit is poorly developed and undulatory.

#### Landslide Affected Saugus Formation (Qols)

The landslide affected Saugus Formation onsite is contained within four large landslides located in the southwesterly portion of the site as shown on the Geotechnical Map. These landslides, numbered 2 through 5, are mapped on the basis of aerial photographic and field interpretation. The landslides numbered 3, 4, and 5 are questionable as to their presence and extents. This large-scale landsliding is believed to have occurred during periods of significantly greater precipitation and runoff than those occurring today and at a time when the base of Plum Canyon was at a much lower level. The older landslides (numbered 2, 3, and 4) are anticipated to have failed in a southwesterly direction as block-glide type failures which are presently buttressed at the toe by alluvium within Plum Canyon. The bedrock within these failures is anticipated to be relatively undisturbed. Older Landslide 5 is anticipated to be a rotational-type failure caused by the oversteepening of the south wall of Plum Canyon. No recent evidence suggesting reactivation of the older landslides onsite was observed.

TABLE 1. SUMMARY OF OLDER LANDSLIDES				
Older Landslide Number	Direction of Movement	Area (Acres)	Anticipated Type of Failure	Conclusion/ Recommendation
2	Southwesterly	47±	Block Glide	Potentially unstable as designed. Redesign to increase fill at toe area and cut in upper portion. If redesign is impractical, buttress or shear key measures should be designed.
3	Southwesterly	71±	Block Glide	Potentially unstable as designed. Redesign to increase fill at toe area and cut in upper portion. If redesign is impractical, buttress or shear key measures should be designed.

Older Landslide Number	Direction of Movement	Area (Acres)	Anticipated Type of Failure	Conclusion/ Recommendation
4	Southwesterly	40±	Block Glide	Potentially unstable as designed. Redesign to increase fill at toe area and cut in upper portion. If redesign is impractical, buttress or shear key measures should be designed.
5	Northwesterly	24±	Rotational	Potentially unstable as designed. Redesign to increase fill at toe area and cut in upper portion. If redesign is impractical, buttress or shear key measures should be designed.

#### Terrace Deposits (Qt)

Three large terraces are located within the northwesterly portion of the site as shown on the Geotechnical Map. The presence of terrace deposits in these areas is questionable. Preliminary studies performed by the County of Los Angeles (Reference 6) indicate that terrace deposits are present and are very similar in appearance to the underlying Saugus Formation bedrock. Saul (Reference 5) has mapped the terraces as landslide debris, underlain by Saugus Formation and with no terrace deposits present. Conversely, no evidence of large-scale landsliding was observed in the area of the mapped terraces. Engineering properties of the terrace deposits is anticipated to be similar to those of the Saugus Formation bedrock. An exposure of terrace deposits within the study area was not observed nor are there any signs of topographic evidence suggesting their presence. This discrepancy can best be evaluated by subsequent subsurface exploration within the area.

Recent Landslide Debris

Twenty-four recent landslides were observed on the site and are delineated on the accompanying Geotechnical Map. These slides are mapped on the basis of aerial photographic interpretation and field observations. Landsliding has occurred primarily within the Saugus Formation and are of the block-glide, rotational, and slump-type failures. The onsite landslides are numbered for correlation between the text and Geotechnical Map and are summarized below. Our conclusions are based upon the current development plan.

Landslide Number	Direction of Movement	Area (Acres)	Anticipated Type of Failure	Conclusions/ Recommendations
1	Northwesterly	1.4±	Rotational	Anticipated to be compressible. May require removal/ recompaction.
2	Southwesterly	5.5±	Block Glide	Anticipated to be compressible, locally unstable, and may require removal/ recompaction and up-slope buttress.
3	Westerly	0.5±	Block Glide	Upslope from proposed development. Down-slope debris barrier should be anticipated.
4	Northwesterly	2.9±	Rotational	Located away from proposed development. No mitigation anticipated.
5	Northwesterly	0.7±	Rotational	Located away from proposed development. No mitigation anticipated.
6	Southerly	5.6±	Rotational	Upslope from proposed development. Down-slope debris barrier should be anticipated.
7	Westerly	0.9±	Rotational	Upslope from proposed development. Down-slope debris barrier should be anticipated.

Landslide Number	Direction of Movement	Area (Acres)	Anticipated Type of Failure	Conclusion
8	Southerly	0.4±	Slump	Upslope from proposed development. Down-slope debris barrier should be anticipated.
9	Southerly	1.7±	Slump	Upslope from proposed development. Down-slope debris barrier should be anticipated
10	Northwesterly	0.3±	Slump	Anticipated to be compressible. May require removal/recompaction.
11	Southerly	1.6±	Block Glide	Anticipated to be compressible. May require removal/recompaction.
12	Northwesterly	2.1±	Rotational	Located away from proposed development. No mitigation anticipated.
13	Northwesterly	13.8±	Rotational	Located away from proposed development. No mitigation anticipated.
14	Southwest	4.4±	Block Glide	Upslope from proposed development. Down-slope debris barrier should be anticipated
15	Southerly	3.4±	Block Glide	Anticipated to be unstable. May require buttress and/or redesign.
16	Southerly	0.3±	Rotational	Anticipated to be compressible. May require removal/recompaction.
17	Northerly	1.3±	Rotational	Anticipated to be compressible. May require removal/recompaction.

Landslide Number	Direction of Movement	Area (Acres)	Anticipated Type of Failure	Conclusion
18	Westerly	3.7±	Block Glide	Upslope from proposed development. Down-slope debris barrier should be anticipated
19	Southwesterly	0.9±	Block Glide	Anticipated to be compressible and unstable. May require removal/recompaction and buttress and/or redesign.
20	Southwesterly	4.0±	Block Glide	Anticipated to be unstable. May require buttress and/or redesign.
21	Westerly	1.7±	Block Glide	Anticipated to be compressible and unstable. May require removal/recompaction and buttress and/or redesign.
22	Westerly	6.7±	Rotational	Anticipated to be unstable. May require buttress and/or redesign.
23	Northwesterly	6.2±	Rotational	Anticipated to be unstable. May require buttress and/or redesign.
24	Northwesterly	1.5±	Rotational	Upslope from proposed development. Down-slope debris barrier should be anticipated

### Alluvium (Qa1)

The alluvium onsite is primarily located within the lower portion of Plum Canyon and within the broader southerly draining tributary drainages. These materials generally consist of sand, silty sands, and gravelly sands which are brown to red-brown, moderately dense, porous, and nonstratified. The upper 20 to 30± feet of this material is anticipated to be compressible. Total thickness of the alluvium in the central portion of Plum Canyon is anticipated to be greater than 50± feet.

### Slope Wash and Colluvium

The areas shown as colluvium and slope wash on the Geotechnical Map have been combined for mapping and engineering purposes and are defined as soil transported by sheetflow-type runoff which have accumulated along the base of the slopes to a thickness greater than 4± feet. These soils consist of brown silty fine to coarse-grained sands with pebbles and cobbles throughout, and are typically dry, loose, porous, and contain abundant roots.

### Artificial Fill (af, afc, afm)

The artificial fill delineated on the Geotechnical Map consists of backfill over an underground telephone cable (Map Symbol: af), concrete debris (Map Symbol: afc); and bones, trash, and animal debris (Map Symbol: afm). The fill over the telephone cable is of an unknown thickness and is anticipated to have been derived from the underlying Saugus Formation and alluvium. This fill is believed to have been placed without benefit of engineering controls.

The concrete debris contains remnants of foundations for farm buildings. This material is surficial and not anticipated to be greater than 2± feet thick. Oversize concrete can be disposed of in deeper portions of fills.

The bones, trash, and animal debris is anticipated to be on the order of 10 to 20± feet thick. This material is unsuitable for reuse in fill and should be disposed of offsite. More accurate quantities of the debris may be further evaluated by subsurface exploration during future geotechnical studies.

SUMMARY OF CUT SLOPES				
Slope Number	Slope Direction	Height/Gradient	Anticipated Geologic Conditions	Conclusion/Recommendation
1	Northwesterly	80'±/2.5:1	Underlain by Saugus Formation. Undulatory bedding dips approximately 5 to 10°± into slope.	Anticipated to be stable as designed.
2	Northwesterly	45'±/2:1	Underlain by Saugus Formation. Undulatory bedding dips approximately 5 to 10°± into slope.	Anticipated to be stable as designed.
3	Southwesterly	109'±/2.5:1	Underlain by Saugus Formation overlying Castaic Formation. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Potentially unstable as designed. May require stabilization and/or redesign.
4	Southwesterly	70'±/3:1	Underlain by Saugus Formation. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Potentially unstable as designed. May require stabilization and/or redesign.
5	Southerly	80'±/2:1	Underlain by Saugus Formation. Undulatory bedding dips approximately 10 to 20°± out of slope.	Potentially unstable as designed. May require stabilization and/or redesign.
6	Southwesterly	30'±/3:1	Underlain by Saugus Formation. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Potentially unstable as designed. May require stabilization.
7	Southerly	90'±/2:1	Underlain by Qols-2. Undulatory bedding within and beneath Qols-2 is anticipated to dip out-of-slope.	See Qols-2 mitigation measures.

Slope Number	Slope Direction	Height/ Gradient	Anticipated Geologic Conditions	Conclusion/ Recommendation
8	Southwesterly	76'±/2:1	Underlain by Qols-2. Undulatory bedding within and beneath Qols-2 is anticipated to dip out-of-slope.	See Qols-2 mitigation measures.
9	Southwesterly	45'±/2:1	Underlain by Saugus Formation. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Potentially unstable as designed. May require stabilization.
10	Northerly	71'±/2:1	Underlain by Qols-3. Undulatory bedding beneath Qols-3 is anticipated to dip into slope.	Anticipated to be stable after Qols-3 is mitigated
11	Southerly	122'±/2:1	Underlain by Saugus Formation. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Potentially unstable as designed. May require stabilization and/or redesign.
12	Southwesterly	84'±/2:1	Underlain by Saugus Formation. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Potentially unstable as designed. May require stabilization and/or redesign.
13	Southerly	110'±/2.5:1	Underlain by Saugus Formation overlying Castaic Formation. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Anticipated to be grossly stable and potentially superficially unstable
14	Southwesterly	165'±/2.5:1	Underlain by Saugus Formation overlying Castaic Formation. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Potentially unstable as designed. May require stabilization and/or redesign.
15	Southwesterly	80'±/2.5:1	Anticipated to be underlain by Mint Canyon Formation. Undulatory bedding dips steeply out-of-slope.	Anticipated to be grossly stable and potentially superficially unstable.

Slope Number	Slope Direction	Height/Gradient	Anticipated Geologic Conditions	Conclusion/Recommendation
16	Southwesterly	70'±/2:1	Underlain by Saugus Formation overlying Castaic Formation. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Potentially unstable as designed. May require stabilization.
17	Southwesterly	70'±/2:1	Underlain by bedrock of the Saugus, Castaic, and Mint Canyon Formations. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Potentially unstable as designed. May require stabilization and/or redesign.
18	Southwesterly	95'±/2.5:1	Underlain by Saugus Formation. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Potentially unstable as designed. May require stabilization.
19	Southwesterly	205'±/2.5:1	Anticipated to be underlain by Saugus Formation overlying Mint Canyon Formation. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Potentially unstable as designed. May require stabilization and/or redesign.
20	Southerly	175'±/2.5:1	Underlain by Saugus Formation overlying Mint Canyon Formation. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Potentially unstable as designed. May require stabilization and/or redesign.
21	Westerly	30'±/2:1	Underlain by Castaic Formation. Undulatory bedding dips approximately 20°± out-of-slope.	Potentially unstable as designed. May require stabilization.
22	Southerly	160'±/2.5:1	Underlain by Mint Canyon Formation. Undulatory bedding dips approximately 15°± out-of-slope.	Potentially unstable as designed. May require stabilization and/or redesign.

Slope Number	Slope Direction	Height/ Gradient	Anticipated Geologic Conditions	Conclusion/ Recommendation
23	Northwesterly	45'±/2:1	Underlain by Q1s-22 and Q1s-23.	See Q1s-22, 23 mitigation measures.
24	Northwesterly	90'±/2:1	Underlain by Saugus Formation. Undulatory bedding dips approximately neutral into proposed slopes.	Anticipated to be stable as designed

SUMMARY OF NATURAL SLOPES				
Slope Number	Slope Direction	Height/ Gradient	Anticipated Geologic Conditions	Conclusion/ Recommendation
1	Northwesterly	200'±/2.5:1	Underlain by Saugus Formation. Undulatory bedding dips approximately neutral to into slope.	Anticipated to be grossly stable, but surficially unstable.
2	Westerly	100'±/2:1	Underlain by Saugus Formation. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Potentially unstable. May require stabilization.
3	Southeasterly	100'±/2.5:1	Underlain by Saugus Formation overlying Castaic Formation. mudstone of the Saugus Formation Undulatory bedding dips approximately neutral to 15°± out-of-slope.	Potentially unstable. May require stabilization.
4	Northwesterly	100'±/2:1	Underlain by Saugus Formation. Undulatory bedding dips approximately 10 to 20°± out-of-slope.	Anticipated to be grossly stable, but surficially unstable.
5	Westerly	125'±/2:1	Underlain by Castaic Formation underlain by Mint Canyon Formation. Undulatory bedding dips approximately 15°± out-of-slope.	Potentially unstable. May require stabilization.
6	Southwesterly	50'±/2:1	Underlain by Saugus Formation overlying Mint Canyon Formation. Undulatory bedding dips approximately 15°± out-of-slope.	Potentially unstable. May require stabilization.

Slope Number	Slope Direction	Height/Gradient	Anticipated Geologic Conditions	Conclusion/Recommendation
7	Southwesterly	125'±/2:1	Underlain by Saugus Formation overlying Mint Canyon Formation. Undulatory bedding dips approximately 15°± out of slope.	Potentially unstable. May require stabilization.
8	Southeasterly	150'±/1.7:1	Underlain by Saugus Formation overlying Mint Canyon Formation. Undulatory bedding dips approximately neutral to into slope.	Anticipated to be grossly stable, but surficially unstable.
9	Southerly	200'±/2:1	Underlain by Mint Canyon Formation. Undulatory bedding dips approximately 15°± out-of-slope.	Potentially unstable. May require stabilization.
10	Southeasterly	200'±/2:1	Underlain by Mint Canyon Formation. Undulatory bedding dips approximately neutral to 10°± out-of-slope.	Anticipated to be grossly stable, but surficially unstable.
11	Northeasterly	250'±/2:1	Underlain by Mint Canyon Formation. Undulatory bedding dips approximately neutral to into slope.	Anticipated to be grossly stable, but surficially unstable.

## APPENDIX 3

# BIOTA STUDY

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SEP 1986

LAND SERVICE  
CORPORATION

Plum Canyon Project  
Tentative Tract 33987  
Ted L. Hanes  
August 26, 1986

## Biota

Biologists surveyed Tentative Tract 33987 August 1986. Vegetation types were determined and mapped, flora and fauna lists were prepared with particular attention to the possible presence of rare and endangered species.

## Setting

The proposed development site is approximately 900 acres of hills, valleys, and mountains. A broad floodplain valley runs from east to west through the southern portion of the property. The proposed extension of Plum Canyon and Whites Canyon Roads would pass through this valley. Residential developments occur to the west of the site. High mountains lie to the south of the property off-site. Other mountains form the northern boundary of the property. Numerous valleys and lesser drainages empty into Plum Canyon from these mountains.

The hillsides are covered with grassland, coastal sage scrub, and chaparral vegetation. The valley bottoms support various alluvial scrub plant species. Most of the site is treeless. However, trees occur along the southern portion and were either planted or are volunteer specimens. An old abandoned olive orchard is the most noteworthy.

Electric transmission lines pass across the northern and western sectors of the property. One of the smaller canyons in the eastern sector of the site has been used as a sanitary landfill in the past. Numerous dirt roads dissect the property. The major road is used by power company vehicles to maintain the electric transmission lines and towers.

There is no permanent water on the site. All stream courses only carry off water during rainstorms. There are steep cliffs associated with the higher mountains and deep canyons both on and off site. Fire scars indicate previous fires on the site. A controlled burn by the Los Angeles County Fire Department was carried out this year along the southern

boundary of the property to reduce fire danger.

### Flora

All plant species observed on the site are listed in Appendix A. Most of the site is covered by grassland vegetation composed of annual weeds and grasses such as wild oats, black mustard, foxtail, tarweed, horseweed, doveweed, cheeseweed, thistle, wheat grass, and stephanomeria. These species indicate past disturbances such as livestock grazing and fire.

Coastal sage scrub vegetation occurs in irregular patches on steep slopes and ridges. This vegetation type is composed of low-statured perennial shrubs and is dominated by California sagebrush, saltbush, chaparral aster, tree tobacco, California encelia, California buckwheat, goldenbush, deerweed, sages, elderberry, and yucca.

Isolated stands of chaparral occur on deeper soils and protected slopes. This vegetation is composed of large, woody shrubs and is dominated by chamise, mountain mahogany, buck brush, yerba santa, toyon, mallow, prickly pear, and scrub oak.

Alluvial scrub occupies the bottoms of major canyons. This type of vegetation is composed of scattered medium to large shrubs such as scalebroom, valley cholla, big basin sagebrush, holly-leaved cherry, redberry, creek senecio, and squaw bush.

Some trees occur on the site, but in most cases were planted by man. In the southwest corner of the property there is a grove of Texas umbrella and tree of heaven trees. A few eucalyptus trees are found in scattered locations in the southern sector. Numerous olive, pepper and tamarisk trees have become established in the broad valley that bisects the property. An old abandoned olive orchard persists in the south-central sector.

None of the plant species observed or expected to occur on the site are classified as rare or endangered.

### Fauna

The lack of water and the limited types of habitats on the site restricts

the number of kinds and population sizes of animal species. Population sizes and animal activity sink to their lowest ebb during August when the field survey was conducted. During spring months the number and activity of various animal species would be much greater. Therefore, Appendix B lists both animals observed as well as those expected to occur on the site. Also, many reptiles and mammals are nocturnal and would not be observable during the daylight hours.

Several species of animals listed in Appendix B are classed as rare, endangered, or depleted. However, none of these was observed on the site. Coast Horned Lizard and California Legless Lizard occur in sandy wash areas such as those common to the site. The property is within the range of the extremely rare and endangered California Condor. This large bird uses open rangeland for scavenging dead carcasses. The cliffs on the site are suitable for nesting of the Golden Eagle and Peregrin Falcon, but no nests were observed nor were any individuals sighted.

#### Impacts

The proposed development would result in the grading of approximately 63% of the site. The remaining 37% would be undeveloped open space. Generally, the undeveloped portions would include the steep cliffs and inaccessible portions of the property. The extension of Plum and Whites Canyon Roads and the construction of a flood control channel would eliminate the alluvial scrub habitat in the southern valley. Both plant and animal populations would be reduced by the grading operations. Remaining populations would tend to be restricted to isolated portions of the site. The presence of people would have further direct impact on the remaining plant and animal populations. Domestic cats and dogs would increase the pressure on small native animals. Conversely, large native animals would have a negative impact on small domestic pets. The potential for fire in the undeveloped portions of the site and adjacent properties would pose a threat to residential structures and may necessitate periodic controlled burning where dense vegetation occurs.

#### Mitigations

The retention of 37% of the site in its natural state as open space would reduce the impact of the proposed development. Plants and animals

would be able to exist in these refuges not easily accessible by people.

Landscaping materials should include drought tolerant species wherever possible in order to conserve water and energy in the proposed development. The use of California native plants would further encourage the return of some native birds and other wildlife.

Appendix A - Plant Species Found on the Project Site

<u>Common Name</u>	<u>Scientific Name</u>	<u>Occurrence*</u>
Chamise	<u>Adenostoma fasciculatum</u>	C
Wheat Grass	<u>Agropyron</u> sp.	C
Tree of Heaven	<u>Ailanthus glandulosa</u>	I
Western Ragweed	<u>Ambrosia psilostachya</u> var. <u>californica</u>	C
Fiddleneck	<u>Amsinckia</u> sp.	C
California Sagebrush	<u>Artemisia californica</u>	D
Great Basin Sagebrush	<u>Artemisia tridentata</u>	C
Four-winged Saltbush	<u>Atriplex canescens</u> ssp. <u>canescens</u>	C
Slender Wild Oats	<u>Avena barbata</u>	C
Wild Oats	<u>Avena fatua</u>	C
Mule Fat	<u>Baccharis glutinosa</u>	I
Golden Star	<u>Bloomeria crocea</u>	I
Black Mustard	<u>Brassica nigra</u>	C
Foxtail Chess	<u>Bromus rubens</u>	D
Buck Brush	<u>Ceanothus cuneatus</u>	I
Thistle	<u>Cercis</u> sp.	I
Mt. Mahogany	<u>Cercocarpus betuloides</u>	C
Rabbit-Brush	<u>Chrysothamnus nauseosus</u>	I
Horseweed	<u>Conyza canescens</u>	I
Chaparral Aster	<u>Corethrogyne filaginifolia</u> Var. <u>bernardina</u>	C
Calabazilla	<u>Cucurbita foetidissima</u>	I
Perennial Ryegrass	<u>Elymus condensatus</u>	I
California Encelia	<u>Encelia californica</u>	C
Dove Weed	<u>Eremocarpus setigerus</u>	C
Thickleaf Yerba Santa	<u>Eriodictyon crassifolium</u>	C
Annual Buckwheat	<u>Eriogonum davidsonii</u>	I
California Buckwheat	<u>Eriogonum fasciculatum</u>	D
Buckwheat	<u>Eriogonum gracile</u>	I
Rattlesnake Weed	<u>Euphorbia albomarginata</u>	C
Spath-leaved Spurge	<u>Euphorbia spathulata</u>	I
Blue-Gum	<u>Eucalyptus globulus</u>	I

\* D = dominant      C = common      I = infrequent

<u>Common Name</u>	<u>Scientific Name</u>	<u>Occurrence</u>
Bedstraw	<u>Galium</u> sp.	I
Cudweed	<u>Gnaphallium</u> sp.	I
Golden Bush	<u>Haplopappus ericoides</u>	I
Tarweed	<u>Hemizonia kellogii</u>	C
Toyon	<u>Heteromeles arbutifolia</u>	C
Telegraphweed	<u>Heterotheca grandiflora</u>	I
Black Walnut	<u>Juglans californica</u>	I
Prickly Lettuce	<u>Lactuca serriola</u>	I
Scale-Broom	<u>Lepidospartum squamatum</u>	D
Deerweed	<u>Lotus scoparius</u>	C
Lotus	<u>Lotus subpinnatus</u>	C
Lupine	<u>Lupinus</u> sp.	I
Chaparral Mallow	<u>Malacothammus fasciculatus</u>	I
Cheeseweed	<u>Malva parviflora</u>	C
Wild Cucumber	<u>Marah macrocarpus</u>	I
Horehound	<u>Marrubium vulgare</u>	C
Texas Umbrella Tree	<u>Melia azedarch</u>	C
Oleander	<u>Nerium oleander</u>	I
Tree Tobacco	<u>Nicotiana glauca</u>	C
Olive	<u>Olea europa</u>	C
Beavertail Cactus	<u>Opuntia basilaris</u>	I
Vasey's Prickly-Pear	<u>Opuntia littoralis</u> Var. <u>vaseyi</u>	I
Valley Cholla	<u>Opuntia parryi</u>	I
Almond	<u>Prunus</u> sp.	I
Holly Leaf Cherry	<u>Prunus ilicifolia</u>	D
Scrub Oak	<u>Quercus dumosa</u>	C
Desert Scrub Oak	<u>Quercus turbinella</u> ssp. <u>californica</u>	I
California Redberry	<u>Rhamnus crocea</u>	I
Squawbush	<u>Rhus trilobata</u>	I
Black Locust	<u>Robinia pseudoacacia</u>	I
Russian Thistle	<u>Salsola iberica</u>	I
White Sage	<u>Salvia apiana</u>	C
Blue Sage	<u>Salvia leucophylla</u>	C
Black Sage	<u>Salvia mellifera</u>	I
Blue Elderberry	<u>Sambucus mexicana</u>	C

<u>Common Name</u>	<u>Scientific Name</u>	<u>Occurrence</u>
Peppertree	<u>Schinus molle</u>	I
Creek Senecio	<u>Senecio douglasii</u>	I
Stephanomeria	<u>Stephanomeria exigua</u>	C
Stephanomeria	<u>Stephanomeria pauciflora</u>	I
Tamarisk	<u>Tamarix aphylla</u>	I
Cottonthorn	<u>Tetradymia comosa</u>	I
Vinegar Weed	<u>Trichostema lanceolatum</u>	I
Chaparral Yucca	<u>Yucca whipplei</u>	C
California Fuchsia	<u>Zauschneria californica</u>	I

Appendix B - Animal Species Observed or Expected to Occur on the Project Site

<u>Common Name</u>	<u>Scientific Name</u>	<u>Occurrence*</u>
<u>Amphibians</u>		
Western Toad	<u>Bufo boreas</u>	N
<u>Reptiles</u>		
Western Fence Lizard	<u>Sceloporus occidentalis</u>	F
Side-blotched Lizard	<u>Uta stansburiana</u>	F
Coast Horned Lizard	<u>Phrynosoma coronatum</u>	Nd
Western Whiptail	<u>Cnemidophorus tigris</u>	O
Southern Alligator Lizard	<u>Gerrhonotus multicarinatus</u>	N
California Legless Lizard	<u>Anniella pulchra</u>	Nd
Racer	<u>Coluber constrictor</u>	N
Striped Whipsnake	<u>Masticophis lateralis</u>	N
Red Racer	<u>Masticophis flagellum</u>	N
Gopher Snake	<u>Pituophis melanoleucus</u>	N
Common Kingsnake	<u>Lampropeltis getulus</u>	N
Western Rattlesnake	<u>Crotalus viridis</u>	N
<u>Birds</u>		
Turkey Vulture	<u>Cathartes dura</u>	F
California Condor	<u>Gymnogyps californianus</u>	N
Black-shouldered Kite	<u>Elanus caeruleus</u>	N
Northern Harrier	<u>Circus cyaneus</u>	N
Red-tailed Hawk	<u>Buteo jamaicensis</u>	O
Golden Eagle	<u>Aquila chrysaetos</u>	N
Peregrine Falcon	<u>Falco peregrinus</u>	N
American Kestrel	<u>Falco sparverius</u>	N
California Quail	<u>Callipepla californica</u>	A
Mourning Dove	<u>Zenaida macroura</u>	A
Greater Roadrunner	<u>Geococcyx californianus</u>	N
Great Horned Owl	<u>Bubo virginianus</u>	N
Lesser Nighthawk	<u>Chordeiles acutipennis</u>	N
White-throated Swift	<u>Aeronautes saxatalis</u>	N
Anna's Hummingbird	<u>Calypte anna</u>	F

\* N = not observed      A = abundant      F = few      O = only one observed  
d = depleted in Los Angeles County

<u>Common Name</u>	<u>Scientific Name</u>	<u>Occurrence</u>
<u>Birds continued</u>		
Common Flicker	<u>Colaptes auratus</u>	O
Ash-throated Flycatcher	<u>Myiarchus cinerascens</u>	N
Say's Phoebe	<u>Sayornis saya</u>	N
Horned Lark	<u>Eremophila alpestris</u>	N
Scrub Jay	<u>Aphelocoma coerulescens</u>	F
Common Raven	<u>Corvus corax</u>	N
American Crow	<u>Corvus brachyrhynchos</u>	N
Wrentit	<u>Chamaea fasciata</u>	F
Northern Mockingbird	<u>Mimus polyglottos</u>	O
California Thrasher	<u>Toxostoma redivivum</u>	O
Western Bluebird	<u>Sialia mexicana</u>	N
European Starling	<u>Sturnus vulgaris</u>	N
Yellow-rumped Warbler	<u>Dendroica coronata</u>	N
Wilson's Warbler	<u>Wilsonia pusilla</u>	O
Western Meadowlark	<u>Sturnella neglecta</u>	N
House Finch	<u>Carpodacus mexicanus</u>	N
Brown Towhee	<u>Pipilo fuscus</u>	A
Savannah Sparrow	<u>Passerculus sandwichensis</u>	O
Sage Sparrow	<u>Amphispiza belli</u>	N
<u>Mammals</u>		
Broad-handed Mole	<u>Scapanus latimanus</u>	N
Pallid Bat	<u>Antrozous pallidus</u>	N
Black-tailed Hare	<u>Lepus californicus</u>	O
Audubon Cottontail	<u>Sylvilagus auduboni</u>	A
California Ground Squirrel	<u>Spermophilus beecheyi</u>	A
Botta Pocket Gopher	<u>Thomomys bottae</u>	F
California Pocket Mouse	<u>Perognathus californicus</u>	N
Harvest Mouse	<u>Reithrodontomys megalotis</u>	N
Coyote	<u>Canis latrans</u>	A
Gray Fox	<u>Urocyon cinereoargenteus</u>	N
Badger	<u>Taxidea taxus</u>	F
Spotted Skunk	<u>Spilogale putorius</u>	N
Mule Deer	<u>Odocoileus hemionus</u> ssp. <u>fuliginatus</u>	F

# APPENDIX 4

**TRAFFIC IMPACT ANALYSIS**

**FOR**

**TENTATIVE TRACT NO. 33987**

**RECEIVED**

**FEB 24 1987**

**ENGINEERING SERVICE  
CORPORATION**

**Prepared For:**

**SHAPELL INDUSTRIES**

**Beverly Hills, California**

**Prepared By:**

**BARTON-ASCHMAN ASSOCIATES, INC.**

**February, 1987**

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1.

#### INTRODUCTION

Barton-Aschman Associates, Inc., was retained to conduct the traffic impact analysis for the proposed residential development on Tentative Tract No. 33987. The project site is located on Plum Canyon Road east of Bouquet Canyon Road in the Bouquet Canyon area of Los Angeles County. Figure 1 illustrates the location of the project site.

Current plans call for construction of 500 single-family homes, 1,100 townhouses, 1,650 condominiums, and 1,750 apartments. For the purposes of this study, half of these units were assumed to be built by 1991 with the remainder constructed as conditions permit.

