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MAY RANCH
SPECIFIC PLAN/EIR

May Ranch

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SPECIFIC PLAN/EIR June 2, 1988
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SUMMARY

May Ranch

1.0 SUMMARY

1.1 SPECIFIC PLAN SUMMARY

1.1.1 THE PROJECT

The May Ranch Specific Plan is a proposal for a planned community situated on an approximately 684-acre site located south and southwest of the Ramona Expressway and east of the Perris Storm Drainage Channel. Rider Street and the Colorado River Aqueduct each bisect the site in an east-west alignment. The site was annexed to the City of Perris in two phases in 1987 and 1988.

The proposed community plan includes 3,450 single family detached homes on approximately 684 acres with an overall density of 5 DU/AC. The following table identifies the proposed land uses and distributions:

Land Use	Dwelling Units	Acres
- Residential:		
R-4000 (medium high)	450	60
R-4050 (medium high)	1,006	134
R-4500 (medium)	980	140
R-5400 (medium low)	654	119
R-7000 (low)	360	90
- Commercial		100
- Community Parks		27
- Linear Park		14
TOTAL	**3,450**	**684**

1.1.2 COMMUNITY LOCATION

The Specific Plan site is situated along the southern side of the Ramona Expressway in the northeasterly portion of the City of Perris. It is approximately two miles east of Interstate 215, immediately southwest of Lake Perris, and approximately three miles northeast of the City of Perris "Old Town" Civic Center and Business District.

The project site is illustrated in both Regional and Local Context on Figures 1 and 2, respectively.

1.1.3 MARKET CHARACTERISTICS

The May Ranch Planned Community will be completed in at least four primary phases with multiple residential products comprising each phase. The diversity of product types is intended to stimulate the creation of a homogeneous community for the young and the established, the first-time home buyer and the move-up buyers, for the larger family and for singles. Target home prices are intended to start in the low $80,000s.

Research indicates a strong market preference for conventional single-family detached units on regularly-shaped subdivision lots, but without private community centers, private recreational facilities, private streets, and common open space. Thus, no master or tract-level homeowner associations are proposed. A lighting and landscaping assessment district will be formed to assure the continuous care of streetscapes, street furniture, public parks, and a linear greenbelt trail/view corridor.

Under current marketing strategies and private lending policies, it is anticipated that residential buildout will be achieved within approximately ten years. Population growth in the area is not expected to be sufficient to support commercial development for at least four years. It is also possible, under the pyramid characteristics of the City of Perris zoning ordinance and the standards of this Specific Plan, for there to be construction of multi-family residential units within areas designated as commercial.

1.1.4 DESIGN OBJECTIVES

The primary challenge of design is to create a unique community from the topographically uniform site through the use of contemporary urban design techniques. Methods which typically contribute to such objectives include:

- roadway realignments to create a continually varying streetscape and geographical orientation,
- creating high-image visual elements along arterials and backbone roadways,
- varying roadway widths to create a hierarchy of design and function,
- developing entry themes to create a sense of "community" and arrival at a destination.

The May Ranch Specific Plan has been designed to establish neighborhood enclaves with views to both the San Bernardino and San Gorgonio Mountains and to the plains of the extensive Perris Valley. Accessible within May Ranch are public parks, community shopping facilities, and access to adjacent regional recreation facilities all linked by sidewalks and public streets.

1.1.5 PLAN PROCESSING

The May Ranch site, though located within the City of Perris, is largely comprised of agricultural land uses. The current zoning for the property is Agriculture. The Land Use Element of the General Plan is in policy form, similar to that of the County of Riverside, and provides for a continuation of agriculture, open space, and flood plain uses unless amended. The instrument to institute such a change is the subject Specific Plan prepared in form, format, and technical detail consistent with the State of California Government Code and Guidelines, County of Riverside Policy, and City of Perris procedures.

REGIONAL SETTING

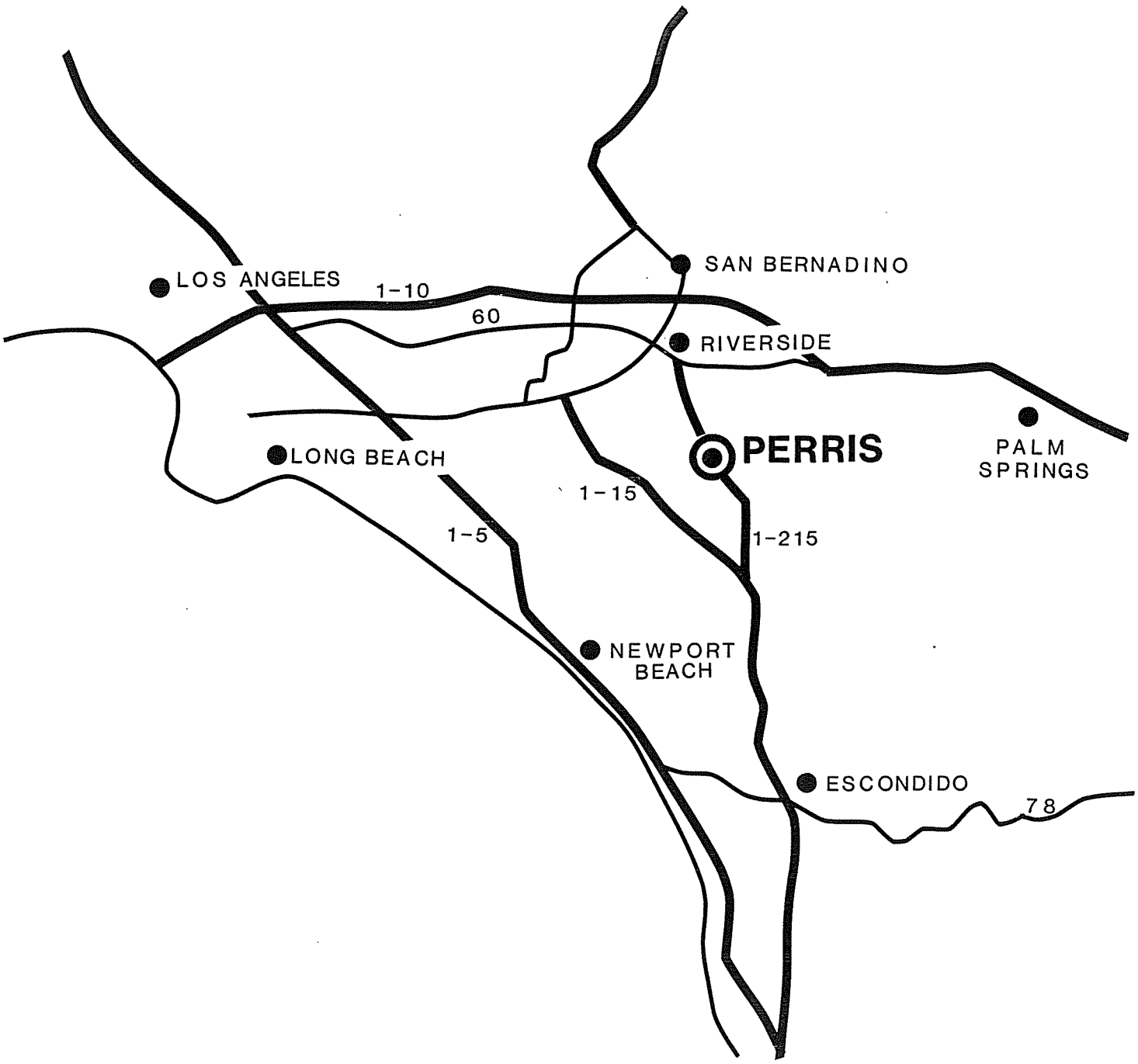


FIGURE: 1

FLORIAN MARTINEZ ASSOCIATES NOT TO SCALE

May Ranch

LOCAL SETTING

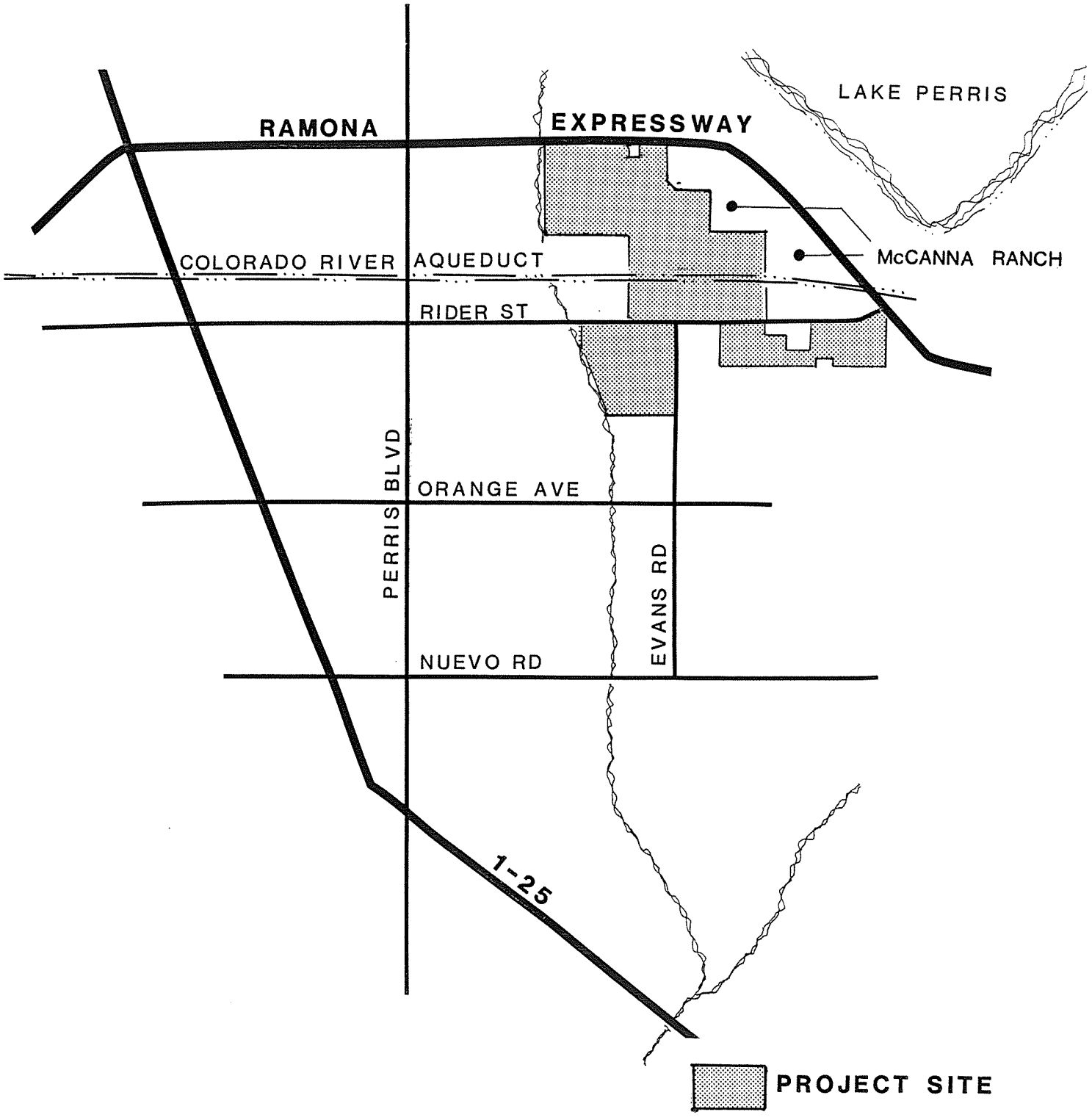


FIGURE: 2

FLORIAN MARTINEZ ASSOCIATES

NOT TO SCALE

May Ranch

This Specific Plan is intended to achieve a General Plan amendment and establish zoning powers for the subject property. The Specific Plan must be reviewed and acted upon in advertised public hearings before both the City of Perris Planning Commission and City Council. The Specific Plan (SP) complies with the provisions of the California Environmental Quality Act (CEQA) through the integration of a Draft Environmental Impact Report (DEIR) within the Specific Plan document. This, too, is subject to public review and comment prior to any legislative action on the Specific Plan document. This SP/DEIR incorporates by reference the previous Final Environmental Impact Report for the adjacent McCanna Ranch property, State Office of Planning and Research Number SCH87011910, including all comments and response therein.

1.2 ENVIRONMENTAL IMPACT REPORT SUMMARY

The following pages represent a brief summary of the environmental analyses contained in Section 4.3 herein. This summary presents highlights of the current conditions on the site (Setting), the impact of the proposed development (Impacts), and the mitigation measures necessary to reduce or eliminate the identified impacts (Mitigation).

Since the Specific Plan has been generated during the period of environmental research, the EIR has been used as a planning tool. This process allows the Plan to be amended during the design stage, thus eliminating conflicts with major environmental issues. Thus, mitigation of significant environmental impacts occurs during the community design period.

1.2.1 EARTH RESOURCES/ SEISMICITY

a. Setting

The site is relatively flat, exhibiting only 20 feet of topographic relief across its width (approximately 0.1 percent) slope. The soils are characterized by alluvial material with perched groundwater located approximately 40 feet below grade. The nearest fault is the San Jacinto Fault (active) situated approximately five miles northeast of the site.

b. Impacts

The site does not exhibit qualities which would preclude development. Minimal grading is required to prepare the site and positive drainage can be achieved. All structures and improvements constructed will be subject to the effects of earthquakes and consequential groundshaking.

c. Mitigation

Grading and earthwork is to be accomplished in conformance with the guidelines contained in the site specific geotechnical investigation.

All local regulations pertaining to grading and structural performance are to be honored in the design of the grading and building plans.

1.2.2 HYDROLOGY/WATER QUALITY

a. Setting

The project site is essentially flat with sheet flow drainage at a low gradient generally toward the southwest. The Perris Valley Storm Drain borders the site on the west and is a major storm water conveyance facility serving the Perris Valley. The project site is located within the Lake Perris Dam Inundation area. Recent engineering studies of the dam show it to be in a safe and stable condition. The Federal Insurance Administration has designated a 100-year flood zone affecting the western portion of the site.

b. Impacts

Site runoff will be increased in volume by approximately 10 percent from existing conditions due to construction of streets, sidewalks, dwellings and other impervious surfaces. The proposed drainage facilities will be designed for carrying the 100-year runoff, thus, there will be no significant impact due to project flooding. Downstream facilities are being improved under the Perris Valley Master Drainage Plan. Ultimately, downstream facilities will be adequate to handle increased runoff flows
from the site and other developments in the valley. During grading, the potential for soil erosion by both wind and water is substantial and is considered a potentially significant impact.

c. Mitigation

Though the potential for failure of Lake Perris Dam is remote, subdivision maps will show the project is within a potential inundation area. The project will contribute fees for drainage improvements amounting to $5083 per gross acre. During construction, efforts will be made to limit wind and water erosion of exposed soils.

1.2.3 AIR QUALITY

a. Setting

The project site is located in the South Coast Air Basin which, jurisdictionally, is the responsibility of the South Coast Air Quality Management District (SCAQMD). Air quality data indicate that ozone is the air pollutant of primary concern in the project area. The ozone standard is exceeded over one out of every three days in the area. All areas of the air basin contribute to ozone levels experienced at Perris.

b. Impacts

Temporary air pollution impacts will result from project construction activities. Approximately 164 tons of dust per year could be generated by grading activities over the buildout period. Construction equipment emissions occur only during periods of equipment use. During those periods,

emissions will amount to approximately 35 pounds per day (PPD) of carbon monoxide, 149 PPD of nitrogen oxides, 15 PPD of hydrocarbons, 11 PPD of sulfur oxides and approximately 10 PPD of particulates.

Long-term air emissions will result from traffic generated by the project. Estimated ultimate emissions are 4.35 tons per day (TPD) of carbon monoxide, 0.88 TPD of nitrogen oxides, 0.15 TPD of sulfur oxides, 0.17 TPD of particulates, and 0.39 TPD of hydrocarbons. Though no significant regional air quality impacts will occur, the project will contribute to already high ambient levels of air pollutants in the area.

c. Mitigation

Support and compliance with the AQMP for the basin is the most important measure to mitigate air pollution impacts. SCAQMD Rule 203 will be adhered to during grading as a means of reducing dust emissions. The applicant will assist the City in implementing regional air quality improvement strategies and regional transportation planning objectives.

Through design modifications made to the circulation system during the environmental impact report preparation process, reductions in air quality impacts were achieved. This results from efficient design, increased LOS's and reductions in peak hour wait times.

1.2.4 NOISE

a. Setting

Due to the very low traffic levels in the area, vehicular noise is presently not a significant factor in the site environment. The western boundary of the project site is adjacent to the 65 CNEL contour for flight operations at March Air Force Base. Aircraft noise levels on the site range from 50 to 65 CNEL.

b. Impacts

Potential noise impacts may arise from construction activities and traffic impacts on surrounding land uses. Construction noise can be a nuisance to surrounding land uses. Noise levels generated by project generated traffic will be significant on Ramona Expressway, Rider Street, Center Street and potentially Perris Boulevard. No impacts are expected from March AFB flight operations.

c. Mitigation

Project construction activities should be limited to between the hours of 7:00 am to 7:00 pm.

Individual phases of the proposed project adjacent to noise impact roadways will be subject to more detailed engineering acoustical studies. Design measures will be incorporated to mitigate the noise impacts from traffic as found necessary.

1.2.5 BIOTIC RESOURCES

a. Setting

The site consists entirely of farmland. No native plant community or undisturbed habitat is present. Although the site is within the range of several species of sensitive plants and animals, all off these prefer habitats other than that found on the property. The site is visited by numerous species of migratory shorebirds, blackbirds, songbirds, and birds of prey.

b. Impacts

Because the site is no longer a natural habitat, the only significant impact is its incremental contribution to the loss of open space in the general area.

No threatened or endangered species will be impacted by project implementation. No essential habitat for threatened or endangered species will be removed.

c. Mitigation

No mitigation is required under this category of examination.

1.2.6 LAND USE

a. Setting

The entire property consists of farmland, with active production of alfalfa, sheep, and non-irrigated grains. A portion of the site is fallow. Prior agricultural uses may have included cattle grazing, potatoes, and sugar beets. There are no structures on site. The current zoning for the property is Agriculture.

The site soils are characteristic of productive farmlands. Class I and II soils predominate. Williamson Act contracts were not renewed in September of 1978 and expired in January 1988.

b. Impacts

Project approval will initiate a phased conversion of land use from agriculture to urbanized uses consisting of residential, commercial and parks. Agricultural uses will be eliminated and prime soils will be removed from production, which is considered a significant adverse impact. Development would occur at a more intense level than is presently allowed under site zoning. The project could encourage surrounding undeveloped or agricultural lands to urbanize.

c. Mitigation

The proposed Specific Plan provides a regulatory framework from which zoning and planning goals for the property can be achieved.

Agricultural uses within the City of Perris may be prolonged through implementation of right-to-farm ordinances or agricultural easements.

1.2.7 POPULATION AND HOUSING

a. Setting

The 1987 estimated population for the City of Perris was 11,250 persons, an increase of 36 percent from 1984 population. Projected 1989 population is projected to be 14,606 persons.

b. Impacts

Implementation of the proposed project will increase the City's single-family dwelling inventory by 3450 units. Projected population from the single-family development is estimated at 9488 persons at full buildout (1999) based on 2.75 persons per household. The project will account for a 19 percent of the anticipated 1999 city population of 49,250 persons. The City of Perris reports that it may soon exceed SCAG Modified Growth rates for the area, however, SCAG and the City are presently working to revise the regional population estimate.

c. Mitigation

Mitigation for growth of population is addressed within each other subject as appropriate. Such areas include, at least, traffic, noise, public facilities, air quality, and related discussion.

1.2.8 CULTURAL RESOURCES

a. Setting

The historical development of the site began prior to 1900, though concentrated settlement in the area started 30 to 40 years later. Since then, farming and ranching have comprised the foci of use on the site. No significant cultural, historical, or prehistorical resources have been identified on the site.

b. Impacts

Although implementation of the project will result in landform alteration, the absence of cultural, historical, or prehistorical resources suggests that such modification will result in no significant impact.

c. Mitigation

A archaeological contingency plan will be formulated in the event that unknown resources are uncovered during grading.

1.2.9 TRAFFIC AND CIRCULATION

a. Setting

Regional access to and from the project site is provided via I-215, Ramona Expressway, and Perris Boulevard. Local circulation to and from the project site will be provided by Rider Street, Bradley Road to Ramona Expressway and Center Street.

b. Impacts

The project will increase traffic volumes on local roadways in the vicinity of the site. The project will generate approximately 35,562 trips per day from residential land uses and 11,130 trips per day from commercial uses. Assuming that 15 percent of the residential trips are internal, the external trip generation for the project is approximately 40,465 trips per day. The project, in conjunction with growth in other areas of the City of Perris, will affect traffic at the following intersections: Ramona at Murrieta, Murrieta at Dawes, Center at "A", Rider at Center, and Placentia at Evans. The project simultaneously contributes to local and regional circulation improvements to increase the overall circulation system efficiencies under build-out conditions.

c. Mitigation

Various improvements to the local circulation system will be required as a result of the project and other growth occurring in the City. These are described in Section 4.3.9b. A fee assessment has been proposed as an equitable method of determining the appropriate contribution to off-site circulation improvements. The applicant's fair-share responsibility for improvements will be determined by the City during the project approval process. Credits for the regional improvements provided by the project are also to be recognized in the calculations.

1.2.10 NATURAL AND ENERGY RESOURCES

a. Setting

No significant amounts of natural resources or energy are presently utilized on the site.

b. Impacts

Implementation of the project will reduce the amount of open space in the area by 648 acres and prevent any future use of the site for agricultural activity. Development of the project will utilize nonrenewable energy resources on a short-term basis during construction and will consume additional resources over the long-term.

c. Mitigation

The use of natural gas and energy shall be reduced by implementing a range of measures pursuant to California Residential Energy Standards and good engineering practice.

1.2.11 PUBLIC FACILITIES AND SERVICES

a. Police and Fire Protection

(1) Setting

Fire protection to the project site is currently provided by the Riverside County Fire Department. The site is currently within the jurisdiction of the City of Perris Police Department. The City is served now by one Station for the entire 12,000 population without extreme difficulty. A study of public facility needs is being prepared for the City under separate cover and is not available at this time. County of Riverside design criteria suggests one station per 3,200 residential dwellings.

(2) Impacts

Considering 3450 SFD residential units, the project could require one fire station and engine company. Additional city police services will be required. Approximately 14 officers and 8 administrative support personnel for the police department could be needed. The fiscal study located in Appendix 5.6 should be consulted for expanded discussion.

(3) Mitigation

The project applicant will be required to make an agreement with the City detailing how the project intends to meet City fire protection requirements if a need is determined by the forthcoming fiscal/public facilities study. It is likely that the need for a fire station on-site will be obviated by a station proposed at the intersection of Placentia and Redlands as referenced in the McCanna Ranch Specific Plan. The increased need for police officers, personnel and equipment is expected to be provided through expenditures from the City General Fund.

b. Water and Sewer Service

(1) Setting

The project site is within the water and sewer service area of the Eastern Municipal Water District. Water service is provided to the site, however, no sewers presently serve the area.

(2) Impacts

The project will create a demand for 1.9 million gallons per day of water and 0.95 million gallons of sewage treatment capacity.
Eastern Municipal can provide service to the site.

(3) Mitigation

Assurances for provision of adequate water and sewer service is required prior to subdivision approval. Fees will be assessed to the project for connection to the water and sewer system. Water conservation measures, including use of reclaimed water for irrigation should be implemented.

c. Schools

(1) Setting

The project site is located in the Perris Union High School District and the Val Verde Elementary School District. Both districts are operating under conditions of impaction.

(2) Impacts

The project will generate approximately 1172 K-5 students, 518 6-8 grade students, and 518 9-12 students.

(3) Mitigation

Both school districts have a developers fee which is required to be paid before building permits are taken out. These fees are $1.50 per square foot for residential areas and $0.25 per square foot of commercial building area.

d. Parks and Recreation

(1) Setting

The project is located immediately south of the Lake Perris Recreation Area. An estimated 2,000,000 visitors utilize Lake Perris annually.

Additional recreation opportunities in the City include approximately 655 acres of regional and community parks.

(2) Impacts

The additional residents attracted to the City by the project will generate additional demand for local and regional recreational facilities in the Perris Valley. Considering the City standard of two acres of park for every 100 dwelling units, the proposed project would require about 69 acres of dedicated park land. Acreage provide by the project is 41 acres, leaving a deficit of 28 acres.

(3) Mitigation

The park acreage deficiency will be compensated by payment of in-lieu fees of $800 per unit to be applied toward the dedicated park land improvements.

e. Solid Waste

(1) Setting

The Mead Valley landfill is expected to operate until 1999 according to the Riverside County Solid Waste Management Plan.
This landfill received an average of 275 tons of solid waste per day in 1986.

(2) Impacts

The project will generate an estimated 11.2 tons of waste per day by 1992, increasing to 37.2 tons per day ultimately.

(3) Mitigation

No mitigation is provided for generation of solid waste.

f. Utilities

(1) Setting

Electrical service to the site is provided via existing Southern Cal Edison facilities. The Southern Cal Gas Company also provides service to the site.

(2) Impacts

The project will increase the demand for electricity and natural gas resources. At project buildout, approximately 22,994,250 cubic feet of natural gas and 20,141,100 kwh of electricity will be utilized.

(3) Mitigation

The affected utility companies can provide assistance in selection of effective energy conservation techniques, as well as assistance in infrastructure construction.

INTRODUCTION

May Ranch

2.0 INTRODUCTION

2.1 PURPOSE AND SCOPE OF SPECIFIC PLAN/ENVIRONMENTAL IMPACT REPORT

This document is a combined Specific Plan and Draft Environmental Impact Report (SP/DEIR). The Specific Plan describes the proposed development of May Ranch, a 684-acre site located south and southwest of the Ramona Expressway and east of the Perris Valley Storm Drainage Channel. The proposed development comprises approximately 3,450 single-family detached homes in conjunction with commercial development, and public and community support facilities.

In order for the development to proceed, a comprehensive General Plan Amendment is required to change the existing agricultural and open space land use designations to the new designation of "Specific Plan."

A key function of the Specific Plan is to complete the detailed planning and environmental review procedure necessary for project development. The May Ranch Specific Plan has been prepared in accordance with the requirements of the California Government Code for Specific Plans (Government Code Sections 65450-65457) and addresses all issues and topics specified in said code.

In accordance with Section 65453 of the California Government Code, the Environmental Impact Report (EIR) prepared under the City's authority describes the environmental impacts resulting from the comprehensive General Plan Amendment and Specific Plan implementation. The EIR is an informational document designed to provide the general public and appropriate governmental agency decision-makers with a full understanding of the potential environmental effects of a proposed project. The EIR process is intended to enable public agencies to evaluate a project for determination of the significance of its effect on the environment, to examine and institute methods of reducing adverse impacts, and to consider alternatives to the project as proposed. This EIR incorporates by reference the Final Environmental Impact Report for the adjacent McCanna Ranch property.

The Scope of the EIR was established in the Notice of Preparation issued by the City of Perris on January 26, 1988 and recognized by the State Office of Planning and Research under Number SCH880125. All topics required by Sections 15140 through 15145 of the State Guidelines are addressed. The following study areas are emphasized:

- Land Form and Topography
- Climate and Air Quality
- Hydrology, Flooding, and Drainage
- Biology
- Noise
- Land Use
- Population and Housing
- Transportation and Circulation
- Natural and Energy Resources
- Public Facilities and Services

2.2 HISTORICAL BACKGROUND

The Lake Perris project area was originally part of the Spanish Rancho named San Jacinto Nuevo Y Potrero. The Spanish Land Grant was initially given to Don Miguel de Pedrorega in 1846 and consisted of 48,823 acres. The ranch was used only for cattle grazing.

Prior to the 1880s, Perris Valley was generally known as the San Jacinto Ranch after the San Jacinto Rancho and San Jacinto River which crosses the southern section of the valley. In 1881, the California Southern Railroad decided to lay its tracks through the valley, terminating in San Diego. The route was completed in 1882.

With completion of the railroad, settlers began homesteading and buying railroad land. In 1886, a railroad station was established on the transcontinental route of the Santa Fe, officially named Perris. Railroad lines were extended into Los Angeles. Heavy storms washed out the tracks in the Temecula Gorge and in 1892, service to San Diego was abandoned and Perris was no longer on the Transcontinental Route.

In the 1880s, a large underground aquifer was discovered and was pumped from depths of 5 to 40 feet. The growing of alfalfa became a major enterprise of the era. The desire for a municipal water system encouraged the citizens of the town of Perris to incorporate and have their own governing body and, by 1911, the State of California recognized Perris as an official incorporated city. The Perris Valley became a part of the Eastern Municipal Water District in 1950, and also became a part of the Metropolitan Water District.

The need for water became a continuing concern for the Valley, as farming, in particular sugar beet, became one of the major industries. The result of the Southern California need for water was the construction of the State Water Project, which delivers water 444 miles from the Oroville Dam near Sacramento to Lake Perris. Completion of the aqueduct and dedication of Lake Perris was celebrated on May 18, 1973.

Although the Perris Valley is rich in history, there are no identified historic sites within or near the project vicinity. Appendix 5.3 contains an expanded discussion of the cultural, historical, and prehistorical analysis of the area and subject property.

2.3 PROJECT SETTING

2.3.1 PROJECT LOCATION

May Ranch is situated in the northeasterly portion of the City of Perris, approximately two miles east of Interstate 215, immediately southwest of Lake Perris and approximately three miles northeast of the City of Perris "Old Town" Civic Center and Business District.

2.3.2 PROJECT BOUNDARIES

The May Ranch property totals approximately 684 acres. The boundaries of the property extend from the Ramona Expressway on the north and Placentia Avenue on the south. The Perris Valley Storm Drain provides the westernmost boundary. The eastern boundary, and others within the site, are irregular. Figure 3 graphically depicts the plan boundaries. The Colorado River Aqueduct bisects the site in an east-west alignment.

2.3.2 PHYSICAL SETTING

The project site is situated on the eastern edge of the flat Perris Valley and exhibits little topographic relief. The site has only 20± feet of fall across its width (approximately 0.1 percent slope). This extremely gentle slope, unto itself, presents no land form related development constraints. The soils are characterized by alluvial material with perched ground water located approximately 40 feet below grade. The site is situated approximately five miles southwest of the San Jacinto Fault (active). These factors do not limit site utilization but do help focus the planning and site engineering.

An adjacent significant topographic feature is the granitic hill located between the May Ranch site and the McCanna Ranch property to the northeast. The subterranean Colorado River Aqueduct also bisects the project. The entire property is located in the Lake Perris Reservoir Dam inundation area. Inundation would occur if the dam were to fail. The Lake Perris Dam is in a "safe, stable condition" according to the State of California Department of Water Resources Board of Consultants.

The project site is underlain by the Perris Valley Alluvial Flood Plain deposits. Soils consist of dense silt and clayey sand, and sand with occasional silt and clay interbeds. These soil conditions are typical of those in the Perris Valley and are considered good soil for agricultural use.

All of Southern California is in a seismically active area. There are no known active faults on or immediately adjacent to the site and the hazard of surface fault rupture is considered to be very low. Seismic hazards at this site would be attributed to ground shaking as a result of an earthquake experienced on an active fault. Seismic risk is considered moderate. Construction will be in conformity with the seismic criteria of the Uniform Building Code.

Geotechnical and soils feasibility investigations were conducted for the May Ranch project site by GA Nicoll and Associates, Inc. Appendix 5.2 contains further discussion of geotechnical issues on and around the subject property.

SITE LOCATION

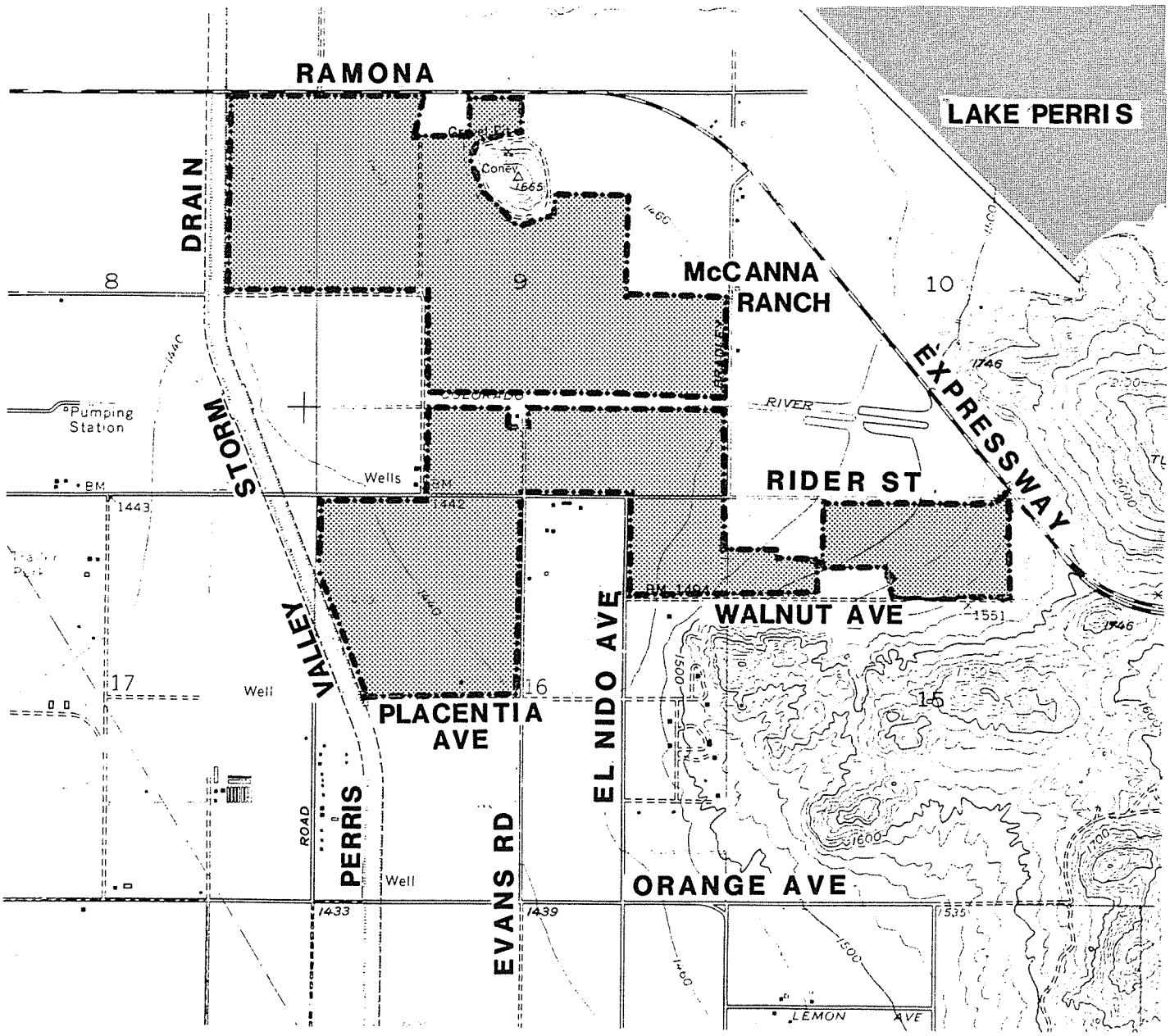


FIGURE: 3

NOT TO SCALE

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May Ranch

2.3.4 JURISDICTIONAL SETTING

All of the property for May Ranch has been annexed to the City of Perris, a sovereign agency incorporated in 1911. Other agencies with an interest in the area include the U.S. Air Force (March AFB), the State of California (Lake Perris), and the County of Riverside.

2.3.5 ADJACENT PROJECTS AND FUTURE TRENDS

A total of 1,387 residential units are proposed on 250± acres within the McCanna Ranch Specific Plan located adjacent to the May Ranch site. These are to be constructed over an approximate five-year time period. May Ranch and the McCanna Ranch development are a part of the pattern of growth representing an expansion of the Moreno and Perris Valley areas.

The project is located in one of the most rapidly growing areas of Southern California. This expansion is due in part to an unmet demand for entry level single-family detached homes serving Riverside, Los Angeles, San Bernardino, and Orange Counties.

Residential development is expected to continue in the Moreno and Perris Valleys. The City of Perris is expected to expand over the next five years, along the arterial spines of Perris Boulevard and Ramona Expressway, and to the east and west of Interstate 215.

The employment base of the area is expected to increase significantly. This is based on:

- rezoning for primarily industrial and commercial uses in the northern portion of the City;
- industrial land use approvals in the County of Riverside northwest of March Air Force Base;
- industrial rezoning in the City of Moreno Valley. Such a demand for employment supports the need for housing in all sectors of the housing market.

In the County of Riverside General Plan, the existing primary land use designation for most of the Perris Valley is agricultural and farming, reflective of the historic setting. However, neither of these could be considered a long-term viable use for the area, based on urbanization pressures, farming economics, and the increased cost of utilities to provide services.

The area to the north of the project site is expected to remain predominately in open space, recreation, and agriculture. The majority of the land is under the jurisdiction of the Lake Perris Recreation Area.

2.4 ALTERNATIVES CONSIDERED

In accordance with State Guidelines, an SP/EIR must present alternatives which are capable of eliminating significant environmental impacts, and state why they were rejected for the proposed project. The emphasis of the alternatives analysis is on reducing adverse effects of the proposed action. Included in this section are discussions addressing the "No Project" Alternative and a Lower Development Intensity Alternative. The City of Perris, as lead agency, must weight the merits of each alternative in comparison to the proposed action.

2.4.1 "No Project" Alternative

a. Environmental Effects

The "No Project" Alternative would retain the site in its present undeveloped condition, and would support the continuation of limited agricultural use of the site. This alternative maintains the existing environmental conditions of the subject property as discussed in the various subsections of Section 4.3 of this SP/EIR. The "No Project" Alternative is considered the environmentally superior alternative for the following reasons:

(1) elimination of all grading impacts and associated impacts upon agricultural soils.

(2) reduction in traffic and associated air quality and noise impacts over development scenarios associated with the project proposal, or other alternatives considered herein.

(3) retention of on-site open space.

The "No Project" Alternative would retain the site's existing general plan and zoning designations.

b. Reasons for Rejection of "No Project" Alternative

This alternative would negate any benefits of the project relative to provision of a wide range of housing types within a homogenous planned community setting. In addition, the benefits of expanding the community's employment base would be negated. The project, as proposed, is designed to meet the public demand by providing affordable detached single family dwelling units and providing local employment opportunities that will be marketable within the region. For these reasons, the "No Project" Alternative was rejected.

2.4.2 Lower Development Intensity Alternative

The objective of a Lower Development Intensity Alternative is to provide for fuller mitigation of the more significant adverse impacts, yet allow the project to proceed at a reduced level. A description of the reduced density alternative is guided by the kinds of impacts that require avoidance or reduction. Specific suggestions for the lower density alternative are given in each section.

a. Earth Resources; Hydrology; Cultural Resources

It can be anticipated that impacts resulting from the Lower Development Intensity Alternative for Earth Resources, Hydrology, and Cultural Resources, would be similar in nature and scope to those associated with the proposed May Ranch Specific Plan. These impacts are briefly summarized below:

(1) Topography, Geology and Soils

Grading for the project will involve cut and fill operations which will alter the existing landform. However, due to the generally flat nature of the site, this alteration will not be significant. Ground surfaces which are temporarily exposed during grading may be eroded.

(2) Seismicity

Due to the presence of regional faults, the potential exists for ground shaking at the project site. This, in turn, creates the potential for structural damage as a result of earthquake activity regardless of development intensity.

(3) Hydrology

Project grading will permanently alter the natural runoff pattern by channeling drainage through pipelines to the Perris Valley Storm Drain. Storm flow rates on-site will increase due to the creation of impervious surfaces. The velocity and composition of runoff will also be altered. Housing units would still be constructed within the dam inundation area of Perris Dam, however, the 100-year flood area could be avoided.

(4) Cultural Resources

No adverse impacts will result from project implementation since the results of the archaeological and historical surveys shows that the project area contains no prehistoric cultural resources and no significant historic resources. The site includes no areas likely to contain subsurface manifestations of such resources.

b. Air Quality

A reduced intensity of development alternatives would result in lower air pollutant emissions compared to the proposed project. Such reduced emissions may be more in line with regional air quality improvement and regional transportation strategies. However, SCAG is in the process of revising population projections for Perris Valley which may allow a higher level of growth than SCAG modified growth levels.

c. Noise

Any reduction in dwelling units will have a concomitant reduction in traffic volumes which would incrementally decrease on-site and off-site noise levels associated with the project. Projected noise impacts along Rider Street could be avoided by this alternative.

d. Wildlife and Vegetation

Development of the site with the uses proposed by the Lower Development Intensity Alternative could eliminate less vegetation compared to the proposed project. Since the existing vegetative communities are agricultural and ruderal/disturbed, loss of habitat and resulting loss of limited wildlife resources is not a significant biological impact with the proposed project, nor would any preservation of vegetation under a low intensity alternative have a significant wildlife benefit.

e. Land Use and Population

Utilizing the scenario of only developing the upper portion of the project site, the alternative could involve the development of 1,654 residential units, 55 acres of commercial space, and 17 acres of parks. Accordingly, population generation would be about 4,550 persons for the alternative. Significantly, the alternative could conserve agricultural soils on approximately 300 acres of the site. The aqueduct could serve as a buffer of these lands from the development to the north. This alternative, however, could not guarantee viability of agricultural uses.

f. Traffic and Circulation

Development to reduce level of 1,654 residential units and 55 acres of commercial use would generate approximately 36,063 vehicle trips, or slightly less than half the trips generated by the proposed action. It is possible that the reduced density alternative would defer the time that LOS problems occur on local roadways affected by project traffic.

g. Utilities, Public Services, and Energy Resources

A low intensity project would result in fewer emergency calls than the proposed project. Though fewer emergency calls would result, the distance between existing police and fire stations and the site may still result in the need for additional facilities. In terms of impacts to schools, the Lower Development Intensity Alternative would generate fewer students than the current project proposal. However, additional students generated by this Alternative would still require additional relocatables or perhaps new facilities. In terms of parks and recreational facilities, the lower population generated by this Alternative would generate less demand for parks and put less pressure on other recreational facilities in the area, such as the Lake Perris State Recreation Area.

h. Reasons For Rejection Of The Lower Development Intensity Alternative

Although the Lower Development Intensity Alternative contains incrementally reduced impacts in the areas of traffic, noise, air quality and public facilities and utilities, and may be considered environmentally superior to the current development proposal. This alternative, however, precludes some of the marketing objectives of the project, including to provide a homogeneous community to serve the needs of the entry-level buyer, the move-up buyer, the large family and singles.

The economic pressures and public demand for housing appears to have improved the development potential of the subject site. Existing uses have been marginally economically viable. The project site is in a high growth area and in the path of growth occurring outward from the City of Perris and Moreno Valley. It appears that the highest and best use of the site is urban use. There appears to be no substantial reason therefore to only to develop a portion of the site.

For these reasons, the Lower Development Intensity Alternative was rejected.

3.0 SPECIFIC PLAN

3.1 COMPREHENSIVE LAND USE PLAN

3.1.1 APPROACH

The Comprehensive Land Use Plan for the Specific Plan proposes the development of approximately 3,450 single-family detached homes on 684 acres, at a density of 5 DU/AC, with the added opportunity for commercial development, public parks, a linear park, and supporting arterial roadways.

Figure 4 depicts the Comprehensive Land Use Plan and Table 3-1 summarizes the project statistics.

The Land Use Plan represents a diversity of residential product types and is intended to stimulate the creation of a homogeneous community for the young and the established, the first-time home buyer, and the move-up buyer, for the larger family, and the singles all within a common community theme.

The entire community will be unified through its use of design consistency and coordinated entry statements, roadside hierarchy, architecture, and signage.

The maximum allowable number of dwelling units shall be as designated for each planning unit on the Land Use Plan (Figure 4) except as may be modified as follows. All areas designated for residential use may be developed at a lower number of dwelling units, without requiring a change in the PRD-Specific Plan zoning. The tabulation on the Land Use Exhibit reflects the average density of each product type. Actual densities in each planning unit may vary above or below the average, based upon the size and shape of the individual planning area.

Planning area boundaries may be modified with the approval of the City Planner. The total number of dwelling units allowed within each Planning Area can exceed that allowed by the Specific Plan up to 25 percent as long as the cumulative total does not exceed the total number of SFD units. This allows the transfer of dwelling units from one Planning Area to another, while controlling the total number of units allowed for the project. Such a transfer is contingent upon the master developer providing additional data to verify, prior to tentative map approval, that the infrastructure capacity will be adequate.

Access points into each individual planning area will be identified at the time of tentative tract map submittal.

LAND USE PLAN

SUMMARY

RESIDENTIAL		ACRES	D.U.
MH	MEDIUM HIGH	194	1455
M	MEDIUM	140	980
ML	MEDIUM LOW	119	655
L	LOW	90	360
COMMERCIAL			
C	COMMERCIAL	100	—
RECREATION			
PARK	PUBLIC PARK	27	—
	LINEAR PARK	14	—
TOTAL		**684**	**3450**

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FIGURE 4

May Ranch

TABLE 3-1
SPECIFIC PLAN SUMMARY

Land Use		Acres	Dwelling Units
RESIDENTIAL			
R-4000	(medium high - MH)	60	450
R-4050	(medium high - MH)	134	1,006
R-4500	(medium - M)	166	1,123
R-5400	(medium low - ML)	93	511
R-7000	(low - L)	90	360
COMMERCIAL		100	
PARKS AND OPEN SPACE			
Community Park #1		9	
Community Park #2		8	
Community Park #3		10	
Linear Park		14	
TOTAL		**684**	**3,450**

3.1.2 RESIDENTIAL

The single-family residential units will encompass five (5) different types of lot areas and configurations:

Min. Area of Lots	Min. Width at Setback*
R-4,000 (MH) SF lots:	50 foot width
R-4,050 (MH) SF lots:	45 foot width
R-4,500 (M) SF lots:	50 foot width
R-5,400 (ML) SF lots:	60 foot width
R-7,000 (L) SF lots:	60 foot width

* Refer to appropriate Development Standards Section for exceptions and interpretations.

3.1.3 COMMERCIAL

The commercial land use designation is intended to include the diversity of uses currently permitted by Chapter 19.40 of the Zoning Ordinance and will incorporate approximately 100 acres of the project site. The actual area to be developed to this land use will be based on market trends at the time of processing. Development will occur under the provisions of Chapter 19.40 (Commercial) of the City of Perris Zoning Ordinance, a copy of which is reprinted in Appendix 5.8 herein.

3.1.4 PARKS/OPEN SPACE

a. Approach

A major element of the May Ranch Community is the Parks/Open Space Plan. The Plan provides various recreational opportunities in which all members of the community can participate.

b. Plan Description

Recreational opportunities vary from passive, to active, to structured activities. Varying types and degrees of activities will be available which will provide residents the opportunity to take walks throughout the community, and participate in activities such as softball, soccer, basketball, volleyball, and picnics.

c. Development Standards

(1) Community Parks

Community Park #1 proposes a variety of recreational activities including multi-purpose fields for softball and soccer, tot lot, picnic areas, and pedestrian trails.

Community Park #2 proposes provisions for activity areas which include a tot lot and informal open space to accommodate two softball fields and picnic areas.

Community Park #3 proposes provisions for multi-purpose courts, picnic areas, and trails.

(2) Linear Park

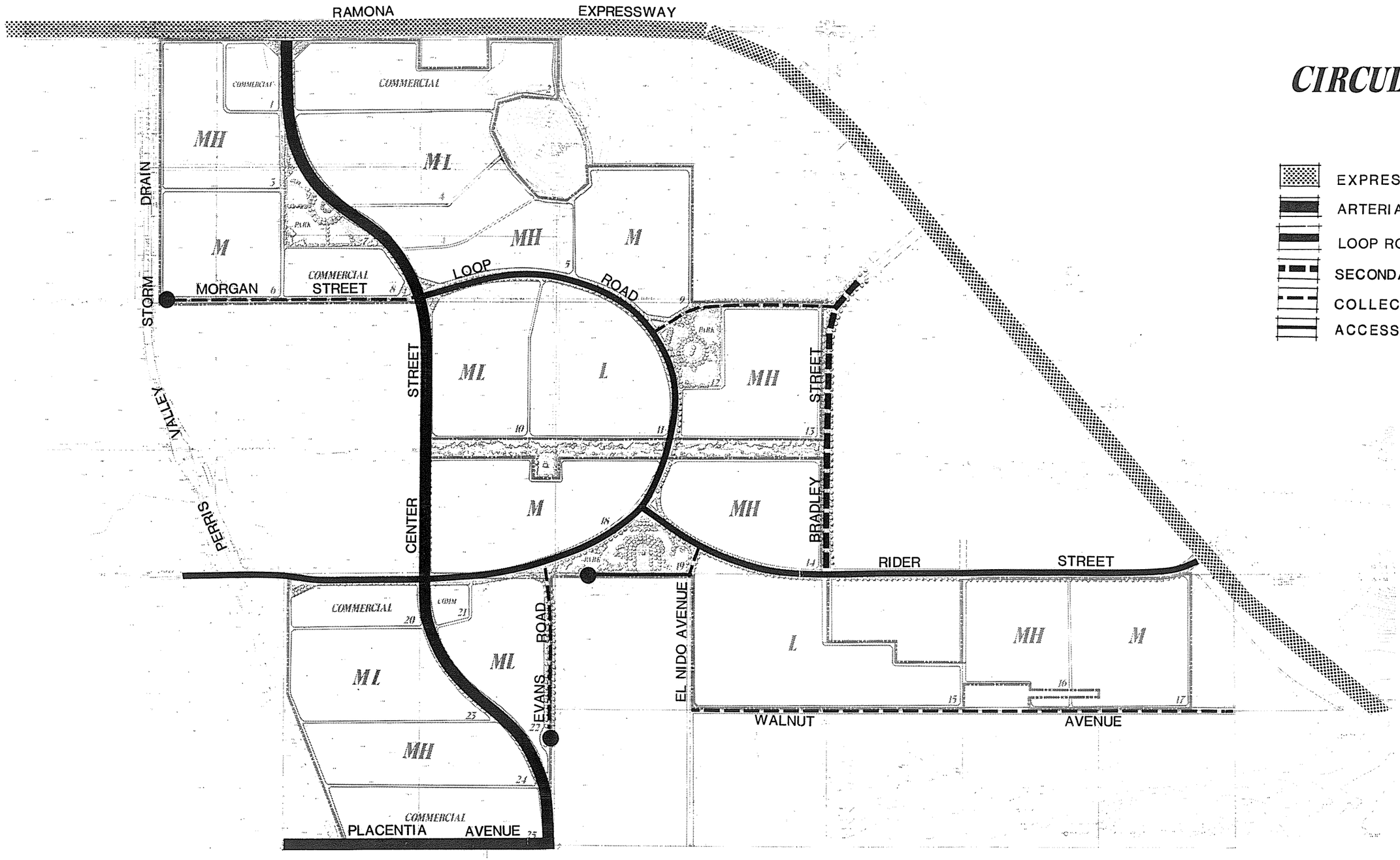
The Linear Park system proposes a ten-foot trail for hiking and emergency access, and picnic areas. Development and use of this park is subject to the approval of the Metropolitan Water District.

3.2 CIRCULATION PLAN

3.2.1 APPROACH

The Circulation Plan for May Ranch is based on a design which will allow safe and efficient internal circulation and access throughout the project. The primary access points provide a wide circulatory dimension while enhancing the aesthetics of the project through landscaping, berming and signage.

CIRCULATION PLAN



EXPRESSWAY – 116' ROW
ARTERIAL HIGHWAY – 110' ROW
LOOP ROAD – 92' ROW
SECONDARY ROAD – 88' ROW
COLLECTOR STREET – 60' ROW
ACCESS ROAD – 56' ROW

GRAPHIC REPRESENTATION ONLY
NOT FOR ADOPTION PURPOSES

FIGURE: 5

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May Ranch

3.2.2 PLAN DESCRIPTION

The Master Circulation Plan, Figure 5, shows the basic roadway design. All roads within the development will be public streets and shall conform with City standards while still providing aesthetic project statements. The system is designed for the efficient movement of traffic with as little disturbance to the residential neighborhoods as possible. Vehicular access to the arterial roadways will be restricted to controlled points. No direct access between individual lots and the primary roadways will be permitted. Access points to each individual planning area will be identified at the time of tentative tract map submittal.

3.2.3 DEVELOPMENT STANDARDS

There are five types of public streets within the project. Figure 6 provides typical cross sections.

Arterial Highway (Center Street and Placentia Avenue) - 110-foot right-of-way. This design will allow for two travel lanes and one parking lane in each direction. A 22-foot wide median will allow for left-hand turn lanes and center landscaping. Additionally, there will be 12 feet of sidewalk and landscaping will be on each side of the roadway. Where applicable May Ranch will only be responsible for development of half the right-of-way for Rider Street and Evans Road, plus 10 feet of additional paving and grading on other side of centerline of street subject to City condemnation and reimbursement agreement through the City of Perris. The areas applicable will be identified on the tentative tract maps.

Arterial Road (Loop Road and Rider Street) - 92-foot right-of-way. This design allows for 27 feet of pavement in each direction, except at intersections, where the roadway will widen to accommodate left hand turn lanes. The 27-foot pavement is divided into two travel lanes and a bicycle lane in each direction. This design will leave a 19-foot right-of-way in each direction for sidewalk and landscaping.

Secondary Road (Bradley) - 88-foot right-of-way. This design allows for 64 feet of paving, two travel lanes, and one parking lane in each direction. Again, there is a 12 foot sidewalk and landscaping strip in each direction. May Ranch will develop only half of the right-of-way for Bradley with McCanna Ranch being responsible for the remainder.

Collector Streets (El Nido, Morgan, Walnut, and Evans) - 60-foot right-of-way. This design allows for one travel lane and one parking lane in each direction with 10 feet for sidewalk and landscaping. All 60-foot right-of-way streets will be developed to half street standards, plus 10 feet of additional paving and grading on other side of centerline of street subject to City condemnation and reimbursement agreement through the City of Perris. The areas applicable will be identified on the tentative tract maps.

Residential Streets - 56-foot right-of-way. This design provides for one travel and one parking lane with 10 feet for parkway and sidewalk in each direction.

3.3 LANDSCAPING PLAN

3.3.1 APPROACH

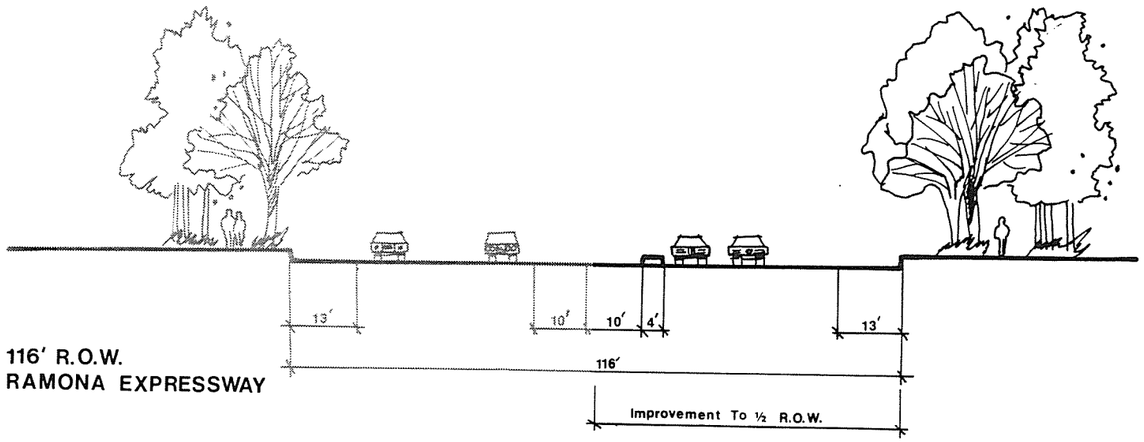
As illustrated on Figure 7, Landscape Concept, project landscaping will play an important role in maintaining project design themes, while emphasizing community continuity.

3.3.2 PLAN DESCRIPTION

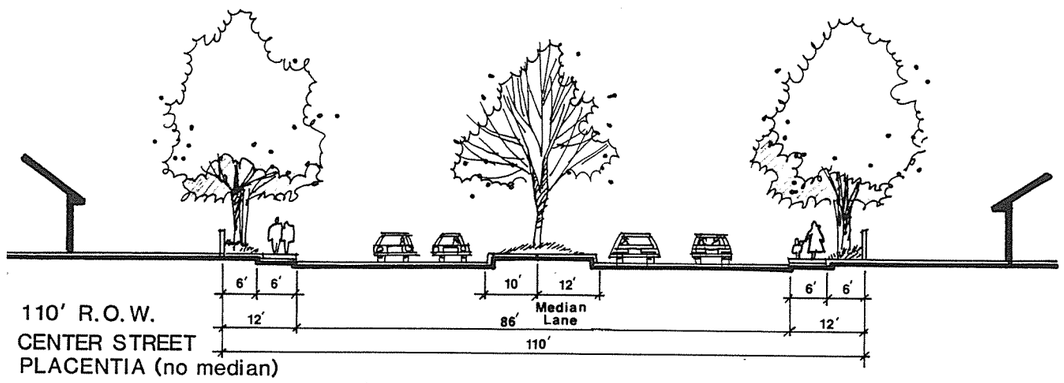
This section of the Specific Plan will provide a general description and development standards for the Landscaping Concept. Entry monumentation will provide initial definition for the site, and will be viewed when approaching the site from any direction. Once within the site, entry monumentation will continue to be present at all key intersections. Monumentation will be developed in a hierarchial format from Major Project entry to Neighborhood entries which will provide initial identification for each residential planning area, and the community as a whole.

Landscaping will be used to identify the hierarchy of the street system, from major access to interior residential streets, creating definite landscaped corridors. This is accomplished by careful consideration of the relationship between street and plant materials characteristics such as size, form, texture, and color.

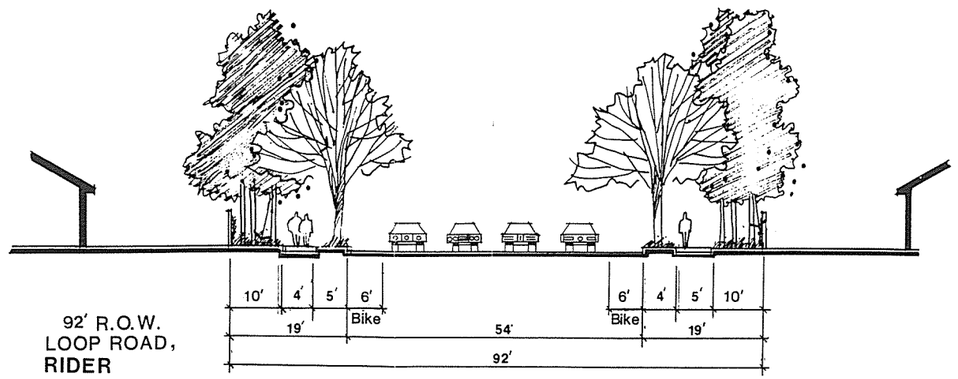
TYPICAL STREET CROSS-SECTION



116' R.O.W.
RAMONA EXPRESSWAY



110' R.O.W.
CENTER STREET
PLACENTIA (no median)



92' R.O.W.
LOOP ROAD,
RIDER

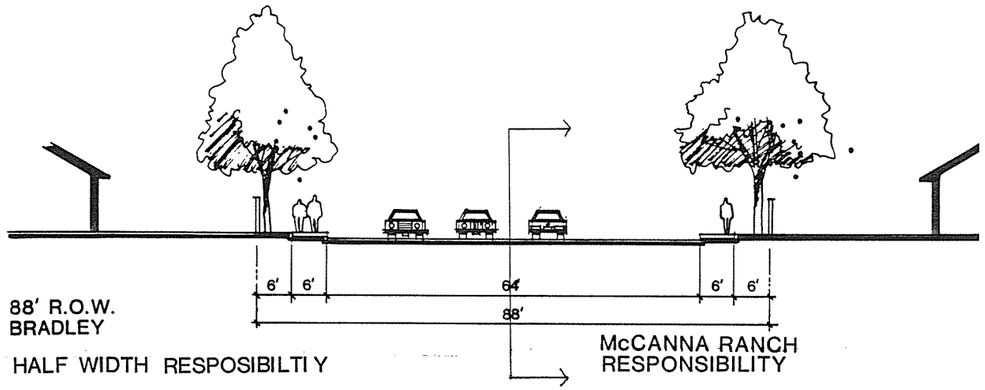
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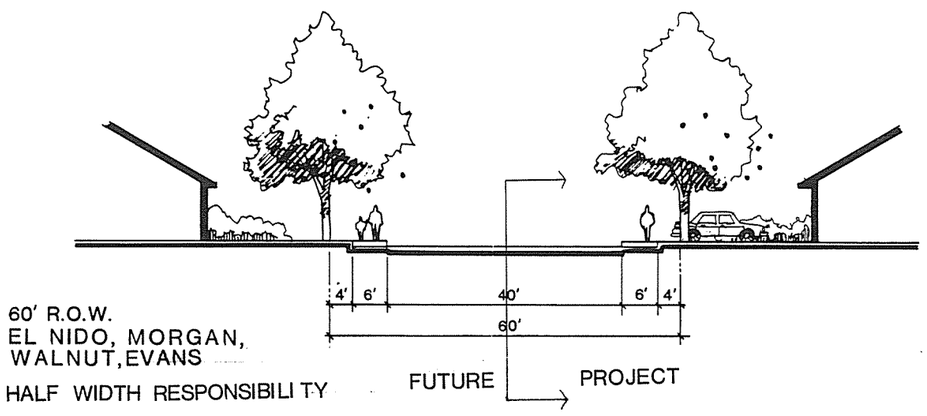
FIGURE: 6

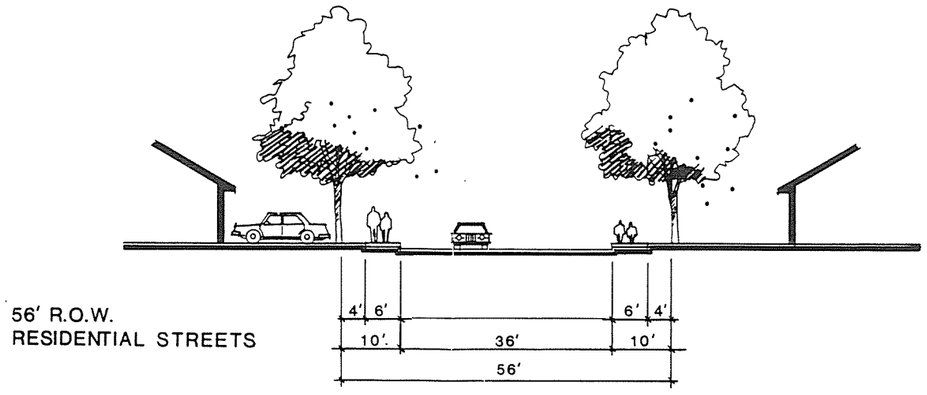
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May Ranch

TYPICAL STREET CROSS-SECTION







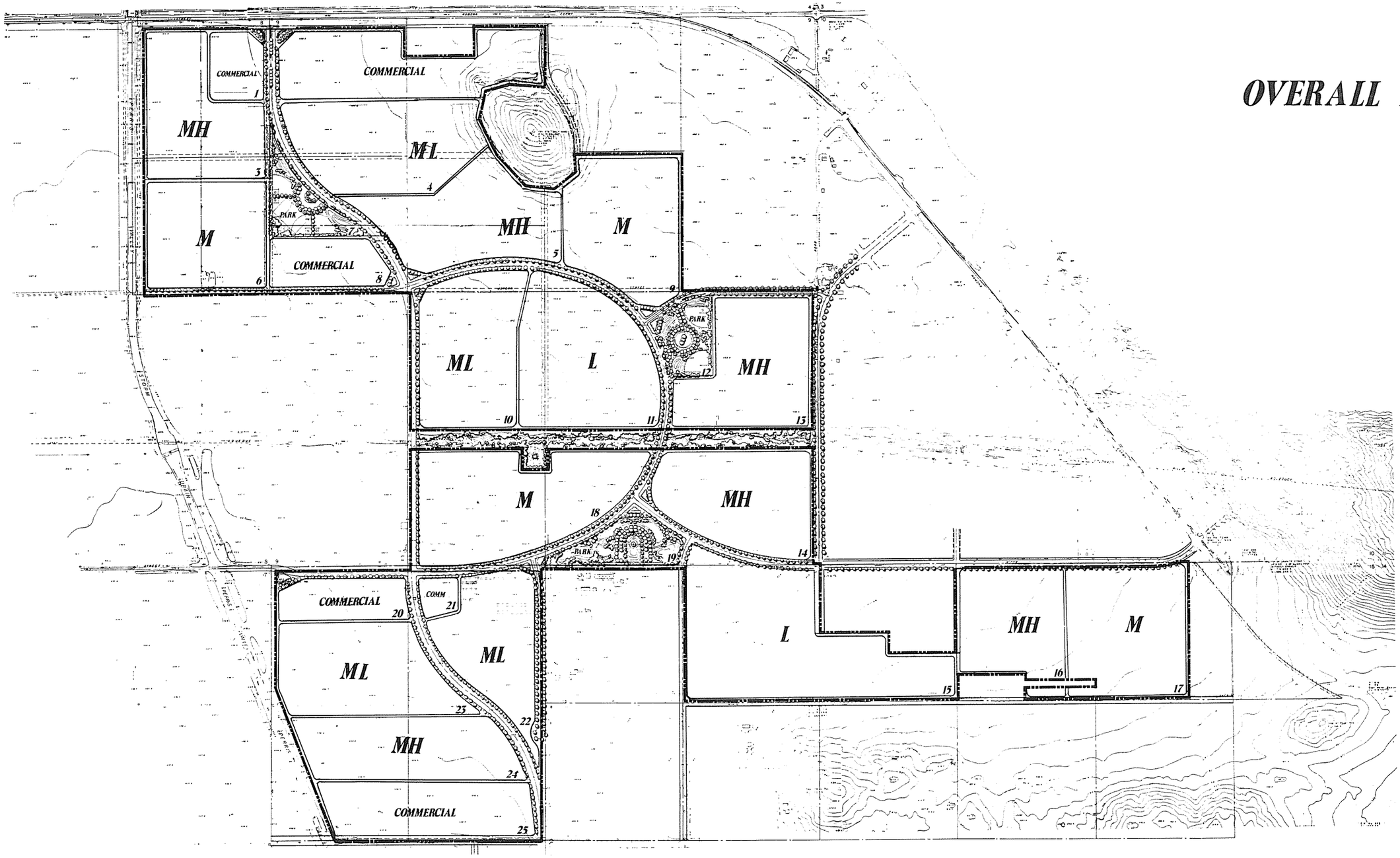
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FIGURE: 6 A

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May Ranch

OVERALL LANDSCAPE CONCEPT



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FIGURE: 7

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May Ranch

3.3.3 DEVELOPMENT STANDARDS

The Landscape Plan consists of landscape components that individually identify specific conditions of the plan and their coordinated landscape treatment. Collectively, all components are coordinated with the selection of building and plan materials that serve to reinforce the overall unified appearance of the community.

a. Entry Monumentation

The Entry Monumentation (Figure 8) proposes enhanced entry signage walls with low planter walls utilizing materials that are reflective of the colors, forms, and textures of the area. The landscaping will consist of turf, berms, flowering shrubs, and groundcover, canopy trees, and vertical accent trees. The entry monumentation may be subject to refinements as development of the commercial areas occur.

b. Landscape Parkways

The Landscape Parkway Design proposes a hierarchy of landscape treatment to identify the specific image of importance of roads servicing the project. Theme street trees will be planted to highlight the primary loop and collector roads serving the project along with flowering shrubs, groundcover, and canopy trees.

c. Community Parks (Parcels 7, 12, and 20).