#### STUDY PROCEDURE

The following analyses were performed to determine the site traffic impacts associated with the project:

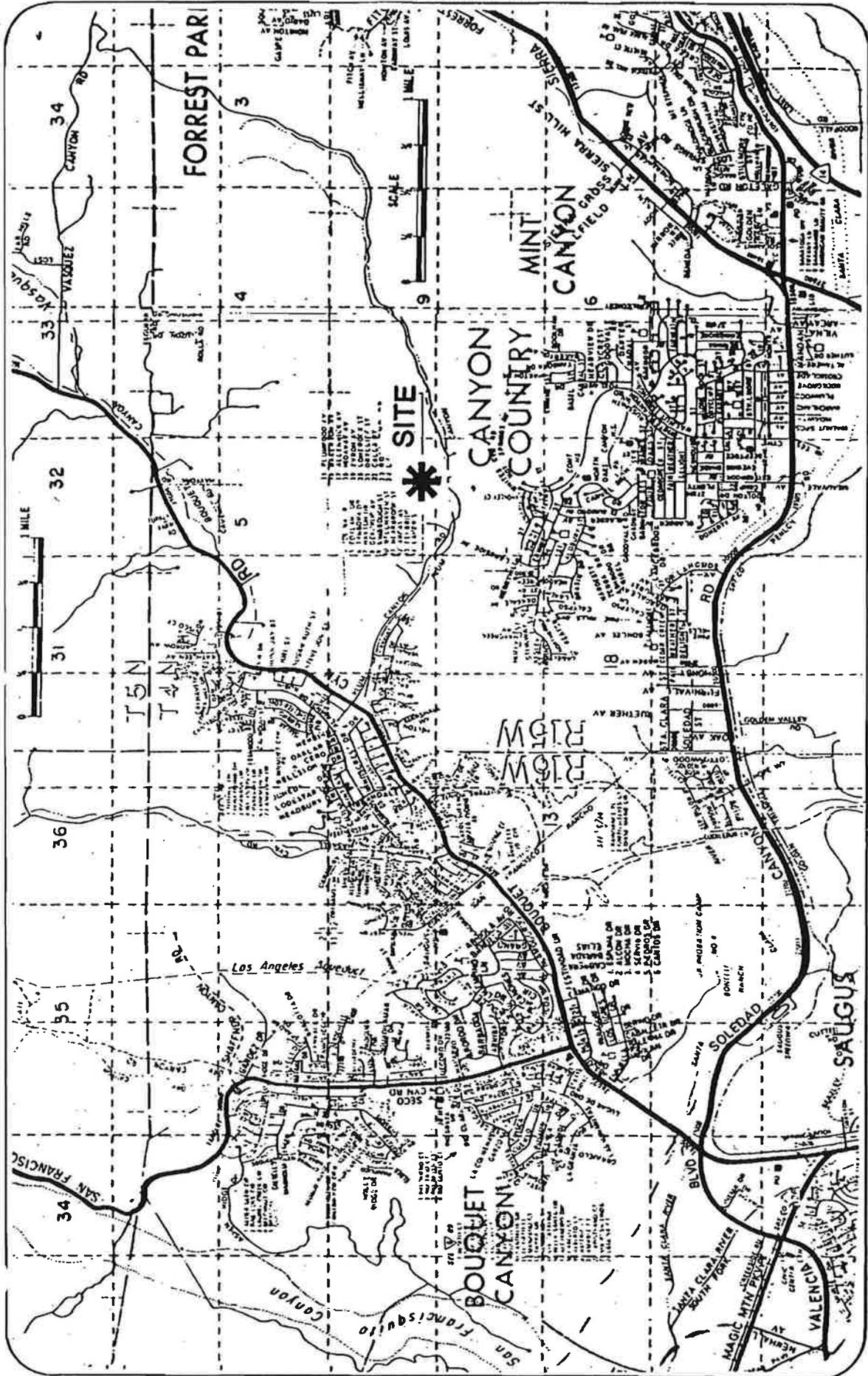


FIGURE 1

**SITE LOCATION**

BARTON-ASCHMAN ASSOCIATES, INC.

1. *Data Collection.* A thorough field reconnaissance of the site and the surrounding roadway network was conducted. Traffic count data, projected roadway improvement plans, and related project information were obtained from Los Angeles County personnel. Barton-Aschman conducted peak-hour turning movement counts at intersections where the County did not have sufficient data.
2. *Directional Distribution.* The direction of vehicle trips to and from the site and other related projects was derived based upon the results of an origin-destination survey conducted by Barton-Aschman Associates, Inc. Previously accepted traffic impact reports were used to refine this analysis.
3. *Traffic Generation and Assignment.* The traffic that would be generated by the proposed development as well as traffic generated by related projects in the Bouquet Canyon area was calculated and assigned to the area roadway network in the vicinity of the site.
4. *Capacity Analysis.* Capacity calculations were performed for the key intersections in the Bouquet Canyon area to evaluate their ability to accommodate future traffic volumes.
5. *Recommended Roadway Improvements.* Based upon the analyses performed in the preceding phases, improvements to the roadway system were recommended as necessary.

The results of these analyses are described in the following chapters.

2.

### EXISTING CONDITIONS

This chapter describes the existing roadway and traffic conditions near the project site.

### EXISTING ROADWAY SYSTEM

The key roadways servicing the site area are as follows:

Bouquet Canyon Road. Running in a southwest-to-northeast direction, Bouquet Canyon Road has a cross section that varies between six lanes just north of Soledad Canyon Road to two lanes north of Plum Canyon Road. This major arterial has signals at intersections with Soledad Canyon, Newhall Ranch, and Seco Canyon roads. South of Plum Canyon Road, Bouquet Canyon Road carries approximately 15,000 vehicles on an average weekday while farther south (near Soledad Canyon Road) it carries over 44,000 vehicles on an average weekday.

Seco Canyon Road. Seco Canyon Road is a north-south four-lane collector that ends at its intersection with Bouquet Canyon Road. It carries approximately 17,000 vehicles during an average weekday.

Soledad Canyon Road. Soledad Canyon Road is a major east-west arterial serving the Bouquet Canyon area. This facility has a signal at Whites Canyon Road in addition to the one at Bouquet Canyon Road and carries between 29-32,000 vehicles on the average weekday. The cross section of Soledad Canyon Road varies from four lanes near Bouquet Canyon Road to six lanes near Whites Canyon Road.

Whites Canyon Road. Whites Canyon Road runs in a north-south direction and presently has a four-lane cross section. On an average day, about 22,000 vehicles use this roadway.

Valencia Boulevard. Valencia Boulevard is a major east-west collector street serving the project area and usually carries between 33,000 and 42,000 vehicles per day depending on location. This four-lane divided facility begins at I-5 on the western end and ends at Bouquet Canyon Road at the eastern end where it turns into Soledad Canyon Road.

#### **EXISTING TRAFFIC VOLUMES**

Based on discussions with the County of Los Angeles, seven existing intersections were identified as receiving potentially significant traffic impacts due to the proposed project. These intersections are:

- o Bouquet Canyon Road/Plum Canyon Road;
- o Bouquet Canyon Road/Seco Canyon Road;
- o Bouquet Canyon Road/Newhall Ranch Road;

- o Bouquet Canyon Road/Soledad Canyon Road;
- o Valencia Boulevard/Magic Mountain Parkway;
- o Soledad Canyon Road/Whites Canyon Road; and
- o Soledad Canyon Road/Sierra Highway.

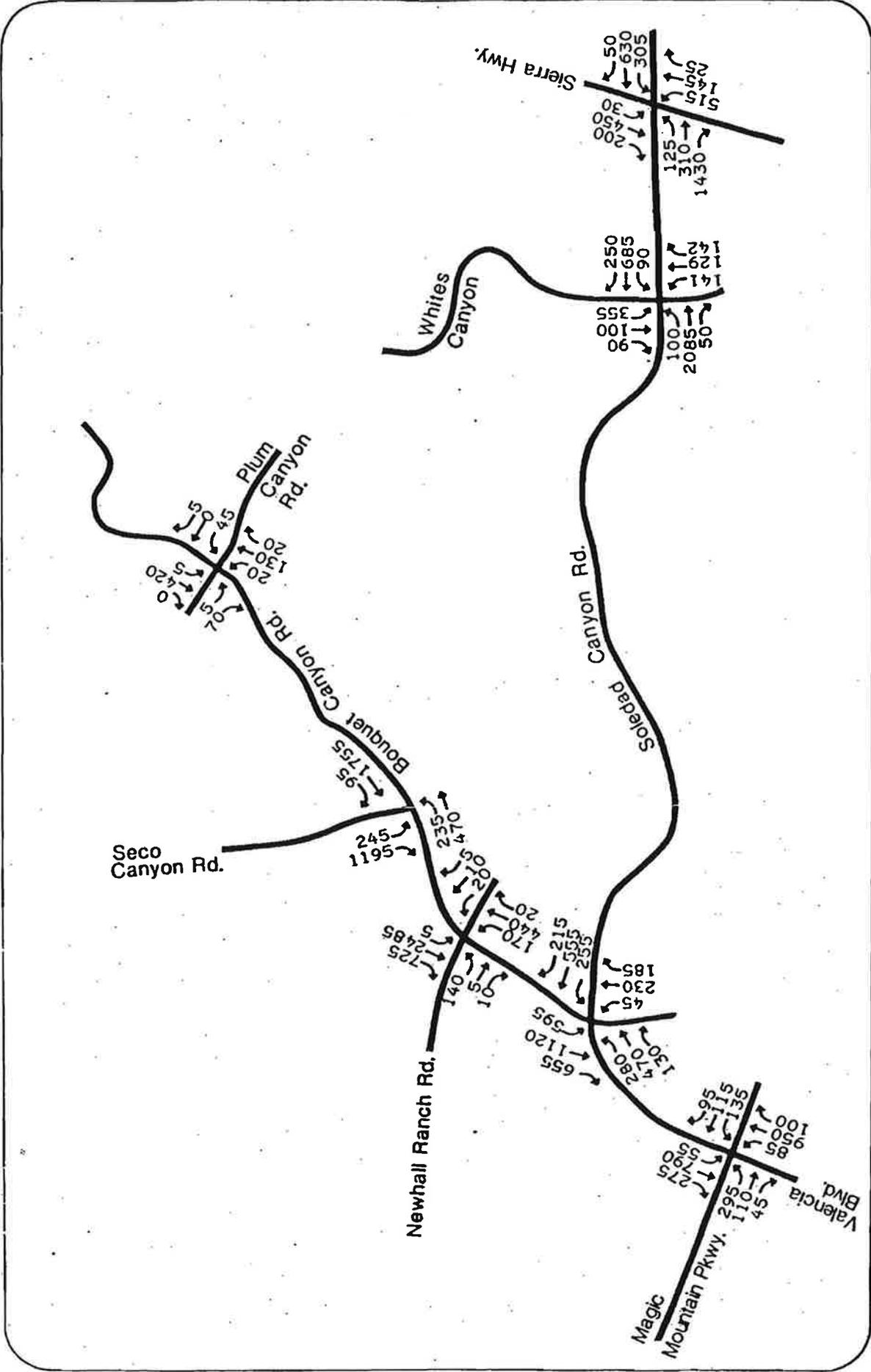
An eighth intersection, Sierra Highway at Via Princessa, may also be impacted by the project, but because of existing conditions (configuration and volumes did not warrant a traffic count) and uncertainty regarding the future access to the Antelope Freeway, this intersection was not analyzed.

Traffic count data was collected from peak-hour counts done by Barton-Aschman as well as from recent County traffic counts. In order to determine any possible traffic impacts caused by the project, both morning and evening peak-hour counts were performed. Figures 2 and 3 illustrate the existing morning and evening peak-hour volumes, respectively.

#### **EVALUATION OF EXISTING CONDITIONS**

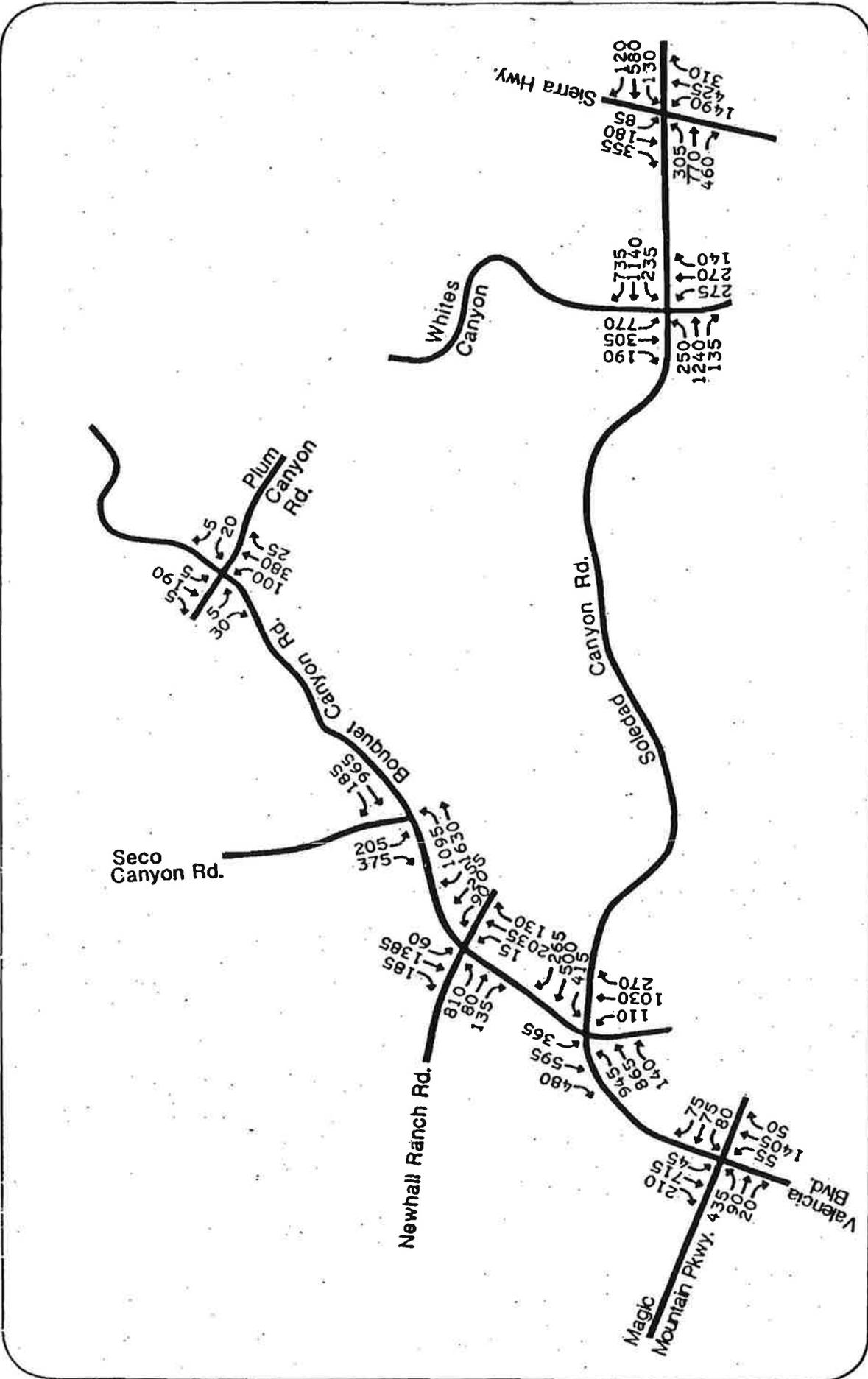
A series of intersection capacity calculations were performed in order to evaluate the operational efficiency of the key intersections in the vicinity of the site. These calculations compare the traffic volumes at a particular intersection to the available capacity at the intersection and yield an overall volume/capacity (V/C) ratio. Based on this calculated ratio, the operation of an intersection can be described in terms of "level of service."

As shown in Table 1, levels of service range from A to F (as defined in the Highway Capacity Manual, Highway Research Board, Special Report 87, 1965). Level of Service A indicates free-flowing conditions while Level of Service F represents essentially total breakdown with stop-and-go conditions. In an



**EXISTING A.M. PEAK HOUR TRAFFIC VOLUMES**

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**EXISTING P.M. PEAK HOUR TRAFFIC VOLUMES**

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**TABLE 1**  
**INTERSECTION LEVEL OF SERVICE DEFINITIONS<sup>(1)</sup>**

<u>Level of service</u>	<u>Interpretation</u>	<u>Volume/Capacity<sup>(2)</sup> Ratio</u>
A,B	Uncongested operations; all vehicles clear in a single signal cycle.	0.00-0.70
C	Light congestion; occasional backups on critical approaches.	0.71-0.80
D	Congestion on critical approaches, but intersection functional. Vehicles required to wait through more than one cycle during short peaks. No long-standing lines formed.	0.81-0.90
E	Severe congestion with some long-standing lines on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements.	0.91-1.00
F	Total breakdown with stop-and-go operation.	1.01+

**NOTES:**

(1) Source: Highway Capacity Manual, 1985.

(2) Volume/Level of Service E Capacity.

area such as Canyon Country, a V/C ratio of 0.85 is typically considered the minimum acceptable level of service during the weekday peak hours.

Table 2 shows the existing levels of service at the aforementioned key intersections.

As shown in Table 2, under existing conditions, only the intersections of Bouquet Canyon Road/Plum Canyon Road, Valencia Boulevard/Magic Mountain Parkway, and Soledad Canyon Road/Whites Canyon Road are presently operating efficiently for both the morning and evening peak hours. The Bouquet Canyon/Soledad Canyon and Soledad Canyon/Sierra Highway intersections operate acceptably during the morning peak hour but deteriorate to unacceptable levels during the evening peak hour. Presently, the Bouquet Canyon/Seco Canyon and Bouquet Canyon/Newhall Ranch intersections operate under unacceptable levels for both peak periods. These figures substantiate the perception that traffic congestion in Bouquet Canyon is already a problem.

TABLE 2

EXISTING INTERSECTION OPERATING CONDITIONS

<u>Intersection</u>	<u>AM</u>		<u>PM</u>	
	<u>V/C</u>	<u>LoS</u>	<u>V/C</u>	<u>LoS</u>
Bouquet Canyon/Plum Canyon	0.24	A	0.35	A
Bouquet Canyon/Seco Canyon	1.02	F	0.90	D
Bouquet Canyon/Newhall Ranch	0.92	E	0.87	D
Bouquet Canyon/Soledad Canyon	0.81	D	1.01	F
Valencia/Magic Mountain	0.57	A	0.73	C
Soledad Canyon/Whites Canyon	0.74	C	0.84	D
Soledad Canyon/Sierra Highway	0.71	C	1.05	F

3.

ANALYSIS OF FUTURE CONDITIONS - 1991

This chapter examines the impacts resulting from the development of the first phase of Tentative Tract No. 33987. Level of service analyses are presented for the following scenarios:

- o 1991 background (ambient growth);
- o 1991 background plus project (Phase 1); and
- o 1991 background plus project (Phase 1) plus related projects completed by 1991.

All of these scenarios take into account the expected redistribution of nonproject traffic that will occur due to major roadway construction that is planned in the Bouquet Canyon area. Specific details regarding the future roadway network assumed for this analysis are described in the following section.

Thus, the evaluation of Phase 1 project traffic impacts includes consideration of the projected 1991 roadway configurations and the nonproject-related volumes on to which the project traffic must be added.

#### **PLANNED ROADWAY IMPROVEMENTS**

Future traffic conditions in the vicinity of the site will be affected by changes in the area roadway network — in most cases, the construction of new facilities. The impact analysis described later in this chapter was affected by the following assumed roadway additions:

- o Plum Canyon Road connected through to Whites Canyon Road;
- o Whites Canyon Road extended south to Via Princessa and then onto Sierra Highway;
- o Rio Vista Road completed from Bouquet Canyon Road to Soledad Canyon Road;
- o McBean Parkway extended north to connect with Decoro Drive;
- o Decoro Drive extended westward to McBean Parkway; and
- o Santa Caterina Road completed from Plum Canyon Road to Soledad Canyon Road.

The County is not certain at this time if the Santa Caterina Roadway will be constructed by 1991. However, research regarding related projects has indicated several tracts along this future roadway that are expected to be completed by 1991. Therefore, for the purposes of this study, Santa

Caterina Road will be assumed to be constructed by project Phase 1 completion.

There are many other roadway additions under consideration by the County as part of the Benefit District Planned Roadway System. Chapter 4 discusses the projected conditions at the key intersections when the full benefit district roadway network is constructed.

#### **BACKGROUND TRAFFIC GROWTH AND REDISTRIBUTION**

The assessment of probable traffic impacts on the roadway system requires that future nonsite traffic volumes be determined in addition to those volumes generated by the project. For this study, a 2 percent per year background growth rate was assumed.

These projected volumes were then redistributed based upon the expected completion of the aforementioned roadway links. The expected directional distribution for these volumes was obtained from Barton-Aschman's 1980 origin-destination survey conducted for the Bouquet Canyon/Seco Canyon area.

#### **TRIP GENERATION**

The estimated traffic volumes for the proposed project were based upon traffic generation rates obtained from the Institute of Transportation Engineers (ITE) report Trip Generation (Third Edition, 1982). The trip generation rates employed and the resulting traffic volumes are summarized for both phases in Table 3 for AM and PM peak hours, as well as on a daily basis.

TABLE 3

TRIP GENERATION

TENTATIVE TRACT 33987

Phase 1  
(By 1991)

Land-Use	Trip Rates						Trips								
	Daily	AM Peak Hour		PM Peak Hour		Daily	AM Peak Hour		PM Peak Hour		Daily	AM Peak Hour		PM Peak Hour	
		In	Out	In	Out		In	Out	In	Out		In	Out	In	Out
250 Single Family	10.0	0.21	0.76	0.63	0.37	2,500	55	190	155	95	2,500	55	190	155	95
1,375 Condominiums	5.2	0.07	0.37	0.37	0.18	7,150	95	510	510	250	7,150	95	510	510	250
875 Apartments	6.1	0.10	0.40	0.45	0.25	5,340	90	350	395	220	5,340	90	350	395	220
						14,990	240	1,050	1,060	565	14,990	240	1,050	1,060	565

Phase I Totals:

Phase 1 + Phase 2  
(Full Buildout)

500 Single Family	10.0	0.21	0.76	0.63	0.37	5,000	110	380	315	185	5,000	110	380	315	185
2,750 Condominiums	5.2	0.07	0.37	0.37	0.18	14,300	190	1,020	1,020	500	14,300	190	1,020	1,020	500
1,750 Apartments	6.1	0.10	0.40	0.45	0.25	10,680	180	700	790	440	10,680	180	700	790	440
						29,980	480	2,100	2,125	1,125	29,980	480	2,100	2,125	1,125

Full Buildout Totals:

As shown, approximately 1,290 trips will be generated by Phase 1 of the project during the morning peak hour, and 1,625 trips will be generated during the evening peak hour.

#### **PROJECT TRAFFIC DISTRIBUTION AND ASSIGNMENT**

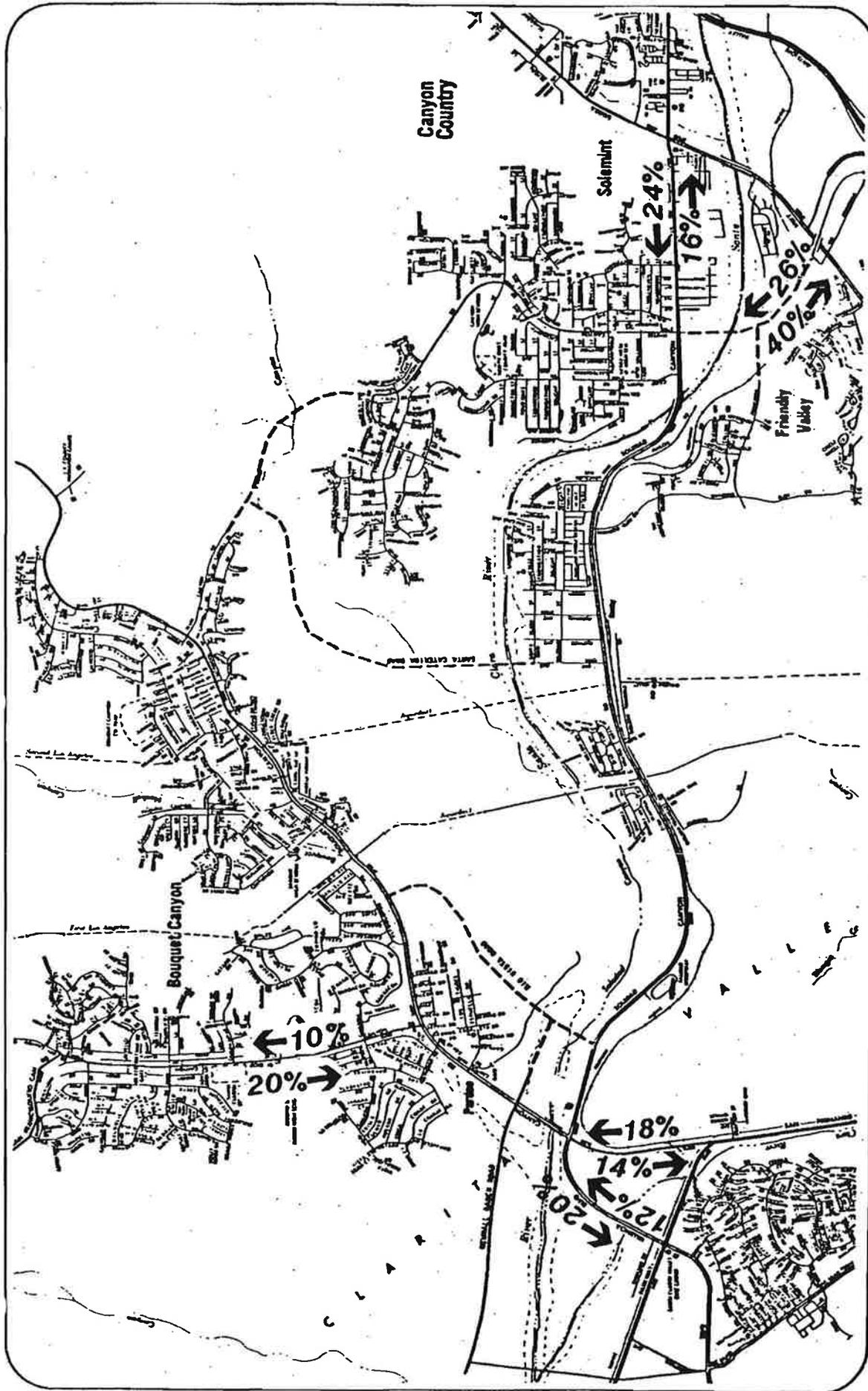
Project-generated traffic was distributed and assigned to the expected roadway network. Figures 4 and 5 illustrate the distribution used. For Phase 1 (or 1991) conditions, approximately 45 percent of the traffic will use the Whites Canyon corridor, 40 percent will use the Bouquet Canyon corridor, and the remainder will use the Santa Caterina link down to Soledad Canyon Road. Figure 6 illustrates the assignment of project traffic.

Figures 7 and 8 show the project traffic volumes combined with the projected background traffic volumes (1991) at the key intersections.

#### **RELATED PROJECTS**

A total of 32 proposed related projects have been identified that may impact the roadways in the study area. These projects, with the exception of number 32, are all expected to be built by 1991 under current plans. The approximate location of these projects is shown in Figure 9. These related projects are expected to generate approximately 10,000 morning and 14,900 evening peak-hour trips upon completion. Table 4 shows the trips generated from these related projects. For the 1991 analyses, approximately 41 percent of the Canyon Park (#32) traffic was added.

Figures 10 and 11 illustrate the traffic volumes expected to occur when the related project traffic is added to the background plus Tentative Tract 33987 traffic. Since the McBean Parkway and Decoro Drive extensions are

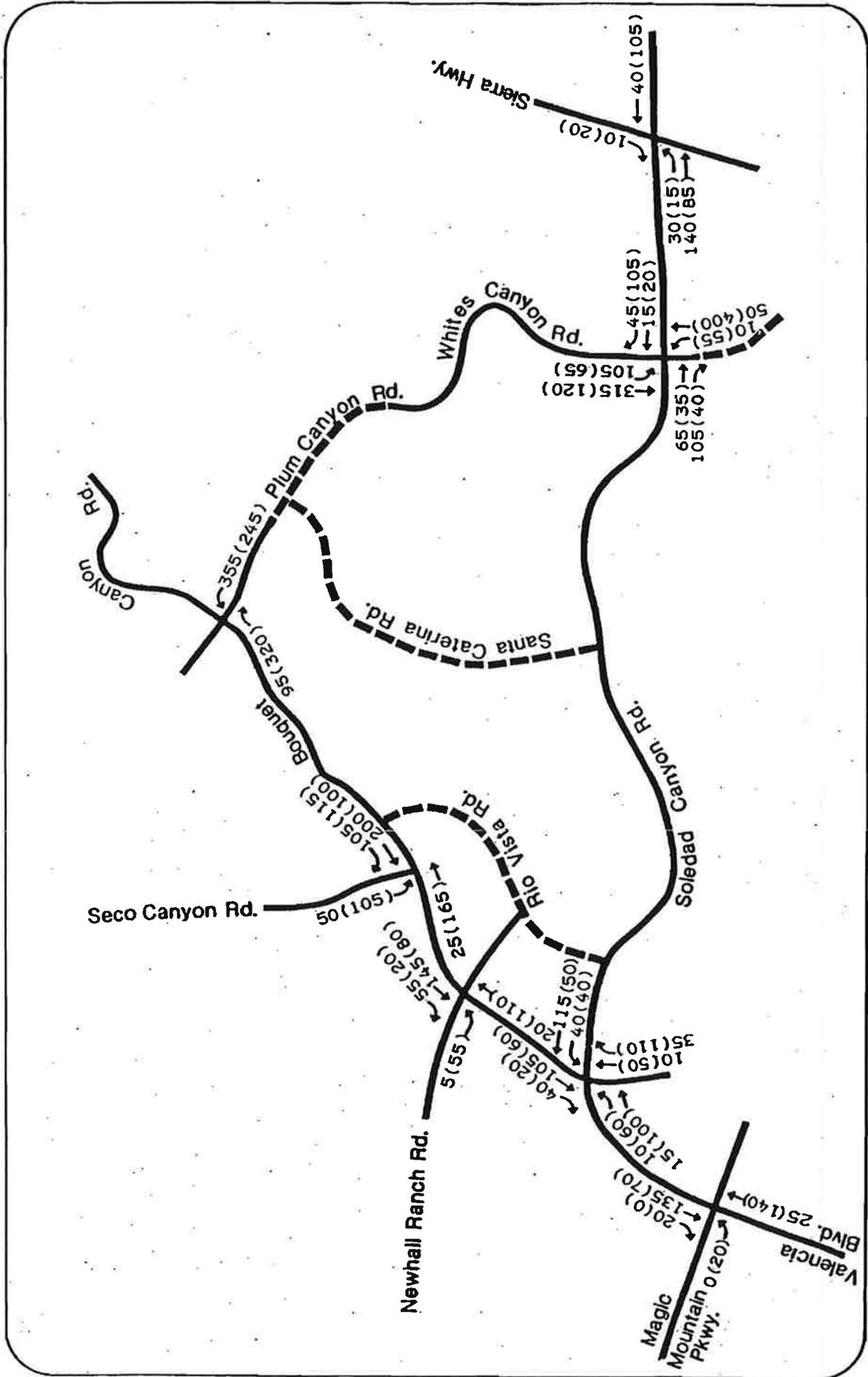


**DIRECTIONAL DISTRIBUTION--A.M.**  
**BARTON-ASCHMAN ASSOCIATES, INC.**



**DIRECTIONAL DISTRIBUTION--P.M.**

**BARTON-ASCHMAN ASSOCIATES, INC.**



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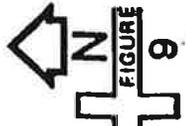
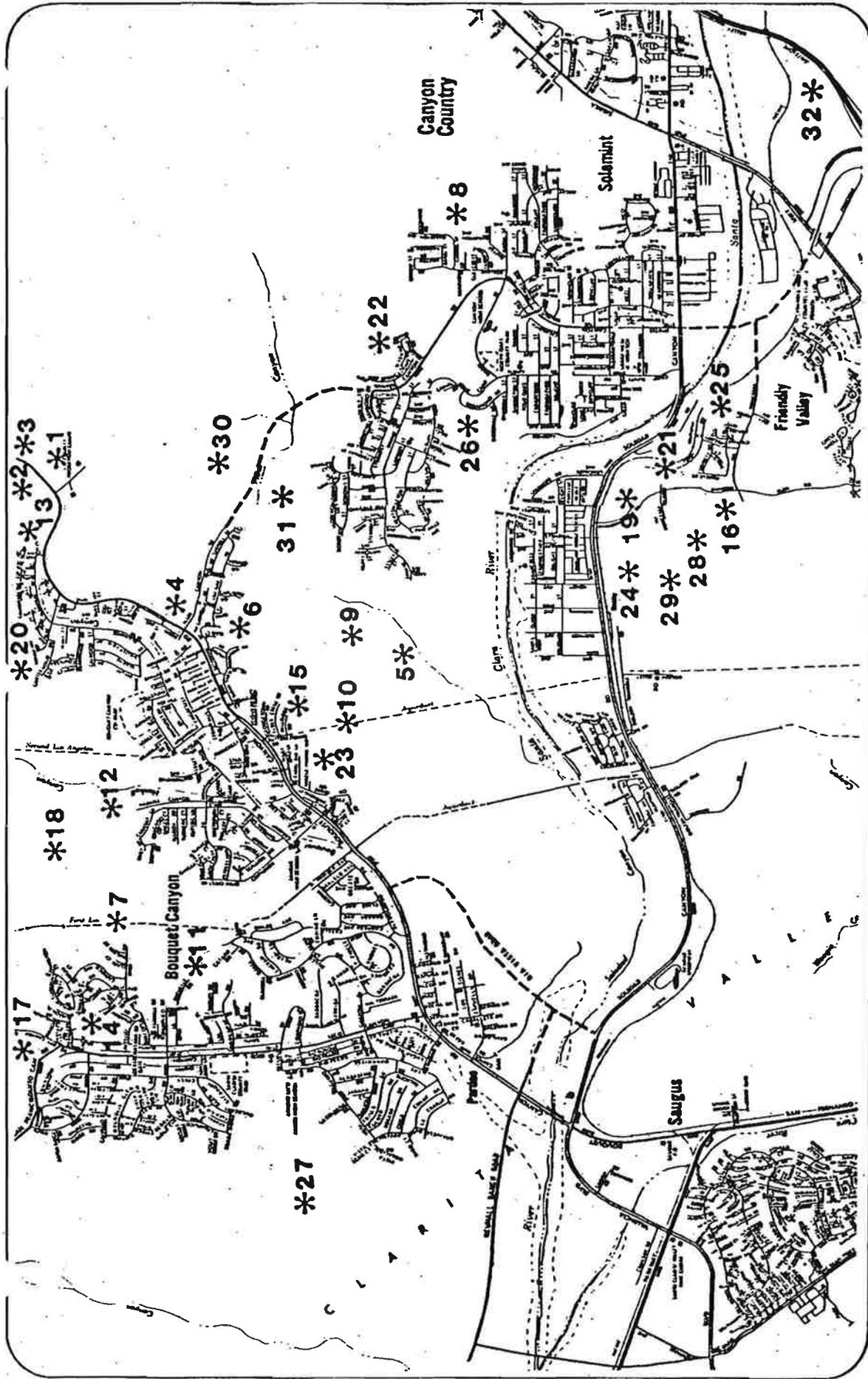


**PHASE 1 PROJECT PEAK HOUR TRAFFIC ASSIGNMENT**

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LOCATIONS OF RELATED PROJECTS  
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**TABLE 4**  
**RELATED PROJECTS<sup>(1)</sup>**  
**TRIP GENERATION SUMMARY**

Project No.	Land-Use	Trip Rates						Trips						
		Daily	AM Peak Hour		PM Peak Hour		Daily	AM Peak Hour		PM Peak Hour				
			In	Out	In	Out		In	Out	In	Out			
1	139 single-family	10.0	0.21	0.55	0.63	0.37	1,390	30	75	90	50			
2	54 single-family	10.0	0.21	0.55	0.63	0.37	590	10	30	35	20			
3	131 single-family	10.0	0.21	0.55	0.63	0.37	1,310	30	75	85	50			
4	113 single-family	10.0	0.21	0.55	0.63	0.37	1,130	25	60	70	40			
5	84 single-family	10.0	0.21	0.55	0.63	0.37	840	20	45	55	30			
	1,380 multifamily	6.1	0.10	0.40	0.45	0.25	8,420	140	550	620	345			
6	117 single-family	10.0	0.21	0.55	0.63	0.37	1,170	25	65	75	45			
7	255 single-family	10.0	0.21	0.55	0.63	0.37	2,550	55	140	165	95			
8	11 single-family	10.0	0.21	0.55	0.63	0.37	110	5	5	5	5			
9	46 single-family	10.0	0.21	0.55	0.63	0.37	460	10	25	30	15			
10	13 single-family	10.0	0.21	0.55	0.63	0.37	130	5	5	10	5			
11	446 single-family	10.0	0.21	0.55	0.63	0.37	4,460	95	295	280	165			
12	423 single-family	10.0	0.21	0.55	0.63	0.37	4,230	90	235	265	160			
13	289 single-family	10.0	0.21	0.55	0.63	0.37	2,890	60	160	180	105			
14	46 single-family	10.0	0.21	0.55	0.63	0.37	460	10	25	30	15			
15	3 single-family	10.0	0.21	0.55	0.63	0.37	30	5	5	5	5			
16	317 multifamily	6.1	0.10	0.40	0.45	0.25	1,935	30	125	145	80			
17	900 single-family	10.0	0.21	0.55	0.63	0.37	9,000	190	495	565	335			
18	19 single-family	10.0	0.21	0.55	0.63	0.37	190	5	10	10	5			
19	668 multifamily	6.1	0.10	0.40	0.45	0.25	4,075	65	265	300	165			
20	103 single-family	10.0	0.21	0.55	0.63	0.37	1,030	20	60	65	40			
21	206 multifamily	6.1	0.10	0.40	0.45	0.25	1,255	20	80	95	50			
22	53 single-family	10.0	0.21	0.55	0.63	0.37	530	10	30	35	20			
23	32 single-family	10.0	0.21	0.55	0.63	0.37	320	5	20	25	15			
24	323 multifamily	6.1	0.10	0.40	0.45	0.25	1,970	35	130	150	80			
25	59 single-family	10.0	0.21	0.55	0.63	0.37	590	15	35	40	20			
26	42 single-family	10.0	0.21	0.55	0.63	0.37	920	10	25	30	15			
27	1,635 single-family	10.0	0.21	0.55	0.63	0.37	16,350	345	900	1,030	605			
28	183 multifamily	6.1	0.10	0.40	0.45	0.25	1,115	20	75	80	45			
29	283 multifamily	6.1	0.10	0.40	0.45	0.25	1,725	30	115	125	70			
30	166 multifamily	6.1	0.10	0.40	0.45	0.25	1,015	20	65	75	40			
	500 single-family	10.0	0.21	0.55	0.63	0.37	5,005	105	275	315	185			
31	173 single-family	10.0	0.21	0.55	0.63	0.37	1,725	40	95	110	65			
	606 multifamily	5.2	0.07	0.37	0.37	0.18	3,150	80	225	225	110			
32	2,875 multifamily <sup>(A)</sup>	6.1	0.10	0.40	0.47	0.23	17,540	290	1,150	1,350	660			
	1,548 multifamily <sup>(T)</sup>	8.0	0.17	0.44	0.50	0.30	12,385	265	680	775	465			
	452,800 S.F. retail	50.6	0.40	0.20	2.30	2.50	22,910	180	90	1,040	1,130			
	515 single-family	10.0	0.21	0.55	0.63	0.37	5,150	110	285	325	190			
	236,000 S.F. office	10.9	1.93	0.20	0.24	1.80	2,580	455	45	55	425			
TOTAL:							142,085	2,960	7,020	8,965	5,965			

NOTE:

1. See Appendix A for descriptions.

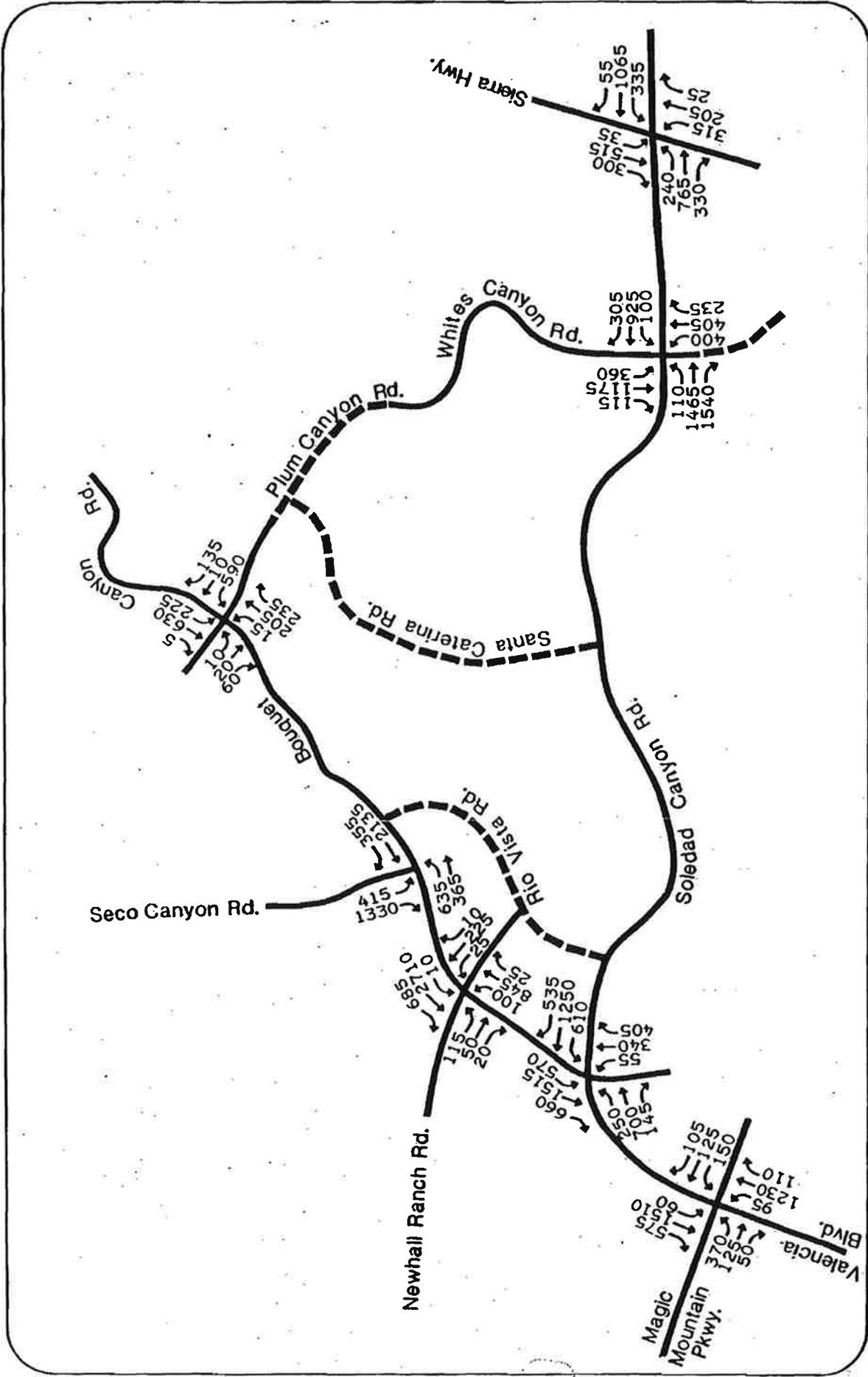
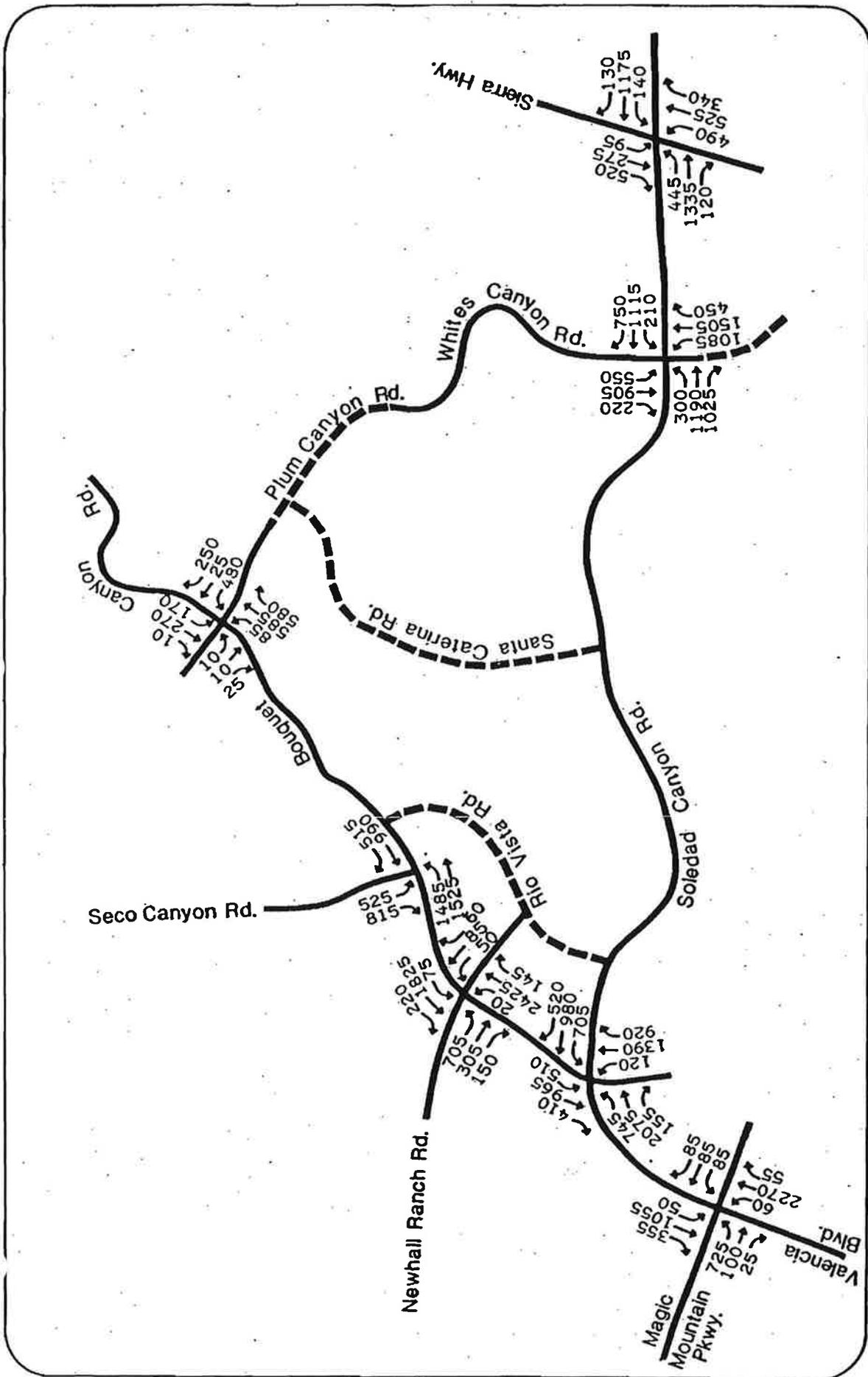


FIGURE 10

1991 BACKGROUND PLUS PHASE 1 PLUS RELATED PROJECTS A.M. PEAK HOUR VOLUMES  
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1991 BACKGROUND PLUS PHASE 1 PLUS RELATED PROJECTS P.M. PEAK HOUR VOLUMES  
 BARTON-ASCHMAN ASSOCIATES, INC.

expected to be completed in a few years, a portion of the traffic generated by proposed Seco Canyon area projects was distributed in that direction.

#### LEVEL OF SERVICE ANALYSIS

The traffic impacts due to a proposed development are typically assessed in terms of the ability of the supporting road system to accommodate site-generated traffic. The ability of the road system is expressed in terms of level of service at intersections. The operating characteristics and the volume-to-capacity ratios of various levels of service were described in Table 1.

Capacity calculations were conducted for each of the scenarios described at the beginning of this chapter. Table 5 shows the results of these calculations for the seven key intersections under 1991 conditions.

In 1991 several intersections will experience some operational problems even without any new developments. These intersections will experience congestion due in part to the ambient growth of traffic offsetting the advantages gained by adding additional roadways. For example, the Bouquet Canyon/Seco Canyon intersection will operate better than it does today, but will still experience minor congestion during the morning peak hour ( $V/C = 0.89$ ).

With a  $V/C$  ratio of 0.79, the Bouquet Canyon/Soledad Canyon intersection will operate acceptably in the morning but deteriorate to a level of service F ( $V/C = 1.02$ ) during the afternoon peak hour, about the same as it operates now.

TABLE 5

INTERSECTION OPERATING CONDITIONS

Intersection	Existing			1991 Background			1991 Background + Phase 1			1991 Background + Phase 1 + Related Projects						
	AM V/C	LoS	PM V/C	AM V/C	LoS	PM V/C	AM V/C	LoS	PM V/C	AM V/C	LoS	PM V/C	LoS			
Bouquet/Plum Canyon	0.24	A	0.35	A	0.23	A	0.35	A	0.49	A	0.51	A	0.80	C	0.93	E
Bouquet/Seco Canyon	1.02	F	0.90	D	0.89	D	0.75	C	0.93	E	0.85	D	1.24	F	1.25	F
Bouquet/Newhall Ranch	0.92	E	0.87	D	0.62	B	0.65	B	0.66	B	0.69	B	0.84	D	0.92	E
Bouquet/Soledad Canyon	0.81	D	1.01	F	0.79	C	1.02	F	0.84	D	1.07	F	1.16	F	1.61	F
Magic Mountain/Valencia	0.57	A	0.73	C	0.62	B	0.79	C	0.63	B	0.84	D	0.78	C	1.10	F
Soledad/Whites Canyon	0.74	C	0.84	D	0.85	D	0.97	E	1.02	F	1.06	F	1.39	F	1.62	F
Soledad Canyon/Sierra Highway	0.71	C	1.05	F	0.69	B	0.77	C	0.72	C	0.81	D	0.85	D	1.05	F

NOTES:

1. Restripe the existing westbound approach for one left turn lane, one through/left lane, and one right turn lane.
2. Restripe existing westbound approach for two through lanes and one through/right lane.
3. Add additional westbound left-turn lane.
4. Restripe northbound approach for one left lane, two through lanes, and one through/right lane.
5. With addition of a northbound through/left lane.

The intersection of Soledad Canyon/Whites Canyon roads will operate at a levels of service of D and E during the AM and PM peak hours (0.85 and 0.97, respectively).

Both the Bouquet Canyon/Newhall Ranch and Bouquet Canyon/Plum Canyon intersections will operate well within acceptable levels.

With the addition of the Phase 1 project traffic, four of the seven intersections (Bouquet/Plum, Bouquet/Newhall Ranch, Magic Mountain/Valencia, and Soledad/Sierra) will continue to operate within acceptable standards.

The intersection of Bouquet Canyon and Seco Canyon Roads will have its Level of Service decrease from D (0.89) to E (0.93) during the morning peak hour and from C (0.75) to D (0.85) during the evening peak hour.

The Bouquet Canyon/Soledad Canyon Roads intersection will continue to operate efficiently with the addition of project traffic during the morning peak hour. The afternoon peak hour will stay at a Level of Service F (V/C = 1.07).

Lastly, the congestion (due to background traffic) is slightly increased due to project traffic at the Soledad Canyon/Whites Canyon intersection for both peak hours. The Levels of Service decrease from E to F in both instances.

With the addition of the traffic generated by the related projects, three intersections (Bouquet/Seco, Bouquet/Soledad, and Soledad/Whites) deteriorate to unacceptable Levels of Service (LoS F) during both peak hours. In addition, the evening peak hours deteriorate to LoS E (0.92), F (1.10), and F (1.05) at the Bouquet Canyon/Newhall Ranch, Magic

Mountain/Valencia, and Soledad Canyon/Sierra Highway intersections, respectively. The Bouquet Canyon/Plum Canyon intersection will also deteriorate to a Level of Service E ( $V/C = 0.93$ ) during the afternoon peak hour.

#### 1991 MITIGATION MEASURES

Based upon the results of the capacity calculations, it is apparent that even with the addition of the aforementioned new roadways, some congestion will still occur eventually at all of the seven key intersections. The following mitigation measures have been identified as additional Bouquet Canyon Roadway Benefit District Improvements that will help reduce the projected congestion:

- o Restripe the west approach of Bouquet Canyon Road at Seco Canyon to allow a third through lane;
- o Add a second westbound left-turn lane at the Bouquet Canyon/Soledad Canyon intersection;
- o Restripe the northbound approach of Valencia Boulevard at Mágic Mountain Parkway to accommodate one left-turn lane, two through lanes, and a through/right lane;
- o Add a combination through/left lane to the northbound approach of Whites Canyon Road at Soledad Canyon Road; and
- o Restripe westbound approach to include one left, one through/left, and one right turn lane.

As shown in Table 5, these measures will help mitigate the congestion due to background growth traffic as well as project and related project traffic volumes. For the Bouquet Canyon/Newhall Ranch and Soledad Canyon/Sierra Highway intersections, no feasible short-term mitigation measures were identified. However, as discussed in the next chapter, as the area roadway system develops, these intersections will experience a substantial decrease in traffic volumes. Therefore, expensive long-term mitigation measures that may be required at these intersections should be avoided.

The related projects assumed in this report are based on information obtained from the Los Angeles County Regional Planning Department and developers having approved tract maps in the area. According to those sources, 31 of the 32 proposed developments in the vicinity of the site (shown in Figure 9) are expected to be completed by 1991. Realistically, however, this is unlikely. In addition, the last column in Table 5, illustrates that, even with completion of the feasible proposed benefit district mitigation measures, three of the intersections will still be projected to operate beyond capacity. The following chapter discusses the redistribution of traffic that is expected to occur upon full buildout of the planned Benefit District roadway system and the effects this distribution has on operation of the key intersections.

4.

ANALYSIS OF FUTURE CONDITIONS - ULTIMATE ROADWAY SYSTEM

This chapter summarizes the implications and impact of the addition of the full project buildout traffic onto the ultimate roadway system. A 1996 project study date was chosen as a current best estimate for the ultimate roadway conditions. Level of service analyses are presented for the following two scenarios:

- o 1996 background (includes Phase 1 traffic); and
- o 1996 background plus full project buildout.

Both of these scenarios take into account the projected redistribution of background traffic that will occur due to the construction of the major roadway network planned in the Benefit District. These roadways are shown in Figure 12.



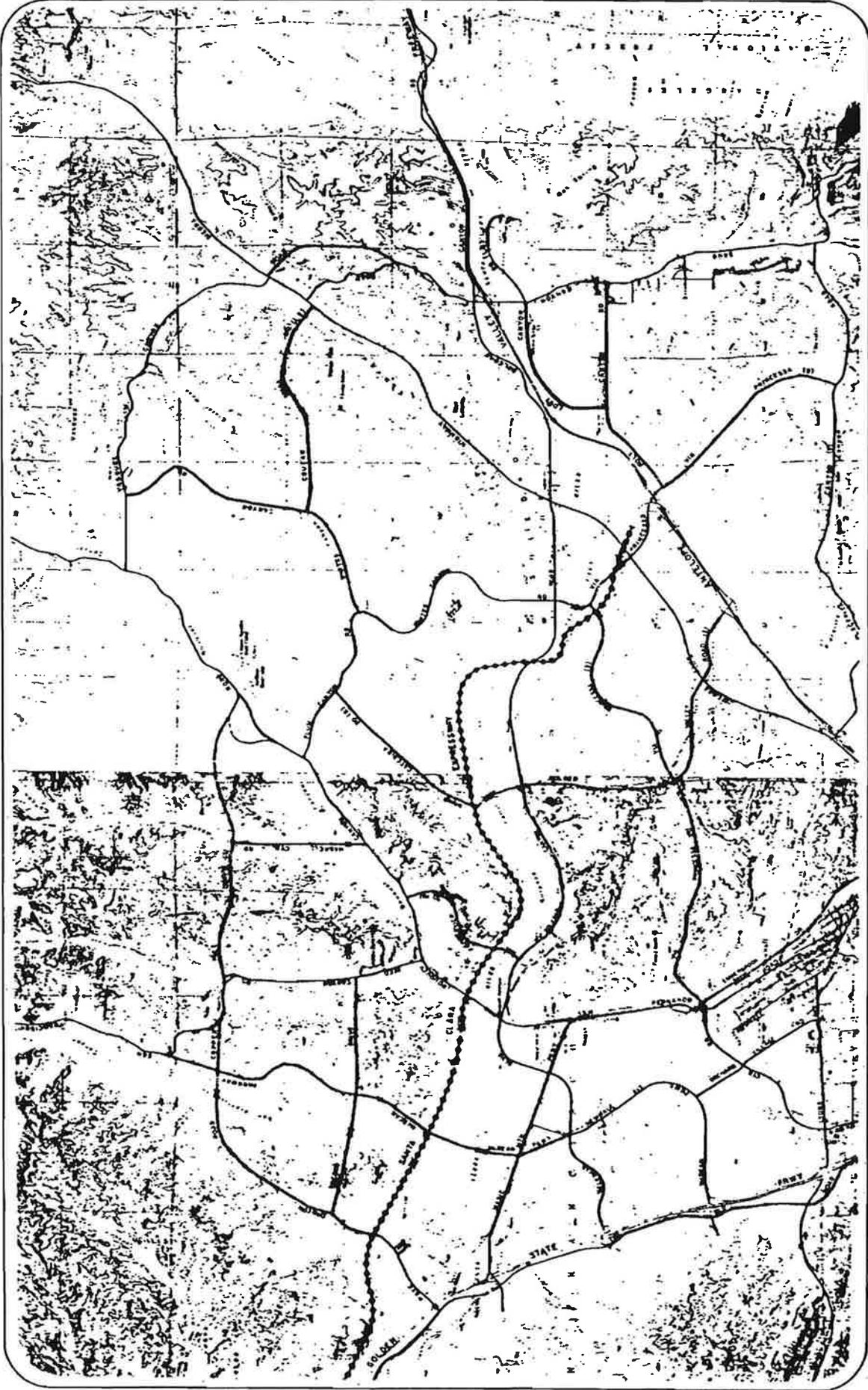
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FIGURE

12

# FUTURE ULTIMATE ROADWAY SYSTEM

BARTON-ASCHMAN ASSOCIATES, INC.



#### **BENEFIT DISTRICT ROADWAY NETWORK**

In addition to the roadway construction listed in Chapter 3, the planned benefit district roadway system includes many significant highway improvements for the Bouquet Canyon area. Among the improvements having the greatest significance in this study are the following:

1. Santa Clara Expressway: An east-west expressway located north of Soledad Canyon Road, connecting the Golden State Freeway (Interstate 5) and the Antelope Valley Freeway (State Route 14).
2. Golden Valley Road: A north-south major arterial located between Bouquet Canyon Road and Whites Canyon Road, connecting the Santa Clara Expressway with the Antelope Valley Freeway.
3. Rye Canyon/Copper Hill Drive: An east-west arterial on the north side of the Santa Clara Expressway, connecting Bouquet Canyon Road and the Santa Clara Expressway.
4. Via Princessa: An east-west arterial located south of Soledad Canyon Road connecting San Fernando Road with Sierra Highway.

#### **BACKGROUND TRAFFIC GROWTH**

As mentioned in Chapter 3, all but one of the related projects in the Bouquet Canyon area are assuming construction completion by 1991. Therefore, a background traffic growth factor of 3 percent per year was used for the years 1991-1996, instead of the 2 percent figure used for Phase 1 analyses.

### **TRIP GENERATION**

The trips generated by the project when fully developed were shown in Table 3. As shown there, a total of 2,580 trips will be generated by Phase 2 during the morning peak hour and 3,250 trips will be generated during the evening peak hour.