(1) Community Park #1. (Figure 9)

This Community Park proposes a variety of recreational activities including multipurpose fields for softball and soccer, tot lot, picnic areas, and pedestrian trails.

The landscaping in the park includes turf berms, shrubs and groundcover, accent trees, and buffering with evergreen tree massing at those locations adjacent to residential uses.

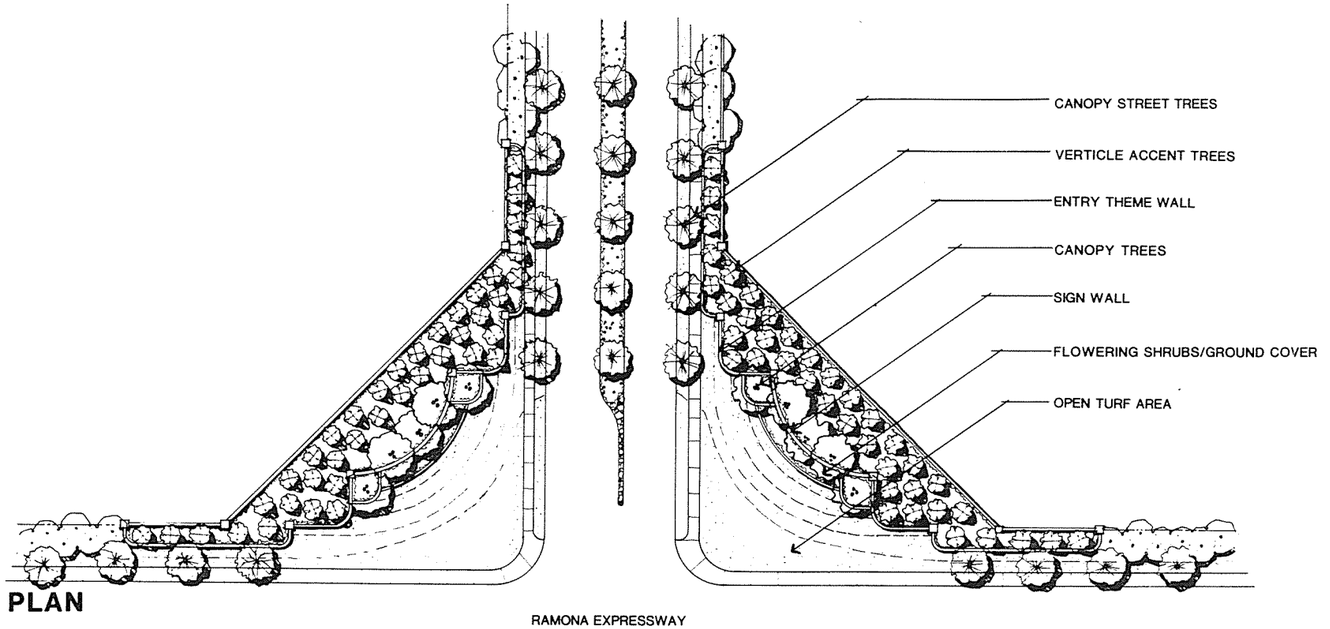
(2) Community Park #2. (Figure 10)

This Community Park proposes provisions for activity areas including tot lot, informal open space to accommodate two softball fields, and picnic areas. Landscaping consists of turf berms, shrubs and groundcover, accent trees, and buffering with evergreen tree massing at those locations adjacent to residential uses.

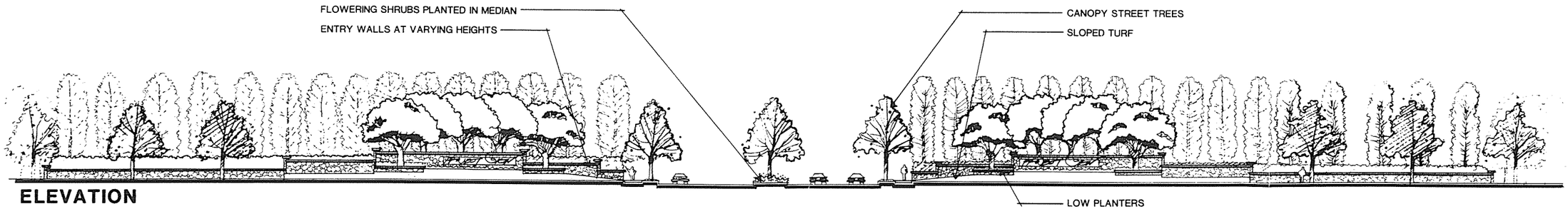
(3) Community Park #3. (Figure 11)

This Community Park proposes provisions for multi-purpose courts, picnic areas, and trails. Landscaping will consist of turf berms, shrubs and groundcover, canopy trees, and evergreen tree massing along the perimeter of the park.

PROJECT ENTRY MONUMENTATION



PLAN



ELEVATION

GRAPHIC REPRESENTATION ONLY
NOT FOR ADOPTION PURPOSES

FIGURE: 8

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May Ranch

d. Linear Park (Figures 12 and 13) Subject to MWD approval.

The linear park system proposes a passive area of natural open space/greenbelt with a minimum twelve-foot equestrian/hiking trail. This trail system shall serve as a link to planning areas within the project boundary and to adjacent, off-site, equestrian trails. Proposed landscaping will consist of turf, canopy trees, and evergreen massing along the perimeter subject to MWD approval.

e. Signage (Figure 14)

(1) Project directional signage and all project graphics will be unique to May Ranch. Such signage will enhance and coordinate with the project entry and intersection monumentation.

(2) The directory signage will provide project identification and directional information for all projects that will be marketed at May Ranch.

f. Procedure

(1) All detailed landscaping programs for planning areas and roadways will be prepared by a qualified landscape architect for review by City staff.

(2) The landscaping design for the site will include trees, shrubs, and groundcover compatible with natural vegetation on-site, where feasible.

(3) Prior to recordation of any final subdivision map, improvement plans for the respective landscaped areas, or plans to mitigate an environmental impact for the stage of development, shall be submitted to the City planning Department for approval. The improvement plans shall include, but not be limited to the following:

(a) Final Grading Plan.

(b) Irrigation plans certified by a landscape architect.

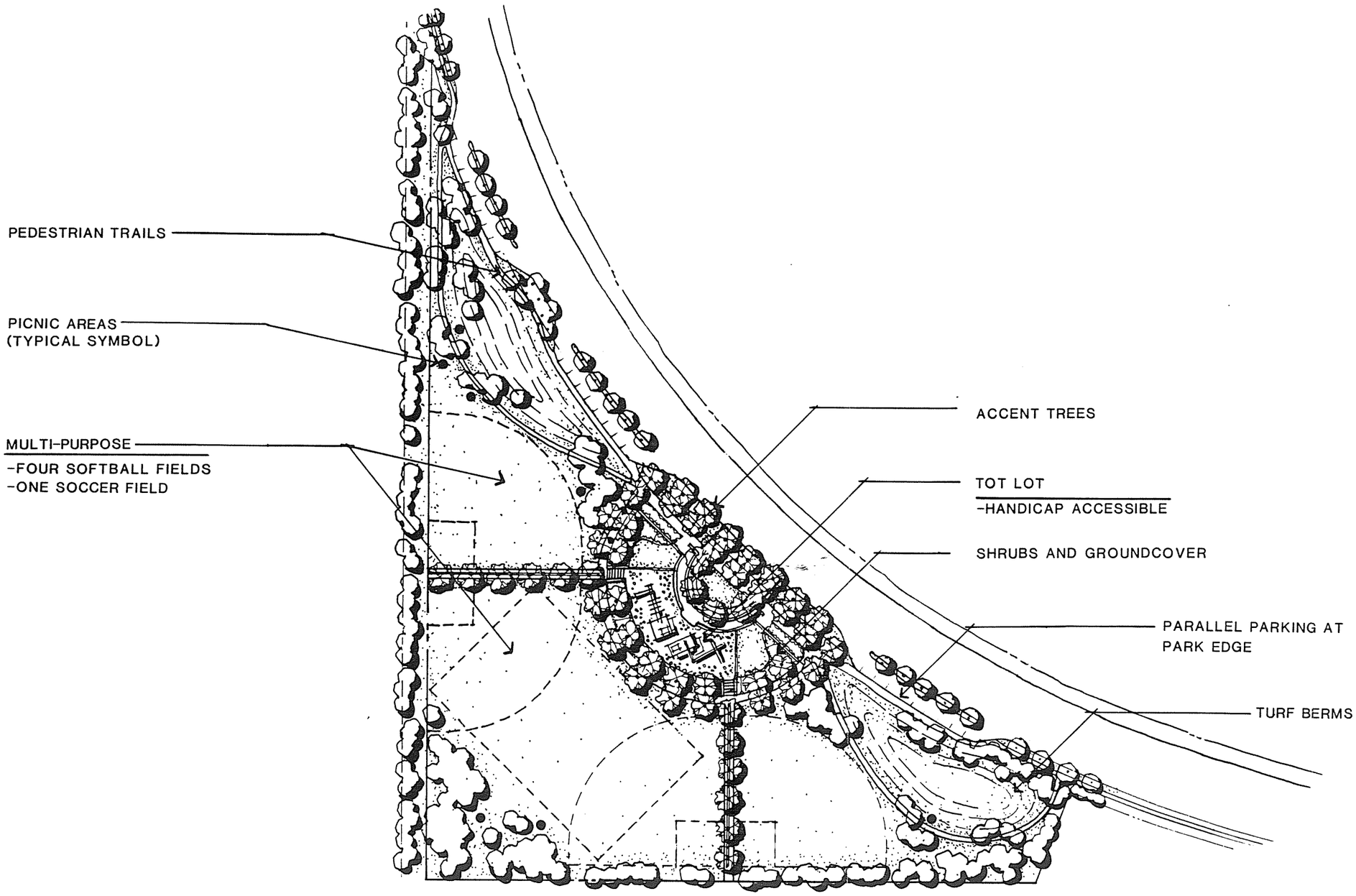
(c) A landscaping plan with seed mixes for mulching and staking methods; locations, type, size, and quantity of plantings.

(d) A hardscaping plan with location and type and quantity of potential recreational amenities/facilities.

(e) Fence treatment plans.

(f) Special treatment/buffer area treatment plans.

LANDSCAPE CONCEPT
PUBLIC PARK
AREA 7



LEGEND

- ACCENT TREES
- CANOPY STREET TREES
- EVERGREEN TREE MASSING
- TURF

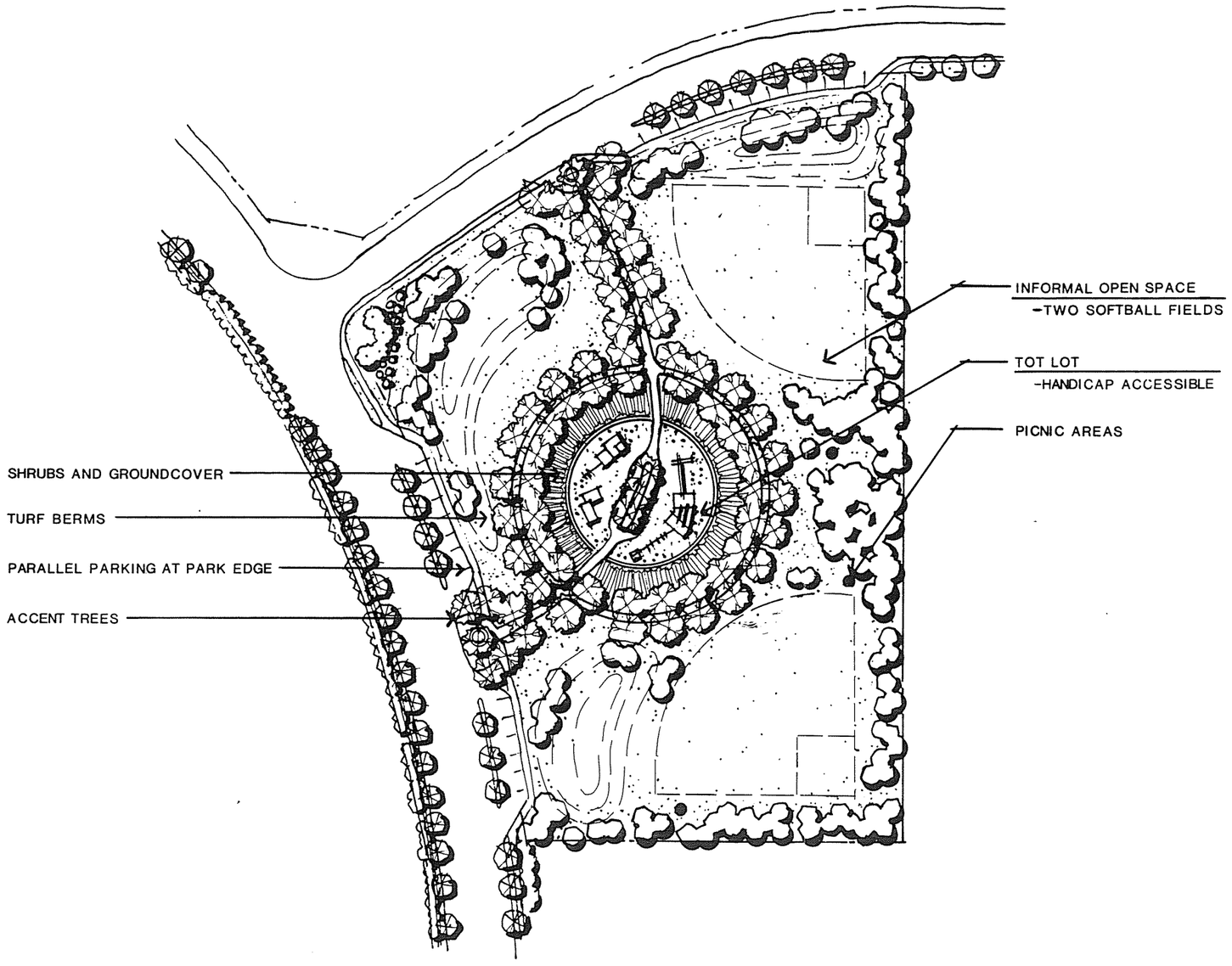
GRAPHIC REPRESENTATION ONLY
NOT FOR ADOPTION PURPOSES

FIGURE: 9

FLORIAN MARTINEZ ASSOCIATES

May Ranch

LANDSCAPE CONCEPT
PUBLIC PARK
AREA 12



LEGEND

- ACCENT TREES
- CANOPY STREET TREES
- EVERGREEN TREE MASSING
- TURF

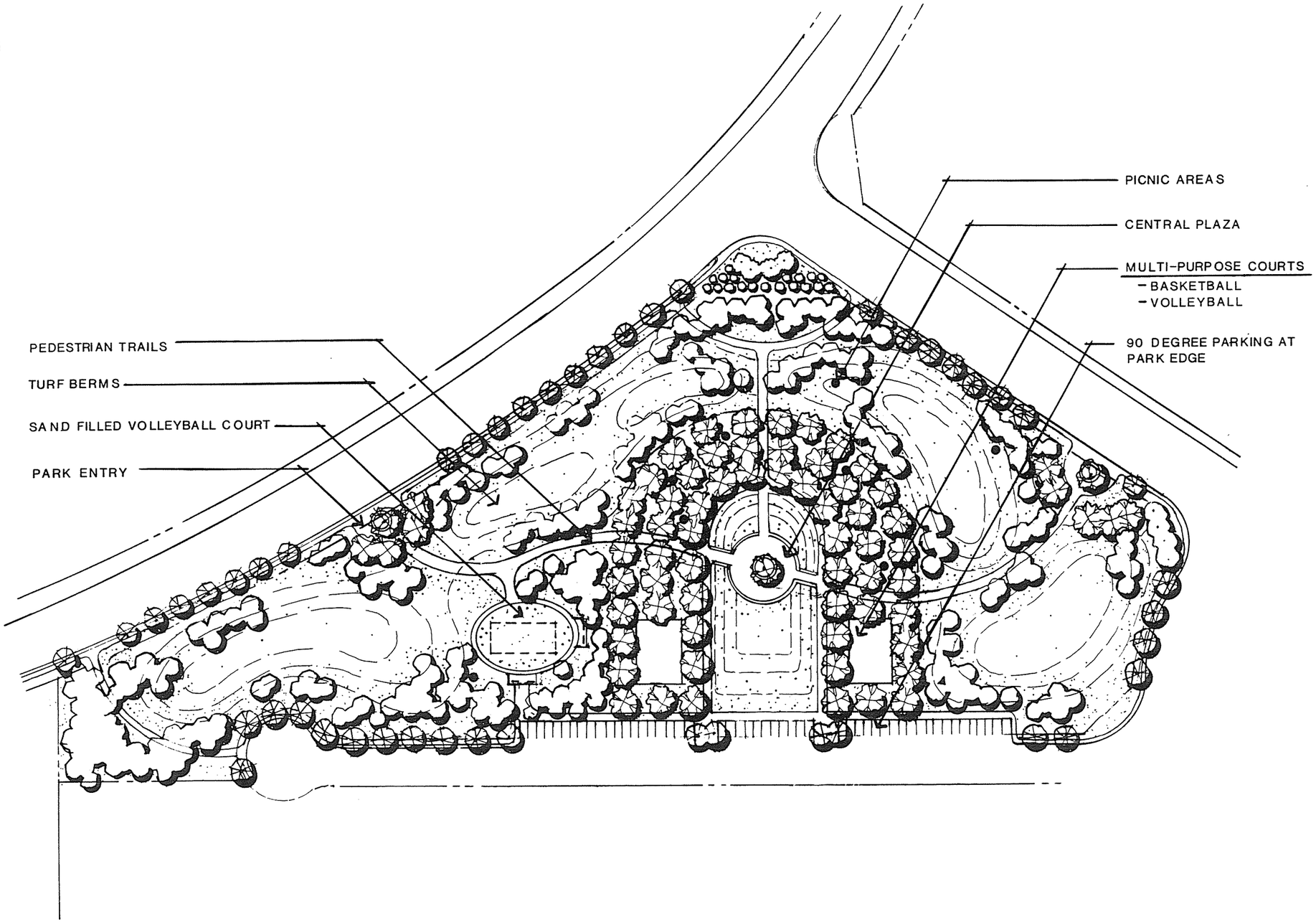
GRAPHIC REPRESENTATION ONLY
NOT FOR ADOPTION PURPOSES

FIGURE: 10

FLORIAN MARTINEZ ASSOCIATES

May Ranch

LANDSCAPE CONCEPT
PUBLIC PARK
AREA 20



LEGEND

- ACCENT TREES
- CANOPY STREET TREES
- EVERGREEN TREE MASSING
- TURF

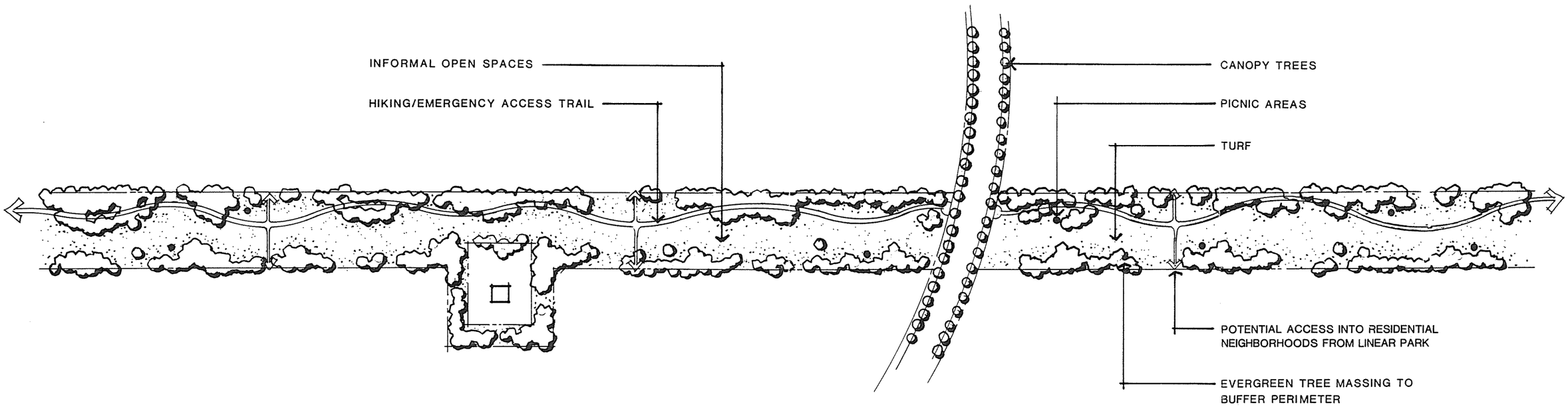
GRAPHIC REPRESENTATION ONLY
NOT FOR ADOPTION PURPOSES

FIGURE: 11

FLORIAN MARTINEZ ASSOCIATES

May Ranch

LANDSCAPE CONCEPT
LINEAR PARK



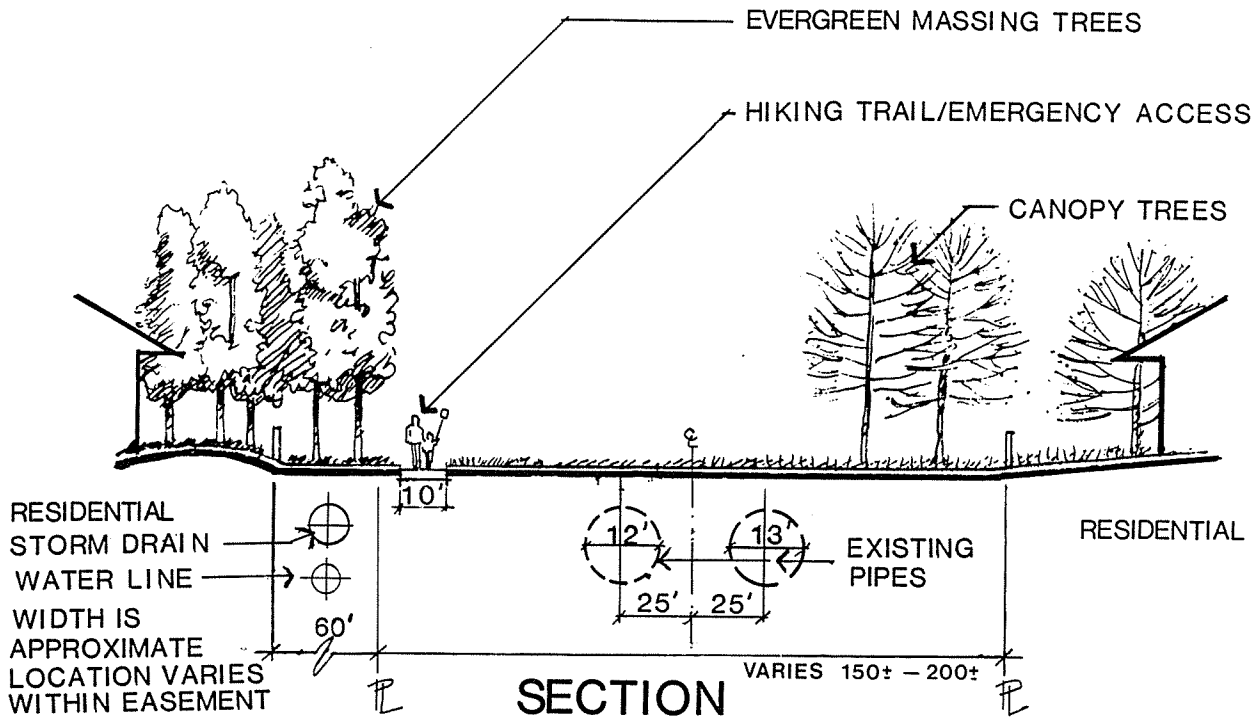
GRAPHIC REPRESENTATION ONLY
NOT FOR ADOPTION PURPOSES

FIGURE: 12

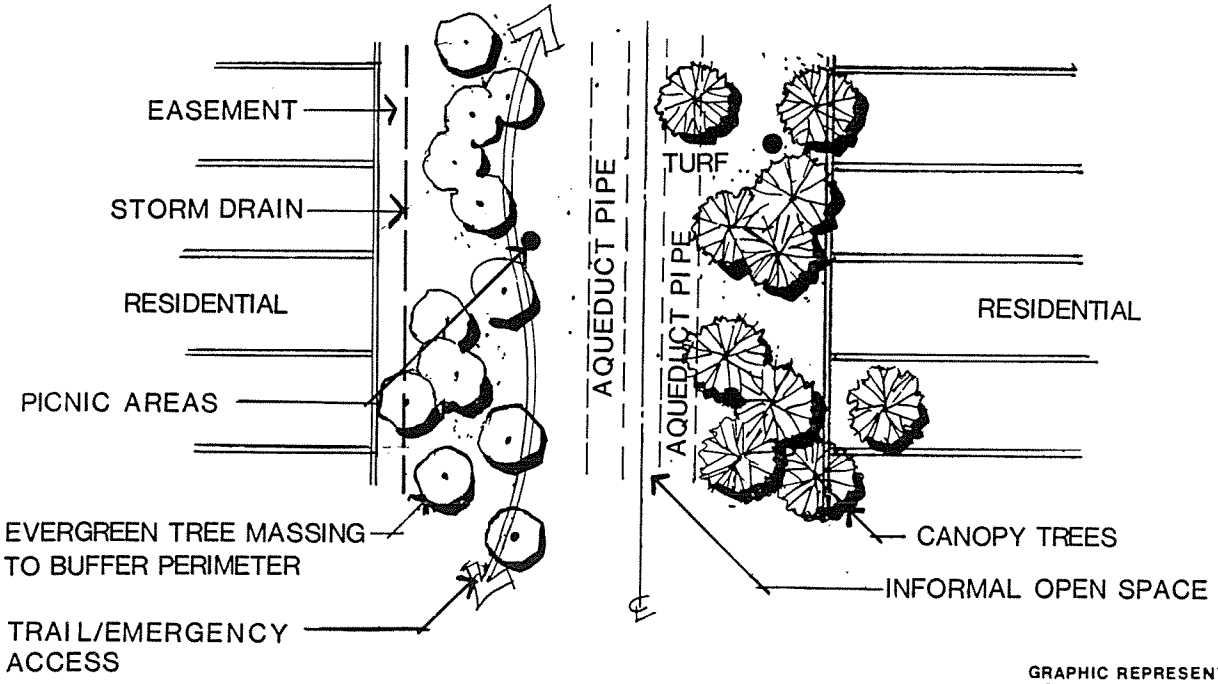
FLORIAN MARTINEZ ASSOCIATES

May Ranch

LINEAR PARK CROSS-SECTIONS



SECTION

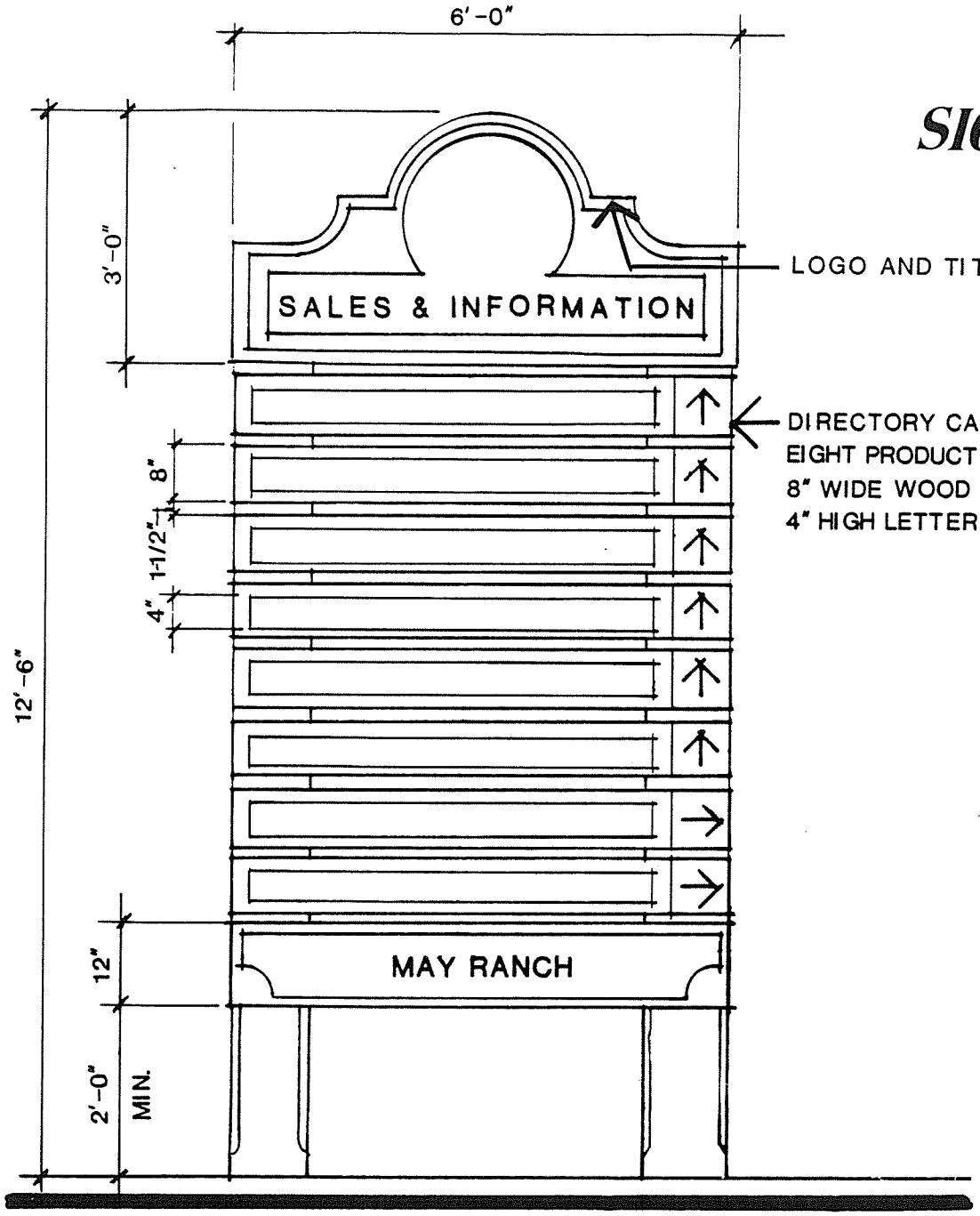


PLAN

GRAPHIC REPRESENTATION ONLY
NOT FOR ADOPTION PURPOSES

FIGURE: 13

SIGNAGE



PROJECT DIRECTORY SIGNAGE

SCALE: 1/2"= 1'-0"

GRAPHIC REPRESENTATION ONLY
NOT FOR ADOPTION PURPOSES

FIGURE: 14

FLORIAN MARTINEZ ASSOCIATES

May Ranch

(4) The applicant and/or developer shall be responsible for maintenance and upkeep of all slope planting, common landscaped areas, and irrigation systems until such time as these operations are the responsibility of the landscape maintenance district.

(5) At the time of recordation of any tentative subdivision which contains a common greenbelt or open space areas, the subdivision shall have an assessment district or community service district/ area, established site-wide, which could include provisions for landscape maintenance.

3.4 DRAINAGE PLAN

3.4.1 APPROACH

May Ranch is currently maintained for agricultural activities and has minimal on-site drainage facilities. Storm drain facilities proposed include those storm drains proposed by the McCanna Ranch project.

3.4.2 PLAN DESCRIPTION

Figure 15 shows the Master Storm Drain System proposed. All storm drain systems shall discharge into the Perris Valley Storm Drain located on the western edge of the property.

3.4.3 DEVELOPMENT STANDARDS

The following design standards will be followed in preparation of the detailed design:

- Protect residential structures from damage from the 100 year storm.
- Safely discharge all flows leaving the property.
- Upon adoption of drainage plans by the Riverside County Flood Control, the system will be designed to meet all applicable standards of the City of Perris and Riverside County Flood Control.

3.5 WATER AND SEWER PLAN

3.5.1 APPROACH

Although there are no sewers servicing the site, sewer service is currently available in the vicinity of May Ranch. The Eastern Municipal Water District (EMWD) is the agency responsible for serving the project area and have master planned a gravity sewer that will run in Morgan Street from Bradley Avenue to a proposed pump station on the north side of the MWD Aqueduct and the west side of the Perris Valley Storm Drain. From that point, the sewage will be pumped over the aqueduct and will flow south to a trunk line proposed for construction (Figure 16). The southerly portion of the project will be directed to this sewer main.

The Eastern Municipal Water District (EMWD) is the responsible agency for providing water service to the site and surrounding area (Figure 17). The EMWD obtains its water primarily from the Colorado River through the Metropolitan Water District. Additional water comes from Northern California via the Rose Water Project and local wells. The current water system includes 12-inch trunk lines in the Ramona Expressway, Bradley Avenue, and Rider Street.

3.5.2 PLAN DESCRIPTION

The Sewer Master Plan for May Ranch is divided into two areas separated by the Metropolitan Water District's Colorado River Aqueduct. The northerly portion of the project will have a collection system consisting of 8-inch and 15-inch collector lines discharging to an 18-inch trunk sewer line in Morgan Street. The sewage will flow in a westerly direction through the trunk line in Morgan Street; then, be pumped over the aqueduct into a gravity flow main to ultimately connect to the Romoland Treatment Plant. The southerly portion of the project will also have a collection system consisting of 8-, 10-, and 12-inch collector lines, that discharge to the existing 15-inch trunk sewer line to be built to the treatment plant. Plans for an additional trunk line to serve the North Perris area are currently being considered.

3.5.3 DEVELOPMENT STANDARDS

The following design standards will be followed in preparation of the detailed design:

- All lines will be designed per EMWD and MWD requirements.

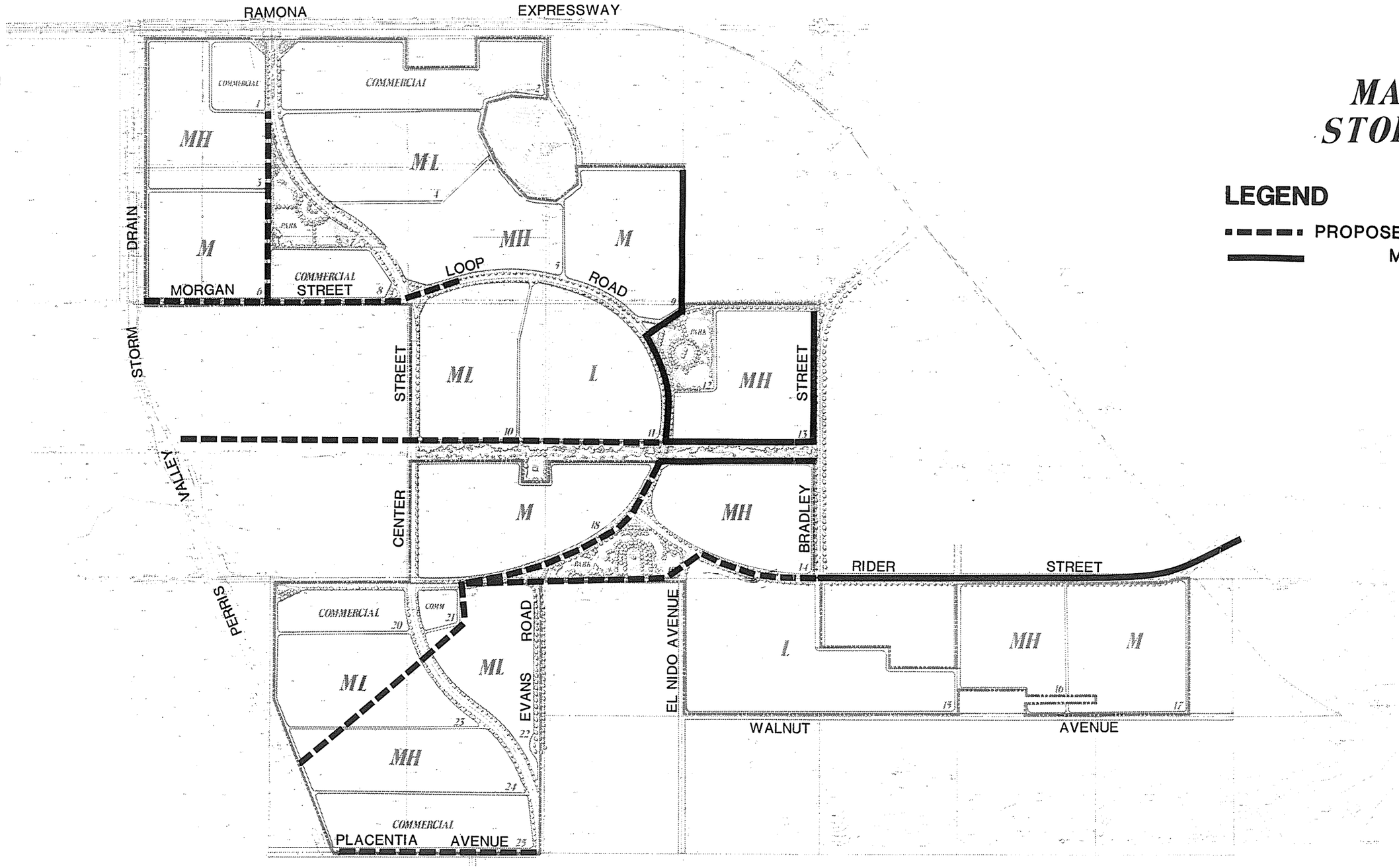
- The infrastructure system will be designed and installed to meet the requirements of the City of Perris Engineering Department, subject to adoption of the Master Plan of Sewers by EMWD.

- Water and sewage disposal facilities shall be installed in accordance with the requirements and specifications of the Riverside County Health Department.

- The applicant shall participate in a domestic water program with Eastern Municipal Water District to upgrade/extend domestic water to the project site.

- The developer shall participate in financing the costs of all sewage transmission, treatment, and disposal facilities to serve the specific plan area as required by EMWD.

MASTER PLAN
STORM DRAINS



LEGEND

PROPOSED MASTER PLAN DRAIN

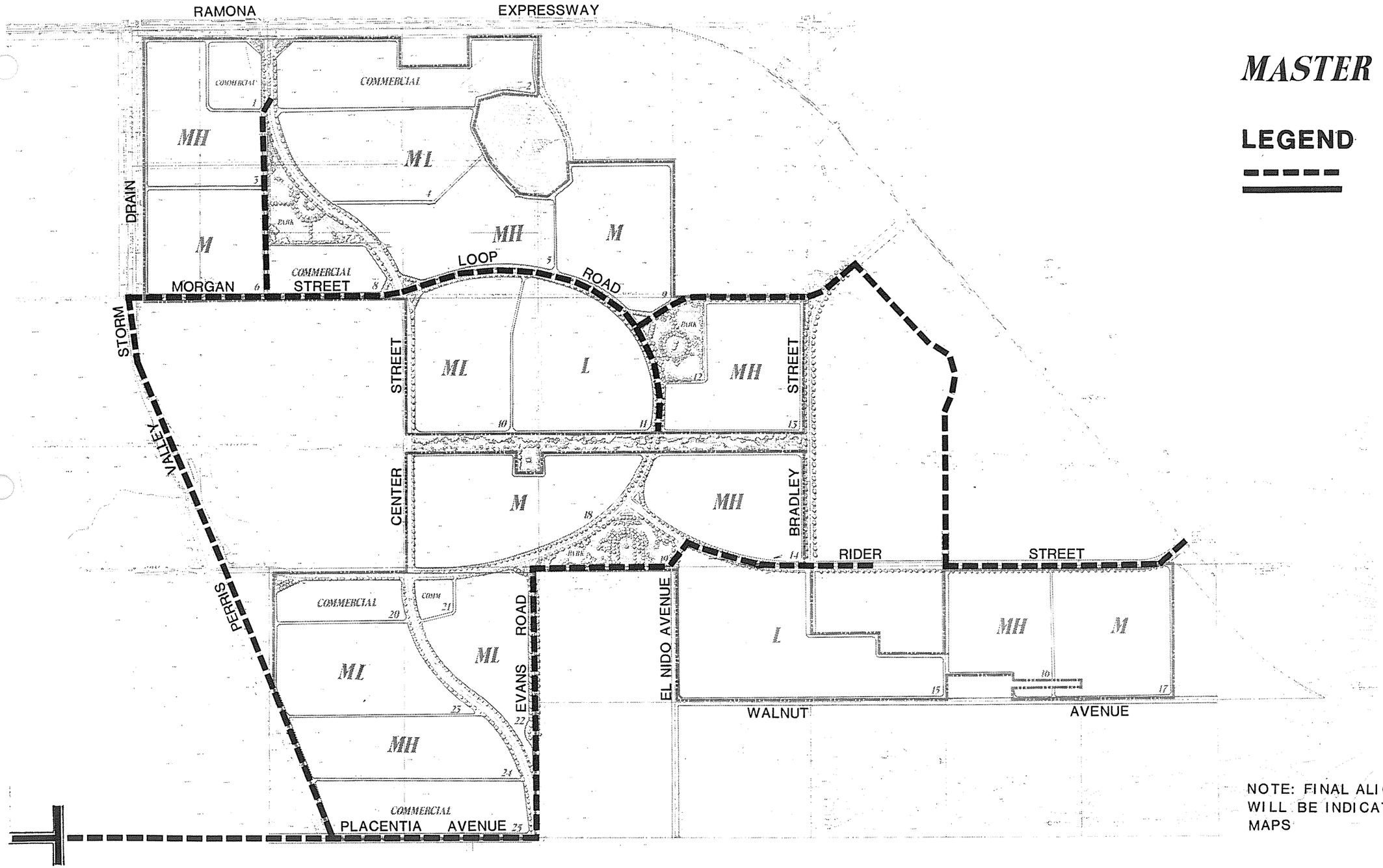
McCANNA RANCH DRAIN

FIGURE: 15

FLORIAN MARTINEZ ASSOCIATES

May Ranch

MASTER PLAN SEWER



LEGEND

PROPOSED SEWER
EXISTING SEWER

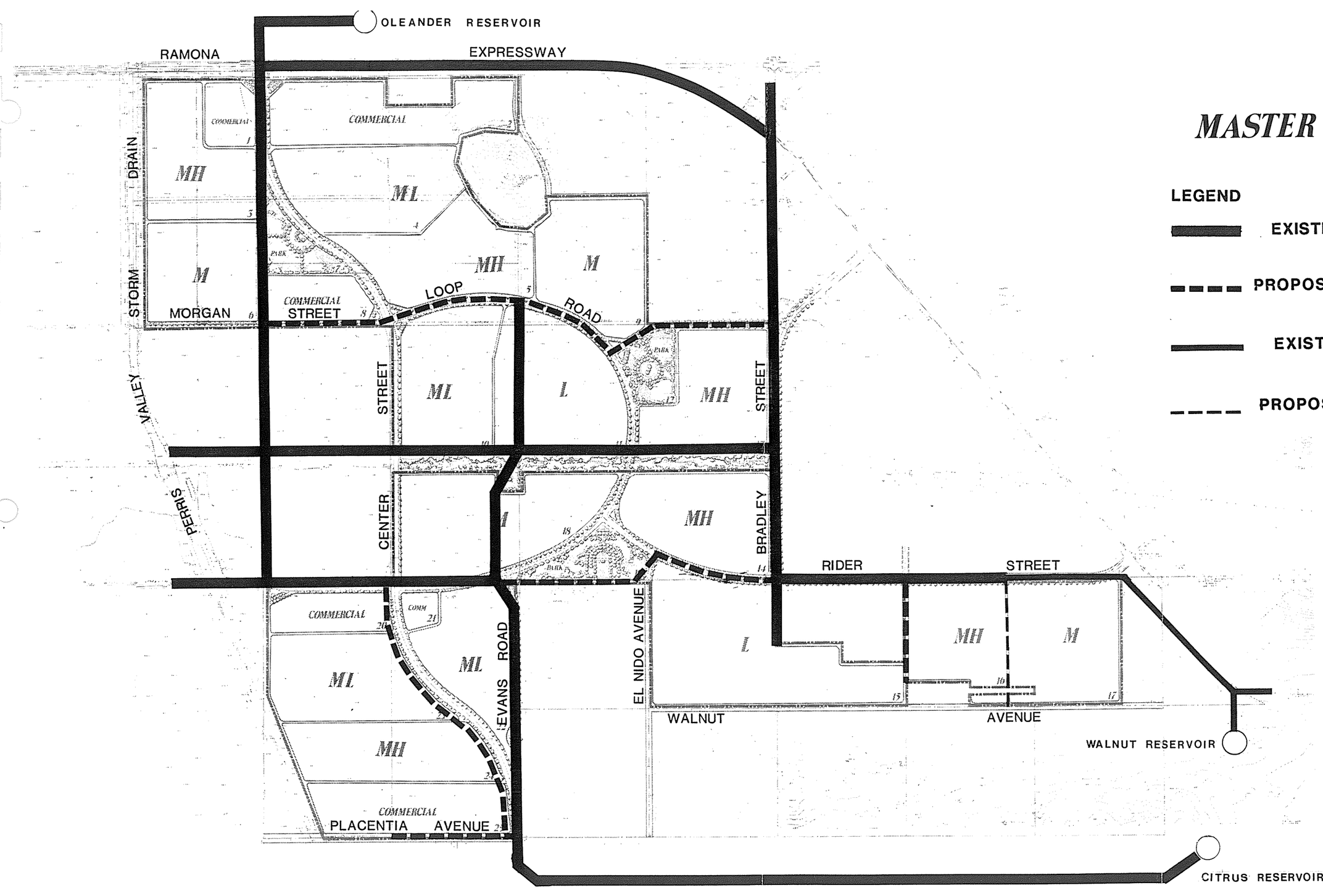
NOTE: FINAL ALIGNMENT TO SEWER LINES WILL BE INDICATED ON TENATIVE TRACT MAPS

FIGURE 16

FLORIAN MARTINEZ ASSOCIATES

May Ranch

MASTER PLAN WATER



LEGEND

- EXISTING (LOWER PRESSURE ZONE)
- PROPOSED (LOWER PRESSURE ZONE)
- EXISTING (UPPER PRESSURE ZONE)
- PROPOSED (UPPER PRESSURE ZONE)

FLORIAN MARTINEZ ASSOCIATES

FIGURE: 17

May Ranch

3.6 PHASING PLAN

3.6.1 APPROACH

The purpose of a Phasing Plan is to schedule development of property in line with market demand, the need for services, and economic concerns. Constructing the entire project at one time would not be feasible. Instead, construction and development phasing are the same so that sales expenditures for improvements can be balanced with revenues generated by sales of lots and homes. As each phase is built, supporting infrastructure and services are also constructed to provide for the needs of the new residents. It is anticipated that buildout will be achieved in approximately ten years. Population growth within the area should be sufficient to support commercial development in about four years.

3.6.2 PHASING PLAN DESCRIPTION

Figure 18 is a graphic representation of the following Phasing Plan.

a. Phase 1: This phase incorporates the most northerly portion of May Ranch. It will provide the prototypical housing types in the medium-low, medium, and medium-high density designation. The major entry monumentation will be developed and Community Park #1 is included in this phase. Supporting infrastructure for the residential area will be constructed at the same time. Commercial development may occur if market trends warrant it at the time.

b. Phase 2: This phase incorporates the middle section of the site, south of Phase 1. It will include the first low-density housing, and continue the development of medium-low and medium-high density residences. Community Park #2 will be provided during Phase 2. Supporting infrastructure will also be provided.

c. Phase 3: This phase incorporates the most southeasterly portion of May Ranch. It will include further construction of low, medium, and medium-high density residential types. Community Park #3 and a portion of the Linear Park will be part of this phase.

d. Phase 4: The final phase incorporates the southwestern portion of the site. It will include continued construction of medium-low, medium, and medium-high density housing. Commercial development is most likely to occur during this phase. The remaining portion of the Linear Park will be developed and supporting infrastructure will continue to be provided.

3.6.3 PHASING PLAN - CIRCULATION

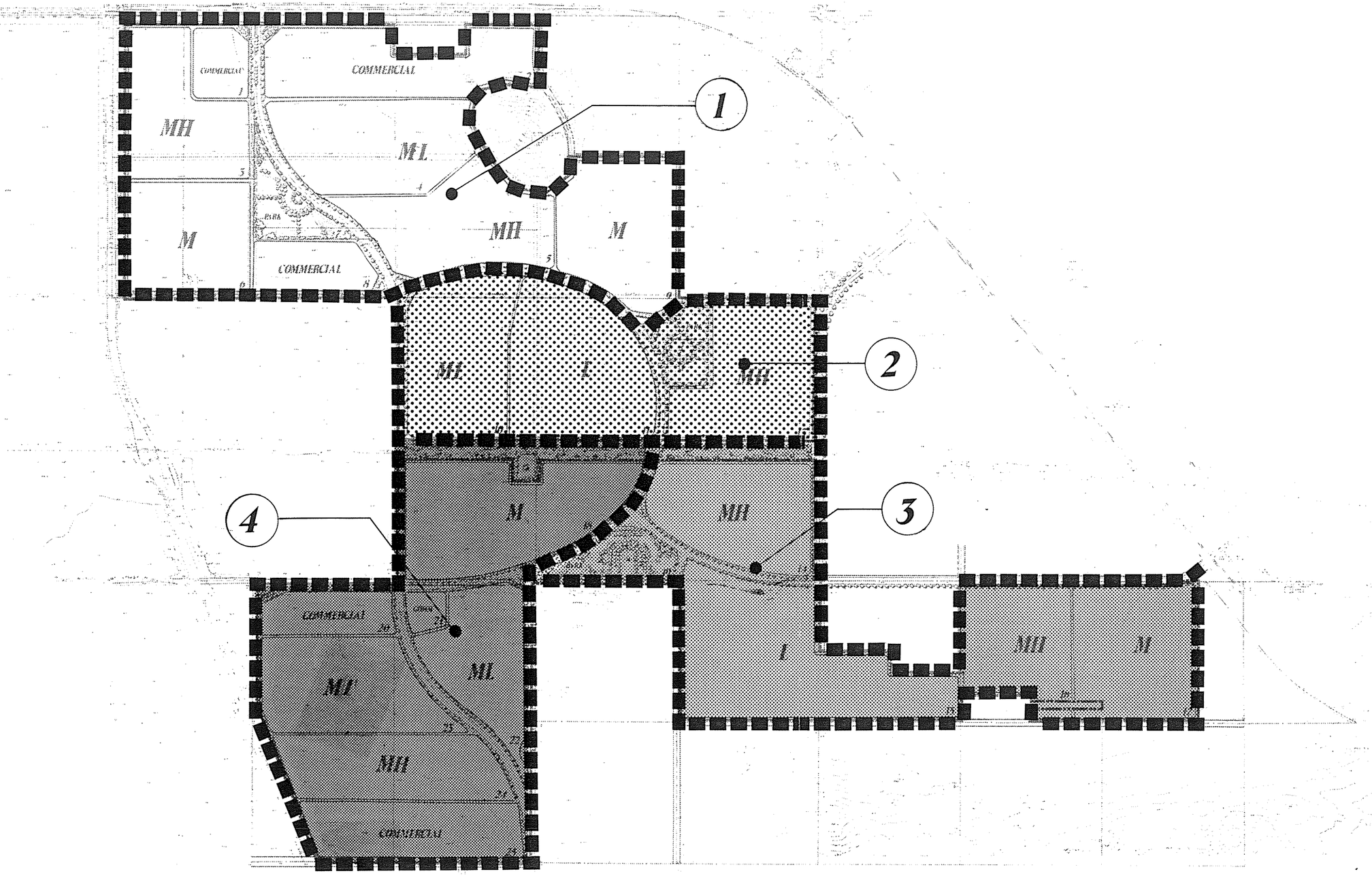
Figure 19 is a graphic representation of the following Phasing Plan for Circulation. Improvements to the circulation system will be developed as shown on Figure 6, typical street cross-sections. The circulation system will be constructed separately from development phasing.

a. Phase 1: This phase provides for the development of a half-width of Ramona Expressway along the Northern property edge. The main arterial, Center Street, from Ramona Expressway to Morgan Street (West portion)/Loop Road will be developed. Loop Road will be constructed from Center Road to Morgan Street (east portion). A half-width of Morgan Street (West portion) from Center Street until its western terminus near the Perris Valley Storm Drain will be provided. Morgan Street (East portion) will be developed from Loop Road to the McCanna Ranch boundary at full width, and at half width along the boundary line to the edge of the May Ranch property.

b. Phase 2: In Phase 2, Loop Road will be extended from Morgan Street (east portion) south to the proposed Rider Street alignment. Rider Street will be developed from Loop Road east to Bradley at full width, and from Bradley to Ramona Expressway at half width. Additionally, a half-width R.O.W. of Bradley Street will be developed from Rider Street north to the McCanna Ranch boundary.

c. Phase 3: Phase 3 will develop a full-width R.O.W. of El Nido Avenue from Rider Street, south to the property boundary and a half-width R.O.W. of El Nido from the property boundary to Walnut will be constructed.

d. Phase 4: Center Street will be constructed from the aqueduct south to the property line at full width, and at half width where it runs along the property line. Loop Road will be completed from Rider Street across Center to the Perris Valley storm drain, at which point an all weather crossing of the storm drain will be developed. A half-width R.O.W. of Evans Road will be completed from Loop Road its terminus near the May Ranch property boundary.



PHASING PLAN

PHASE ONE

	ACRES	D.U.
RESIDENTIAL		
MH MEDIUM HIGH	62	466
M MEDIUM	62	434
ML MEDIUM LOW	36	198
COMMERCIAL	55	
PARK	9	
SUB-TOTAL	**224**	**1098**

PHASE TWO

	ACRES	D.U.
RESIDENTIAL		
MH MEDIUM HIGH	33	247
ML MEDIUM LOW	35	192
L LOW	35	140
PARK	8	
SUB-TOTAL	**111**	**579**

PHASE THREE

	ACRES	D.U.
RESIDENTIAL		
MH MEDIUM HIGH	59	443
M MEDIUM	32	224
L LOW	55	220
PARKS	10	
LINEAR PARK	5	
SUB-TOTAL	**161**	**887**

PHASE FOUR

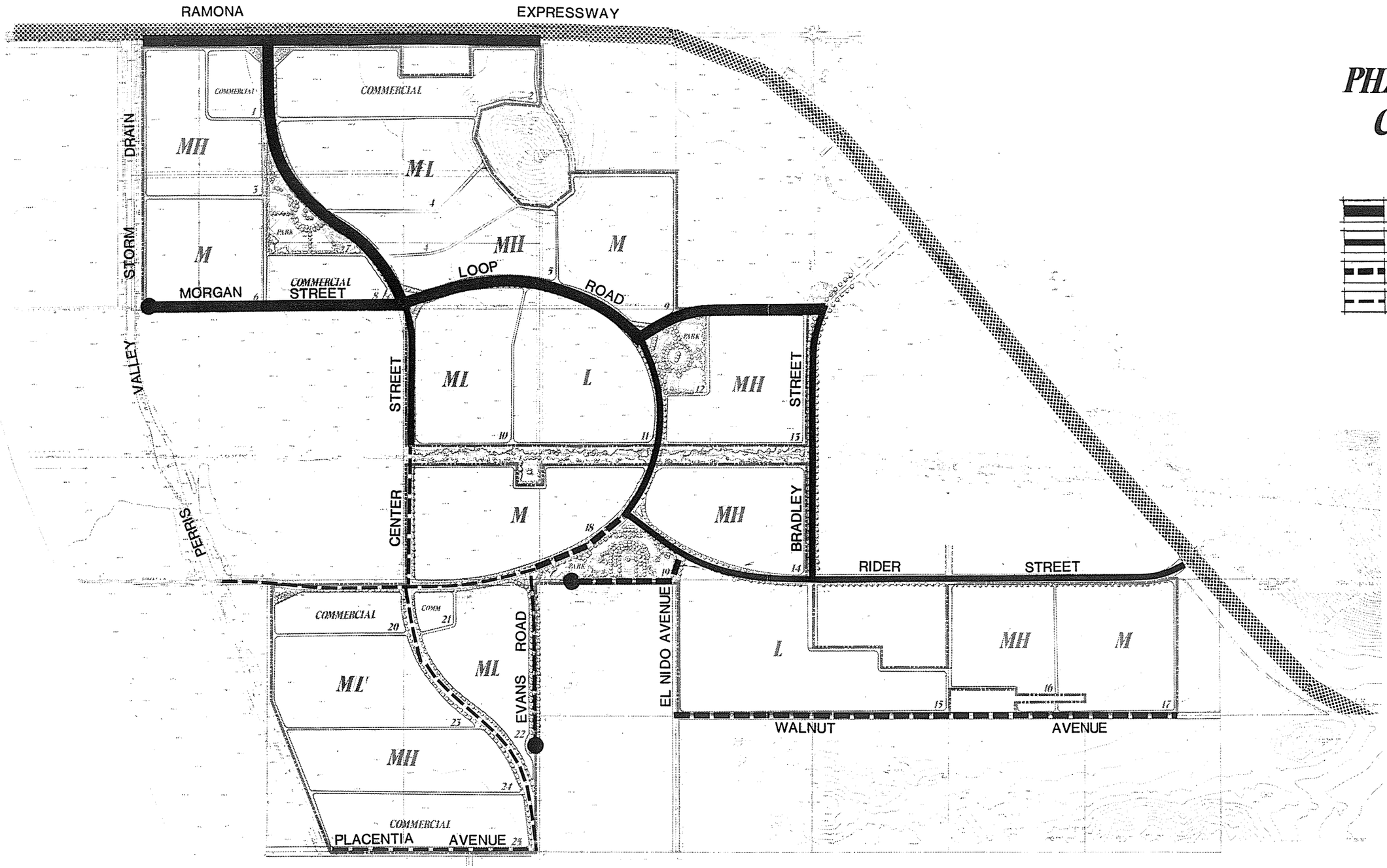
	ACRES	D.U.
RESIDENTIAL		
MH MEDIUM HIGH	40	300
M MEDIUM	46	322
ML MEDIUM LOW	48	264
COMMERCIAL	45	
LINEAR PARK	9	
SUB-TOTAL	**188**	**886**
TOTAL	**684**	**3450**

FIGURE: 18

FLORIAN MARTINEZ ASSOCIATES

May Ranch

PHASING PLAN
CIRCULATION



PHASE ONE
PHASE TWO
PHASE THREE
PHASE FOUR

FIGURE: 19

FLORIAN MARTINEZ ASSOCIATES

May Ranch

3.7 GRADING CONCEPT PLAN

3.7.1 APPROACH

The May Ranch site slopes almost imperceptibly southwesterly, toward the Perris Valley Storm Drain and is essentially flat. The grading for the Specific Plan is intended to elevate development areas above the limits of the 100-year flood plain if development of the initial phase commences prior to the construction of proposed Perris Valley Storm Drain improvements.

3.7.2 PLAN DESCRIPTION

Figure 20 shows the Grading Concept Plan proposed. The grading operation for the project is intended to avoid the need for import or export of materials. A precise grading plan will be prepared prior to final map recordation.

3.7.3 DEVELOPMENT STANDARDS

All grading within the Specific Plan shall be performed in accordance with appropriate City of Perris policies and guidelines.

3.8 PLANNING AREA DEVELOPMENT STANDARDS

Provisions for flexibility are built into this Specific Plan to allow for future transfer of residential dwelling units within individual planning areas (as referenced in Section 3.1). However, the total count of single-family detached units within the project will not exceed the total number of SFD units planned.

3.8.1 LOW AND MEDIUM-LOW DENSITY RESIDENTIAL STANDARDS

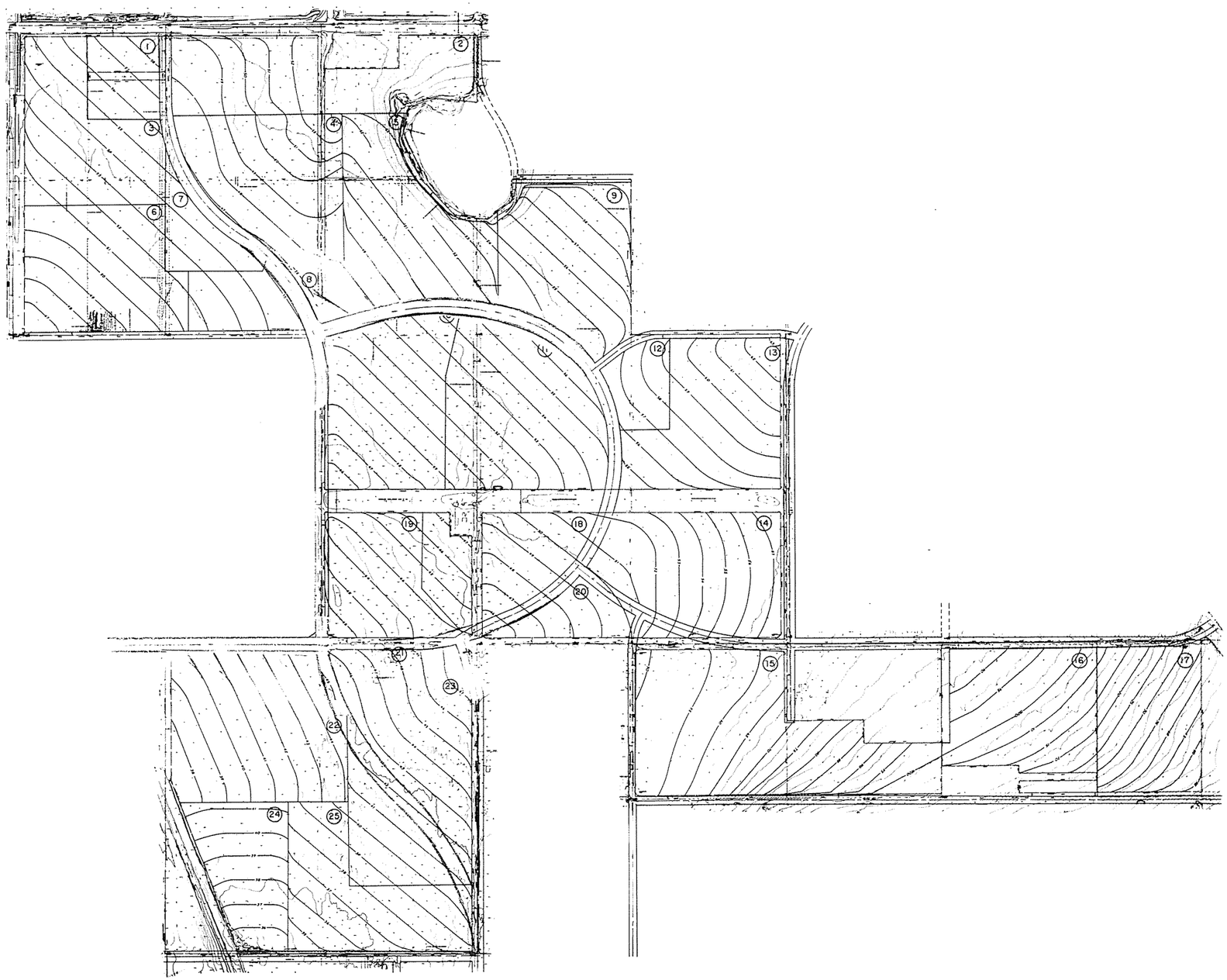
Purpose and Intent. The purpose of the low and medium-low density land use designation is to provide areas for conventional single-family, detached residential development at a low and/or medium-low density of no more than one dwelling unit per lot. Units are arranged on private lots along conventional public streets. All lots are exclusively homeowner-maintained.

a. Uses Permitted. The following general uses shall be permitted in the Low and Medium-Low Density Residential Zone:

   (1) Conventional detached single-family residences.