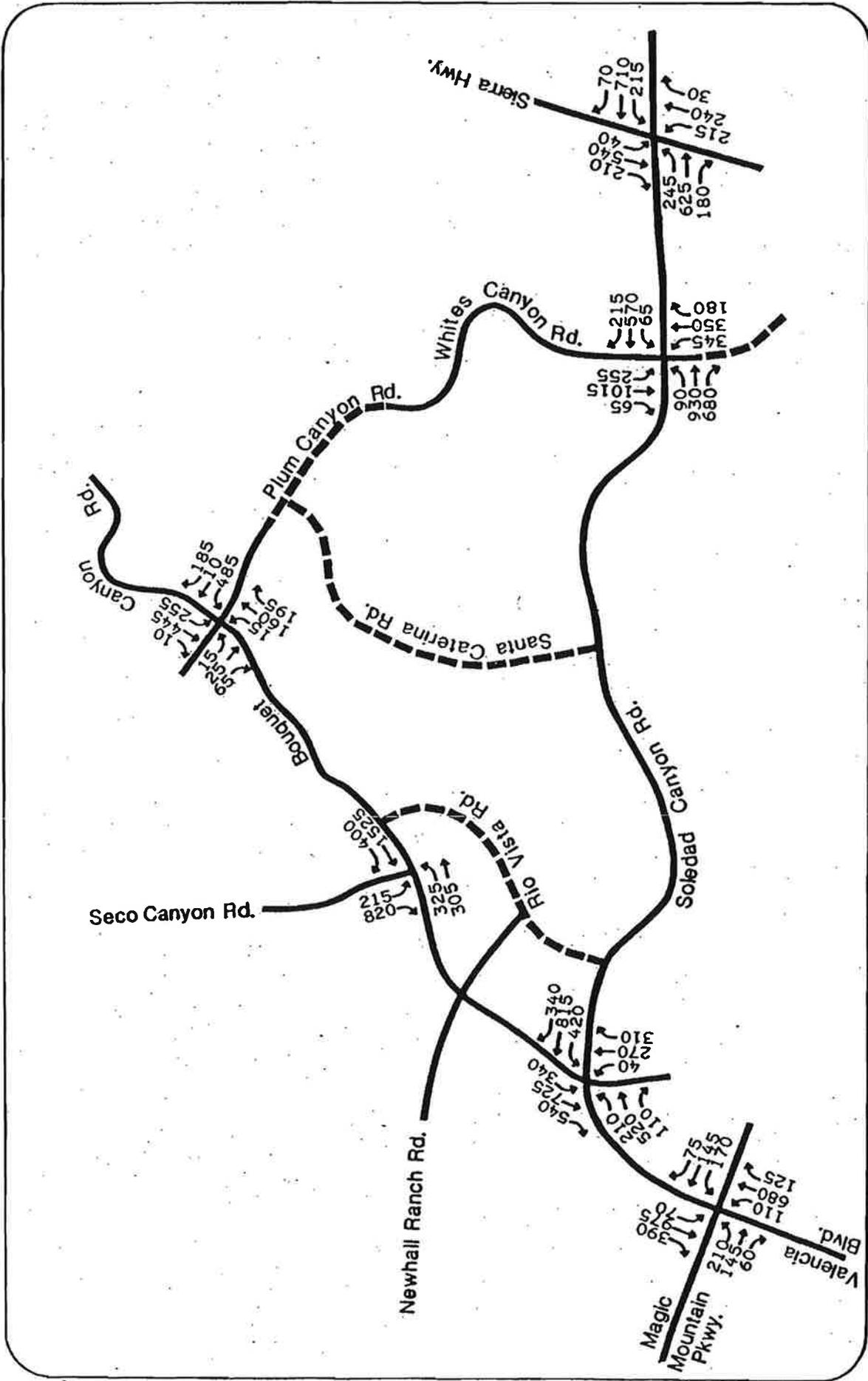
### **TRAFFIC DISTRIBUTION AND ASSIGNMENT**

The background and project traffic volumes for the study area were reassigned through the key intersections, based upon distribution methods described in Chapter 1. The resulting AM and PM peak-hour intersection traffic volumes are illustrated in Figures 13 and 14, respectively.

As shown, even with the addition of Phase 2 project traffic and the 15 percent increase in background volumes, the intersection volumes were significantly decreased. To a large degree, this was due to the diversion of traffic from surface arterials to the proposed Santa Clara Expressway. It should be noted, however, that these volumes reflect a conservative analysis of the possible redistribution, and a higher usage of the proposed expressway could easily be reached.

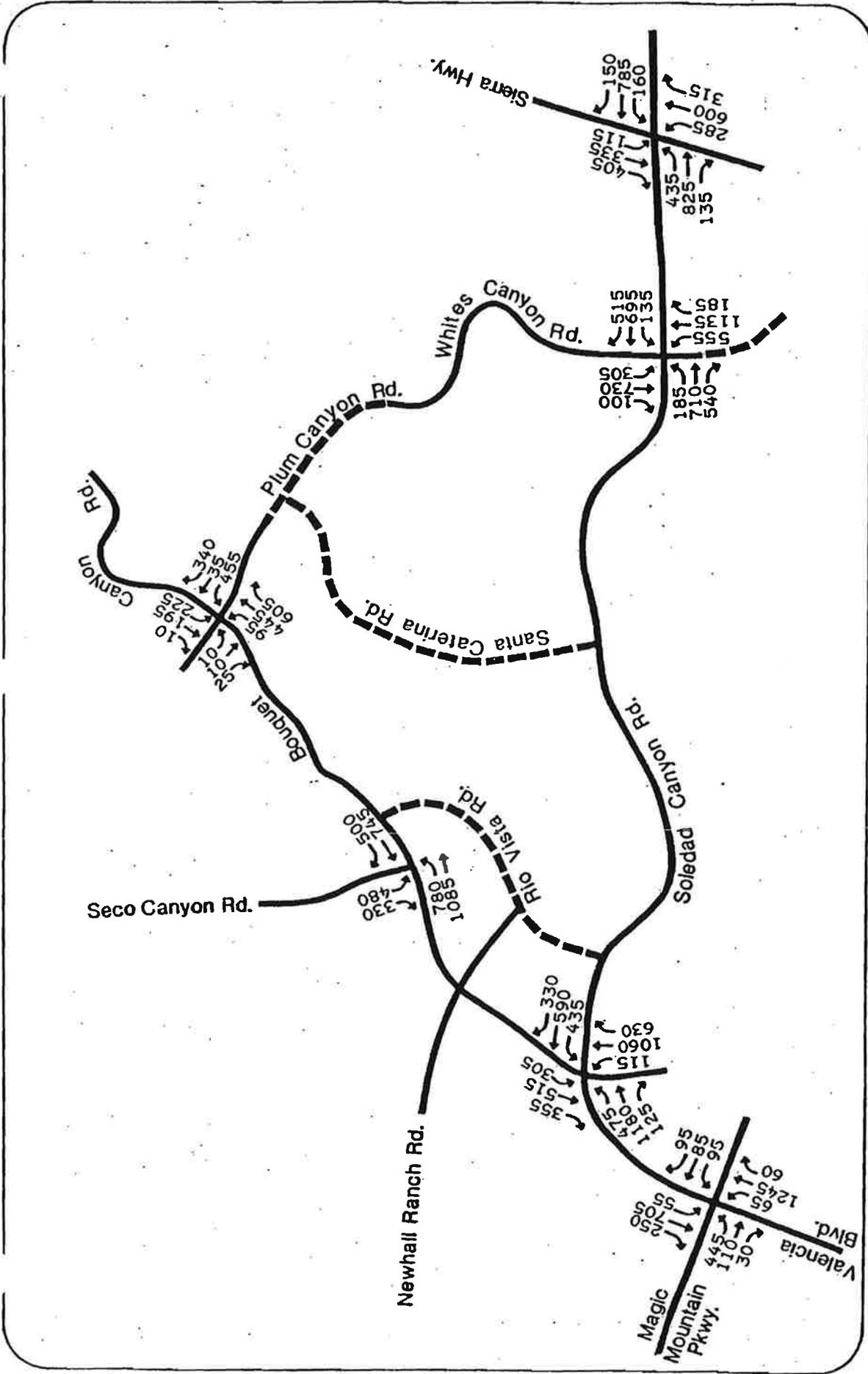
### **LEVEL OF SERVICE ANALYSES**

Capacity calculations were performed for each of the seven key intersections under the two scenarios described earlier. Table 6 summarizes the results of these calculations.



REDISTRIBUTED 1996 BACKGROUND PLUS PROJECT BUILDOUT A.M. PEAK HOUR VOLUMES

BARTON-ASCHMAN ASSOCIATES, INC.



**REDISTRIBUTED 1996 BACKGROUND PLUS PROJECT BUILDOUT P.M. PEAK HOUR VOLUMES**

BARTON-ASCHMAN ASSOCIATES, INC.

TABLE 6  
 INTERSECTION OPERATING CONDITIONS  
 ULTIMATE ROADWAY SYSTEM

Intersection	Existing		1996 Background (1)		1996 Background		Project Buildout			
	AM V/C	PM LoS	AM V/C	PM LoS	AM V/C	PM LoS	AM V/C	PM LoS		
Bouquet/Plum Canyon	0.24	A	0.35	A	0.54	A(2)	0.60	A(2)	0.72	C(2)
Bouquet/Seco Canyon	1.02	F	0.90	D	0.72	C	0.83	D	0.74	C
Bouquet/Soledad Canyon	0.81	D	1.01	F	0.65	B	0.91	E(2)	0.65	B
Magic Mountain/Valencia	0.57	A	0.73	C	0.56	A	0.68	B	0.58	A
Soledad/Whites Canyon	0.74	C	0.84	D	0.74	C(2)	0.88	D(2)	0.81	D(2)
Soledad Canyon/Sierra Hwy.	0.71	C	1.05	F	0.72	C	0.88	D	0.73	C

NOTES:

1. Includes Phase 1 project traffic.
2. Includes roadway changes described in Table 5.

As shown, all of the key intersections will operate acceptably during the morning peak hour under the 1996 background conditions. However, enough local traffic will still use three of the key intersections during the afternoon peak hour to cause slightly congested conditions. These are the Bouquet/Soledad, Soledad/Whites Canyon, and Soledad/Sierra Highway intersections. The intersections will continue to operate acceptably during the morning peak hour even with the addition of Phase 2 traffic. The three aforementioned already congested afternoon intersections will become slightly more congested with V/C ratios ranging from 0.90 to 0.93. The Bouquet Canyon/Seco Canyon intersection will also deteriorate to a V/C ratio of 0.89.

#### **MITIGATION**

The 1996 analyses described in the chapter were based upon a very conservative approach to the redistribution of future traffic onto the ultimate roadway system. The figures illustrated in Table 6 reflect that "worst case" approach and future levels of service are very likely to be better than those shown. In addition, the three most congested intersections under the 1996 background plus project scenario are already congested due to background traffic. Given these facts, no specific mitigation measures have been identified for the 1996 scenario.

#### **CONCLUSION**

This report has examined the traffic impacts caused by not only the proposed Tentative Tract 33987 project, but also the impacts attributed to ambient growth and 32 related projects.

The capacity calculations performed illustrate the existing congestion in the Bouquet Canyon area, and the possible future congestion even with some of the minor Benefit District improvements.

Further, the analyses presented in this report demonstrate the importance of future development of the full highway system, not only as it pertains to the projects included in this study, but also to developments that will occur in Canyon Country beyond 1996.

**APPENDIX**

APPENDIX A

UNIT SUMMARY

Assumptions: 92.34% of pending units are approved  
 98.34% of approved units are recorded  
 100% of recorded projects are built

<u>Project</u>	<u>Status</u>	<u>Units per Activity Report</u>	<u>Adjusted Units</u>	<u>Misc. Comments</u>
1. 30546	A	141 sf	139	
2. 30562	A	55 sf	54	
3. 30599	A	133 sf	131	
4. 37081	A	128 sf	0	2nd phase of 37081 is part of Tent. Tr. 31158
43529	R	97 sf	97	part of 1st phase 37081
43530	R	16 sf	16	part of 1st phase 37081
		93 sf		
5. 31236	P	1,520 mf	1,465	
6. 32615	R	13	13	
35586	R	21	21	
35962	R	83	83	
7. 32758	A	259 sf	255	
8. 33451	R	11 sf	11	
9. 33629	R	32 sf	32	14 lots of original 46 lot 33629 resubdivided by 32306
32306	A	47	46	
10. 34260	R	13 sf	13	
11. 34430	A	454 sf	446	
12. 34988	A	430 sf	423	
13. 35157	P	318 sf	289	
14. 35572	R	46 sf	46	
15. 35885	R	3 sf	3	
16. 35984	A	79		
31549	R	82	82	
31572	R	78	78	
31631	R	78	78	
17. 37539	A	970 sf		w/o Copper Hill, tract is limited to 900 du
		546 mf	900	
18. 36610	A	19 sf	19	
19. 36686	R	220 mf	220	
43129	R	448 mf	448	
20. 38371	A	105 sf	103	
21. 38519	R	206 mf	206	some du already occupied
22. 38890	R	53 sf	53	
23. 43112	A	33 sf	32	
24. 43116	R	328 mf	323	
25. 43439	A	60 sf	59	
26. 43584	A	43 sf	42	
27. 43591	P	1,801 sf	1,635	
28. 44359	P	202 mf	183	
29. 44360	P	312 mf	283	
30. 31158	P	542 sf	500	
		180 mf	166	
31. 31803	P	187 sf	173	
		656 mf	606	
32. GPA85-004	P	557 sf	515	
		4,791 mf	4,424	
		453K Retail	453K	
		236K Office	236K	

**TRAFFIC COUNT DATA SOURCES**

Intersection	Source		Day and Date of Count		Comments
	AM	PM	AM	PM	
Bouquet Canyon/Plum Canyon	BA	BA	Th (7-31-86)	W (1-23-85)	
Bouquet Canyon/Seco Canyon	County	BA	W (5-14-86)	T (9-9-86)	RED. #291 (AM)
Bouquet Canyon/Newhall Ranch	County	County	W (3-14-86)	M (3-12-86)	RED. #135, 148
Bouquet Canyon/Soledad Canyon	County	County	TH (3-13-86)	T (3-25-86)	RED. #145, 176
Valencia/Magic Mountain	County	County	F (3-28-86)	TH (3-27-86)	RED. #187, 180
Soledad Canyon/Whites Canyon	County	BA	T (7-1-86)	TH (9-25-86)	RED. #399 (AM)
Soledad Canyon/Sierra Highway	County	County	TH (4-17-86)	TH (4-24-86)	RED. #231, 257

## APPENDIX 5

Mr. Paul Taylor  
Engineering Service Corporation  
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5. Student Generation Rates

The student generation rates for the Hart District is approximately .238 students per household. As most of the dwellings in the Hart District are single family homes, there is not a separate student generation rate for multi-family units. Using this student generation rate and multiplying it by the number of dwelling units (5,000), the Project would generate approximately 1,190 additional students for the Hart District. The potential impact of this Project is quite severe. The Hart District simply does not have the facilities or financial resources at its disposal to construct the facilities needed to accommodate this large increase in the number of students.

6. Map of System in the Project Area

A map of the Hart District's facilities will be forwarded to you under a separate cover.

7. School Districts' Proposed Mitigation Measures

The California Environmental Quality Act ("CEQA") requires that significant impacts of a Project be mitigated if feasible. We believe that certain things can be done to mitigate the school impacts and that timing is of the essence in implementing mitigation measures. As indicated above, it is necessary to now provide funds to start the planning, design and construction of new schools so these schools will be completed in time to accommodate the students generated by the Project and the other residential projects.

It is the position of the Hart District that the EIR should contain a school impact mitigation measure to the effect that before the Project will be approved by the County of Los Angeles the Project proponents shall enter into a School Impact Mitigation Agreement with the Hart District. Further, that agreement should contain language to the effect that the following will be considered as mitigation of the school impacts identified in the EIR for the Project:

1. The inclusion of language in all of the land use approvals for the Project, including, but not limited to general plan amendments, zone changes, specific plans and tentative tract maps, to the effect that

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\*A PROFESSIONAL CORPORATION

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AUG 28 1986

ENGINEERING SERVICE  
CORPORATION

August 26, 1986

4920 CAMPUS DRIVE, SUITE A  
NEWPORT BEACH, CALIFORNIA 92660  
AREA CODE 714  
TELEPHONE 851-1300  
ZAP NET (714) 833-3843

REF. OUR FILE

Mr. Paul Taylor  
Environmental Analyst  
Engineering Service Corporation  
6017 Bristol Parkway  
Culver City, California 90230

Re: Environmental Impact Report for  
Tentative Tract No. 33987

Dear Mr. Taylor:

This law firm represents the William S. Hart Union High School District (the "Hart District") in matters relating to the financing of school facilities. The Hart District has requested us to respond to your letter of July 21, 1986 in which you requested the Hart District to prepare answers to questions relating to the preparation of an Environmental Impact Report ("EIR") on the above-referenced tract. It is our understanding, that your plans consist of 5,000 dwelling units situated on approximately 900 acres of land in the Plum Canyon area (the "Project").

1. Existing District Schools Serving the Project Site

Canyon and Saugus High Schools are the high schools that would serve the Project. Sierra Vista Junior High School would serve the Project.

2. Existing Enrollment/Capacity of Affected Schools

During the 1985-1986 school year the enrollment of Canyon High School was 2,200 students and the capacity was 1,875 students. Six temporary trailer classrooms were used for the additional students. These trailers were fully utilized to their capacity. During the 1985-86 school year the enrollment of Saugus High School was 1,954 students and the capacity was 1,866 students. Two temporary trailer classrooms have been put into service to accommodate the excess students. The trailers were utilized at their capacity. The trailers at both Canyon and Saugus High Schools do not meet the Field Act requirements for earthquake safety. Further, the trailers can only be used for three years and the first year is now over. There is

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simply no capacity at the Canyon or Saugus High Schools for the students that would be generated by this Project and the students generated by other projects in this area. The Hart District has no funds to provide for the school facilities and services that would be generated by these projects.

During the 1985-86 school year, Sierra Vista Junior High School had an enrollment of 981 students and a capacity of 1,161 students. The cumulative impact of this Project and others that have already been approved, would generate students in excess of the capacity of Sierra Vista Junior High School or other junior high schools in the Hart District.

3. Any Existing or Proposed Special Assessment Districts to Provide for School Facilities

At the present time, there are no existing special assessment or "Mello-Roos" Districts within the Hart District. For the past five months the Hart District has tried to obtain the consent of the leading developers within its boundaries to form a Mello-Roos or assessment district to finance the new construction of badly needed school facilities. The efforts of the Hart District have been unsuccessful and thus it has been unable to form a Mello-Roos or assessment district. The Hart District is requesting SB 201 fees of the County of Los Angeles.

4. Any Planned Future District School Expansions or New School Construction

In a study prepared by Ed Group International dated January 1986, entitled Santa Clarita Valley Area Wide School Facilities Study, it was determined that in order to accommodate future increases in student enrollment, the Hart District would have to construct three 1,600 student high schools and three junior high schools by the year 2005. In addition, the Hart District needs to replace the Bowman Continuation High School because it consists primarily of semi-permanent relocatable buildings and the Learning Post School (an independent Study Program) since it is in a building that does not meet the State Field Act (earthquake safety) requirements. Any expansion of existing facilities or construction of new schools is contingent on obtaining new funds.

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before a final tract map will be approved and recorded, the Hart District must execute a certification to the effect that adequate school facilities are available or have been made available by the Project proponent.

2. The performance of provisions of the agreement which will require the Hart District to establish a community facilities district pursuant to the Mello-Roos Community Facilities District Act and sell bonds to obtain proceeds for the required school facilities and require that the Project proponents cooperate with and consent to these endeavors and the levying of a special tax to pay bond principle and interest.

The language that we propose be included in all land use approvals for the Project is set out below:

"Before the County of Los Angeles will approve a final tract map for the project and before any such map can be recorded, a certification shall be executed on behalf of the William S. Hart Union High School District and the elementary school district in which the project is located, which certifications shall be included on the face of each such final tract map and which shall state that either there are sufficient school facilities available to accommodate all students which have been generated by said project or that sufficient school facilities have been made available by the project proponent."

If it is required, as a mitigation measure, that the Project proponents enter into the above-described mitigation agreement before final approval of the Project, it is our position that this will not only provide for an appropriate school impact mitigation but will also lead to measures which can be immediately put into effect to insure that there are adequate funds available for the school facilities that will be required for the Project and that those become occupied. The execution of the above-proposed mitigation agreement would lead to the creation of a community facilities district in the near future closely followed by a bond sale to generate proceeds for school facilities. Further, this condition could result in the Project proponent and the Hart District entering into an

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agreement to provide for other forms of mitigation in lieu of or in combination with a community facilities district. Such other mitigation might include the Project proponent agreeing to approve a sale of General Obligation Bonds, dedicating a school site or paying a school impact fee.

Specifically, we propose that the following language be included in the EIR as a mitigation measure for the Project:

"Before the Project will be considered by the County of Los Angeles for final approval, the Project proponents are required to enter into an agreement with the William S. Hart Union High School District and the elementary school district in which the Project is located for the mitigation of impacts caused by the Project on the school enrollment and school facilities of the school districts. Further, said agreement is required to contain provisions to the effect that the following will be considered as mitigation for the impacts identified in the Final EIR for the Project: (1) the inclusion in the conditions of all land use approvals for the Project, of language to the effect that before final approval and recordation of any final tract map, there must be a certification from the William S. Hart Union High School District that either there are available sufficient school facilities for students generated by the Project or such facilities have been made available by the Project proponents, and (2) the performance of provisions of the agreement which will require the establishment by the Hart District of a Mello-Roos Community Facilities District and the sale of bonds for the required school facilities which require the Project proponents to cooperate and consent to the formation, bond sale and levy of special taxes to pay principal and interest on such bonds."

8. Miscellaneous

Though our firm will cooperate in the preparation of this EIR for the above-referenced tract, we believe that to have the engineering consultants to the contractor preparing the EIR is

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Mr. Paul Taylor  
Engineering Service Corporation  
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not consistent with the California Environmental Quality Act  
Guidelines and is most inappropriate.

If you have any additional questions or comments please do  
not hesitate to contact our office.

Yours very truly,

BOWIE, ARNESON, KADI & DIXON

By   
Robert A. Anderson

RAA:dv

cc: Lee Stark (Department of  
Regional Planning)  
Dr. James Bown (Hart District)  
Terry E. Dixon, Esq.

## APPENDIX 6

Cumulative Analysis Methodology for Tentative Tracts

This section described the general methodology used to estimate future development which, in conjunction with the Proposed Project, may result in significant environmental impacts.

The Los Angeles County Department of Regional Planning monitors the status applications and approvals for subdivision developments in Santa Clarita Valley. The following categories are used to track residential projects:

- Prospective                      - Tentative Map filed, but not approved.
- Encumbered                      - Tentative Map approved, but not recorded.
- Committed                      - Final Map recorded since 1980, but not built.

The department's computer data base includes information on each active project. "Residential Subdivision Activity Reports" are available from the County which summarize development within the district boundaries of various service providers in the Santa Clarita Valley. The report summarizes the current status of projects within the specified geographical boundaries, including the distribution of housing units by type. The following page shows a sample Residential Activity Report.

The Department of Regional Planning also provides discount factors to more accurately estimate the number of housing units which will actually be built. The Planning Department monitors project status and periodically updates these factors. Currently the Department estimates that 91% of prospective projects will become encumbered projects, 97% of encumbered projects will become committed projects, and 100% of committed projects will be built. (88.3% of prospective units will be constructed (.91 x .97)).

SERVICE PROVIDER - SANTA CLARITA WATER COMPANY

CODE: 1110200 -

RESIDENTIAL SUBDIVISION ACTIVITY REPORT

01-15-87

Development Profile	Approval		Status
	Pending	Approved	Recorded
Number of active projects	25	35	48
Total number of dwelling units	7492	3874	4088
Single family units (detached)	2648	2210	899
Multi family units (attached)	4844	1664	3189
Mobile Homes	0	0	0

Explanation of Approval Status:

- Pending - subdivisions filed with Regional Planning Department, not yet approved nor denied
- Approved - subdivisions approved by Regional Planning Commission, not yet recorded nor expired
- Recorded - subdivisions recorded since 7/1/1976, not yet built

The following section, "Sample Cumulative Analysis Calculations", provides a detailed example of this methodology used.

#### Sample Cumulative Analysis Calculations

The following sample calculation is based on the January 15, 1987 Residential Activity Report for the Santa Clarita Water Company (see previous page). The calculations below were used to estimate future projects which will impact the service district. Appropriate generation factors were then applied to the resultant number of housing units to estimate cumulative sewage treatment demand for these projects.

- 1) The following equation is used to estimate the number of units which will be built:

$$(.91 \times (\text{Prospective Units}) + (\text{Encumbered Units})) \times .97 + \text{Committed Units}$$

- 2) Application of the equation to the aforementioned Activity Report yields the following results:

Single Family Units:  $((2,648) \cdot .91 + 2,210) \cdot .97 + 899 = 5,380$

Multi Family Units:  $(4,844 \cdot (.91) + 1,664) \cdot .97 + 3,189 = 9,079$

RELATED WATER USE - SCWC (ACRE FEET PER YEAR)

	<u>LAND USE</u>	<u>FACTOR (5)</u>	<u>DEMAND</u>
A. RESIDENTIAL TENTATIVE TRACTS (1)			
B. RESIDENTIAL ZCs AND PAs (2)			
ZC85628	1,407 SF	0.48	675.4
	3,220 MF	0.19	611.8
SP1	637 SF	0.48	305.8
	4,763 MF	0.19	905.0
TOTAL			2,497.9
C. COMMERCIAL & INDUSTRIAL TRACTS (3)			
TPM 16717 - COM	1.80 AC	2.24	4.0
TPM 16696 - COM	5.00 AC	2.24	11.2
TPM 17078 - IND	3.63 AC	3.19	11.6
TT 44328 - COM	15.30 AC	2.24	34.3
TPM 17184 - COM	2.00 AC	2.24	4.5
TPM 17479 - IND	2.05 AC	3.19	6.5
TPM 17165 - COM	2.50 AC	2.24	5.6
TPM 17681 - COM	111.00 AC	2.24	248.6
TPM 18024 - COM	1.16 AC	2.24	2.6
TPM 18174 - IND	8.02 AC	3.19	25.6
TPM 18109 - IND	20.72 AC	3.19	66.1
TPM 18378 - IND	2.20 AC	3.19	7.0
TT 45113 - COM	18.30 AC	2.24	41.0
TOTAL			468.6
D. COM. & IND. ZCs AND PAs (4)			
ZC 85628 - COM	21.9 AC	2.24	49.1
SP1 - COM	60.6 AC	2.24	135.7
TOTAL			184.8
E. TOTAL RELATED WATER USE			
1) Source:	Based on Subdivision Activity Report, 1/15/87 Cumulative Analysis methodology for tentative tracts included in this Appendix.		
2) Source:	Land Data Management Agency, List of ZCs & PAs, 2/9/87.		
3) Source:	Land Data Management Agency, List of Subdivisions, 2/9/87.		
4) Source:	Land Data Management Agency, List of ZCs & PAs, 2/9/87.		
5) Source:	Dept. of Regional Planning for Residential factor, and Valencia Water Company for Com. and Ind. factors. Factors in acre feet per year per gross acre.		

TABLE D-1: RELATED PROJECTS - EDUCATION

ZONE CHANGES & PLAN AMENDMENTS (1) RESIDENTIAL TRACTS (2)

SCHOOL DISTRICT	CASE	DWELLING UNITS	STUDENTS PER DU	STUDENTS GENERATED	FUTURE CLASSROOMS (3)	STUDENTS/CLASSROOM	STUDENTS GENERATED (5)	TOTAL STUDENTS GENERATED
SAUGUS UNION								
HART JUNIOR HIGH SCHOOL	1. ZC85500	250 MF	0.03	8	91.3	33	3,013	3,103
	2. ZC86256	272 MF	0.03	8				
	3. ZC86343	1,406 SF	0.12	169	72.6	28	2,033	2,459
		725 MF	0.03	22				
	4. SP1	637 SF	0.12	76				
		4,763 MF	0.03	143				
	TOTAL			426				
HART SENIOR HIGH SCHOOL								
	1. ZC85500	250 MF	0.06	15	174.4	28	4,883	5,734
	2. ZC86256	272 MF	0.06	16				
	3. ZC86343	1,406 SF	0.24	337				
		725 MF	0.06	44				
	4. SP1	637 SF	0.24	153				
		4,763 MF	0.06	286				
	TOTAL			851				

(1) SOURCE: Los Angeles County Land Data Management Agency, List of Subdivisions, Zone Changes, and Plan Amendments, 2/9/87

NOTE: These are ZCs and PAS which do not have a corresponding T.T.

(2) SOURCE: LA County Inventory Report, 12/26/86.

(3) Calculated from Inventory Report, Total Demand less Existing Demand.

(4) Units in Case reduced by 193 SF DU and 180 MF DU due to overlap with TT 31158.

(5) Students calculated by utilizing the student per classroom factor, and then subtracting the students generated by the subject project.

1038-3

RESPONSE TO COMMENTS

Zone Change No. 85-628

Santa Clarita Valley, California

Prepared for:

The County of Los Angeles, California

Applicant:

SHAPELL/MONTEVERDE

Prepared By:

ENGINEERING SERVICE CORPORATION

6017 Bristol Parkway  
Culver City, CA 90230

September, 1987

Name: RTC/85-628  
Vol.: EIR-4

RESPONSE TO COMMENTS

Zone Change No. 85-628

Santa Clarita Valley, California

Prepared for:

The County of Los Angeles, California

Applicant:

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## INTRODUCTION

This "RESPONSE TO COMMENTS" document is written to address Los Angeles County and State of California agency comments concerning the Draft Environmental Impact Report prepared for Zone Change 85-628 in Santa Clarita Valley, California.

These comments and responses follow, in sequence of receipt. Copies of the commenting correspondence, as well as supplementary reports, are found in the APPENDIX following this text.

RESPONSE TO COMMENTS  
Zone Change 85-628

State Department of Food and Agriculture

Letter of 6/12/87

COMMENT:

This project does not appear to significantly affect any agricultural land currently under cultivation. If agricultural lands are affected, please let us know; otherwise, the California Department of Food and Agriculture has no comment on the DEIR.

RESPONSE:

Comment noted.

State Department of Water Resources

Letter of 5/26/87

COMMENT:

Your subject document has been reviewed by our Department of Water Resources staff. Recommendations, as they relate to water conservation and flood damage prevention, are attached.

After reviewing your report, we also would like to recommend that you further consider implementing a comprehensive program to use reclaimed water for irrigation purposes in order to free fresh water supplies for beneficial uses requiring high quality water supplies.

RESPONSE:

The Applicant will comply with appropriate California Administrative Codes, Health and Safety Codes and Government Codes to conserve water and prevent flood damage, and consider recommendations for interior and exterior water conservation measures, where applicable, as well as for flood damage prevention.

County of Los Angeles Department of Public Works

Letter of 6/4/87

COMMENT:

The geology and soils aspects of the project are approved provided that the appropriate ordinances and codes are followed.

RESPONSE:

The Applicant will comply with appropriate ordinances and codes concerning geology and soils.

COMMENT:

The information contained in the Landfill Data Table (pages 73 through 75) has been incorrectly quoted. The remaining solid waste capacity of Chiquita Canyon is not 11.5 million tons. Its correct capacity is 11.5 million cubic yards, which is equivalent to 5.3 million tons. However, the landfill permit for Chiquita Canyon has recently been expanded to allow for the disposal of 5,000 tons per day which dramatically reduces its life expectancy to 2.9 years from a previous 11.5 years. The California Waste Management Board approved this increase in tonnage on April 21, 1987.

In addition, a recently proposed legislation, AB 1489 (Friedman), attempts to prohibit use of the Sunshine Canyon Landfill by 1990. By ceasing landfill operations at Sunshine Canyon, sharp impacts on the County's solid waste capacity would be experienced. The data on solid waste in the Draft EIR should be changed to reflect the aforementioned information and the associated impacts re-evaluated.

RESPONSE:

Assembly Bill 1489, introduced by Terry Friedman in the Spring of 1987, failed to pass committee review for the current legislative term, and, therefore, does not affect the Sunshine Canyon Landfill operation.

The following is a revision of pages 73 through 75 of the Draft EIR reflecting additional information provided by comment of the County Sanitation Districts:

9. Solid Waste Disposal

Environmental Setting

The project site is located within the service areas of two landfills: Sunshine Canyon Landfill, approximately 5-1/2 miles southwest of the site and Chiquita Canyon Landfill, approximately 8-1/2 miles southwesterly of the site. A summary of conditions of the landfills is as follows:

Landfill Data\*

<u>Site</u>	<u>Current Demand (tons/day)</u>	<u>Remaining Capacity (M tons)</u>	<u>Contract Expiration Year</u>
Sunshine Canyon	6,000	8.58	1991
Chiquita Canyon	5,000	5.3	1990

The County of Los Angeles currently is proposing ten new landfill expansions and six new landfill sites to meet future demands. These plans include the proposed 217 million ton expansion of the Sunshine Canyon Landfill.

Environmental Impacts

Project related solid waste generation can be determined by applying a generation factor to the total number of project site residents. The generation factor used is an overall per capita factor used by the County of Los Angeles to estimate combined solid waste generation for residential, commercial and industrial land uses. Project related solid waste generation is shown in the following table:

---

\* Source: L.A. County Dept., Public Works, letter 6/4/87.

Solid Waste Generation

<u>No. of Dwelling Units</u>	<u>No. of Persons/DU</u>	<u>Total No. of Persons</u>	<u>Generation* Factor</u>	<u>Total Generation</u>
5,000	2.8	14,000	1.825 tons/ capita/year	25,550 tons/year

The Proposed Project will generate approximately 25,550 tons of solid waste per year at buildout and would not individually impact remaining capacities at the two landfills.

Cumulative impacts of the subject project and other proposed developments within the Santa Clarita Valley were estimated. Related projects in the service area will generate approximately 226,194 tons per year of solid waste. Combining the existing (1985) solid waste generation of 98,400 tons per year for the Santa Clarita Valley, plus Proposed Project generated solid wastes would result in the cumulative generation of 350,144 tons per year (1,000 tons/day), or approximately 9% of the combined daily capacity of the two landfills - 11,000 tons/day.

COMMENT:

We do not agree with the statement that the project will not cause any significant impacts to solid waste disposal facilities. The waste generated from the proposed project will restrict the County's severely limited capacity even further. This depletion of landfill capacity is a primary concern and all mitigation measures should be carefully investigated. This investigation

---

\* Source: Alice Chung, County of Los Angeles Dept. of Public Works, Solid Waste Management Section, February, 1987.

should include alternatives to landfilling and information should be provided illustrating what measures are to be employed to ensure the implementation of said alternatives.

RESPONSE:

The Proposed Project, and existing demands plus related area cumulative projects will generate solid wastes amounting to approximately 9% of the combined daily solid waste accepted at the Sunshine and Chiquita Canyon landfills. The Proposed Project, individually, demands only 0.6% of the combined daily solid waste accepted at the landfills. Therefore, the Proposed Project adds incrementally to the regional solid waste management and disposal situation.

Solid waste management is a regional concern. The following volume reduction alternatives will minimize the need for future landfill expansions:

- waste incineration
- source separation
- glass container deposits
- recycling projects
- refuse derived fuels utilization
- wastes to energy projects

COMMENT:

The Draft EIR fails to address the impacts on hazardous waste management caused by the proposed project. There are currently no hazardous waste disposal sites in the County, and adequate treatment facilities for such wastes are not available.

State law prohibits land disposal of untreated hazardous waste by May 8, 1990, and if there is a lack of adequate facilities to handle the waste, then

development of new projects which would generate hazardous waste should be prohibited unless the proponents of these projects are required to provide for onsite treatment of such waste. Therefore, any impacts relating to hazardous waste management must be carefully detailed in the report and specific mitigation measures provided.

RESPONSE:

The Proposed Project is a residential use proposal with commercial uses to serve residential needs. The Proposed Project is not a major generator of hazardous wastes. However, if construction of the Proposed Project generates significant hazardous wastes, disposal and/or mitigation will be conducted in accordance with effective provisions of California Administrative Code, Title 22.\*\*

COMMENT:

Although the Draft EIR states that the sewage plant site has capacity for expansion, no further information is provided to substantiate this statement (Appendix 1, page 15). More information should be included in the final report regarding sewage disposal to ensure adequate treatment capacity is available. The impacts of the sewage generated from the project should be addressed and mitigation measures proposed as necessary. Any modifications or connections to the sewer system under the jurisdiction of the County will require prior approval from this Department.

RESPONSE:

The Proposed Project will generate approximately 1 million gallons per day (MGD) of sewage. Existing Districts No. 26 and 32 sewage flows of approximately 9.5 MGD,\* plus Project generated flows of 1 MGD, result in total flows of 10.5 MGD - well within the existing Districts' treatment capacity of 12.5 MGD. Existing, plus Project, plus related area projects sewage generation would result in cumulative flows of approximately 20.7 MGD.

---

\* Development Monitoring System (DMS), Service Provider Report of 4/2/86, Los Angeles County Sanitation Districts No. 26 and 32.

\*\* County of Los Angeles, Department of Health Services Contact, 9/9/87.

Practical, physical site capacities in Sanitation Districts No. 26 and No. 32 for future plant expansion will accommodate 21 million gallons per day of sewage flows. This future plant capacity will meet the treatment demands of the Proposed Project at buildout. Applicant connection fees for plant expansion mitigate project sewage impacts.

Project connection fees will be deposited into a capital improvement fund to pay for new facilities and expansion required in the Districts.

COMMENT:

The Draft EIR provides little information on the project's effect on water quality (Appendix 1, page 9). If there are to be any impacts caused by developments in the area that may affect the water quality of storm water runoff, they should be addressed and mitigated in the Final EIR.

RESPONSE:

The Proposed Project will have no significant effect upon water quality. No septic tank disposal of sewage is proposed, and site storm water runoff will be settled or screened of debris and suspended solids and reduced in volume by proposed drainage facilities prior to entering area drainage systems.

COMMENT:

We do not agree with the report (page 15 of Appendix 4) that this project will generate 29,980 trips per day. The traffic study did not include the traffic generated by 21.9 acres of commercial use, which we believe would generate an additional 12,000 vehicle trips per day and significantly increase the impacts to the roadway system.

Also, we do not agree with the report (pages 13-14 of Appendix 4) that Santa Catarina Road from Plum Canyon Road to Soledad Canyon Road will be constructed by the first phase completion date of 1991.

RESPONSE:

Santa Catarina Road from Plum Canyon Road to Soledad Canyon Road is projected for construction by the first phase completion date of 1991. Two projects south of the Proposed Project within the Route 126 Bridge and Major Thoroughfare Construction Fee District (Tract 31236 and Tract 31803 are pending) will construct Santa Catarina Road from Soledad Canyon Road to the Proposed Project site boundary connecting to Plum Canyon Road. These projects are projected for completion by the project Applicants, by or prior to the Proposed Project, first phase completion date of 1991.

COMMENT:

We request a revised traffic analysis to be submitted which includes the commercial trips along with the traffic generated by the dwelling units. The traffic study should not only analyze the key intersections, but also access to the property, including the need for left-turn pockets at the access roads, and traffic signals where needed. We consider mid-range Level of Service D or volume to capacity ratio of 0.85 as the point beyond which mitigation measures are required for new development.

RESPONSE:

A revised traffic study for the Proposed Project by Barton-Aschman, Assoc. including commercial trips and site access analyses is contained in the APPENDIX that follows.

Trip generation from the approximately 150,000 net sq. ft. of commercial use in the Proposed Project will generate approximately 10,005 vehicle trips per day (155 a.m. peak trips and 900 p.m. peak trips). These trips will occur in the Phase 2 full buildout period of the Proposed Project. The commercial use is proposed to primarily serve the residents within the project site and, to a very limited extent, serve the residential development surrounding the Proposed Project.

With the added commercial trips all of the key intersections will operate at County acceptable levels (level of service, LOS "D" with volume/capacity ratio 0.85 or less) during the morning peak hour under the 1996 full buildout. However, enough local traffic will still use three of the key intersections during the afternoon peak hour to cause slightly congested conditions. These are the Bouquet/Soledad, Soledad/Whites Canyon and Soledad/Sierra Highway intersections. The intersections will continue to operate acceptably (0.85 or less) during the morning peak hour even at full buildout. The three aforementioned already congested afternoon intersections will become slightly more congested with V/C

ratios ranging from 0.90 to 0.93 (LOS "E"). The Bouquet Canyon/Seco Canyon intersection will also deteriorate to a V/C ratio of 0.89 (LOS "D"). However, with mitigation including: westbound two through lanes and one shared through and right-turn lane; southbound one right-turn lane, one shared right and left-turn lane, and one left-turn lane; and a three-phase signal; the Bouquet Canyon/Seco Canyon intersection returns to acceptable (0.85 or less) levels of service. TABLE 2 shows the intersection operating conditions upon Proposed Project buildout, with appropriate mitigation measures.

The Proposed Project's residential and commercial developments are located along Plum Canyon Road and Whites Canyon Road. FIGURE 1 illustrates these locations and the access to property numbered one through ten. As shown, the residential development will be distributed in the following manner:

	<u>Trips per Day</u>
● 1,200 units: north of Plum Canyon Road	780
● 3,250 units: south of Plum Canyon Road	2,110
● 300 units: north of Whites Canyon Road	200
● 250 units: south/east of Whites Canyon Road	160
● 150,000 sq. ft. commercial: north of Plum Canyon Road	<u>900</u>
TOTAL	4,150

TABLE 1 shows the configurations and the treatments that are likely to be required at the access points numbered on FIGURE 1. Locations that would require exclusive left-turn lanes are identified along with the type of control. These are based on turning movements from and into the groups of development.

# TABLE 1

## CONFIGURATION AT ACCESS TO PROPERTY

Intersection	Description
1	<ul style="list-style-type: none"> <li>o Signalized 2 phases.</li> <li>o EB: 2 TH + 1 TH/RT + 1 RT; WB: 2 TH + 1 TH/LT;</li> <li>o NB: 2 LT + 1 RT.</li> </ul>
2	<ul style="list-style-type: none"> <li>o Stop-sign controlled southbound.</li> <li>o EB: 2 TH + 1 TH/LT + 1 LT; WB: 3 TH + 1 RT;</li> <li>o SB: 1 RT + 1 RT/LT + 1 LT.</li> </ul>
3	<ul style="list-style-type: none"> <li>o Stop-sign controlled southbound.</li> <li>o EB: 3 TH + 1 LT; WB: 3 TH + 1 RT; SB: 1 LT + 1 RT</li> </ul>
4 through 8	<ul style="list-style-type: none"> <li>o Stop-sign controlled at access from project.</li> <li>o EB: 2 TH; WB: 2 TH; exit from project 1 lane.</li> </ul>
9	<ul style="list-style-type: none"> <li>o Stop-sign controlled at access from project.</li> <li>o WB: 1 RT + 1 LT; NB: 2 TH + 1 RT; SB: 2 TH + 1 RT.</li> </ul>
10	<ul style="list-style-type: none"> <li>o Signalized 2 phases.</li> <li>o EB: 2 RT + 1 LT; NB: 2 TH + 1 TH/LT = 1 LT;</li> <li>o SB: 3 TH + 1 RT.</li> </ul>
Plum/Whites	<ul style="list-style-type: none"> <li>o 3-way stop-sign controlled.</li> </ul>

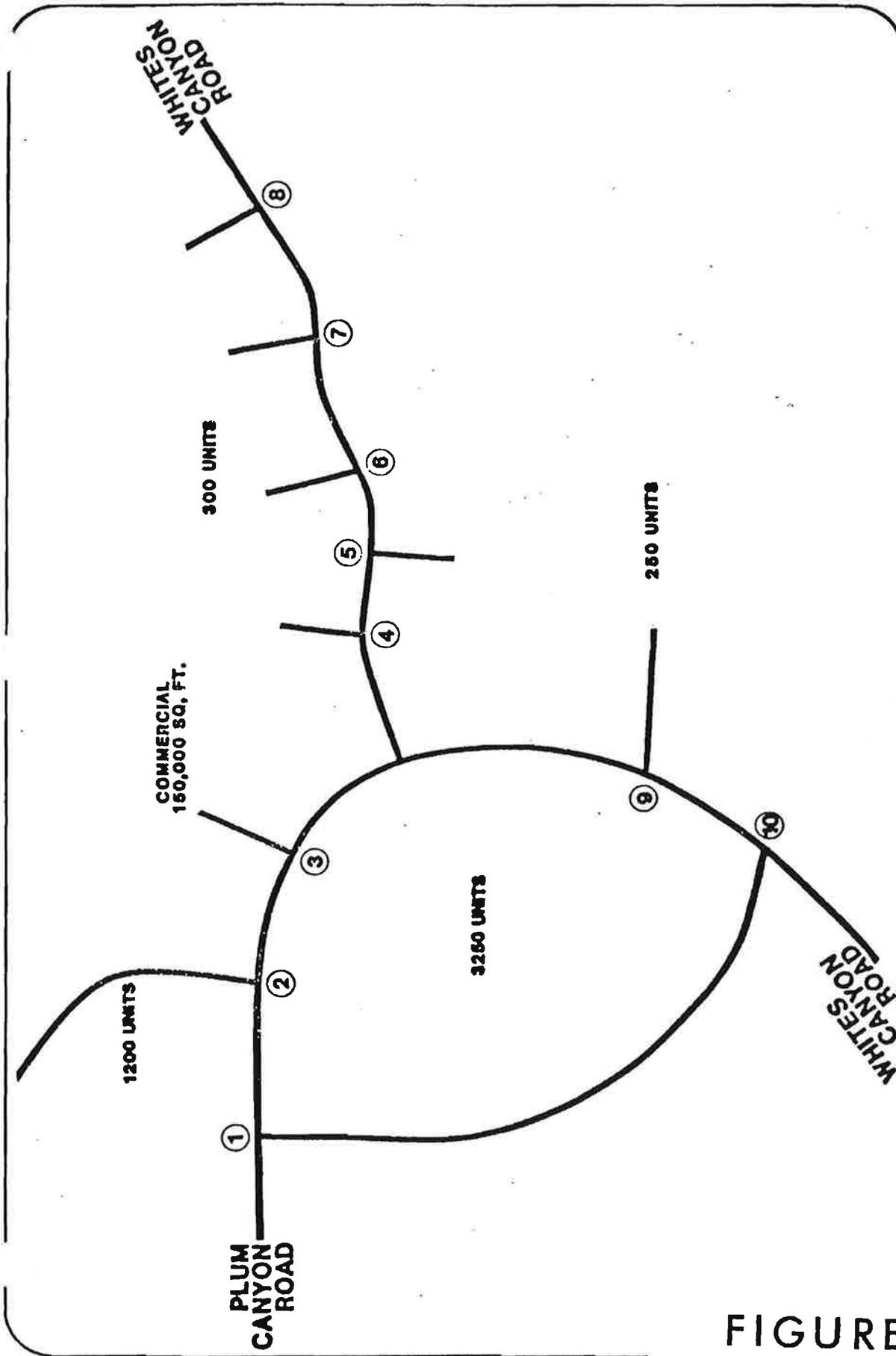


FIGURE 1

LOCATION OF DEVELOPMENT AND ACCESS TO PROPERTY

TABLE 2

INTERSECTION OPERATING CONDITIONS

ULTIMATE ROADWAY SYSTEM

Intersection	Existing		1996 Background (1)		1996 Background Project Buildout					
	AM V/C	PM LOS	AM V/C	PM LOS	AM V/C	PM LOS				
Bouquet/Plum Canyon	0.24	A	0.54	A(2)	0.60	A(2)	0.72	C(2)		
Bouquet/Seco Canyon	1.02	F	0.72	C	0.83	D	0.74	C	0.89	D
Bouquet/Soledad Canyon	0.81	D	0.65	B	0.91	E(2)	0.82(3)	D	0.80(3)	D
Magic Mountain/Valencia	0.57	A	0.56	A	0.68	B	0.65	B	0.93	E(2)
Soledad/Whites Canyon	0.74	C	0.74	C(2)	0.88	D(2)	0.58	A	0.69	B
Soledad Canyon/Sierra Hwy.	0.71	C	0.72	C	0.88	D	0.81	D(2)	0.93	E(2)
							0.73	C	0.90	D

NOTES:

1. Includes Phase 1 project traffic.
2. Includes roadway changes:

- Restripe the existing westbound approach for one left turn lane, one through/left lane, and one right turn lane.
- Restripe existing westbound approach for two through lanes and one through/right lane.
- Add additional westbound left-turn lane.
- Restripe northbound approach for one left lane, two through lanes, and one through/right lane.
- With addition of a northbound through/left lane.

3. Westbound two through lanes and one shared through and right-turn lane; southbound one right-turn lane, one shared right and left-turn lane, and one left-turn lane. Intersection to have three-phase signal.

COMMENT:

The drainage and grading aspects of the project are approved provided the appropriate ordinances and codes are followed.

RESPONSE:

The Applicant will comply with appropriate ordinances and codes concerning drainage and grading of the Proposed Project.

Santa Clarita Water Company

Letter of 5/21/87

COMMENT:

The Santa Clarita Water Company has reviewed the referenced draft Environmental Impact Report (EIR) and feels that the water supply issues have been reasonably explained although there are a few figures that may be questionable. This utility has had the proposed project of approximately 5,000 units in its master plan projection since 1980.

We still feel that we will be able to serve the orderly growth of the project without significant effect on our ability to provide service to other customers.

RESPONSE:

Comment noted.

William S. Hart Union High School District

Letter of 5/18/87

COMMENT:

The Wm. S. Hart Union High School District is opposed to the proposed zone change and strongly urges the project application be rejected.

As stated in the draft EIR, the project alone will create a demand for over 1,000 student spaces which are not available. Further, the project and related projects will generate over 9,000 unhoused students requiring more than 300 classrooms (Page 62).

The new DMS of the County of Los Angeles requires that projects be denied if the impact on services cannot be mitigated (except in certain cases of overriding conditions). This project offers nothing in the way of mitigation.

References to negotiations, AB 2926 fees, possible Mello-Roos districts, and "other measures" have been stated by others and there are still no new classrooms. This school district opposes the project and the zone change request and will continue to do so until an acceptable mitigation arrangement is in place and the requirements of the DMS (as applied to schools) are satisfied.

RESPONSE:

The Applicant will pay all developer fees required under current law. If additional fees are approved prior to recordation, the Applicant will pay as required.

The Applicant realizes that on 7/2/87 the voters passed a measure authorizing school assessment fees of \$3,439.00 for the Wm. S. Hart Union High School District; however, the measure is being challenged in court. If the school assessment measure is upheld, the Applicant will pay fees as required by the court decision.

The Applicant will comply with the County of Los Angeles Development Monitoring System (DMS) analysis for "urban expansion" areas, whereby, project impacts must demonstrate mitigation to a level of insignificance.

## APPENDIX

# Memorandum

Mr. Glenn Stober  
State Clearinghouse  
Office of Planning and Research  
1400 Tenth Street, Room 121  
Sacramento, California 95814

Date : June 12, 1987

Place : Sacramento

**RECEIVED**

**JUN 23 1987**

**ENGINEERING SERVICE CORPORATION**

From : Department of Food and Agriculture --1220 N Street, Room 104  
Sacramento, CA 95814

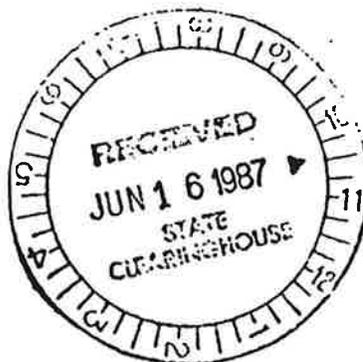
Subject : SCH No. -87010614 *95032613*

Thank you for the opportunity to comment on the Draft Environmental Impact Report (DEIR) for Los Angeles County Zone Case 85-628.

This project does not appear to significantly affect any agricultural land currently under cultivation. If agricultural lands are affected, please let use know, otherwise, the California Department of Food and Agricultural has no comment on the DEIR.

*Martha Neuman*

Martha Neuman  
Research Assistant  
(916) 322-5227



# Memorandum

MAY 26 1987

**To :** 1. Gordon F. Snow, Ph.D.  
 Assistant Secretary for Resources  
 2. County of Los Angeles  
 Regional Planning  
 320 W. Temple Street  
 Los Angeles, CA 90012  
 Attention: Kerwin Chih  
**From :** Department of Water Resources  
 Los Angeles, CA 90055  
**Subject :** DEIR, for Canyon Country, Z.C. 85-628, SCH 86032613

Your subject document has been reviewed by our Department of Water Resources staff. Recommendations, as they relate to water conservation and flood damage prevention, are attached.

After reviewing your report, we also would like to recommend that you further consider implementing a comprehensive program to use reclaimed water for irrigation purposes in order to free fresh water supplies for beneficial uses requiring high quality water supplies.

For further information, you may wish to contact John Pariewski at (213) 620-3951.

Thank you for the opportunity to review and comment on this report.

Sincerely,

Charles R. White, Chief  
Planning Branch  
Southern District

Attachments



**DEPARTMENT OF WATER RESOURCES RECOMMENDATIONS  
FOR WATER CONSERVATION AND WATER RECLAMATION**

To reduce water demand, implement the water conservation measures described here.

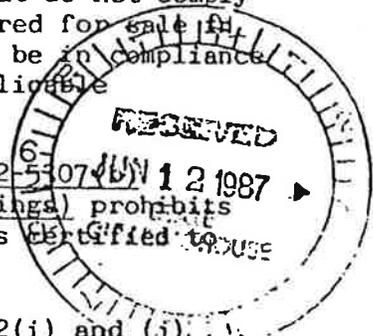
**Required**

The following State laws require water-efficient plumbing fixtures in structures:

- o Health and Safety Code Section 17921.3 requires low-flush toilets and urinals in virtually all buildings as follows:

"After January 1, 1983, all new buildings constructed in this state shall use water closets and associated flushometer valves, if any, which are water-conservation water closets as defined by American National Standards Institute Standard A112.19.2, and urinals and associated flushometer valves, if any, that use less than an average of 1-1/2 gallons per flush. Blowout water closets and associated flushometer valves are exempt from the requirements of this section."

- o Title 20, California Administrative Code Section 1604(f) (Appliance Efficiency Standards) establishes efficiency standards that give the maximum flow rate of all new showerheads, lavatory faucets, and sink faucets, as specified in the standard approved by the American National Standards Institute on November 16, 1979, and known as ANSI A112.18.1M-1979.
- o Title 20, California Administrative Code Section 1606(b) (Appliance Efficiency Standards) prohibits the sale of fixtures that do not comply with regulations. No new appliance may be sold or offered for sale in California that is not certified by its manufacturer to be in compliance with the provisions of the regulations establishing applicable efficiency standards.
- o Title 24 of the California Administrative Code Section 2-5107.4(b) (California Energy Conservation Standards for New Buildings) prohibits the installation of fixtures unless the manufacturer has certified to the CEC compliance with the flow rate standards.
- o Title 24, California Administrative Code Sections 2-5352(i) and (j) address pipe insulation requirements, which can reduce water used before hot water reaches equipment or fixtures. These requirements apply to steam and steam-condensate return piping and recirculating hot water piping in attics, garages, crawl spaces, or unheated spaces other than between floors or in interior walls. Insulation of water-heating systems is also required.



- o Health and Safety Code Section 4047 prohibits installation of residential water softening or conditioning appliances unless certain conditions are satisfied. Included is the requirement that, in most instances, the installation of the appliance must be accompanied by water conservation devices on fixtures using softened or conditioned water.
- o Government Code Section 7800 specifies that lavatories in all public facilities constructed after January 1, 1985, be equipped with self-closing faucets that limit flow of hot water.

**To be implemented where applicable**

Interior:

1. Supply line pressure: Water pressure greater than 50 pounds per square inch (psi) be reduced to 50 psi or less by means of a pressure-reducing valve.
2. Drinking fountains: Drinking fountains be equipped with self-closing valves.
3. Hotel rooms: Conservation reminders be posted in rooms and restrooms.\* Thermostatically controlled mixing valve be installed for bath/shower.
4. Laundry facilities: Water-conserving models of washers be used.
5. Restaurants: Water-conserving models of dishwashers be used or spray emitters that have been retrofitted for reduced flow. Drinking water be served upon request only.\*
6. Ultra-low-flush toilets: 1-1/2-gallon per flush toilets be installed in all new construction.

Exterior:\*

1. Landscape with low water-using plants wherever feasible.
2. Minimize use of lawn by limiting it to lawn-dependent uses, such as playing fields. When lawn is used, require warm season grasses.
3. Group plants of similar water use to reduce overirrigation of low-water-using plants.
4. Provide information to occupants regarding benefits of low-water-using landscaping and sources of additional assistance.

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\*The Department of Water Resources or local water district may aid in developing these materials or providing other information.

5. Use mulch extensively in all landscaped areas. Mulch applied on top of soil will improve the water-holding capacity of the soil by reducing evaporation and soil compaction.
6. Preserve and protect existing trees and shrubs. Established plants are often adapted to low-water-using conditions and their use saves water needed to establish replacement vegetation.
7. Install efficient irrigation systems that minimize runoff and evaporation and maximize the water that will reach the plant roots. Drip irrigation, soil moisture sensors, and automatic irrigation systems are a few methods of increasing irrigation efficiency.
8. Use pervious paving material whenever feasible to reduce surface water runoff and to aid in ground water recharge.
9. Grade slopes so that runoff of surface water is minimized.
10. Investigate the feasibility of using reclaimed waste water, stored rainwater, or grey water for irrigation.
11. Encourage cluster development, which can reduce the amount of land being converted to urban use. This will reduce the amount of impervious paving created and thereby aid in ground water recharge.
12. Preserve existing natural drainage areas and encourage the incorporation of natural drainage systems in new developments. This aids ground water recharge.
13. To aid in ground water recharge, preserve flood plains and aquifer recharge areas as open space.

## FLOOD DAMAGE PREVENTION

In flood-prone areas, flood damage prevention measures required to protect a proposed development should be based on the following guidelines:

1. It is the State's policy to conserve water; any potential loss to ground water should be mitigated.
2. All building structures should be protected against a 100-year flood.
3. In those areas not covered by a Flood Insurance Rate Map or Flood Boundary and Floodway Map, issued by the Federal Emergency Management Agency, the 100-year flood elevation and boundary should be shown in the Environmental Impact Report.
4. At least one route of ingress and egress to the development should be available during a 100-year flood.
5. The slope and foundation designs for all structures should be based on detailed soils and engineering studies, especially for hillside developments.
6. Revegetation of disturbed or newly constructed slopes should be done as soon as possible (utilizing native or low-water-using plant material).
7. The potential damage to the proposed development by mudflow should be assessed and mitigated as required.
8. Grading should be limited to dry months to minimize problems associated with sediment transport during construction.



COUNTY OF LOS ANGELES  
DEPARTMENT OF PUBLIC WORKS

1540 ALCAZAR STREET  
LOS ANGELES, CALIFORNIA 90033  
Telephone : (213) 226-8111

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:  
P.O. BOX 4089  
LOS ANGELES, CALIFORNIA 90061

IN REPLY PLEASE  
REFER TO FILE:

P-4  
1.21

June 4, 1987

Mr. Norman Murdoch  
Planning Director  
Department of Regional Planning  
County of Los Angeles  
1340 Hall of Records  
Los Angeles, CA 90012

Attention Mr. Lee Stark

RESPONSE TO AN ENVIRONMENTAL IMPACT REPORT (EIR)

Thank you for the opportunity to provide comments on the Draft EIR for the proposed Zone Case No. 85-628. We have reviewed the report and have the following comments.

Geology and Soils

The geology and soils aspects of the project are approved provided that the appropriate ordinances and codes are followed.

Solid Waste

The information contained in the Landfill Data Table (pages 73 through 75) has been incorrectly quoted. The remaining solid waste capacity of Chiquita Canyon is not 11.5 million tons. Its correct capacity is 11.5 million cubic yards, which is equivalent to 5.3 million tons. However, the landfill permit for Chiquita Canyon has recently been expanded to allow for the disposal of 5,000 tons per day which dramatically reduces its life expectancy to 2.9 years from a previous 11.5 years. The California Waste Management Board approved this increase in tonnage on April 21, 1987.

In addition, a recently proposed legislation, AB 1489 (Friedman), attempts to prohibit use of the Sunshine Canyon Landfill by 1990. By ceasing landfill operations at Sunshine Canyon, sharp impacts on the County's solid waste capacity would be experienced. The data on solid waste in the Draft EIR should be changed to reflect the aforementioned information and the associated impacts re-evaluated.

We do not agree with the statement that the project will not cause any significant impacts to solid waste disposal facilities. The waste generated from the proposed project will restrict the County's severely limited capacity even further. This depletion of landfill capacity is a primary concern and all mitigation measures should be carefully investigated. This investigation should include alternatives to landfilling and information should be provided illustrating what measures are to be employed to ensure the implementation of said alternatives.

#### Hazardous Waste

The Draft EIR fails to address the impacts on hazardous waste management caused by the proposed project. There are currently no hazardous waste disposal sites in the County, and adequate treatment facilities for such wastes are not available.

State law prohibits land disposal of untreated hazardous waste by May 8, 1990, and if there is a lack of adequate facilities to handle the waste, then development of new projects which would generate hazardous waste should be prohibited unless the proponents of these projects are required to provide for on-site treatment of such waste. Therefore, any impacts relating to hazardous waste management must be carefully detailed in the report and specification mitigation measures provided.

#### Sewage

Although the Draft EIR states that the sewage plant site has capacity for expansion, no further information is provided to substantiate this statement (Appendix 1, page 15). More information should be included in the final report regarding sewage disposal to ensure adequate treatment capacity is available. The impacts of the sewage generated from the project should be addressed and mitigation measures proposed as necessary. Any modifications or connections to the sewer system under the jurisdiction of the County will require prior approval from this Department.