   (2) Patio homes.

GRADING PLAN



NATURAL

CONTOUR

FIGURE: 20

FLORIAN MARTINEZ ASSOCIATES

SOURCE: PSOMAS & ASSOCIATES

May Ranch

b. Accessory Uses Permitted. The following accessory buildings and uses customarily incidental to any of the above uses shall be permitted in the Low and Medium-Low Density Residential Zone:

(1) Arbors, trellises, gazebos, and similar shade structures of open construction.
(2) Fences and walls.
(3) Garages.
(4) Patio covers.
(5) Swimming pools and spas.
(6) Tennis and racquet courts.
(7) Home occupations in compliance with the City of Perris Zoning Code.
(8) Pedestrian and bicycle trails.
(9) Churches
(10) Schools

c. Temporary Uses Permitted. The following temporary uses are permitted in the Low Density Residential Zone:

(1) Temporary construction facility during construction.

(2) Temporary real estate offices and model homes located within a subdivision, to be used only for and during the original sale of the subdivision.

d. Development Standards.

(1) **Maximum Structure Height:** One- and two-story structures not to exceed 30 feet.

(2) **Minimum Lot Size:** Lot area shall not be less than 5,400 square feet.

(3) **Maximum Building Coverage:** Site coverage of all structures, including accessory structures, shall not exceed 60 percent.

(4) **Street Frontage:** The minimum frontage of a lot shall be 60 feet. On cul-de-sac lots, the 60-foot width can be an average achieved at the mid-point of the lot with a minimum of 25 feet at the front setback.

(5) **Minimum Lot Width:** The minimum average lot width of that portion of a lot used as a building site shall be 60 feet.

(6) **Setbacks:**

(a) Front Yard: The front yard shall not be less than 20 feet, measured from the existing street right-of-way line or from any future street line as shown per any approved tract map.

(b) Side Yard(s): Side yards on interior and through lots shall be not less than three feet from the nearest property line. A structure-to-structure side yard separator of not less than 10 feet must be maintained, excluding architectural projections such as fireplace boxes and bay windows. Sideyards in corner lots shall not be less than 10 feet from the existing street right-of-way line, or any future street line as shown per any approved tract map.

(c) Rear Yard: The rear yard shall not be less than 15 feet average. Patio covers and shade structures may extend to within five (5) feet of the rear property line.

(d) Garages with direct access shall be set back 20 feet minimum from the garage door to the sidewalks.

(7) **Density Regulations:**

Each dwelling unit shall have a minimum living floor area, including walls, but excluding garage of 900 square feet.

e. Special Regulations.

No mechanical equipment, tank, duct, elevator enclosure, cooling tower, or mechanical ventilator shall be erected, constructed, maintained, or altered anywhere on the premises unless all such equipment and appurtenances are screened from public view by landscaping, walls, fences, and/or architectural structures. All fences, walls, and structures shall be of similar and compatible construction and appearance to the main building. This provision excludes chimneys and similar architectural elements, which are specifically permitted. Violation of special regulations is a zoning code infraction and is subject to the issuance of a citation.

f. Automobile Storage Space.

(1) A minimum of two spaces shall be provided per dwelling unit in an enclosed garage.

(2) No vehicle shall be stored in any required front setback area of a residential lot. Additionally, stored vehicles must be screened so as not to be viewed from public right-of-way. Violation is a zoning code infraction and a citation may be issued.

3.8.2 MEDIUM AND MEDIUM-HIGH DENSITY RESIDENTIAL STANDARDS

Purpose and Intent. The Medium and Medium-High Density Residential Zone is intended primarily for one-family detached dwellings on conventional residential subdivision lots. All lots are to be privately owned and maintained without the creation of a homeowners association.

a. Uses Permitted. The following general uses shall be permitted in the Medium and Medium-High Density Residential Zone:

Single-family detached dwellings.

b. Accessory Uses. The following accessory buildings and uses customarily incidental to any of the above uses shall be permitted in the Medium and Medium-High Density Zone:

(1) Arbors, trellises, gazebos, and similar shade structures of open construction.
(2) Fences and walls.
(3) Garages.
(4) Patio covers.
(5) Swimming pools and spas.
(6) Home occupations.
(7) Pedestrian and bicycle trails.
(8) Tennis and racquet courts.

c. Temporary Uses Permitted. The following temporary uses are permitted in the Medium and Medium-High Density Residential Zone:

(1) Christmas tree and Halloween pumpkin sales with approval of a Temporary Use Permit by the City of Perris Planning Department.

(2) Temporary construction facility during construction.

(3) Temporary real estate offices and model homes located within a subdivision, to be used only for and during the original sale of the subdivision.

d. Development Standards.

(1) **Maximum Structure Height:** One- and two-story structures not to exceed 30 feet.

(2) **Minimum Lot Size:** Lot area shall not be less than 4,000 square feet.

(3) **Maximum Building Coverage:** Site coverage of all structures, including accessory structures, shall not exceed 70 percent.

(4) **Setbacks:**

(a) Front Yard: The front yard shall not be less than 10 feet, measured from the existing street right-of-way line or from any future street line as shown per any approved tract map.

(b) Side Yard(s): Side yards on interior and through lots shall be not less than three from the nearest property line. Side yards on corner and reverse corner lots shall not be less than 10 feet from the existing street right-of-way line or any future street line as shown per any approved tract map.

(c) Rear Yard: The rear yard shall not be less than 15 feet average. Patio covers may extend to within five feet of the rear property line.

(d) Exemption: Two adjoining lots which have a common side lot line and which are developed with zero side yards on said common side lot line, provided that the minimum separation between structures on adjacent lots is 10 feet minimum, excluding architectural projections such as fireplace boxes and bay windows.

(e) Garages with direct access shall be set back 20 feet minimum from the garage door to the sidewalks.

Garages or carports with turn-in access shall provide a minimum of 20 feet from the garage door to the nearest point on the driveway that contacts the back of the sidewalk (provided that such garages or carports shall be set back a minimum of 10 feet).

e. Density Regulations.

(1) No lot shall be occupied by more than one dwelling unit for each 4,000 square feet of lot area.

(2) Each dwelling unit shall have a minimum living floor area, including walls, but excluding garage of 800 square feet.

f. Special Regulations.

No mechanical equipment, tank, duct, elevator enclosure, cooling tower, or mechanical ventilator shall be erected, constructed, maintained, or altered anywhere on the premises unless all such equipment and appurtenances are screened from public view by landscaping, walls, fences, and/or architectural structures. All fences, walls, and structures shall be of similar and compatible construction and

appearance to the main building. This provision excludes chimneys and similar architectural elements, which are specifically permitted. Violation of special regulations is a zoning code infraction and is subject to the issuance of a citation.

g. Automobile Storage Space.

(1) A minimum of two spaces shall be provided per dwelling unit in an enclosed garage.

(2) No vehicle shall be stored in any required front setback area of a residential lot. Additionally, stored vehicles must be reasonably screened from view. Violation of special regulations is a zoning code infraction and is subject to the issuance of a citation.

3.8.3 COMMERCIAL

Purpose and Intent. The purpose of the Commercial Land Use designation is to provide areas for commercial development. The actual area to be developed on this land use will be based on market trends at the time of processing.

a. Uses Permitted. The specific locations of the proposed commercial uses are shown on the Land Use Exhibit.

(1) Commercial Development. Under this specific designation, any development would occur under the provisions of Chapter 19.40 of the City of Perris Zoning Ordinance.

(2) Temporary Homefinders Information Center.

(3) Recreational vehicle storage lots.

(4) Any uses included in Appendix 5.8 herein.

b. Development Standards.

(1) Those standards specified in the City of Perris Zoning Ordinance Chapter 19.40 as contained in Appendix 5.8 herein.

(2) A thematic architectural style is encouraged in order to provide a unique focal point for the community.

(3) Access to the proposed commercial site shall conform to the requirements of the City Engineer.

(4) Proposed commercial uses shall be subject to site plan review by the City of Perris Planning Department.

(5) Prior to the development of multi-family residential units in the commercial use, specific site plans will be presented and subject to City approval and park and school fee mitigation.

GENERAL PLAN-
ENVIRONMENTAL ANALYSIS

May Ranch

4.0 GENERAL PLAN/ENVIRONMENTAL IMPACT ANALYSIS

4.1 GENERAL PLAN LAND USE DETERMINATION SYSTEM (STEPS 1-4)

4.1.1 PROJECT IDENTIFICATION WITHIN OPEN SPACE AND CONSERVATION MAP INVENTORY

A review of the City's Open Space and Natural Resources Policy indicates that the project site is currently designated agriculture, open space, and flood plain. The subject property, as discussed in Section 2.1 above seeks to amend the Open Space and Natural Resources Policy. The Open Space and Natural Resources Policy addresses the need for eventual designation in the General Plan for the location of residential, commercial, and industrial development to accommodate the projected population and economic growth within the City and surrounding areas. Discussion in Sections 4.1.1 through 4.1.4 not only provides for determination of appropriate land use on the site, but also clarifies the application of the City's Open Space and Natural Resources Policy to the site.

- o Standard: Much of the vacant and undeveloped land will be designated for the location of residential, commercial, and industrial development.

  This development is proposed as a project necessary to accommodate the projected population and economic growth within the City.

- o Standard: Publicly owned Perris Valley Storm Drain Channel should be considered for open space designation.

  The proposed project takes the policy into consideration and provides for no development within the storm drain area.

- o Standard: The existing system of storm channels would be suited for development of recreational trails linking different open space areas in the Perris Area.

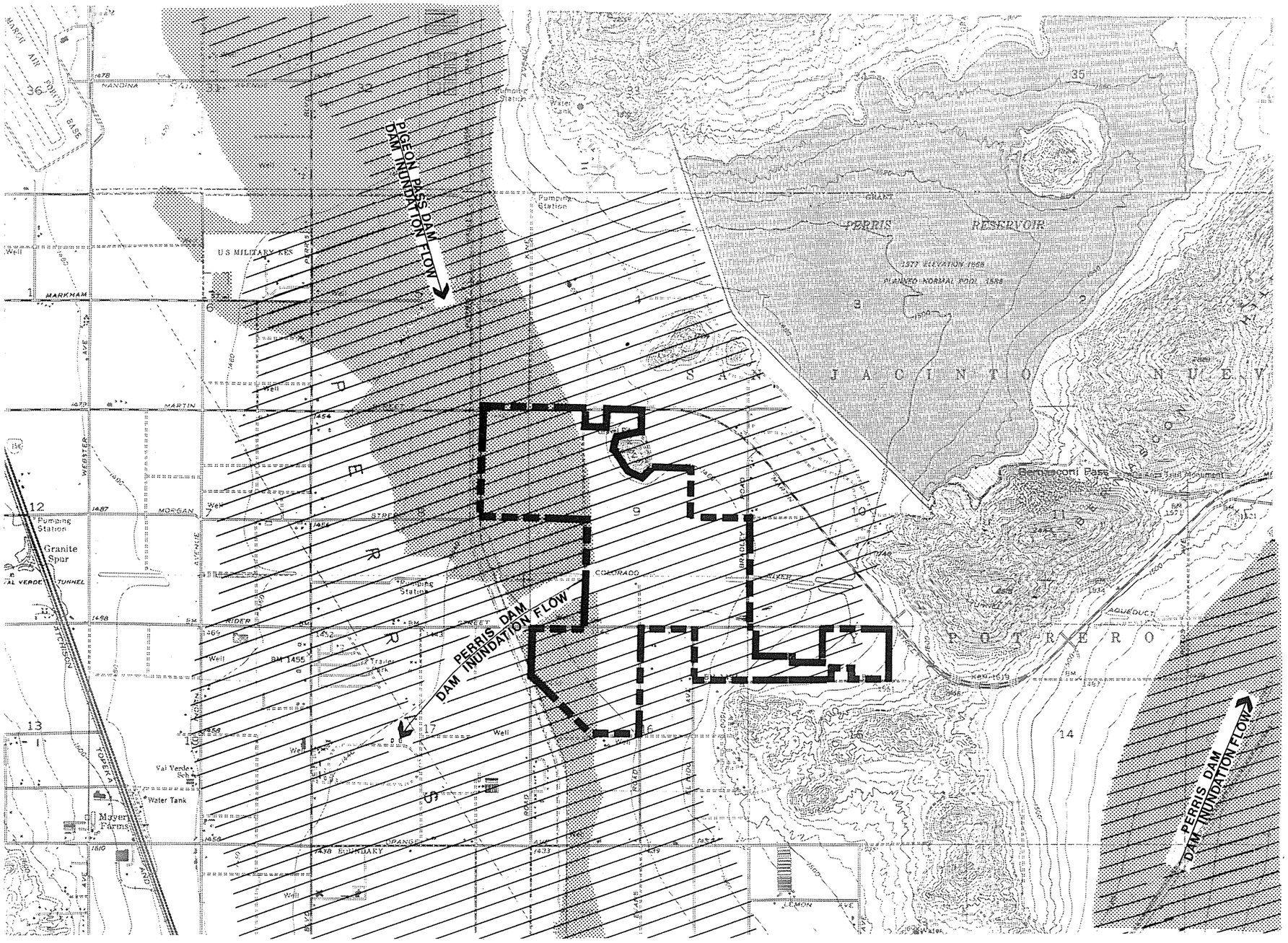
  The proposed plan addresses identified environmental hazards and resources.

4.1.2 SITE IDENTIFICATION WITHIN COMPOSITE HAZARDS/RESOURCES MAP INVENTORY

As shown in Figure 21 Regional Drainage, the project is subject to flooding.

- o Standard: All proposed development within identified flood hazard areas, including floodways, 100-year flood plains, and areas subject to shallow flooding will be required to comply with the provisions of the Floodplain Management Ordinance Number 492, and the criteria of the Federal Flood Insurance Program.

REGIONAL DRAINAGE



- o Standard: Prior to the approval of any development that is proposed to be located within an identified flood hazard area, it shall be found and demonstrated that:

  The proposed development will not increase the danger to human life and health.

  The proposed development is justified in terms of adequate social and economic considerations in light of the probability for property loss of damage and the need for access by emergency services in the event of flooding.

- o Standard: Full consideration shall be given to the potential for danger to life and property in downstream areas that may be caused by the increased flood heights, stream velocities, and debris that could result from additional construction in flood hazard zones, in determining the acceptability of such development.

- o Standard: Each proposed land subdivision and development within floodplain areas shall be reviewed as to the appropriateness of anticipated densities and land uses in light of the need for, and cost of, providing disaster relief services both during and after periods of inundation, and in view of alternate sites more suitable for such development not located in flood prone areas.

- o Standard: In areas where the topography consists of well defined ridges and natural watercourses, an adequate area outside of natural drainage courses for building must be shown for all land divisions. Permitted development densities should be scaled depending upon the particular topographic and slope conditions that prevail on the site, and access routes must not interfere with natural drainage patterns.

- o Standard: Approved developments shall not result in the diversion of storm run-off into adjacent properties, nor cause any undue alteration of natural drainage courses that cannot be handled by existing or proposed storm drainage and flood control improvements.

4.1.3 LAND USE AREA PROFILE AND COMMUNITY POLICY AREA IDENTIFICATION FOR PROJECT SITE

4.1.4 SUMMARY OF PROJECT PROPOSAL/SITE COMPARISON WITH APPLICABLE LAND USE CATEGORY POLICIES OR COMMUNITY PLAN

The City of Perris lists ten (10) land use categories which could be delineated for land other than open space and public facilities. The 10 categories are:

1. Rural Residential
2. Low-Density Residential
3. Medium-Density Residential
4. Professional Commercial/Mixed Use
5. Neighborhood Convenience

6. General Commercial
7. Industrial
8. Open Space
9. Commercial Recreation and Visitor Center - Industrial
10. Public Facilities

For the purpose of this Specific Plan, the only applicable land use designations are:

2. Low-Density Residential
3. Medium-Density Residential
4. Professional Commercial/Mixed Use
9. Commercial Recreation and Visitor Center - Industrial
10. Public Facilities

Low-Density Residential (3-7 units per acre.) This designation is intended for the majority of the land area in the City that is allocated by the Plan for residential uses. Typical of the development that is consistent with this designation would be single-family home tracts as well as mobile home subdivisions.

The proposed project site provides for a product of development which fits the criteria of this category.

Medium-Density Residential (8-15 units per acre). This category includes multi-family developments consisting of duplex, triplex, or fourplex structures, garage style apartments as well as the zero lot line design concept.

The proposed project site provides for a project which utilizes the density criteria of this category. The project provides for the density development within a single-family dwelling product.

Professional Commercial/Mixed Use. This category is intended to provide an environment of residential and commercial development which would enhance the livability of the surrounding development.

The proposed project site will provide projects which comply with high standards of site design and incorporate adequate buffering measures to protect residents from possible concentrated impacts of commercial and residential development.

4.2 LAND USE ELEMENT

4.2.1 LAND USE PLANNING POLICY ANALYSIS

The May Ranch site is situated in the northeasterly portion of the City of Perris, approximately two miles east of Interstate 215, immediately southwest of Lake Perris, and approximately three miles northeasterly of the City of Perris "Old Town" Civic Center and Business District.

The land use categories of the City of Perris are meant to provide a means for allocating the land areas within the City of Perris to the various types of development that are desirable in the community's future growth pattern. Any proposed development on any site must meet all of the Plan's policies and specific development criteria relating to the type, density, and location of such development.

The proposed May Ranch project is consistent with more than one land use category. The project provides the characteristic design criteria which are consistent with the established General Plan Land Use Policies.

4.2.2 COMMUNITY POLICY AREA ANALYSIS

4.2.3 LAND USE CATEGORY POLICY ANALYSIS

The project request is to amend the Perris General Plan to adopt a Specific Plan. Discussion of applicable land use category policies are provided in Section 4.1.3. Subsequent requests will include zone change and tentative tract map, which will facilitate the Specific Plan.

The General Plan identifies the major policies associated with projects under which the Specific Plan is guided. These relate to Flooding, Noise, Slope and Geologic Hazards, Fire Protection and Safety, Infrastructure and Public Services, Police and Fire Service, Schools and Recreational Facilities, and Storm Drainage Flood Control Facilities and Land Use Compatibility.

a. **Flooding:** The site is located in the Perris Dam Flood Inundation area and specific considerations are made in Section 4.3.2.

b. **Noise:** The General Plan considerations are discussed in Section 4.3.3.

c. **Slope and Geologic Hazards:** While slope is not a problem on this proposed site, seismic considerations are discussed in Section 4.3.1.

d. **Fire Protection and Safety, Infrastructure and Public Services** are discussed in Section 4.4.

4.3 SPECIFIC PLAN ENVIRONMENTAL IMPACTS AND MITIGATION

4.3.1 EARTH RESOURCES

The specific geotechnical recommendations contained in this section of the EIR were taken from a report entitled, "Geotechnical Feasibility Investigation, May Company Parcel - 1000 acres Perris, California", dated November 4, 1987 and contained in Appendix 5.2.

a. Existing Conditions

Topography

Elevations on the proposed project site range from approximately 1,410 feet above mean sea level (MSL) in the northwestern corner of the property at the intersection of the Perris Valley Storm Drain and Ramona Expressway, to approximately 1,560 feet MSL in the extreme southeastern corner near the terminus of Walnut Avenue. Relief over the project site is gently upsloping from west to east. Predominant drainage is to the southwest. A large granitic hill feature occurs on the northern boundary of property. An area of steeper topography occurs generally east and southeast of the project site.

Regional Geology

This discussion incorporates by reference Section 4.1, Regional Geology from the McCanna Ranch Final EIR (SCH87011910).

The project site is situated on the Perris Block which is a portion of the Peninsular Ranges Geomorphic Province. The site is underlain by granitic and metamorphic rocks which have been alternately deeply eroded and filled with stream deposits during Pliocene and Pleistocene geologic epochs.

Site Geology

The site lies predominantly on alluvium characteristic of that encompassing the greater Perris Valley floodplain. Soils encountered during the field investigation generally consist of dense Silty and Clayey Sand and Sand with occasional Silt and Clay interbeds. No areas of fill were noted. Soils depths encountered during exploratory testing ranged from 3 feet to 20 feet. Alluvial soils are probably 40 to 50 feet thick beneath the majority of the site with much thinner alluvium in the vicinity of the granitic feature.

Regional Seismicity

Seismic risk in Southern California is a well recognized factor, and is directly related to geologic fault activity. Seismic damage potential depends of the proximity to active or potentially active fault zones, and on the type of geologic structure. In relative terms, seismic damage is generally less intense in consolidated formations, i.e. bedrock, than in unconsolidated materials, such as alluvium.

In Southern California, most of the seismic damage to man-made structures results from ground shaking and, to a lesser degree, from liquefaction and ground rupture caused by earthquakes along active fault zones. In general, the greater the magnitude of the earthquake, the greater the potential damage.

Seismic hazards at the proposed project site are attributed to ground shaking as a result of an earthquake epicentered on an active fault in the surrounding Southern California area (Figure 22). No evidence of active faulting was encountered on-site during the field survey phase of the geotechnical investigation. The regional faults with the greatest potential to affect the site over the life of the project include the San Andreas Fault, the San Jacinto Fault, the Whittier-Elsinore Fault, the Cucamonga Fault and the Newport-Inglewood Fault. The closest of these faults is the San Jacinto Fault located about five miles northeast of the site. Table 4.1 provides pertinent information about these faults including distance from site, historical movements of importance, maximum probable magnitudes and horizontal accelerations affecting the project site.

b. Environmental Impacts

Topography

The extent of topographic alteration of the site required to accommodate development is considered minor in magnitude, given the already flat nature of the project site. Figure 20 illustrates the grading concept plan for the proposed project. No extensive cuts or fills are required, and it is the objective to attempt to balance the earthwork on site. No significant impacts on topography will occur.

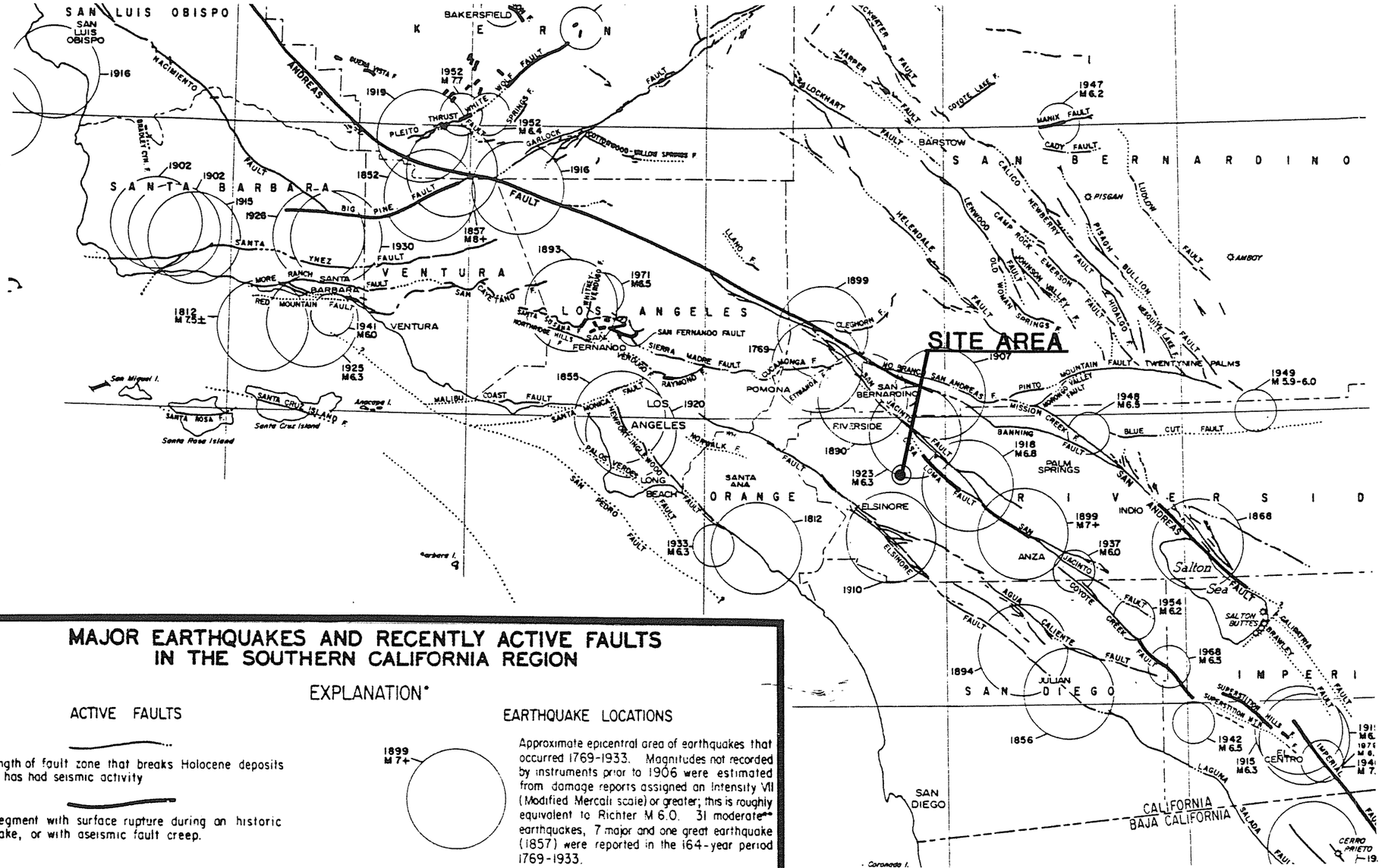
Site Geology

The Geotechnical Feasibility Investigation of the proposed project has concluded that the site is suitable for the proposed development from a geotechnical standpoint. However, site soils exhibit several characteristics that must be compensated for during grading and preparation for foundations in order to avoid adverse impact on the developed site and structures. Specific recommendations are contained in the geotechnical report contained in Appendix 5.2.

The major soil characteristics that could affect the proposed development are summarized below.

(1) Excavating conditions - Excavation of on-site materials may be accomplished with standard earthmoving or trenching equipment. No hard rock was encountered which would require blasting. Due to depth to groundwater, dewatering during excavation is not anticipated.

FAULT LOCATION EXHIBIT



MAJOR EARTHQUAKES AND RECENTLY ACTIVE FAULTS IN THE SOUTHERN CALIFORNIA REGION

EXPLANATION*

ACTIVE FAULTS

Total length of fault zone that breaks Holocene deposits or that has had seismic activity

Fault segment with surface rupture during an historic earthquake, or with aseismic fault creep.

☼ - Holocene volcanic activity
(Amboy, Pisgah, Cerro Prieto and Salton Buttes)

EARTHQUAKE LOCATIONS

1899 M 7+

Approximate epicentral area of earthquakes that occurred 1769-1933. Magnitudes not recorded by instruments prior to 1906 were estimated from damage reports assigned an Intensity VII (Modified Mercali scale) or greater; this is roughly equivalent to Richter M 6.0. 31 moderate** earthquakes, 7 major and one great earthquake (1857) were reported in the 164-year period 1769-1933.

1952 M 7.7

Earthquake epicenters since 1933, plotted from improved instruments. 29 moderate** and three major earthquakes were recorded in the 40-year period 1933-1973.

* See Lamar, Merrifield, Proctor paper herein for additional explanation of map.

** Code recommendations by the Structural Engineers Association of California define a great earthquake as one that has a Richter Magnitude of 7 3/4 or greater; a major earthquake 7 to 7 3/4; a moderate earthquake 6 to 7.

Compiled by Richard J. Proctor mainly from published and unpublished data of the *California Division of Mines and Geology*; *California Department of Water Resources Bulletin 116-2* (1964); selections from bulletins of the *Geological* and *Seismological Societies of America*; from C. F. Richter, *Elementary Seismology* (1958); and the *National Atlas*, p. 66.

FIGURE: 22

FLORIAN MARTINEZ ASSOCIATES

SOURCE: G.A NICOLL & ASSOCIATES
NOVEMBER, 1987

May Ranch

TABLE 4-1
SEISMIC PARAMETERS

POTENTIAL CAUSATIVE EARTHQUAKE FAULT	CLOSEST DISTANCE FAULT TO SITE (miles)	HISTORY OF EARTHQUAKES OVER 6 RICHTER MAGNITUDE WITHIN 70 MILE RADIUS			MAXIMUM PROBABLE EARTHQUAKE			
		DATE	RICHTER MAGNITUDE	DISTANCE FROM SITE (miles)	RICHTER MAGNITUDE	PEAK HORIZONTAL BEDROCK ACCELERATION AT SITE (gravities)	*MAXIMUM REPEATABLE GROUND ACCELERATION (gravities)	DURATION OF STRONG SHAKING (seconds)
SAN ANDREAS FAULT (SOUTH OF GARLOCK FAULT)	18W	12/24/48	6.5	47	8.25	.34	.22	36
SAN JACINTO FAULT	5SW	4/21/18 7/23/23	6.8 6.3	14 11	7.2	.53	.34	26
WHITTIER-ELSINORE FAULT	15NE	5/15/10 10/1/87	6.0 6.1	14 48	6.5	.23	.15	18
CUCAMONGA FAULT	28SW				6.75	.13		21
NEWPORT-INGLEWOOD FAULT	39NE	3/11/33	6.3	49	6.5	.07	.13	18

* THE REPEATABLE HIGH GROUND ACCELERATION TAKEN AS 65% OF THE PEAK ACCELERATION FOR SITES WITHIN 20 MILES OF THE EPICENTER (AFTER PLOESSEL AND SLOSSON, 1974), MAY BE MORE APPLICABLE FOR DESIGN ANALYSIS

FLORIAN MARTINEZ ASSOCIATES

SOURCE: G.A. NICOLL & ASSOCIATES NOVEMBER, 1987

(2) Processing of Soils - The existing soils are generally not considered adequate as foundation material without densification. Soils can, and should be, over-excavated and reworked within the foundation zone to achieve adequate densification. Soils are considered adequate for reuse in the construction of on-site fills if the organic content does not exceed 3 percent.

(3) Shrinkage - Existing on-site materials are expected to exhibit shrinkage on the order of 5 to 10 percent by volume.

(4) Expansion Potential - Expansivity of existing site soils is expected to range from Low to Moderate.

(5) Sulfate Content - The sulfate content of representative site soils are less than 0.2 percent, which typifies a sulfate condition. Such a condition allows for conventional building practices.

Seismicity and Seismic Hazards

The Whittier-Elsinore Fault and the San Jacinto Fault have the greatest potential for causing groundshaking at the project site. As shown in Table 4.1, a Magnitude 7.2 earthquake on the San Jacinto Fault could produce maximum repeatable ground acceleration of .34g at the site. The duration of strong ground motion could last 26 seconds. Such an earthquake could cause substantial damage at the project site and is considered a potentially significant adverse effect. Design measures are proposed in the Mitigation Measures section, however, to reduce this impact to a level of insignificance.

Potential secondary seismic hazards have been considered and include such occurrences as earthquake-induced landslides, seismic settlement, liquefaction, ground lurching and cracking, and seismic seiche. Due to the dense nature of the soil cover, such hazards as settlement and ground lurching though possible, have a low probability of occurrence. Similarly, the relatively flat topography on-site and intact bedrock condition of surrounding hilly terrain result in low probability of impact from earthquake-induced landslides.

Perched groundwater was encountered on-site at depths of from 35 to 41 feet below the surface. Due to the relatively great depths to the groundwater, the potential for soil liquefaction is considered negligible.

Seiching in Perris Reservoir may occur. The possibility of seiches overtopping the dam and/or collapse of the dam resulting in flooding of the site is considered low (City of Perris, 1987).

c. Mitigation Measures

Site Geology

The Geotechnical Feasibility Investigation for the subject project site (Appendix 5.2) contains specific recommendations to overcome adverse soil

conditions which exist on-site. All grading and earthwork will be accomplished in accordance with standards and guidelines acceptable in the industry. In certain instances, the Geotechnical Feasibility Investigation requires that additional investigations and evaluations be made during final design and during project construction. These existing and future geotechnical studies will sufficiently mitigate to insignificance all potential geotechnical impacts identified above.

Seismicity

In accordance with the recommendations of the Geotechnical Feasibility Investigation, buildings should be designed to resist seismic lateral loading as prescribed by the Uniform Building Code.

4.3.2 HYDROLOGY/WATER QUALITY

a. Existing Conditions

The project site is essentially flat, with sheet flow drainage at a low gradient generally towards the southwest. Minor drainage improvements presently exist on the site and consist of shallow culverts at intersections and earth ditches along some roadways. The Perris Valley Storm Drain borders the site on the west and is the principal storm water conveyance facility serving the Perris Valley. The Perris Valley Storm Drain is tributary to the San Jacinto River.

The project site is situated three-quarters of a mile southwesterly of Lake Perris and is located within the Lake Perris Dam Inundation Area. The area of inundation in the event of a dam failure is shown on Figure 23, and encompasses all but about 20 acres of the site on the extreme southeastern corner. Though a catastrophic earthquake could cause a failure of the earthen dam structure, recent engineering studies of the dam show it to be in a safe and stable condition (State of California, 1982). According to the recent engineering review, the dam is considered to be capable of withstanding a Magnitude 8.0 earthquake originating at a distance of 10 miles from the dam. It was also determined that a major seismic event would not cause impact from seiches or surges in the reservoir. The maximum seiche action would be approximately two feet, whereas the reservoir normally has at least 12 feet of freeboard.

On the western portion of the project site, the Federal Insurance Administration has designated a 100-year flood hazard zone. This flood area is depicted on Flood Insurance Rate Map No. 060245-1405A and is illustrated on Figure 22.

The Perris Valley Area Master Drainage Plan encompasses the project site. Drainage fees amounting to $5,083 per gross acre of the Specific Plan can be assessed by the City.

FLOOD PLAIN EXHIBIT

100 YEAR FLOOD

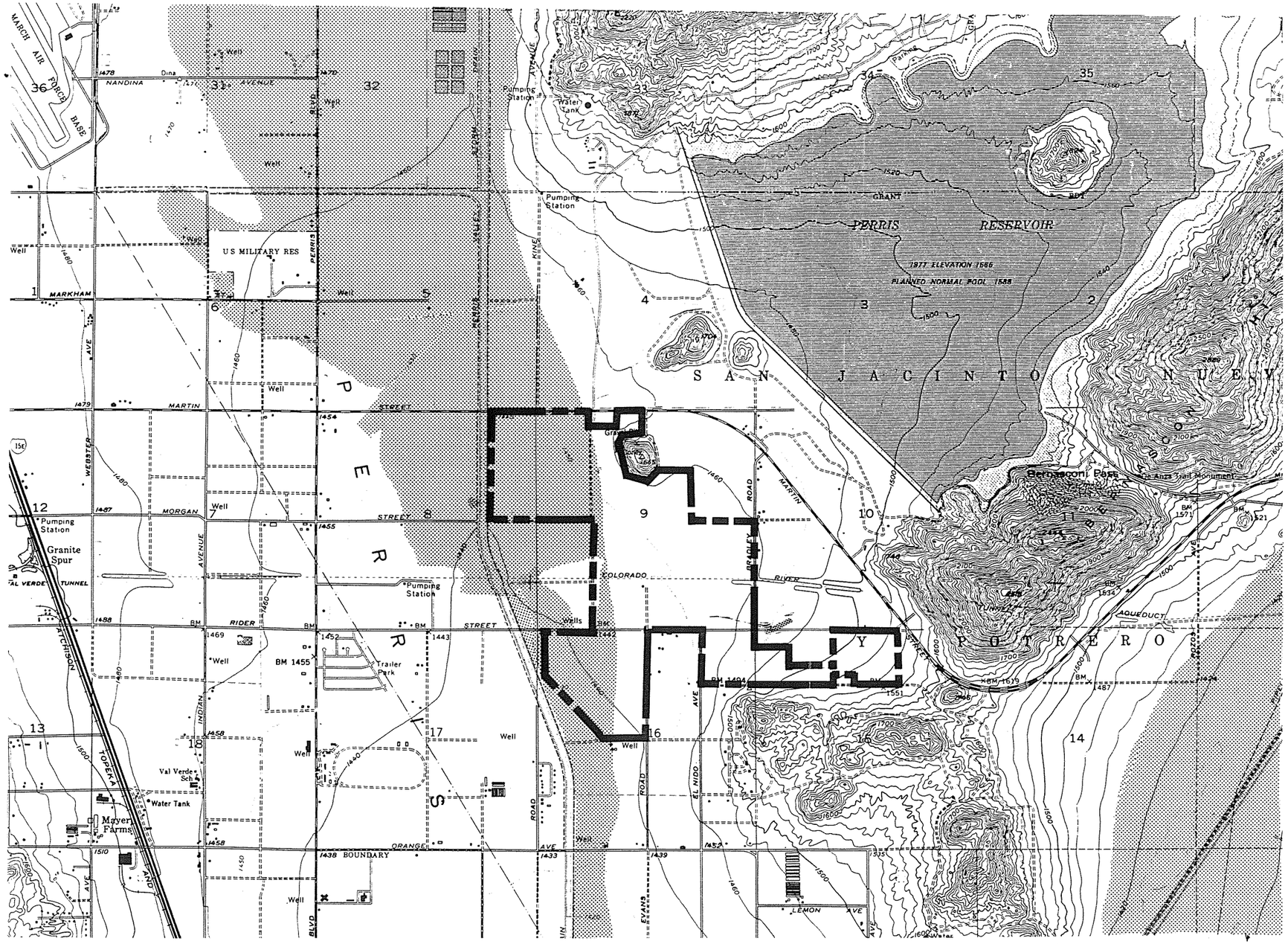


FIGURE: 23

FLORIAN MARTINEZ ASSOCIATES

May Ranch

Perched groundwater was encountered on-site at depths ranging from 35 to 41 feet below the surface. Based on data published in the U.S.G.S. Open-file Report 79-1256, the static groundwater level beneath the site is probably on the order of 180 to 200 feet deep (City of Perris, 1987).

b. Environmental Impacts

Development of the project site will alter the existing drainage patterns of the site. Site runoff will be increased in volume by approximately 10 percent from existing conditions due to construction of streets, sidewalks, dwellings and other impervious surfaces. Runoff will be channeled to a system of on-site drainage facilities which will convey the runoff to the Perris Valley Storm Drain. The proposed drainage facilities, which are shown on Figure 15 are based on runoff from a 100-year intensity storm event and modify the facilities shown on the Perris Valley Master Drainage Plan. These modifications are required due to changes in street alignments which affect major drainage facilities. With the proposed drainage features in-place, there will be no significant impact to the project from surface runoff.

From a regional perspective, site runoff will generally follow existing patterns, i.e. it will flow southwesterly to the San Jacinto River. As the Master Drainage Plan has assumed a fully developed condition of the Perris Valley Drainage Area, ultimate downstream facilities should be adequate to handle the increased flows from the project site.

The velocity and composition of runoff will be altered by grading of the site and by permanent developments. During grading, the potential for soil erosion by both wind and water is substantial and is considered a potentially significant impact. Runoff from developed areas will contain minor amounts of typical urban pollutants such as pesticides, fertilizers, oil and rubber residues, detergents, trace metals and hydrocarbon particles. These pollutants will be added to the existing levels of these substances in the Perris Valley Storm Drain and be contributed downstream to the San Jacinto River.

Virtually the entire site would be located in the inundation area of Lake Perris should the dam fail. Based upon recent engineering studies, it is concluded that the potential for such an occurrence is remote and does not represent a significant hazard to future inhabitants.

A further result of project development is an unquantified reduction in groundwater recharge from the site. It is assumed that recharge opportunities exist downstream such that the net reduction in contribution to the basin would be insignificant.

c. Mitigation Measures

On-site drainage facilities have been designed to accommodate capacities specified in the Perris Valley Master Drainage Plan. All facilities will conform to requirements established by Riverside County Flood Control District and Water Conservation District and the City of Perris.

During project construction, efforts will be made to limit wind and water erosion of exposed soils. Erosion control measures to be implemented include, but are not limited to, scheduling major grading activities during the dry season, revegetation of graded areas where possible, use of site watering or dust blankets to control fugitive dust and utilization of temporary drainage and sediment control devices.

Though the potential for failure of Lake Perris Dam is remote, final subdivision maps should note that the proposed project lies in a potential inundation zone.

The project applicant will contribute fees for drainage improvements to the appropriate agency amounting to $5,083 per acre. These fees are offset by the regional drainage improvements provided on-site and are to be used for regional drainage improvement projects.

The California Department of Water Resources has recommended the following measures to mitigate impacts relative to hydrology;

(1) Grade slopes so that drainage from runoff of surface water is minimized.

(2) Use pervious paving materials whenever feasible to reduce surface runoff.

(3) Use mulch extensively in landscaped areas as a means of improving the water-holding capacity of the soil.

4.3.3 AIR QUALITY

The subject discussion has been prepared in conformance with the guidelines of the South Coast Air Quality Management District and the analytical methodology outlined in the South Coast Air Quality Management District's, Air Quality Handbook for Environmental Impact Reports, revised April 1987. This discussion also incorporates by reference the Mestre Greve Associates (August 1987) "Air Quality Analysis For McCanna Ranch at Lake Perris EIR," SCH87011910.

a. Existing Conditions

The climate around May Ranch, as with all of Southern California, is controlled largely by the strength and position of the subtropical high pressure cell over the Pacific Ocean. It maintains moderate temperatures and comfortable humidities, and limits precipitation to a few storms during the winter. Temperatures are normally mild with rare extremes above 100 degrees F or below freezing. Daily and seasonal variations about the annual mean temperature of 62 degrees F are small.

Winds in the project area are typically driven by the dominant land/sea breeze circulation system. Regional wind patterns are dominated by daytime on-shore sea breezes. At night the wind generally slows and reverses direction traveling towards the sea. Wind direction will be altered by

local canyons, with wind tending to flow parallel to the canyons. During the transition period from one wind pattern to the other, the dominant wind direction rotates into the south and causes a minor wind direction maximum from the south. The frequency of calm winds (less than 2 miles per hour) is less than 15 percent. Therefore, there is little stagnation in the project vicinity, especially during busy daytime traffic hours.

Southern California frequently has temperature inversions which inhibit the dispersion of pollutants. Inversions may be either ground based or elevated. Ground based inversions, sometimes referred to as radiation inversions, are most severe during clear cold early winter mornings. Under conditions of a ground based inversion, very little mixing or turbulence occurs, and high concentrations of primary pollutants may occur near major roadways. Elevated inversions can be generated by a variety of meteorological phenomena. Elevated inversions act as a lid or upper boundary and restrict vertical mixing. Below the elevated inversion, dispersion is not restricted. Mixing heights for elevated inversions are lower in the summer and more persistent. This low summer inversion puts a lid over the South Coast Air Basin and is responsible for the high levels of ozone observed during summer months in the air basin.

Air Quality Management

The proposed project is located in the South Coast Air Basin and, jurisdictionally, is the responsibility of the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB). The SCAQMD sets and enforces regulations for stationary sources in the basin. The CARB is charged with controlling motor vehicle emissions.

The SCAQMD, in coordination with the Southern California Association of Governments (SCAG), has developed an Air Quality Management Plan (AQMP) for the air basin. The South Coast Air Basin has been designated a non-attainment area for ozone, carbon monoxide, nitrogen dioxide, total suspended particulate matter, and lead. The AQMP mandated achieving healthful levels of air quality by 1987. Included in the plan are new stationary and mobile source controls; car-pooling, van-pooling, and other ride-sharing programs, and energy conservation measures. The AQMP is designed to accommodate a moderate amount of new development and growth throughout the basin. The AQMP projections and mitigations are based on the SCAG-82 Growth Forecasts.

Within the AQMP is a list of strategies designed to improve the transportation system throughout the region. This package of measures explores the feasible limits for long-range solutions to systemwide air quality concerns. Measures included in the AQMP can be divided into five broad categories: transportation control measures, mobile technological controls, energy conservation, land use, and stationary source controls. The land use strategies focus on land use measures that could help reduce the number and length of automobile trips made. The underlying premise for the land use measures is that trip making and mode choices are not only a function of the transportation system, but also of such factors as housing density, the relative location of land uses, and the way land uses relate to

the transportation system. Improvements in the transportation system recommended include: bus system expansion, high occupancy vehicle lanes, traffic signal synchronization, and traffic pattern optimization.

Monitored Air Quality

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

The nearest air monitoring station operated by the SCAQMD is in Perris. The data collected at this station is considered to be representative of the air quality experienced in the vicinity of the project area. Air quality data for 1984 through 1986 for the Perris station is provided in Table 4.2.

TABLE 4-2
AIR QUALITY LEVELS MEASURED AT THE PERRIS AMBIENT AIR MONITORING STATION

Pollutant	California Standard	National Standard	Year	Maximum Level	Days State St. Exceeded
Ozone	0.1 ppm for 1 hr.	0.12 ppm for 1 hr.	1984	0.22	137
			1985	0.29	146
			1986	0.22	133
Part. matter	150 ug/m3 for 24 hr.	260 ug/m3 for 24 hr.	1984	(2) NM	NM
			1985	NM	NM
			1986	215	8
Sulfate	25 ug/m3 for 24 hr.	No Std.	1984	15.9	0
			1985	14.1	0
			1986	14.0	0

NM = Not Measured
NOTES

1. Standards for sulfur dioxide and lead were not exceeded.
2. Standards for particulate matter changed in 1984. Data reported in terms of PM10.
3. Carbon monoxide and nitrogen dioxide are not monitored at the Perris station.

The air quality data indicates that ozone is the air pollutant of primary concern in the project area. The ozone standard is exceeded over one out of every three days. Ozone is a secondary pollutant; it is not directly emitted. Ozone is the result of the chemical reactions of other pollutants, most importantly hydrocarbons and nitrogen dioxide, in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in Perris. All areas of the South Coast Air Basin contribute to the ozone levels experienced at Perris, with the more significant areas being those directly upwind in Los Angeles and Orange Counties.

Particulate concentrations monitored at the Perris station should be representative of the levels currently experienced at the project site. Particulate matter levels in the area are due to natural sources, grading operations, and motor vehicles.

b. Environmental Impacts

Air quality impacts are usually divided into short term and long term. Short term impacts are usually the result of construction or grading operations. Long term impacts are associated with the built-out condition.

Short Term Impacts

Temporary impacts will result from project construction activities. Air pollutants will be emitted by construction equipment and dust will be generated during grading and site preparation. Construction activities for large development projects are estimated by the U.S. Environmental Protection Agency ("Compilation of Air Pollutant Emission Factors") to add 1.2 tons of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust as required by SCAQMD Rule 403, the emissions can be reduced by up to 50 percent. Applying the above factors to the approximately 684 acres of the project, a two month grading cycle, and a ten year total project buildout, results in an estimate of 0.45 tons per day of particulate emissions released. This is a small amount compared to the 116 tons per day of particulate matter currently released in Riverside County. Dust generated by such activities usually becomes more of a local nuisance than a serious health problem. In later development phases, grading may be near existing development. Care should be taken to minimize the generation of dust by watering prior to and during grading.

Heavy duty equipment emissions are difficult to quantify because of day to day variability in construction activities and equipment used. Typical emission rates for a diesel powered scraper is provided in Table 4.3, and were obtained from the SCAQMD Air Quality Handbook. A diesel powered scraper is the most common equipment used for grading operations. For this type of project 12 to 15 pieces of heavy equipment may be expected to operate at one time. If all of the equipment operated for eight hours per day the following emissions would result: 120 pounds per day of carbon monoxide, 520 pounds per day of nitrogen oxides, 50 pounds per day of hydrocarbons, 35 pounds per day of sulfur oxides, and approximately 35

pounds per day of particulate matter. The emissions generated by construction equipment are very minor.

TABLE 4-3
EMISSION RATES FOR GRADING SCRAPER
(Grams per hour)

Pollutant	Emission Rate
Carbon monoxide	660
Nitrogen oxides	2,820
Hydrocarbons	284
Sulfur oxides	210
Particulates	184

Long Term Effects

Estimates of the vehicular emissions are based on the Mohle Grover and Associates (March 1988) May Ranch Traffic Analysis, as contained herein. The subject traffic report forecasts 67,855 total vehicular trips per day resulting from the Specific Plan completion, with an average trip length of 10 miles. An average vehicle speed of 25 miles per hour was assumed. Table 4.4 below depicts the projected motor vehicle emissions.

TABLE 4-4
VEHICULAR EMISSIONS

Pollutant	Emissions (Tons/Day)
Carbon Monoxide	4.33
Nitrogen Oxides	0.79
Sulfur Oxides	0.14
Particulates	0.17
Hydrocarbons	0.39

Stationary Sources

Emissions will be generated on-site by the combustion of natural gas for space heating and Water heating. Projections of emissions are presented in Table 4.5. Estimates of commercial-use square footages were made based on a floor area ratio of 0.20.

TABLE 4-5
EMISSIONS FROM THE COMBUSTION OF NATURAL GAS

Pollutant	Emissions (Lbs/Day)
Carbon Monoxide	22.08
Nitrogen Oxides	88.34
Sulfur Oxides	0.00
Particulates	0.17
Hydrocarbons	5.84

Off-site emissions will be generated due to electrical usage. The generation of electrical energy by the combustion of fossil fuels results in additional emissions off-site. Emissions generated by this means are presented in Table 4.6.

TABLE 4-6
EMISSIONS GENERATED BY ELECTRICAL USAGE

Pollutant	Emissions (Lbs./Day)
Carbon Monoxide	16.73
Nitrogen Oxides	96.29
Sulfur Oxides	10.05
Particulates	3.34
Hydrocarbons	0.83

Total Emissions

The additional emissions generated by the project are compared to emissions for Riverside County in Table 4.7. The total emissions generated by the project (year 2000) are presented in the first line of the table. The Riverside County emissions for 2000 are from the 1982 Revision to the Air Quality Management Plan. The proposed project emissions are compared to the County emissions. The increases in all pollutants, when compared to Riverside County emissions, will be less than 1.3 percent, except for sulfur oxides. Since the emissions projected for the project are such a small fraction of regional emissions, it is concluded that no significant regional air quality impacts as a result of the proposed project will occur. The emissions for Source Receptor Area 24 are also listed in Table 4.7. Comparison of the emissions generated by the May Ranch with those of Source Receptor Area 24 indicate that the project emissions expectedly begin to be more significant due to the project size.

TABLE 4-7
COMPARISON OF EMISSIONS

	CO	NO(x)	SO(x)	PART	HC
2000 Proposed Project Emissions(tons/day)	4.35	0.88	0.15	0.17	0.39
2000 Riverside County Emissions(tons/day)	504	68.4	6.34	147	222
Proposed Project as a % of County Emissions	0.86%	1.29%	2.37%	0.12%	0.18%
1987 Source Recept. Area 24 Emissions (tons/day)	47.79	4.74	N.A.*	N.A.*	2.36
Proposed Project as a % of Area 24 Emissions	9.10%	18.57%	---	---	16.53%

*N.A. - Data not available.

The AQMP is designed to accommodate growth in the basin consistent with the SCAG-82 Growth Forecasts. This growth forecasts is based essentially on the general plans adopted by the various municipalities at the time of the development of the forecast. The growth forecasts are not sufficiently detailed so that consistency of the proposed project with the SCAG-82 document can be determined directly. However, the current land use for the area is a mix of agricultural and residential land uses. The SCAG-82 forecasts are based on the adopted General Plans. Therefore, it appears that it will generate significantly more emissions than previously planned. Because of the inconsistencies between the SCAG-82 Growth Forecast and actual development trends, an update is being generated at this time by SCAG.

c. Mitigation measures

Short-term Impact Measures

In order to minimize short-term air quality impacts, SCAQMD Rule 403 should be adhered to during grading operations to minimize dust generation, which will require watering during earth moving operations.

Long-term Impact Measures

Support and compliance with the AQMP for the basin is the most important measure to achieve to eliminate regional air quality impacts. Compliance with the AQMP will require implementing one of the following three options in response to the apparent inconsistency:

(1) The project could be modified to become consistent with the AQMP.

(2) A general plan amendment could be prepared, subject to the requirement of state planning laws.

(3) An EIR could be certified for an inconsistent project if a Finding is so made and a Statement of Overriding Considerations is included.

Because most of the project-related air pollution emissions are generated by automobiles, there is very limited potential for any effective mitigation on the part of any single developer. The incorporation of commercial land uses and public parks in the project designs assists in reducing vehicle miles, as does the inclusion of sidewalks and bicycle trails throughout the community. The applicant should assist the city in implementing measures detailed in the AQMP and regional transportation plan relative to reducing vehicle travel.

4.3.4 NOISE

a. Existing Conditions

This discussion incorporates by reference Section 4.10, Existing Conditions from the McCanna Ranch Final EIR (SCH87011910). Noise contouring analysis for the May Ranch has been provided by Acoustical Impacts International, Dr. Otto Bixler.

The California Department of Health has established guidelines for assessing the compatibility of community noise environments and land uses. The guidelines rank noise and land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

In addition, the California Noise Insulation Standards require that new multi-family residential construction should be noise insulated so that the interior noise levels do exceed 45 CNEL. Most cities have adopted this standard for both single and multi-family developments along with a 65 CNEL standard for private outdoor living areas (e.g., rear yards and patio areas). These standards, 45 CNEL indoors and 65 CNEL outdoors, will be used to evaluate the potential noise impact on surrounding residential uses.

Traffic Noise

An estimate of traffic noise levels in terms of CNEL was computed for the roadways in the vicinity of the project. The Highway Noise Model published by the Federal Highway Administration (FHWA Highway Traffic Noise Prediction Model, "FHWA-RD-77-108," December, 1978) was utilized. Estimates of existing traffic volumes, estimated speeds, and truck volumes were used with

the FHWA Model to estimate existing noise levels in terms of CNEL. Existing traffic volumes were obtained from the traffic study prepared for the McCanna Ranch Final EIR. The distances to the CNEL contours for the roadways in the vicinity of the project site are given in Table 4.8, Existing Traffic Noise Levels. These represent the distance from the centerline of the road to the contour value shown. Note that the values given do not take into account the effect of any noise barriers that may affect ambient noise levels.

TABLE 4-8
EXISTING TRAFFIC NOISE LEVELS
Distance to CNEL Contour from Centerline of Roadway (Feet)

Roadway	57 CNEL	60 CNEL	65 CNEL	70 CNEL
RAMONA EXPRESSWAY				
I-215 to Indian	409	206	69	32
Indian to Perris	427	215	72	33
Perris to Center	565	284	93	38
Center to Bradley	301	151	50	21
Bradley to Rider	301	151	50	21
RIDER STREET				
Perris to Center	7	6	6	6
Center to Ramona Expressway	7	6	6	6
PERRIS BOULEVARD				
N/O Ramona	259	130	41	14
Ramona to Rider	201	101	32	12
Rider to Orange	197	99	32	12
S/O Orange	206	103	33	12

Source: Acoustical Impacts International, 1988

Aircraft Noise Sources

March Air Force Base is over three miles northwest of the project site. Based on the 1984 Air Installation Compatible Use Zone (AICUZ) Report for the March Air Force Base, the western boundary of the project site is located adjacent to the 65 CNEL contour (Figure 24). Through extrapolation, the aircraft noise levels at the project site are approximated to be between 65 and 50 CNEL.

b. Environmental Impacts

Potential noise impacts may arise from construction activities and traffic impacts on surrounding land uses. Each of these activities is addressed below.

NOISE CONTOUR EXIBIT

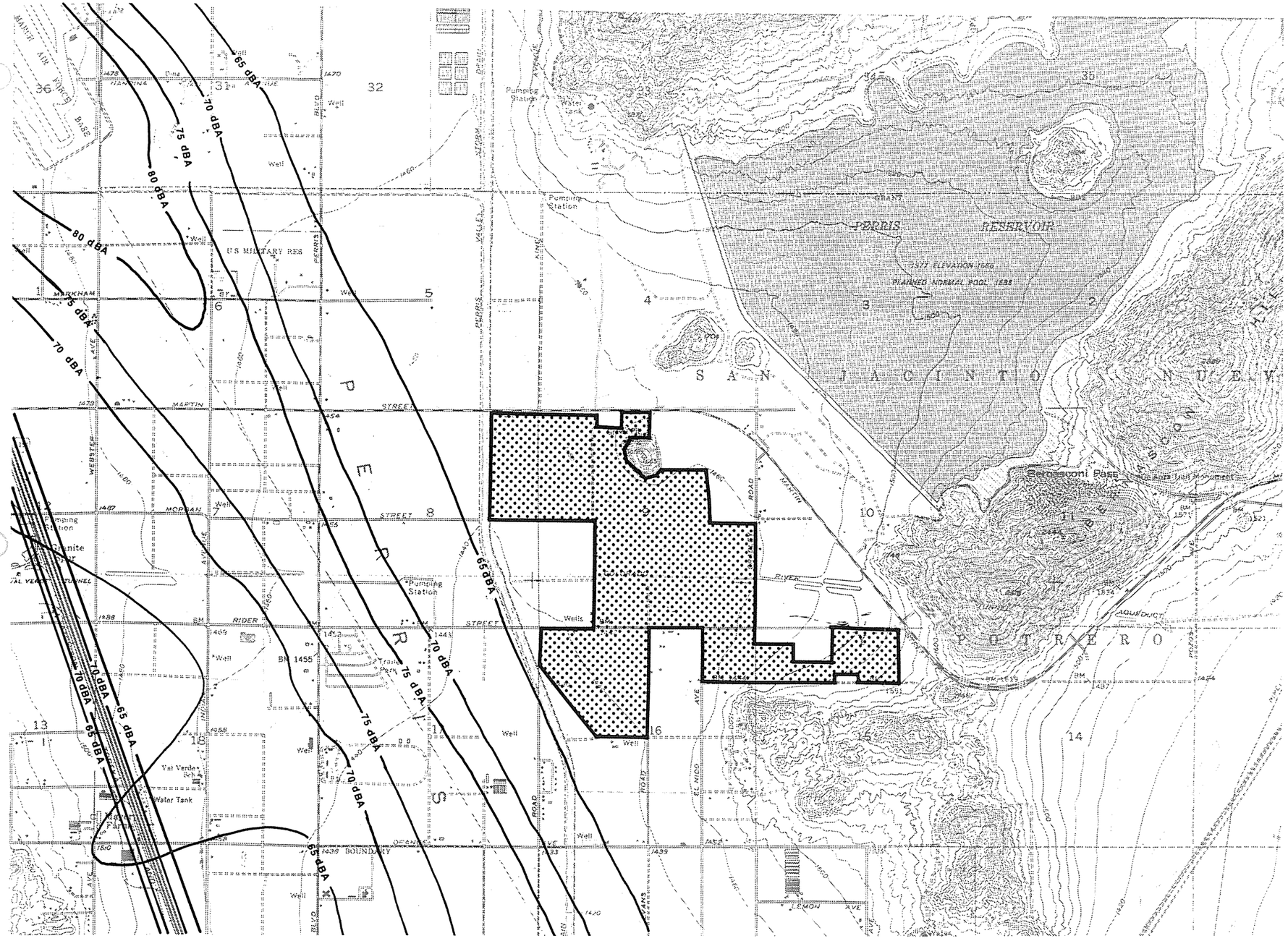


FIGURE: 24

FLORIAN MARTINEZ ASSOCIATES

May Ranch

Construction Activities

Construction noise represents a short-term impact on ambient noise levels. Noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators, can reach high levels. Construction equipment noise comes under the control of the Environmental Protection Agency's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations). Presently, air compressors are the only equipment under strict regulation, and no new regulations are currently under consideration. Noise levels for equipment which might be used for the excavation and construction of the proposed project range from approximately 65 to 105 dBA at a distance of 50 feet. The noise levels decrease at a rate of approximately 6 dBA per doubling of the distance. Therefore, at 100 feet the noise levels will be about 6 dBA less. Similarly, at 200 feet the noise levels would be 12 dBA less. Intervening structures or topography will act as a noise barrier, and reduce noise levels further.

Traffic Noise

The proposed development of the May Ranch will generate substantial traffic, and, as a result, will alter noise levels in surrounding areas. To assess the impact of the proposed project on land uses adjacent to streets that will serve the project, the roadway noise along these streets were determined. The roadways were modeled for existing traffic conditions and for existing plus project traffic conditions. The existing plus project CNEL noise levels are presented in Table 4.9. Distances to contour from center lines assume no intervening structures or noise attenuating features.

TABLE 4-9
EXISTING PLUS PROJECT NOISE LEVELS
Distance to CNEL Contour from
Centerline of Roadway (Feet)

ROADWAY	57 CNEL	60 CNEL	65 CNEL	70 CNEL
RAMONA EXPRESSWAY				
I-215	1192	598	191	65
Indian to Perris	1407	705	224	75
Perris to Center	2743	1375	435	140
Center to Bradley	685	344	111	42
Bradley to Rider	432	217	70	26
RIDER STREET				
Perris to Center	468	236	81	40
Center to Ramona	55	28	11	7

PERRIS BOULEVARD				
N/O Ramona	671	337	111	47
Ramona to Rider	437	221	77	40
Rider to Orange	295	151	57	36
S/O Orange	295	151	57	36
CENTER STREET				
Ramona to Placentia	635	315	155	70

Source: Acoustical Impacts International, 1988
Riverside County General Plan, 1986

The results in Table 4.9 indicate that the residences along the Ramona Expressway will be impacted by traffic noise unless mitigated by use of walls or barriers. Noise levels along Rider Street will also increase and may require mitigations. For the other roadways within the project site, the noise levels should be acceptable. Generally homes along the interior roadways will not be exposed to noise levels greater than 60 CNEL. Mitigation will be needed for homes exposed to 57 CNEL or greater to achieve acceptable noise levels.

Aircraft Noise Sources

The noise levels generated by March Air Force Base are anticipated to remain constant in future years. Therefore, the project site will continue to experience aircraft noise levels less than 65 CNEL. The proposed residential development is compatible with aircraft noise environment and mitigation will not be needed.

c. Mitigation Measures

The following mitigation measures are proposed:

1. Construction activities near residential areas should be limited to daytime hours (7 a.m. to 7 p.m.) on weekdays.

2. For the proposed residential developments along impacted roadways detailed noise studies should be conducted prior to the issuance of building permits when grading and architectural plans become available. The noise studies should indicate the measures necessary to achieve a noise level of 65 CNEL in private outdoor living areas (i.e., rear yards), and 45 CNEL in indoor living areas. These mitigation measures should be based on ultimate traffic levels for the roadways.

4.3.5 BIOTIC RESOURCES

a. Existing Conditions

The 684-acre property consists entirely of farmland, with active production of alfalfa, sheep, and non-irrigated grains. No native plant community or undisturbed habitat is present.

Although no native plant communities are present, the fallow fields are occupied by non-native grassland. (The original vegetation of the site was probably grassland and sparse sage scrub.) With the exception of a few Peruvian pepper trees at the old homesites, the only trees on the site are a row of large eucalyptus trees which borders Rider Street.

Because of the active cultivation, few ground-dwelling birds, mammals, or reptiles inhabit the site. However, the large expanse of open space, of which May Ranch is a part, attracts a variety of birds of prey, especially in the winter. Its proximity to Lake Perris and the San Jacinto Wildlife Area increases the open space and habitat value of the site and the surrounding area. The region is well-known for its large populations of wintering hawks, eagles, and owls. In addition to the habitation and use of the site and environs by the several raptor species, the agricultural lands also support thousands of wintering shorebirds, blackbirds, and songbirds. Although several mammals were also detected on the subject property, the lack of significant groundcover does make the site less desirable for many of the species of mammals.