#### Water Quality

The Draft EIR provides little information on the project's effect on water quality (Appendix 1, page 9). If there are to be any impacts caused by developments in the area that may affect the water quality of storm water runoff, they should be addressed and mitigated in the Final EIR.

Traffic/Circulation

We do not agree with the report (page 15 of Appendix 4) that this project will generate 29,980 trips per day. The traffic study did not include the traffic generated by 21.9 acres of commercial use, which we believe would generate an additional 12,000 vehicle trips per day and significantly increase the impacts to the roadway system.

Also, we do not agree with the report (pages 13-14 of Appendix 4) that Santa Catarina Road from Plum Canyon Road to Soledad Canyon Road will be constructed by the first phase completion date of 1991.

We request a revised traffic analysis be submitted which includes the commercial trips along with the traffic generated by the dwelling units. The traffic study should not only analyze the key intersections, but also access to the property, including the need for left-turn pockets at the access roads, and traffic signals where needed. We consider mid-range Level of Service D or volume to capacity ratio of 0.85 as the point beyond which mitigation measures are required for new development.

Should you have any questions, please contact our Traffic Studies Unit at (213) 226-8381.

Drainage and Grading

The drainage and grading aspects of the project are approved provided the appropriate ordinances and codes are followed.

If you have any questions regarding the environmental reviewing process of this Department, please contact Mr. Maged El-Rabaa of our Planning Division at (213) 226-4369.

Very truly yours,

T. A. TIDEMANSON  
Director of Public Works



N. C. DATWYLER  
Assistant Deputy Director  
Planning Division

MR:rg/MRNM

ANTA CLARITA WATER COMPANY



22722 WEST SOLEDAD CANYON ROAD, BOX B • SAUGUS, CA. 91350-0050 • 805-259-2737

'87 MAY 27 AM 10 43

DEPARTMENT

RECEIVED

MAY 28 1987

ENGINEERING SERVICE CORPORATION

May 21, 1987

Department of Regional Planning  
320 West Temple Street  
Los Angeles, California 90012

Attn: Mr. Lee Stark, Section Head  
Impact Analysis Section

Re: Draft Environmental Impact Report (EIR)  
Zone Change 85-628

Dear Mr. Stark:

The Santa Clarita Water Company has reviewed the referenced draft Environmental Impact Report (EIR) and feels that the water supply issues have been reasonably explained although there are a few figures that may be questionable. This utility has had the proposed project of approximately 5,000 units in its master plan projection since 1980.

We still feel that we will be able to serve the orderly growth of the project without significant effect on our ability to provide service to other customers.

Very truly yours,

W. J. Manetta, Jr.  
President

WJM/naf

# WM. S. HART UNION HIGH SCHOOL DISTRICT

24823 NORTH WALNUT STREET  
NEWHALL, CALIFORNIA 91321  
(805) 259-5440

'87 MAY 21 PM 3 21

REGIONAL PLANNING  
DEPARTMENT

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MAY 28 1987

ENGINEERING SERVICE  
CORPORATION

May 18, 1987

Mr. Lee Stark  
Impact Analysis Section  
L.A. County Department of  
Regional Planning  
320 Temple Street  
Los Angeles, Ca 90012

Re: Draft EIR Zone Change  
85-628

Dear Mr. Stark:

The Wm. S. Hart Union High School District is opposed to the proposed zone change and strongly urges the project application be rejected.

As stated in the draft EIR, the project alone will create a demand for over 1,000 student spaces which are not available. Further, the project and related projects will generate over 9,000 unhousted students requiring more than 300 classrooms (Page 62).

The new DMS of the County of Los Angeles requires that projects be denied if the impact on services cannot be mitigated (except in certain cases of overriding conditions). This project offers nothing in the way of mitigation.

References to negotiations, AB 2926 fees, possible Mello-Roos districts, and "other measures" have been stated by others and there are still no new classrooms. This school district opposes the project and the zone change request and will continue to do so until an acceptable mitigation arrangement is in place and the requirements of the DMS (as applied to schools) are satisfied.

Very truly yours,



James Bown, Ed.D.  
Director  
Support Services

JB:ck

**RECEIVED**

**AUG 3 1987**

**ENGINEERING SERVICE  
CORPORATION**

**TRAFFIC IMPACT ANALYSIS**

**FOR**

**TENTATIVE TRACT NO. 33987**

**Prepared For:**

**SHAPELL INDUSTRIES**

**Beverly Hills, California**

**Prepared By:**

**BARTON-ASCHMAN ASSOCIATES, INC.**

**Revised July, 1987**

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1.

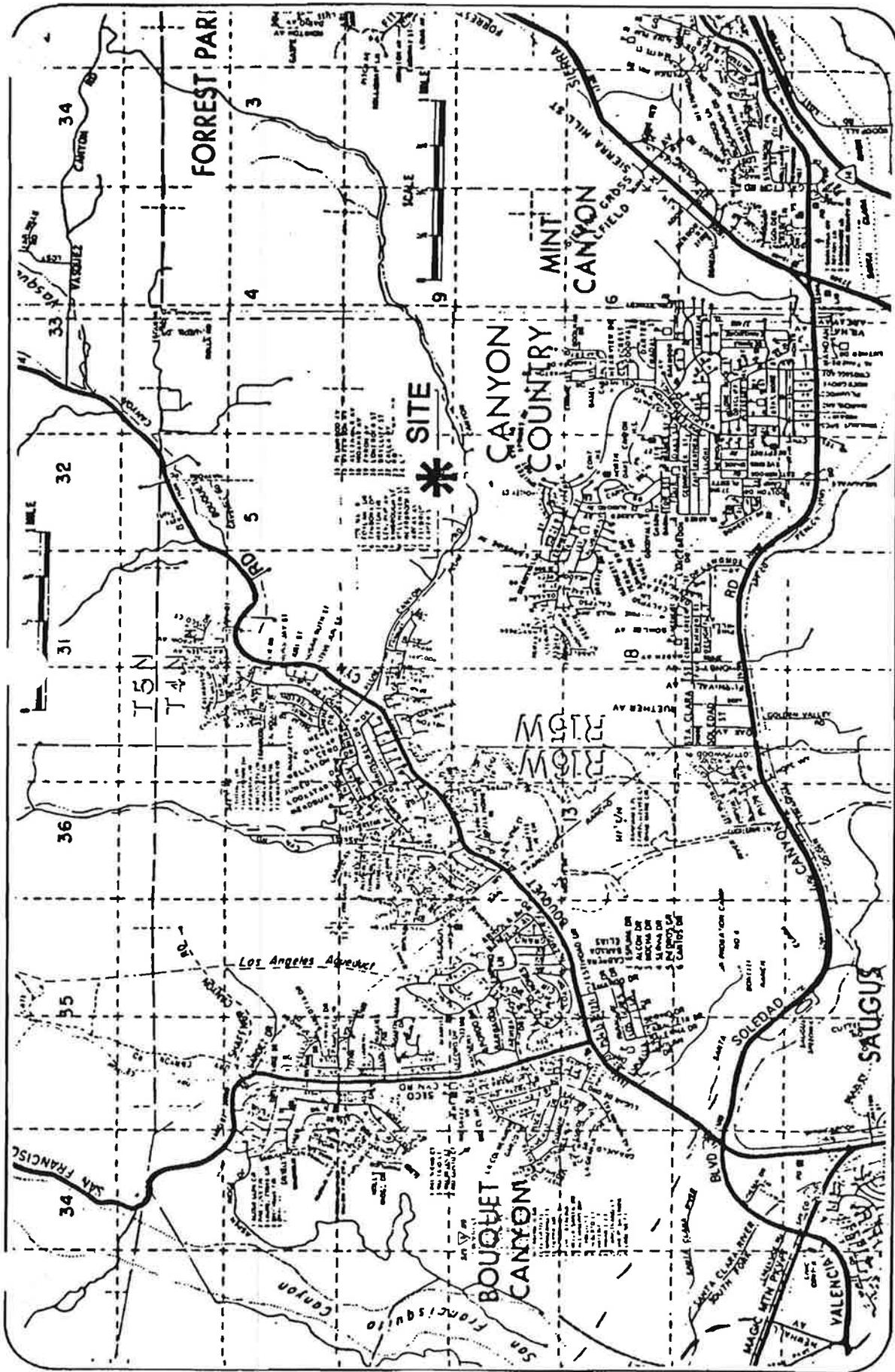
#### INTRODUCTION

Barton-Aschman Associates, Inc., was retained to conduct the traffic impact analysis for the proposed residential development on Tentative Tract No. 33987. The project site is located on Plum Canyon Road east of Bouquet Canyon Road in the Bouquet Canyon area of Los Angeles County. Figure 1 illustrates the location of the project site.

Current plans call for construction of 500 single-family homes, 1,100 townhouses, 1,650 condominiums, and 1,750 apartments. For the purposes of this study, half of these units were assumed to be built during the first phase of development by 1991 with the remainder constructed as conditions permit. The second phase of the project also includes 150,000 square feet of commercial use primarily serving the project and to a marginal extent serving the residential development in very close proximity of the project.

#### STUDY PROCEDURE

The following analyses were performed to determine the site traffic impacts associated with the project:



**SITE LOCATION**

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FIGURE 1

1. *Data Collection.* A thorough field reconnaissance of the site and the surrounding roadway network was conducted. Traffic count data, projected roadway improvement plans, and related project information were obtained from Los Angeles County personnel. Barton-Aschman conducted peak-hour turning movement counts at intersections where the County did not have sufficient data.
2. *Directional Distribution.* The direction of vehicle trips to and from the site and other related projects was derived based upon the results of an origin-destination survey conducted by Barton-Aschman Associates, Inc. Previously accepted traffic impact reports were used to refine this analysis.
3. *Traffic Generation and Assignment.* The traffic that would be generated by the proposed development as well as traffic generated by related projects in the Bouquet Canyon area was calculated and assigned to the area roadway network in the vicinity of the site.
4. *Capacity Analysis.* Capacity calculations were performed for the key intersections in the Bouquet Canyon area to evaluate their ability to accommodate future traffic volumes.
5. *Recommended Roadway Improvements.* Based upon the analyses performed in the preceding phases, improvements to the roadway system were recommended as necessary.

The results of these analyses are described in the following chapters.

2.

EXISTING CONDITIONS

This chapter describes the existing roadway and traffic conditions near the project site.

EXISTING ROADWAY SYSTEM

The key roadways servicing the site area are as follows:

Bouquet Canyon Road. Running in a southwest-to-northeast direction, Bouquet Canyon Road has a cross section that varies between six lanes just north of Soledad Canyon Road to two lanes north of Plum Canyon Road. This major arterial has signals at intersections with Soledad Canyon, Newhall Ranch, and Seco Canyon roads. South of Plum Canyon Road, Bouquet Canyon Road carries approximately 15,000 vehicles on an average weekday while farther south (near Soledad Canyon Road) it carries over 44,000 vehicles on an average weekday.

Seco Canyon Road. Seco Canyon Road is a north-south four-lane collector that ends at its intersection with Bouquet Canyon Road. It carries approximately 17,000 vehicles during an average weekday.

Soledad Canyon Road. Soledad Canyon Road is a major east-west arterial serving the Bouquet Canyon area. This facility has a signal at Whites Canyon Road in addition to the one at Bouquet Canyon Road and carries between 29-32,000 vehicles on the average weekday. The cross section of Soledad Canyon Road varies from four lanes near Bouquet Canyon Road to six lanes near Whites Canyon Road.

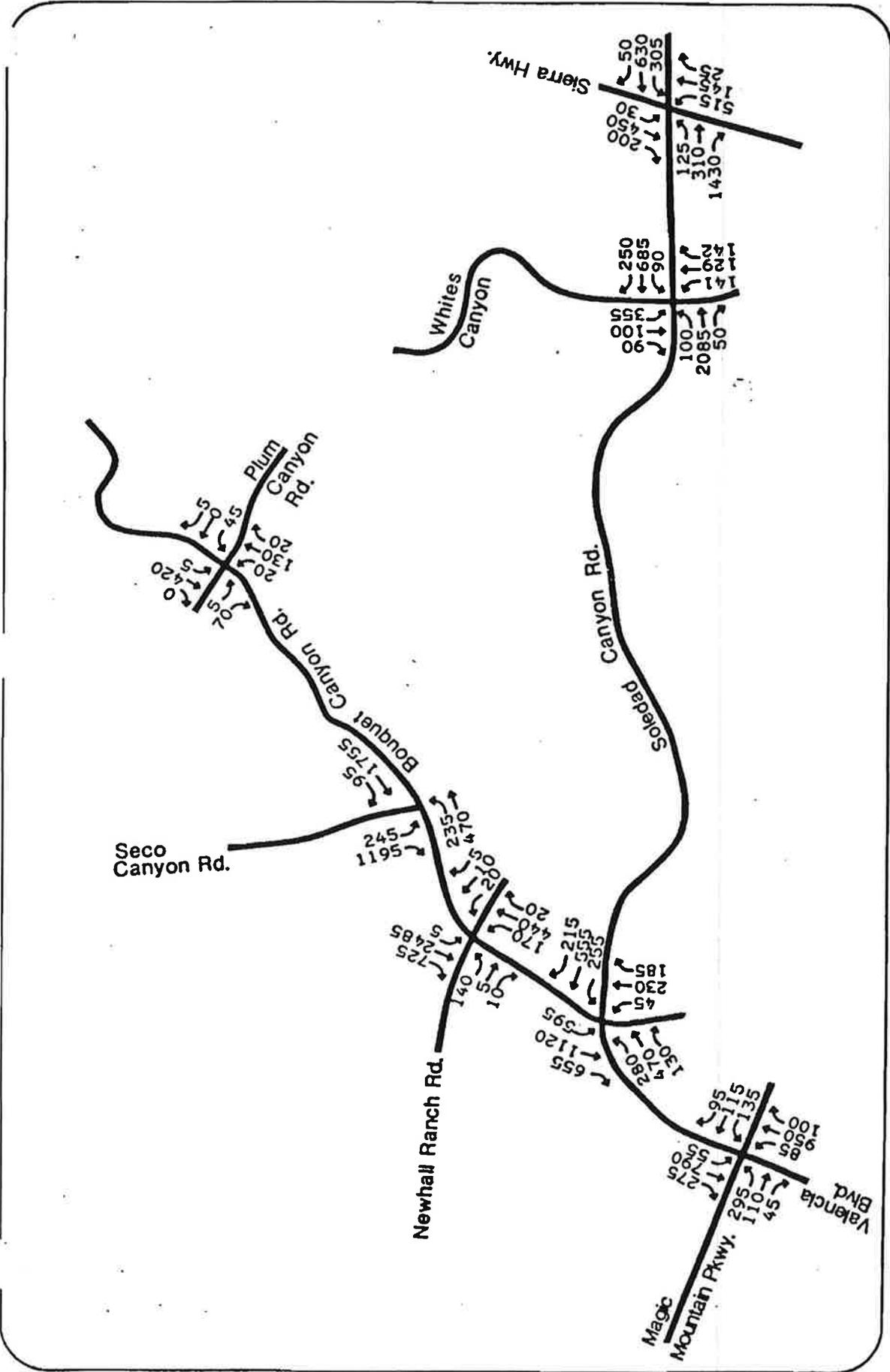
Whites Canyon Road. Whites Canyon Road runs in a north-south direction and presently has a four-lane cross section. On an average day, about 22,000 vehicles use this roadway.

Valencia Boulevard. Valencia Boulevard is a major east-west collector street serving the project area and usually carries between 33,000 and 42,000 vehicles per day depending on location. This four-lane divided facility begins at I-5 on the western end and ends at Bouquet Canyon Road at the eastern end where it turns into Soledad Canyon Road.

#### **EXISTING TRAFFIC VOLUMES**

Based on discussions with the County of Los Angeles, seven existing intersections were identified as receiving potentially significant traffic impacts due to the proposed project. These intersections are:

- o Bouquet Canyon Road/Plum Canyon Road;
- o Bouquet Canyon Road/Seco Canyon Road;
- o Bouquet Canyon Road/Newhall Ranch Road;
- o Bouquet Canyon Road/Soledad Canyon Road;

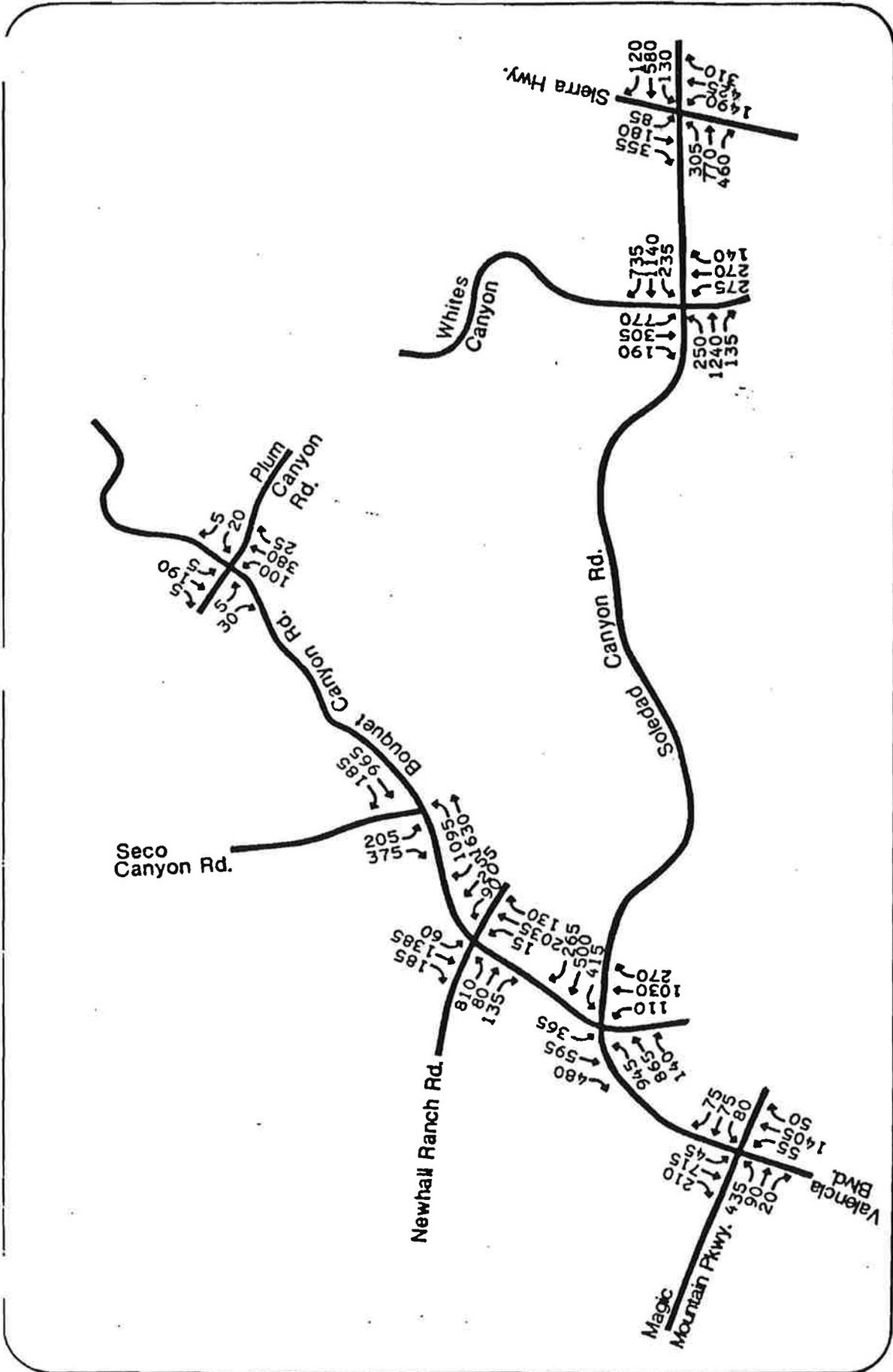


**EXISTING A.M. PEAK HOUR TRAFFIC VOLUMES**

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FIGURE

2



**EXISTING P.M. PEAK HOUR TRAFFIC VOLUMES**

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FIGURE

3

**TABLE 1**  
**INTERSECTION LEVEL-OF-SERVICE DEFINITIONS (1)**

<u>Level of service</u>	<u>Interpretation</u>	<u>Volume/Capacity<sup>(2)</sup> Ratio</u>
A,B	Uncongested operations; all vehicles clear in a single signal cycle.	0.00-0.70
C	Light congestion; occasional backups on critical approaches.	0.71-0.80
D	Congestion on critical approaches, but intersection functional. Vehicles required to wait through more than one cycle during short peaks. No long-standing lines formed.	0.81-0.90
E	Severe congestion with some long-standing lines on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements.	0.91-1.00
F	Total breakdown with stop-and-go operation.	1.01+

**NOTES:**

(1) Source: Highway Capacity Manual, 1985.

(2) Volume/Level of Service E Capacity.

area such as Canyon Country, a V/C ratio of 0.85 is typically considered the minimum acceptable level of service during the weekday peak hours.

Table 2 shows the existing levels of service at the aforementioned key intersections.

As shown in Table 2, under existing conditions, only the intersections of Bouquet Canyon Road/Plum Canyon Road, Valencia Boulevard/Magic Mountain Parkway, and Soledad Canyon Road/Whites Canyon Road are presently operating efficiently for both the morning and evening peak hours. The Bouquet Canyon/Soledad Canyon and Soledad Canyon/Sierra Highway intersections operate acceptably during the morning peak hour but deteriorate to unacceptable levels during the evening peak hour. Presently, the Bouquet Canyon/Seco Canyon and Bouquet Canyon/Newhall Ranch intersections operate under unacceptable levels for both peak periods. These figures substantiate the perception that traffic congestion in Bouquet Canyon is already a problem.

**TABLE 2**  
**EXISTING INTERSECTION OPERATING CONDITIONS**

<u>Intersection</u>	<u>AM</u>		<u>PM</u>	
	<u>V/C</u>	<u>LoS</u>	<u>V/C</u>	<u>LoS</u>
Bouquet Canyon/Plum Canyon	0.24	A	0.35	A
Bouquet Canyon/Seco Canyon	1.02	F	0.90	D
Bouquet Canyon/Newhall Ranch	0.92	E	0.87	D
Bouquet Canyon/Soledad Canyon	0.81	D	1.01	F
Valencia/Magic Mountain	0.57	A	0.73	C
Soledad Canyon/Whites Canyon	0.74	C	0.84	D
Soledad Canyon/Sierra Highway	0.71	C	1.05	F

3.

ANALYSIS OF FUTURE CONDITIONS - 1991

This chapter examines the impacts resulting from the development of the first phase of Tentative Tract No. 33987. Level of service analyses are presented for the following scenarios:

- o 1991 background (ambient growth);
- o 1991 background plus related projects (Phase 1); and
- o 1991 background plus related projects plus Phase 1 project completed by 1991.

All of these scenarios take into account the expected redistribution of nonproject traffic that will occur due to major roadway construction that is planned in the Bouquet Canyon area. Specific details regarding the future roadway network assumed for this analysis are described in the following section.

Thus, the evaluation of Phase 1 project traffic impacts includes consideration of the projected 1991 roadway configurations and the nonproject-related volumes on to which the project traffic must be added.

#### PLANNED ROADWAY IMPROVEMENTS

Future traffic conditions in the vicinity of the site will be affected by changes in the area roadway network — in most cases, the construction of new facilities. The impact analysis described later in this chapter was affected by the following assumed roadway additions:

- o Plum Canyon Road connected through to Whites Canyon Road;
- o Whites Canyon Road extended south to Via Princessa and then onto Sierra Highway;
- o Rio Vista Road completed from Bouquet Canyon Road to Soledad Canyon Road;
- o McBean Parkway extended north to connect with Decoro Drive;
- o Decoro Drive extended westward to McBean Parkway; and
- o Santa Caterina Road completed from Plum Canyon Road to Soledad Canyon Road.

The County is not certain at this time if the Santa Caterina Roadway will be constructed by 1991. However, research regarding related projects has indicated several tracts along this future roadway that are expected to be completed by 1991. Therefore, for the purposes of this study, Santa

Caterina Road will be assumed to be constructed by project Phase 1 completion.

There are many other roadway additions under consideration by the County as part of the Benefit District Planned Roadway System. Chapter 4 discusses the projected conditions at the key intersections when the full benefit district roadway network is constructed.

#### BACKGROUND TRAFFIC GROWTH AND REDISTRIBUTION

The assessment of probable traffic impacts on the roadway system requires that future nonsite traffic volumes be determined in addition to those volumes generated by the project. For this study, a 2 percent per year background growth rate was assumed.

These projected volumes were then redistributed based upon the expected completion of the aforementioned roadway links. The expected directional distribution for these volumes was obtained from Barton-Aschman's 1980 origin-destination survey conducted for the Bouquet Canyon/Seco Canyon area.

#### TRIP GENERATION

The estimated traffic volumes for the proposed project were based upon traffic generation rates obtained from the Institute of Transportation Engineers (ITE) report Trip Generation (Third Edition, 1982). The trip generation rates employed and the resulting traffic volumes are summarized for both phases in Table 3 for AM and PM peak hours, as well as on a daily basis.

TABLE 3

TRIP GENERATION

TENTATIVE TRACT 33987

Land-Use	Phase 1 (By 1991)						Phase 1 + Phase 2 (Full Buildout)					
	Trip Rates			Trips			Trip Rates			Trips		
	Daily	AM Peak Hour In	PM Peak Hour Out	Daily	AM Peak Hour In	PM Peak Hour Out	Daily	AM Peak Hour In	PM Peak Hour Out	Daily	AM Peak Hour In	PM Peak Hour Out
250 Single Family	10.0	0.21	0.76	0.63	0.37	0.37	2,500	55	190	155	95	
1,375 Condominiums	5.2	0.07	0.37	0.37	0.18	0.18	7,150	95	510	510	250	
875 Apartments	6.1	0.10	0.40	0.45	0.25	0.25	5,340	90	350	395	220	
							14,990	240	1,050	1,060	565	
500 Single Family	10.0	0.21	0.76	0.63	0.37	0.37	5,000	110	380	315	185	
2,750 Condominiums	5.2	0.07	0.37	0.37	0.18	0.18	14,300	190	1,020	1,020	500	
1,750 Apartments	6.1	0.10	0.40	0.45	0.25	0.25	10,680	180	700	790	440	
150,000 SF Commercial	66.7	0.90	0.80	2.90	3.10	3.10	29,980	480	2,100	2,125	1,125	
							10,005	135	120	435	465	

As shown, approximately 1,290 trips will be generated by Phase 1 of the project during the morning peak hour, and 1,625 trips will be generated during the evening peak hour.

#### PROJECT TRAFFIC DISTRIBUTION AND ASSIGNMENT

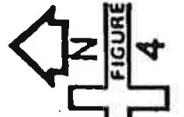
Project-generated traffic was distributed and assigned to the expected roadway network. Figures 4 and 5 illustrate the distribution used. For Phase 1 (or 1991) conditions, approximately 45 percent of the traffic will use the Whites Canyon corridor, 40 percent will use the Bouquet Canyon corridor, and the remainder will use the Santa Caterina link down to Soledad Canyon Road. Figure 6 illustrates the assignment of project traffic.

Figures 7 and 8 show the project traffic volumes combined with the projected background traffic volumes (1991) at the key intersections.

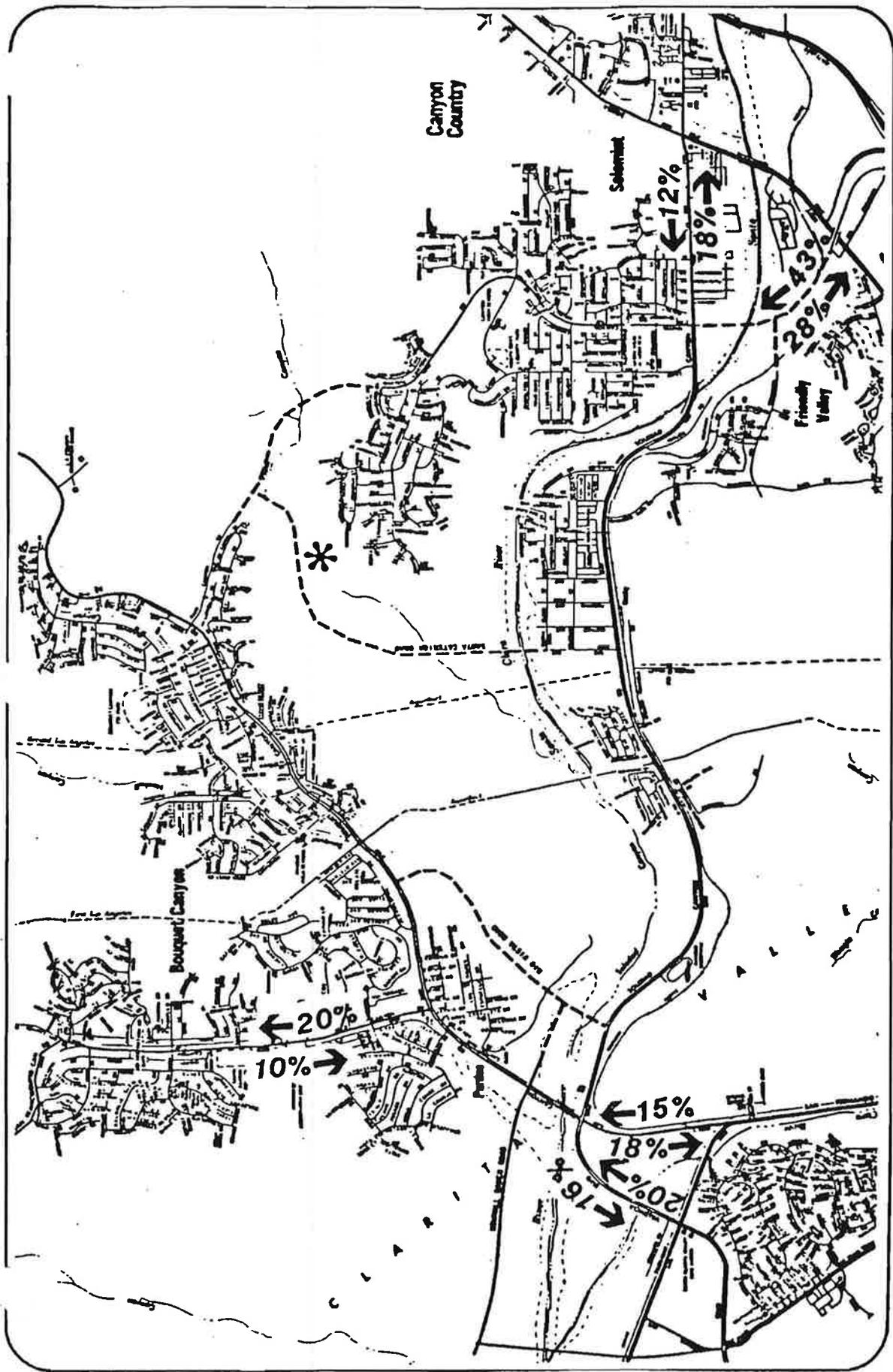
#### RELATED PROJECTS

A total of 32 proposed related projects have been identified that may impact the roadways in the study area. These projects, with the exception of number 32, are all expected to be built by 1991 under current plans. The approximate location of these projects is shown in Figure 9. These related projects are expected to generate approximately 10,000 morning and 14,900 evening peak-hour trips upon completion. Table 4 shows the trips generated from these related projects. For the 1991 analyses, approximately 41 percent of the Canyon Park (#32) traffic was added.

Figures 10 and 11 illustrate the traffic volumes expected to occur when the related project traffic is added to the background plus Tentative Tract 33987 traffic. Since the McBean Parkway and Decoro Drive extensions are

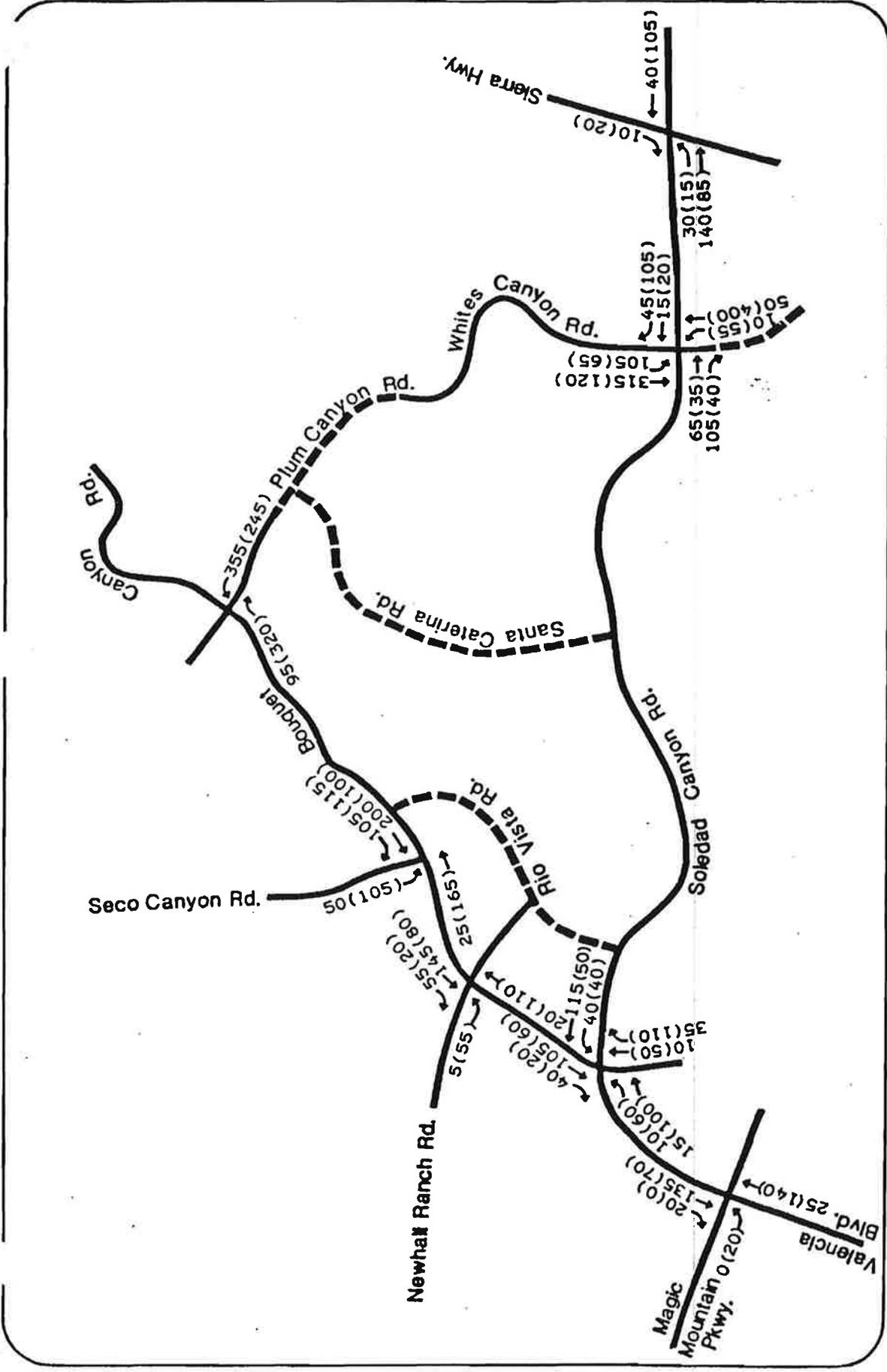


DIRECTIONAL DISTRIBUTION—A.M.  
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DIRECTIONAL DISTRIBUTION—P.M.

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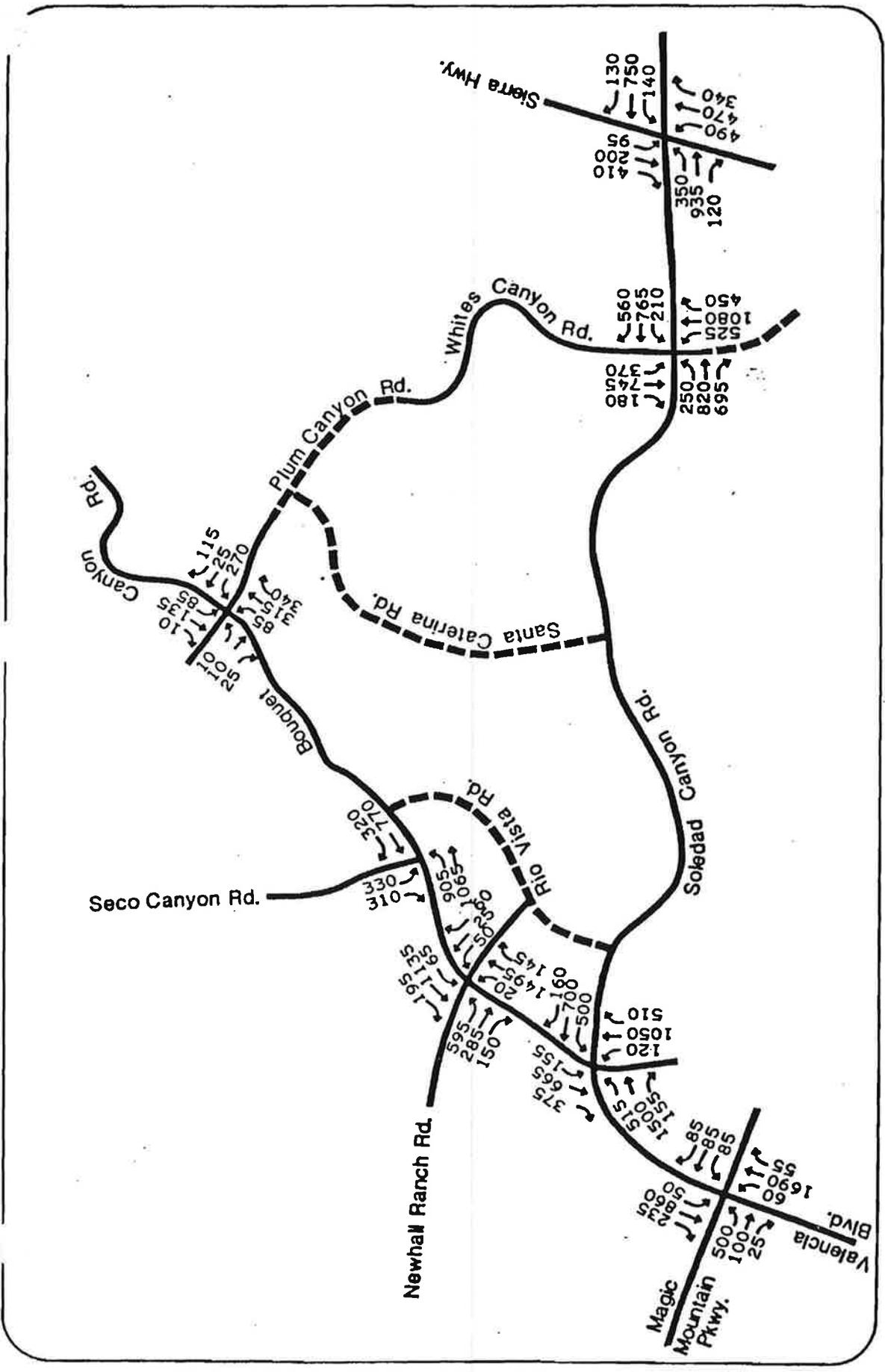
PHASE 1 PROJECT PEAK HOUR TRAFFIC ASSIGNMENT

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FIGURE

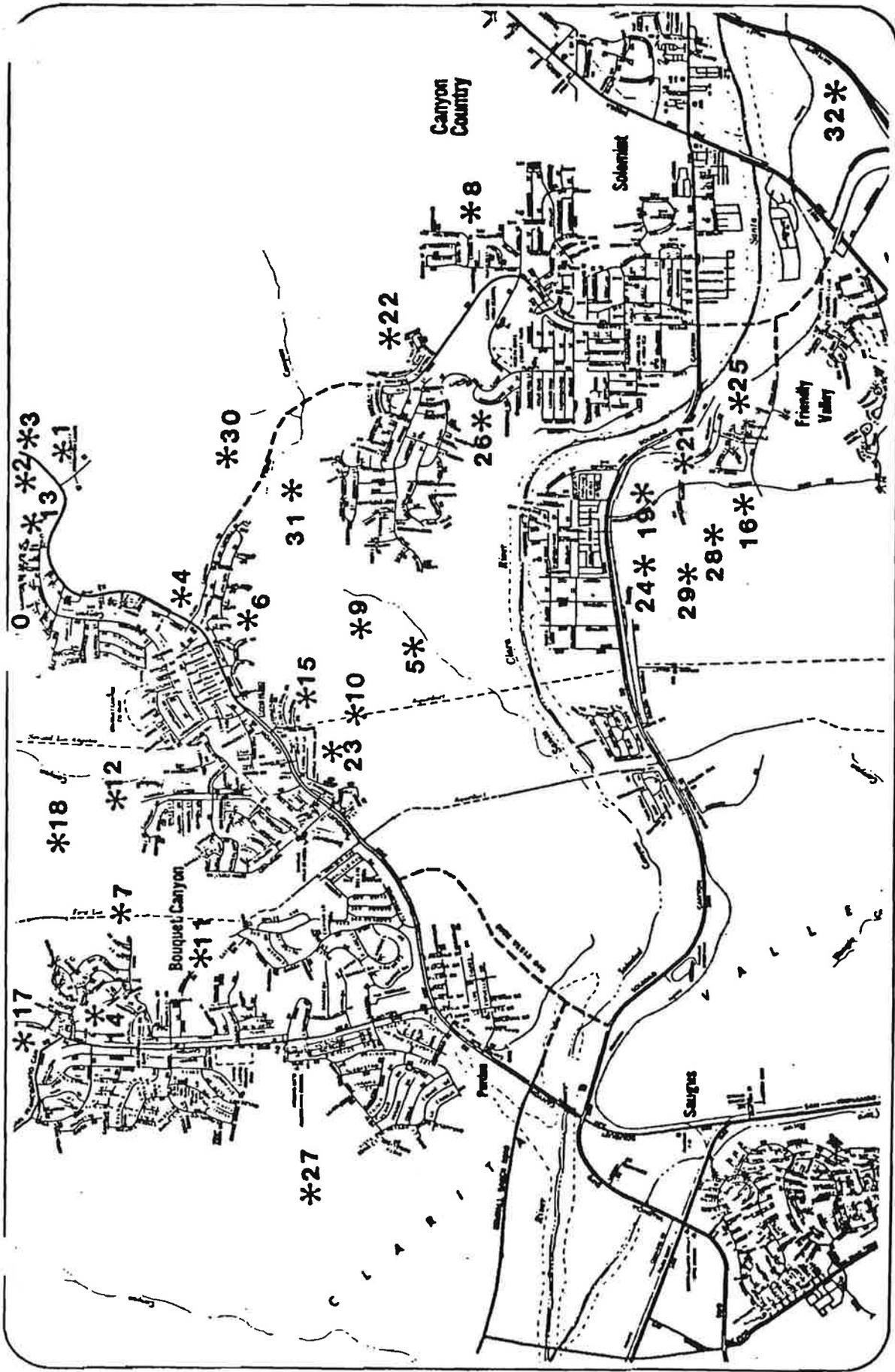
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1991 BACKGROUND PLUS PHASE 1 P.M. PEAK HOUR TRAFFIC

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**LOCATIONS OF RELATED PROJECTS**

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FIGURE

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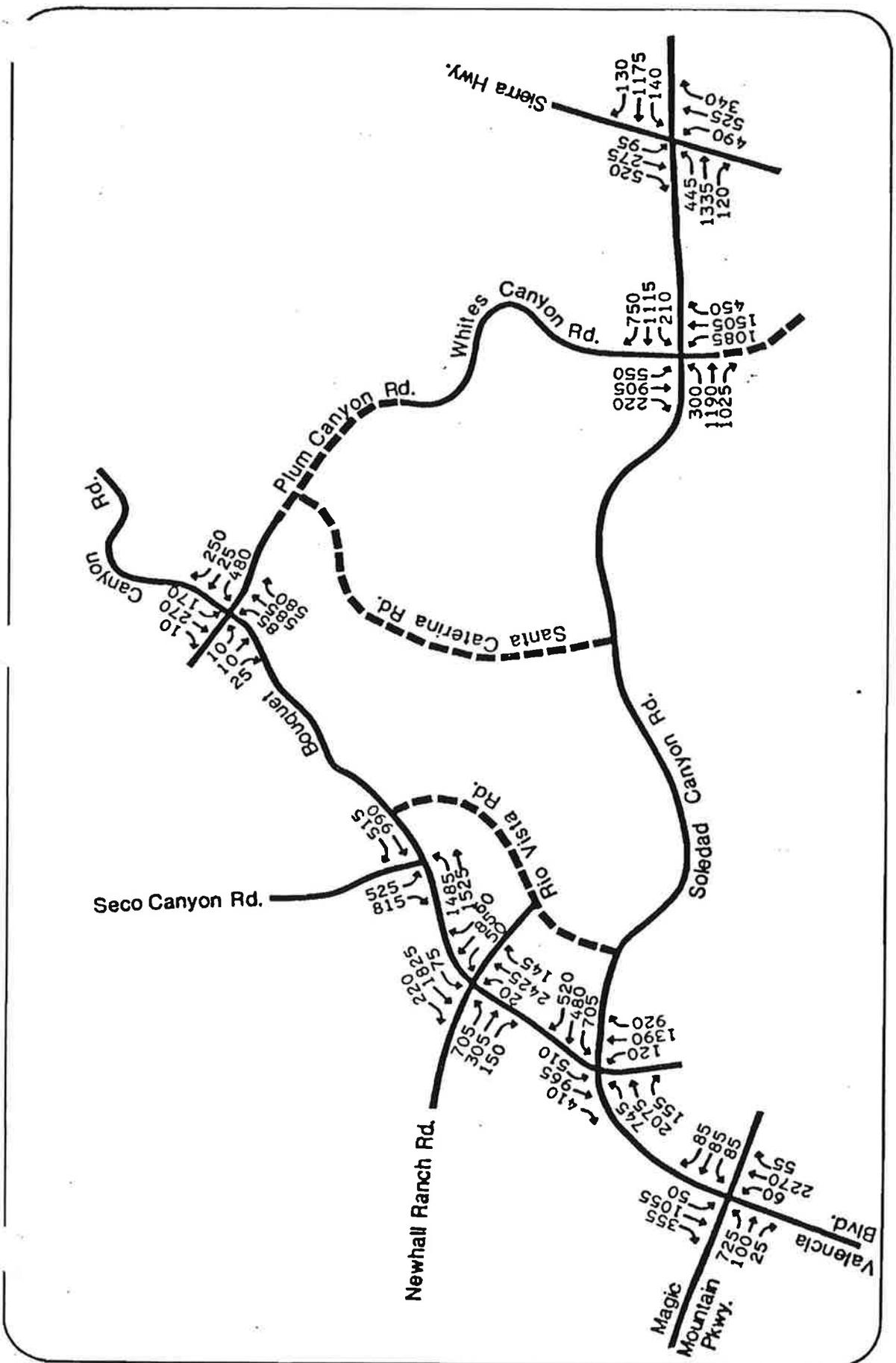
TABLE 4  
RELATED PROJECTS<sup>(1)</sup>  
TRIP GENERATION SUMMARY

Project No.	Land-Use	Daily	Trip Rates				Trips				
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
			In	Out	In	Out	In	Out	In	Out	
1	139 single-family	10.0	0.21	0.55	0.63	0.37	1,390	30	75	90	50
2	54 single-family	10.0	0.21	0.55	0.63	0.37	590	10	30	35	20
3	131 single-family	10.0	0.21	0.55	0.63	0.37	1,310	30	75	85	50
4	113 single-family	10.0	0.21	0.55	0.63	0.37	1,130	25	60	70	40
5	84 single-family	10.0	0.21	0.55	0.63	0.37	840	20	45	55	30
	1,380 multifamily	6.1	0.10	0.40	0.45	0.25	8,420	140	550	620	345
6	117 single-family	10.0	0.21	0.55	0.63	0.37	1,170	25	65	75	45
7	255 single-family	10.0	0.21	0.55	0.63	0.37	2,550	55	140	165	95
8	11 single-family	10.0	0.21	0.55	0.63	0.37	110	5	5	5	5
9	46 single-family	10.0	0.21	0.55	0.63	0.37	460	10	25	30	15
10	13 single-family	10.0	0.21	0.55	0.63	0.37	130	5	5	10	5
11	446 single-family	10.0	0.21	0.55	0.63	0.37	4,460	95	295	280	165
12	423 single-family	10.0	0.21	0.55	0.63	0.37	4,230	90	235	265	160
13	289 single-family	10.0	0.21	0.55	0.63	0.37	2,890	60	160	180	105
14	46 single-family	10.0	0.21	0.55	0.63	0.37	460	10	25	30	15
15	3 single-family	10.0	0.21	0.55	0.63	0.37	30	5	5	5	5
16	317 multifamily	6.1	0.10	0.40	0.45	0.25	1,935	30	125	145	80
17	900 single-family	10.0	0.21	0.55	0.63	0.37	9,000	190	495	565	335
18	19 single-family	10.0	0.21	0.55	0.63	0.37	190	5	10	10	5
19	668 multifamily	6.1	0.10	0.40	0.45	0.25	4,075	65	265	300	165
20	103 single-family	10.0	0.21	0.55	0.63	0.37	1,030	20	60	65	40
21	206 multifamily	6.1	0.10	0.40	0.45	0.25	1,255	20	80	95	50
22	53 single-family	10.0	0.21	0.55	0.63	0.37	530	10	30	35	20
23	32 single-family	10.0	0.21	0.55	0.63	0.37	320	5	20	25	15
24	323 multifamily	6.1	0.10	0.40	0.45	0.25	1,970	35	130	150	80
25	59 single-family	10.0	0.21	0.55	0.63	0.37	590	15	35	40	20
26	42 single-family	10.0	0.21	0.55	0.63	0.37	920	10	25	30	15
27	1,635 single-family	10.0	0.21	0.55	0.63	0.37	16,350	345	900	1,030	605
28	183 multifamily	6.1	0.10	0.40	0.45	0.25	1,115	20	75	80	45
29	283 multifamily	6.1	0.10	0.40	0.45	0.25	1,725	30	115	125	70
30	166 multifamily	6.1	0.10	0.40	0.45	0.25	1,015	20	65	75	40
	500 single-family	10.0	0.21	0.55	0.63	0.37	5,005	105	275	315	185
31	173 single-family	10.0	0.21	0.55	0.63	0.37	1,725	40	95	110	65
	606 multifamily	5.2	0.07	0.37	0.37	0.18	3,150	80	225	225	110
32	2,875 multifamily <sup>(A)</sup>	6.1	0.10	0.40	0.47	0.23	17,540	290	1,150	1,350	660
	1,548 multifamily <sup>(T)</sup>	8.0	0.17	0.44	0.50	0.30	12,385	265	680	775	465
	452,800 S.F. retail	50.6	0.40	0.20	2.30	2.50	22,910	180	90	1,040	1,130
	515 single-family	10.0	0.21	0.55	0.63	0.37	5,150	110	285	325	190
	236,000 S.F. office	10.9	1.93	0.20	0.24	1.80	2,580	455	45	55	425
TOTAL:							142,085	2,960	7,020	8,965	5,965

NOTE:

1. See Appendix A for descriptions.





1991 BACKGROUND PLUS PHASE 1 PLUS RELATED PROJECTS P.M. PEAK HOUR VOLUMES  
 BARTON-ASCHMAN ASSOCIATES, INC.

expected to be completed in a few years, a portion of the traffic generated by proposed Seco Canyon area projects was distributed in that direction.

#### LEVEL OF SERVICE ANALYSIS

The traffic impacts due to a proposed development are typically assessed in terms of the ability of the supporting road system to accommodate site-generated traffic. The ability of the road system is expressed in terms of level of service at intersections. The operating characteristics and the volume-to-capacity ratios of various levels of service were described in Table 1.

Capacity calculations were conducted for each of the scenarios described at the beginning of this chapter. Table 5 shows results of these calculations for the seven key intersections under various conditions.

In 1991 several intersections will experience some operational problems even without any new developments. These intersections will experience congestion due in part to the ambient growth of traffic offsetting the advantages gained by adding additional roadways. For example, the Bouquet Canyon/Seco Canyon intersection will operate better than it does today, but will still experience minor congestion during the morning peak hour ( $V/C = 0.89$ ).

With a  $V/C$  ratio of 0.79, the Bouquet Canyon/Soledad Canyon intersection will operate acceptably in the morning but deteriorate to a level of service F ( $V/C = 1.02$ ) during the afternoon peak hour, about the same as it operates now.



The intersection of Soledad Canyon/Whites Canyon roads will operate at a levels of service of D and E during the AM and PM peak hours (0.85 and 0.97, respectively).

Both the Bouquet Canyon/Newhall Ranch and Bouquet Canyon/Plum Canyon intersections will operate well within acceptable levels.

With the addition of the related project traffic, three intersections (Bouquet/Seco, Bouquet/Soledad, and Soledad/Whites) will operate at Level of Service F during the evening peak hour.

Two intersections (Magic Mountain/Valencia and Soledad/Sierra) will operate at Level of Service F during the evening peak hour. Two intersections (Bouquet/Plum and Bouquet/Newhall) will operate at acceptable levels of service, although the intersection at Newhall will operate at a marginally lower than normally acceptable level with a V/C ratio of 0.88.

The incremental impact of the Phase 1 project traffic on the intersection level of service will be significant for all the intersections with the existing intersection characteristics. It is shown in Table 5 that with the proposed short-term mitigation measures, the levels of service at all the intersections are improved to background levels or better. The only exception to this is the intersection at Bouquet Canyon Road and Seco Canyon Road where it was not possible to entirely mitigate the impacts due to Phase 1 of the project during the evening peak hour. However, the intersection operates at a better level of service with Phase 1 project relative to that with related projects during the morning peak hour due to the mitigation measures proposed.

## 1991 MITIGATION MEASURES

Based upon the results of the capacity calculations, it is apparent that even with the addition of the aforementioned new roadways, some congestion will still occur eventually at all of the seven key intersections. The following mitigation measures have been identified as additional Bouquet Canyon Roadway Benefit District Improvements that will help reduce the projected congestion:

- o Restripe the west approach of Bouquet Canyon Road at Seco Canyon to allow a third through lane;
- o Add a second westbound left-turn lane at the Bouquet Canyon/Soledad Canyon intersection;
- o Restripe the northbound approach of Valencia Boulevard at Magic Mountain Parkway to accommodate one left-turn lane, two through lanes, and a through/right lane;
- o Add a combination through/left lane to the northbound approach of Whites Canyon Road at Soledad Canyon Road; and
- o Restripe westbound approach to include one left, one through/left, and one right turn lane.

As shown in Table 5, these measures will help mitigate the congestion due to background growth traffic as well as project and related project traffic volumes. For the Bouquet Canyon/Newhall Ranch and Soledad Canyon/Sierra Highway intersections, no feasible short-term mitigation measures were identified. However, as discussed in the next chapter, as the area roadway system develops, these intersections will experience a substantial decrease

#### BENEFIT DISTRICT ROADWAY NETWORK

In addition to the roadway construction listed in Chapter 3, the planned benefit district roadway system includes many significant highway improvements for the Bouquet Canyon area. Among the improvements having the greatest significance in this study are the following:

1. Santa Clara Expressway: An east-west expressway located north of Soledad Canyon Road, connecting the Golden State Freeway (Interstate 5) and the Antelope Valley Freeway (State Route 14).
2. Golden Valley Road: A north-south major arterial located between Bouquet Canyon Road and Whites Canyon Road, connecting the Santa Clara Expressway with the Antelope Valley Freeway.
3. Rye Canyon/Copper Hill Drive: An east-west arterial on the north side of the Santa Clara Expressway, connecting Bouquet Canyon Road and the Santa Clara Expressway.
4. Via Princessa: An east-west arterial located south of Soledad Canyon Road connecting San Fernando Road with Sierra Highway.

#### BACKGROUND TRAFFIC GROWTH

As mentioned in Chapter 3, all but one of the related projects in the Bouquet Canyon area are assuming construction completion by 1991. Therefore, a background traffic growth factor of 3 percent per year was used for the years 1991-1996, instead of the 2 percent figure used for Phase 1 analyses.

### TRIP GENERATION

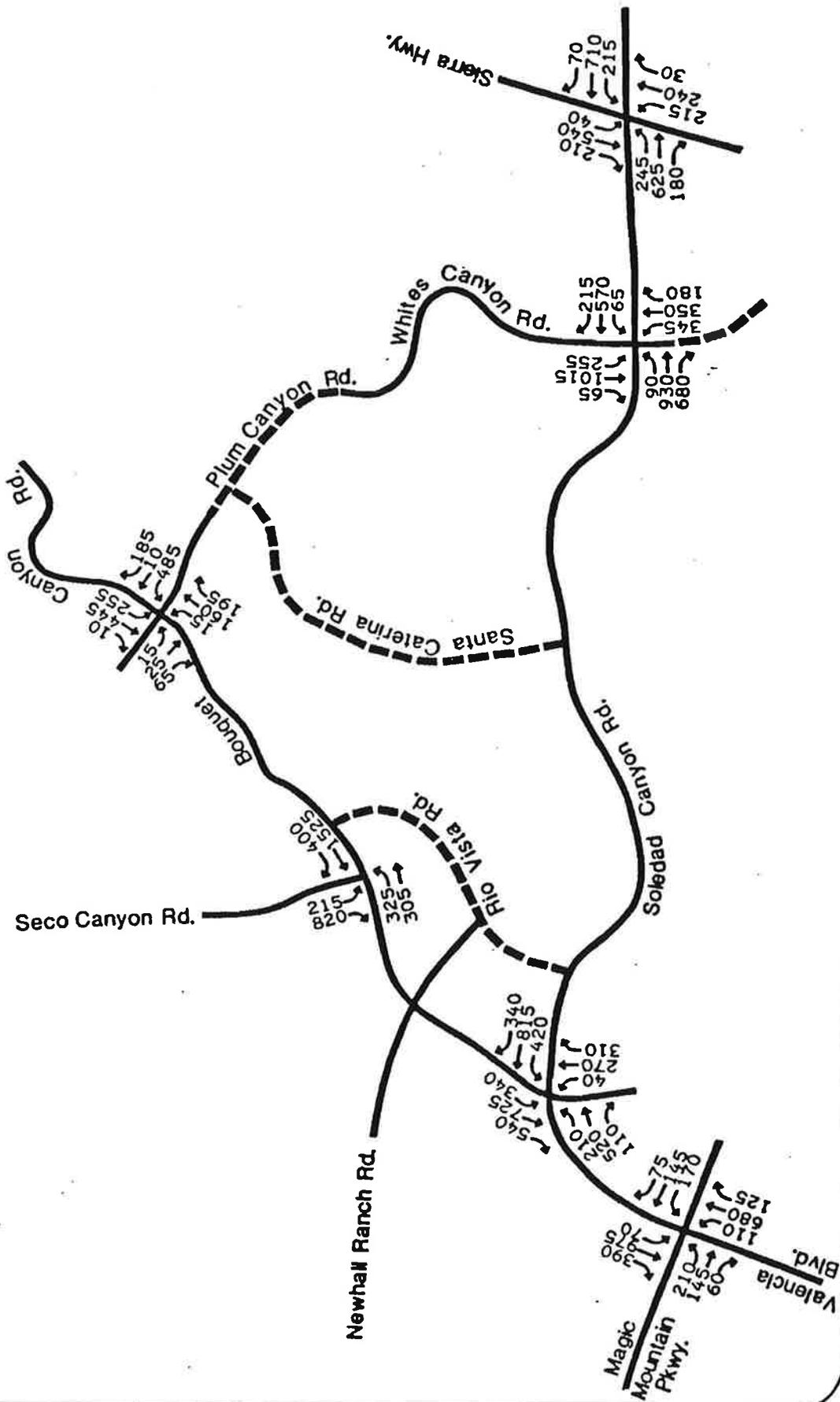
The trips generated by the project when fully developed were shown in Table 3. As shown there, a total of 2,580 trips will be generated by Phase 2 residential development during the morning peak hour and 3,250 trips will be generated during the evening peak hour. In addition to this, the proposed commercial use will generate 155 trips during the morning peak hour and 900 trips during the evening peak hour.

### TRAFFIC DISTRIBUTION AND ASSIGNMENT

The background and residential use project traffic volumes for the study area were reassigned through the key intersections, based upon distribution methods described in Chapter 1. The resulting AM and PM peak-hour intersection traffic volumes are illustrated in Figures 13 and 14, respectively.