Several species of plants and animals considered to be sensitive by resource agencies and conservation organizations were identified as occurring or potentially occurring on May Ranch. These species include two reptiles, one mammal, and three plants. The Stephens kangaroo rat was not trapped and is absent on the property while the probability of occurrence is considered low for the San Diego horned lizard and the Orange-throated whiptail (i.e., site is within the known range of the species but habitat on the site is rarely used by the species). The three plant species reportedly in the environs (Payson's caulanthus, thread-leaved brodiaea, and prostrate spineflower) prefer habitats different from that on the subject property.

Because the site is within the range identified by the County of Riverside for the Stephens kangaroo rat, a State and federally listed species, a trapping survey of the property most likely to be inhabited by that species, was undertaken. However, only four deer mice were captured. Based on the results of the trapping study, it was determined that the site does not provide habitat for kangaroo rats or other rodents because of the active cultivation.

Many birds of prey were noted, both in field observations and through other documentation, to occur on the site. The site supports wintering populations of many species of predatory birds, including ospreys, the great horned owl, long-eared owl, burrowing owl, and barn owl. Other species which may use the site are the golden eagle, black-shouldered kite, prairie falcon, ferruginous hawk, and northern harrier. In addition, bald eagles are occasionally sighted in the winter near Lake Perris and in the San Jacinto Valley; this endangered species may fly over the site, on occasion.

The numbers of nesting predatory birds are much fewer. One nest of a red-tailed hawk was observed off-site in a eucalyptus tree near Evans Road. A hollow stump of a Peruvian pepper tree at an old homestead was also believed to contain a nesting site for a pair of great horned owls. The red-tailed hawks are seen daily using the wooden power poles for perches and golden

eagles may nest in the Bernasconi Hills or on Mount Russell; this latter species is often sighted in the area surrounding May Ranch.

b. Environmental Impact

Because the site is no longer a natural habitat, biological impacts (i.e., impacts occurring to wildlife and vegetation, including habitats) are less than if undisturbed lands were being converted to more intense uses for the first time. The major impact resulting from project implementation is the loss of a large area of open space, one which is now contiguous with other large open space parcels. At this time, the biological impact of the proposed specific plan of development represents an incremental contribution to the loss of open space in the general region. Because several thousand acres of open space are still available, this impact is not significant when considered by itself. However, as urbanization of private lands continues in the Perris and San Jacinto Valleys, development will cumulatively become very significant for the substantial populations of migratory birds now present in the region. No threatened or endangered species of plants and/or animals will be impacted by project implementation. Likewise, no essential habitat for threatened or endangered species will be removed.

c. Mitigation Measures

Mitigation is not required under this category of examination.

4.3.6 LAND USE

a. Existing Conditions

On-site Land Use

The entire property consists of farmland, with active production of alfalfa, sheep, and non-irrigated grains. A portion of the site is fallow. As discussed in Section 2.2, agricultural use of the property is predominant in recent history. Prior agricultural uses in the area and perhaps the project site have included cattle grazing, the growing of potatoes and sugar beets and the growing of alfalfa.

There are presently no structures on the site.

Surrounding Land Uses

The immediate surrounding land uses include the Lake Perris Recreation Area to the north and agricultural lands to the west and south. Immediately on the east, the McCanna Ranch Specific Plan has been approved which will result in the construction of approximately 1387 residential units on 250+ acres. Further west lies Lake Perris Dam and Reservoir. Several individual farm dwellings and structures are located on properties adjacent to the proposed site.

All of the subject property north of Rider Street is presently within the city limits of the City of Perris. The subject property south of Rider

Street is currently proposed for annexation to the City of Perris. Other land uses of interest in the surrounding area include the City of Perris "Old Town" Civic Center and Business District (approximately three miles southwest of the site), and March Air Force Base (approximately 4.5 miles north of the site). The Farmers Fair project is to be located on a parcel of land at the northeast corner of Ramona Expressway and Center Street. The "Fair" is currently scheduled for two weeks continuous operation per year, though it may ultimately become a year around operation.

Area Development Trends

Existing and future development trends are discussed in Section 2.3.5 of this Specific Plan/EIR.

General Plan Policies and Zoning Designations

The current zoning for the property is Agriculture. This zoning carried over from the County land use plan upon annexation of the project site to the City of Perris. The land use element of the City's general plan is in a policy format and provides for a continuation of agricultural, open space and flood plain uses.

An analysis of the proposed project's relationship to general plan policies is contained in Section 4.3.6.b.

Other Pertinent Land Use Plans

(1) Airport Land Use Plan - The Riverside County Airport Land Use Commission has adopted an Airport Land Use Plan (ALUP) and has established an Interim Influenced Area for March Air Force Base. The Interim Influenced Area defines the compatible land uses for areas around the base affected by aircraft operations. Three Areas are defined. Area I is defined as imaginary approach surfaces and clear zones in the runway vicinity and extending beyond on the runway centerline. This is the area with the most restricted land use criteria. Area II encompasses the area where significant safety concerns are evident due to aircraft maneuvering about the flight pattern. Land use restrictions are moderate in this area. Area III is the outer boundary of the influenced area. No specific land use restrictions occur in this area. The ALUP is an advisory document only.

A portion of the proposed project site, consisting of about 160 acres bounded by the Perris Valley Storm Drain, Ramona Expressway, Morgan Street and a line coinciding with a hypothetical extension of Center Street, is within Area II of the March Air Force Base Influenced Area. Also in Area II is the portion of the project site southerly of Rider Street and west of Evans Road and consisting of about 147 acres. Compatible uses in Area II,

according to the ALUP are commercial, industrial and agricultural. Residential uses must be minimum 2.5 acre lots per dwelling unit.

The remainder of the site lies within Area III and is not subject to any ALUP restrictions.

(2) 1984 Air Installation Compatible Use Zones Report, March Air Force Base - The Air Installation Compatible Use Zone (AICUZ) Report was prepared by the U.S. Air Force to promote orderly and compatible use of land around March Air Force Base. Basic land use compatibility determinations are based on the establishment of clear zones, accident potential zones (APZ 1 and APZ 2), and noise impact zones defined by DNL noise contours. For obvious reasons, very few land uses are acceptable in the clear zones adjacent to and off the end of the runways. In the accident potential zones, the objective is to restrict people-intensive uses. In APZ 1, compatible uses are industrial, transportation, utilities, wholesale trade, open space and agriculture. In APZ 2, compatible uses include APZ 1 uses plus other low intensity uses (including low density residential). With respect to noise, residential uses located in areas below Ldn 65 are considered compatible. The study also states that there is an accident risk outside of the APZ area within a 10 nautical mile radius of the base, however, the risk is not significant enough to warrant special attention.

None of the clear zones, APZ's or noise contours of March Air Force Base intersect the project site. The Ldn 65 noise contour lies right at the property's western boundary as shown on Figure 23 in the Noise section.

Agricultural Resource Considerations

The project site soils are characteristic of productive farmland. Agricultural capability classifications include both Class I and Class II soils. Such soils have low to moderate limitations for a range of truck crops, specialty crops, and field crops.

The Riverside County General Plan identifies two classifications of agricultural land occurring on-site. A small portion of the site consists of Prime Farmland which, as previously mentioned, has physical characteristics conducive to the production of a wide range of agricultural products. The majority of the site is classified as Statewide Important Farmland. This designation is for land other than prime farmland that has a good combination of physical and chemical characteristics needed to produce food, fiber, or animals.

Agricultural lands which make up the project site were formerly subject to agricultural use contracts under the Williamson Act. However, a non-renewal of this preserve was filed in September of 1978. The contract expiration date is August 1988.

b. Environmental Impacts

On-site Land Use

Approval of the proposed Specific Plan will initiate a phased conversion of site land use from the existing agricultural operation to an urbanized use consisting of residential, commercial and park uses. A direct effect of this conversion will be the physical changes which take place on-site to implement the project. Indirectly, the project will attract residents and businesses, create demands for additional business and community services, and utilities. The land use change will alter the tax revenues available to the local governments and will establish long-term demands for supporting natural resources such as water and energy.

Surrounding Land Use

Implementation of the project could encourage surrounding undeveloped or agricultural uses to urbanize. Causative factors include extension of major utilities, creation of assessment districts and other taxing mechanisms, urban/agricultural land use conflicts (see Agricultural Resource Considerations, below) and an attractive environment. Induced projects are subject to the same review and approval process as the proposed action, however.

Other surrounding land uses such as the Farmers Fair and the Lake Perris Recreation Area are generally compatible with the proposed residential and commercial uses. Certain use conflicts, such as increased traffic, may arise in conjunction with major events or due to seasonal factors. Project landscaping concepts will serve to buffer the site from these surrounding land uses.

General Plan and Zoning Considerations

Approval of the proposed Specific Plan would allow a more intense development of the site than is allowed under existing zoning. While individual aspects of the Specific Plan vary from existing zoning regulations and the project proposes distinctive development standards, there are two major aspects of the project which conform to key provisions of the existing zoning regulations. Lot sizes for the single family residential units will range from 4,000 square feet to 7,000 square feet which conforms to Ordinance Number 641 of the City Council of the City of Perris. Also, all commercial development will occur in compliance with Chapter 19.40 of the City of Perris Zoning Ordinance.

The Specific Plan has been formulated to be generally consistent with the overall City General Plan. The project's relationship to the applicable City General Plan goals and policies is discussed below.

OVERALL GENERAL PLAN GOALS

(1) To encourage an orderly, contiguous development pattern sufficient to handle the City's expected population growth, in a manner that will preserve the City's fiscal capacity to provide the expanded public services that will be required by both its present and future residents.

(2) To assure equal opportunity for the availability of decent, affordable and sound housing units for all economic segments of the community without regard to ethnic, racial or religious background. Ensure that sufficient buildable land area, accessible to public utilities and City services, will be available for the construction of housing units needed by low- and moderate-income households expected to reside within the City.

Project Relationship to Overall General Plan Goals

(1) The project site is located approximately three miles from downtown Perris and is currently surrounded by open space and agricultural uses. Therefore, it cannot be said that project follows a contiguous development pattern. However, project development will occur in an orderly manner and will provide additional housing to handle the City's expected population growth. A fiscal impact report has been prepared that assesses the fiscal capacity of the City to provide the public services that will be required.

(2) As stated in Section 1.1.3, Market Characteristics, it is a goal of the project to reflect anticipated marketing needs and public demand by providing a homogenous community for the first-time homebuyer as well as the move-up buyer, the large family as well as singles. Target home prices are intended to start in the low $80,000s.

LAND USE DEVELOPMENT POLICIES

The General Plan section of Development Policies is intended to provide specific guidelines that relate to the design of all major development projects in conformance with the overall goals of the General Plan. These guidelines, and the project's relationship to them, are discussed below:

NATURAL HAZARDS AND PUBLIC SAFETY

(1) Flooding Goals

(a) Encourage a comprehensive approach to drainage problems in large areas that are prone to sheet-flows and shallow flooding.

(b) Approved developments shall not result in the diversion of storm runoff into adjacent properties, nor cause any undue

alteration of natural drainage courses that cannot be handled by existing or proposed storm drainage and flood control improvements. Compliance with the recommendations and conditions of the Riverside County Department of Flood Control and Water Conservation shall be required prior to development approval.

Project Relationship to Flooding Goals

(a) Storm drainage facilities will be designed to accommodate 100-year storm flows.

(b) The project will not result in diversion of storm runoff into adjacent properties.

(2) Noise Goals

(a) Interior - Developments that are proposed within intensified impact zones along highways, arterial or collector streets, and rail facilities shall be required to incorporate measures to reduce traffic noise impacts to acceptable levels, especially higher density residential uses. Such measures may include walls, earth berms, landscape buffers, and architectural insulation features sufficient to reduce interior noise levels to Ldn 45 dB(A).

(b) Exterior - Residential construction shall be strongly discouraged in those areas where exterior noise levels exceed Ldn 70 db(A), especially within the March Air Force Base aircraft noise impact contours as depicted in the AICUZ Report dated October 1979. This report should be used as a guide in determining the appropriate type of land uses as well as appropriate noise mitigation measures to be used within these impact zones.

Project Relationship to Noise Goals

(a) Development will be constructed to all applicable jurisdictional standards and regulations.

(b) The majority of the development is not located in an area where existing or projected future exterior noise levels exceed 65 db(A), although residences proposed along Ramona Expressway will be exposed to noise levels that may reach 65 CNEL. Mitigation to achieve an interior noise level of 45 CNEL and an exterior noise level of 65 CNEL is normally required. The 65 Ldn noise contour associated with March Air Force Base does not affect the site. (See Section 4.3.4, Noise.)

(3) Slope and Geologic Hazards

As the site contains no slopes exceeding 10 percent, none of the General Plan policies are applicable to the site. (See Section 4.3.1, Earth Resources.)

(4) Fire Protection and Safety Goals

(a) All development proposals should demonstrate an adequate fire response time and capability based upon the scale, intensity and proposed densities of the particular project.

(b) May Ranch development must prove the existence of a sufficient water supply and pressure level adequate for the suppression of structural fires. Required water lines and fire hydrants must be installed in accordance with the standards of the County of Riverside Fire Department.

(c) All residences and other structures must have address numbers that are clearly visible from the public street. Driveway entrances may not exceed a 15 percent grade, in order to provide reasonable access for fire fighting and other emergency vehicles.

Project Relationship to Fire Protection and Safety Goals

(a) The City of Perris is conducting a comprehensive public safety study to determine the levels of service, funding for those levels, and capital facilities needs for adequate community-wide fire protection. The study will provide to the City recommendations involving the location of fire stations and equipment needs to serve the community including the proposed project site and surrounding areas. The applicant has contributed $15,000 to the City as its share of study costs, credited against any future fees. The study will be completed in late summer of 1988; thus approval of the proposed project will be conditioned to provide fire protection capital and manpower in accordance with recommendations in the public safety study.

Based on County fire standards, one engine company should be provided for each 3200 dwelling units. Considering this standard, the May Ranch Specific Plan would generate the need for a fire station and one engine company at buildout. The City's current one-time fire protection fee of $0.10 per square foot would result in the generation of $1,749,000 which would cover the probable capital costs of the facilities required using County standards.

Regarding the phasing of project development with the provision of fire facilities and services, the applicant and the City will agree to a funding plan that provides fire

facilities as they are needed. Included in such a plan could be provisions to provide fire protection coverage from facilities that are either existing; planned (i.e., the possible new station at Placentia and Redlands); temporary; or, implementation of funding mechanisms such as a Mello-Roos District.

(b) Eastern Municipal Water District (EMWD) has indicated that there is an adequate supply and pressure of water to meet fire flow requirements. All water mains and hydrants will be constructed to all applicable jurisdictional standards and regulations.

(c) All residences will have addresses that are clearly visible from the street and driveway entrances will not exceed a 15 percent grade.

INFRASTRUCTURE AND PUBLIC FACILITIES

(1) Water Supply and Sewage Disposal Goals

(a) All proposed land divisions shall have available a potable water supply and adequate provision for sewage disposal prior to the approval of occupancy.

(b) The capacity of existing water storage facilities to provide an adequate reserve supply and pressure for fire fighting needs shall be taken into consideration when reviewing development proposals. Mitigating measures to be provided at the developer's expense may be required when needed based on proposed development uses and densities.

(c) All provisions for sewage disposal within any approved land division or development project within the City of Perris shall meet the standards of the Riverside County Department of Health and the Regional Water Quality Control Board.

Project Relationship to Water Supply and Sewage Disposal Goals

(a) Eastern Municipal Water District (EMWD) has indicated their ability to provide potable water and sewer service to the May Ranch site.

(b) EMWD has indicated that a new water storage tank may be required to meet fire flow requirements for the development.

(c) The EMWD has master planned a gravity sewer main in Morgan Street from the Ramona Expressway to an existing eight-inch force main located on Redlands Avenue. The planned improvements will be constructed to meet all applicable jurisdictional standards and regulations.

(2) Circulation Standards Goals

(a) Improved street access shall be provided to all new parcels in accordance with the standards of the Circulation Element and applicable sections of the Subdivision Ordinance.

(b) Local street patterns shall be logically related to the overall network of arterial and collector streets as provided for in the Circulation Network. Driveway entrances onto surrounding arterial, secondary and major streets should be restricted in all possible instances, and through traffic on interior residential streets should be minimized.

(c) Successive land developments should occur in a contiguous manner, so as not to be dependent on the possible future extensions of important roads through intervening land areas or properties.

(d) Easements for through-access by pedestrians should be provided where appropriate, especially to provide access from developments to neighborhood shopping facilities, schools and local park and recreation facilities.

Relationship to Circulation Standards Goals

(a) A well-balanced transportation network has been designed for the project that is adequately sized for safe and efficient movement of people and goods. A street system consisting of major public arterials, secondary roads, collector streets and local streets is planned. Where required, the project will integrate transit facilities, such as benches or shelters and turnouts into the project design.

(b) Residential neighborhoods will be accessed by local streets and will not be traversed by heavy through-traffic. Residential driveways will not enter onto arterial and major secondary streets.

(c) Although the proposed development is not occurring contiguous to existing land development, the project site's circulation needs will be adequately served by the Ramona Expressway and Center Street access routes and by extensions of various streets on-site. (See Section 4.3.9, Circulation.)

(d) A pedestrian walkway system is proposed throughout the project site, connecting all residential areas with the proposed park and open space facilities on-site. All interior streets will be provided with sidewalks.

(3) Police and Fire Service Goals

(a) All new developments should be located within an adequate response distance for police, fire and emergency services. Response time should not exceed five minutes for low to high density land use categories.

(b) Developments that are proposed in areas where these criteria cannot be met may be required to mitigate such hazards through provision of emergency access routes, reserve water storage capacity, sprinkling systems or provision of fire fighting equipment.

(c) Proposed developments should be designed with the concept of crime prevention, such as "defensible space" kept in mind. The police department should be afforded the opportunity to review proposed site plans for incorporating such criteria, as well as advising on the adequacy of existing staff levels to protect and serve any future developments.

Project Relationship to Police and Fire Service Goals

(a) The proposed project site may be in excess of five minutes response time for fire services but is generally within five minutes response time for police protection. The City of Perris is conducting a comprehensive public safety study to determine the levels of service, funding for those levels, and capital facilities needs for adequate community-wide fire and police protection. The study will provide to the City recommendations involving the location of fire stations and equipment needs to serve the community including the proposed project site and surrounding areas. The study will also recommend appropriate per capita police personnel ratios. The applicant has contributed $15,000 to the City as its share of study costs, to be credited toward future fees if any.

(b) The Public Safety Study will be completed in late summer of 1988; thus, approval of the proposed project will be conditioned to provide police and fire protection capital and manpower in accordance with recommendations in the public safety study. (See Section 4.3.11, Paragraph a).

(c) City standards for lighting of public areas will be integrated with project design. The police department will be afforded the opportunity to review site plans during the regular City plan review process.

(4) Schools and Recreational Facilities Goals

(a) Adequate enrollment capacity in the local school districts that is sufficient to accommodate the projected residents of

a proposed development should be demonstrated prior to project approval. Where such capacity does not exist at the present time, the developer shall offer appropriate mitigating measures, such as dedicating land for school purposes, or providing temporary school buildings.

(b) The City Council can require the assessment of a per-unit fee on all new residential development provided any local school district makes a finding that its facilities are seriously overcrowded.

(c) The City should encourage the provision of adequate park lands and recreational facilities. Larger scale developments should provide such land and facilities within the total project design as much as possible.

Project Relationship to Schools and Recreational Facilities Goals

(a) With extensive use of relocatable classrooms, the Perris Union High School and the Val Verde Elementary School Districts have capacity to serve students generated by the proposed project. (See Section 4.3.15, Schools.)

(b) A developers fee is required before building permits are taken out. These fees may not exceed the state mandated maximum amounts of $1.50 per square foot of building in residential areas.

(c) The May Ranch Specific Plan proposes to dedicate to the City three public parks totalling approximately 27 acres in size. A linear park of 14 acres is also proposed for a total of 41 acres of park land. However, City standards require the provision of approximately 69.0 acres of parks for the proposed 3,450 dwelling units. Additional park land dedication or the payment of in-lieu fees will be required. (See Section 4.3.14, Parks and Recreation.) The in-lieu fees paid to the City will be used toward the improvement of the three public park sites within the Specific Plan or the purchase of the park land.

ENVIRONMENTAL RESOURCES, CONSERVATION AND OPEN SPACE PRESERVATION

(1) Open Space and Conservation Policies

(a) The City shall seek to preserve and maintain those land areas that are of a unique quality and importance as habitats for wildlife and the rare and endangered species that are characteristic of the region.

Project Relationship to Open Space and Conservation Policies

(a) The project site is not considered of unique quality and importance as habitat for wildlife. However, measures have been proposed to enhance the habitat value of the site after development.

(2) Agricultural Preservation Goals

(a) The continued viability of agricultural uses within the City shall be enhanced by discouraging the premature expansion of urban land uses into areas that are presently devoted to large scale agricultural production, and that are beyond the present range of urban infrastructure such as sewer collection facilities and improved roads. Future residential and urban growth should occur in a logical and contiguous pattern, so as not to exert an undue influence on agricultural land values or operations.

Project Relationship to Agricultural Preservation Goals

(a) Although the project area is presently devoted to agricultural activities, the site is not beyond the range of sewer collection facilities and improved roads. The project could potentially influence adjacent agricultural land values through growth-inducement pressures and land uses conflicts.

(3) Recreational Resources Goals

(a) Encourage the development of a system of community parks and recreational facilities for a recreational and open space resource for the residents of the Perris Valley Region.

(b) Means should be found by which open space and natural areas within the City can be linked in order to form a system of recreational trails as well as provide a scenic backdrop to the City's physical form of projected urban growth.

(c) The City should consider requiring developers to make dedication of parkland or pay in-lieu park fees based on the number of residential units, as a condition of subdivision map approval.

Project Relationship to Recreational Resources Goals

(a) A significant portion of the property will be dedicated to recreational and open spaces, including 41 acres of public parks. This is less than the 69 acres required by current City ordinances (2 acres of park land per 100 units constructed). Additional park land dedication and/or the payment of in-lieu fees will be required.

(b) The May Ranch Specific Plan proposes a 14-acre linear shaped park along the Metropolitan Water District's Colorado River Aqueduct right-of-way subject to the approval of the MWD. As this right-of-way traverses other portions of the City, it could potentially be developed as a park system throughout the City.

(c) The developer will dedicate 27 acres of parkland to the City of Perris, and the parks will be owned and maintained by the City. An additional 14 acres will be provided by a linear park subject to MWD approval. An additional 28 acres of park land dedication, or the payment of in-lieu fees will be required to satisfy current City ordinances.

HISTORIC, COMMUNITY AND SCENIC RESOURCES

(1) Historic Structures and Districts Goals

(a) Efforts shall be made to identify and preserve any significant archaeological resources on, or surrounding, the site of proposed development. Based on existing inventories of archaeologically significant areas, a site survey by qualified archaeological professionals may be required as a part of the environmental assessment of a development proposal.

Relationship to Historic Structures and Districts Goals

(a) The developer has retained a qualified archaeological professional to survey the site as part of the environmental planning process. Survey results indicate no identified archaeological or historical resources on or immediately adjacent to the proposed project site. (See Section 4.3.8, Cultural Resources.)

(2) Community Design and Scenic Highway Routes Goals

(a) A high quality of aesthetic design should be encouraged in the development of the City's residential areas. Effective landscaping treatment should be required as part of all new developments.

(b) The City is in the process of adopting a Scenic Highways Ordinance which designates the Ramona Expressway as a "Scenic Highway."

Relationship to Community Design and Scenic Highway Routes Goals

(1) A licensed landscape architect, retained by the project developer, is working as an integral part of the May Ranch design team to insure that overall project design will be coordinated and cohesive through its landscaping program.

(2) The project's relationship to the City's proposed Scenic Highways ordinance is discussed in Section 4.3.9.

Other Pertinent Land Use Plans

The density of development proposed on the westernmost portion of the site is in apparent conflict with the Airport Land Use Plan prepared by the Riverside County Airport Land Use Commission. Several areas of residential units at densities up to 7.5 units per acre occur on a portion of the site overlain by the Interim Influenced Area II of March Air Force Base. The ALUP specifies a density of one unit per 2.5 acres this acreage. It is noted that there are no project site or development density land use conflicts identified in the 1984 AICUZ Report prepared by March Air Force Base. Based on the 1984 AICUZ Report, establishment of ALUP residential densities of one unit per 2.5 acres on the project site appears overly restrictive and not justified by base flight operations or noise contours.

In addition, the City of Perris General Plan states that the AICUZ Report, ..."should be used as a guide in determining the appropriate type of land uses as well as the appropriate noise mitigation measures to be used within these impact zones."

Agricultural Resource Considerations

Implementation of the proposed project will eliminate agricultural uses on the 684-acre project site. Prime agricultural soils will be removed from production which will contribute to their decline in the County and the Perris Valley. The impact is not considered significant, however, since these lands were removed from agricultural preserve status in 1978 and under current circumstances do not represent a long-term, economically viable agricultural use.

A number of factors or trends in the area point toward the eventual conversion of these lands to urban use. In addition to being removed from contract status under the Williamson Act in 1978, the project site is within the city limits of the City of Perris (a small part is the subject of a current annexation action). Long term viability of agriculture in this area is questionable due to urbanization pressures within the City, unfavorable farming economics, and the increased cost of utilities and water.
An unfavorable result of the proposed action could be the creation of development pressure on nearby agricultural lands that are viable and are not within the City. Such pressures can be exerted through the creation of land use conflicts, such as annoyances and complaints of new residents during spraying of pesticides and application of fertilizers, complaints about agricultural odors and insects, traffic conflicts between farm

vehicles and other vehicles and crop vandalism. This impact is considered potentially significant.

c. Mitigation Measures

On-site and Surrounding Land Use

The proposed Specific Plan presents a coordinated approach to the development of the site which enhances land use feasibility. Project design elements and development standards within the Specific Plan address on-site amenities and the relationship to surrounding uses including landscape buffers and setbacks.

Agricultural Resource Considerations

As mitigation for agricultural resource impacts a reduced intensity alternative is considered in Section 2.9.

It is further suggested that the City of Perris consider including an ordinance that substantiates the continuation of agricultural use on appropriate lands. Such ordinances are sometimes known as right-to-farm ordinances and can be considered a form of agricultural easement.

To the extent possible, the City could assist applicants in making agricultural contracts under the Williamson Act.

4.3.7 POPULATION AND HOUSING

a. Existing Conditions

This discussion incorporates by reference Section 4.6, Existing Conditions from the McCanna Ranch Final EIR (SCH07011910).

The population of the City of Perris was 8,288 persons on January 1, 1984, and consisted of 2,891 households. By 1987, the population had increased by 36 percent to about 11,250 persons. The projected City population for year 1989 is 14,606 persons consisting of 5,114 households. The City of Perris has a greater percentage of persons 65 years and older when compared to the State-wide average. The City has a lower percentage of persons aged 35 through 54 compared to the State-wide average.

Lower cost of housing, which results in lower mortgage and rent payments, is a major factor attracting population to western Riverside County and the City of Perris.

The SCAG 82 Forecast predicts that the number of jobs in the Perris Valley subregion is expected to increase by 345.5 percent by the Year 2000. The employment growth rate in Riverside County for the same period is expected to be 150 percent. The Perris Valley region will absorb a significant increase in population due to migration from more heavily urbanized areas

and a much greater proportion of this growth is expected to consist of families with employed household heads. As population grows, the proportion of 65 and older population will decrease.

b. Environmental Impacts

Implementation of the proposed project will increase the City's housing stock by 3,450 single family dwelling units. Projected population from the development is estimated at 9,490 persons at full buildout (1999) based on 2.75 persons per dwelling unit. The projected dwelling unit occupancy rate is a City Planning Department estimate based on a review of census tract information. Project population growth by project phase is shown on Table 4-10.

TABLE 4-10
PROJECT POPULATION GROWTH BY PHASE

Phase	Year On-line	Dwelling Units	Population per Phase	Population Cumulative
1	1992	1098	3020	3020
2	1995	579	1593	4613
3	1996	887	2440	7053
4	1999	886	2437	9490
		=======	====	
	Totals	3450	9490	

The proposed project will account for a notable percentage of the population and housing units within the City. If it is assumed that a six percent City growth rate can be maintained through project buildout, the estimated 1999 City population would be approximately 49,250 persons. The project would account for about 19 percent of the estimated population.

The SCAG-82 Growth Forecast is used to determine regional population density for regional planning strategies such as air quality management plans and transportation plans. SCAG-82 Forecasts are based on existing general plan and zoning designations. The proposed project would be developed to densities greater than presently allowed under the site's agricultural zoning and possibly exceeds SCAG-82 forecasts.

In addition, the City of Perris reports that it will soon exceed SCAG-82 Modified Growth Forecasts for population and housing. SCAG is in the process of revising these forecasts at the request of the City and it is anticipated that additional regional growth will be allocated to the City of Perris.

c. Mitigation Measures

No significant adverse impact of population growth, by itself, is identified.

Mitigation for the affects of population growth is addressed for other subjects as appropriate. Such areas include, at least, traffic, noise, public facilities, air quality, and related discussion.

4.3.8 CULTURAL RESOURCES

The firm of Scientific Resource Surveys (SRS), Inc., conducted both background research and a records search to determine if the project area had been previously surveyed and if it contained any previously identified historic or prehistoric sites. In addition, an intensive site survey of the 684-acre property was undertaken to determine the presence or absence of any historic and/or prehistoric resources. The results of this work are summarized below while the Riverside County Archaeological Assessment form and accompanying information has been included in this document as Technical Appendix 5.3.

In addition, SRS, Inc., conducted a similar study on the adjacent McCanna Ranch Specific Plan property located north of the subject site. The information regarding historic and prehistoric resources and documented in the Draft EIR for that project (SCH87011910) has been summarized in the assessment presented below and is incorporated into this document by reference.

a. Existing Conditions

A records search for the adjacent McCanna Ranch indicated that no cultural resources had been documented previously in the project area. As a result of this study, that project site was determined to possess a low potential to contain cultural resources, based on site location trends derived from previous studies and the patterns reflected by sites in the immediate vicinity. The records search and field investigation conducted for the McCanna Ranch revealed that no prehistoric cultural resources were located there. Further, the project site survey similarly found that no significant historic cultural resources existed, although five non-significant historic localities which contained structures or remnants of structures did exist on the McCanna Ranch. The impact analysis included in the Draft EIR for that project concluded that no significant impacts would occur to cultural resources if the project was implemented.

Research previously conducted for the McCanna Ranch indicated that although historic development of portions of the Perris Valley began prior to 1900, concentrated settlement in the project environs started 30 to 40 years later. From that time to the present, farming and ranching have comprised the foci of uses in the areas. An historic overview which documents the sequence of historical occupation within the Lake Perris area is contained in Technical Appendix 5.3.

The records search and subsequent field survey also revealed the absence of any significant cultural and/or historic resources on the 684-acre May Ranch. The records search was obtained from the California Archaeological Inventory, Eastern Information Center, University of California, Riverside, and it indicated that no historic or prehistoric sites had previously been

recorded within the limits of the subject property. A review of pertinent literature and turn-of-the-century U.S.G.S. maps also indicated that no historic sites or structures were located on the property at that time.

b. Environmental Impact

Although implementation of the proposed project will result in landform alteration, the absence of historic and/or prehistoric resources as documented by the records search and field investigation suggests that such modification of the existing environment will result in no impacts to cultural resources.

c. Mitigation Measures

Despite the low probability of encountering undetected cultural resources during construction, a program outlining their treatment should be developed in the event that resources are encountered during grading and/or construction. This program should include adjustments and procedures to provide for the recovery of cultural resources during grading operations.

4.3.9 TRAFFIC AND CIRCULATION

This report has been prepared using guidelines provided by the County of Riverside and in format consistent with that developed for the adjacent McCanna Ranch Specific Plan. Additionally, the McCanna Ranch Specific Plan EIR (SCH87011910) is incorporated by reference and recognized under cumulative effects.

a. Existing Conditions

Regional access to and from the project site will be provided via I-215 Freeway, Ramona Expressway, and Perris Boulevard. Local circulation to and from the project site will be provided via Rider Street, Bradley Road, Center Street, and Evans Road. Figure 25, Existing Circulation System, presents the roadway characteristics of the surrounding local and regional circulation system.

Interstate 215 (I-215) is a controlled and uncontrolled freeway connecting Riverside and San Diego. The roadway is presently improved with two travel lanes in each direction and a median. In the immediate vicinity of the project, the intersection of Ramona Expressway with I-215 is improved with a full access controlled diamond interchange. The California Department of Transportation (Caltrans) has this facility designated to ultimately be improved as a full access controlled freeway.

Ramona Expressway is an east/west arterial located on the north side of the project site and provides primary access to and from the project. This roadway is presently improved to provide a four lane divided highway between I-215 and Center Street (Lake Perris Recreation Area access). Easterly of Center Street, the roadway is improved to provide two travel lanes and improved shoulders.

EXISTING CIRCULATION SYSTEM

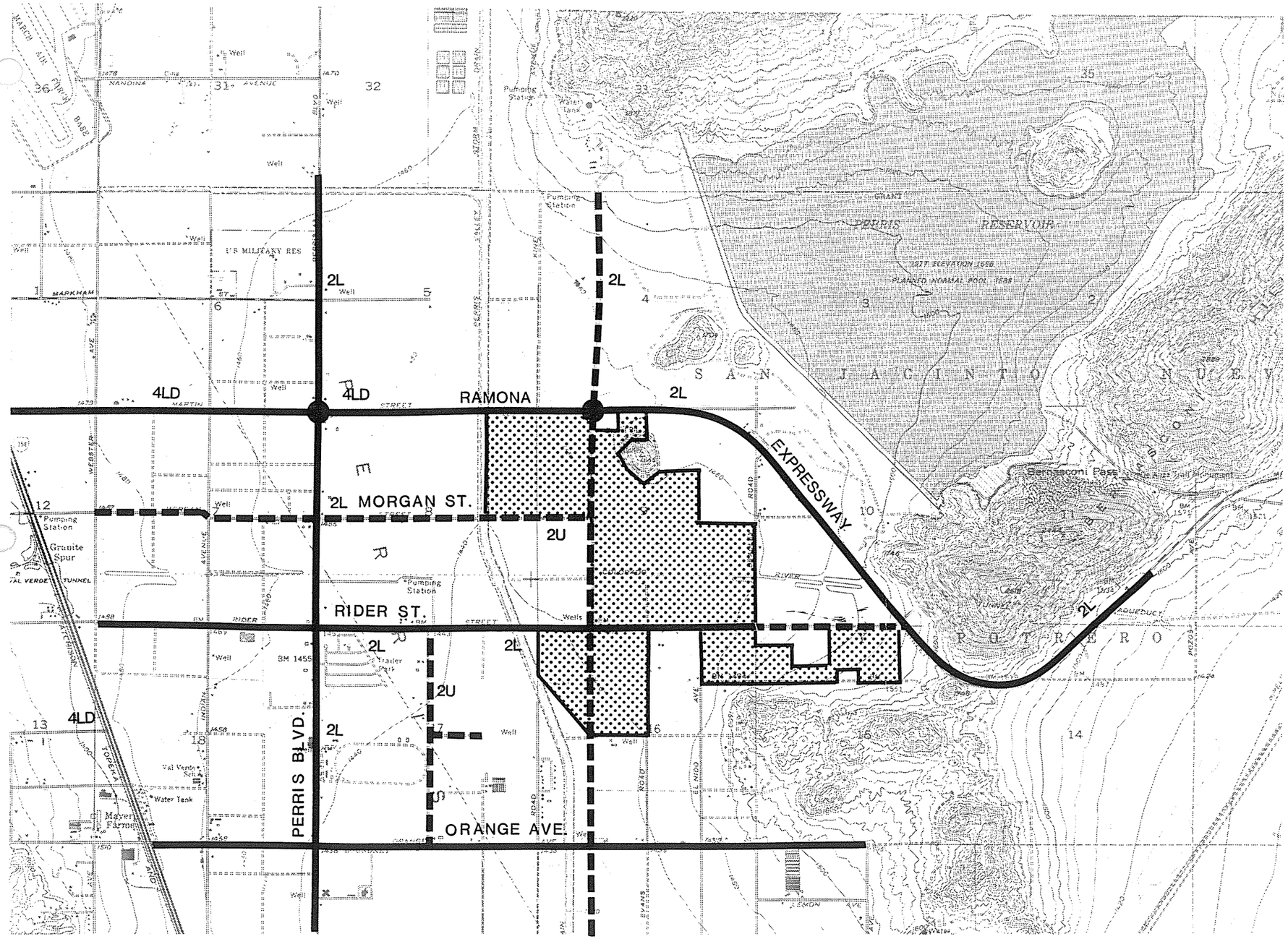
LEGEND

4LD – 4 LANE DIVIDED

2L – 2 LANE IMPROVED

2U – 2 LANE UNIMPROVED

● TRAFFIC SIGNAL CONTROL



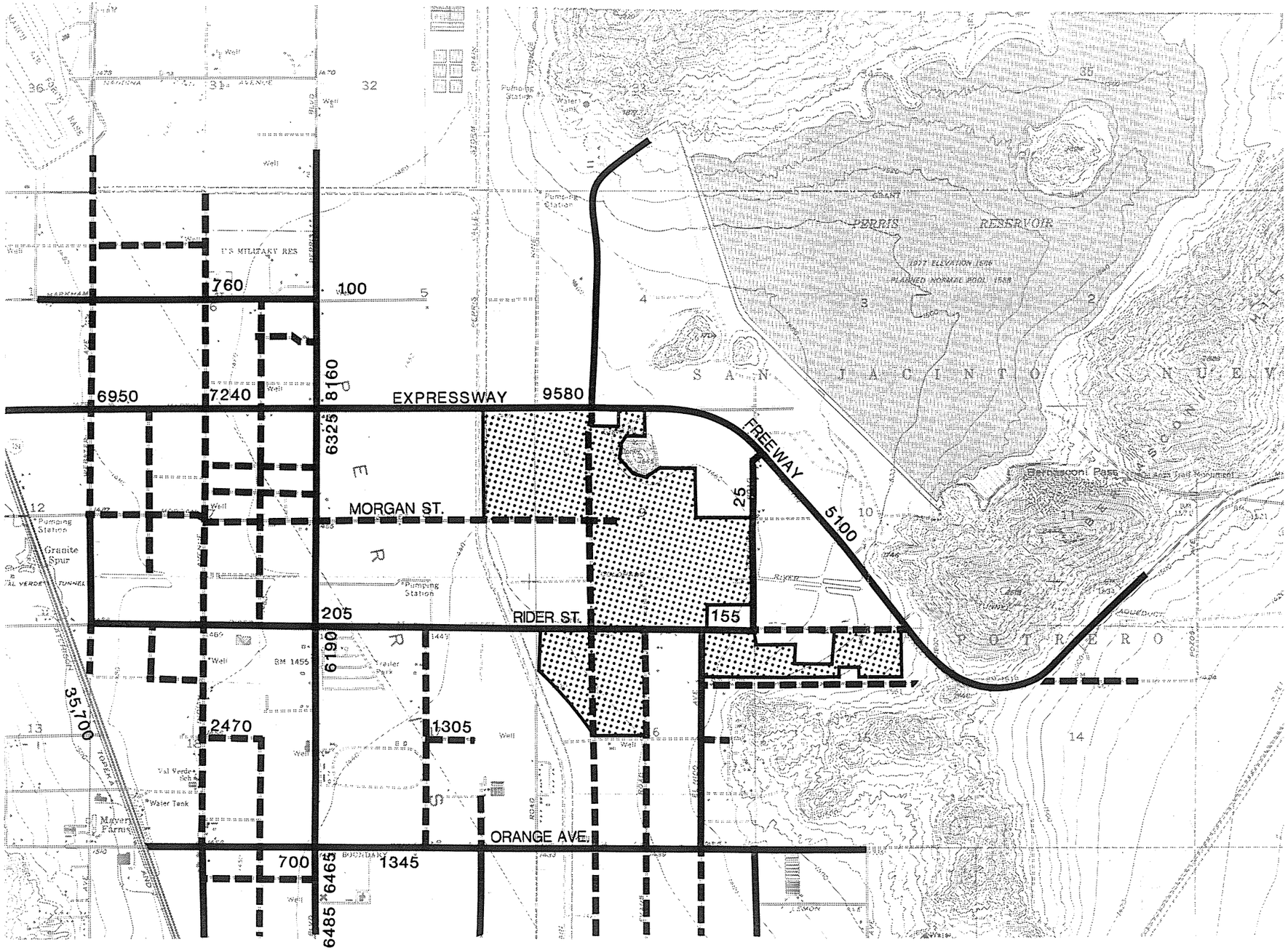
SOURCE: McCANNA RANCH EIR

FIGURE: 25

FLORIAN MARTINEZ ASSOCIATES

May Ranch

EXISTING TRAFFIC VOLUMES



LEGEND

XXXX-DAILY TRAFFIC VOLUME

FIGURE: 26

FLORIAN MARTINEZ ASSOCIATES

ESTIMATED BY
McCANNA RANCH EIR & ADJUSTED
2% FOR GROWTH FACTOR

May Ranch

MASTER PLAN OF HIGHWAYS

- FREEWAY
- EXPRESSWAY- 116′ R.O.W.
- ARTERIAL - 110′ R.O.W.
- MAJOR - 100′ R.O.W.
- SECONDARY - 88′ R.O.W.

PROJECT SITE

HEACOCK ST.
INDIAN ST.
PERRIS BLVD
KITCHING AVE
MURRIETA RD
MARKHAM ST.
RAMONA EXPRESSWAY
MORGAN ST.
RIDER ST.
PLACENTIA AVE.
ORANGE AVE.
EVANS ST.
BRADLEY RD.
ANTELOPE RD.
I-215
PERRIS RESERVOIR
SAN JACINTO
Bernasconi Pass

FIGURE: 27

SOURCE: CITY OF PERRIS
RIVERSIDE COUNTY ROAD DEPARTMENT

FLORIAN MARTINEZ ASSOCIATES

May Ranch

Perris Boulevard is a north/south roadway providing access between the City of Perris (located to the south) and the City of Moreno Valley and March Air Force Base to the north.

Rider Street is a two-lane paved roadway traversing the southerly side of the project site. Rider Street west of Bradley Road is improved to provide two paved lanes and graded shoulders. Easterly of Bradley Road, Rider Street is a two-lane graded roadway to Ramona Expressway.

Existing daily traffic volumes on roadways within the vicinity of the project site are presented on Figure 26, Existing Traffic Volumes, representing 1985 and 1986 count data collected from the City of Perris, County of Riverside, and Caltrans. Also presented in Figure 26 are traffic volumes estimated by Basmaciyan-Darnell, Inc., (BDI) and reported in the referenced McCanna Ranch EIR, but increased by two percent to adjust for growth.

Traffic control within the immediate area primarily consists of stop control at the side streets entering Ramona Expressway and Perris Boulevard. At I-215 and Ramona Expressway, the on- and off-ramps are stop controlled.

Traffic signal control is provided at the Ramona Expressway intersection of Perris Boulevard and Center Street, near the primary site access point. The traffic signal control provides left-turn phasing for east-west Ramona Expressway traffic at each intersection.

The Master Plan of Highways (MPAH) for the area is presented on Figure 27, Master Plan of Highways. The MPAH shows the conceptually proposed long-range circulation system for the area. In the immediate vicinity of the project, Ramona Expressway, Evans, Bradley Road, and Rider Street are MPAH roadways that will have an impact on the project. On the MPAH, Ramona Expressway is designated as an expressway; Bradley Road is a secondary (88 foot right-of-way); while, Rider Street is a major roadway (92 foot right-of-way).

b. Environmental Impacts

Project implementation will increase traffic volumes both on- and off-site. An on-site circulation system will be constructed to serve anticipated traffic volumes. (See Figure 5, Master Circulation Plan.) Further, the site plan has been iteratively adjusted to provide for the north-south extension of the Evans-Marrietta Road extension. The traffic generated by the project is determined by applying an appropriate trip generation rate to the quantity of land use. Trip generation rates are expressed in terms of trip ends per dwelling unit, acre, or thousand square feet. Residential trip generation by project phase is shown on Table 4.11.

TABLE 4-11
RESIDENTIAL TRAFFIC BY DEVELOPMENT PHASE

PHASE	DWELLINGS	ADT's	FINAL OCCUPANCY (Est)
I	1,098 DU's	11,090 trips	Estimated final unit sales 1992
II	579 DU's	5,848 trips	Estimated final unit sales 1995
III	887 DU's	8,959 trips	Estimated final unit sales 1996
IV	886 DU's	8,949 trips	Estimated final unit sales 1999

Trip generation characteristics for the proposed project are based on previous research of similar projects and data contained in the Trip Generation Manual published by the Institute of Transportation Engineers. Table 4.12, Trip Generation Rates, provides a summary of trip generation characteristics, while Table 4.13, Summary of Project-Related Trip Generation, provides a summary of the project-related ultimate daily and peak hour traffic based upon the professionally accepted modeling technique.

TABLE 4-12
TRIP GENERATION RATES

Lane Use	Basis	Daily	AM Peak In	AM Peak Out	PM Peak In	PM Peak Out
Single-Family Res.	Per DU	10.1	.22	.56	.65	.36
Community Commercial	/1,000 SF	40.4*	---	---	---	- - -
Parks	/AC	36.6	5.47	0	0	3.33

*Rate varies with ultimate overall center size.

TABLE 4-13
SUMMARY OF PROJECT-RELATED TRIP GENERATION

Land Use	Daily	AM Peak In	AM Peak Out	PM Peak In	PM Peak Out
Single-Family Residential	34,845	689	1,900	2,207	1,277
Community Commercial	43,996	707	296	1,706	1,884
Park Land	988	148	0	0	89
Total Project Traffic	79,829	1,544	2,196	3,913	3,250
Internal Circulation (15% of total project)	11,974	232	330	587	488
TOTAL EXTERNAL TRAFFIC	**67,855**	**1,312**	**1,866**	**3,326**	**2,762**

As shown in Table 4.13, Summary of Project-Related Trip Generation, the proposed project is estimated to generate 79,829 daily vehicle trip ends with 67,855 external trips. During the AM peak hour, 1,312 vehicles will leave the project area and 1,866 vehicles will enter the project area. The afternoon peak hour is expected to generate 3,326 vehicles entering the project area and 2,762 leaving. These figures are compiled from the MGA Study of May 25, 1988 based on 3,450 dwellings and 1,089,000 square feet of retail commercial uses.

Trip Distribution and Assignment

Trip making characteristics to/from the project are estimated taking into account regional travel patterns and the spatial orientation of origin and destination locations. The residential makeup of the project will create a higher concentration of trip making to the west and north and south, followed by local trip making within the project area. Estimated travel orientations have been developed by Mohle Grover Associates (MGA) from regional traffic modeling. Based on this information, traffic to and from the project was allocated to the existing and proposed street systems. The resulting project-related PM peak hour traffic volumes are shown on Table 4-14 below and have been extrapolated from the earlier noted MGA study.

The loads which project-related traffic may be expected to impose on the adjacent street system are considered significant at certain locations when compared to existing traffic volumes, which reflect only partial build-out of that area. Table 4-14 shows the comparison of project-related PM peak hour traffic to existing volumes.

TABLE 4-14
COMPARISON OF EXISTING HOUR PM'S DAILY TRAFFIC TO PROJECT PEAK
(Extrapolated from MGA Study, April 1988)

LOCATION	Existing Daily Traffic	Project-Related PMPH Traffic	PMPH as % of Existing Daily Total
Ramona Expressway:			
E/O I-215	6,935	1,113	13.8%
W/O Perris Blvd	7,240	1,111	13.3%
E/O Perris Blvd	9,590	837	8.0%
E/O Center Street	5,100	1,231	19.4%
E/O Rider Street	5,100	909	15.1%
Perris Boulevard:			
N/O Ramona	8,160	941	10.3%
S/O Ramona	6,325	584	8.4%
S/O Rider	6,070	446	6.8%
N/O Placentia	6,190	1,768	22.2%
S/O Placentia	6,465	1,505	18.8%
Rider Street:			
E/O Perris Blvd	N/A	769	---
W/O Perris Blvd	N/A	25	---

Traffic Circulation Considerations

Mohle, Grover and Associates, has prepared a sequence of four (4) separate traffic analyses for the proposed project between January 20 and May 25, 1988 focusing on future peak hour operating conditions at key intersections in the local circulation network, including citywide cumulative growth assumptions. A number of circulation system improvements are also considered in the development of the level of service estimates which are discussed in the detailed traffic report contained in Appendix 5.4. However, the general approach involved determination of trip making characteristics considering full development within the city, development of traffic analysis zones for creation of origin/destination assumptions, distribution of the traffic onto the existing partially completed street system, and calculation of a.m. and p.m. peak hour level of service characteristics for selected intersections. It is pointed out that the analysis focused on intersection level of service during peak hour operations. Average daily traffic volumes on roadways were not directly focused upon by the study.

Level of service determinations for p.m. peak hour traffic at twenty-seven (27) selected intersections are shown in Table 4-15. The p.m. peak is considered the worst-case, as it is the period of maximum traffic demand. Also shown is the percentage of the traffic that is attributable to the proposed project. Level of service "D" is considered acceptable while levels of service "E" and "F" are typically considered unacceptable (Mohle, Grover and Associates, 1988).

As can be seen, citywide traffic growth (including the proposed project) will result in traffic impacts at several intersections examined in the traffic study. Significant impacts occur at level of service "E" and "F" intersections listed on Table 4-15.

Considering the May Ranch traffic, significance can be determined by a 25 percent or greater contribution of traffic at a level of service "E" or "F" intersection. Consequently, the proposed project will have significant traffic impact at the intersections listed below.

Ramona and Murrieta
Murrieta and Dawes
Center and "A" Street
Rider and Center
Placentia and Evans

It should be noted that while forecast at an adverse level of service, the Perris/Placentia and Perris/Citrus intersections are not significantly impacted by the May Ranch. Further, those locations which are significantly impacted are internal to the project site along the Murrieta-Evans backbone alignment. While internal to the project, volumes on this link are predominantly "through" traffic generated outside of the subject site, and are attracted to this roadway due to its regional travel orientation. The future possible adverse service levels reflect cumulative development patterns on a regional scale, presumed in the traffic analysis, which may or may not materialize.

INTERSECTION VOLUME ANALYSIS
TABLE 4-15

Intersection Name	Total Peak Hour Intersection Volume From Whole Study	May Ranch PMPH Volume	Percent of May Ranch of Total	Level of Service
Perris at Marham	3,132	-0-	0.00	B
Cajalco at I-215 S/B	8,272	725	8.70	B
Ramona at I-215 N/B	10,448	1,015	9.70	C
Ramona at Perris	8,793	2,052	23.30	C
Ramona at Redlands	7,865	2,702	34.30	C
Ramona at Murrietta	10,766	4,850	45.00	E
Ramona at Evans	3,243	324	10.00	A
Ramona at Bradley	3,033	267	8.80	A
Murrieta at Dawes	6,850	5,038	73.50	F
Center at Street "A"	7,207	5,581	77.40	F
Morgan at Street "A"	1,248	1,248	100.00	B
Perris at Rider	4,817	135	2.80	B
Rider at Redlands	4,568	1,311	28.60	D
Rider at Center	7,425	5,101	68.70	F
Rider at Evans	368	69	18.70	B
Rider at Street "A"	351	72	20.50	C
Rider at Bradley	520	520	100.00	C
Ramona at Rider	1,987	624	31.40	B
Ramona at Placentia	1,582	52	3.20	B
Placentia at I-215 N/B	6,207	1,582	25.40	C
Placentia at I-215 S/B	3,277	1,257	38.30	A
Perris at Placentia	9,311	2,328	24.90	F
Placentia at Redlands	8,790	4,314	49.00	B
Placentia at Evans	9,033	4,710	52.10	F
Perris at Orange	3,638	-0-	0.00	C
Perris at Nuevo	10,620	1,400	13.10	B

c. Mitigation Measures

To mitigate the project's impacts on Ramona Expressway, it is recommended that Ramona Expressway be widened to provide two travel lanes in each direction between Center Street and Evans Road. This improvement will increase level of service capacity of Ramona Expressway from 13,000 vehicles to 30,000 vehicles per day for a four lane highway. This improvement will necessitate that at the Ramona Expressway intersection of Center Street (Lake Perris Recreation Area access), minor intersection improvements be made to facilitate two westbound lanes and the free right turn lane from the Lake Perris Recreation Area to westbound Ramona Expressway.

In addition to the measure described above and the onsite traffic and roadway improvements proposed as part of the Specific Plan (detailed in Section 3.2), the traffic study recommends numerous measures required in a regional context to improve levels of service on streets in and around the project site. These measures are listed below:

- Rider Avenue and Placentia Avenue need to be extended and improved to serve the project site.

- Special improvements may be needed at the Perris Boulevard intersections at the Ramona Expressway and Placentia Avenues.

- A double right turn for traffic movements eastbound to southbound will be needed at the Ramona Expressway intersection of Street "A."

In addition, it is recommended that the City establish a traffic fee assessment program to provide an equitable means of funding needed offsite regional improvements. Such a fee program could provide funds for improvements such as signalization of the interchange ramps on the Ramona Expressway at the I-215 Freeway, special intersection modifications and improvements, bridge crossings of the Perris Valley Storm Drain and other improvements such as grade separated intersections if these are determined to be feasible. The applicant's contribution to such a fee program would be considered as mitigation for the project contribution to offsite traffic impacted areas.

4.3.10 NATURAL AND ENERGY RESOURCES

a. Existing Conditions

No significant amounts of natural resources or energy are presently utilized on the project site, though well water is pumped for irrigation of on-site agricultural use. The 684-acre project site is presently open space in agricultural use, which is considered a natural resource.

b. Environmental Impacts

Development of the May Ranch project site as proposed will reduce the amount of open space by 684 acres and prevent any future use of the site for agricultural activities, resulting in the loss of the site as an open space resource. Project grading will permanently alter the natural topography of the site. Due to the agricultural use of the site, no natural biotic resources of significance remain.

Development of the project will utilize energy during construction on a short-term basis. On a long-term basis, water and sewer service will be required, natural gas and electricity consumption will occur, and gasoline will be utilized by project residents. The proposed project is estimated to consume 24,696,660 cubic feet of natural gas per month and approximately 30,734,712 kwh of electricity per year.

c. Mitigation Measures

The use of natural gas and energy shall be reduced by the following mitigation measures:

(1) Install thermal insulation in walls and ceilings which meets or exceeds standards established by the State of California or the Department of Building & Safety.

(2) Construct all buildings in conformance with Title 24, of the California Administrative Code.

(3) Consult with the Southern California Gas Company and Southern California Edison Company for other methods of energy conservation.

(4) The architectural and mechanical plans for commercial developments should be carefully checked to verify that the lowest energy rated mechanical and electrical equipment are being used.

(5) The retail buildings will be designed for optimum energy efficiency in accordance with Energy Conservation Standards for non-residential buildings which represent state-of-the-art design.

4.3.11 PUBLIC FACILITIES AND SERVICES

a. Police and Fire Protection

(1) Existing Conditions

This discussion incorporates by reference Section 4.14.1 of the McCanna Ranch Specific Plan Final EIR (SCH87011910).

Fire protection to the project site is currently provided by the Riverside County Fire Department. There is one fire station in the City of Perris and another existing fire station west of the project site near the intersection of Old Elsinore Road and Cajalco Road. The City is considering a potential fire station in the northern portion of town near the intersection of Placentia and Redlands Avenue.

The project site is currently within the jurisdiction of the City of Perris Police Department. Prior to annexation, the site was served by the Riverside County Sheriffs Department. Due to lack of population on the site, police calls to the area are infrequent.

(2) Environmental Impacts

Implementation of the proposed project will create additional demands for fire protection services. General plan policies stipulate that an adequate response time to the project site should not exceed five minutes. Existing fire services may not be able to respond within the stipulated time frame. Existing fire services may be inadequate to serve the proposed development.

County fire standards for a Category II urban project require that a fire station be located within three miles of the site. The City of Perris fire station is approximately three miles away which is marginal for the project. The County Fire Impact Mitigation Program seeks to provide one fire station and one engine company to provide fire protection services for every 3,200 dwelling units. Under such policy, 3,450 single family dwelling units would need one fire station and engine company for service.

Implementation of the proposed project will create additional demands for City police protection services. The City standard is 1.5 police officers per 1000 population. Accordingly, 14 police officers would be required ultimately to adequately serve the community. In addition, eight additional police department personnel in the categories of administrative support, agents, and dispatchers would be needed. The increased police force will require adequate support equipment including weapons, communications devices and vehicles. Costs for these services are paid out of the City General Fund.

It should be noted that the City of Perris is presently conducting a Public Facilities Study to determine adequate levels of services to be provided to the public. The generation rates for police and fire services may be revised as a result of the study.

(3) Mitigation Measures

The City of Perris changes a one-time fire protection fee of $0.10 per square foot payable at the time building permits are issued. Based on total project building area, which is 174.9 million square feet, fire protection fees of $1,749,000 would be generated. This level of fees would cover the capital costs of a fire station which has been estimated at approximately $1,000,000.

The project build-out period of ten years will result in staged collection of the City's fire protection fees. This may result in a delay in receiving sufficient revenues by the time the fire station and its associated apparatus and equipment are required. The developer and City should agree to a process (perhaps through inclusion of fire protection in the proposed Mello-Roos Public

Facilities District) to assure availability of funds for the fire facilities as they are needed to serve the development. The City has previously utilized a standard which requires full fire protection services after 300 units are occupied.

Eastern Municipal Water District has indicated that there is an adequate supply of water to meet fire flow requirements. Pressure requirements in a portion of the development will require construction of a one million gallon storage tank. All water mains and hydrants will be provided to specifications of the applicable jurisdictional standards and regulations.

Specific fire water protection needs of commercial developments will be assessed on a case-by-case basis when the type of business is known. However, the building plans must incorporate provisions to maximize internal fire safety including use of fire retardant building materials, specification of critical hydrant spacing, and requirements for use of fire sprinkler systems or alternatives in the commercial structures.

Overall, the fire protection system will be designed in accordance with the standards contained in the Insurance Services Office Fire Suppression Schedule.

The need for 14 police officers, 8 police personnel and support equipment is expected to be provided through expenditures from the City General Fund. First year costs are expected to be $5,043 increasing to $868,352 at build-out.

b. Water and Sewer Service

(1) Existing Conditions

Water on the project site is currently provided by area water wells. The May Ranch Specific Plan project area is provided water service by Eastern Municipal Water District (EMWD). EMWD currently obtains the majority of its water supply from groundwater sources and from the Metropolitan Water District (MWD). Water supply is currently available to the site, with 12" trunk lines existing in the Ramona Expressway and Bradley Road that are supplied by a 24" main in Murrieta Road and a 21" main within the MWD'S Colorado River Aqueduct right-of-way. Although the easement containing the aqueduct does not provide water directly to the site, adequate water supplies can be delivered to the project site via the existing system.

Currently, the project site and the surrounding properties operate with septic sewage disposal systems. There are no sewers serving the site. The Eastern Municipal Water District (EMWD) is the agency responsible for providing sewer service to the project area. The project site is situated between two existing wastewater treatment plants. To the north and approximately

three miles distance is the Sunnymead Wastewater Reclamation Facility (WRF). To the south approximately four miles is the Perris Valley WRF. To reach Perris Valley WRF, sewage could flow by gravity main.

The Sunnymead WRF currently has a capacity of 5.0 MGD. However, the District plans to expand the facility to 10 MGD in 1989. The Perris Valley WRF will be expanded from 1 MGD to 2 MGD in 1989.

(2) Environmental Impacts

The Master Water Plan for May Ranch is presented in Figure 15, Master Water Plan. The water system has been designed to meet the domestic flows as required by the proposed project as well as fire flow requirements. The only off-site water system component required is a one MG water storage tank for the purpose of improving emergency fire storage to approximately 100 acres of the project site. The District uses an average flow rate demand factor of 200 gallons per person per day. Based on a projected population of 9,488 persons, the average flow demand for the May Ranch would be approximately 1.9 MGD gallons of water per day ultimately.

The Master Sewer Plan for the project is presented in Figure 16, Master Sewer plan. The on-site collection system is divided into two areas, separated by the MWD's Colorado River Aqueduct. The portion of the project site to the north of the aqueduct will have a collection system discharging to a 18-inch trunk sewer line in Morgan Street. The southern portion of the project may also have a collection system consisting of 12-inch, 10-inch, and 8-inch collector lines, that will discharge to the existing 15-inch trunk sewer line in Wilson Avenue.

Construction of May Ranch will create a need for sewer service to the site. EMWD uses a sewage generation factor of 100 gallons per person per day. Based upon a projected population of 9,488 persons the project will generate 948,800 gallons of sewage per day.

(3) Mitigation Measures

Assurance for provision of adequate water and sewer service is required prior to approval of a subdivision map, in accordance with the State Subdivision Map Act. The payment of fees to the EMWD will prevent any negative fiscal impacts to the proposed development. The applicant will continue to work with the EMWD to find a workable solution to the conveyance of wastewater flows from the project.

Drought-resistant, native vegetation should be planted, where feasible, in developed areas. Efficient landscape irrigation systems should be developed, minimizing excess runoff and the

watering of streets and sidewalks. Use of reclaimed water for irrigation of greenbelts and park lands will be considered to minimize water use for landscape irrigation, in accordance with EMWD requirements.
In addition, the State of California Department of Water Resources provided the following list of State laws requiring water-efficient plumbing fixtures in structures:

(a) Health and Safety Code Section 17921.3 requires low-flush toilets and urinals.

(b) 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.

(c) Title 20, California Administrative Code 1606(b) prohibits the sale of fixtures that do not comply with regulations.

(d) Title 24 of the California Administrative Code Section 2-5307(b) prohibits the installation of fixtures unless the manufacturer has certified to the CEC compliance with the flow rate Standards.

(e) Title 24, California Administrative Code, Sections 2-5352(i) and (j) address pipe insulation requirements. Insulation of water-heating systems is also required.

c. Schools

(1) Existing Conditions

This discussion incorporates by reference Section 4.14.2, Existing Conditions, of the McCanna Ranch Specific Plan Final EIR (SCH87011910).

The project site is located in the Perris Union High School District and the Val Verde Elementary School District. Both districts are operating under conditions of impaction from population growth. In addition to the existing school facilities, a new elementary school is under construction, a new middle school opened in 1987, and a site for a new high school has been approved west of the project site.

(2) Environmental Impacts

Students generated by project phase are indicated in Table 4-16.

TABLE 4.16
PROJECTED STUDENT GENERATION BY PROJECT PHASE

Phase/Year	No. of Dwellings	No. of Students by Grade			Total Students
		K-5	6-8	9-12	
1 / 1992	1098	373	165	165	703
2 / 1995	579	197	86	86	369
3 / 1996	887	302	133	133	568
4 / 1999	886	301	133	133	567
Totals	3450	1173	517	517	2207

Student generation factors are as follows;
K-5 .34 students/D.U.
6-8 .15 students/D.U.
9-12 .15 students/D.U.

The student generation rates are equivalent to the enrollment level in approximately two elementary schools, 65 percent of a middle school and 17 percent of a high school. Consequently, the project will have an adverse impact on elementary and middle school enrollment and an adverse, but not significant impact, on high school enrollment.

(3) Mitigation Measures

The applicant is negotiating with the school districts to provide mitigation in the form of school impaction fees and/or dedication of an elementary school site. School impaction fees may not exceed the state mandated limit of $1.50 per square foot of building area in residential areas and $0.25 per square foot of commercial building area.

The project applicant will cooperate with both school districts to advise of expected student loading at the time of tentative tract map submittals to insure that school facilities are available to serve the project and the community.

d. Parks and Recreation

This discussion incorporates by reference Section 4.14.3, Existing Conditions, from the McCanna Ranch Specific Plan Final EIR (SCH87011910).

(1) Existing Conditions

The project site is located immediately south of the Lake Perris State Recreation Area (SRA). This 8,200-acre park facility provides opportunities for boating, swimming, fishing, hunting, hiking, bicycling, horseback riding, picnicking, rock climbing and overnight camping. According to the Area Manager for Lake Perris, the SRA has the capacity to accommodate between 2,200 and 2,250 vehicles per day. An estimated 2,000,000 visitors utilize Lake Perris annually. Lake Perris itself is the southern terminus of the State Water Project. It has nine miles of shoreline and a water surface area of 2,318 acres. Perris Dam, located at the west end of the lake, is 128 feet high and 2.2 miles long.

Additional recreational opportunities in the City include the 640-acre Roy Kabian Regional Park, the Perris Valley Parachuting Center, a 3-acre firing range, the 5-acre Bob Long Memorial Park, the 3.15-acre Russel Stewert Park, and the 2.5-acre Banta Beatty Park.

The Farmer's Fairground has traditionally been held in Hemet; however, the fair moved to Lake Perris, across the Ramona Expressway from the project site.

In order to determine if the City is presently in a "park deficit" situation, a number of assumptions were made. The City presently requires two acres of park land for every 100 dwelling units constructed. In 1984, there were a total of 2,891 dwelling units within the City. Applying the above park land requirement to these 2,981 units would result in the need for 57.82 acres of park land. The three City-operated parks total less than eleven acres in size. When the 640-acre Roy Kabian Regional Park is considered, the City has a total of 651 acres of park land. Also, due to the proximity of the City to the Lake Perris State Recreation Area, City residents have convenient access to that recreational facility.

However, in terms of City provided park acreage, it appears that additional park land would be of benefit to City residents. The City especially needs more ballfields and soccer fields. At the present time, there is only one ball park with two diamonds in the City.

(2) Environmental Impacts

The additional residents attracted to the city by the proposed project will generate additional demand for local and regional recreational facilities in the Perris Valley.

Considering the City standard of two acres of park for every 100 dwelling units, the proposed project would require approximately 69 acres of dedicated park acreage. The proposed Specific Plan provides for 27 acres of public park land. A large linear park along the Colorado River Aqueduct easement will also be provided and will contribute 14 acres of greenbelt and trails. Since this land is the aqueduct easement, it would not be dedicated in fee. Total park acreage provided by the proposed project is 41 acres, leaving a deficit of 28 acres. It should be noted that the project will increase community park acreage in the City by 300% and will triple the number of active ball diamonds.

Due to the close proximity of the site to the Lake Perris State Recreation Area (SRA), project residents will undoubtedly frequent this facility as well. In order to estimate the quantitative impact that the May Ranch Specific Plan will have on the Lake Perris SRA, a number of assumptions were made. As previously discussed under "Existing Conditions", an estimated 2,000,000 visitors utilize the SRA annually. Riverside County as a whole had a 1984 population of 757,465 according to SCAG. Assuming a 3% annual growth rate for 1985 and 1986, it is projected that the County had a 1986 population of approximately 803,600 persons.

Therefore, the average County resident visited Lake Perris 2.5 times per year. As a populations of 10,676 is projected to result from the May Ranch Specific Plan, it can be anticipated that 26,700 additional visits to Lake Perris would result. This is an increase of 1.3% compared to existing levels. This figure should be considered a "worst case" assessment, as residents of nearby San Bernardino, Los Angeles, Orange and San Diego Counties also utilize Lake Perris' recreational facilities, which would reduce the number of visits attributed to each Riverside County resident. These additional SRA visitors will increase demand and competition for the finite recreational resources of Lake Perris, as well as increase traffic congestion at Park entrances. As the Perris Valley and the adjacent Moreno Valley areas are experiencing rapid population growth, the project will contribute to the cumulative demand for the resources of Lake Perris.

(3) Mitigation Measures

Based upon the City of Perris requirements for park dedication, the amount of park land proposed by this project falls short by approximately 28.0 acres. The 41 acres proposed is equal to the City requirement for approximately 2050 units. Therefore, compensation must be made for the remaining 1394 units proposed by this project. The deficiency will be compensated by payment of in-lieu fees of $800 per unit for the remaining 1,400 units. The in-lieu fees should be used for improvement of the dedicated park land or aquisition of additional land.

e. Solid Waste

(1) Existing Conditions

Solid waste generated in the City of Perris is collected by Perris Disposal, a private company, and is disposed of in the Mead Valley landfill. The Mead Valley landfill is expected to operate until 1999 according to the Riverside County Solid Waste Management Plan. This landfill received an average of 275 tons of solid waste per day in 1986.

(2) Environmental Impacts

The proposed May Ranch Specific Plan will increase the amount of solid waste generated on the project site and thus increase service needs for waste haulers. The average solid waste generation factor for Riverside County was 7.9 pounds per person per day in 1986, based on the wastes received at County Disposal Sites and the estimated population within the County. Therefore, the proposed 3,450 SFD units would result in about 11.2 tons per day by 1992, increasing to 37.5 tons per day ultimately. This would increase the average daily waste load at the Mead Valley Disposal site by about 4.0 percent in 1992 and would slightly reduce the estimated site life.

The Riverside County Solid Waste Management Plan (CoSWMP), contains projections for reasonable growth within each disposal site service area as provided by the Riverside County Planning Department in 1980 and 1981. However, the current rate of development exceeds the earlier projections. The CoSWMP growth projections are for the regional service area. No specific project is in conformance or non-conformance with the CoSWMP.

(3) Mitigation Measures

No mitigation for the generation of solid waste is proposed.

f. Utilities

(1) Existing Conditions

Electricity is provided by the Southern California Edison Company (SCE). Five KV, 12 KV and 33 KV overhead utility lines are found above the Ramona Expressway and on Bradley Road. The 12 KV line is currently available to serve the site.

The project site is within the service area of the Southern California Gas Company (SCG). The closest line is at the intersection of Evans Road and Sinclair Street.

Telephone service is provided by General Telephone. An underground telephone line is located in Ramona Expressway.

(2) Environmental Impacts

Project implementation will result in an increased demand for natural gas and electricity. Based upon an average monthly consumption of 6,665 cubic feet of natural gas per month per dwelling unit, the 3,450 SFD units project will require 22,994,250 cubic feet of natural gas per month. An additional 1,742,400 cubic feet of natural gas per month would be consumed ultimately by commercial acreage in the project. Based upon an average annual per dwelling unit consumption of 5,838 kilowatt hours (kwh) of electricity, electrical usage for the residential portion of the proposed project would be approximately 20,141,000 kwh per year. An additional 10,628,640 kwh per year would be consumed by the commercial acreage proposed.

The Southern California Gas Company and the Southern California Edison Company will provide their respective utility services to the proposed May Ranch in accordance with policies and rules for extension of services on file with the California Public Utilities Commission.

The project will create the need for extended telephone service from lines within Ramona Expressway. While the proposed project will place additional demand upon telephone services, these demands are well within the service parameters of the General Telephone Company.

(3) Mitigation Measures

The Southern California Gas Company and Southern California Edison Company can provide assistance in selection of effective energy conservation techniques, as well as assistance in infrastructure construction. The use of solar energy and waste heat recovery should be encouraged wherever feasible.

New utility lines to be installed underground to serve the proposed project will be connected into the existing network of lines servicing the project.

4.4 UNAVOIDABLE ADVERSE IMPACTS

Unavoidable adverse environmental effects are those which cannot be eliminated or sufficiently mitigated through design measures to render them insignificant. These are, therefore, inevitable consequences inherent in the project and its ultimate construction. The probable adverse impacts resulting from implementation of the project are common to most residential developments. These impacts have been discussed previously in Sections 4.3, therefore, they will only be summarized here.

4.4.1 EARTH RESOURCES

Grading for the 684-acre project will involve cut and fill operations which will alter the existing landform. Ground surfaces which are temporarily exposed during grading may be eroded.

Due to the presence of regional faults, anticipated ground shaking intensities over all of the site could possibly become high during the life of the project and cause damage to project structures. Though unavoidable, the impact is typical of all of Southern California. (See Section 4.3.1, Earth Resources.)

4.4.2 HYDROLOGY AND WATER QUALITY

The volume and peak flow of surface runoff generated on-site will increase as a result of the creation of impervious surfaces such as roadways, driveways and other urban uses. Run-off entering the storm drain system will contain pollutants typical of urban use. Groundwater recharge may be somewhat reduced by project development. (See Section 4.3.2 Hydrology and Water Quality.)

4.4.3 AIR QUALITY

Air quality in the project area will be temporarily degraded during construction activity, and the quality of the regional air cell will be incrementally degraded by pollutants from increased traffic and energy consumption. Population growth in the Perris Valley is occurring at a rate faster than the growth rate required to achieve regional air quality improvement goals. (See Section 4.3.3, Air Quality).

4.4.4 NOISE

Short-term noise from construction activities may temporarily impact areas on the project site and in proximity to the project site. Noise related to future daily traffic volumes and general urban activities on the project site will increase local and on-site acoustical levels, affecting the project site and surrounding areas. (See Section 4.3.4, Noise.)

4.4.5 BIOTIC RESOURCES

Construction of the May Ranch will necessitate the removal of existing agricultural and ruderal vegetation and limited wildlife habitats. Due to the highly altered and/or non-native nature of existing vegetation, however, these losses will not be significantly adverse. (See Section 4.3.5, Biotic Resources.)

4.4.6 LAND USE

Implementation of the proposed project will result in long-term or permanent commitment of the land to the proposed uses. Currently, the site contains agricultural use and its development with residential and commercial communities will continue the trend toward urbanization of the Perris area. In addition to the loss of agricultural production in the County of Riverside, Class I and Class II agricultural soils will be lost to urbanization. Adjacent agricultural lands may experience growth pressures as a result of project development. (See Section 4.3.6, Land Use.)

4.4.7 POPULATION AND HOUSING

Implementation of the proposed project will generate 3,450 additional SFD dwelling units and approximately 9,488 new residents to the City of Perris. This level of growth potentially exceeds SCAG-82 Modified Forecast for the RSA and has adverse implications for regional air quality and transportation planning. (See Section 4.3.7, Population and Housing.)

4.4.8 CULTURAL RESOURCES

The potential for disturbance or destruction of possible unknown archaeological, and historical resources during earthwork and grading exists. (See Section 4.3.8, Cultural Resources.)

4.4.9 CIRCULATION

Development of the May Ranch Specific plan will necessitate construction of an on-site circulation system, as well as connections to the existing street system at Ramona Expressway and Rider Street. The project will generate an estimated 67,855 external vehicle trips per day. This will increase traffic volumes on area roads. (See Section 4.3.9, Circulation.)

4.4.10 ENERGY RESOURCES

Implementation of the proposed project will increase the long-term demand for energy resources in the project area. Energy consumption will increase on both a temporary and long-term basis through short-term consumption of energy during project construction and long-term operation and maintenance of the project site. (See Section 4.3.10, Energy Resources.)

4.4.11 PUBLIC FACILITIES AND SERVICES

The demand for public utilities and services will be incrementally increased as a result of project implementation. These demands may result in the expansion or extension of existing facilities to serve the project site. The particularly critical services which require definitive solution are fire protection and schools.

4.5 THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The project site is currently undeveloped, supporting limited agricultural use. If the May Ranch Specific Plan is approved and constructed, a variety of short-term and long-term impacts will occur on a local basis. During construction, portions of surrounding lands would be temporarily impacted by dust and noise over the anticipated ten-year project build-out. During later phases of the project, such impacts could affect already built phases of the project. During construction, impacts could occur from erosion of soils during grading. There also will be an increase in air pollution, mainly dust generation, caused by grading and construction activities. These disruptions, however, are temporary and can be mitigated to a large degree.

The long-term effect of the proposed development is the gradual conversion of the site from agricultural uses into residential and commercial uses. In relation to this process, the characteristics of the physical, biological, cultural, aesthetic and human environment will be impacted. Consequences of this urbanization include: increased traffic volumes, incremental degradation of the regional air cell, additional noise created by traffic generated by inhabitants of the proposed residential uses, incremental increased demands for public services and utilities and increased energy and natural resource consumption.

Ultimate development of the May Ranch Specific Plan would create long-term environmental consequences that are connected with any form of urbanization. However, the proposed project has been designed to benefit the community and population by providing increased housing in an attractive environmental setting. The proposed project will ultimately provide for a form of long-term productivity which appears compatible with human needs in the area and with City of Perris goals for planned growth.

The project will provide for employment opportunities through provisions of commercial office and retail space. Approximately 3,920 jobs may be created in the approximate 1,089,000 gross square feet of commercial area provided in the specific plan. The provision of employment opportunity in the local area enhances long-term productivity by shortening commute distance, conserving energy resources, and reducing regional air pollution.

4.6 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

Construction of the proposed project would result in the following primary irreversible environmental changes.

- Permanent commitment of land which will be physically altered to create access roads, home sites, etc.
- Removal of 684 acres of agricultural open space.
- Damage to or possible irreversible loss of agricultural soils.
- Alteration of the human environment as a consequence of the development process. The project continues the trend toward urbanization in the project area.
- Increased requirements for public services and utilities represents a permanent commitment of these resources.
- Utilization of various new materials, such as lumber, sand and gravel for construction.

4.7 GROWTH INDUCING IMPACTS OF THE PROPOSED ACTION

The area in the immediate vicinity of the project is currently in agricultural uses and has recently been annexed (part is still proposed to be annexed) into the City of Perris. In general, the Perris Valley, which includes the City of Perris and the communities of Homeland and Romoland, has experienced growth resulting in a 64% increase in population between 1970 and 1980. The City of Perris itself has experienced a 36% growth in population between 1984 and 1987. Residential development is expected to continue in the Moreno Valley and Perris Valley areas. Residential development within the City of Perris is expected to expand over the next five years along the Perris Boulevard and Ramona Expressway corridors, and to the east and west of Interstate 215. The project site is located approximately three miles north of downtown Perris, where most development has occurred to date.

New residents of the proposed project will incrementally increase demands for public services and utilities, and will contribute to the need for educational and recreational facilities. Increased use of commercial establishments will occur, contributing to the demand for larger new retail commercial services, such as regional shopping centers in the project area. The proposed project's contribution to demand for these

services should be considered as a growth-inducement to these systems. However, it is not anticipated that the increase in demand will reduce or impair any existing or future levels of utility services, either locally or regionally, as costs for increases in utilities and services will be met through cooperative agreements between the applicants and servicing agencies.

Project-related employment opportunities and project generated tax revenues will contribute to expansion of the economic base of Perris Valley and City of Perris. These factors will also contribute to growth inducement.

Though project phasing is expected to help regulate the rate of growth, the extension of utilities to the project site may contribute to growth in adjacent lands. Although water is currently available to the project area through 12" trunk lines existing in the Ramona Expressway and Bradley Road, sewer service is not presently available. However, the extension of sewer service to the adjacent McCanna Ranch project site and the proposed project site may induce growth in other currently undeveloped lands by removing a major constraint to development.

The location of the project in a semi-rural but steadily developing area could result in conversion of adjoining agricultural lands to similar uses. However, a Non-Renewal application has been filed on certain Agricultural Preserve lands in the area, indicating that discontinuance of agricultural use was anticipated years ago independent of the proposed action.

4.8 CUMULATIVE IMPACT OF THE PROJECT

This discussion assesses the impacts caused by implementation of the proposed project in combination with other reasonably foreseeable projects that may occur in the area. For purposes of this analysis, the City's compilation of projects in-process was used to estimate the magnitude of projects which may be implemented during a similar time frame as the proposed project. The City's records include tentative tract maps filed, final tract maps approved and/or recorded, apartment projects pending, and commercial projects pending.

According to City records, there were approximately 5800 residential units (single family units but not including mobile home and lot sale subdivisions), 350,000 square feet of commercial development, and 3880 apartment units in-process as of 12/30/87. Based on building industry trends, it can be assumed that approximately 80 percent of these projects will eventually be built (i.e 7744 residential units and 280,000 square feet of commercial). Most of the projects to be built are smaller projects which could be completed within 5 years. Additionally, a development growth factor of 6 percent per year is considered for the cumulative analysis period from 6 years out to 10 years (project full buildout time frame). The cumulative project base, therefore, is assumed to consist of 10,363 residential units and 374,700 square feet of commercial development through 1999.

The May Ranch Specific Plan proposes 3,450 SFD units over a 10 year buildout, commercial acreage equivalent to 1,089,000 square feet of floor area, as well as 41 acres of open space, parks, community facilities, etc. Adding the project development levels to the cumulative project base, the Perris community could grow by 13,813 residential units and 1,245,700 square feet of commercial area by 1999. Based on 2.75 persons per residential unit and 4.5 persons (jobs) per 1000 square feet of commercial, cumulative projects could add 37,986 persons and 5600 jobs to the community. Added to the 1987 estimated population (11,250 persons), the Year 1999 community population could be 49,250.

4.8.1 SEISMIC SAFETY, SLOPES AND EROSION

Impacts resulting from grading for construction of these 13,813 dwelling units and the development of commercial areas will alter the topography of the sites. Cut and fill operations will be necessary to prepare street grades,lots and pads for development. A large portion of the Perris Valley, especially in the immediate vicinity of the project site, is composed of relatively flat, agricultural land which will not require extensive cut and fill operations and which minimizes the impact upon landform in the immediate area. Grading activities, however, increase the potential for erosion of soils from the area. Limiting soil erosion has water quality benefits as well as facilitates the operation and maintenance of regional flood control facilities. Due to the presence of regional faults, the potential exists for impacts from strong groundshaking associated with a seismic episode.

As mitigation, the City could develop a model grading ordinance as a means of protecting the area's valuable soil resources. Grading concepts presented in the earth resources mitigation measures section can be used in the formulation of the ordinance. Other landform and seismic impacts are mitigated on a site specific basis through the requirement for geotechnical and soils investigations during project design and construction.

4.8.2 HYDROLOGY AND WATER QUALITY

Drainage patterns and the quality, velocity and composition of runoff will be altered by large scale areas planned for construction. Developments will create impervious surfaces (such as roadways, driveways, parking lots, etc.) which can reduce groundwater basin recharge. Runoff entering streams will contain minor amounts of pollutants typical of urban use, thereby impacting the downstream water quality. Downstream uses which are sensitive to water quality impacts include the San Jacinto River Canyon Lake and Lake Elsinore. A large portion of the Perris Valley is subject to flooding and/or is within inundation areas of a dam failure at Lake Perris.

Mitigation of these impacts includes continuation of the existing drainage improvement program for the San Jacinto River and the continued collection of development fees to implement regional drainage improvements. It is anticipated that storm drain systems of individual projects will be constructed in accordance with the City of Perris and the RCFCD requirements in order to mitigate impacts on local drainage patterns.

4.8.3 CLIMATE AND AIR QUALITY

Construction of these projects will cumulatively impact air quality in the vicinity. Air quality will be temporarily degraded during construction activities which occur separately or simultaneously. However, the greatest cumulative impact on the quality of the regional air cell will be incremental addition of pollutants from increased traffic in the area and increased consumption of energy by inhabitants of the various new projects.

The City of Perris should take an active role in implementing regional transportation strategies contained in the AQMP aimed at reducing vehicle travel.

4.8.4 NOISE

Noise during construction activities will impact noise conditions in the region on a short-term basis. It is not expected that cumulative construction noise impact would be significant since proposed projects are physically separate or can be phased so they do not occur simultaneously within a concentrated area. The major significant cumulative noise impact in the area would result from the increased traffic volume in the vicinity. This is particularly important for existing noise sensitive land uses near I-215, within or near the 65 Ldn contour of March AFB, uses near the railroad or near designated arterial highways. For the already noise impacted uses, a relatively small noise increase may be realized. The local standard of 70 Ldn will likely not be exceeded.

As mitigation, State and local standards are established to require noise attenuation in dwellings impacted by noise. Additionally, the City could establish noise zones where proposed projects within the zones could be required to provide special noise attenuation techniques on-site as well as to clearly impacted off-site areas.

4.8.5 BIOTIC RESOURCES

Developments in the Perris Valley will require grading and clearing of a substantial amount of existing vegetation. Due to the disturbed (or nonnative) nature of much of the valley, losses of vegetation will not be significant. Of significance is the loss of open space available to wildlife. Loss of open space in the region could adversely affect use of the area by wildlife in general, and specifically, could adversely affect use by wintering raptors and other avian species, including the bald and golden eagles. The Perris valley also contains a large area designated as habitat for the state and federal listed Stephens kangaroo rat which could be affected by cumulative projects. Other sensitive or protected plant and animal species are known to occur in the area as discussed in Section 4.3.5.a of this EIR.

4.8.6 LAND USE

It can be anticipated that development of cumulative projects would influence the present atmosphere of passive rural open space and scattered development which typifies the outlying areas of Perris. These development projects have the potential for inducing growth within neighboring areas, and may encourage removal of lands from agricultural use. In addition, General Plan Amendments and Zone Changes may be necessary to accommodate the proposed urban uses.

The General Plan of the City of Perris will be revised in the near future. The land use goals and policies, as well as the policies in other elements of the plan will reflect the magnitude of growth potential of the area. No other mitigation is proposed at this time.

4.8.7 HOUSING AND POPULATION

The potential 13,813 dwelling units occurring cumulatively will generate an anticipated population of 37,986 (2.75 persons per dwelling unit). A population of 11,250 was estimated for 1987 for the City of Perris, which had a 1984 population of 8,288. The 37,986 persons generated by the cumulative projects represents a growth rate of about 12 percent per year between 1987 and 1999. Therefore, the projects may exceed the limits of anticipated growth for Perris, as presented in the current General Plan. A General Plan Amendment is required to accommodate the proposed May Ranch Specific Plan and will be required to accommodate other cumulative developments. Cumulative commercial developments could result in employment opportunity for 5600 persons. This appears to be a significant amount of commercial development and it is not known whether the valley could support this level of commercial development.

The City of Perris should work with SCAG to develop realistic population growth projections for the area. The upcoming general plan revision provides an opportunity to establish accurate population and land use consumption projections. Commercial development proposals should be accompanied by fiscal and economic documentation at the time application for development is made.

4.8.8 HISTORIC AND PREHISTORIC RESOURCES

Development in the area will not disturb any archaeological, paleontological and historical resources, due to grading and excavation activity. However, if a qualified historian analyzes any potentially significant structures and if certified archaeologists and paleontologists are present, where necessary, during grading operations, these impacts may be largely mitigated. The impacts could be considered positive impacts, due to the discovery of resources which would not otherwise have been evaluated or

uncovered. It is possible that grading and excavation in the area will uncover archaeological and paleontological resources which would contribute to knowledge of the history of the Perris Valley.

4.8.9 TRAFFIC CIRCULATION

Ultimate development of 13,813 dwelling units and 1,245,700 square feet of commercial space will significantly increase trip generation and local traffic volumes. Mohle, Grover and Associates estimate that by Year 2000, some 300,000 vehicle trips will be generated citywide. Traffic generated by the developments will impact existing roadways, necessitating the expansion and improvement of the existing circulation system and the construction of new regional roadway networks in accordance with the City of Perris Master Plan of Highways. Within developments, it will be necessary to install circulation systems with sufficient capacity to accommodate traffic generated, in coordination with the regional roadway system.

While the cumulative impact of these projects may be viewed as an increase that will necessitate expansion and improvement of the existing road network, it is important to reiterate that City of Perris planning goals reflected in their Master Plan of Highways include programming major roads in the Perris area for incremental widening and/or extension to serve expected growth in surrounding areas. Mohle, Grover and Associates cautions that potential developments based on zoning will create some level of service problems at City intersections (see Table 4-15). The City should consider a fee assessment as a way to equitably distribute the costs of circulation system improvements.

4.8.10 UTILITIES, SERVICES AND ENERGY USE

Increased development in the City of Perris will incrementally increase the demand for public utilities and services, including water and sewer service; electricity and natural gas service; telephone and cable television services; police and fire protection; school and park facilities; public transportation; and solid waste disposal service.

4.8.10.1 POLICE AND FIRE PROTECTION

Growth in the project area will increase the demand for fire and police services provided by the County of Riverside Fire Department and the City of Perris Police Department. The level of growth envisioned could result in the need for additional fire stations and/or engine companies and additional police officers.

It is expected that the project applicants will cooperate with local jurisdictions to assure that sufficient effective services are provided to serve each project, thereby insuring a safe environment throughout the area. The principal means that this can be accomplished is through mitigation fees and or dedication of property for location of emergency services facilities.

4.8.10.2 WATER AND SEWER SERVICE

Increased expansion in the project area will increase the demand from the Eastern Municipal Water District for water and sewer service. Approximately 7.6 million gallons per day of water would be required to serve cumulative levels of development. Approximately 3.8 million gallons per day of wastewater would be generated. Additional lines and facilities will be required to provide this service effectively to all developments in the area.

Water and sewer service fees charged on a per unit basis will be applied to all units built. These fees should cover the costs of needed expansion. In that water supplies are limited in the local area and regionally, it is proposed that City of Perris adopt a water conservation ordinance that implements strict standards for water consumption throughout the community. The City should provide literature to residents on water conservation methods including xeriscape techniques for landscaping and irrigation. A comprehensive water reclamation reuse plan should formulated and implemented locally.

4.8.10.3 SCHOOLS AND PARKS

Construction of cumulative developments will increase area population, and therefore, the demand on school and park facilities. The anticipated 13,813 dwelling units will generate a population of approximately 8840 students attending Grades K-12. Additional schools will be required to accommodate these students. It will be necessary for each development to cooperate with local school districts so that sufficient facilities are collectively provided to accommodate students generated.

Mitigation measures could include the payment of fees of $1.50 per square foot of building area, or dedication of land for school sites.

Cumulative projects will result in the need for some 276 additional acres of community parks. The May Ranch Specific Plan proposes approximately 41 acres of open space, community parks and recreation facilities, including three public parks. These park facilities will partially satisfy City of Perris cumulative requirements for park lands. The payment of in-lieu fees can also be used to meet park acreage standards.

4.8.10.4 SOLID WASTE

The cumulative projects will increase the amount of solid waste generated in the area and thus increase service needs for waste haulers. The average solid waste generation factor for Riverside County was 7.9 pounds per person per day in 1986, based on the wastes received at County Disposal Sites and the estimated population within the County. Therefore, the cumulative population of 37,985 persons would generate about 150 tons per day by 1999. The Mead Valley Disposal site is expected to be full in 1999. It is anticipated that a new disposal site will be required some time prior to 1999.

The Riverside County Solid Waste Management Plan (CoSWMP), may need to be amended to consider the anticipated solid waste disposal needs of the Perris Valley.

4.8.10.5 ELECTRICITY AND NATURAL GAS SERVICE

The addition of 13,813 dwelling units to the area will create a need for additional electricity and natural gas service. Southern California Edison and the South Coast Air Quality Management District (SCAQMD) utilize an estimated residential demand rate of 5,838 Kwh/unit/year. Considering the estimated cumulative total of dwelling units in the project area, the ultimate residential demand for electricity may increase by 80,640,295 kwh/year.

The Southern California Gas Company and the SCAQMD generally utilize a residential rate of 6,665 cubic feet/d.u./month. Considering the estimated cumulative dwelling unit total, approximately 92,063,645 cubic feet per month of natural gas could be consumed by these additional dwelling units. Additional Southern California Gas lines, as well as Southern California Edison lines, would be required to provide these services to the area.

4.9 ALTERNATIVES TO THE PROPOSED PROJECT

In accordance with State EIR Guidelines, an EIR must present alternatives which are capable of eliminating significant environmental impacts, and state why they were rejected for the proposed project. The emphasis of the alternatives analysis is on reducing adverse effects of the proposed action. Included in this section are discussions addressing the "No Project" Alternative and a Lower Development Intensity Alternative. The City of Perris, as lead agency, must weight the merits of each alternative in comparison to the proposed action.

4.9.1 "NO PROJECT" ALTERNATIVE

a. Environmental Effects

The "No Project" Alternative would retain the site in its present undeveloped condition, and would support the continuation of limited agricultural use of the site. This alternative maintains the existing environmental conditions of the subject property as discussed in the various subsections of Section 4.3 of this EIR. The "No Project" Alternative is considered the environmentally superior alternative for the following reasons:

(1) Elimination of all grading impacts and associated impacts upon agricultural soils.

(2) Reduction in traffic and associated air quality and noise impacts over development scenarios associated with the project proposal, or other alternatives considered herein.

(3) Retention of on-site open space.

The "No Project" Alternative would retain the site's existing general plan and zoning designations.

b. Reasons for Rejection of "No Project" Alternative

This alternative would negate any benefits of the project relative to provision of a wide range of housing types within a homogenous planned community setting. In addition, the benefits of expanding the community's employment base would be negated. The project, as proposed, is designed to meet the public demand by providing affordable detached single family dwelling units and providing local employment opportunities that will be marketable within the region. For these reasons, the "No Project" Alternative was rejected.

4.9.2 LOWER DEVELOPMENT INTENSITY ALTERNATIVE

The objective of a Lower Development Intensity Alternative is to provide for fuller mitigation of the more significant adverse impacts, yet allow the project to proceed at a reduced level. A description of the reduced density alternative is guided by the kinds of impacts that require avoidance or reduction. Specific suggestions for the lower density alternative are given in each section. For general purposes of this alternative, however, two scenarios for a lower intensity development are devised. One scenario would be to develop on the portion of the property north of the Colorado River Aqueduct. This would leave the southern portion open for possible continued agricultural use. A second scenario would be to develop the entire parcel at a reduced density.

a. Earth Resources; Hydrology; Cultural Resources

It can be anticipated that impacts resulting from the Lower Development Intensity Alternative for Earth Resources, Hydrology, and Cultural Resources, would be similar in nature and scope to those associated with the proposed May Ranch Specific Plan. These impacts are briefly summarized below:

(1) Topography, Geology and Soils

Grading for the project will involve cut and fill operations which will alter the existing landform. However, due to the generally flat nature of the site, this alteration will not be significant. Ground surfaces which are temporarily exposed during grading may be eroded.

(2) Seismicity

Due to the presence of regional faults, the potential exists for ground shaking at the project site. This, in turn, creates the potential for structural damage as a result of earthquake activity regardless of development intensity.

(3) Hydrology

Project grading will permanently alter the natural runoff pattern by channeling drainage through pipelines to the Perris Valley Storm Drain. Storm flow rates on-site will increase due to the creation of impervious surfaces. The velocity and composition of runoff will also be altered, but reduced from the proposed project. Housing units would still be constructed within the dam inundation area of Perris Dam, however, the 100-year flood area could possibly be avoided.

(4) Cultural Resources

No adverse impacts will result from implementation of the alternative since the results of the archaeological and historical surveys shows that the project area contains no prehistoric cultural resources and no significant historic resources. The site includes no areas likely to contain subsurface manifestations of such resources.

b. Air Quality

A reduced intensity of development alternative would result in lower air pollutant emissions compared to the proposed project. Such reduced emissions may be more in line with regional air quality improvement and regional transportation strategies. However, SCAG is in the process of revising population projections for Perris Valley which may allow a higher level of growth than SCAG Modified Growth Levels.

c. Noise

Any reduction in dwelling units will have a concomitant reduction in traffic volumes which would incrementally decrease on-site and off-site noise levels associated with the project. Projected noise impacts along Rider Street could be avoided by this alternative.

d. Wildlife and Vegetation

Development of the site with the uses proposed by the Lower Development Intensity Alternative could eliminate less vegetation compared to the proposed project. Since the existing vegetative communities are agricultural and ruderal/disturbed, loss of habitat and resulting loss of limited wildlife resources is not a significant biological impact with the proposed project, nor would any preservation of vegetation under a low intensity alternative have a significant wildlife benefit.

e. Land Use and Population

Utilizing the scenario of only developing the upper portion of the project site, the alternative could involve the development of 1,654 residential units, 55 acres of commercial use, and 17 acres of parks. Accordingly, population generation would be about 4,550 persons for the alternative. Significantly, the alternative could conserve agricultural soils on approximately 300 acres of the site. The aqueduct could serve as a buffer of these lands from the development to the north. This alternative, however, could not guarantee viability of agricultural uses.

Utilizing the scenario of developing the entire parcel at a reduced density would not lessen impact on agricultural soils.

f. Traffic and Circulation

Development to reduce level of 1,654 residential units and 55 acres of commercial acreage would generate approximately 36,063 vehicle trips, or slightly less than half the trips generated by the proposed action. It is possible that the reduced density alternative would defer the time that LOS problems occur on local roadways affected by project traffic.

g. Utilities, Public Services, and Energy Resources

A low intensity project would result in fewer emergency calls than the proposed project. Though fewer emergency calls would result, the distance between existing police and fire stations and the site may still result in the need for additional facilities. In terms of impacts to schools, the Lower Development Intensity Alternative would generate fewer students than the current project proposal. However, additional students generated by this Alternative would still require additional relocatables or perhaps new facilities. In terms of parks and recreational facilities, the lower population generated by this Alternative would generate less demand for parks and put less pressure on other recreational facilities in the area, such as the Lake Perris State Recreation Area. Water demand and sewage treatment demands would be less than one-half of the proposed project demand.

h. Reasons For Rejection Of The Lower Development Intensity Alternative

The Lower Development Intensity Alternative contains incrementally reduced impacts in the areas of traffic, noise, air quality and public facilities and utilities and may be considered environmentally superior to the current development proposal. This alternative, however, precludes some of the marketing objectives of the project, including to provide a homogeneous community to serve the needs of the entry-level buyer, the move-up buyer, the large family and singles.

The economic pressures and public demand for housing appears to have improved the development potential of the subject site. Existing agricultural uses have been marginally economically viable. The project site is in a high growth area and in the path of growth occurring outward from the City of Perris and Moreno Valley. It appears that the highest and best use of the site is urban use. Cancellation of former agricultural preserve contracts seems to support this.

For these reasons, the Lower Development Intensity Alternative was rejected.

4.10 EFFECTS FOUND NOT TO BE SIGNIFICANT

The scope of the environmental issues assessed in this EIR has been determined through preparation of the requisite Initial Study. Also, a Notice of Preparation, containing the Initial Study, was circulated for review locally and through the State Clearinghouse. Agency responses to the NOP further refined the scope of issues discussed in the EIR. The Initial Study, Notice of Preparation and agency responses are contained in Appendix 5.1.

Based on the Initial Study and NOP responses, certain environmental issues were determined to be insignificant and are not covered in the EIR. These issues include the following;

a. Human health and toxic substances handling and disposal- No known toxic wastes will be handled or encountered during project development. Potential public safety impacts due to failure of Perris Dam are discussed in the Hydrology section of the EIR.

b. Mineral Resources - There are no significant mineral resources on-site. Impact on agricultural soils is discussed under Land Use.

c. Groundwater quantity and quality - The project will have no direct or purposeful recharge of groundwater.

d. Aesthetics and Light and Glare - The project's urban design elements as embodied in the Specific Plan address visual aesthetics of the site with respect to the surrounding areas. Individual environmental aspects which have an impact on the aesthetics of the area are addressed in separate sections and include noise, traffic, and land use compatibility.

e. Public Services relative to libraries, health services, and airports- These items have been determined by the City to not be significantly impacted by the proposed project.

4.11 ORGANIZATIONS AND PERSONS CONSULTED

4.11.1 EIR PREPARERS

The Specific Plan/EIR was prepared for the City of Perris (lead agency) with environmental data collected, analyzed and compiled by Florian Martinez Associates, with support from other engineers and analysts. Major contributors are as follows:

City of Perris

Carl Parson	Director of Planning
Susan Gray	Acting Planning Director
Lewis Mazei	Associate Planner
Carol Miller	Assistant Planner

Florian Martinez Associates

Gil Martinez	Executive Vice President
James Norton	Project Director
Richard Goacher	Environmental Technical Support
Donna McCormick	Environmental Research
Thomas Ryan	Environmental Planner
Norman Canchola	Researcher
Debbie Butz	Graphic Artist
Alvin Johnson	Associate Landscape Arch

Psomas Associates

John Vann	Infrastructure Engineering/Grading

Mohle Grover Associates

Hank Mohle	Traffic Engineering
Ed Norris	Traffic Engineering

Environmental Perspectives

Keeton Kreitzer	Environmental Coordination

Tierra Madre Consultants

Lawrence LaPre, Ph.D	Biologist

Scientific Resource Surveys, Inc.

Melinda Horne	Cultural Resources

Christensen and Wallace, Inc.

Fred Christensen	Fiscal Assessment

Acoustical Impacts International

Otto Bixler	Noise Contour Calculation

4.11.2 Contacts During Preparation of the EIR

A list of persons, agencies and organizations contacted during preparation of the EIR is attached to the Initial Study contained in Appendix 5.1.

TECHNICAL APPENDICES

May Ranch

5.1 INITIAL STUDY/NOP AND RESPONSES

CITY OF PERRIS
NOTICE OF PREPARATION

December 3, 1987

TO: JIM NORTON
FMA
15641 Redhill Ave Ste. 205
Tustin, CA 92630

FROM: CITY OF PERRIS
101 North "D" Street
Perris, CA 92307

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report

The City of Perris will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the probable environmental effects are contained in the attached materials. A copy of the Initial study is attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to Carl Parsons at the address shown above. We will need the name for a contact person in your agency.

Project Title:
May Property, Specific Plan and Environmental Impact Report

Project Applicant: Kaufman & Broad of Southern California, Inc.

Carl Parsons
Director of Planning & Community Development
(714) 943-5003

Reference: California Administrative Code, Title 14, Sections 15082(a), 15103, 15375.

PROJECT DESCRIPTIONS

The May Property Project is located south and southwest of the Ramona Expressway and east of the Perris Storm Drainage Channel. The Colorado River Aqueduct and Rider Street align in an east-west direction bisecting the project site. The majority of the property lies in the City of Perris except the contiguous parcels south of Rider Street which are to be annexed into the City of Perris.

The proposed uses for the approximate 680 acres of May Property will consist of approximately 3,006 dwelling units of single-family detached, 612 dwelling units of multi-family, commercial, and recreational uses.

CITY OF PERRIS

ENVIRONMENTAL CHECKLIST FORM
(To be completed by Lead Agency)

I. BACKGROUND

1. Name of Proponent Kaufman & Broad of Southern California, Inc.
2. Address and Phone Number of Proponent:
   5500 E. Santa Ana Canyon Road
   Anaheim, Ca. 92807
   (714) 921-0500
3. Date of Checklist Submitted
4. Agency Requiring Checklist City of Perris
5. Name of Proposal, if applicable
   May Property Specific Plan and Environmental Impact Report

II. ENVIRONMENTAL IMPACTS
(Explanations of all "Yes" and "Maybe" answers are required on attached sheets.)

	YES	MAYBE	NO
1. Earth. Will the proposal result in:			
a. Unstable earth conditions or in changes in geologic sub-structures?	___	___	X
b. Disruptions, displacements, compaction or overcovering of the soil?	X	___	___
c. Change in topography or ground surface relief features?	X	___	___
d. The destruction, covering or modification of any unique geologic or physical features?	___	___	X
e. Any increase in wind or water erosion of soils, either on or off the site?	___	___	X
f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or			

	YES	MAYBE	NO
erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?	___	___	X
g. Exposure of people or property to geologic hazards such as earth quakes, landslides, mudslides, ground failure, or similar hazards?	___	___	X
2. Air. Will the proposal result in:			
a. Substantial air emissions or deterioration of ambient air quality?	___	X	___
b. The creation of objection able odors?	___	___	X
c. Alteration of air move ment, moisture or temperature, or any change in climate, either locally or regionally?	___	___	X
3. Water. Will the proposal result in:			
a. Changes in currents, or the course or direction of water move ments, in either marine or fresh waters?	___	___	X
b. Changes in absorption rates, drainage patterns, or the rate and amount of surface water run off?	X	___	___
c. Alterations to the course of flow of flood waters?	X	___	___
d. Change in the amount of sur- face water in any water body?	___	___	X
e. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?	___	___	X

	YES	MAYBE	NO
f. Alteration of the direction or rate of flow of ground waters?	___	___	X
g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	___	___	X
h. Substantial reduction in the amount of water otherwise available for public water supplies?	___	___	X
i. Exposure of people or property to water related hazards such as flooding or tidal waves?	___	X	___
j. Significant changes in the temperature, flow or chemical content of surface thermal springs?	___	___	X
4. Plant Life. Will the proposal result in:			
a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, microflora and aquatic plants)?	X	___	___
b. Reduction of the numbers of any unique, rare or endangered species of plants?	___	___	X
c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?	___	___	X
d. Reduction in acreage of any agricultural crop?	X	___	___
5. Animal Life. Will the proposal result in:			
a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, or insects)?	X	___	___

	YES	MAYBE	NO
b. Reduction of the numbers of any unique, rare or endangered species of animals?	___	___	X
c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?	___	X	___
d. Deterioration to existing fish or wildlife habitat?	X	___	___
6. Noise. Will the proposal result in:			
a. Increases in existing noise levels?	X	___	___
b. Exposure of people to severe noise levels?	___	X	___
7. Light and Glare. Will the proposal produce new light or glare?	X	___	___
8. Land Use. Will the proposal result in a substantial alteration of the present or planned land use of an area?	X	___	___
9. Natural Resources. Will the proposal result in:			
a. Increase in the rate of use of any natural resources?	___	X	___
b. Substantial depletion of any nonrenewable natural resource?	___	___	X
10. Risk of Upset. Will the proposal involve:			
(a) A risk of an explosion or the release of hazardous substances (including but not limited to oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?	___	___	X

	YES	MAYBE	NO
(b) Possible interference with an emergency response plan or an emergency evacuation plan?	—	—	X
11. Population. Will the proposal alter the location, distribution, density, or growth rate of the human population of an area?	X	—	—
12. Housing. Will the proposal affect existing housing, or create a demand for additional housing?	X	—	—
13. Transportation/Circulation. Will the proposal result in:			
a. Generation of substantial additional vehicular movement?	X	—	—
b. Effects on existing parking facilities, or demand for new parking?	—	—	X
c. Substantial impact upon existing transportation systems?	—	X	—
d. Alterations to present patterns of circulation or move ment of people and/or goods?	—	X	—
e. Alterations to waterborne, rail or air traffic?	—	—	X
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	—	X	—
14. Public Services. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:			
a. Fire protection?	X	—	—
b. Police protection?	X	—	—
c. Schools?	X	—	—

	YES	MAYBE	NO
d. Parks or other recreational facilities?	X		
e. Maintenance of public facilities, including roads?	X		
f. Other governmental services?	X		
15. Energy. Will the proposal result in:			
a. Use of substantial amounts of fuel or energy?		X	
b. Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy?			X
16. Utilities. Will the proposal result in a need for new systems, or substantial alterations to the following utilities:			
a. Power or natural gas?	X		
b. Communications systems?	X		
c. Water?	X		
d. Sewer or septic tanks?	X		
e. Storm water drainage?	X		
f. Solid waste and disposal?	X		
17. Human Health. Will the proposal result in:			
a. Creation of any health hazard or potential health hazard (excluding mental health)?		X	
b. Exposure of people to potential health hazards?			X

	YES	MAYBE	NO
18. Aesthetics. Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?	X		
19. Recreation. Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?		X	
20. Cultural Resources.			
(a) Will the proposal result in the alteration or destruction of a prehistoric or historic archeological site?			X
(b) Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure or object?			X
(c) Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values?			X
(d) Will the proposal restrict existing religious or sacred uses within the potential impact area?			X
21. Mandatory Finding of Significance.			
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X	

	YES	MAYBE	NO
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well in to the future.)	—	X	—
c. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)	—	—	X
d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	—	X	—
22. EIR Tiering Determination. (See §12 Tiering Guidelines)			
a. Is this project consistent with a program, plan, policy or ordinance for which an EIR has been prepared and certified?	—	—	X
b. Is this project consistent with applicable local land use plans and zoning of the city and county in which it is located?	—	—	X
c. May this project cause significant effects on the environment that were not examined in the prior EIR?	X	—	—

III. DISCUSSION

On attached sheets, discuss:

1. The environmental evaluation.

2. Ways, if any, to mitigate any significant effects identified.

3. Compatibility with existing zoning and plans.

IV. DETERMINATION
(To be completed by the Lead Agency)

On the basis of this initial evaluation:

___ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

___ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project by the applicant. A NEGATIVE DECLARATION WILL BE PREPARED.

_X_ I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

___ I find that the proposed project may have a significant effect on the environment, but that this project is consistent with a previously prepared TIERED EIR on the overall program, plan, policy or ordinance, and that such TIERED EIR adequately examines the possible environmental effects of this project.

Date _____

CARL PARSONS (Signature)

For City of Perris

EXPLANATIONS OF ENVIRONMENTAL IMPACTS

1. Earth: In order to prepare the site for development, grading, disruptions, displacements, compaction of the soil will be required which will change the topography of the site.

2. Air: Air emissions are expected to increase during the preparation and construction phase of the project. Air emissions will also be generated from the motor vehicles associated with the future residents of the project.

3. Water: Absorption rates, drainage patterns, and the rate of surface runoff will be altered since runoffs and drainage will be channeled to the Perris Valley Storm Drain. Also, the proximity of the project site to Lake Perris Dam may expose future residents to potential hazards associated with dam inundation.

4. Plant Life: The project will reduce the agricultural resources of the area and will affect existing species of plants as a result of preparation and construction of the project.

5. Animal Life: Impacts are expected on species of animals and their habitats in the project area, since the development of the project will permanently alter the physical nature of the site.

6. Noise: The existing noise levels are expected to increase since the amount of traffic volume, associated with the project, on the Ramona Expressway and Rider Street will increase.

7. Light and Glare: The project will produce a higher level of light and glare than that which currently affects the site.

8. Land Use: The project proposes residential and commercial uses which divert from the current open space and agricultural uses. The current zone for the project site is largely agricultural. However, the proposed Specific Plan will guide and establish amendments to the existing General Plan to accommodate the project.

9. Natural Resources: The project will increase the consumption of natural resources as the project develops.

11. Population and Housing: The proposed project will contribute to an /12. increase in population and housing above the current city level.

13. Transportation/Circulation: As the project reaches its full potential, the vehicular movement will increase on local collectors, Ramona Expressway, and Rider Street.

14. Public Services: The project will require additional fire and police protection, schools, parks and other recreational facilities, public facilities, and governmental services to accommodate the needs of the new community.

15. Energy: The consumption level of energy will increase as the project develops.

16. Utilities: The project will require additional utility services to accommodate the needs of the new community.

17. Human Health: The proximity of the project to the Lake Perris Dam may create potential health hazards associated with dam inundation.

18. Aesthetics: The development of the project will alter the open space/ agricultural vista of the project site.

19. Recreation: The project proposes on-site recreational facilities currently unavailable in the project area.

LIST OF AGENCIES CONTACTED

Audobon Society
2024 Orange Tree Land
Redlands, CA 92373

City of Moreno Valley
13671 Frederick
Moreno Valley, CA 92388

Eastern Municipal Water District
P.o. Box 858
Hemet, CA 92343

General Telephone
120 East 3rd Street
Perris, CA 92370

Ken Jones
17801 Lake Perris Drive
Lagos District
Perris, CA 92370

March Air Force Base
22nd CSG/CC
March Air Force Base, CA 92518
Attn: Janice Hester

Nuview School District
29780 Lakeview Avenue
Nuevo, CA 92637

Perris Union High School District
1151 North "A" Street
Perris, CA 92370-1909
Attn: Dr. Grover J. Moore

Riverside County Aviation Department
3562 10th Street
Riverside, CA 92501

Riverside County Fire Department
210 West San Jacinto
Perris, CA 92370

Riverside County Flood Control
P.O. Box 1033
Riverside, CA 92502

Riverside County Health Department
P.O. Box 1370
Riverside, CA 92502

Riverside County Parks Department
4600 Crestmore Road
Riverside, CA 92519

Riverside County Sheriff's Department
P.O. Box 512
Riverside, CA 92502

Riverside County Transportation Commission
4075 Main Street, Suite 302
Riverside, CA 92501

San Jacinto Basin Resource
1779 East Florida Avenue
Suite D-5
Hemet, CA 92343

S C A G
600 South Commonwealth
Suite 1000
Los Angeles, CA 90005

Sierra Club
San Gorgonio Chapter
560 North Mountain View Avenue
Suite 130
San Bernardino, CA 92401

Southern California Edison
24124 Sunnymead Boulevard
Moreno Valley, CA 92388

LIST OF AGENCIES CONTACTED (continued)

South Coast Air Quality Management
District
9150 Flair Drive
El monte, CA 91731

State Clearinghouse
Office of Planning & Research
1400 10th Street
Sacramento, CA 95814

State Department of Fish and Game
District 5
245 West Broadway, Suite 350
Long Beach, CA 90802
Attn: Jack Spruell

State Department of Parks &
Recreation
P.O. Box 2390
Sacramento, CA 95811

State Department of Transportation
247 West 3rd Street
San Bernardino, CA 92403
Attn: Morgan Choate

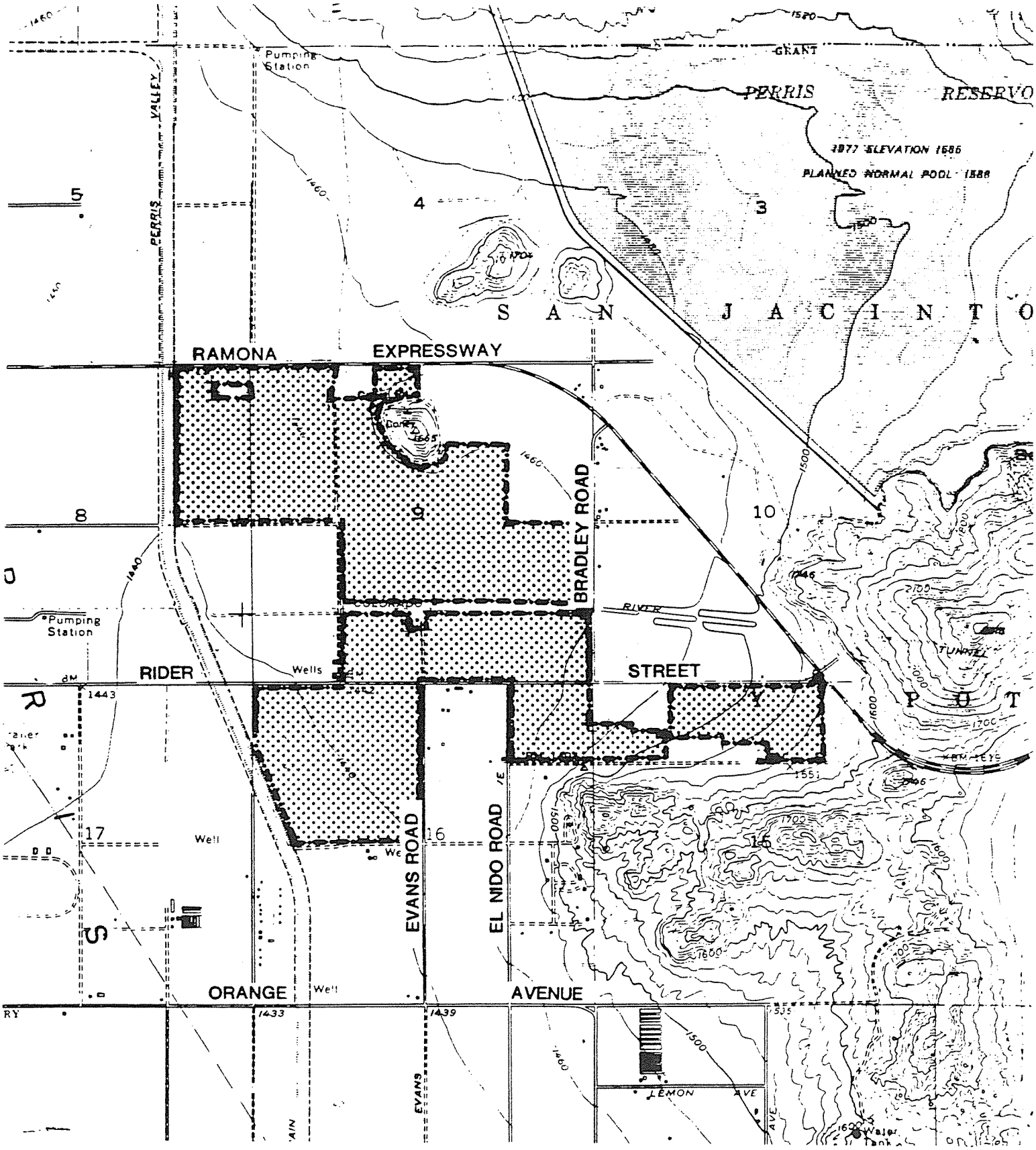
State Department of Water Resources
P.O. Box 6598
Los Angeles, CA 90055

State Regional Water Quality
Control Board
District 8
6809 Indiana Avenue, Suite 200
Riverside, CA 92506

Roger Streeter
Riverside County Planning
4080 Lemon STreet
Riverside, CA 92501

U.C. Riverside
900 University Avenue
Riverside, CA 92521

Val Verde School District
2935 Indian Street
Perris, CA 92370



VICINITY MAP
MAY PROPERTY
KAUFMAN & BROAD

RIVERSIDE COUNTY
FIRE DEPARTMENT
IN COOPERATION WITH THE
CALIFORNIA DEPARTMENT OF FORESTRY

RAY HEBRARD
FIRE CHIEF

1-21-88

Planning & Engineering Office
4080 Lemon Street, Suite 11
Riverside, CA 92501
(714) 787-6606

TO: CITY OF PERRIS

ATTN: PLANNING DEPARTMENT

RE: Notice of Preparation
May Property, Environmental Impact Report

The California Department of Forestry/Riverside County Fire Department as contracting agency providing firefighting staff for the operation of the City Fire Department, is concerned that an acceptable level of service be provided. The draft E.I.R. should address fire station locations, response times and service levles for the proposed project.

All questions regarding the meaning of the conditions shall be referred to the Fire Department Planning and Engineering staff.

MICHAEL E. GRAY, Planning Officer

amb

United States Department of Agriculture

Soil Conservation Service

711 W. Esplanade Ave., Suite C
San Jacinto, CA 92383
(714) 654-7733

JAN 1988
RECEIVED

Jan 22, 1988

Dear Carl Parsons

We acknowledge receipt of the draft environmental statement for

The City of Perris May Property

in Riverside County, California that was addressed to

San Jacinto Basin RCD on Jan 18th for review and comment.

We have reviewed the above draft environmental statement and find that:

1. There are no controversial items in the statement within the realm of the Soil Conservation Service's expertise and responsibilities. There is no prime farmland involved in this report. We find no conflict with any SCS on-going or planned programs or projects.

(2) We find that the items listed below should be reviewed by your committee:

(a) The Loss of Prime Farmland should be addressed.

(b) Erosion control during and after contruction, including agreed-to-items by developers, should be addressed.

We appreciate the opportunity to review and comment on this proposed project.

Sincerely,

Robert S Hewitt

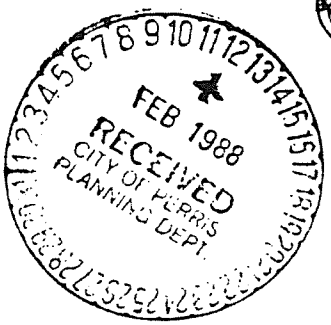
Robert S. Hewitt
Soil Conservationist, San Jacinto

The Soil Conservation Service is an agency of the Department of Agriculture

TE OF CALIFORNIA—OFFICE OF THE GOVERNOR

GEORGE DEUKMEJIAN, Governor

FF'CE OF PLANNING AND RESEARCH
O H STREET
R. NTO, CA 95814



DATE: January 29, 1988

TO: Reviewing Agencies

RE: The City of Perris Planning Department's NOP for May Property, Specific Plan & EIR
SCH# 38012503

Attached for your commnent is the City of Perris Planning Department's Notice of Preparation of a draft Enviornmental Impact Report (EIR) for the May Property, Specific Plan & EIR.

Responsible agencies must transmit their concerns and comments on the scope and content of the EIR, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of this notice. We encourage commenting agencies to respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Carl Parsons
City of Perris
101 North D Street
Perris, CA 92307

with a copy to the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the review process, call John Keene at 916/445-0613.

Sincerely,

David C. Nunenkamp
Chief
Office of Permit Assistance

Attachments

cc: Carl Parsons

88012503

SCH#: _____

'S': Sent by Lead 'X': Sent by SCH

Genevieve Shiroma
Air Resources Board
1102 Q Street
Sacramento, CA 95814
916/322-8267

Barbara Kierbow
Dept. of Boating & Waterways
1629 S Street
Sacramento, CA 95814
916/445-6281

Gary L. Holloway
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, CA 94105
415/543-8555

Sharron Taylor
California Energy Commission
1516 Ninth Street, Rm. 200
Sacramento, CA 95814
916/324-3231

Sandy Hesnard
Caltrans - Division of Aeronautics
P.O. Box 942874
Sacramento, CA 94274-0001
916/324-0761

Ron Helgeson
Caltrans - Planning
P.O. Box 942874
Sacramento, CA 94274-0001
916/445-5570

Dennis O'Bryant
Dept. of Conservation
1416 Ninth Street, Room 1326-2
Sacramento, CA 95814
916/322-5873

- Div. of Mines and Geology
- Div. of Oil and Gas
- Land Resources Protect. Unit

Vashek Cervinka
Dept. of Food and Agriculture
1220 N Street, Room 104
Sacramento, CA 95814
916/322-5227

Douglas Wickizer
Dept. of Forestry
1416 Ninth Street, Room 1516-2
Sacramento, CA 95814
916/322-0128

James Hargrove
Dept. of General Services
400 P Street, Suite 3460
Sacramento, CA 95814
916/324-0209

Alda Wyatt
Dept. of Health

Sgt. Jim Weikel
California Highway Patrol
Long Range Planning Section
Planning and Analysis Division
P.O. Box 898
Sacramento, CA 95804
916/445-1981

William A. Johnson
Native American Heritage Comm.
915 Capitol Mall, Room 288
Sacramento, CA 95814
916/322-7791

Hans Kreutzberg
Office of Historic
Preservation
P.O. Box 942896
Sacramento, CA 94296-0001
916/322-9621

Mike Doyle
Dept. of Parks and Recreation
P.O. Box 942896
Sacramento, CA 94296-0001
916/324-6421

George Hersh
Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
415/557-1375 (8-597)

William P. Vaughn, Jr.
Public Works Board
1025 P Street, 4th Floor
Sacramento, CA 95814
916/445-5132

Mel Schwartz
Reclamation Board
1416 Ninth Street Room 204-8
Sacramento, CA 95814
916/445-2458

Morris Milliken
S.F. Bay Conservation & Dev't. Comm.
30 Van Ness Avenue, Room 2011
San Francisco, CA 94102
415/557-3686

Mike Leaon
Calif. Waste Management Board
1020 Ninth Street, Room 300
Sacramento, CA 95814
916/322-2674

Ted Fukushima
State Lands Commission
1807 - 13th Street
Sacramento, CA 95814
916/322-7813

Nadell Gayou
Dept. of Water Resources
1416 Ninth Street, Room 215-4
Sacramento, CA 95814
916/445-7416

Reed Holderman
State Coastal Conservancy

Department of Transportation
District Contacts

Jerry Haynes
Caltrans, District 1
1656 Union Street
Eureka, CA 95501
707/445-6320

Michelle Gallagher
Caltrans, District 2
1657 Riverside Drive
Redding, CA 96001

Brian J. Smith
Caltrans, District 3
703 B Street
Marysville, CA 95901
916/741-4277

Ed Boyle
Caltrans, District 4
P.O. Box 7310
San Francisco, CA 94120
415/557-3405

Jerry Lauser
Caltrans, District 5
P.O. Box 8114
San Luis Obispo, CA 93403-8114
805/549-3161

Nathan Smith
Caltrans, District 6
P.O. Box 12616
Fresno, CA 93778
209/488-4088

Wayne Ballentine
Caltrans, District 7
120 South Spring Street
Los Angeles, CA 90012
213/620-5335

Guy Visbal
Caltrans, District 8
247 West Third Street
San Bernardino, CA 92403
714/383-4557

Tom Dayak
Caltrans, District 9
500 South Main Street
Bishop, CA 93514
619/873-8411

Terri Barrie
Caltrans, District 10
P.O. Box 2048
Stockton, CA 95201
209/948-7112

Jim Cheshire
Caltrans, District 11
P.O. Box 85406
2829 Juan Street
San Diego, CA 92138-5406
714/237-6755

Fish and Game - Regional Offices

A. Naylor, Regional Manager
Department of Fish and Game
601 Locust
Redding, CA 96001
916/225-2300

Jim Messersmith, Regional Manager
Department of Fish & Game
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670
916/355-0922

B. Hunter, Regional Manager
Department of Fish and Game
P.O. Box 47
Yountville, CA 94599
707/944-2011

O. Mokes, Regional Manager
Department of Fish and Game
1234 East Shaw Avenue
Fresno, CA 93710
209/222-3761

Fred A. Worthley,Jr., Reg. Manager
Department of Fish and Game
245 West Broadway, Suite 350
Long Beach, CA 90802
213/590-5113

Rolf E. Mall
Marine Resources Region
245 West Broadway, Suite 350
Long Beach, CA 90802
213/590-5155

State Water Resources Control Board

Joan Jurancich
State Water Resources Control Board
Division of Clean Water Grants
P.O. Box 100
Sacramento, CA 95801
916/322-3413

Ed Anton
State Water Resources Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95801

Dave Beringer
State Water Resources Control Board
Delta Unit
P.O. Box 2000
Sacramento, CA 95810
916/322-9870

Mike Falkenstein
State Water Resouces Control Board
Division of Water Rights
901 P Street
Sacramento, CA 95814
916/324-5716

OTHER: _____

_____

Regional Water Quality Control Boa

NORTH COAST REGION (1)
1440 Guerneville Rd.
Santa Rosa, CA 95401
707/576-2220

SAN FRANCISCO BAY REGION (2)
1111 Jackson Street, Room 6000
Oakland, CA 94607
415/464-1255

CENTRAL COAST REGION (3)
1102-A Laurel Lane
San Luis Obispo, CA 93401
805/549-3147

LOS ANGELES REGION (4)
107 South Broadway, Room 4027
Los Angeles, CA 90012
213/620-4460

CENTRAL VALLEY REGION (5)
3443 Routier Road
Sacramento, CA 95827-3098
916/361-5600

Fresno Branch Office
3374 East Shields Avenue, Roo
Fresno, CA 93726
209/445-5116

Redding Branch Office
100 East Cypress Avenue
Redding, CA 96002
916/225-2045

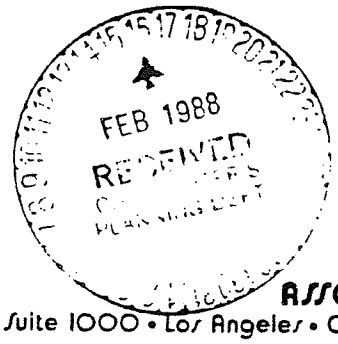
LAHONTAN REGION (6)
2092 Lake Tahoe Boulevard
P.O. Box 9428
South Lake Tahoe, CA 95731
916/544-3481

Victorville Branch Office
15371 Bonanza Road
Victorville, CA 92392-2499
619/245-6583

COLORADO RIVER BASIN REGION (7)
73-271 Highway 111, Suite 21
Palm Desert, CA 92260
619/346-7491

SANTA ANA REGION (8)
6809 Indiana Avenue, Suite 200
Riverside, CA 92506
714/782-4130

SAN DIEGO RN (9)
9771 Clairemont Mesa Blvd., Suite



SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
600 South Commonwealth Avenue • Suite 1000 • Los Angeles • California • 90005 • 213/385-1000

February 4, 1988

Mr. Carl Parsons
Director of Planning & Community Development
City of Perris
101 North "D" Street
Perris, California 92307

RE: May Property, Specific Plan and Environmental Impact Report
SCAG File No. RI-50959-NPR

Dear Mr. Parsons:

Thank you for submitting the Notice of Preparation for an Environmental Impact Report (EIR) for the 3,006 dwelling unit May Property project. Staff has reviewed the Notice and offers the following comments.

The DEIR should address SCAG plans and policies. For population, housing, and employment forecasts, the document entitled SCAG-82 Modified, adopted in February 1985, is the basis for review for consistency with regional plans and policies. The project should also be reviewed against the Baseline Projection which was approved, for planning purposes, June 1987. In order to evaluate the relationship of this project to the forecasts, the EIR should address the following issues:

- What is the growth permitted in the project as a percent of the growth forecast in SCAG-82 Modified for RSA 47 at the anticipated dates of project completion or phasing?

- What is the anticipated employment level associated with the project and how does it relate to the most recent SCAG growth forecasts for RSA 47?

- What is the availability of housing to accommodate the employees in the area, as provided for in the Regional Housing Allocation Model?

- What are the cumulative impacts and growth allowed by this project and other projects in RSA 47, as related to SCAG-82 Modified for the anticipated dates of completion or phasing?

- Are the local government provisions of the Regional Air Quality Management Plan, adopted in 1982, being implemented in your jurisdiction? What are the air quality impacts of the project?

- In evaluating both the transportation and air quality impacts, the DEIR should also provide a detailed description and documentation of the assumptions used in estimating total trips generated and their related vehicular emissions. This information is essential in estimating the project's impact on traffic in the area. To relieve significant air quality and traffic impacts, the DEIR should include transportation system and demand management programs to encourage the use of mass transit, ridesharing, trip-reduction strategies, etc., in order to reduce these impacts.

- What are the impacts of the project on water, wastewater treatment, solid and hazardous waste, energy, and school facilities?

Thank you again for the opportunity to comment. SCAG would appreciate the opportunity to review the draft environmental impact report when it is available.

If you have any questions, please contact Tom Brady at (213) 739-6742.