The commercial use in the project is proposed to primarily serve the residences in the project area and to a very limited extent they may serve the residential development in the vicinity of the project. The trips generated by the commercial use are not, therefore, likely to affect the key intersections analyzed in the study. However, these trips will be considered while analyzing access to property in this chapter.

As shown, even with the addition of Phase 2 project traffic and the 15 percent increase in background volumes, the intersection volumes were significantly decreased. To a large degree, this was due to the diversion of traffic from surface arterials to the proposed Santa Clara Expressway. It should be noted, however, that these volumes reflect a conservative analysis of the possible redistribution, and a higher usage of the proposed

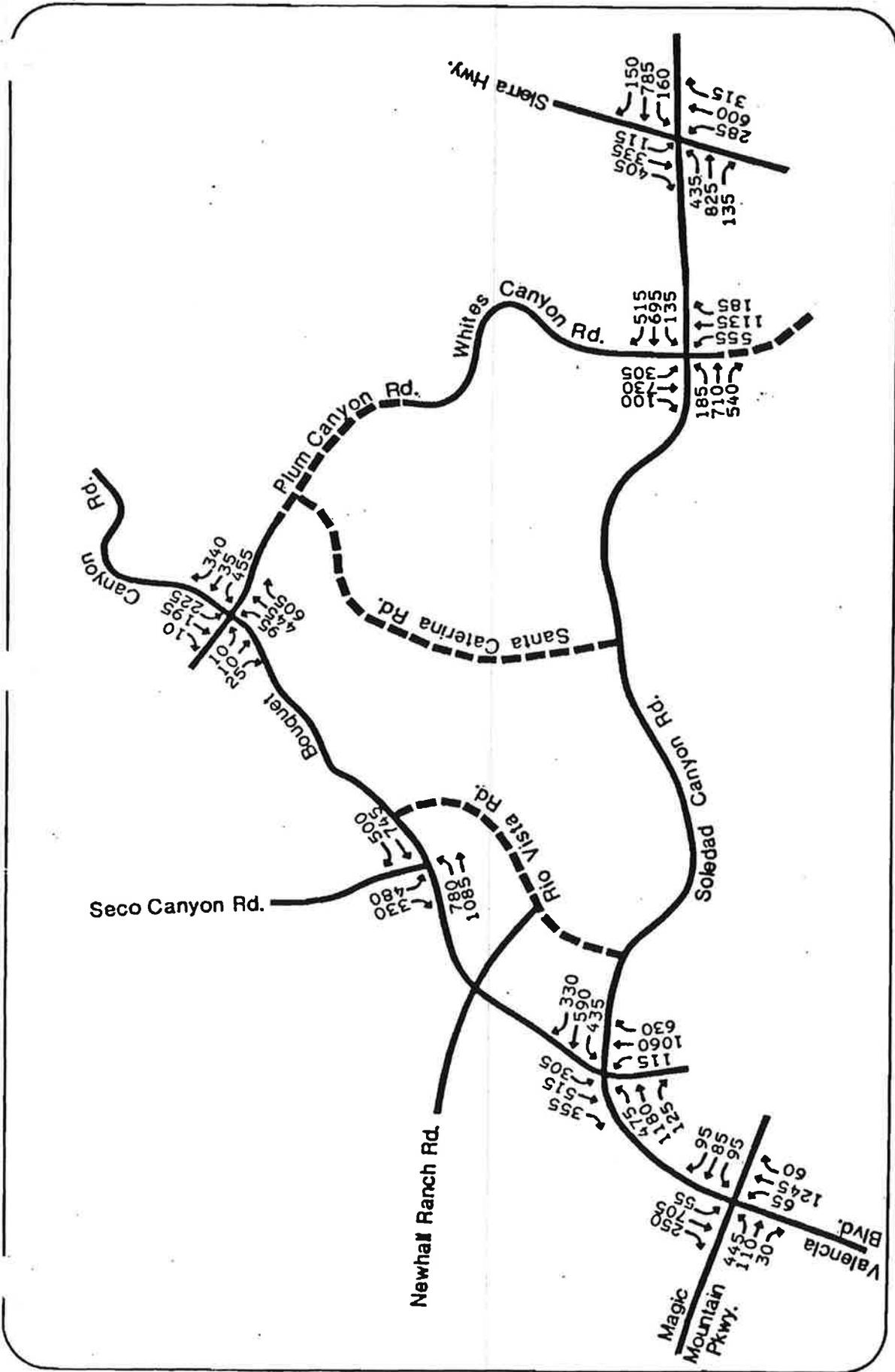


REDISTRIBUTED 1996 BACKGROUND PLUS  
PROJECT BUILDOUT A.M. PEAK HOUR VOLUMES.

BARTON-ASCHMAN ASSOCIATES, INC.

FIGURE

13



**REDISTRIBUTED 1996 BACKGROUND PLUS PROJECT BUILDOUT P.M. PEAK HOUR VOLUMES**

BARTON-ASCHMAN ASSOCIATES, INC.

expressway could easily be reached, thereby lowering the V/C ratios from values obtained with the current assumptions.

#### LEVEL OF SERVICE ANALYSES

Capacity calculations were performed for each of the seven key intersections under the two scenarios described earlier. Table 6 summarizes the results of these calculations.

As shown, all of the key intersections will operate acceptably during the morning peak hour under the 1996 background conditions. However, enough local traffic will still use three of the key intersections during the afternoon peak hour to cause slightly congested conditions. These are the Bouquet/Soledad, Soledad/Whites Canyon, and Soledad/Sierra Highway intersections. The intersections will continue to operate acceptably during the morning peak hour even with the addition of Phase 2 traffic. The three aforementioned already congested afternoon intersections will become slightly more congested with V/C ratios ranging from 0.90 to 0.93. The Bouquet Canyon/Seco Canyon intersection will also deteriorate to a V/C ratio of 0.89.

#### MITIGATION

The 1996 analyses described in the chapter were based upon a very conservative approach to the redistribution of future traffic onto the ultimate roadway system. The figures illustrated in Table 6 reflect that "worst case" approach and future levels of service are very likely to be better than those shown. In addition, the three most congested intersections under the 1996 background plus project scenario are already congested due to background traffic. Given these facts, no specific mitigation measures have been identified only for the Bouquet Canyon/Seco

TABLE 6

## INTERSECTION OPERATING CONDITIONS

## ULTIMATE ROADWAY SYSTEM

Intersection	Existing		1996 Background (1)		1996 Background Project Buildout	
	AM V/C	PM LoS	AM V/C	PM LoS	AM V/C	PM LoS
Bouquet/Plum Canyon	0.24	A	0.35	A	0.60	A(2)
Bouquet/Seco Canyon	1.02	F	0.90	D	0.74	C
Bouquet/Soledad Canyon	0.81	D	1.01	F	0.65	B
Magic Mountain/Valencia	0.57	A	0.73	C	0.58	A
Soledad/Whites Canyon	0.74	C	0.84	D	0.81	D(2)
Soledad Canyon/Sierra Hwy.	0.71	C	1.05	F	0.73	C
					0.82(3)	D
					0.89	(3) D
					0.93	E(2)
					0.72	C(2)
					0.88	D
					0.93	E(2)
					0.90	D

## NOTES:

1. Includes Phase 1 project traffic.
2. Includes roadway changes described in Table 5.
3. Westbound two through lanes and one shared through and right-turn lane; southbound one right-turn lane, one shared right and left-turn lane, and one left-turn lane. Intersection to have three-phase signal.

Canyon intersection to reduce the incremental impact due to Phase 2 project traffic to acceptable levels for the 1996 scenario.

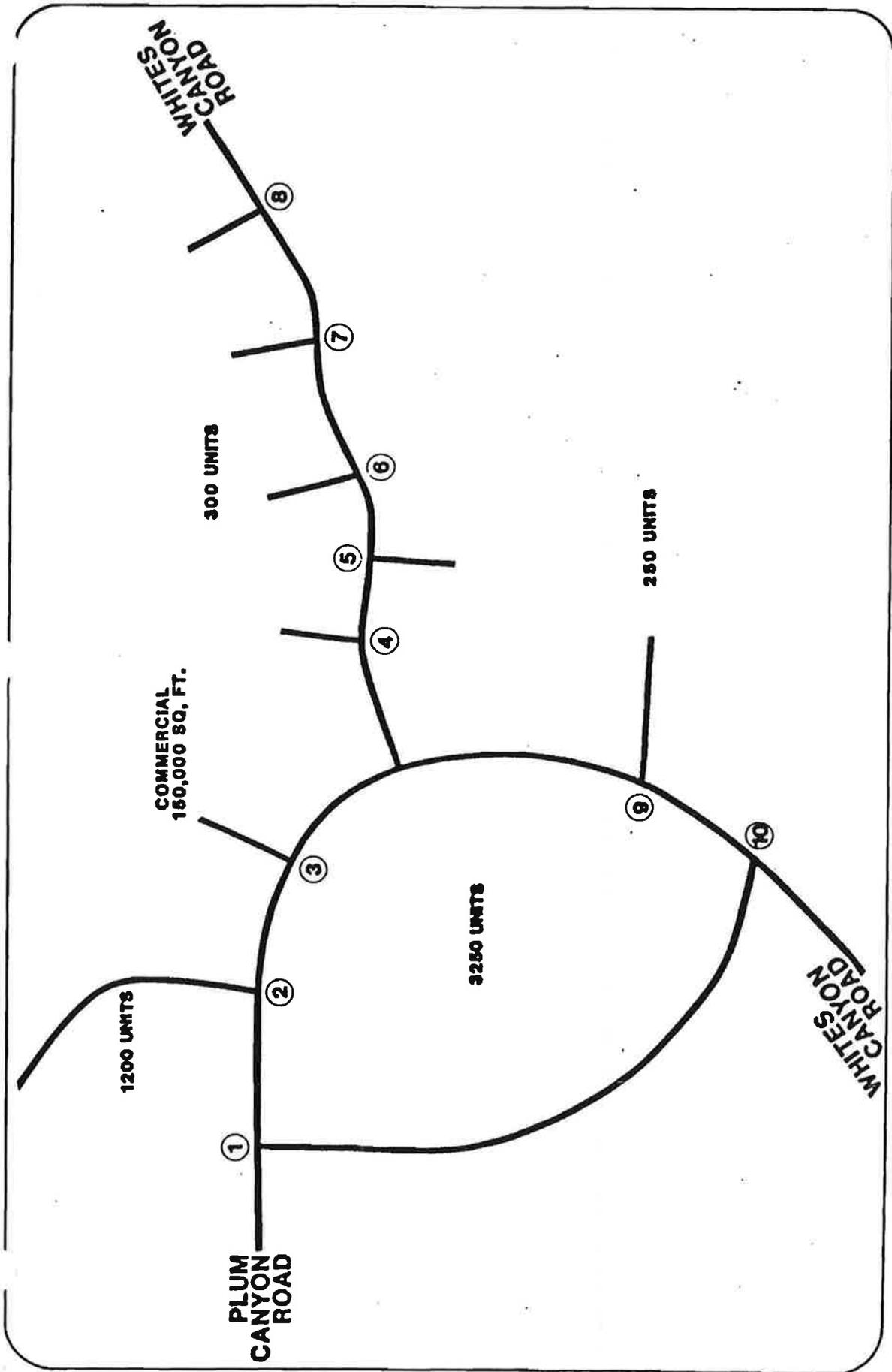
#### ANALYSIS OF ACCESS TO PROPERTY

The proposed residential and commercial developments proposed are located along Plum Canyon Road and Whites Canyon Road. Figure 15 illustrates these locations and the access to property numbered one through ten. As shown there, the residential development will be distributed in the following manner:

- o 1,200 units: north of Plum Canyon Road
- o 3,250 units: south of Plum Canyon Road
- o 300 units: north of Whites Canyon Road
- o 250 units: south/east of Whites Canyon Road
- o 150,000 sq. ft. commercial: north of Plum Canyon Road

Table 7 shows the trips generated by each group of dwellings and by the commercial use for the full buildout scenario. There will be 2,580 trips generated by the residential use and 255 trips generated by the commercial use during the morning peak hour. During the evening peak hour, the residential and commercial uses will generate 3,250 trips and 900 trips, respectively.

While the trips generated by the commercial use will mainly be produced by and attracted to the residential use proposed in the project, this adjustment has not been made in the residential trips leaving and entering the project area. The impact of the residential use generated trips on the key intersections represents the "worst case" scenario.



LOCATION OF DEVELOPMENT AND ACCESS TO PROPERTY

BARTON-ASCHMAN ASSOCIATES, INC.

TABLE 7

TRIP GENERATION BY LAND PARCEL

	AM Peak Hour			PM Peak Hour		
	<u>In</u>	<u>Out</u>	<u>Total</u>	<u>In</u>	<u>Out</u>	<u>Total</u>
1,200 units	115	505	620	510	270	780
3,250 units	310	1,365	1,675	1,380	730	2,110
250 units	25	105	130	105	55	160
300 units	<u>30</u>	<u>125</u>	<u>155</u>	<u>130</u>	<u>70</u>	<u>200</u>
Total Residential	480	2,100	2,580	2,125	1,125	3,250
Commercial	135	120	255	435	465	900

NOTE:

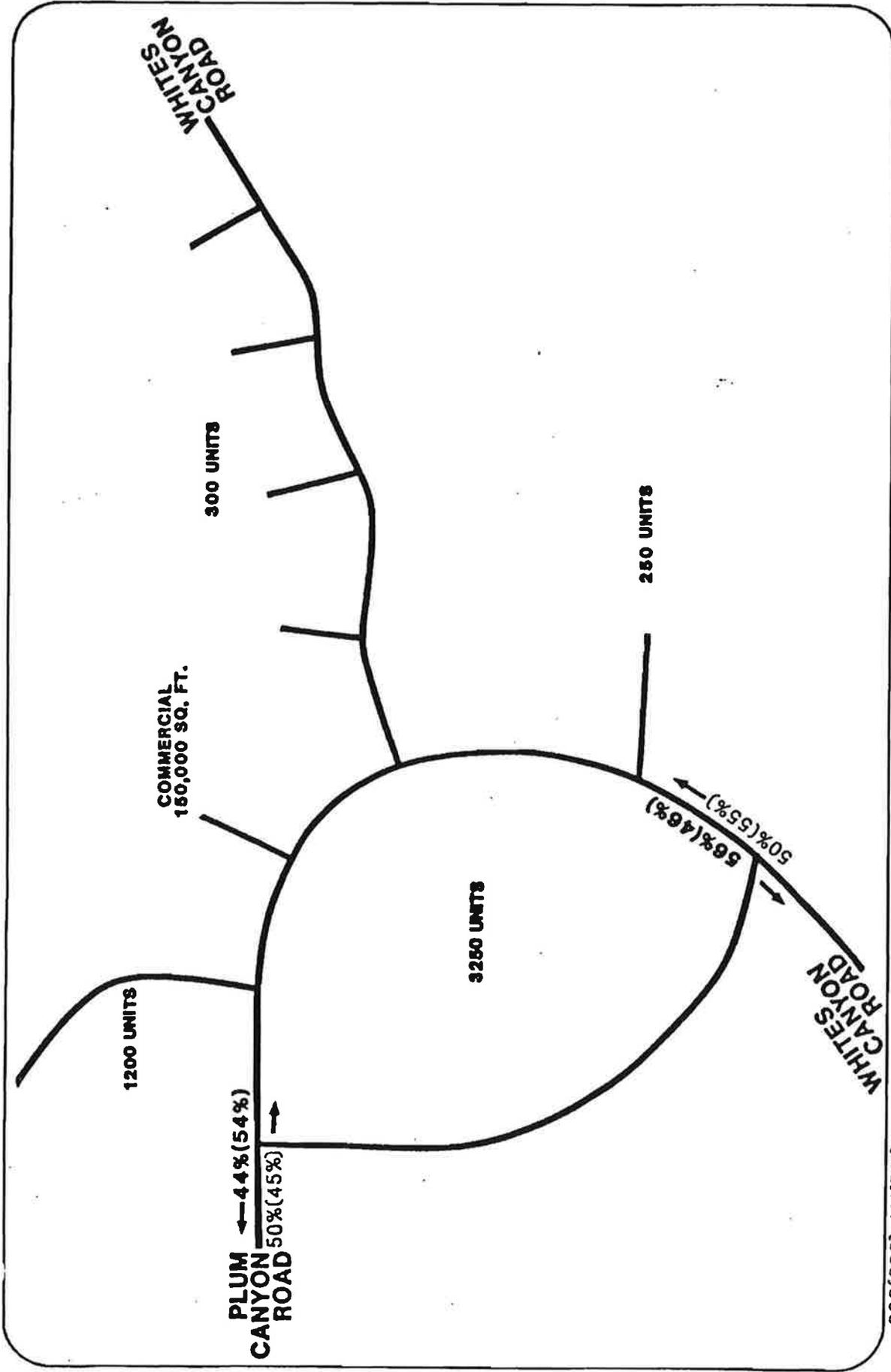
The entering and leaving trips have been proportionately distributed by size based on the total trips presented in Table 3.

The primary objective of this exercise was to assess the impact of site-generated traffic on the access to properties located on Plum Canyon Road and Whites Canyon Road.

Figure 16 illustrates the distribution of residential use generated trips at the entrances and exits to the proposed project. These distributions have been explicitly identified for morning and evening peak-hour inbound and outbound trips. The distribution presented here is consistent with that illustrated in Figures 4 and 5.

Based on the above mentioned trip generations and distributions, the project traffic at each of the access points is illustrated in Figure 17. Plum Canyon Road is proposed to be 100-foot wide and Whites Canyon Road is proposed to be 80-foot wide. These widths will allow for three lanes in each direction on Plum Canyon Road and two lanes in each direction on East Whites Canyon Road.

Table 8 shows the configurations and the treatment that are likely to be required at the access points. Locations that would require exclusive left-turn lanes are identified along with the type of control. These are based in turning movements from and into the groups of development and the assumption of the total number of lanes on the roadway.

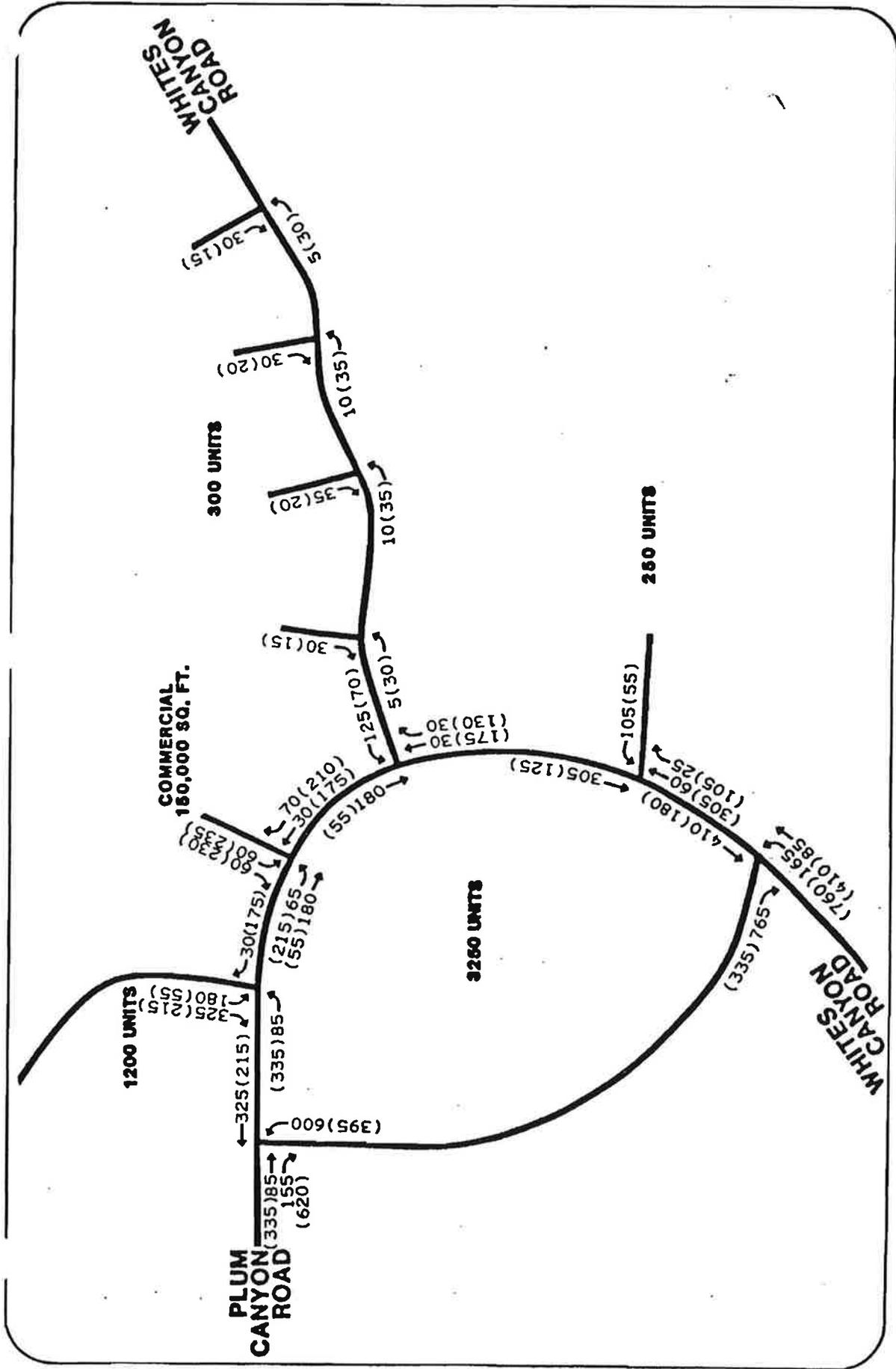


000(000) AM(PM) INBOUND  
 000(000) AM(PM) OUTBOUND



**TRIP DISTRIBUTION FOR ACCESS POINTS**

BARTON-ASCHMAN ASSOCIATES, INC.



**INBOUND AND OUTBOUND PROJECT TRIPS - FULL BUILDOUT**

BARTON-ASCHMAN ASSOCIATES, INC.

TABLE 8

CONFIGURATION AT ACCESS TO PROPERTY

Intersection	Description
1	<ul style="list-style-type: none"> <li>o Signalized 2 phases.</li> <li>o EB: 2 TH + 1 TH/RT + 1 RT; WB: 2 TH + 1 TH/LT; NB: 2 LT + 1 RT.</li> </ul>
2	<ul style="list-style-type: none"> <li>o Stop-sign controlled southbound.</li> <li>o EB: 2 TH + 1 TH/LT + 1 LT; WB: 3 TH + 1 RT; SB: 1 RT + 1 RT/LT + 1 LT.</li> </ul>
3	<ul style="list-style-type: none"> <li>o Stop-sign controlled southbound.</li> <li>o EB: 3 TH + 1 LT; WB: 3 TH + 1 RT; SB: 1 LT + 1 RT</li> </ul>
4 through 8	<ul style="list-style-type: none"> <li>o Stop-sign controlled at access from project.</li> <li>o EB: 2 TH; WB: 2 TH; exit from project 1 lane.</li> </ul>
9	<ul style="list-style-type: none"> <li>o Stop-sign controlled at access from project.</li> <li>o WB: 1 RT + 1 LT; NB: 2 TH + 1 RT; SB: 2 TH + 1 RT.</li> </ul>
10	<ul style="list-style-type: none"> <li>o Signalized 2 phases.</li> <li>o EB: 2 RT + 1 LT; NB: 2 TH + 1 TH/LT = 1 LT; SB: 3 TH + 1 RT.</li> </ul>
Plum/Whites	<ul style="list-style-type: none"> <li>o 3-way stop-sign controlled.</li> </ul>

5.

CONCLUSIONS

This report examines the traffic impacts due to the proposed tentative Tract 33987 project. Impacts due to background traffic and due to 32 related projects in the Bouquet Canyon area have also been analyzed.

The proposed project will be completed in two phases. Phase 1 will consist of approximately 2,500 dwelling units representing 50 percent of the residential component of the project. At full buildout, the project will include 5,000 dwelling units and 150,000 square feet of commercial use. The proposed commercial use will primarily serve the project's residences.

During the morning and evening peak hours, the residential use will generate 2,580 and 3,250 vehicle trips, respectively, after full buildout. The distribution of these trips was based on the existing and proposed road network in the area. Capacity analyses of seven key intersections revealed existing congested conditions and possible future congestion, particularly on completion of Phase 1 even with some of the minor benefit district

improvements. In most cases, short-term measures as suggested, mitigate the incremental impacts due to the project.

The analyses presented in this report demonstrate the importance of future development of the full highway system, not only as it pertains to the projects included in this study, but also to developments that will occur in Canyon Country beyond 1996.

Further, a conservative approach has been adopted in the analyses and represents the "worst case" scenario in terms of impacts. The magnitude of the project is assumed to be the maximum that is likely to be constructed, and it is assumed that 100 percent of the trips generated by the residential use would be distributed among the key intersections. The impacts due to the project, actually construction, are likely to be less significant than that shown in the analyses.

TT46018

FINAL ENVIRONMENTAL IMPACT REPORT  
PROJECT NO. 85-628

Canyon Country Area

County of Los Angeles  
Department of Regional Planning  
320 W. Temple Street  
Los Angeles, California 90012

February 10, 1988

Addendum To Draft

Environmental Impact Report  
Project No: 85-628

February 10, 1988

The Final Environmental Impact Report (EIR) for the above project consists of the following documents:

- 1) The Draft EIR prepared by the applicant dated April, 1987;
- 2) The Responses to Comments prepared by the applicant dated September, 1987;
- 3) This Addendum to the Draft EIR dated February 10, 1988

It is important to note that the intent of an EIR is to serve as an informational document and to show good faith effort by providing a full public disclosure of the physical impacts a proposed project may have. An EIR is not a technical document, nor does the evaluation of the impacts need to be exhaustive. Disagreement among experts does not make an EIR inadequate. The environmental documentation process emphasizes the need to discuss significant environmental impacts, mitigation measures, and alternatives.

As part of the public review process, the Draft EIR was available for public input for thirty (30) days before the public hearing was held by the Regional Planning Commission on December 23, 1987. During the public hearing, concern was raised with regard to the cumulative impacts on school facilities. However, it is the staff's opinion that the additional data or responses provided by the applicant have adequately addressed all project related environmental issues, including impacts on schools.

## Attachment "A"

### Environmental Findings

The Final EIR prepared for this project encompasses only Zone Change 85-628.

The Initial Study prepared for this project identified potential environmental impacts relative to geotechnical hazard, flood hazard, air quality, biota, scenic quality, traffic/access, education, water supply, and solid waste disposal. As a result of the Initial Study, it was also determined that the project will not have significant effects on the remaining environmental factors, since they do not exceed the threshold criteria for significance, as established by the County of Los Angeles.

The conditions of approval and the design of this project mitigate the potential significant effects relative to geologic hazards, in that: the project will be designed and implemented in conformance of all applicable County Ordinances and Codes, additional geotechnical studies will be prepared for review and approval by the Department of Public Works when the Tentative Tracts are submitted, and all the recommendations and mitigation measures in the geologic reports and those from the Department of Public Works will be adhered to.

The conditions of approval and the design of this project mitigate the potential significant effects relative to flood hazard, in that: the Department of Public Works has reviewed the preliminary hydrology report and determined that the project can be designed and implemented safely with the inclusion of a drainage concept plan. This plan will be prepared at the tract map stage and will include, if necessary, drainage improvement facilities such as storm drains, inlet structures, and debris basins. All graded slopes will be revegetated as soon after grading operations are complete for erosion control purposes.

The conditions of approval and the design of this project mitigate the potential significant environmental effects on air quality, in that: the project provides an opportunity to balance employment and residential uses on site, the access within the project site facilitates the flow of traffic, and the project will comply with the AQMD regulations including the watering of all graded areas to control dusts and ceasing grading operations during extremely windy days.

The conditions of approval and the design of this project mitigate potential significant effects on biota, in that: the project site is not within the Significant Ecological Area, the biota study prepared for the project concludes that there are no endangered or rare species of plants and animals on site,

the project design incorporates 250 acres of natural open space, and a landscape plan incorporating native species will be submitted to the Department of Regional Planning for review and approval.

The conditions of approval and the design of this project mitigate significant environmental effects on scenic quality, in that: the project will provide a large area (265 acres) of natural open space, there are no views of the site from any designated Scenic Highway, and the project will prepare a landscape plan including the plantings of slopes and street trees for review and approval by the Department of Regional Planning when the tract maps are submitted.

The conditions of approval and the design of this project mitigate the potential significant environmental effects on traffic/access, in that: the project will provide adequate access and internal circulation system to the satisfaction of the Department of Public Works, the project will contribute its fair share towards a Benefit District to fund a roadway improvement program. This program will include restriping the west approach of Bouquet Canyon Road at Seco Canyon to allow a third through lane; addition of a second westbound left-turn lane at the Bouquet Canyon/Soledad Canyon intersection; restriping the northbound approach of Valencia Boulevard at Magic Mountain Parkway to provide one left-turn lane, two through lanes, and a through/right-turn lane; and the addition of a combination of through/left lane to northbound approach of Whites Canyon Road at Soledad Canyon Road.

The conditions of approval and the design of this project mitigate potential significant effects on school facilities, in that: the project will comply with the provisions of AB 2926 for funding new school facilities; the project design includes the provision of an elementary school site; and if an assessment district is established to provide additional funding mechanisms for schools, the applicant will be required to pay a fair share to mitigate project impacts.

The conditions of approval and the design of this project mitigate potential significant effects on water supply, in that: the service providers are currently seeking additional water from the State Water Project. The Water Project will include the construction of an offstream reservoir to allow additional surface storage of water, the purchase of approximately 30-40 acres of land in Kern County with high recharge potential for use as underground water storage, and the construction of delivery system improvements to allow the export of more water. In addition, implementation of measures contained in the water conservation program of the Santa Clarita Valley Urban Water Management Plan.

The conditions of approval and the design of this project mitigate potential significant effects relative to solid waste

disposal, in that: the project will not individually and cumulative impact the landfill facilities ability to serve, there are adequate capacities to accommodate the project waste disposal needs, and alternative means of solid wastes disposal as well as landfill expansions are being investigated.

As conditional and through the project design, the potential environmental impacts of this project relative to geotechnical hazard, flood hazard, air quality, biota, scenic quality, traffic/access, education, water supply, and solid waste disposal have been reduced to insignificant levels. The cumulative impact associated with the total growth projected by the year 2000 was evaluated in the Final Environmental Impact Report for the County General Plan which was approved and certified by the Board of Supervisors. This document, which includes a statement of overriding consideration for the significant adverse impacts associated with future growth and development, is incorporated herein by reference.