Sincerely, TB

Patricia Nemeth

PATRICIA NEMETH
Director of Environmental Planning

PN:TB

STATE OF CALIFORNIA

GEORGE DEUKMEJIAN Governc

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION
6809 INDIANA AVENUE, SUITE 200
RIVERSIDE, CALIFORNIA 92506
PHONE (714) 782-4130

February 8, 1988

Mr. Carl Parsons
City of Perris
101 North "D" Street
Perris, CA 92307

NOP: MAY PROPERTY, SPECIFIC PLAN AND ENVIRONMENTAL IMPACT REPORT

Dear Mr. Parsons:

We have reviewed the Notice of Preparation (NOP) for this project. In response to the statutory concerns of this office, the Draft EIR should address the following:

I. Water Quality

A. Potential impacts of the proposed project on surface and ground water quality:

- Construction activities (including grading) that could result in water quality impacts.
- Soil characteristics related to water quality (potential for erosion and subsequent siltation, increase or decrease in percolation).
- Impacts of waste generation, treatment and disposal.
- Impacts of toxic substances handling and/or disposal (if appropriate).
- Degree and seasonal variation of impact.

B. Mitigation of Adverse Impacts.

II. Water, Wastewater and Solid Waste Service

A. Water

- Availability of water for the proposed project.
- Existing infrastructure: location of water supply lines, tie-ins.
- Applications or permits required for water acquisition.
- Impact of calculated project demand on water supply.

B. Waste Disposal/Treatment

- Types and amounts of waste materials generated by project.
- Proposed waste treatment and disposal methods.
- Existing infrastructure:
  * treatment facilities: location, current capacity, treatment standards; master treatment facilities expansion plan (if appropriate)
  * treatment plant collector system: location of major trunk lines and tie-ins, current capacity
  * disposal facilities: location, capacity
  * location of discharge areas
- Applications or permits required to implement waste disposal.
- Impact of calculated project waste volume on capacity of existing and proposed treatment and disposal facilities.
- Need for pretreatment of industrial flows (if appropriate).

We look forward to review of the DEIR when it becomes available.

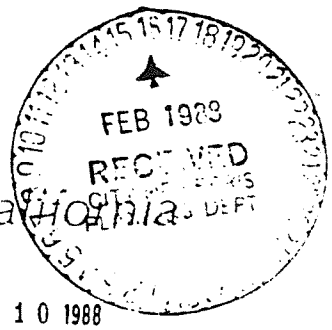
If you have any questions, please contact this office.

Sincerely,

Nancy A. Olson
Sanitary Engineering Technician

NAO:ww

The Metropolitan Water District of Southern California



Mr. Carl Parsons
City of Perris
101 North "D" Street
Perris, California 92307

Colorado River Aqueduct
Perris Valley Siphon

Dear Mr. Parsons:

Notice of Preparation of a Draft Specific Plan and Environmental Impact Report for the May Property

We have reviewed your Notice of Preparation (NOP) of a draft Specific Plan and EIR for the May Property project. Our comments are directed to information relevant to Metropolitan's statutory responsibilities in connection with the proposed project.

Based on the project area description within your NOP, we have determined that a portion of Metropolitan's Colorado River Aqueduct, the Perris Valley Siphon, is located within the project area. The Perris Valley Siphon consists of two monolithic precast concrete pipelines (Barrels 1 and 2) that have a 12.4- and 13-foot-inside-diameter, respectively. These barrels are located within Metropolitan's permanent fee property, the width of which varies from 175 feet to 391 feet.

We request that prints of plans for any construction in the area of our facilities be submitted for our review and approval before construction begins. Additionally, we require that all grading, street improvement, utility, and landscape plans affecting our facilities and fee property be submitted for our review and approval prior to implementing the plans. Should you require additional information, you should contact Mr. James E. Hale, Senior Engineering Technician, at (213) 250-6564.

[illegible] Sunset Boulevard, Los Angeles, Calif. • Mailing Address: Box 54153, Los Angeles, Calif. 90054 • Telephone: (213) 250-6000

We appreciate the opportunity to review project plans that could affect our facilities. If we can be of any further assistance, please contact me at (213) 250-6437.

Very truly yours,

Roberta L. Soltz Ph.D.
Sr. Administrative Analyst
Environmental Section

DAM/gg

Southern California Edison Company

26100 MENIFEE ROAD

ROMOLAND, CALIFORNIA 92380

February 11, 1988

City of Perris
101 North "D" Street
Perris, CA 92307

Subject: Environmental Impact Report for the May Property Project Near the Ramona Expressway

Gentlemen:

Southern California Edison has a transmission line through the subject project that may be necessary to relocate. We are therefore requesting street improvement plans and legal descriptions to determine our rights.

At this time, Southern California Edison has no additional concerns regarding this project.

Please call me at (714) 943-8226 if you have any questions.

Sincerely,

Don Warren

DON WARREN
Senior Planner

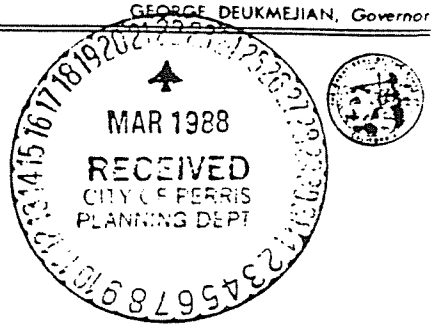
DRW/jh

STATE OF CALIFORNIA

GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF FOOD AND AGRICULTURE
1220 N Street
P.O. 942871
Sacramento, CA 94271-0001

March 17, 1988



RECEIVED
MAR 23 1988

Mr. Carl Parsons
City of Perris
101 North D Street
Perris, CA 92307

Dear Mr. Parsons:

Thank you for the opportunity to comment on the forthcoming Draft Environmental Impact Report (DEIR) for the development of the 680 acre May Property (SCH No. 88012503).

The California Department of Food and Agriculture (CDFA) would appreciate a discussion of the following issues in the DEIR:

1. A description of the site. This should include soil classifications, a history of agricultural activities, surrounding land uses, General and Community land use designations and zonings, and whether the site is considered prime farmland or farmland of local or statewide importance. How productive is the land and what would be the overall loss to agriculture in the region? Is the project consistent with existing policies concerning agricultural land use?

2. Whether the site or surrounding land is under a Williamson Act Contract. Will contract cancellation or non-renewel encourage similar actions elsewhere in the region?

3. The pressure this project could create to convert agricultural land to other uses. Can development of the site be considered precedent setting for similar projects in the area? Can this project be considered growth inducing?

4. The conflicts which can arise from the close proximity of agricultural and urban areas due to noise, dust, and spraying activities of farm operations, and trespassing, vandalism, and increased traffic from urban areas. Will development of the property restrict surrounding farming operations? What buffering measures which are proposed for the development.

5. Whether the development constitutes discontiguous growth and, if so, whether other sites are available which might be closer to existing urban areas or do not convert agricultural land. Is the conversion of agricultural land necessary to accomodate anticipated urban development?

6. The possible mitigation measures to ensure that agricultural land is not prematurely or unnecessarily converted to non-agricultural uses. These could include placing new land under cultivation, additional use of the Williamson Act, a right-to-farm ordinance, and requiring developers to make land available for community gardens.

7. The cumulative impact of this and other projects in the vicinity.

The CDFA supports the right of local agencies to develop and implement land-use policy in its area of influence, but also wants to assure that agricultural land is not prematurely and irreversibly lost due to development which is not accurately assessed for environmental impact.

We hope these comments are still timely as our agency received the Notice of Preperation from the State Clearinghouse on February 16, 1988. If there is any problem, please contract us and we will consult with the Clearinghouse.

Sincerely,

Martha Neuman

Martha Neuman
Research Assistant
Agricultural Resources Branch
(916) 322-5227

cc: John Keene

STATE OF CALIFORNIA—THE RESOURCES AGENCY

GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF CONSERVATION
DIVISION OF ADMINISTRATION
DIVISION OF MINES AND GEOLOGY
DIVISION OF OIL AND GAS
DIVISION OF RECYCLING

MAR 1988
RECEIVED
CITY OF PERRIS
PLANNING DEPT.

1416 Ninth Street
SACRAMENTO, CA 95814

(916) 322-5873
TDD (916) 324-2555

March 7, 1988

Mr. Carl Parsons
City of Perris
101 North D Street
Perris, CA 92307

Dear Mr. Parsons:

Subject: Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the May Property Specific Plan SCH# 88012503

The Department of Conservation has reviewed the City of Perris' NOP for the Specific Plan (SP) referenced above. The Department is responsible for monitoring farmland conversion on a statewide basis and also administers the California Land Conservation (Williamson) Act. Because the proposal involves the loss of valuable farmland and possibly the termination of Williamson Act contracts, the Department offers the following comments.

The proposal would develop 680 acres northeast of the City of Perris for 3,618 residential units, as well as commercial and recreational uses. The Department's Riverside County Important Farmland Map indicates that the location of the project site may be on or adjacent to Prime Farmlands, Farmlands of Statewide Importance, and/or Farmlands of Local Importance.

It should be noted that California Administrative Code Section 15082 addresses minimum requirements for NOPs: (1) Description of the project; (2) Location of the project indicated either on an attached map (preferably a copy of a U.S.G.S. 7-1/2' topographical map identified by quadrangle name) or by a street address when in an urbanized area; and (3) Probable environmental effects of the project. Inclusion of a location map greatly facilitates the correlation of the project site to other existing maps, e.g., farmland maps.

The loss of prime agricultural land should be identified and treated as a significant environmental impact (see California Administrative Code Section 15000 et seq., Appendix G (y)). As such, the Draft Environmental Impact Report (DEIR) should provide information on the number of acres of agricultural land to be developed, the potential agricultural value of the site, the impacts of farmland conversion, and possible mitigation actions. Specifically, we recommend that the DEIR contain the following

information to ensure the adequate assessment of the SP impacts in these areas.

- o The agricultural character of the area covered by the SP and of nearby or surrounding lands which may be affected by the conversion.
  - A map which identifies the location of agricultural preserves in the SP area, the number of acres and type of land in each preserve, (i.e., prime/non-prime).
  - A brief history of the agricultural preserve(s) and the current status of the preserve(s). This is in response to your assertion that the preserve had been cancelled, effective January 1, 1988.
  - Types and relative yields of crops grown in the affected areas, or in areas of similar soils under good agricultural management.
  - Agricultural potential, based on the Department of Conservation's Important Farmland Series map designations.

- o The impacts of any required cancellations of Williamson Act contract(s) affecting the project site and surrounding property including: (1) location of Williamson Act contracts on lands within and adjacent to the SP area; and (2) discussion to support the specific findings (Government Code Section 51282) that must be made by the Board of Supervisors or City Council in order for the Williamson Act contract(s) to be cancelled.

  Since there have been a number of requests for cancellation of Williamson Act contracts, both in Riverside County and statewide, we recommend that these findings be documented and discussed under the DEIR's sections on cumulative and growth-inducing impacts. In addition to the findings called for by the Government Code, the DEIR should identify recently granted, current and likely future Williamson Act contract cancellation applications in the vicinity of the project. In addition, the DEIR should discuss the effects that cancellation of Williamson Act contracts would have on any nearby properties also under contract.

  The NOP notes future annexation of contiguous parcels south of Rider Street. The status of this annexation should also be discussed in the DEIR. The following provisions relating to Williamson Act contract cancellation as affected by annexation, in Government Code Section 51243(b), should be noted:

> "...on the annexation by a city of any land under contract with a county, the city shall succeed to all rights, duties and powers of the county under such contract, unless the land being annexed was within one mile of such city at the time that the contract was initially executed, the city has filed and the local agency formation commission has approved a protest to the contract pursuant to Section 51243.5, and the city states its intent not to succeed in its resolution of intention to annex..."

It should also be noted that Government Code Section 51284 states that no contract may be cancelled until after the City or County has given notice of, and has held, a public hearing on the matter. Notice of the hearing shall be published and mailed to the Director of the Department of Conservation and other specified entities.

- Farmland Conversion Impacts.
  - The type, amount and location of farmland conversion that would result from implementation of the SP.
  - The impact on current and future agricultural operations.
  - The cumulative and growth-inducing impact of the SP on farmland in the SP and surrounding area.
  - The economic impacts of the farmland conversion. In assessing these impacts, use should be made of economic multipliers, such as those used in the University of California Cooperative Extension's study, "Economic Impacts of Agricultural Production and Processing in Stanislaus County."
- Mitigation measures and alternatives that would lessen the farmland conversion impact of the SP. Some of the possibilities are:
  - Direct urban growth to lower quality soils in order to protect prime agricultural land.
  - Increase densities or cluster residential units to decrease the amount of agricultural lands taken out of production, while providing open-space amenities and vistas for residents.
  - Protect other, existing farmland of equivalent, or better, quality through the use of Williamson Act contracts.

- Establish buffers such as setbacks, berms, greenbelts and open space areas to separate farmland from urban uses.
- Implement right-to-farm ordinances to diminish nuisance impacts of urban uses on neighboring agricultural operations, and vice-versa.

Also, farmland trusts, which have been established by other counties, such as the San Elijo Alliance and Ventura County Land Conservancy, can effectively preserve agricultural land and should be considered in the analysis of mitigation alternatives.

The Department appreciates the opportunity to comment on the NOP. We hope that the farmland conversion impacts and the Williamson Act contract issues are given adequate consideration in the DEIR. If I can be of further assistance, please feel free to call me at (916) 322-5873.

Sincerely,

Dennis J. O'Bryant

Dennis J. O'Bryant
Environmental Program Coordinator

cc: Stephen Oliva, Chief
Office of Land Conservation

EK:DJO

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IVED
PERRIS
S DEPT.

OFFICE OF THE ROAD COMMISSIONER AND COUNTY SURVEYOR
COUNTY OF RIVERSIDE

LeRoy D. Smoot
Road Commissioner and
County Surveyor

County Administrative Center
4080 Lemon Street, 8th Floor
P.O. Box 1090
Riverside, CA 92502
(714) 787-6554

January 20, 1988

Mr. Carl Parsons, Director
Planning & Community Development
City Of Perris
101 North "D" Street
Perris, CA 92307

K&B

RE: Notice Of Preparation Of An Environmental Impact Report-City Of Perris

Dear Mr. Parsons:

The Riverside County Road Department has reviewed the proposal referenced above and has the following comments.

The present access points onto the Ramona Expressway are the only access points allowable under County Standards. The following Comprehensive General Plan Roads intersect the expressway, as shown on Study Area Map Number 2:

Rider Street (Major 100'R/W)
Center Street (Major 100'R/W)
Bradley Road (Secondary 88'R/W)

The Road Department recommends that the circulation system for this project be designed to utilize these streets. The design focus should be directed toward circulating traffic to the southwest to access Interstate 215.

The County's Comprehensive General Plan Study Area Map Number 2 depicts a bridge at the expressway and Rider Street where the Perris Storm Drain Channel intersects each. These should be considered in the project circulation design.

The Road Department also recommends that a traffic study be accomplished for this project. Particularly, the study should focus on issues such as the ICU analysis, cumulative impact analysis, project trip generation and distribution, area attractions, home-based trip analysis, and internal circulation analysis.

The Road Department desires an opportunity to review and comment on the DEIR.

If you desire additional information, or have any questions contact me at (714) 787-1445.

Very truly yours,

John Johnson
Associate Planner

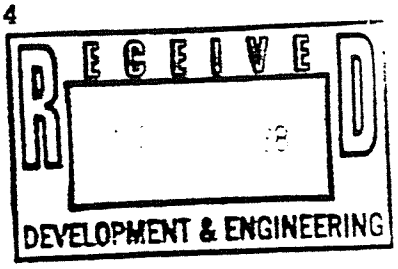
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Attachment (map)

OFFICE OF THE ROAD COMMISSIONER AND COUNTY SURVEYOR
COUNTY OF RIVERSIDE

LeRoy D. Smoot
Road Commissioner and
County Surveyor

County Administrative Center
4080 Lemon Street, 8th Floor
P.O. Box 1090
Riverside, CA 92502
(714) 787-6554



January 27, 1988

Ms. Linda M. Horning
Kaufman and Broad Of Southern California, Inc.
5500 E. Santa Ana Canyon Road
Anaheim, CA 92807

RE: Notice Of Preparation Of An Environmental Impact Report-May Project (680 Acres) Perris/Moreno Valley Area

Dear Ms. Horning:

The Road Department has reviewed the project referenced above and has the following comments.

The Department finds that the acreage of the project requires that a traffic study be accomplished. The outline contained in the County's information pamphlet is the proscribed guide to be used to accomplish the traffic study.

We request that we be given an opportunity to review the DEIR.

If you desire additional information, contact me at (714) 787-1445.

Very truly yours,

John Johnson
Associate Planner

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 8, P.O. BOX 231
SAN BERNARDINO, CA 92402
TDD (714) 383-4609



February 25, 1988

Carl Parsons
City of Perris
101 N. "D" Street
Perris, CA 92307

Dear Mr. Parsons:

This is in response to a Notice of Preparation of a Draft Environmental Impact Report for May Property.

We would appreciate the opportunity to review and comment on the proposed DEIR in order to evaluate possible impacts to the transportation system, particularly Interstate 215.

A detailed traffic study should be prepared for this project which would include existing and future average daily traffic (ADT) volumes, traffic generation (including peak hour), traffic distribution, intersection capacity utilization (ICU) analysis along with current and projected capacities of local roads, State highways and freeways that might be impacted.

Consideration should be given to the cumulative impacts that continued development in the area will have on the transportation system from a "worst case" viewpoint. Discussion of impacts to the transportation system should include traffic growth, traffic safety, drainage, and those associated with the construction, maintenance and operation of any anticipated highway improvements. The EIR should consider the use of public transit and accommodations for both pedestrians and bicycles. Costs related to any transportation improvements, potential for funding, and sources of funds should be discussed.

Continued development in this area, especially of the magnitude suggested by this project, will eventually lead to the need for traffic signals at the freeway ramps at Ramona Expressway. We do not anticipate the availability of sufficient highway funds to do such work in the foreseeable future. Consideration should, therefore, be given to proportionately distributing those costs to the developments that generate the impacts.

We urge early and continuous liaison with Caltrans on proposed plans as they affect State highways.

If you have any questions, please contact Richard Dennis at (714) 383-4165.

Very truly yours,

G. G. Visbal

GUY G. VISBAL
Chief, Transportation Planning Branch

Perris Union High School District

ADMINISTRATION BUSINESS SERVICES
1151 North "A" Street, Perris, California 92370-1909 Phone (714) 943-6369



January 21, 1988

Mr. Carl Parsons
Director of Planning
City of Perris
101 North "D" Street
Perris, CA 92370

SUBJECT: May Property, Environmental Impact Report

COMMENTS: The Perris Union High School District has declared impaction due to overcrowding resulting from enrollment growth. Before clearance will be given for the issuance of building permits, fees authorized by Government Code Section 53080 will be assessed in the total amount of $1.50 per square foot for residential construction and $0.25 per square foot for industrial/commercial construction. Please call the District Administration Center at (714) 943-6369 for information relating to payment and division of fees between our District and the appropriate Elementary District.

Sincerely,

PERRIS UNION HIGH SCHOOL DISTRICT

Grover J. Moore, Ed.D.
Assistant Superintendent, Business

GJM:as

DEPARTMENT OF FISH AND GAME
245 W. Broadway, Suite 350
Long Beach, CA 90802-4467
(213) 590-5113



January 15, 1988

Carl Parsons, Director
Planning & Community Development
City of Perris
101 North "D" Street
Perris, CA 92307

Dear Mr. Parsons:

We have reviewed the Notice of Preparation for the May Property Specific Plan and EIR. To enable our staff to adequately review and comment on this project, we recommend the following information be included in the Draft EIR:

1. A complete assessment of flora and fauna within the project area. Particular emphasis should be placed upon identifying endangered, threatened, and locally unique species.

2. Documentation of direct, indirect, and cumulative impacts expected to adversely affect biological resources within and adjacent to the project site, and mitigation measures proposed to offset such impacts. Potential impacts to the Stephen's kangaroo rat, a state-listed threatened species, and mitigation measures to offset such impacts should be included.

3. Assessment of growth-inducement factors potentially affecting natural open space and biological resources. Set aside natural open space in sufficient acreage to provide habitat for native wildlife and landscape programs, including native trees and shrubs to provide habitat for wildlife.

Diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream, or lake will require notification to the Department of Fish and Game as called for in the Fish and Game Code. Notification should be made after the project is approved by the lead agency.

Thank you for the opportunity to review and comment on this Notice of Preparation. If you have any questions, please contact Jack L. Spruill of our Environmental Services staff at (213) 590-5137.

Sincerely,

Fred Worthley
Regional Manager
Region 5

cc: D. Yparraguirre
Office of Planning & Research

STATE OF CALIFORNIA—THE RESOURCES AGENCY GEORGE DEUKMEJIAN, *Governor*

DEPARTMENT OF PARKS AND RECREATION
O. BOX 2390
ACRAMENTO 95811

(916) 445-7067



February 2, 1988

Mr. Carl Parsons
City of Perris
101 North "D" Street
Perris, CA 92307

Dear Mr. Parsons:

May Property, Specific Plan and Environmental Impact Report
Notice of Preparation

The Department of Parks and Recreation has reviewed the subject document, which was received on January 15, 1988. The proposed project will affect our property, Lake Perris State Recreation Area.

Several environmental issues in the NOP are of immediate concern to us for their potential impact on the State Recreation Area. These are: Animal Life, Light and Glare, Transportation and Circulation, Public Services, and Recreation.

The environmental impact report should discuss these issues and their specific effects on Lake Perris State Recreation Area.

Thank you for the opportunity to review the NOP; please keep us apprised of the progress of the project. Our contact is Mr. James M. Doyle, Supervisor, Environmental Review Section, telephone (916) 324-6421, address above.

Sincerely,

Richard G. Rayburn, Chief
Resource Protection Division

cc: Office of Planning and Research, Keith Lee

STATE OF CALIFORNIA—RESOURCES AGENCY
GEORGE DEUKMEJIAN, *Governor*

DEPARTMENT OF WATER RESOURCES
O Box 6598
LOS ANGELES
90055-1598

FEB 3 1988

City of Perris
101 North "D" Street
Perris, CA 92307

Attention: Carl Parsons

Subject: Notice of Preparation of DEIR for May Property, Specific Plan and Environmental Impact Report, dated December 3, 1988.

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

The Department recommends that you 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

Charles R. White, Chief
Planning Branch
Southern District

Attachments

cc: Office of Planning and Research
State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814

DEPARTMENT OF WATER RESGURCES 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:

- 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."

- 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.

- 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.

- Title 24 of the California Administrative Code Section 2-5307(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.

- 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.

- 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.

- 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.

DEPARTMENT OF AVIATION
County of Riverside
4164 Brockton Avenue
Riverside, CA 92501
(714) 369-9577

G. HARDY ACREE, A.A.E.
Aviation Director

FEB 1988
RECEIVED
CITY OF PERRIS
PLANNING DEPT.

January 27, 1988

Carl Parson
Planning Department
City of Perris
101 North "D" Street
Perris, CA 92307

Dear Mr. Parson:

Thank you for the opportunity to review Notice of Preparation of Draft EIR for May Property, Specific Plan and Environmental Report.

Upon review of the Specific Plan Area, I find the Specific Plan is located in Area II and Area III of the March Air Force Base Interim Influenced Area as designated by the Riverside County Airport Land Use Commission. I have taken a portion of the Influenced Map depicting the portions which are located in the Influenced Area. Also, the ALUC Land Use Plan is enclosed to assist you in defining Areas I, II, and III of the March Air Force Base Influenced Area. Area II is identified as the area of Significant Safety Concerns due to aircraft maneuvering about the flight pattern.

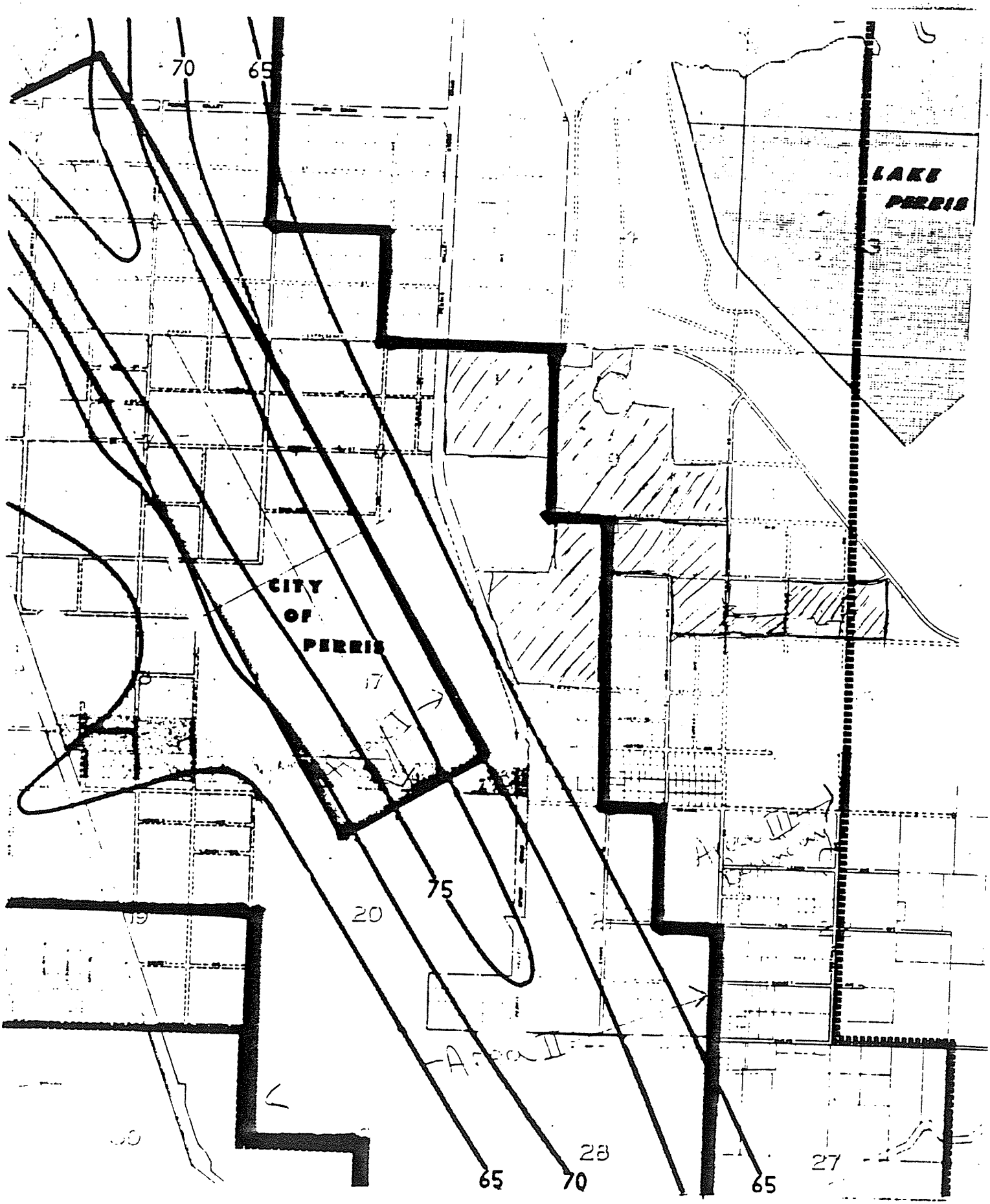
The ALUC Policies for compatible land uses in Area II are commercial, industrial, and agricultural uses are permitted. Residential uses must be a 2-1/2 acre lot size per dwelling unit. There are substantial land areas identified in the May Project which fall within Area II. Land use must be those identified by the ALUC or the ALUC would determine the Specific Plan incompatible with March Air Force Base Interim Influenced Area.

Area III is the outer boundary of the influenced area. All land uses are permitted and the ALUC Policies are to encourage easements in this area as a condition of approval.

If you have any questions, feel free to contact me.

Sincerely,

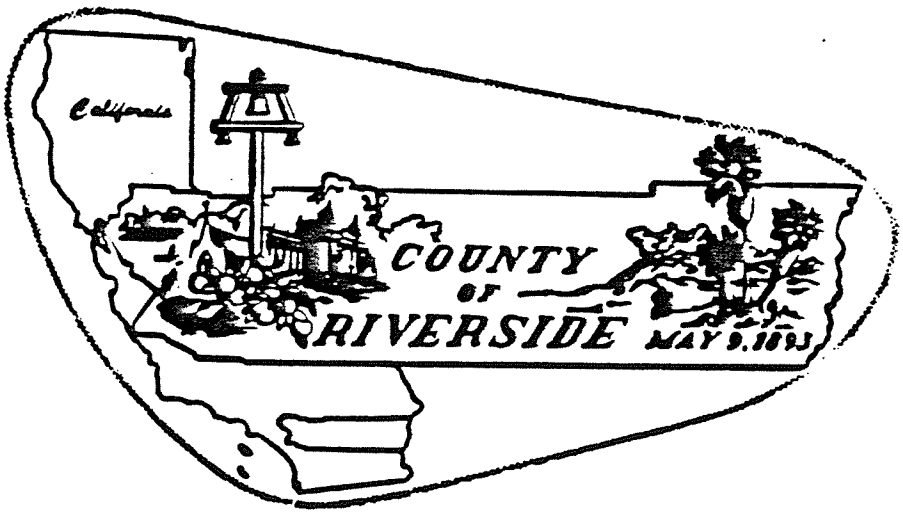
Judy M. Ross
Assistant Director


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AIRPORT LAND USE PLAN

Formulated By

RIVERSIDE COUNTY AIRPORT LAND USE COMMISSION



Adopted April 26, 1984

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RIVERSIDE COUNTY
AIRPORT LAND USE COMMISSION

COMPOSITION

Friend Frank Wilson, Chairman
F. Gillar Boyd, Jr.
Edward G. Butler
William Harker
Tookie Hensley
Donald Slotten
John Wingate

STAFF

D. L. Canady, Aviation Director
R. D. Tingey, Assistant Aviation Director
Cathy Malone, Secretary

CHAPTER I

INTRODUCTION

A. Legal Background

1. California State Law (Public Utilities Code, Article 3.5, Sections 21670-21678 as amended) created the requirement for an Airport Land Use Commission in each county and assigned the commission the following powers and duties:

   (a) To assist local agencies in ensuring compatible land uses in the vicinity of all new airports and in the vicinity of existing airports to the extent that the land in the vicinity of such airports is not already devoted to incompatible uses.

   (b) To coordinate planning at the state, regional and local levels so as to provide for the orderly development of air transportation, while at the same time protecting the public health, safety and welfare.

   (c) To prepare and adopt an airport land use plan pursuant to Section 21675.

   (d) To review the plans, regulations and other actions of local agencies and airport operators pursuant to Section 21676.

   (e) The powers of the commission shall in no way be construed to give the commission jurisdiction over the operation of any airport.

2. The Riverside County Airport Land Use Commission was established December 14, 1970 when the Board of Supervisors acting in conjunction with the mayors of the cities in the county designated the existing five member aviation commission to assume the planning responsibilities of an airport land use commission. On August 29,

1972, the Board, in response to the mayors of the cities in the county, augmented the five member commission by two additional members to be appointed from time to time by a selection committee of the mayors.

3. The Riverside County Airport Land Use Commission adopted Rules and Regulations that became effective July 29, 1971 and revised them in October 1972. The Rules and Regulations were rewritten and adopted June 17, 1983. A copy of the newest Rules and Regulations is contained in Appendix A.

B. Historical Background

1. The Commission has designated interim airport-influenced areas around nearly all public use airports within the County. Local planning agencies affected by these designations have been encouraged to consult with the Commission and its staff concerning planning actions and regulations affecting the influenced areas.

2. On October 10, 1974, the Commission defined the final boundaries of the Palm Springs Municipal Airport-influenced area and adopted, as their official comprehensive land use plan for the influenced area, "A Specific Plan for the Airport Portion of the Transportation Element of the Palm Springs General Plan, September 1974." Subsequently, the City of Palm Springs adopted the same plan as a part of their general plan and modified their city zoning plan accordingly. The City of Palm Springs acted as lead agency in this matter and prepared the Draft and Final Environmental Impact Report for this plan.

3. An interim airport-influenced area around the Hemet-Ryan Airport was designated by the Airport Land Use Commission (ALUC) August 30, 1973. The ALUC asked the City of Hemet and the County Planning Department to prepare "area" land use plans for their respective jurisdictions

within the interim-influenced area. Higher priority work in both agencies and the fact that existing land use then appeared to be compatible with the airport, precluded response to the ALUC's request.

In 1977, a proposed residential development within the City of Hemet, but under the approach to the airport, posed a threat to the future viability of the airport. Hearings on this project resulted in its eventual denial by the City of Hemet and led directly to a concerted effort by the City of Hemet, County Planning Department and ALUC to prepare a joint airport land use plan for the Hemet-Ryan airport-influenced area.

A proposed land use plan and draft environmental impact report were prepared by Aviation and Planning Department staff and presented to the County Planning Commission September 13, 1978. The County Planning Commission approved the plan, as revised, during the hearing process on March 14, 1979. The EIR was certified in early 1980 and the Board of Supervisors approved the plan June 10, 1980.

The City of Hemet prepared a plan for their jurisdictional area. Their plan - "Specific Land Use Plan for Southwest Area" and supporting EIR were adopted by the Hemet City Council, June 26, 1979.

The ALUC on October 17, 1980 designated a final airport-influenced area and adopted both the approved City and County Plans as their land use plan.

Subsequently, contested planning actions within the City of Hemet highlighted inadequacies of the approved land use plans. A subcommittee of members of all involved jurisdictions was formed to

research and discuss the problem. This subcommittee first met June 17, 1982 and by December 1982 produced a "Position Paper" defining an enlarged planning boundary around the airport and proposed policies for land use within the boundary.

The City of Hemet acted as lead agency and prepared a Draft Environmental Impact Report. The City Council ultimately certified the EIR and adopted the "Position Paper" policies July 26, 1983. The ALUC on September 22, 1983 adopted the narrative, policies, exhibits and appendix of the "Position Paper" as a complete amendment to and replacement for the "Hemet-Ryan Airport Land Use Plan" that had been adopted in 1980. The County Planning Department has included the "Position Paper" policies in its recently adopted new General Plan.

4. With this background, it is apparent that a great deal of effort has gone into the development of the airport land use plans completed and in progress. It is also apparent that, for the most part, real emphasis is not placed on the development of these airport land use plans until a crisis in land use near an airport develops. It is the intent of the Airport Land Use Commission to build upon the experience gained in these past actions to prepare a single document airport land use plan modeled after the Hemet-Ryan Plan, modified as necessary to fit specific situations, that will apply to the remaining public use airports within the County.

CHAPTER II

Airport Influenced Area Boundaries and Land Use Planning Areas

A. Review

1. As mentioned in Chapter I, interim airport-influenced boundaries have been designated at all public use airports in the County except Chiriaco Summit, Rancho California and Thompson Transportation Center. Final boundaries have been designated for the Palm Springs Municipal Airport and the Hemet-Ryan Airport. Experience in developing the final boundaries at these two airports led to a change in the ALUC's Rules and Regulations for defining airport-influenced boundaries.

2. As a result, each interim influenced boundary must be reviewed against the new criteria and the area redesignated or a new influenced area boundary defined, if deemed necessary.

B. Airport Influenced Area Boundaries

1. Airport Influenced Area Boundaries will be determined by the ALUC on the basis of the type of airport, type of aircraft expected to use the airport, aircraft flight patterns and altitudes, noise levels, Federal Aviation Administration (FAA) criteria concerning objects affecting navigable airspace as established in Part 77 of the Federal Aviation Regulations (FAR Part 77) or a combination of these factors.

2. The boundaries will be adjusted in so far as possible to follow roads, section lines, canals, aqueducts, or other natural features that will provide for easy identification of the boundaries.

3. If practicable, parcel maps will be used in defining the boundaries.

4. Existing land uses within the airport-influenced boundaries will be documented so that those areas already devoted to incompatible uses can be identified.

C. Land Use Planning Areas

1. Three land use planning areas will be determined by the ALUC within each airport-influenced area boundary described in B above. The description of each planning area will be based upon the criteria below. This criteria may be changed, as necessary, to meet conditions for specific airports.

2. Area I

The imaginary approach surface defined by FAR Part 77, Objects Affecting Navigable Airspace, as the approach surfaces for the size and type of runways at each airport. These areas are always centered on the runway centerlines extended.

3. Area II

An area defined by the ALUC to be those areas of significant safety conce These safety concerns are due to aircraft maneuvering, ascending, descending, turning, and changing power settings when landing or taking off from the airport. These areas may bend to accurately reflect actual flight paths utilized.

4. Area III

The outer boundary of each airport-influenced area, as defined by the ALUC per paragraph B above. Areas I and II are considered to be a part of Area III.

5. The provisions for adjusting boundaries described in paragraphs B, 2 and 3 above, will be used in so far as possible in describing the boundaries of the Land Use Planning Areas.

CHAPTER III

Airport Land Use Commission Policies and Rationale

A. Safety Considerations

1. Policy 1: Area I shall be kept free of all high risk land uses. (See Appendix B). Residential development (2½ acre lot size and larger) will be permitted only within areas designated by the ALUC to be so far removed from the actual flight paths or to be in areas where aircraft will have gained sufficient altitude that they no longer pose a relative safety threat, should inflight problems occur.
2. Rationale for Policy 1: The approach surfaces are specifically defined by Federal Aviation Regulations. These areas carry the highest volume of air traffic due to the fact that all aircraft have to align with these areas to land or take-off on the runways. Aircraft have a higher tendency to have problems within these zones due to changing power settings to take-off or land. The convergence of all aircraft landing and taking-off within these narrow zones also means that the noise levels are highest in these zones. Due to these factors and the accepted Federal definition of the boundary of these surfaces, the area was deemed inappropriate for housing and high risk uses. Certain areas of approach zones may be deemed appropriate for large lot (dispersed) residential use because over this area aircraft have achieved higher altitude and may be turning out of the approach zone away from the area in question. Therefore, the relative risk is not as great as in other areas of the approach zone.
3. Policy 2: Area II shall have a minimum residential lot size of 2½ acres. Agricultural, industrial and commercial uses are acceptable in this area.
4. Rationale for Policy 2: Area II illustrates the general flight paths of the various types of aircraft using the airport. The hazards in

this area are similar to those in Area I, the approach zones, but the influence of the same factors of landing, take-off and noise are not as severe and the aircraft are higher in altitude. Therefore, the proposed policy is not as severe. The boundaries of the area will be established to coincide as much as possible to areas where aircraft would be in the landing - take-off pattern and would be turning and applying or reducing power (again, higher risk of something happening.)

B. Noise Considerations

1. Policy 3 - Within Area III, avigation easements will be required for all land uses. The height of the avigation easements will be from runway ground elevation within Area I, the defined approach surfaces, and from 150 feet above runway ground level elevation throughout the remainder of Areas II and III.

2. Rationale for Policy 3. Activity directly related to the airports does not extend much beyond the area defined as the airport-influenced area. This is the area influenced by airport operations and aircraft noise. Prospective buyers of land within the area should be notified that aircraft will be in the area and that some may be noisy or produce other ancillary effects such as glare or vibration. Avigation easements are a legal basis wherein the landowner basically acknowledges that aircraft and ancillary effects are present in the airspace overhead, and gives up any future right to sue regarding the acknowledged effects and their impact upon the enjoyment of his property or change in property value. Avigation easements are permitted and defined by the Public Utilities Code, Section 21652. The requirement for avigation easements allows property to be developed in the airport-influenced area for residential and other land uses, but offers constructive notice to future buyers; and protection to the airport that people

choosing to live and/or work in the influenced area will not have a legal basis for suit, which would jeopardize the airport operation and presence.

3. Policy 4 - New housing to be constructed within the noise level specified by the ALUC for each airport shall be sound-proofed as necessary to achieve interior annual noise levels attributable to exterior sources, not to exceed 45 dB (CNEL of Ldn) in any habital room with windows closed.

4. Rationale for Policy 4. An important element of this plan is the selection of a noise standard determining residential land use compatability. There is a great deal of information available on the subject. Not all of the information is consistent. The State of California Noise Standards for Airports established 65 CNEL as the long range (1986) criteria for excluding residential uses without soundproofing. The Environmental Protection Agency uses 55 Ldn (equivalent to CNEL) as the minimum outdoor level of noise that they can predict with confidence will not be detrimental to health or welfare. The County of Riverside General Plan establishes 60 Ldn or CNEL as the level above which residential uses should be discouraged. In addition to these various recommended standards, some references (see Appendix C) point out that the acceptable noise standard may vary according to location. These studies suggest that, because of the difference in background noise levels, the standard for quiet rural areas could be as much as 20 dB less than for established but very noisy urban residential communities near busy roads, industrial areas, or airports. These studies also suggest that the standard could be adjusted based upon previous exposure and community attitudes by as

much as 15 dB from a community with no prior experience with the intruding noise (such as at a new airport) to those communities that have had considerable previous exposure and are aware that the noise source is necessary and operating for their benefit (such as military airports) or that the noise will not continue indefinitely (such as emergency or fire bomber operation). Because of these various considerations, the ALUC expects to establish an appropriate noise standard at each airport based upon all of the mentioned considerations. This standard will be an integral part of that specific airport land use plan and will delineate that area within which soundproofing of new housing will be acceptable.

5. Airport Consideration

Policy 5 - Development of Airport Master Plans or Layout Plans, or changes to existing plans of any public use airport that involve significant changes in land use, noise sources, or policy changes in size or type of aircraft to use the airport will, prior to finalizing or modifying the plans, be referred to the ALUC for consideration.

6. Rationale for Policy 5. New master plans, layout plans or changes thereto or physical expansion of airports that change the operational capabilities of the airport may require changes in the airport land use plan pertaining to that airport. Thus, referral to the ALUC is necessary. It is also required by Section 21676 (c) of the PUC. The Commission must make a determination within 60 days from date of referral whether the proposed action is consistent or inconsistent with ALUC Land Use Plan for that airport. A public agency may, under certain conditions, over-rule the ALUC recommendations.

CHAPTER IV

Riverside County Airport Land Use Plans

A. Introduction

This chapter will document by reference, the airport land use plans as formulated and adopted by the ALUC for each public use airport in the County. Thus, this chapter will be amended from time to time to incorporate the individual plans as they are prepared and approved by the various jurisdictions involved and the ALUC. At this time, plans have been formulated for two airports, Palm Springs Municipal and Hemet Ryan.

B. Airport Land Use Plans

1. Palm Springs Municipal Airport. Plan prepared by City of Palm Springs. Adopted by the ALUC October 10, 1974. Plan is on file with the Riverside County Aviation Department.

2. Hemet Ryan Airport. Plan prepared jointly by City of Hemet, County of Riverside and ALUC. Adopted by the ALUC September 22, 1983. Plan is on file with Riverside County Aviation Department.

CHAPTER V

IMPLEMENTATION

A. Consultation with Affected Local Planning Agencies

1. Subsequent to the designation or redesignation of interim airport-influenced areas and designation of planning boundaries (per Chapter II), local planning agencies whose jurisdiction or projected LAFCO approved sphere of influence are affected by these designations will be notified. Their cooperation in the finalization of the boundaries will be sought. If required, a subcommittee structure of ALUC commissioners will be designated to hear and consult with local commissioners to resolve differences. Subcommittees organized under this concept will, after considering all facets and negotiating solution acceptable to individual subcommittee members, prepare a position paper delineating their recommendations to their respective jurisdiction.

2. Before final consideration of airport-influenced areas, associated planning boundaries and individual Airport Land Use Plans, environmental documentation required by Commission rules for implementing the California Environmental Quality Act will be prepared by the local jurisdiction with the cooperation of the ALUC. The Commission will consider the results of this documentation prior to finalizing planning boundaries and land use plans.

B. Land Use Changes after Finalization of Planning Boundaries

1. After final adoption of the Airport Land Use Plan and planning boundaries by the ALUC, the plan will be considered as the comprehensive land use plan required by Section 21675 of the PUC.

2. The plan designating final planning boundaries and land uses therein will be provided each jurisdiction affected. The affected jurisdiction's general plan, and any applicable specific plan, shall be amended within

180 days of receipt of the ALUC plan to be consistent with that plan per Section 65302.3 of the California Government Code (General Planning Law).

3. In the event that the legislative body of the affected jurisdiction does not concur with any provisions of the ALUC approved plan, it may satisfy the provision of the Government Code Section 65302.3 by over-riding the ALUC by a two-thirds vote of its governing body if it makes specific findings that the proposed action is consistent with the legislative purposes defined in Section 21670 of the PUC.
4. If the affected public agency over-rides the ALUC plan and does not itself operate the public owned airport involved, the operator of the involved airport shall be immune from liability for damages to property or personal injury caused by or resulting directly or indirectly from the public agencies decision to over-ride the ALUC plan.

C. Land Use Changes Before Finalization of the Planning Boundaries

1. After redesignation of the interim airport-influenced boundaries per Chapter II A2 affected local jurisdictions will be notified. They will be asked to refer all land use cases (Tentative Tract Maps, Parcel Maps, Conditional Use Permits, Changes of Zone, General Plan and Specific Plans) that would change or have the potential to change property within the interim-influenced area from currently compatible uses to uses that would be incompatible with the airport activities to the ALUC for review and recommendation.
2. ALUC recommendation before finalization of this plan and planning boundaries would fall within the powers and duties assigned the ALUC per Section 21674 of the PUC. That is, "to assist local agencies in ensuring compatible land uses in the vicintiy of all new airports and in the vicinity of existing airports to the extent that the land in the vicinity of such airports is not already devoted to incompatible uses." Local agencies would be encouraged to consider the ALUC recommendations.

Appendix A

RULES OF THE RIVERSIDE COUNTY AIRPORT LAND USE COMMISSION

Adopted and Effective June 17, 1982

ARTICLE I. AUTHORITY. The Commission shall exercise the authority, powers, and duties of an airport land use commission as provided in Public Utilities Code, Section 21670 et seq.

ARTICLE II. OBJECTIVE. It shall be the objective of the Commission to promote the orderly development of each public airport and its area of influence in such manner as to safeguard the general welfare of the inhabitants of such areas and the public in general, to assure the safety of air navigation, and to encourage the growth of air commerce.

ARTICLE III. MEMBERSHIP, PROXIES AND OFFICERS.

Section 3.1. MEMBERSHIP. The Commission consists of seven members, the five members of the Riverside County Aviation Commission and two members elected at large by the Committee of Mayors of the cities of Riverside County.

Section 3.2. PROXIES. Each member shall promptly appoint a single proxy to represent him on Commission affairs when the member is not in attendance. The proxy shall be designated in a signed written instrument which shall be kept on file at the Commission offices, and the proxy shall serve at the pleasure of the member who appointed him. A vacancy in the office of proxy shall be filled promptly by appointment of a new proxy.

Section 3.3. OFFICERS. A chairman and a vice chairman shall be elected by a majority vote of the Commission at the first meeting in July of each year. The vice chairman shall

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serve in the absence of the chairman and until a new chairman is elected if a vacancy occurs. In case of a vacancy in either of these offices, the Commission shall elect a successor at the next succeeding regular meeting of the Commission after the vacancy is created to serve the unexpired term.

ARTICLE IV. DEFINITIONS. As used in these rules, the following words shall be defined as follows:

Section 4.1. Airport. An area of ground designated and intended for the taking-off and/or landing of aircraft. Heliports and stolports both will be considered to be airports for the purposes of implementing these rules and formulating land use plans.

Section 4.2. Airport-Influenced Area. An area, around each specified airport, that is designated by the Commission and which is,

or reasonably may become, affected by airport-related noise, fumes or other influence, or which may be now or in the future, a site for a hazard to aerial navigation.

Section 4.3. Commission. The Riverside County Airport Land Use Commission.

Section 4.4. Heliport. An area designated and intended for the taking-off and landing of helicopters or other types of aircraft capable of vertical ascent and descent, whether or not the area is located on a building or a platform.

Section 4.5. Local Planning Agency. The County, a city, more than one city, or a combination of the county and cities, which have the authority to plan for and zone all or any part of the land which has been designated by the Commission as being in an airport-influenced area.

Section 4.6. Public Use Airport. Any airport which offers the use of its facilities by the public in general without prior notice and without specific invitation or clearance. Ownership of the airport, whether public or private, is not a factor. An airport owner may discriminate against use by a size or type of aircraft for which the facilities are not adequate without altering the status of the airport as a public use airport.

Section 4.7. Private Use Airport. Any airport, regardless of whether the airport is publicly or privately owned, which allows use of its facilities only by the owner and his invitees.

Section 4.8. Type of Airport. Airport types are defined by Federal Aviation Regulations based on runway length, width, bearing strength and obstruction clearance. Airport type is therefore directly related to the numbers, sizes and categories of aircraft that can be accommodated.

ARTICLE V. AIRPORT-INFLUENCED AREAS.

Section 5.1. Criteria for Designation. An airport-influenced area shall be designated around each public use airport in Riverside County. The boundaries of the area shall be determined by the Commission on the basis of the type of airport, type of aircraft expected to use the airport, aircraft flight altitudes, flight patterns, noise levels, and Federal Aviation Administration criteria concerning objects affecting navigable airspace as established in Part 77 of the Federal Aviation Regulations. Both current information and anticipated 20 year

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airport growth may be considered by the Commission in defining the airport-influenced area.

Section 5.2. Interim Designation of Airport-Influenced Areas. Pending the adoption of a comprehensive land use plan for each public use airport in the County, the Commission shall designate "Interim Airport-Influenced Areas." The "interim" classification shall be placed on areas determined by the Commission to be critical for future planning purposes. Local planning agencies in the area shall be notified of the interim designation and encouraged to consult the Commission and its staff concerning planning actions and regulations affecting the designated area.

Section 5.3. Procedure for Designation. The boundaries of airport-influenced areas shall be established by the Commission after hearing and consultation with the affected local planning agencies. The boundaries, whether interim or permanent, shall be defined to the maximum extent practicable by utilizing prominent features or landmarks of a permanent nature such as roads, power lines, railroad tracks, and developed properties.

ARTICLE VI. LAND USE PLANS.

Section 6.1. Formulation. The Commission shall formulate a comprehensive land use plan for all airport-influenced areas in the County as required by State Law. The land use plan shall reflect the anticipated growth of each airport during the next 20 years and shall be consistent with the State Master Airport Plan. Representatives of the airport owner and the local planning agencies will be asked to cooperate with the Commission and to provide expertise regarding the local areas. It is

intended that the local planning agencies that are affected by an area land use plan shall assist in the development of the plan.

Section 6.2. Land Use Plan Elements. A comprehensive land use plan may include, but is not limited to, compatible land uses, height restrictions on buildings, building standards including the soundproofing of buildings, and ground access to the airport. Land use designations and standards established by the local planning agencies in the area shall be used whenever possible if deemed appropriate by the Commission.

Section 6.3. Hearing. The Commission shall hold a public hearing in accordance with Article VIII of these rules prior to adoption of a land use plan.

ARTICLE VII. IMPLEMENTATION OF LAND USE PLANS.

Section 7.1. Local Planning Agencies. Local planning agencies will be encouraged and requested to implement the provisions of the Commission land use plan for each airport-influenced area by adopting a compatible General Plan, by appropriate zoning, and by other regulatory measures.

Section 7.2. Commission Review. The Commission shall review substantive changes in the General Plan, zoning, and other regulations or actions by local planning agencies affecting an airport-influenced area for consistency with the Commission land use plan for the area. Local planning agencies will be encouraged and requested to submit such changes to the Commission for review prior to final action by the agency. The Commission staff shall make an initial determination as to the consistency of such changes and shall report to the Commission. If the Commission finds such change to be consistent with the Commission land use

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plan, no further action shall be taken. If the Commission finds such change to be inconsistent with the Commission land use plan, a hearing shall be held pursuant to Article VIII of these rules to determine whether or not the change is in the best interest of the airport and the airport-influenced area. The findings and determination of the Commission shall be forwarded to the local planning agency upon the close of the hearing.

ARTICLE VIII. MEETINGS AND HEARINGS.

Section 8.1. Scheduling. Meetings shall be scheduled by the Commission to consider matters relevant to its duties and responsibilities when requested by the chairman, two or more of the Commission members, a local planning agency, or as scheduled by the Secretary to the Commission in accordance with a request for hearing pursuant to Section 8.2 below. A hearing also may be scheduled when requested by any interested party that claims that a matter being considered by a local planning agency, or that action taken by a local planning agency, is not consistent with the Commission approved plan for an airport-influenced area. A request for hearing by an interested party shall be filed simultaneously with both the Commission and the local planning agency. If the matter is under consideration by the local planning agency, the Commission staff may request that the local planning agency take no final action on the matter for a period of not less than 60 days in order to receive the Commission's recommendation.

Section 8.2. Processing of Hearing Requests. Requests for hearing, except when initiated by the Commission in session, shall be submitted either on forms provided by the

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Commission or in letter form. The request shall fully and fairly state the reason for the request and shall provide property descriptions, maps and other material necessary to fully understand the matter for which a hearing is being requested. Within the 21 days after receipt of a request for hearing, the Commission's staff shall determine if the matter for which the hearing is being requested is within the purview of the Commission. If the matter is a proper subject for a Commission hearing, a date for the hearing shall be set no more than 50 days following the original filing of the request for hearing.

Section 8.3. Notice of Hearing. Notice of the date, time, place and subject matter of each hearing shall be given at least 15 days prior to the hearing by publication at least once in a newspaper of general circulation in the County which is circulated in the area in which the subject matter of the hearing is located. Notice of hearing shall also be given by mail at least 15 days prior to the hearing to the local planning agency or person requesting the hearing and to all public agencies having an interest in the matter to be heard.

Section 8.4. Rules of Hearing. The order of the hearings held by the Commission shall be:

(a) Open hearing.

(b) Staff to present evaluation.

(c) Proponents to present case.

(d) Opponents to present case.

(e) Rebuttal by proponents.

(f) Any member of the Commission to call for

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such additional information, pros and cons, in the order desired.

(g) Close hearing.

(h) Commission discussion and deliberation.

(i) Motions and voting.

Section 8.5. Quorum and Voting. A majority of the members of the Commission shall constitute a quorum. Actions of the Commission shall be by vote of a majority of the members of the whole Commission.

ARTICLE IX. TEMPORARY DISQUALIFICATION OF COMMISSION MEMBERS.

Section 9.1. A Commission member shall disqualify himself from taking part in any discussion and from casting a vote in accordance with the Conflict of Interest Code adopted by the Commission or as otherwise required by law.

Section 9.2. Disqualification of Commission Member by Challenge. The qualification of any member to take part in the Commission deliberations and voting may be challenged by any interested party. The Commission chairman shall evaluate the challenge and the testimony presented and then rule upon the qualification of the challenged member. If the chairman is the member so challenged, he shall immediately surrender his chair to the vice chairman, who will act as chairman until the qualification of the challenged member has been decided.

Section 9.3. The proxy for a disqualified member shall serve for the member during deliberations and voting on any matter as to which the member has been disqualified.

ARTICLE X. STAFF. The Riverside County Aviation Director shall serve as Secretary to the Commission and shall be its Administrative Officer. The members of the Aviation Director's staff shall be available to serve as staff members of the Commission.

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Appendix B

HIGH RISK LAND USE EXAMPLES

The following is a list of examples of high risk land uses. In general, high risk land uses have one or more of the following characteristics:

(1) high concentration of people,

(2) critical facilities, and

(3) flammable or explosive materials.

The following are examples of uses which have these higher risk characteristics. This list is not complete and each land use application shall be evaluated for its appropriateness given airport flight activities:

Places of Assembly:

auditoriums, churches, schools, carnivals, drive-in theaters, etc.

High Patronage Services:

bowling alleys, restaurants, theaters, motels, banks, etc.

Large Retail Outlets:

department stores, supermarkets, drug stores, etc.

Residential:

smaller than 2-1/2 acre lot sizes.

Critical Facilities:

telephone exchanges, radio/t.v. studies, hospitals, etc.

Flammables:

bulk fuel storage, gasoline and liquid petroleum service stations, manufacture of plastics, breweries, feed and flour mills, etc.

Source: Hemet Ryan Airport Land Use Plan

APPENDIX C

Adjustments to the Measured Community Noise Equivalent Level (CNEL) to Obtain Normalized CNEL

Type of Correction	Description	Amount of Correction to be Added to Measured CNEL in dB
Seasonal Correction	Summer (or year-round operation).	0
	Winter only (or windows always closed).	-5
Correction for Outdoor Residual Noise Level	Quiet suburban or rural community (remote from large cities and from industrial activity and trucking).	+10
	Quiet suburban or rural community (not located near industrial activity).	+5
	Urban residential community (not immediately adjacent to heavily traveled roads and industrial areas).	0
	Noisy urban residential community (near relatively busy roads or industrial areas).	-5
	Very noisy urban residential community	-10
Correction for Previous Exposure and Community Attitudes	No prior experience with the intruding noise.	+5
	Community has had some previous exposure to intruding noise but little effort is being made to control the noise. This correction may also be applied in a situation where the community has not been exposed to noise previously, but the people are aware that bona fide efforts are being made to control the noise	0
	Community has had considerable previous exposure to the intruding noise and the noise maker's relations with the community are good.	-5
	Community aware that operation causing noise is very necessary and it will not continue indefinitely. This correction can be applied for an operation of limited duration and under emergency circumstances	-10
Pure Tone or Impulse	No pure tone or impulsive character.	0
	Pure tone or impulsive character present.	+5

Source: California Office of Noise Control

5.2 PRELIMINARY GEOTECHNICAL REPORT

G. A. Nicoll
and Associates, Inc.

November 4, 1987
Project 3657-01

Kaufman & Broad
5500 E. Santa Ana Canyon Road
Anaheim, California 92807

Attention: Ms. Linda Horning
Project Manager

Subject: Geotechnical Feasibility Investigation
May Company Parcel - 1000 Acres
Perris, California

Dear Ms. Horning:

1. INTRODUCTION

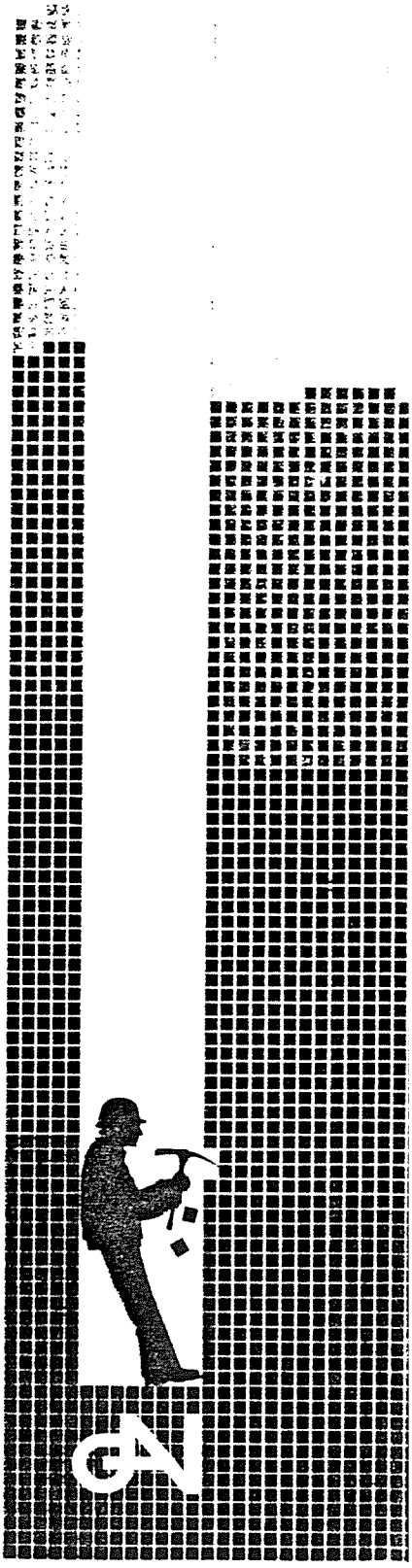
a) This report presents the results of our feasibility investigation for the proposed development in the Lake Perris area of California, encompassing approximately 1000 acres and consisting of two non-contiguous parcels.

b) The purposes of this investigation were: to determine the soil and geologic conditions of the project site, including ground water characteristics; to evaluate the effect of these conditions; and to provide geotechnical recommendations related to the feasibility of site development. Percolation testing was performed in areas of the site lying within the 100-year Floodplain for the purpose of designing percolation ponds.

2. PROJECT DESCRIPTION

a) We understand that proposed improvements at the project site consist of:

i) approximately 800 acres of residential and 200 acres of commercial construction;



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ii) a percolation pond on each of the parcels;

iii) utilities;

iv) related streets and parking.

b) Architectural, structural and grading plans are not available at present.

c) Riverside County Flood Control Maps, reduced to 1:4800 scale from 1:2400 scale were used as our base map.

3. **SCOPE**

The scope of services provided during this investigation is outlined below:

a) Review of available geotechncial reports and literature pertaining to the site;

b) Examination of stereoscopic aerial photographs, flown in 1976;

c) Geologic site reconnaissance;

d) Subsurface exploration, including 15 borings drilled by a truck-mounted hollow stem auger drill rig, and 20 exploratory test pits excavated by a rubber-tire backhoe;

e) Mapping of the subsurface profile, and obtaining bulk and undisturbed samples for purposes of classification and testing;

f) Percolation testing;

g) Laboratory testing of samples representative of those obtained in the field, in order to evaluate relevant engineering properties;

h) Geologic and engineering analyses of field and laboratory data;

i) The preparation of this report, presenting our findings, conclusions and recommendations.

4. FIELD EXPLORATION

a) The field exploration is described in Appendix A, which includes the logs of borings and test pits. The locations of borings and test pits are shown on the Geotechnical Map, Plates 1 and 2.

5. LABORATORY TESTING

The laboratory testing program, including descriptions of the tests and the results, are presented in Appendix B.

6. SITE DESCRIPTION

6.1 Location

The project site is located in the Perris Valley. The northerly parcel consists of approximately 700 acres and is bounded on the west by the Perris Valley Storm Drain, on the north and east by the Ramona Expressway and on the south by Placentia and Walnut Avenues. The southerly parcel consists of approximately 300 acres, is bisected by the San Jacinto River bed and is bounded by Dunlap Drive on the west, San Jacinto Avenue on the south, a turkey ranch on the north and the extension of Dawson Road on the east.

6.2 Surface Conditions

a) The project site consists of approximately 1000 acres of predominantly flat farmland which is presently uncultivated.

b) Elevations above Mean Sea Level range from 1410± feet to 470± feet. The north parcel drains to the southwest, whereas the south parcel drains towards the bed of the San Jacinto River in the middle of the site.

c) The underground Colorado River Aqueduct crosses the northerly parcel from west to east.

d) The limits of the 100-year Floodplain are shown on the Geotechnical Map, Plates 1 and 2. The 100-year Floodplain exists on the

northwest portion of the north parcel adjacent to the Perris Valley Storm Drain and covers the entire south parcel.

7. **GEOLOGY**

The project site is underlain by the Perris Valley alluvial floodplain deposits. Soils encountered during the field investigation generally consist of dense Silty and Clayey SAND and SAND with occasional SILT and CLAY interbeds within the north parcel. Soils encountered on the south parcel are similar except that they are capped by 5 to 7 feet of Sandy Clayey SILT. Caliche-rich soil layers were often encountered at a depth of 2 to 4 feet in the test pits.

8. **FAULTS**

No evidence of active faulting was encountered during our field investigation. The active San Jacinto Fault is located approximately 5 miles northeast of the site.

9. **GROUND WATER**

Perched ground water was encountered in Borings B-5 and B-12 at depths of 41 and 35.7 feet respectively. No flowing water was observed in the Perris Valley Storm Drain or the San Jacinto River during our field investigation.

10. **SEISMICITY**

a) Seismic risk in Southern California is a well recognized factor, and is directly related to geologic fault activity. Seismic damage potential depends on the proximity to active or potentially active fault zones, and on the type of geologic structures. In relative terms, seismic damage is generally less intense in consolidated formations, i.e. bedrock, than in unconsolidated materials, such as alluvium.

b) In Southern California, most of the seismic damage to man-made structures results from ground shaking and to a lesser degree from liquefaction and ground rupture caused by earthquakes along active fault zones. In general, the greater the magnitude of the earthquake, the greater the potential damage.

c) Seismic hazards at this site are attributed to ground shaking as a result of an earthquake epicentered on an active fault.

d) Figure 2 shows the geographical relationships among the site locations, nearby faults and the epicenters of significant occurrences. Figure 3 gives the seismic parameters affecting the subject site. During historic times a number of major earthquakes have occurred along the Whittier-Elsinore and San Jacinto Fault zones in Southern California. From the seismic history of these zones and their close proximity, the Whittier-Elsinore and the San Jacinto fault zones have the greatest potential for causing earthquake damage at this site. Based on past seismic history it can be assumed that the site will experience maximum repeatable ground accelerations on the order of .34g.

11. CONCLUSIONS AND RECOMMENDATIONS

11.1 General

a) It is our opinion that the site will be suitable for the proposed development, from the geotechnical aspect, assuming that our recommendations are implemented.

b) We are of the opinion that the proposed structures can be supported on spread footings founded in reworked material.

c) We consider that the anticipated grading will not adversely affect, nor be adversely affected by, adjoining property, with due precautions being taken.

d) The grading plans, and foundation plans/design loads, should be reviewed by the Soil Engineer.

e) The recommendations given here should be reviewed during the final investigation phase.

TABLE OF SEISMIC PARAMETERS

POTENTIAL CAUSATIVE EARTHQUAKE FAULT	CLOSEST DISTANCE FAULT TO SITE (miles)	HISTORY OF EARTHQUAKES OVER 6 RICHTER MAGNITUDE WITHIN 70 MILE RADIUS			MAXIMUM PROBABLE EARTHQUAKE			
		Date	Richter Magnitude	Distance from Site (miles)	Richter Magnitude	Peak Horizontal Bedrock Acceleration at Site (gravities)	Maximum Repeatable Ground Acceleration* (gravities)	Duration of strong Shaking (seconds)
San Andreas Fault (South of Garlock Fault)	18 SW	12/4/48	6.5	47	8.25	.34	.22	36
San Jacinto Fault	5 SW	4/21/18 7/23/23	6.8 6.3	14 11	7.2	.53	.34	26
Whittier-Elsinore Fault	15 NE	5/15/10 10/1/87	6.0 6.1	14 48	6.5	.23	.15	18
Cucamonga Fault	28 SW				6.75	.13		21
Newport-Inglewood Fault	39 NE	3/11/33	6.3	49	6.5	.07	.13	18

*The repeatable high ground acceleration taken as 65 percent of the peak acceleration for sites within 20 miles of the epicenter (after Ploessel and Slosson, 1974), may be more applicable for design analysis.

G. A. NICOLL & ASSOCIATES, INC.
EARTH SCIENCE CONSULTANTS

MAY CO. PARCEL - PERRIS

Date: November, 1987

Project No: 3657-01

Figure No: 3

11.2 Grading

11.2.1 Processing of On-Site Soils

a) i) The existing soils are generally not considered adequate as foundation material without densification. Therefore, the soils should be overexcavated and reworked within the foundation zone.

ii) The foundation zone shall be taken to extend below footings to a depth equal to twice the footing width for the northern parcel and to thrice the footing width for the southern parcel, and to extend beyond the edges of footings a distance equal to the depth of the foundation zone below footings.

iii) For the anticipated loads, the depth below continuous footings need not exceed 2 feet for the north parcel and 3 feet for the south parcel, and below column pads need not exceed 3 feet for the north parcel and 4 feet for the south parcel, subject to review when plans are finalized.

b) Wherever structural fills are to be placed, the upper 6 to 8 inches of the subgrade should, after stripping or overexcavation, first be scarified and reworked.

c) There should be at least 15 inches of reworked existing material or compacted fill under slabs-on-grade.

d) Any loosening of reworked or native material, consequent to the passage of construction traffic, weathering, etc., should be made good prior to further construction.

e) The depths of overexcavation should be reviewed by the Soil Engineer during the actual construction. Any surface or subsurface obstructions, or questionable material, encountered during grading should be brought immediately to the attention of the Soil Engineer for proper exposure, removal or processing as directed. No underground obstructions, facilities or structural elements from demolished buildings should remain in any structural areas. Depressions and/or cavities created as a result of the removal of obstructions should be backfilled properly with suitable material, and compacted.

11.2.2 Material Selection

After the site has been stripped of any debris, vegetation and organic soils, excavated on-site soils are considered satisfactory for reuse in the construction of on-site fills, provided the organic content does not exceed 3 percent by volume.

11.2.3 Compaction Requirements

a) Reworking/Compaction shall include moisture-conditioning/drying as needed to bring the soils to approximately the optimum moisture content. All reworked soils and structural fills should be densified to achieve at least 90 percent relative compaction with reference to the laboratory compaction standard. The optimum moisture content and maximum dry density should be determined in the laboratory in accordance with ASTM Test Designation D1557.

b) Fill should be compacted in lifts not exceeding 8 inches (loose).

11.2.4 Excavating Conditions

a) Excavation of on-site materials may be accomplished with standard earthmoving or trenching equipment. No hard rock was encountered which would require blasting.

b) Consolidation test results for a sample obtained at 9 feet depth in Boring B-11 indicates the presence of collapsible soils. The extent of collapsible soils, if any, should be determined during the final design investigation.

c) Ground water was encountered at depths as noted. Dewatering is not anticipated due to deeper depths to ground water.

11.2.5 Shrinkage

a) For preliminary earthwork computations, the following shrinkage factors are recommended for the existing on-site materials.

i) North Parcel - 5 to 10%

ii) South Parcel - 10 to 20%

b) Subsidence may be assumed at 1½ inch.

11.2.6 Expansion Potential

Expansivity of the existing site soils is considered to range from Low to Moderate. Any imported material, or doubtful material exposed during grading, should be evaluated for their expansive properties.

11.2.7 Sulphate Content

The sulphate contents of representative samples of the soil are less than the 0.2% which typifies a sulphate condition. Type II Portland cement is recommended for the construction.

11.2.8 Utility Trenching

a) The walls of temporary construction trenches should stand nearly vertical, with only minor sloughing, provided the total depth does not exceed about 4 feet. Shoring of excavation walls or flattening of slopes may be required, if greater depths are necessary.

b) Trenches should be located so as not to impair the bearing capacity or settlement under foundations. As a guide, trenches should be clear of a 45-degree plane extending outward and downward from the edge of foundations.

c) Existing soils may be utilized for trench backfill, provided they are free of organic materials.

d) All work associated with trench shoring must conform to the State of California Safety Code.

11.2.9 Surface Drainage Provisions

Positive surface gradients should be provided adjacent to the buildings to direct surface water run-off away from structural foundations and to suitable discharge facilities.

11.3 Tentative Building Design Recommendations

(Note: These are tentative recommendations provided principally for purposes of initial planning. Final design parameters will be provided at the final design investigation stage, and/or when rough grading is completed, and structural criteria are made available to this firm.)

11.3.1 Slabs-on-Grade

a) Concrete floor slabs may be founded on the reworked existing soils or compacted fill. The subgrade should be proof-rolled just prior to construction

to provide a firm, unyielding surface, especially if the surface has been loosened by the passage of construction traffic.

b) If a floor covering that would be critically affected by moisture is to be used, a plastic vapor barrier is recommended. This sheeting should be covered with two inches of SAND.

c) Floor slabs should be at least 4 inches thick. Joints should be provided.

d) The FFL should be at least 6 inches above highest adjacent grade.

e) Precautions in respect of expansive soils should be taken as follows:

	Very Low to Low Expansivity	Moderate Expansivity
i) Min. reinforcement	6x6-W1.4xW1.4 WWF	6x6-W1.4xW1.4 WWF
ii) Pre-soaking (% of optimum)	Not required	120%, through upper 12 to 15 inches

11.3.2 Foundations

The proposed structures, of the type anticipated can be founded on shallow spread footings. The criteria presented as follows should be adopted:

		Minimum Width (ft.)	Minimum Thickness (in.)	Minimum Embedment below lowest adjacent grade (ft.)
Equivalent 1-story wall footings (supporting 1 floor)	(Perimeter	1.0	6	1.5
	(Interior			1.0
Equivalent 2-story wall footings (supporting 2 floors)	(Perimeter	1.25	7	1.5
	(Interior			1.5
Square Column Footings (up to 50 kip)		-	-	2.0
Square Column Footings (51 to 80 kip)		-	-	2.5

b) Allowable Bearing Capacity

2,000 lb/ft^2 at 1.5 ft. depth

2,400 lb/ft^2 at 2.0 ft. depth

2,800 lb/ft^2 at 2.5 ft. depth

(Notes:

- These values may be increased by one-third in the case of short-duration loads, such as induced by wind or seismic forces.
- It should be ensured that the embedment depths do not become reduced or adversely affected by erosion, softening, planting, digging, etc.
- Planter areas should not be sited adjacent to walls.
- The footings adjacent to the slopes should be sited so that the horizontal distance from the bottom of the leading edge of a footing to the competent slope face should be at least 1/5 x slope height, and not less than 6 feet; the distance need not exceed 15 feet.
- Footing excavations should be observed by the Soil Engineer.
- Bearing capacities should be re-evaluated when loads have been obtained and footings sized during the preliminary design.
- In the event that footings are founded in structural fills consisting of imported materials, the allowable bearing capacities will depend on the type of these materials and should be re-evaluated.)

11.3.3 Lateral Forces

a) i) The following lateral design forces are tentatively recommended for the design of retaining structures not exceeding 10 feet in total height. Because no wall locations are currently identified, and local conditions are expected to vary significantly, each individual wall site must be analyzed separately at a future date.

Lateral Force	Soil Profile	Pressure - (lb/ft²/ft depth) Unrestrained Wall	Rigidly Supported Wall
Active Pressure	Level	40	-
At-Rest Pressure	Level	-	65
Passive Resistance (ignore upper 1.0 ft.)	Level	350	-

ii) Friction coefficient - 0.40.

iii) These values apply to the typical existing soils as well as most compacted backfill generated from in-situ materials, with expansivity not rated greater than "Moderate".

iv) It is recommended that, where feasible, imported granular backfill be utilized, for a width equal to approximately ⅓ the wall height, and not less than 1.5 feet.

v) Backfill should be placed under engineering control.

vi) Subdrains should be provided behind retaining walls. The use of water stops/impermeable barriers should be considered for any basement construction.

11.4 Pavement Design

The R-Value should be obtained during the concluding stages of grading and the final paving sections designed at that time.

11.5 Percolation Testing

a) Results of percolation testing are included in Appendix C.

b) The following percolation rates were obtained during our testing:

i) North Parcel - 7.4 to 14.3 min/in.

ii) South Parcel - 42.9 to 75.0 min/in.

c) In our opinion, the percolation rates for the north parcel are generally acceptable, however for the south parcel, the rates are generally unacceptable due to the presence of surficial Silty soils. It is recommended that the percolation rate be established within the Sandy soils beneath surficial Silty soils, in order to determine if deeper percolation ponds are feasible from a percolation standpoint. The developer should consider the construction feasibility of deeper percolation ponds.

11.6 Seismicity

a) Buildings should be designed to resist seismic lateral loading in accordance with Uniform Building Code Section 2312 for Seismic Zone 4.

b) The potential for liquefaction is considered to be negligible.

12. LIMITATIONS

a) Soils and bedrock over an area show variations in geological structure, type, strength and other properties from what can be observed, sampled and tested from specimens extracted from necessarily limited exploratory borings and test pits. There are therefore natural limitations inherent in making geologic

and soil engineering studies and analyses. Our findings, interpretations, analyses and recommendations are based on observation, laboratory data and our professional experience; and the projections we make are professional judgments conforming to the usual standards of the profession. No other warranty is herein expressed or implied.

b) In the event that during construction, conditions are exposed which are significantly different from those described in this report, they should be brought to the attention of the Soil Engineer.

The opportunity to be of continued service is sincerely appreciated. If you have any questions or if we can be of further assistance, please call.

Very truly yours,

G. A. NICOLL AND ASSOCIATES, INC.

Gerald A. Nicoll
President
CEG 34
(Exp. June 30, 1988)

Mohan B. Upasani
Senior Engineer
RCE 41196
(Exp. Mar. 31, 1991)

GAN/MBU/JG:cs

Enclosures:

Location Map	- Figure 1
Seismicity Map	- Figure 2
Table of Seismic Parameters	- Figure 3
Field Exploration	- Appendix A
Unified Soil Classification System	Figure A-1
Logs of Borings and Test Pits	Figures A-2 to A-26
Laboratory Testing Program	- Appendix B
Percolation Testing	- Appendix C
Test Results	Figures C-1 and C-2
Geotechnical Map	- Plates 1 and 2

APPENDIX A

Field Exploration

a) The proposed development site was explored during the period September 29, 1987 to October 2, 1987 by drilling a total of 15 borings to depths ranging between 15 and 50 feet and excavating 20 test pits to depths ranging between 3 and 10 feet. A truck-mounted hollow stem auger drill rig and a rubber-tire backhoe were utilized. All bore holes and test pits were subsequently backfilled. Locations of the borings and test pits are shown on the Geotechncial Map, Plates 1 and 2 (Locations and sizes of test pits are approximate).

b) The soils encountered in the borings and test pits are logged and sampled by our Engineering Geologist. The soils were classified visually in accordance with the Unified Soil Classification System described in Figure A-1. The logs are presented as Figures A-2 through A-26. (The logs, as presented, are based on the field logs, modified as required from the results of the laboratory tests.) Driven ring and bulk samples were obtained for laboratory inspection and testing. The depths at which bulk samples and driven ring samples were obtained are indicated on the logs.

c) The number of blows of the Kelly bar during sampling was recorded, together with the depth of penetration, the driving weight and the height of fall. The energy required per foot of penetration for given samples was then calculated, and is indicated on the logs. These drive energies provide a measure of the density or consistency of the soil.

d) Perched water was encountered at depths as noted on the Logs of Borings.

e) Caving did not occur.

APPENDIX B

Laboratory Testing Program

The laboratory testing program was directed towards providing quantitative data relating to the relevant engineering properties of the soils. Samples considered representative of site conditions were tested as described below.

a) Moisture-Density

Moisture-density information usually provides a gross indication of soil consistency. Local variations at the time of the investigation can be delineated, and a correlation obtained between soils found on this site and nearby sites. The dry unit weights and field moisture contents were determined for selected samples. *The results are shown on the Logs of Borings and Logs of Test Pits.

b) Compaction

Representative soil samples were tested in the laboratory to determine the maximum dry density and optimum moisture content, using the ASTM D1557 compaction test method. This test procedure requires 25 blows of a 10-pound hammer falling a height of 18 inches on each of five layers, in a 1/30 cubic foot cylinder. The results of the tests are presented overleaf:

*The dry unit weights and field moisture contents were also determined in the field using the Sand Cone Test Method.

Boring/ Test Pit No.	Sample Depth (ft.)	Soil Description	Optimum Moisture Content (%)	Maximum Dry Density (lb/ft³)
B-1	5-8	Silty SAND	10.0	130.5
B-1	15-20	Slightly Clayey SAND	9.4	128.1
B-15	4-8	Clayey SILT/Silty SAND	10.8	128.0
TP-13	3-4	Sandy Clayey SILT	21.8	102.3

c) Direct Shear

Direct shear tests were made on remolded samples, using a direct shear machine at a constant rate of strain. Variable normal or confining loads are applied vertically and the soil shear strengths are obtained at these loads. The angle of internal friction and the cohesion are then evaluated. The samples were tested at saturated moisture contents. The test results are shown in terms of the Coulomb shear strength parameters shown below:

Boring No.	Sample Depth (ft.)	Soil Description	Coulomb Cohesion (lb/ft²)	Angle of Internal Friction (°)	Peak/ Residual
B-1	5-8	Silty SAND	(160	27.0	Peak
			(80	28.0	Residual
B-15	4-8	Clayey SAND	(20	31	Peak
			(0	31	Residual

d) Expansion Index

Surface soils were collected in the field and tested in the laboratory in accorance with the ASCE Expansion Index Test Method, as specified by UBC Standard No. 29-2. The degree of expansion potential is determined from soil volume changes occurring during saturation of the specimen. The results of the tests are presented as follows:

Test Pit No.	Sample Depth (ft.)	Soil Description	Expansion Index	Expansion Potential
TP-13	3-4	Sandy Clayey SILT	40	Low to Moderate

e) Consolidation

Loads are applied to the test specimens in several increments in a consolidometer and the resulting deformations are recorded at selected time intervals. The rebound deformations on unloading are also recorded. Porous stones are placed in contact with the top and bottom of the specimen to permit the ready addition or release of water. Samples were tested at field and saturated moisture contents. The test results are shown in Figures B-1 and B-2.

f) Grain Size Analyses

Gradation on representative samples were obtained. The results are shown on the grain size distribution charts on Figures B-3 and B-4.

g) Sulphate Content

Representative soil samples were analyzed for their sulphate content. The results are given below:

Boring/ Test Pit No.	Sample Depth (ft.)	Soil Description	Sulphate Content (%)
B-15	4-8	Clayey SAND	0.0522
TP-16	2-3	Clayey SILT	

APPENDIX C

Percolation Testing

1. General

The purpose of the percolation testing was to establish the percolation rate in areas of the site within the 100-year Floodplain. This rate is to be used to design percolation ponds for flood control.

2. Procedure

a) Backhoe Test Pits T-6, 7, 15 and 16 were utilized for percolation tests. The test pit locations are shown on the Geotechnical Maps, Plates 1 and 2. Borings 1 through 15 served as deep pits.

b) An approximate 8-inch diameter by 12-inch deep percolation pit was hand dug at the bottom of Test Pits T-6 and 7. A 12-inch square by 12-inch deep pitwas hand dug in the bottom of Test Pits T-15 and 16. The percolation pits were presoaked, allowed to drain and refilled prior to start of testing.

c) After presoaking, each pit was filled with water and water level measurements were taken at intervals over a period of 60 minutes for P-1 and P-2 and over a period of 360 minutes for P-3 and P-4. The

percolation tests were conducted in accordance with the county of Riverside, Department of Health, Waste Disposal Booklet.

d) Test results are given in Figures C-1 and C-2.

G. A. Nicoll
and Associates, Inc.

February 24, 1988
Project B3657

Kaufman and Broad of Southern California
5500 E. Santa Ana Canyon Road
Anaheim, California 92807

Attention: Linda Horning
Project Manager

Subject: Revised Geotechnical Recommendations
May Company Parcel - 1000 Acres
Perris, California

Reference: Geotechnical Feasibility Investigation
May Company Parcel - 1000 Acres, Perris, California
by G. A. Nicoll and Associates, Inc., dated November 4, 1987, Project 3657-01.

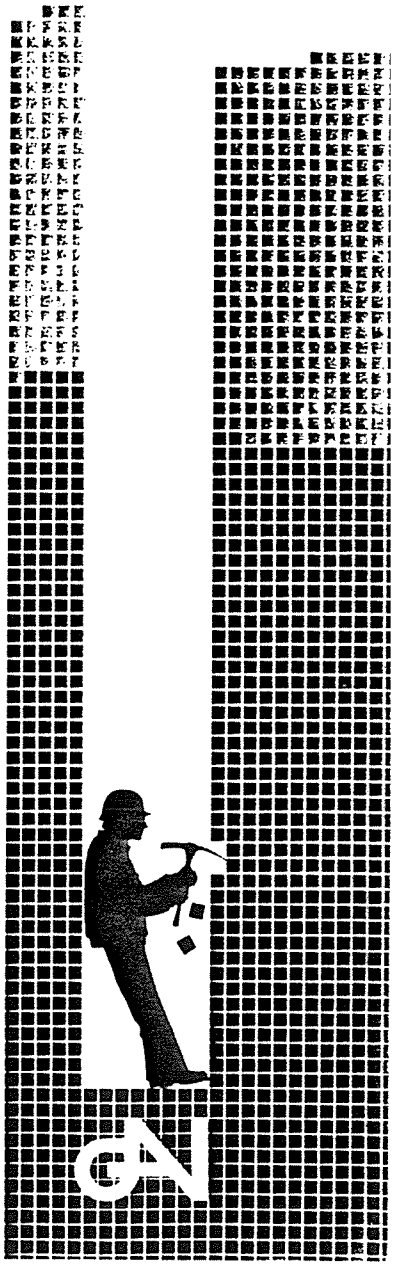
Gentlemen:

1. INTRODUCTION

a) As requested, we have reviewed the recommendations made in the referenced report for the May Company Parcel in Perris, California.

b) This review presents clarification of the previous recommendations with pertinent revisions and additions, as appropriate.

c) These and all other pertinent recommendations in this and the referenced report are provided as preliminary design criteria for feasibility evaluation and should be reviewed on a site specific basis during subsequent investigations and during construction.



Geologic and Soil Engineers
Corporate Office
15621 Red Hill Avenue, Suite 210, Tustin, CA 92680, (714) 259-9111
Inland Empire Office
1894 Commercenter West, Suite 108, San Bernardino, CA 92408, (714) 884-5664

2. RECOMMENDATIONS

2.1 General

a) It is our opinion that the site will be suitable for a development of the type proposed from a geotechnical standpoint, assuming that pertinent recommendations are followed.

b) These recommendations are intended to supplement and replace, where necessary, the recommendations made in the referenced report. All previous recommendations, not addressed in this report, remain valid.

c) The areas of concern, as expressed to us by Ms. Linda Horning of your office, involve processing of on-site soils, slabs-on-grade, and foundation design criteria. Our current recommendations pertaining to these areas are herewith presented.

d) Other concerns involving the suitability of on-site rocky materials for select fill and backfill are being handled under separate cover and scope.

2.2 Grading

2.2.1 Processing of On-Site Soils

a) Topsoil, which contains appreciable organic matter (more than 3%) varies in thickness from negligible to about 2 feet.

b) The upper approximately 3 feet of natural soils are generally loose and dry, and should be moistened and recompacted within foundation zones to reduce the potential for settlement due to hydro-consolidation and/or densification under the anticipated light residential foundation loads. These foundation zones should be interpreted as extending in depth at least 1½ feet below the footing base, and at least 5 feet horizontally, outside the foundation and

building perimeters. For heavily loaded column footings in the range of 20 to 50 Kips and for commercial structures, additional depth of overexcavation of up to the thickness of the upper loose soils may be necessary.

c) Where the foundation depth is greater than 3 feet below natural grade, overexcavation probably will not be necessary, provided no loose, low density soils exist and the upper 8 inches of foundation soils are moistened and recompacted in place.

d) In transition cut to fill lots, all footing zones should be overexcavated to provide at least 2½ feet of compacted fill beneath the footing base throughout. This recommendation is to provide assurance that the structure will have relatively uniform support and will not be subject to consequential differential settlements that often occur between cut and fill areas.

2.2.2 General - These grading recommendations regarding processing of on-site soils and overexcavation are preliminary and are for feasibility evaluation only. They are subject to review when the actual site/soil conditions are determined through site specific investigations and/or are exposed in each lot area during construction.

2.3 Slabs-On Grade

a) Concrete floor slabs should be founded on at least 12 inches of compacted soils, especially in cut to fill transition areas and where the slab grade is within the upper 3 feet of existing natural soils.

b) In areas where the cut is deeper than 3 feet and where dense soils are known to exist at slab grade, or where the fill depth in the building pad areas exceeds 12 inches, the slab subgrade need only to be moistened and proof-rolled prior to construction to identify only loose areas and to provide a firm unyielding surface for support of the slab.

c) Interior slabs sould be 4-inch nominal thickness (minimum of 3½ inches), structural considerations not withstanding. Reinforcement may be required due to soil expansion which is considered to be in the range of Low to Moderate.

d) These recommendations are preliminary and for feasibility evaluation only. They are subject to review when the actual soil conditions are identified in each slab area through subsequent investigations and during construction.

2.4 Tentative Foundation Design Recommendations

a) These tentative recommendations are provided principally for purposes of initial planning. Final design information should be provided after preliminary and final investigations and reviews are completed. This work can only be done after grading and structural design information is made available to us.

b) Accordingly, the proposed single-family residential structures can be founded on spread footings after all previous recommendations are followed. The minimum foundation design criteria presented below may be considered:

DIMENSIONS/EMBEDMENT DEPTHS

	Minimum Footing Width (ft.)	Minimum Depth Below Lowest Adjacent Grade (ft.)
Building walls supporting 0 to 1 floor (one two-story structure)	1.0	1.0
Building walls supporting 2 to 3 floors (three-story and split level structures	1.25	1.5
Column Footings (20 to 50 kips)	-	2.0

c) Allowable Bearing Capacities

2,000 lb/ft^2 for continuous footing

2,400 lb/ft^2 for column footings

Notes: °The bearing capacity values may be increased by one-third to allow for short-term loads, such as from wind and seismic forces.

°Footing reinforcement may be required due to soil expansive forces.

°These bearing capacities could be revised, if necessary, depending on the nature of structural fills used, especially in commercial areas, and when the actual footing loads and sizes are known.

3. MISCELLANEOUS

a) The recommendation provided in this report and the previous report are preliminary and predicated on anticipated soil conditions which are considered to have a Low to Moderate expansion potential. If the exposed soil conditions during grading appear different, they should be tested and the recommendations modified accordingly.

b) When the location of structures, especially commercial, are known and the conceptial grading plans developed, a preliminary investigation can be planned. After the final grading plans and foundation plans, with anticipated loads, are made available to us and reviewed by the Geotechnical Engineer, final design criteria can be presented.

4. LIMITATIONS

a) Soils and bedrock over the project area show variations in geological structure, type, strength and other properties from what can be observed, sampled and tested from specimens extracted from necessarily limited exploratory borings and test pits. There are therefore natural limitations inherent in making geologic and geotechnical engineering studies and analyses. Our findings, interpretations, analyses and recommendations are based on observation, laboratory data and our professional experience; and

the projections we make are professional judgments conforming to the usual standards of the profession. No other warranty is herein expressed or implied.

b) In the event that during construction conditions are exposed which appear to be significantly different from those described in this and the referenced report, they should be brought to the attention of the Geotechnical Engineer.

The opportunity to be of continued service is sincerely appreciated. If you have any questions or if we can be of further assistance, please call.

Very truly yours,

G. A. NICOLL AND ASSOCIATES, INC.

Gerald A. Nicoll
President
CEG 34
(Exp. June 30, 1988)

Theodore H. Cody, P.E.
Project Engineer
RCE 20914, RGE 00227
(Exp. Sept. 30, 1989)

GAN/THC:cn

REGISTERED PROFESSIONAL ENGINEER
THEODORE HAROLD CODY
No. GE000227
Exp. Date 9-30-89
GEOTECHNICAL
STATE OF CALIFORNIA

5.3 CULTURAL RESOURCES

Case No. _____ Report No. _____

EA No. _____ STAFF USE ONLY

Date _____ Reviewed by _____

ARCHAEOLOGICAL ASSESSMENT FORM

Riverside County Planning Department

PROPERTY OWNER _____

ADDRESS _____ PHONE NO. _____

APPLICANT FLORIAN MARTINEZ ASSOCIATES for THE MAY PROJECT / CITY OF PERRIS

ADDRESS 5641 Red Hill Ave., Suite 205, Tustin, CA 92680 PHONE NO. (714) 259-9300

MAP PREPARER _____

ADDRESS _____ PHONE NO. _____

CONSULTING ARCHAEOLOGIST SCIENTIFIC RESOURCE SURVEYS, INC.

ADDRESS 5232 Bolsa Ave., Suite 5, Huntington Beach, CA 92649 PHONE NO. (714) 898-7877

This form is designed to provide additional information for the initial Study process of environmental review. The form is divided into two parts. Part I is a set of questions and attachements for all projects when archaeological field reconnaissance is required. Part II is to be completed only when cultural resources have been located during the field reconnaissance. All answers and statements should be presented in a complete and concise manner.

PART I

A. QUESTIONS

1. Outline the methodology and scope of work done including field work.

The purpose of this survey (SRS Job No. 817 / February 1-5, 1988) was to investigate and document the presence or absence of cultural resources on the May Project properties (Figure 1 & 2). Evaluation of the project area consisted of: 1) A background research and records search to determine if the project area had been previously surveyed and if it contained any previously identified sites; and 2) An intensive pedestrian (walking) survey of the entire 680 acre project area. For the survey, archaeologists walked parallel transects spaced at 30 meter intervals, allowing for a 100 % coverage of the property. Special attention was given to that portion of the project area on and surrounding the small knoll in Section 9, local settlement patterns indicate that most prehistoric sites in the Lake Perris region are situated at the interface of the valley edge and hill/mountain slope. Visibility was excellent and ranged from 90-100% (the majority of the project area is currently under cultivation for onions and barley).

2. What informants were consulted? Also provide the results of your records check.

No informants were consulted. A records search was obtained from the California Archaeological Inventory, Eastern Information Center, University of California, Riverside. This search indicated that no historic or prehistoric sites had been previously recorded within the project boundaries. Review of pertinent literature and turn-of-the-century maps (USGS) indicated that no historic sites or structures were located on the property at that time.

3. List the types of cultural resources observed.

Despite a thorough investigation and excellent ground visibility, no cultural resources were observed on the 680 acre May Project properties.

B. ATTACHMENTS REQUIRED FOR PART I AND II

1. A photocopy of the appropriate portion of the USGS quadrangle sheet delineating the following: (1) project boundaries; (2) approximate location of any recorded resources (including a specified UTM grid location); and (3) quad sheet title.
2. Photographs (color prints): including a panoramic view of the study area and details of any significant artifacts and features observed.
3. Drawings and other illustrations (when appropriate).
4. A list of all consulted references, highlighting those that relate specifically to the project area.

Nancy A. Whitney-Desautels, Ph.D.

PART II

To be completed when any cultural resources are recorded during archaeological reconnaissance for this project.

A. QUESTIONS

1. Identify the uses allowed by ordinance for this project that are most likely to pose direct and indirect adverse impacts to cultural resources: refer to Ordinance 348 (Land Use) and Ordinance 460 (Regulation of Subdivisions). Compare the potential uses and impacts with the specific development plans of the project sponsor. In the case of parcel maps and subdivisions, development plans refer to potential building sites and preliminary grading plans.

2. Of the cultural resources observed and recorded, which are considered to be scientifically or culturally significant? Briefly explain the significance of each resource and outline your reasons for determining the degree of significance (include any references).

3. What is the opinion of the Native American Community concerning the significance of cultural resources and the potential impacts of this project? (Refer to the Planning Department's list of Native American Consultants.) Provide a brief summation and attach an independent assessment from the Native American Consultant (See Part II, B. ATTACHEMENTS, below).

4. What are the recommendations to the project sponsor for avoidance or mitigation of adverse impacts? Consider such mitigation measures as redesign, modification of grading plans, combination of lots, etc.

5. If further work (collection, mapping excavation, etc.) is recommended, what are the projected costs in terms of person-days?

B. ATTACHMENTS REQUIRED

1. Native American Assessment (or documentation that an opinion was solicited but not received within a 30-day period).

2. Project exhibit map (tentative Parcel Map, Tract Map, Conditional Use Permit exhibit map, etc.) with detail sufficient to illustrate the approximate boundaries of all cultural resources recorded

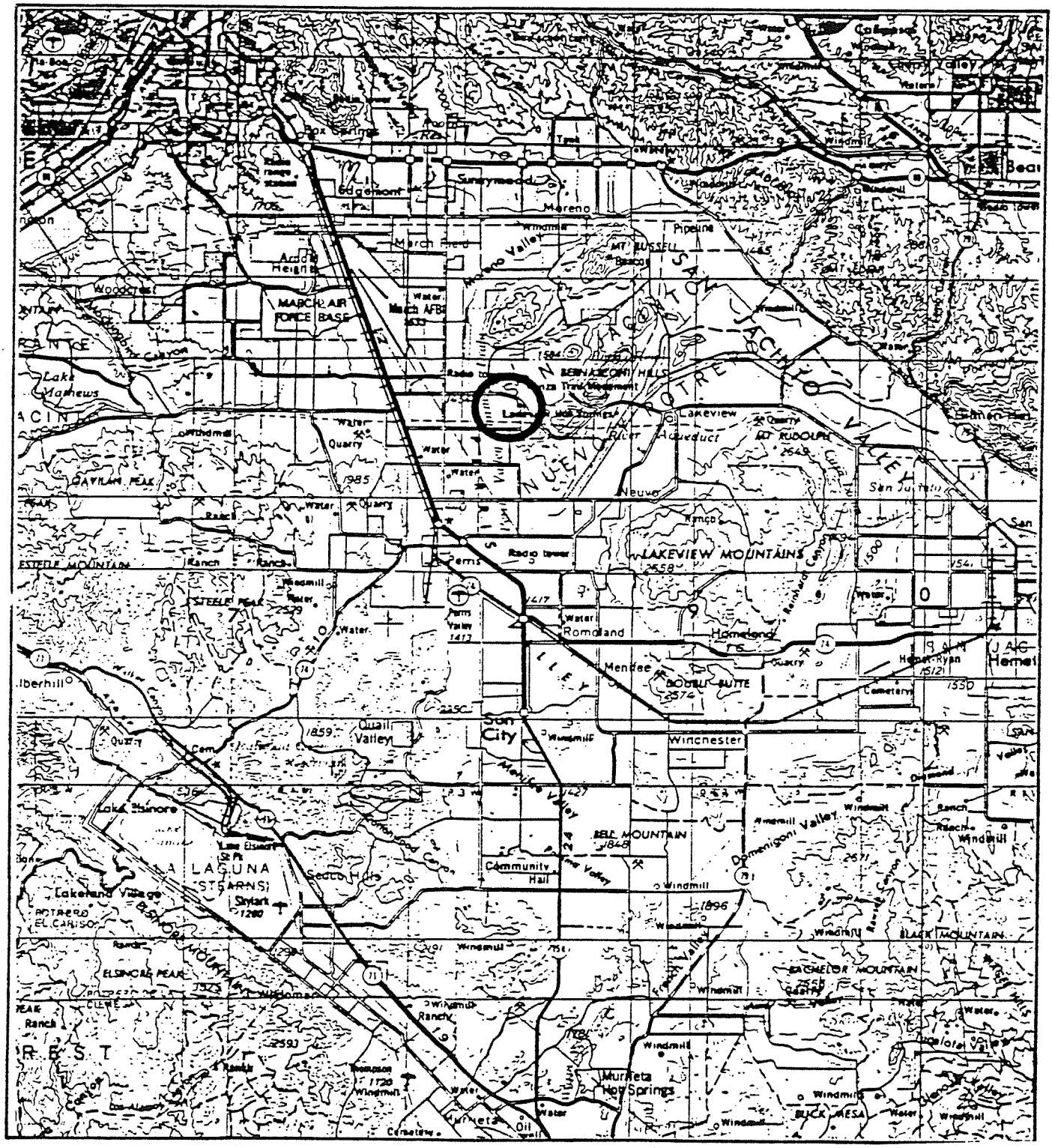


Figure 1. General Location of the May Property Project Area (circle), Riverside County, California. From: Santa Ana (1979) 15' Quadrangle. Scale = 1,250,000.

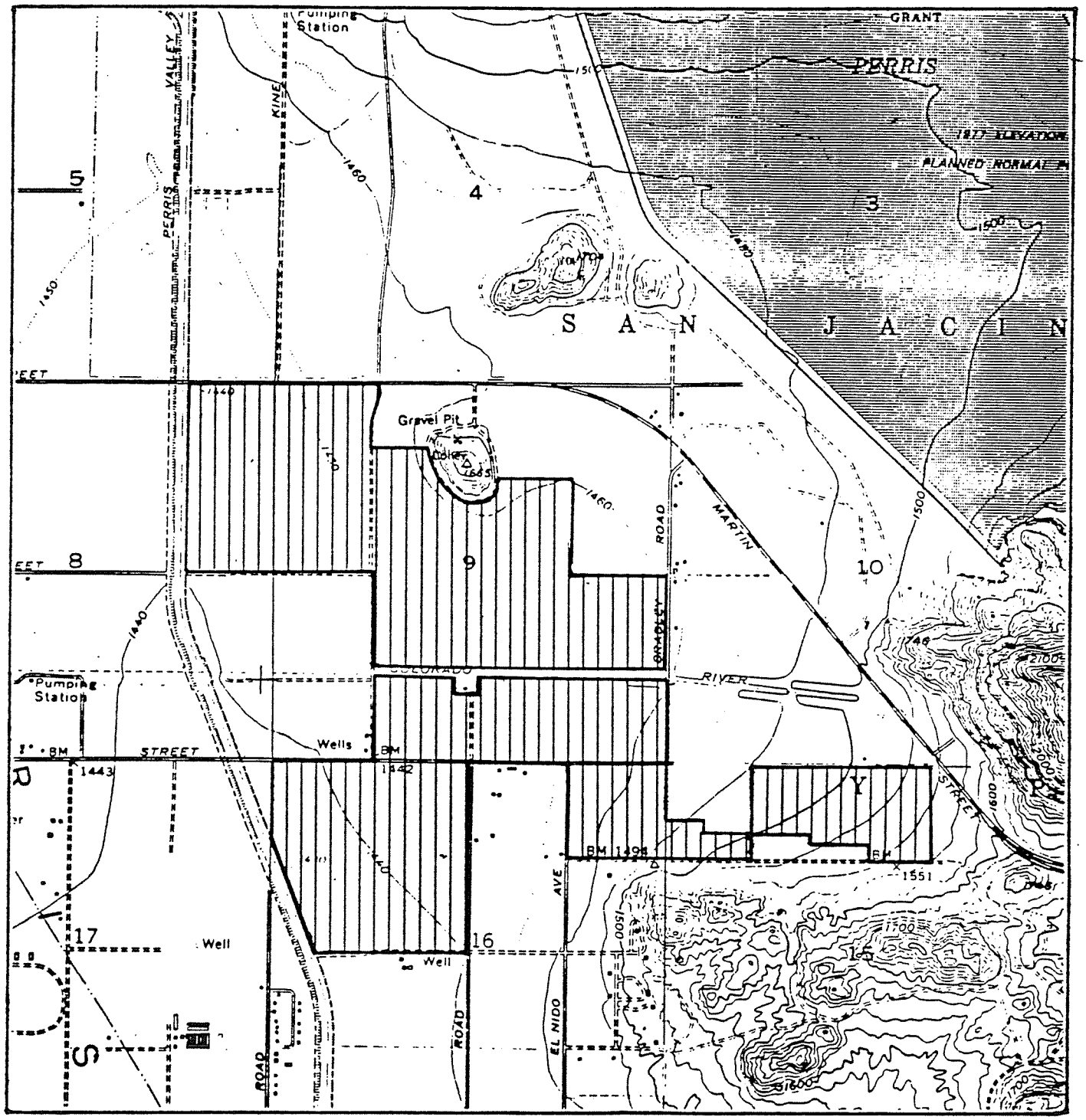


Figure 2. Specific Location of the May Property Project Area (vertical lines), Riverside County, California. From: Perris (1979) 7.5' Quadrangle. Scale = 1:24,000.

HISTORIC OVERVIEW

The Lake Perris project area was originally part of the Spanish Rancho named San Jacinto Nuevo y Potrero. This Spanish land grant was initially given to Don Miguel de Pedrorena in 1846 and consisted of 48,823 acres (Gunn 1947). Don Miguel de Pedrorena came from Peru in 1837 as a business agent of the brig Delmire, of which he was part owner. He became a resident of San Diego, serving as collector of customs, harbor master, and justice of the peace. Don Miguel's wife, Donna Maria Antonio Estudillo de Pedrorena was granted the El Cajon rancho near San Diego in 1845. Don Miguel and Donna Maria built a house at both ends of the Rancho El Cajon (at the locations of today's Lakeside and Mission Gorge) and raised their families there (Moyer 1969:82-83). A house was never built on Rancho San Jacinto Nuevo y Potrero by the Pedrorenas, the ranch was used only for cattle grazing.

In 1850 Don Miguel de Pedrorena died leaving four minor children, Miguel de Pedrorena Jr., Victoria de Pedrorena, Ysabel de Pedrorena and Helena de Pedrorena. Don Miguel's wife, Donna Maria, had died some years earlier (San Diego Historical Society Colection). In 1858, a Judge acting as guardian for the four minor children allowed the sale of Rancho San Jacinto Nuevo y Potrero to Jose Antonio Aguirre for $10,000. A tax assessment record of 1867 shows Don Jose Aguirre still owned Rancho San Jacinto Nuevo y Potrero, though the heirs were seeking the return of the Rancho since Aguirre never paid the $10,000 (Gunn 1947). By 1869 the children of Don Miguel de Pedrorena won back the Rancho (San Diego Hisotrical Society Collection). Also in 1869 Helena de Pedrorena married Joseph Wolfskill, son of the yankee trapper and orange grower in Los Angeles, named William Wolfskill. Joseph and Helena lived in Los Angeles, using their share of the San Jacinto Nuevo y Potrero for cattle (Wilson 1965:112). By 1872, tax records show that Miguel de Pedrorena Jr. owned 46,000 acres of the original 48,823 acres of the Rancho. Obviously some arrangement had been made between family members, which is not recorded.

Prior to the 1880's, Perris Valley was generally known as the San Jacinto Plains after the San Jacinto Rancho and San Jacinto River which crosses the southern section of the valley in a southwesternly direction. Bands of cattle and sheep roamed the valley and a few Mexican and Spanish miners worked the gold deposits in the surrounding hills. In 1881 the California Southern Railroad decided to lay its tracks through the valley, terminating the transcontinental route of the Santa Fe at San Diego. Mr. Fred T. Perris, later Chief Engineer and Superintendent of Construction of the California Southern, was in personal charge of all surveying and construction of the route which was completed in 1882.

With completion of the railroad, settlers began flocking to the valley staking out homesteads and buying railroad land. The townsite of Pinacate had been established where a siding and station were built in the general vicinity of the present site of Orange Empire Trolley Museum, about a mile south of the present Perris City Limits. The first business established there, the first in the valley, catered to miners and early settlers selling groceries and supplies.

In 1885, a number of people in the central and northern parts of the valley discussed the desirability of a town more conveniently located. Together they interested a group of San Bernardino financiers in the project and land was purchased from the California Southern Railroad. Mr. Perris studied the plan, and later the backers agreed to errect a depot, dig a well, and donate a number of lots to the railroad in exchange for establishing a station at the new town.

Perris was officially named a station on the transcontinental route of the Santa Fe on April 1, 1886. The railroad had now extended its lines into Los Angeles, and in 1887 six passenger trains and two freight trains stopped at Perris daily. Heavy storms repeatedly washed out the tracks in the Temecula Gorge, and in 1892 service to San Diego was abandoned and Perris was no longer on the transcontinental route.

The transcontinental railroad had played an important part in establishing the Perris Valley, and when the railroad ceased the people in the valley turned to agriculture for their future development. The Perris Irrigation District was formed in 1880 to bring water from Big Bear Lake to Perris Valley. Practically no water was delivered to the newly planted orange groves because the Big Bear Land and Water Company had contracted to sell more water than was available, and the land, consequently, was devoted almost entirely to dry farming of grain crops. Then it was discovered that great quantities of water were underground and could be pumped to the surface from depths from five to forty feet. With the water available from irrigation, alfalfa became a major crop. The growing of alfalfa became such a major enterprise of the era that a day was set aside to celebrate it.

In the years that followed, the Temescal Water Company contributed greatly to the depletion of the abundant underground water supply by pumping a continous stream of over 700 inches of water from the valley to Corona. Wells were drilled deeper and deeper, with water secured by using turbine pumps. Gradually the land was turned to more practical farming and King potatoes became the major crop of the valley and were known throughout most of the United States.

The desire of a municipal water system encouraged the citizens of the Town of Perris to incorporate and have their own governing body and by 1911 the State of California issued the Corporation Papers and recognized Perris as an official incorporated city. The long sought after city water system came into being in 1912, and by 1913 the city voters authorized the construction of a completely new municipal water system. Since water was a prime concern, Perris Valley became a part of the Eastern Municipal Water District in 1950, and also became a member of the Metropolitan Water District, whose 220 mile aqueduct from the Colorado River crossed the Perris Valley.

In the 1950's when taxes began to rise, while potato crops remained stable, the farmers began to look for crops that yielded higher monetary returns. The sugar beet became the mainstay of farming in the valley and is today one of the farming industry's major crops. The continuing need for water in the entire southern California area has long been recognized by the representatives of the people of California as well as state and water

officals. The result of this recognized need was the construction during the late 1960's and early 1970's of the State Water Project, which delivers water 444 miles from the Orville Dam near Sacramento to Lake Perris, the terminal lake of the California Aqueduct. Completion of the California Aqueduct and dedication of Lake Perris was celebrated on May 18, 1973.

HISTORIC RESOURCES

Although the Perris valley has a rich history, there are no properties within the project area which are listed on the National Register of Historic Places (NHRP 1976), the California Historical Landmarks (CHL 1982), the California Inventory of Historic Resources (CIHR 1976) or at the Riverside County Parks Department Historical Section. A review of the 1898 USGS Elsinore Quadrangle indicates that no early 20th Century homesites were in existence within the May Properties project area at the time of that mapping. However, just west of the project area, at the intersection of what is now Perris Blvd. and Morgan Street, the 1898 map indicates that there was a grouping of about six structures with the name "Indian School". No other information on historic sites within or near the project vicinity is available.

5.4 TRAFFIC ANALYSIS

TRAFFIC ANALYSIS

Kaufman and Broad Development of the May Ranch

Prepared for

CITY OF PERRIS

Submitted by

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May 1988

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May 25, 1988

Ms. Susan Gray
Acting Planning Director
City of Perris
101 North "D" Street
Perris, CA 92370

Dear Sue:

This is the traffic analysis for the Kaufman & Broad development of the May Property.

The study not only included traffic impacts resulting from the specific May Property development but also included consideration of the adjoining McCanna Ranch project by Barratt as well as consideration of cumulative traffic based on existing zoning that would be tributary to the arterial street system serving the May and McCanna Ranch Properties.

Please give me a call if you have any questions or need amplification of any aspect of the draft.

Respectfully submitted,

MOHLE, GROVER & ASSOCIATES

Hank

R. Henry Mohle
President

RHM:jh
Attachment

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INTRODUCTION

The purpose of this report is to present the findings of a study concerning the proposed development by Kaufman & Broad of the May Property located in the northeast corner of the City.

The general location of the project is shown on Figure 1 titled "Project Location Map."

The figure also indicates the location of the McCanna Ranch project to be developed by Barratt of Irvine.

The May Property constituting 684 acres is proposed to have 3,450 single family dwelling units and 100 acres of commercial development. The previously approved McCanna Ranch project, which borders the May Property development on the easterly side, has been approved for 1,490 single family dwelling units.

Figure 2 titled "Arterial Network" shows the general overall layout of the May Property development and the arterials serving the study area.

Recognizing that there are large areas of undeveloped land within the general area of the Barratt and May Properties, it was decided that a more realistic analysis should involve cumulative traffic impact that would result from the undeveloped land generally located westerly of the May Property along the Ramona Expressway to the Placentia Avenue corridor.

Since specific development plans were not available, the existing zoning was utilized for these presently unplanned areas to generate development intensity, and therefore traffic demands. To put the study into some perspective, the May Property and Barratt McCanna Ranch developments constitute some 4,940 dwelling units while the total of 25,742 dwelling units were assumed in the study area based on existing zoning. This means that 19 percent of the total dwelling units in the study area are from the May and Barratt projects.

It is recognized that the City General Plan Study, which has just been started, will most likely modify the assumptions concerning land development in the non-May Property and Barratt areas included in this study. However, land developments assumed are the best available and are considered reasonable for purposes of this analysis.

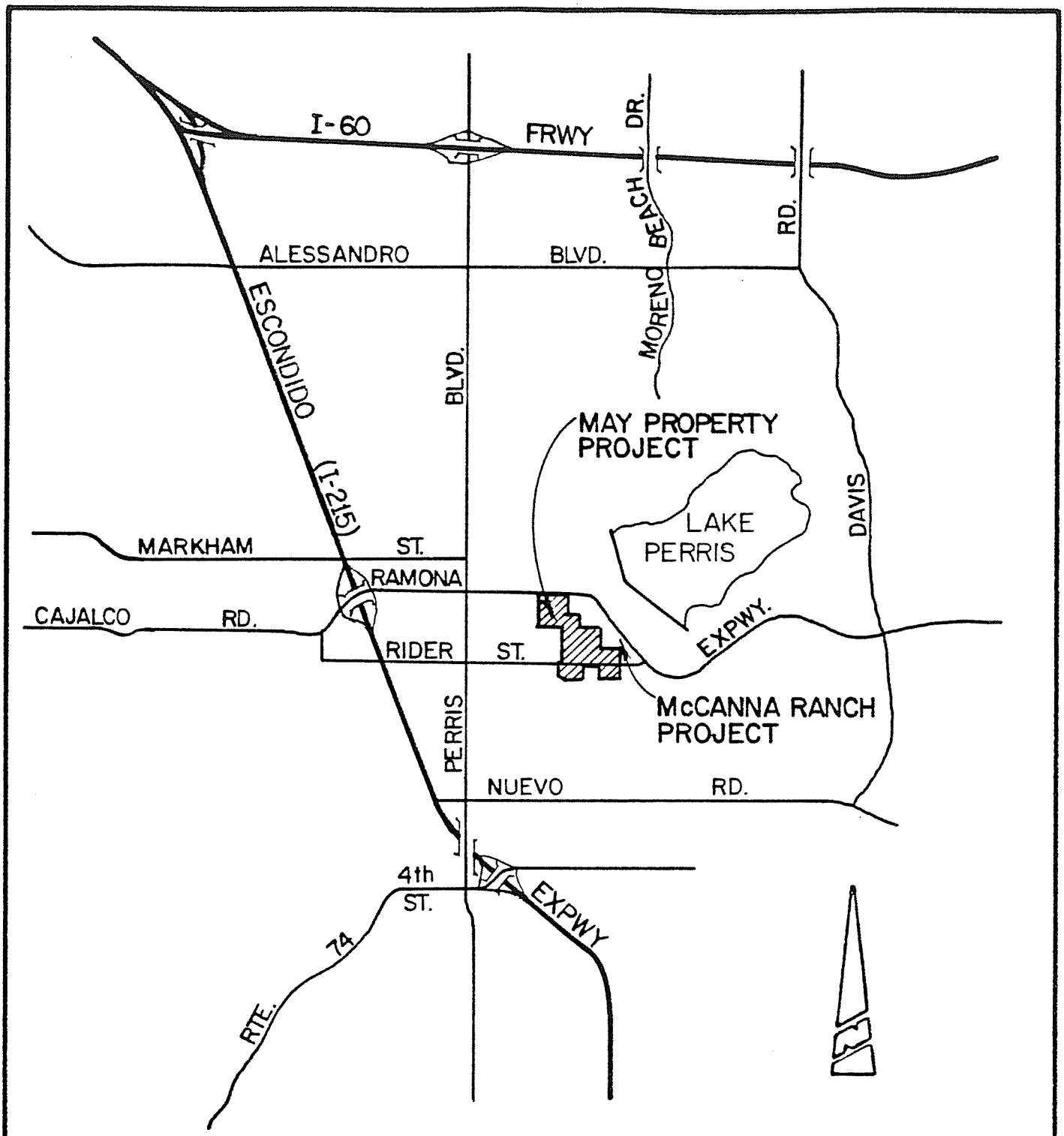


FIGURE 1

PROJECT LOCATION MAP

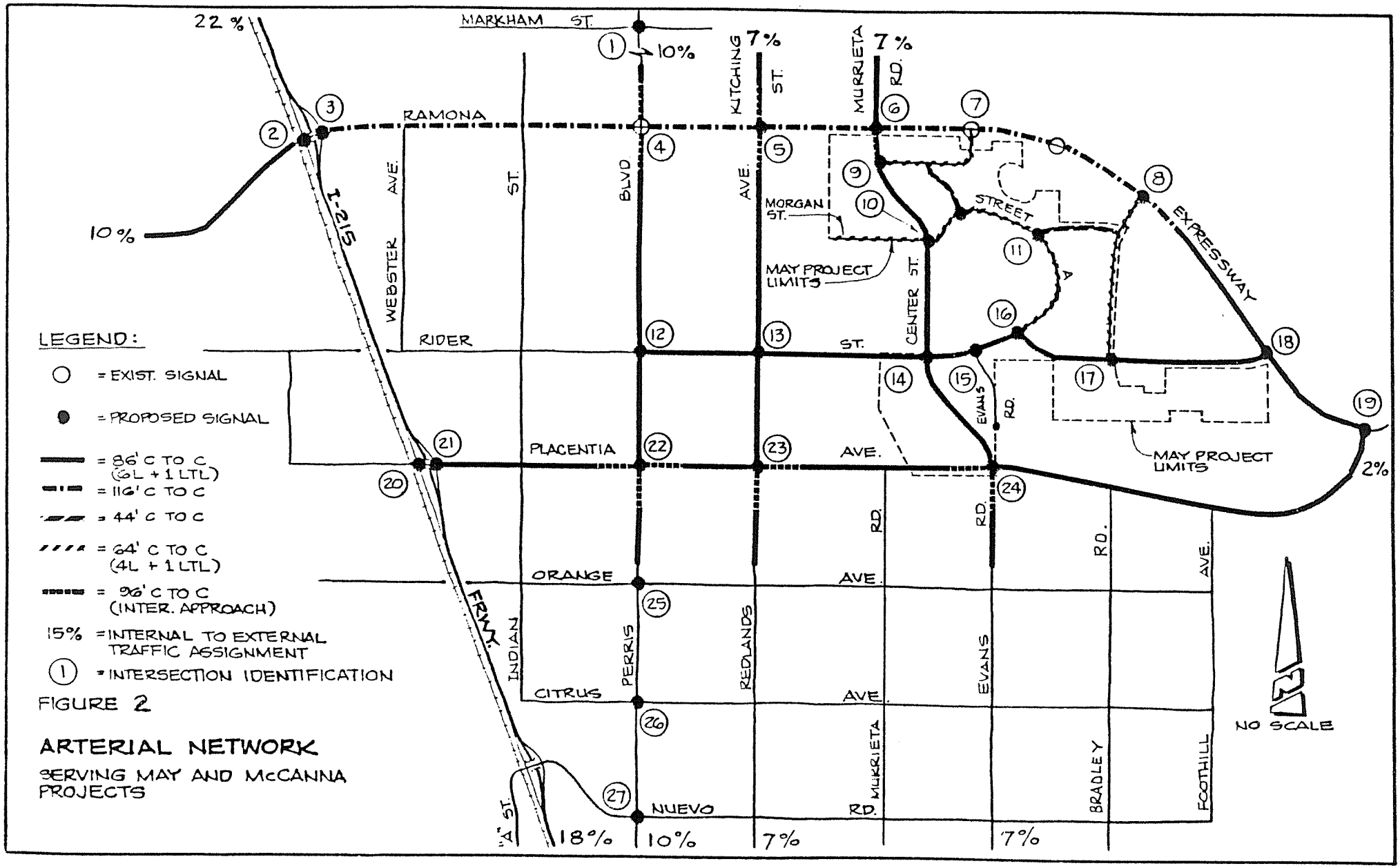


FIGURE 2

ARTERIAL NETWORK

SERVING MAY AND McCANNA PROJECTS

STUDY METHODOLOGY

The purpose of this portion of the report is to provide a brief overview of the way in which the study was conducted. The steps involved are discussed below.

Traffic Generation

The first step in the overall process was to make an estimate of the 24 hour and peak hour traffic volumes that would be generated from the various project areas, not only from the May and Barratt developments but also from the areas outside of these projects included in this study. Figure 3 titled "Zone Map" shows how the study area was subdivided into 60 small areas called "traffic zones."

For each of these zones, estimates were made concerning ultimate land use and traffic generation values. It is pertinent to note that all of the commercial areas were assumed to have 25 percent building coverage. The industrial park acreages were assumed to have a land coverage of 20 percent.

Table 1 titled "Trip Generation" shows the zone numbers, land use, assumed development intensity and the peak hour and 24 hour traffic volumes resulting from the indicated land use for each of the zones. The table shows that on an overall 24 hour basis there are more than 486,000 vehicle trip ends generated by the traffic zones in the study area.

At this point it is pertinent to point out that consideration was given to the traffic generated from the Lake Perris recreational area and the proposed "Farmers Fair." These developments are located on the northerly side of the Ramona Expressway in the vicinity of the May and McCanna Ranch developments. The report prepared by Justin F. Farmer, Transportation Engineers, dated February 9, 1987, titled "Report on Traffic and Circulation Study for the Farmers Fair, Ramona Expressway between Center Street and Evans Street," provided a very detailed analysis of traffic expected for these two developments.

Based on a detailed review of this report, it is concluded that because of the relatively infrequent occurrence of peak traffic from these developments, the traffic impacts from these developments would not be included in the present study. It is fully recognized that in the future when there are special events at the Farmers Fair at peak weekend times the traffic from the Lake Perris recreational

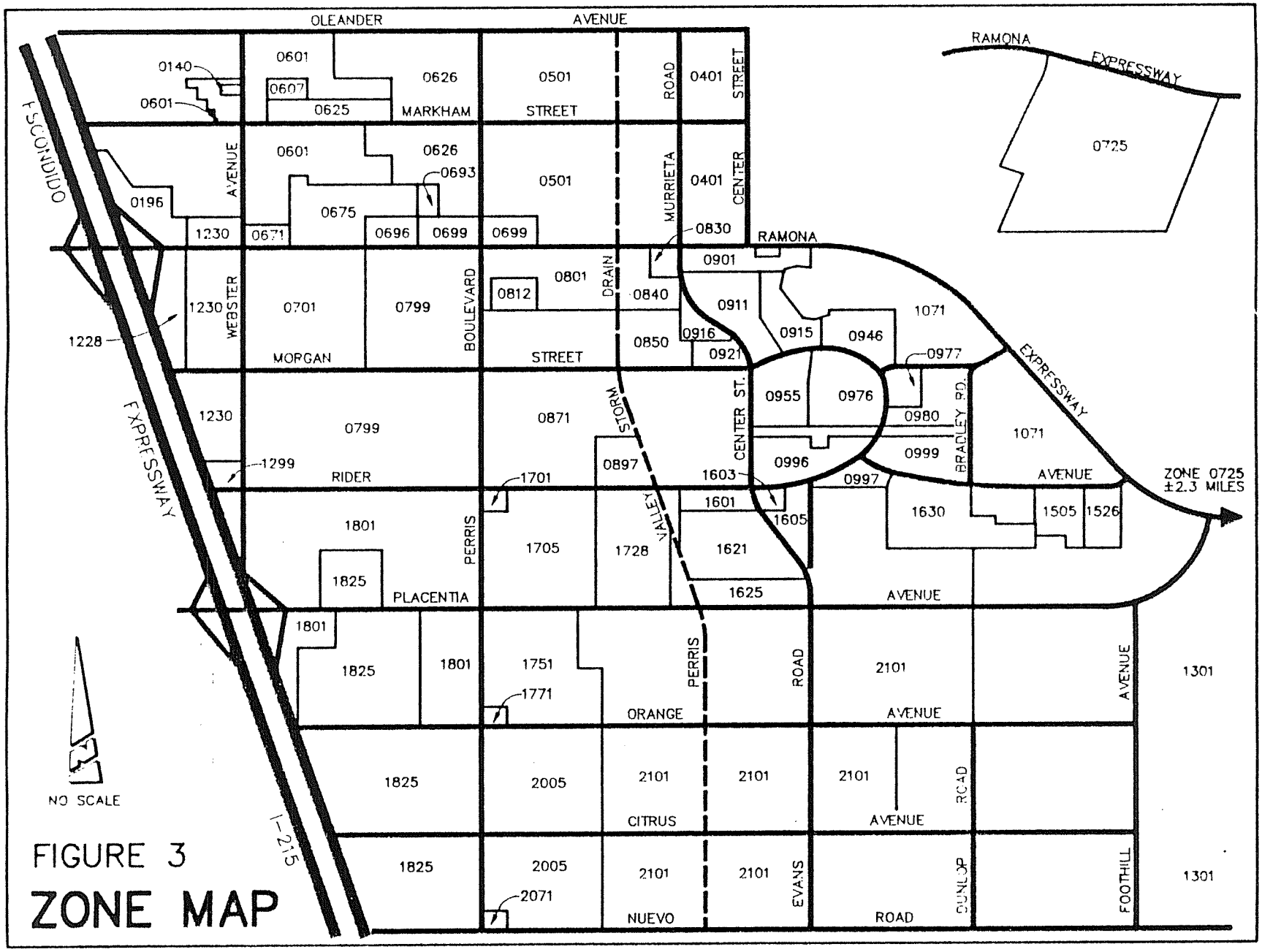


FIGURE 3

ZONE MAP

TABLE 1
TRIP GENERATION
NORTH PERRIS AREA

05-26-1988

ZONE	LAND USE	SIZE	TRIP RATES AM IN	TRIP RATES AM OUT	TRIP RATES PM IN	TRIP RATES PM OUT	TRIP RATES 24 HOUR	TRIP ENDS AM IN	TRIP ENDS AM OUT	TRIP ENDS PM IN	TRIP ENDS PM OUT	TRIP ENDS 24 HOUR
0601	AGRICULTURAL	226 AC	0.00	0.00	0.00	0.00	2.0	0	0	0	0	452
0140	MANUFACTURING	9 KSF	0.76	0.17	0.20	0.77	7.0	7	2	2	7	63
0607	MANUFACTURING	87 KSF	0.76	0.17	0.20	0.77	7.0	66	15	17	67	609
0625	MANUFACTURING	348 KSF	0.76	0.17	0.20	0.77	7.0	264	59	70	268	2436
0626	MANUFACTURING	2091 KSF	0.76	0.17	0.20	0.77	7.0	1589	355	418	1610	14637
0196	COMMERCIAL	478 KSF	0.65	0.28	1.59	1.79	40.4	311	134	760	856	19311
0671	COMMERCIAL	87 KSF	1.29	0.55	3.26	3.40	78.0	112	48	284	296	6786
0675	MANUFACTURING	610 KSF	0.76	0.17	0.20	0.77	7.0	464	104	122	470	4270
0696	AGRICULTURAL	20 AC	0.00	0.00	0.00	0.00	2.0	0	0	0	0	40
0699	COMMERCIAL	348 KSF	0.74	0.32	1.73	1.95	45.4	258	111	602	679	15799
0501	RESIDENTIAL	1608 DU	0.20	0.55	0.64	0.37	10.1	322	884	1029	595	16241
0401	RESIDENTIAL	960 DU	0.20	0.55	0.64	0.37	10.1	192	528	614	355	9696
1228	COMMERCIAL	403 KSF	0.70	0.30	1.66	1.87	42.9	282	121	669	754	17289
0701	MANUFACTURING	1394 KSF	0.76	0.17	0.20	0.77	7.0	1059	237	279	1073	9758
0799	AGRICULTURAL	480 AC	0.00	0.00	0.00	0.00	2.0	0	0	0	0	960
0812	MOBILE HOME	15 AC	0.91	2.71	2.87	2.04	39.1	14	41	43	31	587
0801	COMMERCIAL	828 KSF	0.53	0.23	1.43	1.61	34.8	439	190	1184	1333	28814
1230	MANUFACTURING	450 KSF	0.76	0.17	0.20	0.77	7.0	342	77	90	347	3150
0871	MANUFACTURING	2091 KSF	0.76	0.17	0.20	0.77	7.0	1589	355	418	1610	14637
1299	COMMERCIAL	50 KSF	1.61	0.69	4.26	4.43	94.7	81	35	213	221	4735
0897	AGRICULTURAL	31 AC	0.00	0.00	0.00	0.00	2.0	0	0	0	0	62
1801	MANUFACTURING	3111 KSF	0.76	0.17	0.20	0.77	7.0	2364	529	622	2395	21777
1701	COMMERCIAL	19 KSF	2.38	1.02	6.78	7.05	132.9	45	19	129	134	2525
1705	MOBILE HOME	75 AC	0.91	2.71	2.87	2.04	39.1	68	203	215	153	2933
1728	MANUFACTURING	610 KSF	0.76	0.17	0.20	0.77	7.0	464	104	122	470	4270
1825	AGRICULTURAL	140 AC	0.00	0.00	0.00	0.00	2.0	0	0	0	0	280
1771	COMMERCIAL	56 KSF	1.54	0.66	4.03	4.20	91.0	86	37	226	235	5096
1751	RESIDENTIAL	1650 DU	0.09	0.44	0.46	0.21	6.1	149	726	759	347	10065
2071	COMMERCIAL	80 KSF	1.34	0.57	3.40	3.54	80.3	107	46	272	283	6424
0693	AGRICULTURAL	4 AC	0.00	0.00	0.00	0.00	2.0	0	0	0	0	8
2005	RESIDENTIAL	1375 DU	0.09	0.44	0.46	0.21	6.1	124	605	633	289	8388
0725	RESIDENTIAL	653 DU	0.11	0.30	0.35	0.21	4.8	72	196	229	137	3134
1071	RESIDENTIAL	1490 DU	0.30	0.50	0.60	0.30	12.0	447	745	894	447	17880
0830	COMMERCIAL	108 KSF	1.19	0.51	2.94	3.06	72.3	129	55	318	330	7808
0901	COMMERCIAL	348 KSF	0.74	0.32	1.73	1.95	45.4	258	111	602	679	15799
0840	RESIDENTIAL	203 DU	0.20	0.55	0.64	0.37	10.1	41	112	130	75	2050
0911	RESIDENTIAL	198 DU	0.20	0.55	0.64	0.37	10.1	40	109	127	73	2000
0915	RESIDENTIAL	263 DU	0.20	0.55	0.64	0.37	10.1	53	145	168	97	2656
0850	RESIDENTIAL	210 DU	0.20	0.55	0.64	0.37	10.1	42	116	134	78	2121
0916	PUBLIC PARK	9 AC	5.47	0.00	0.00	3.33	36.6	49	0	0	30	329
0921	COMMERCIAL	142 KSF	1.06	0.46	2.58	2.69	65.7	151	65	366	382	9329
0946	RESIDENTIAL	224 DU	0.20	0.55	0.64	0.37	10.1	45	123	143	83	2262
0955	RESIDENTIAL	192 DU	0.20	0.55	0.64	0.37	10.1	38	106	123	71	1939
0976	RESIDENTIAL	140 DU	0.20	0.55	0.64	0.37	10.1	28	77	90	52	1414
0977	PUBLIC PARK	6 AC	5.47	0.00	0.00	3.33	36.5	33	0	0	20	219
0980	RESIDENTIAL	247 DU	0.20	0.55	0.64	0.37	10.1	49	136	158	91	2495
0999	RESIDENTIAL	240 DU	0.20	0.55	0.64	0.37	10.1	48	132	154	89	2424
1630	RESIDENTIAL	220 DU	0.20	0.55	0.64	0.37	10.1	44	121	141	81	2222
1505	RESIDENTIAL	203 DU	0.20	0.55	0.64	0.37	10.1	41	112	130	75	2050
1526	RESIDENTIAL	224 DU	0.20	0.55	0.64	0.37	10.1	45	123	143	83	2262
0996	RESIDENTIAL	322 DU	0.20	0.55	0.64	0.37	10.1	64	177	206	119	3252
0975	COMMERCIAL	72 KSF	1.39	0.60	3.57	3.72	83.4	100	43	257	268	6005
0997	PUBLIC PARK	10 AC	5.47	0.00	0.00	3.33	36.6	55	0	0	33	366
1603	COMMERCIAL	55 KSF	1.55	0.67	4.07	4.23	91.6	85	37	224	233	5038
1601	COMMERCIAL	158 KSF	1.02	0.44	2.45	2.55	63.3	161	70	387	403	10001
1605	RESIDENTIAL	143 DU	0.20	0.55	0.64	0.37	10.1	29	79	92	53	1444
1621	RESIDENTIAL	421 DU	0.20	0.55	0.64	0.37	10.1	84	232	269	156	4252
1625	COMMERCIAL	252 KSF	0.84	0.36	1.92	2.17	52.4	212	91	484	547	13205
2101	RESIDENTIAL	2085 DU	0.20	0.55	0.64	0.37	10.1	417	1147	1334	771	21059
1301	RESIDENTIAL	12400 DU	0.20	0.55	0.64	0.37	10.1	2480	6820	7936	4588	125240
							TOTALS	16138	16845	25031	25022	502353

area and the Farmers Fair will have an impact. However, on a daily basis these impacts are very infrequent and the traffic from these two developments does not in any way affect the conclusions of this report.

Trip Distribution

The next step in the analysis procedure was to determine for the peak hour periods the percentage distribution of traffic from each of the analysis zones. It is emphasized that the entire traffic analysis is based on analyzing the a.m. and p.m. peak hour traffic conditions. It is the peak hours that are the most critical and therefore the analysis is focused on these peak periods.

Special studies by the Southern California Association of Governments (SCAG) were utilized in determining the general distribution of trips for the year 2010 from this geographical area. Specifically, zone to zone trip tables were obtained from SCAG for all of their traffic analysis zones in this general geographical area.

In addition to the SCAG trip distribution percentages, the 1988 Edition of "California Population Characteristics - Regional Market Update and Projections" published by the Center for Continuing Study for the California Economy was reviewed.

One of the significant considerations was the rapidly increasing housing and employment centers being developed along the I-215 corridor in North San Diego County. In the future it is predicted by SCAG that a majority of trips will be oriented along the I-215 corridor in a southerly direction as far as home-based peak hour trips originating from the specific study area.

One of the key facts in the trip distribution determination is the recognition that trips from the study area will be oriented in a westerly manner so as to gain access to either Perris Boulevard or the I-215 Freeway. The vast majority of traffic in the morning, for instance, will therefore be headed in a westbound direction except for trips of a very local nature.

Figure 2 titled "Arterial Network" shows the percentage orientation of traffic from the general study area. It is pointed out that a specific percentage distribution was applied to each individual traffic analysis zone; however, Figure 2 is intended to show the overall general trip distribution utilized for this study.

Trip Assignment

Having generated the peak hour both inbound and outbound traffic for each traffic zone and having determined the directional distribution of this traffic, the next step in the process is to assign the specific peak hour trips to study intersections. For the purposes of this report, 27 signalized intersections were selected for quantitative analysis. These intersections are shown on Figure 2

titled "Arterial Network." The numbered intersections are assumed to be signalized and are on the street system that will serve the study area from an arterial traffic service viewpoint.

It will be noted that the Arterial Network specifically shows the proposed new interchange on Placentia Avenue at the I-215 Freeway. It is assumed that this interchange will be constructed concurrently with the upgrading of the existing expressway to Interstate standards.

Utilizing MGA's "MONITOR" computer program, trip assignment tables were developed for each of the 27 study intersections. These tables contained in Appendix A show for each of the possible 12 turning movements at each of the study intersections the predicted traffic coming from each of the traffic zones as well as existing traffic. In other words, there is a trip assignment table in the Appendix for each of the study intersections which enables the reader to determine what proportion of the traffic predicted at the intersection for either the a.m. or p.m. peak hour came from each particular traffic analysis zone.

These trip assignment tables were then utilized by the computer program to form the traffic count basis for subsequent analysis which is the next step of the procedure.

INTERSECTION TRAFFIC VOLUME ESTIMATES

The generated and attractor traffic as shown in each of the respective traffic zones on Table 1 was distributed to the arterial network as shown on Figure 2. More specifically, recognizing that signalized intersections represent the capacity constraints in an urban arterial street network, the traffic generated from the existing zones together with existing traffic was analyzed at the 27 intersections indicated on Figure 2, the arterial network map.

In distributing the traffic to the arterial network, the general distribution percentages shown around the periphery of the arterial network map were used in the traffic distribution process. These external traffic percentages were determined from 2010 SCAG projections and value judgment on the part of MGA. The percentage distributions shown on Figure 2 assume that the arterial network and interchange locations will be in place at the time the total study area has been built and is generating traffic in accordance with the estimates shown on Table 1.

It is recognized that important arterial street links such as Murrieta Road northerly of the Ramona Expressway and Placentia Avenue between Evans Road and the Ramona Expressway are not within the project limits of the May project. These arterials are required to serve the overall circulation needs of the area.

Table 2 titled "Intersection Peak Hour Volumes" shows the estimated a.m. and p.m. peak hour volumes for each of the possible turning movements at each of the 27 study intersections.

TABLE 2
INTERSECTION PEAK HOUR VOLUMES

INTERSECTION NUMBER	INTERSECTION NAME	PEAK HOUR	EBT	EBL	EBR	SBT	SBL	SBR	WBT	WBL	WBR	NBT	NBL	NBR
1	PERRIS BLVD @ MARKHAM ST	AM	0	0	0	753	0	21	557	0	0	533	41	0
		PM	341	62	0	1123	602	0	34	0	0	970	0	0
2	CAJALCO RD @ I-215 S/B	AM	1110	0	557	0	1273	44	1353	518	0	0	0	0
		PM	2339	0	472	0	1904	120	2258	1182	0	0	0	0
3	RAMONA EXPWY @ I-215 S/B	AM	2151	232	0	0	0	0	1518	0	957	0	513	812
		PM	4159	84	0	0	0	0	3141	0	1533	0	299	1234
4	RAMONA EXPWY @ PERRIS BLV	AM	575	355	459	424	84	255	2000	41	95	543	350	32
		PM	2742	386	848	860	334	479	1674	40	214	749	431	36
5	RAMONA EXPWY @ REDLANDS A	AM	689	41	0	412	0	291	2030	417	0	335	0	63
		PM	2524	508	0	360	886	213	1589	255	104	1083	51	292
6	RAMONA EXPWY @ MURRIETTA	AM	309	0	443	1521	0	349	1148	23	983	1480	958	0
		PM	1907	109	1686	2478	469	204	856	0	471	1698	888	0
7	RAMONA EXPWY @ EVANS RD	AM	710	0	0	0	0	0	1630	0	0	0	573	0
		PM	2068	0	0	0	0	0	846	0	0	0	329	0
8	RAMONA EXPWY @ BRADLEY RD	AM	810	0	0	0	0	0	1270	86	0	0	363	0
		PM	2014	0	60	0	0	0	640	55	0	0	216	48
9	MURRIETTA RD @ DAWES ST	AM	0	0	22	1706	200	50	0	0	0	2493	73	11
		PM	16	0	78	2851	976	127	18	0	0	2613	149	22
10	CENTER ST @ ST "A"	AM	148	0	81	1415	321	0	37	633	0	2538	108	153
		PM	159	0	135	2441	310	0	94	737	0	2607	296	428
11	MORGAN ST @ ST "A"	AM	0	0	0	0	318	0	0	0	381	0	0	0
		PM	0	0	0	0	790	0	0	0	261	0	0	0
12	PERRIS BLVD @ RIDER ST	AM	0	0	0	723	0	23	126	0	234	975	29	0
		PM	33	0	435	2099	0	11	19	0	104	1640	48	428
13	RIDER ST @ REDLANDS AVE	AM	0	0	0	286	12	0	360	138	322	1147	0	133
		PM	350	112	0	1486	201	0	123	473	129	866	0	828
14	RIDER ST @ CENTER ST	AM	20	121	0	1967	0	171	97	16	28	2558	606	0
		PM	402	720	21	3035	53	158	156	18	37	2622	203	0
15	RIDER ST @ EVANS RD	AM	15	0	0	0	0	0	49	0	0	0	0	0
		PM	266	0	0	0	0	0	102	0	0	0	0	0
16	RIDER ST @ ST "A"	AM	0	0	0	0	0	0	0	49	0	0	0	0
		PM	0	0	0	0	0	0	0	84	0	47	0	220
17	RIDER ST @ BRADLEY RD	AM	0	0	0	24	37	0	52	13	43	14	0	0
		PM	50	83	0	88	113	0	46	0	0	0	0	0
18	RAMONA EXPWY @ RIDER ST	AM	313	0	0	0	0	0	1116	195	0	0	240	11
		PM	1418	0	60	0	0	0	135	219	0	0	136	19
19	RAMONA EXPWY @ PLACENTIA	AM	16	0	0	0	0	0	634	0	0	0	0	0
		PM	1435	0	0	0	0	0	147	0	0	0	0	0
20	PLACENTIA AVE @ I-215 S/B	AM	0	0	0	0	1248	0	0	662	0	0	0	0
		PM	0	0	0	0	1934	0	0	1343	0	0	0	0
21	PLACENTIA AVE @ I-215 N/B	AM	1248	0	0	0	0	0	662	0	1019	0	0	890
		PM	1934	0	0	0	0	0	1341	0	1496	0	0	1436
22	PERRIS BLVD @ PLACENTIA A	AM	685	131	73	554	157	86	2234	0	116	738	645	0
		PM	2407	580	450	1477	707	297	1381	32	96	1583	321	0
23	PERRIS BLVD @ REDLANDS AV	AM	598	340	136	327	65	17	2230	54	34	881	214	430
		PM	2058	695	486	1726	167	130	1463	194	43	923	100	805
24	PLACENTIA AVE @ EVANS RD	AM	460	240	49	679	619	652	1133	0	1868	1155	528	0
		PM	1575	632	430	1435	1379	421	406	0	1192	1081	482	0
25	PERRIS BLVD @ ORANGE AVE	AM	0	0	0	579	0	0	43	0	63	868	0	0
		PM	332	0	0	1120	383	0	0	0	0	1803	0	0
26	PERRIS BLVD @ CITRUS AVE	AM	0	0	0	579	0	0	0	143	0	868	0	0
		PM	0	0	165	716	0	0	0	512	0	1247	0	1102
27	PERRIS BLVD @ NUEVO RD	AM	1689	37	111	688	0	43	2105	819	0	830	111	651
		PM	2296	1386	62	973	0	489	2183	892	0	1074	37	1228

Table 3 titled "Intersection Analysis Results - A.M." and Table 4 titled "Intersection Analysis Results - P.M." show the estimated levels of service resulting at the study intersections for both the a.m. and p.m. peak hour periods as well as the assumed number of lanes at each of the intersections.

A review of these tables indicates that with the proposed lane arrangements the vast majority of intersections will operate at a level of service "D" or better. Level of service "D" has an upper limit of 40 seconds of stop time delay per vehicle. The stop time delay numbers shown on Tables 3 and 4 indicate the weighted average delay at the particular intersection.

At a few intersections in this extensive network estimated delays may exceed this level. However, from a point of view of overall planning and traffic analysis, the overall distribution of traffic is believed to be in balance with the proposed land use densities. It is important to recognize that the intersections need to have the number of lanes as indicated on the tables in order to achieve enough capacity so as to provide an acceptable level of service to the vast majority of intersections.

MAY RANCH PROJECT TRAFFIC CONTRIBUTION

Table 5 titled "Percent Intersection P.M. Volume from May Ranch Project" shows the percentage of estimated intersection p.m. peak hour volumes attributable to traffic generated within the May ranch project.

These percentages are indicative of the specific impact that the May Ranch project has on the various 27 intersections studied.

MITIGATION MEASURES

The overall mitigation measures for the arterial system serving the study area and in particular the May Ranch project are to ensure that the intersections and connecting links are constructed to the indicated lane arrangements as shown in Tables 3 and 4 at the time the area is fully developed.

Specifically, the recommended street sections within the May Ranch project are shown on Figure 1.

Table 6 titled "Street Sections" shows the recommended street sections for the arterial network within the May Ranch project area.

Traffic signals should be constructed at the intersections shown on Figure 1 when either anticipated traffic within a short time in the future or existing traffic meets one of the accepted traffic signal warrants.

TABLE 3

INTERSECTION ANALYSIS RESULTS

A.M. PEAK HOUR

INTERSECTION NUMBER	INTERSECTION NAME	LEVEL OF SERVICE	AVERAGE DELAY (SEC)	LANE CONFIGURATION											
				EBT	EBL	EBR	SBT	SBL	SBR	WBT	WBL	WBR	NBT	NBL	NBR
1	PERRIS BL @ MARKHAM ST	B	14	2	1	S	3	1	S	2	1	S	3	1	S
2	CAJALCO RD @ I-215 S/B	D+	29	2	-	1	S	2	1	2	2	-	-	-	-
3	RAMONA EXPWY @ I-215 N/B	E+	40	2	2	-	-	-	-	2	-	1	S	1	2
4	RAMONA EXPWY @ PERRIS BLVD	E	45	3	2	1	3	2	1	3	2	1	3	2	1
5	RAMONA EXPWY @ REDLANDS AVE	B	15	3	2	S	3	2	S	3	2	1	3	2	S
6	RAMONA EXPWY @ MURRIETTA RD	D+	28	3	2	2	3	2	1	3	2	1	3	2	1
7	RAMONA EXPWY @ EVANS RD	B	14	3	-	S	-	-	-	3	2	-	-	1	1
8	RAMONA EXPWY @ BRADLEY RD	B	9	3	-	S	-	-	-	3	2	-	-	1	1
9	MURRIETTA RD @ DAWES ST	B	9	1	-	-	3	2	S	2	1	S	3	2	S
10	CENTER ST @ ST "A"	B	13	2	1	S	3	2	S	2	2	S	3	2	S
11	MORGAN ST @ ST "A"	A	1	-	-	-	2	1	-	-	1	1	2	-	S
12	PERRIS BLVD @ RIDER ST	B	8	2	1	S	3	1	S	2	1	S	3	1	S
13	RIDER ST @ REDLANDS AVE	B	11	2	1	S	3	1	S	2	1	S	3	1	S
14	RIDER ST @ CENTER ST	B	10	2	1	S	3	1	S	2	2	S	3	2	S
15	RIDER ST @ EVANS RD	B	9	2	-	S	-	-	-	2	1	-	S	1	S
16	RIDER ST @ ST "A"	C	16	1	S	S	2	1	S	S	2	S	2	1	S
17	RIDER ST @ BRADLEY RD	C	19	2	1	S	1	1	1	2	1	S	1	S	S
18	RAMONA EXPWY @ RIDER ST	B	9	3	-	S	-	-	-	3	2	-	-	1	1
19	RAMONA EXPWY @ PLACENTIA AVE	A	1	3	-	S	-	-	-	3	2	-	-	2	1
20	PLACENTIA AVE @ I-215 S/B	B	12	2	-	S	S	2	1	2	2	-	-	-	-
21	PLACENTIA AVE @ I-215 N/B	D	33	2	2	-	-	-	-	2	-	1	S	1	2
22	PERRIS BLVD @ PLACENTIA AVE	B	12	3	2	1	3	2	1	3	2	1	3	2	1
23	PERRIS BLVD @ REDLANDS AVE	C	24	3	1	S	3	1	S	3	1	S	3	2	S
24	PLACENTIA AVE @ EVANS RD	C	20	3	2	S	3	2	S	2	1	2	3	2	S
25	PERRIS BLVD @ ORANGE AVE	A	5	2	1	S	3	2	S	2	1	S	3	2	S
26	PERRIS BLVD @ CITRUS AVE	B	6	2	1	2	3	2	S	2	1	S	3	2	S
27	PERRIS BLVD @ NUEVO RD	F	81	3	2	1	3	1	S	3	2	S	3	2	S

S = SHARED WITH THRU LANE

TABLE 4

INTERSECTION ANALYSIS RESULTS

P.M. PEAK HOUR

INTERSECTION NUMBER	INTERSECTION NAME	LEVEL OF SERVICE	AVERAGE DELAY (SEC)	LANE CONFIGURATION											
				EBT	EBL	EBR	SBT	SBL	SBR	WBT	WBL	WBR	NBT	NBL	NBR
1	PERRIS BL @ MARKHAM ST	C	21	2	1	S	3	1	S	2	1	S	3	1	S
2	CAJALCO RD @ I-215 S/B	F	399	2	-	1	S	2	1	2	2	-	-	-	-
3	RAMONA EXPWY @ I-215 N/B	F	437	2	2	-	-	-	-	2	-	1	S	1	2
4	RAMONA EXPWY @ PERRIS BLVD	F	61	3	2	1	3	2	1	3	2	1	3	2	1
5	RAMONA EXPWY @ REDLANDS AVE	F	154	3	2	S	3	2	S	3	2	1	3	2	S
6	RAMONA EXPWY @ MURRIETTA RD	F	153	3	2	2	3	2	1	3	2	1	3	2	1
7	RAMONA EXPWY @ EVANS RD	A	5	3	-	S	-	-	-	3	2	-	-	1	1
8	RAMONA EXPWY @ BRADLEY RD	A	4	3	-	S	-	-	-	3	2	-	-	1	1
9	MURRIETTA RD @ DAWES ST	B	13	1	-	-	3	2	S	2	1	S	3	2	S
10	CENTER ST @ ST "A"	C	18	2	1	S	3	2	S	2	2	S	3	2	S
11	MORGAN ST @ ST "A"	B	5	-	-	-	2	1	-	-	1	1	2	-	S
12	PERRIS BLVD @ RIDER ST	B	10	2	1	S	3	1	S	2	1	S	3	1	S
13	RIDER ST @ REDLANDS AVE	C	17	2	1	S	3	1	S	2	1	S	3	1	S
14	RIDER ST @ CENTER ST	C	16	2	1	S	3	1	S	2	2	S	3	2	S
15	RIDER ST @ EVANS RD	A	1	2	-	S	-	-	-	2	1	-	S	1	S
16	RIDER ST @ ST "A"	B	13	1	S	S	2	1	S	S	2	S	2	1	S
17	RIDER ST @ BRADLEY RD	C	22	2	1	S	1	1	1	2	1	S	1	S	S
18	RAMONA EXPWY @ RIDER ST	B	9	3	-	S	-	-	-	3	2	-	-	1	1
19	RAMONA EXPWY @ PLACENTIA AVE	A	1	3	-	S	-	-	-	3	2	-	-	2	1
20	PLACENTIA AVE @ I-215 S/B	F	72	2	-	S	S	2	1	2	2	-	-	-	-
21	PLACENTIA AVE @ I-215 N/B	E	48	2	2	-	-	-	-	2	-	1	S	1	2
22	PERRIS BLVD @ PLACENTIA AVE	D-	36	3	2	1	3	2	1	3	2	1	3	2	1
23	PERRIS BLVD @ REDLANDS AVE	F	71	3	1	S	3	1	S	3	1	S	3	2	S
24	PLACENTIA AVE @ EVANS RD	D	32	3	2	S	3	2	S	2	1	2	3	2	S
25	PERRIS BLVD @ ORANGE AVE	B	9	2	1	S	3	2	S	2	1	S	3	2	S
26	PERRIS BLVD @ CITRUS AVE	C	16	2	1	2	3	2	S	2	1	S	3	2	S
27	PERRIS BLVD @ NUEVO RD	F	240	3	2	1	3	1	S	3	2	S	3	2	S

TABLE 5

PERCENT INTERSECTION PM VOLUME
FROM
MAY RANCH PROJECT

INTERSECTION NUMBER	INTERSECTION NAME	TOTAL INTERSECTION VOLUME FROM ENTIRE STUDY	MAY RANCH PMPH VOLUME	MAY RANCH VOLUME PERCENT
1	PERRIS BLVD @ MARKHAM ST	3132	0	0
2	CAJALCO RD @ I-215 S/B	8275	725	8
3	RAMONA EXPWY @ I-215 N/B	1045	1015	97
4	RAMONA EXPWY @ PERRIS BLVD	8793	2052	23
5	RAMONA EXPWY @ REDLANDS ST	7865	2702	34
6	RAMONA EXPWY @ MURRIETTA RD	10766	4850	45
7	RAMONA EXPWY @ EVANS RD	3243	324	9
8	RAMONA EXPWY @ BRADLEY RD	3033	267	8
9	MURRIETTA RD @ DAWES ST	6850	5038	73
10	CENTER ST @ ST "A"	7207	5581	77
11	MORGAN ST @ ST "A"	1248	1248	100
12	PERRIS BLVD @ RIDER ST	4817	135	2
13	RIDER ST @ REDLA	4568	1311	28
14	RIDER ST @ CENTER ST	7425	5101	68
15	RIDER ST @ EVANS RD	368	69	18
16	RIDER ST @ ST "A"	351	72	20
17	RIDER ST @ BRADLEY RD	520	520	100
18	RAMONA EXPWY @ RIDER ST	1987	624	31
19	RAMONA EXPWY @ PLACENTIA AVE	1582	52	3
20	PLACENTIA AVE @ I-215 S/B	3277	1257	38
21	PLACENTIA AVE @ I-215 N/B	6207	1582	25
22	PERRIS BLVD @ PLACENTIA AVE	9331	2328	24
23	PERRIS BLVD @ REDLANDS ST	8790	4314	49
24	PLACENTIA AVE @ EVANS RD	9033	4710	52
25	PERRIS BLVD @ ORANGE AVE	3638	0	0
26	PERRIS BLVD @ CITRUS AVE	3742	0	0
27	PERRIS BLVD @ NUEVO RD	10620	1400	13

TABLE 6
STREET SECTIONS

STREET	CURB TO CURB WIDTH, FT.
EVANS ROAD / CENTER STREET	86
EVANS ROAD / CENTER STREET APPROACHES TO:	
- PLACENTIA AVENUE	96
- RAMONA EXPRESSWAY	96
PLACENTIA AVENUE	86
PLACENTIA AVENUE APPROACHES TO:	
- EVANS ROAD / CENTER STREET	96
STREET "A"	64
BRADLEY STREET	64
RIDER STREET	86
RAMONA EXPRESSWAY	116

OFF SITE IMPROVEMENTS

It is recommended that the following off site improvements be implemented by the developer in conjunction with the development of Phase I of the overall phasing plan of the project area development.

The recommended projects are as follows:

- Signalization of the intersection of Ramona Expressway at Murrieta Road.
- Signalization of the interchange ramps at the I-215 Freeway and Ramona Expressway.
- Construction of at least one lane in each direction on the Evans Road/Center Street/Murrieta Road alignment from Placentia Avenue to Ramona Expressway. It is recognized that the portion of Center Street within the Phase I development area would be developed to ultimate standards initially.
- Installation of a traffic signal at the intersection of Placentia Avenue and Perris Boulevard.
- Construction of at least one lane in each direction on Placentia Avenue between Evans Road and Redlands Avenue.

Some of these improvements may be financed by means other than by direct developer-paid improvements.

5.5 BIOLOGICAL ASSESSMENT

May Property Biological Assessment

Tierra Madre Consultants
Lawrence F. LaPre, PhD

February, 1988

Introduction

This report was contracted by Richard Goacher of Florian Martinez Associates as part of the baseline data necessary for consideration of environmental impacts of development by the City of Perris and other concerned regulating agencies. The property described in this report is a 680 acre parcel located along the Ramona Expressway near Lake Perris. As proposed by this Specific Plan, the property will be developed into 3,686 residential units, along with commercial and recreational uses. The biological resources of the project area are described, potential impacts to those resources as a result of the proposed project are discussed, and recommendations are made for mitigation measures intended to minimize those impacts.

Methods

A literature review was conducted to identify any sensitive elements which are known to occur on or in the vicinity of the property. This included consultation with the California Natural Diversity Data Base (Data Base), the Riverside County Comprehensive General Plan, and relevant environmental documents prepared for other development projects in the nearby area.

Following the literature review, a field survey was performed by L. LaPre and Kelly Campbell on February 4, 5, 6, and 12, 1988. Sixteen man-hours were spent driving and walking over the site. All plant and animal species detected were recorded in field notes. Because this site has no natural vegetation, species lists are excluded from this report. The major sightings are reported in the text instead.

Results

This site consists entirely of farmland, with active production of alfalfa, sheep, and nonirrigated grains. No native plant community or undisturbed habitat is present. The site is biologically valuable as open space, where it is occupied by a variety of wildlife species adapted to the rural conditions.

Vegetation and flora

Although no native plant communtities are present, the fallow fields are occupied by non-native grassland. Non-native grassland contains red brome, ripgut grass, wild oats, short-pod mustard, filaree, and other weeds common in disturbed areas. These species will continue to dominate the flora for many years even without any further cultivation. The original vegetation of the site was probably grassland and sparse coastal sage scrub.

A row of large Eucalyptus trees borders Rider Street. These are the only trees on the property, with the exception of a few Peruvian pepper trees at the old homesites.

Wildlife Habitat and Fauna

Because of the active cultivation, few ground-dwelling birds, mammals, or reptiles inhabit the site. However, the large region of open space, of which the May property is a part, attracts a variety of birds of prey, especially in the winter. The agricultural lands are close to Lake Perris and the San Jacinto Wildlife Area. This proximity increases their value as open space, because a large contiguous habitat is available for wide-ranging species such as raptors. This region of Riverside County is well-known for its large populations of wintering hawks, eagles, and owls. The May property is a substantial part of the existing habitat for these birds. These protected raptors known to frequent the site are discussed below under sensitive species.

The agricultural lands in this area also support thousands of wintering shorebirds, blackbirds, and songbirds. For example, a flock of several hundred kildeer was observed during the field survey in a plowed field near the Perris Valley storm drain, and the annual Christmas Bird Count of the National Audubon Society held in the San Jacinto Valley reported thousands of blackbirds, kildeer, horned larks, savannah sparrows, and water pipits.

Mammals detected on the site either by direct observation or by the presence of sign included western pocket gopher, Beechey ground squirrel, deer mouse, coyote, blacktailed jackrabbit, and cottontail rabbit. The latter two were seen in the MWD easement, just east of the May property, and few rabbits are actually present on site due to the lack of cover.

Small mammal trapping survey

The trapping survey, conducted in the annual grassland at the edge of the knoll at the northern boundary of the property, resulted in the capture of four deer mice. The site does not provide habitat for kangaroo rats or other rodents because of the active cultivation.

Sensitive species

Several species of plants and animals considered sensitive by resource agencies and conservation organizations were identified as occurring or potentially occurring on the May property, including two reptiles, one mammal, and three plants. In addition, several species of sensitive predatory birds are known to visit the site. Sensitive species and communities are so called because their populations are declining, they are especially vulnerable to habitat change, or because they have restricted distributions and are naturally rare. For a summary of those sensitive species occurring or potentially occurring on the property, see Table 1.

The three plant species reported by the Data Base are species preferring habitats different from that on the site, and these are not listed in the Table. They were Payson's caulanthus (Caulanthus simulans), a chaparral species, and thread-leaved brodiaea (Brodiaea filifolia) and prostrate spineflower (Navarretia fossalis), both species restricted to alkaline clay soils that are vernally wet.

Table 1. Sensitive species of the May Property as indicated in literature review.

Scientific Name (Common name)	Status *	Probability of Occurrence **	Habitat
Dipodomys stephensi Stephens kangaroo rat	1. C1 2. CT 3. B1.2	Absent	Level Grassland
Phrynosoma coronatum blainvillei San Diego horned lizard	1. C2 2. CSC 3. B2.1	Low	Chaparral, coastal sage scrub, and sandy washes
Cnemidophorus hyperythrus Orange-throated whiptail	1. C2 2. CSC 3. B3.1	Low	Coastal sage scrub, chaparral, and sandy washes.
Birds of prey (Many species)	2. CSC	Occurs	Agricultural, Hillsides

* Status designations on next page

**** Definitions of occurrence probability:**

Occurs: Observed on the site by field personnel of Tierra Madre Consultants, or recorded on-site observations by other qualified biologists.

Low: Site is within the known range of the species but habitat on the site is rarely used by the species.

Absent: No suitable habitat present and/or proper detection methods used at proper season and species not found.

STATUS DESIGNATIONS

1) FEDERAL DESIGNATIONS

E = Federally listed, endangered
T = Federally listed, threatened
C1 = Category 1 candidate species. Enough data are on file to support the federal listing.
C2 = Category 2 candidate species. Threat and/or distribution data are insufficient to support federal listing.

2) STATE DESIGNATIONS

CE = State listed, endangered
CT = State listed, threatened (previously listed as rare)
CP = Fully protected under California Fish and Game Code, Sections 3511, 4700, 5050, 5515
CSC = California Department of Fish and Game Species of Special Concern

3) CALIFORNIA NATURAL DIVERSITY DATA BASE

A1.1 Extremely rare, endangered and unprotected species
A1.2 Extremely rare and threatened species
A2.1 Very rare, endangered and unprotected species
A2.2 Very rare and threatened species

B1.1 Rare and endangered species or extremely rare, endangered or threatened subspecies
B1.2 Rare and threatened species or very rare, endangered or threatened subspecies
B2.1 Uncommon and threatened species or rare and endangered subspecies
B2.2 Rare but not threatened or peripheral and endangered species in California only, or rare and threatened subspecies.
B3.1 Uncommon and declining or peripheral and threatened species in California only, or uncommon or threatened, or peripheral and endangered subspecies in California only.
B3.2 Widespread and declining species or uncommon declining, or peripheral and threatened subspecies in California only.
BU Possibly threatened, needs more information

Information sources of status descriptions are derived from the California Natural Diversity Data Base. See references for federal and state designations.

Birds of prey are considered sensitive by resource agencies and conservation groups because they require protected nest sites, large home ranges for foraging, and because they are susceptible to cumulative effects of environmental contamination, such as the DDT-related eggshell thinning reported for many species.

This site supports wintering populations of many species of predatory birds. Ospreys wintering at Lake Perris are seen over the fields occasionally, and great horned owl, long-eared owl, burrowing owl, and barn owl all use the agricultural lands for nocturnal hunting. Sensitive raptors known to use this property on occasion include golden eagle, black-shouldered kite, prairie falcon, ferruginous hawk, and northern harrier. Bald eagles are occasionally sighted in the winter near Lake Perris and in the San Jacinto Valley, and this endangered species may fly over the site on occasion.

The numbers of nesting predatory birds are much fewer, and consist of American kestrel, red-tailed hawk, barn owl, great horned owl, and perhaps burrowing owl. One nest of a red-tailed hawk was observed in a Eucalyptus tree near Evans Street (off site), and a hollow stump of a Peruvian pepper tree at an old homestead was believed to contain a nesting site for a pair of great horned owls. The red-tailed hawks are seen daily using the wooden power poles for perches. Golden eagles may nest in the Bernasconi Hills or on Mount Russell, and this species is often sighted in the area surrounding the May property.

The **San Diego horned lizard** was not observed on the site and is not expected to occur. The Data Base records are for Perris and the Perris Valley, but today this species is found mainly in hilly areas, and often in dense chaparral. Populations of this lizard are declining due to extensive collecting on wildlands near urban development areas and as a result of its habitat being converted to agricultural and urban lands.

The **orange-throated whiptail** was reported by the Data Base from "Perris and 5 miles E. of Perris". These lizards have a restricted range which is similar to that of the Stephens kangaroo rat. They occur in grassland or coastal sage scrub, often near riparian drainages. They are known from these habitats at the San Jacinto Wildlife Area, about 5 miles to the north. Although the site may have had populations of this reptile prior to cultivation of the site, no suitable habitat remains, and it is believed to be absent from the May property.

Stephens kangaroo rat occurs on gentle slopes or flats with dry, sandy, gravelly soils. Its preferred habitat is open grasslands with little or no brush cover. The project site, having been cultivated for many years, is not considered to be

suitable habitat for the Stephens kangaroo rat. The small uncultivated edge of the field near the knoll on the northern boundary had no sign of kangaroo rats, and none were captured during the trapping survey. The entire site, however, was probably prime habitat for the Stephens kangaroo rat prior to the establishment of agriculture in the Perris Valley.

Discussion

Project impacts

Because the site is no longer a natural habitat, biological impacts are less than if undisturbed lands were being converted to different uses for the first time. The major impact is the loss of a large area of open space, one which is now contiguous with other large open space parcels. At this time, the biological impact of this residential project represents an incremental contribution to the loss of open space in the general region. Because several thousand acres of open space are still available, this impact is not significant by itself. As urbanization of private lands continues in the Perris and San Jacinto Valleys, however, residential developments will cumulatively become very significant for the substantial populations of migratory birds now present.

No threatened or endangered species of plant or animal will be impacted by this project, nor will essential habitat for these species be removed.

Mitigating measures

Plantings of tall trees, especially adjacent to parks, school sites, and the knoll at the northern boundary, might make the area continue to be attractive to the more urban-adapted birds of prey. The Perris Valley storm drain, the knoll at the northern property boundary, and the MWD easement on the east of the site represent habitat lands to some extent, and design of the project adjacent to these areas should encourage compatibility with the habitat value. For example, parks, school fields, or other uses with an open aspect are preferred adjacent to the knoll, and a separation of the residences from the storm channel, as with a wall, will prevent encroachment by the residents on the wildlife drinking source and travel corridor.

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5.6 FISCAL IMPACT ANALYSIS

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FISCAL ANALYSIS OF THE IMPACT OF THE DEVELOPMENT OF THE MAY PROPERTY SPECIFIC PLAN PROJECT ON THE CITY OF PERRIS

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FISCAL ANALYSIS OF THE IMPACT OF THE DEVELOPMENT OF THE MAY PROPERTY SPECIFIC PLAN ON THE CITY OF PERRIS

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FISCAL ANALYSIS OF THE IMPACT OF
THE MAY PROPERTY SPECIFIC PLAN ON THE CITY OF PERRIS

PART ONE - EXECUTIVE SUMMARY

I. FINDINGS

1. The May Property Specific Plan involves some 700 acres in the area generally bounded by the Ramona Expressway, Rider Street and the Riverside County Flood Control channel in the northeast portion of the City of Perris. The project consists of 3,444 single family units and 100 acres of commercial.

2. The residential units proposed range from 4,000-square-foot lots to 7,140-square-foot lots, and range in value (in 1988 dollars) from $75,000 to $120,000.

3. The project is proposed to be built in four phases, with construction of the residential portion beginning in 1988-89 and continuing to 1998-99. The commercial portion is proposed to begin construction in 1989-90 with approximately four of the 100 acres built following the residential build-out.

4. An analysis of operating revenues and costs to the City of Perris attributable to this development during the study period from 1988-89 through 2003-04 concludes that:

   a. The overall fiscal impact of the development, using current levels of service, is positive and results in a surplus of revenues over costs in all but the second year of the study period.

   b. The City General Fund will experience a surplus throughout the study period, ranging from a modest $1,156 in 1988-89 and rising to $168,828 in the final year of the study period, 2003-04.

   c. The City Road Fund will fluctuate between a surplus and a deficit on a year-by-year basis, reflecting the costs of maintaining new street improvements as the development proceeds. However, the Fund will experience a deficit of $39,489 beginning in 2001-02 and continuing through the end of the study period.

   d. The surpluses in the General Fund will be sufficient to offset the Road Fund deficit so that, with the exception of the second year (1989-90), the overall fiscal impact of the development will be positive, showing a surplus of $129,339 at the end of the study period.

5. A review of capital facility needs indicates no major issues that would result in infrastructure or facility problems. The review shows:

   a. Fees levied by the City for fire protection appear to cover the costs required for fire facilities. The City and the developer need to assure that the funds are available in advance of the need for the station.

   b. Traffic signal mitigation fees satisfy the immediate needs for traffic signalization.

   c. No major obstacles were encountered in reviewing flood control, water or sewer facility needs. The establishment of a Mello-Roos Public Facilities District for water and sewer facilities appears to meet this need satisfactorily.

   d. The developer will provide the local streets and the backbone street structure as the development proceeds.

II. STUDY DESIGN

INTRODUCTION

This study has been conducted to provide the officials of the City of Perris and interested parties with an analysis of the fiscal impact of the proposed development on the City's ability to provide services for which it is responsible to the development. The study is also designed to meet the requirements of the Riverside County Local Agency Formation Commission for a fiscal analysis in connection with Annexation No. 31 to the City of Perris. This annexation includes the southern 252 acres of the proposed Specific Plan.

This study analyzes the revenues to be derived by the City on an annual basis during the projected period of build-out of the project and for a period of five years following residential build-out, together with an analysis of the cost of services provided by the City and required by the project. Throughout the study, all amounts represent constant 1988 dollars. From these analyses, review agencies and City policy-makers will have a basis upon which to evaluate the fiscal benefits that would flow from the project, as well as any potential fiscal issues that would need to be addressed.

This fiscal analysis has been conducted in accordance with the requirement of the City of Perris for a fiscal impact report on Specific Plans of Land Use. Further, this fiscal analysis has been conducted using the following general guidelines:

1. The case study method was utilized to the extent possible in analyzing the cost/revenue impacts on the City for the provision of municipal-type services (public protection, road maintenance, fire protection, etc.).

2. A per capita multiplier method was utilized in analyzing the cost/revenue impacts on the provision of general functions of the City, such as general government, public works non-road costs and miscellaneous city costs, etc.

3. Values for the residential units were obtained from the developer; while values for commercial development were based on Marshall & Swift Valuation Service, June 1987 Edition, adjusted for inflation.

Property taxes were calculated in constant 1988 dollars by applying the apportionment factors provided by County staff to the assessed value of units projected by phase as provided by the developer, Kaufman & Broad of Southern California, Inc. Since the entire project was contained in a single Tax Rate Area, the apportionment factors in that area (except for the City's share of property taxes) were based on the factors provided by the Office of the County Auditor-Controller.

The City's General Fund share was calculated at 25% of the County factor provided by the County Auditor-Controller for use in the required fiscal impact reports for developments occurring in the unincorporated area. The 25% factor was used in accordance with the Master City-County Property Tax Transfer Agreement in effect in Riverside County which provides that, in any annexation of territory to a City, the City will receive 25% of the property tax apportioned to the County within that territory.

Under an agreement effective in 1983-84, the City also receives the property tax apportionment formerly going to the County Structural Fire Fund. The apportionment ratio for that Fund provided by the Office of the Auditor-Controller was employed in this study.

The study assumed a constant inflationary increase of 5% per annum. The projected inflationary increase in property taxes was held at the Constitutionally-mandated 2% per annum. Since this study is prepared using constant dollars, the practical effect of this Constitutionally-mandated limit is to depress property tax generation for properties that remain in the same ownership by three percent per annum.

The rationale for computation of each revenue and cost category will be described in more detail in Part Two, Analysis of Revenues and Costs.

THE PROPOSED DEVELOPMENT

The proposed May Property Specific Plan consists of 700 acres situated in the northeastern portion of the City of Perris, generally south and west of the Ramona Expressway and east of the existing Riverside Flood Control Channel.

Of the 700 acres, approximately 448 are within the City as the result of annexation No. 28 which received final approval by the Perris City Council in January of this year. The remaining 252 acres are included in annexation No. 31 which is being filed with the Riverside County Local Agency Formation Commission coincident with the completion of this analysis.

The proposed Specific Plan involves the construction of 3,444 residential units and 100 acres of commercial development.

The project is proposed to be built in four phases. The initial phase would involve the area adjacent to the Ramona Expressway at the north end of the property. The second and third phases would involve the area on both sides of Rider Street east of El Nido Avenue. The final phase would complete the project south of Rider Street and west of Evans Street.

Based on a factor of 2.75 persons per household, the project would result in a population of 8,903 persons at build-out. Table I below shows the dwelling unit and population figures by fiscal year from the beginning of construction to build-out.

TABLE I

MAY PROPERTY SPECIFIC PLAN
BUILD-OUT PROJECTIONS BY FISCAL YEAR

Fiscal Year	No. of D/Us	Cumulative D/Us	Projected (1) Population
1988-89	20	20	52
1989-90	316	336	869
1990-91	497	833	2,153
1991-92	473	1,306	3,376
1992-93	434	1,740	4,498
1993-94	400	2,140	5,532
1994-95	450	2,590	6,695
1995-96	347	2,937	7,592
1996-97	350	3,287	8,497
1997-98	137	3,424	8,851
1998-99	20	3,444	8,903

(1) Based on 2.75 persons per household and a 6% vacancy factor.

Commercial development within the Specific Plan is proposed to begin the second year (1989-90). The 100 acres committed to commercial calculates to 1,089,000 net square feet of commercial development based on development of 25% of the gross acreage. Of this total, 1,029,630, or 23.64 acres, are projected to be developed during the study period, with the remaining 1.36 acres projected for development after 2003-04, the final year of the study period.

The project also includes 41 acres of public use area consisting of three passive parks and one linear park. The passive parks will contain ten, nine, and eight acres respectively, while the linear park is planned to include 14 acres.

Table II on the following page provides a statistical summary of the project as currently proposed. It should be noted that the Specific Plan is in the process of filing and review by the City of Perris and therefore is subject to adjustment.

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TABLE II

STATISTICAL SUMMARY
MAY PROPERTY PROPOSED SPECIFIC LAND USE PLAN

Products	Acres	%	Density
4,000 Sq. Ft.	64	9	479
4,050 Sq. Ft.	137	20	682
4,500 Sq. Ft.	137	20	1,298
5,400 Sq. Ft.	110	16	605
7,140 Sq. Ft.	95	14	380
Commercial	100	15	---
Public Parks	27	4	---
Linear Park	14	2	---
Totals	684	100	3,444

STUDY PERIOD

This study scans the period of residential build-out (1988-89 through 1998-99) and, in accordance with standard Christensen & Wallace, Inc. methodology, the study period was extended for a period of five years beyond the final year of build-out (to 2003-04). This extension provides to the review agencies a test of the continuing impact of property turnover on property tax generation once development is stabilized and no new property values (except for limited commercial development extending beyond the residential build-out) are added to the tax rolls. Resales, which have the effect of providing a balance to the depreciation of property taxes on properties retained by owners, are assumed to occur at a rate of 5% of total residential units beginning the fifth year of the development period.

SERVICES COVERED IN THIS ANALYSIS

The purpose of a fiscal impact analysis is to study a proposed development and determine the cost/benefit relationship of the development on affected local agencies. In establishing a cost/benefit relationship, the primary issue involves whether or not the development will generate sufficient revenues to the affected local agencies to fund the cost of services that can be directly attributed to the development.

In the instant case, the services most directly affecting the fiscal analysis are provided by two local agencies -- the City of Perris and the County Fire Department, which provides fire suppression services under contract to the City.

Two types of costs are generated in providing public services: capital improvement costs and maintenance and operation costs of those improvements. For example, in providing fire protection and suppression, capital costs include the construction of fire stations and the acquisition of fire apparatus; while maintenance and operation costs involve the expenditures associated with staffing to maintain the station and respond to calls for services, as well as the services and supply costs for maintaining the station and apparatus.

The first part of this analysis concentrates on the maintenance and operation costs, while the latter part will address capital improvement issues.

While other services to the development are also provided by local agencies, those services, for the most part, are operated on a full cost-recovery basis. These include the provision of domestic water, liquid waste disposal, and flood control. The impact of the development will be summarized in the report, but the major concentration of the analysis involves the following functions and services:

Law Enforcement (including Animal Control)
Fire Protection
Street and Road Maintenance
Local Parks and Recreation
Senior Citizen Services
Public Works (Non-Road Services)
General Government
Miscellaneous Costs

Since the City receives one-time revenues associated with the processing of land development projects, and these fees are designed to offset associated costs incurred for these activities, no net cost results to the City. This study, therefore, does not consider the costs of planning and land use regulation or building inspection directly related to this project.

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(This Page reserved for Vicinity and Specific Plan Map)

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FISCAL ANALYSIS OF THE IMPACT OF THE MAY PROPERTY SPECIFIC PLAN ON THE CITY OF PERRIS

PART TWO - ANALYSIS OF REVENUES AND COSTS

I. REVENUES

INTRODUCTION

Eleven revenue sources were examined in this study. Per capita multipliers based on data contained in the Final Budget for 1987-88 of the City of Perris were used in developing projections for six of these sources; the case study approach was utilized in four others; and one source (sales and use taxes), was developed using a combination of per capita multipliers and case studies.

The sources developed through the use of per capita multipliers were:

Franchise fees;
Sales and use taxes (other than the commercial development component);
Motor vehicle in lieu;
Cigarette taxes;
Gasoline taxes;
Traffic/motor vehicle fines (road fund); and
Civil penalties.

The sources developed through the use of case study methodology were:

Property taxes (general fund);
Property taxes (structural fire fund);
Property transfer taxes;
The commercial component of the sales tax; and
Interest earnings.

DEVELOPING PER CAPITA MULTIPLIERS

In using the per capita multiplier, the City Budget was examined and actual revenues received during 1986-87 were divided by 11,253, the population for the City certified by the State Department of Finance as of January 1, 1987. This methodology was employed in deriving franchise fees, cigarette tax, civil penalties, vehicle code fines, and State fuel taxes.

With the exception of motor vehicle in lieu fees, all per capita revenues were assumed to increase annually at the rate of inflation, and, as a result, increase only on the basis of projected increases in population. In the case of sales and use tax, this tends to result in a conservative estimate, since inflation is based on the Consumer Price Index which includes, in the "market basket" used in its development, a wide variety of consumer products, while sales tax generation related to the City of Perris involves those consumer products available within the City. As the City grows, a wider variety of products can be expected to become available; products which are presently being purchased in other market areas (Riverside, for example). This broader market will be reflected in increases in per capita sales tax generation above the rate of population growth.

As for motor vehicle in lieu, this revenue was projected to grow at a rate higher than inflation. For the first five years of the study period, this revenue was increased at 3% above inflation; while for the remainder of the study period, the increase above inflation was held to two percent. The rationale behind this increase involves the trend of this revenue source over the last ten years. According to data published by the League of California Cities, motor vehicle in lieu revenues have risen from $12.90 per capita in 1977-78 to $33.20 in 1987-88, or an average of 25.7% per year. Even discounting for the double-digit inflation experienced in the late 70's, this revenue source has been rising at about 10% annually due for the most part by the substantial increase in automobile prices. While it is unlikely that automobile prices will continue to rise at the rate of the last several years, it is reasonable to anticipate continued increases in this revenue source at rates above inflation as projected in this analysis.

DEVELOPING SALES AND USE TAX PROJECTIONS

As noted above, sales and use tax projections were developed using both the per capita multiplier and the case study method. Sales and use taxes generated by the City of Perris currently amount to a per capita of $72.34. This amount was applied to projected population of the project throughout the study period.

The project, however, proposes the development of over one million square feet of commercial uses over the study period. Based on the most recent edition of "Dollars and Cents of Shopping Centers" published by the Urban Land Institute, it can be expected that neighborhood shopping centers will generate approximately $125 per square foot in taxable sales, or $1.25 per square foot in sales taxes allocated to the local agency.

However, this study assumes that the taxable purchases made by residents of the project would be included in the per capita multipliers, so that addition of the taxable sales generated

within the commercial development would, in effect, result in double counting.

The project phasing proposes development of a 42-acre commercial center at the intersection of the Ramona Expressway and the Loop Road at the entrance to the project. Given the fact that the Ramona Expressway is a major arterial road connecting Perris with the Hemet-San Jacinto area; and given the proximity of this location to a major State Recreation Area (Lake Perris), this analysis allocates ten percent of the taxable sales within the project area to consumers from outside the City of Perris. Since State law allocates sales taxes on a situs basis, taxable sales made by consumers residing outside of Perris are allocated to the City.

DEVELOPING PROPERTY TAX AND PROPERTY TRANSFER TAX REVENUE PROJECTIONS

Property Tax Revenue Projections

As noted in Part One, residential property values were provided by the developer in accordance with seven product lines ranging in value from $75,000 to $120,000. These values were projected to increase at the rate of inflation and, consequently remained constant throughout the study period. In calculating property taxes, the prior year's depreciated value resulting from the 2% lid on property tax increases, adjusted for appreciated values resulting from resales, were added to new values resulting from additional development during the build-out period. This revised cumulative market value represents assessed valuation; the apportionment ratios for each taxing agency were then applied against each $100 of assessed valuation. Residential unit resales were assumed to begin six years into the development, and were projected to occur at the rate of 5% annually. No resales were assumed for commercial properties.

For the period following build-out, the prior year assessed value was adjusted for appreciated values resulting from resales, and the apportionment ratios applied against one percent of the assessed value to determine the property tax for each taxing agency. The calculations for property taxes and property transfer taxes for both residential and commercial development are contained in Table A (Residential) and Table B (Commercial) in the Appendix. Table C in the Appendix contains the apportionment factors for all property tax- receiving agencies in the subject territory, and the projected property tax allocation each will receive throughout the study period.

Property Transfer Tax Projections

Each time property is transferred in the State of California, a property transfer tax (documentary transfer tax) is levied at the

rate of $1.10 per $1,000 of value conveyed. This tax is divided equally between counties and cities, so that the City of Perris receives the tax at the rate of $0.55 per $1,000 of value conveyed.

This tax is generated at the time a new property is sold, so it is included in the analysis based on the number of residential units built by fiscal year to account for the initial sale of the property. Similarly, the tax is included for commercial property based on its value at the time of construction.

The tax would also be generated each time a property is resold, so it is included based on the resale assumptions used in this analysis, but only for residential properties. Although commercial properties also change hands, there is no basis upon which to make any assumptions as to resale rates (which are typically very low). In keeping with a conservative approach, no revenues were generated in this study for commercial property resales, either for property tax or for property transfer tax purposes.

DEVELOPING THE STRUCTURAL FIRE TAX COMPONENT

As provided for in the Revenue and Taxation Code, the County of Riverside has levied a structural fire tax which is a dedicated portion of the $1 per $100 of assessed valuation property tax. In 1983-84, the City of Perris acted under a provision of the Revenue and Taxation Code to assume all responsibility for structural fire protection, and, in accordance with the statute, this portion of the property tax was transferred to the City.

With each annexation to the City, that portion of the property tax allocated to the County Structural Fire Fund is transferred to the City. According to the Office of the Auditor-Controller, the apportionment ratio in the subject Tax Rate Area amounts to 0.05794098. This ratio was used in calculating the structural fire component of the property tax allocated to the City throughout the study period.

DEVELOPING PROJECTIONS FOR INTEREST EARNINGS

Because of the manner that funds are allocated to public agencies, the opportunity exists to invest idle funds and earn interest on them. Based on the Budget of the City of Perris, the City earned 2.7% on total revenues during 1986-87. This earnings rate was applied to total revenues throughout the study period. Since Road Fund revenues are restricted to road expenditures, the interest earnings were calculated separately for the General Fund and for the Road Fund.

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SUMMARY

The projections for revenue generation by fiscal year during the study period is contained in Tables III and IV following. Each revenue source is identified and tracked by fiscal year for the full study period. The first Table shows revenue generation to build-out, while the second Table illustrates revenue generation for five years following build-out.

TABLE III

REVENUE PROJECTIONS
(For the Construction Period)

POPULATION:	TOTALS	1988-89	1989-90	1990-91	1991-92	1992-93
Dwelling Unit Projections	3,444	20	316	497	473	434
Population Projections (@ 2.75 pph - Cumulative)		52	869	2,153	3,376	4,498

GENERAL FUND DISCRETIONARY REVENUE	1988-89	1989-90	1990-91	1991-92	1992-93
Franchise Fees ($9.12 per capita)*/**	0	7,921	19,638	30,789	41,021
Sales and Use Tax ($72.34 per capita)**	3,740	62,832	155,770	244,221	325,378
Sales and Use Tax (Com'l. Develop. Component)	0	9,375	35,085	44,460	58,523
Motor Vehicle in Lieu ($26.17 per capita)***	1,394	24,114	61,577	99,439	136,458
Cigarette Tax ($2.65 per capita)**	137	2,302	5,706	8,946	11,919
Civil Penalties ($1.11 per capita)**	57	964	2,390	3,747	4,993
Property Tax, General Component	1,111	21,563	56,749	86,753	114,554
Property Tax, Structural Fire Component	927	17,992	47,351	72,386	95,584
Property Transfer Tax	2,530	19,100	25,506	25,938	24,082
Interest Earnings (2.7% of total revenue)	267	4,486	11,064	16,650	21,938
TOTAL, GENERAL FUND REVENUE	10,163	170,649	420,837	633,330	834,450

ROAD FUND REVENUES					
State Fuel Tax ($11.90 per capita)**	615	10,336	25,624	40,175	53,525
Vehicle Code Fines ($4.71 per capita)**	244	4,091	10,142	15,901	21,185
Interest Earnings (@ 2.7%)	23	390	966	1,514	2,017
TOTAL, ROAD FUND REVENUES	882	14,816	36,732	57,590	76,727

NOTES: * Since franchise fees are collected on an annual basis, no revenue is anticipated from this source during the first fiscal year.

** Per capita revenues are stated in constant dollars assuming 5% inflation.

*** This revenue source is increased 3% above the rate of inflation through 1993-94 and 2% above the rate of inflation to the end of the study period.

TABLE III (Continued)

REVENUE PROJECTIONS
(For the Construction Period)

POPULATION:	TOTALS	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
Dwelling Unit Projections	3,444	400	450	347	350	137	20
Population Projections (@ 2.75 pph - Cumulative)		5,532	6,695	7,592	8,497	8,851	8,903

GENERAL FUND DISCRETIONARY REVENUE	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
Franchise Fees ($9.12 per capita)*/**	50,451	61,060	69,240	77,492	80,721	81,193
Sales and Use Tax ($72.34 per capita)**	400,178	484,327	549,216	614,665	640,284	644,024
Sales and Use Tax (Com'l. Develop. Component)	72,585	86,648	100,425	120,113	140,428	169,618
Motor Vehicle in Lieu ($26.17 per capita)***	172,863	213,397	246,827	281,766	299,380	307,151
Cigarette Tax ($2.65 per capita)**	14,660	17,742	20,119	22,517	23,455	23,592
Civil Penalties ($1.11 per capita)**	6,140	7,432	8,427	9,432	9,825	9,882
Property Tax, General Component	138,908	166,228	187,162	208,567	216,408	219,445
Property Tax, Structural Fire Component	115,905	138,701	156,168	174,028	180,570	183,104
Property Transfer Tax	22,011	25,525	23,084	23,884	15,835	6,941
Interest Earnings (2.7% of total revenue)	26,830	32,429	36,738	41,376	43,386	44,414
TOTAL, GENERAL FUND REVENUE	1,020,530	1,233,487	1,397,405	1,573,839	1,650,293	1,689,364

ROAD FUND REVENUES						
State Fuel Tax ($11.90 per capita)**	65,830	79,672	90,347	101,113	105,327	105,943
Vehicle Code Fines ($4.71 per capita)**	26,055	31,534	35,759	40,020	41,688	41,932
Interest Earnings (@ 2.7%)	2,481	3,003	3,405	3,811	3,969	3,993
TOTAL, ROAD FUND REVENUES	94,366	114,209	129,510	144,944	150,985	151,867

NOTES: * Since franchise fees are collected on an annual basis, no revenue is anticipated from this source during the first fiscal year.

** Per capita revenues are stated in constant dollars assuming 5% inflation.

*** This revenue source is increased 3% above the rate of inflation through 1993-94 and 2% above the rate of inflation to the end of the study period.

TABLE IV

REVENUE PROJECTIONS
(For a Period of Five Years Following Build-Out)

POPULATION:	TOTALS	1999-00	2000-01	2001-02	2002-03	2003-04
Dwelling Unit Projections	3,444	0	0	0	0	0
Population Projections (@ 2.75 pph - Cumulative)		8,903	8,903	8,903	8,903	8,903

GENERAL FUND DISCRETIONARY REVENUE	1999-00	2000-01	2001-02	2002-03	2003-04
Franchise Fees ($9.12 per capita)*/**	81,193	81,193	81,193	81,193	81,193
Sales and Use Tax ($72.34 per capita)**	644,024	644,024	644,024	644,024	644,024
Sales and Use Tax (Com'l. Develop. Component)	174,306	178,993	183,681	188,368	193,056
Motor Vehicle in Lieu ($26.17 per capita)***	313,294	319,560	325,951	332,470	339,119
Cigarette Tax ($2.65 per capita)**	23,592	23,592	23,592	23,592	23,592
Civil Penalties ($1.11 per capita)**	9,882	9,882	9,882	9,882	9,882
Property Tax, General Component	216,310	213,816	211,965	210,522	209,346
Property Tax, Structural Fire Component	180,489	178,407	176,863	175,660	174,679
Property Transfer Tax	7,054	7,978	8,861	9,193	8,415
Interest Earnings (2.7% of total revenue)	44,554	44,751	44,982	45,222	45,449
TOTAL, GENERAL FUND REVENUE	1,694,698	1,702,196	1,710,994	1,720,127	1,728,756

ROAD FUND REVENUES					
State Fuel Tax ($11.90 per capita)**	105,943	105,943	105,943	105,943	105,943
Vehicle Code Fines ($4.71 per capita)**	41,932	41,932	41,932	41,932	41,932
Interest Earnings (@ 2.7%)	3,993	3,993	3,993	3,993	3,993
TOTAL, ROAD FUND REVENUES	151,867	151,867	151,867	151,867	151,867

NOTES: * Since franchise fees are collected on an annual basis, no revenue is anticipated from this source during the first fiscal year.

** Per capita revenues are stated in constant dollars assuming 5% inflation.

*** This revenue source is increased 3% above the rate of inflation through 1993-94 and 2% above the rate of and 2% above the rate of inflation to the end of the study period.

inflation to the end of the study period.

II. COSTS

INTRODUCTION

As was the case with revenues, expenditure projections were developed using both per capita multipliers and case study methodologies.

Per capita multipliers were used to determine cost projections for parks and recreation, senior citizen services and public works (non-road) expenditures. While the project involves some 41 acres of parkland, it was decided to use the multiplier approach as more appropriate for two reasons: the parks within the project would be an extension of the park system of the City and thus would be maintained as part of the total park system; and the City's recreation programs would be available to the residents of the project so that projecting costs based on the cost per person City-wide was deemed more representative.

Law enforcement (including animal control) and road maintenance costs were developed using the case study approach. The detailed method of projection is discussed below.

In the case of fire protection, a modified case study approach was employed. The County Fire Department provided estimates based on per-unit cost for residences and per-square-foot costs for commercial developments. However, upon examination, it became obvious that these costs were not representative of the expenditures for actual levels of service currently provided to the City, as manifested by the existing contract between the City and the Fire Department. As a result of this apparent inconsistency, it was decided to use the existing level of service cost as reflected in the contract and apply it to the project. The methodology is described in detail below.

It should be pointed out, however, that a comprehensive public safety study (both law enforcement and fire protection) has been undertaken by the City of Perris. The results of that study, which should be ready by late summer, may recommend increases in service levels which would have the effect of increasing the cost estimates contained in this study.

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A modified approach was also developed for determining "general government" costs and applying them to the project. These costs, which involve expenditures for the City Council and City Administration, as well as for a group of miscellaneous expenditures, presented several problems.

First, many of the expenditures were not directly affected by added population or commercial development. For example, for the foreseeable future, the City of Perris will operate with a five-member City Council; one City Manager, one Director of Finance, one Personnel Officer, etc. To lump all City Council and City administrative costs together and generate a per capita multiplier which would be applied against the population of the project would seriously over-state these costs. This is particularly so when one considers that payroll expenses (retirement, social security, workmen's compensation, etc.) which constitute a major expenditure of any local agency are directly affected by the positions and the salaries of local agency personnel.

Additionally, there were expenditure items that did not lend themselves to spreading equally among the population. Included in this category were civic promotion, civic center building maintenance, auditing, and the services of the City Attorney.

Second, it was necessary to separate the costs of services attributable to resident population and those attributable to commercial/industrial development. This distinction obviously applied to the general government categories discussed above. It also applies to the public works activities not related to road construction and maintenance.

Since the major part (about 80%) of the acreage involved in this project was related to residential development, it was deemed appropriate to apply the residential factor to these costs. The factor was developed by determining the percentage of developed residential land area in the City of Perris. Based on data provided by the City, this factor came to 46.1%, and therefore this factor was applied to costs related to general government, miscellaneous and non-road related public works.

As to the development of an appropriate base for establishing the per capita multiplier for general government and miscellaneous City costs attributable to the development, Table V on the following page illustrates the approach taken. The City Budget was reviewed for each of the activities in the general government function, and costs which are not related to population growth were excluded. In the case of planning/community development, the full cost-recovery financing was confirmed. The total general government costs that should be included, identified as "net" costs in the Table, amounted to $184,137 out of a total expenditure of $974,581. In the miscellaneous category, "net" costs of $773,251 were identified. These "net" costs, then, where multiplied by 0.461 (the developed residential land use factor) to establish a more appropriate per capita multiplier.

TABLE V

ANALYSIS OF GENERAL GOVERNMENT/MISCELLANEOUS COSTS
CITY OF PERRIS 1987-88 FINAL BUDGET
TO DETERMINE COSTS ASSOCIATED WITH POPULATION GROWTH

ACTIVITY	TOTAL COST	EXCLUDE	NET COST
City Council	55,025	55,025	0
Administration			
City Manager	67,321	67,321	
Admin. Services Officer	30,580	30,580	
Personnel Clerk	20,736	0	
Clerk-Typist	15,186	0	
Services & Supplies	13,450	0	
Contingency	75,000	37,500	
	222,273	135,401	86,872
City Clerk			
City Clerk	30,096	0	
Senior Clerk-Typist	19,020	0	
Clerk-Typist	14,814	14,814	
Services & Supplies	22,060	22,060	
	85,990	36,874	49,116
Planning/Community Development			
Planner	42,490	42,490	
Building Inspector	27,834	27,834	
Code Enforcement Officer	21,244	0	
Other Salaries	123,465	0	
Services & Supplies	114,500	0	
Building Permit Revenue		160,000	
Planning Dep't. Fees		100,000	
	329,533	330,324	0
Finance			
Director of Finance	41,395	0	
Accountant	24,420	24,420	
Services & Supplies	27,500	27,500	
	93,315	51,920	41,395
Auditing/Consulting	14,100	14,100	0
City Attorney	75,000	75,000	0
Special Election	8,000	8,000	0
Elections	5,525	0	5,525
Civic Promotion	17,200	17,200	0
Civic Center Building Maint.	66,600	66,600	0
City Emergency	2,020	0	2,020
TOTAL, GENERAL GOVERNMENT	974,581	790,444	184,137
Miscellaneous, Non-Payroll	105,000	0	105,000
Miscellaneous, Payroll-Related			
General Government Salaries	478,601	207,459	271,142
Other Department Salaries	1,571,235	392,809	1,178,426
	2,049,836	600,268	1,449,568
Miscellaneous, Payroll-Related	944,974	276,723	668,251
Total Miscellaneous	1,049,974	276,723	773,251

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The determination of costs will be discussed by function or activity below. The order of discussion follows the listing of services in the expenditure Tables following the discussion.

Law Enforcement:

Law enforcement costs were based on data provided by the Perris Police Department. The Department indicated the City's officer-to-population ratio was 1.5:1,000. This amounts to one officer for every 670 people. Each officer, in turn, requires certain quantifiable staffing and equipment back-up. These relationships were also provided by the Department.

With the officer-to-population ratio and the relationship of additional personnel and equipment to officers, it was possible to establish the total personnel and associated equipment that would be required to serve the project on a year-by-year basis as population growth occurred. To do this, the cost of the various positions and equipment needs on a per capita by fiscal year basis was determined. These costs are listed in Table D in the Appendix. In summary, however, it was determined that, at build-out, the project would require just over 13 sworn officers, 2.5 police agents, 1.9 sergeants, just over 2.5 dispatchers, and two-and-a-half records clerks, together with supporting equipment. Costs for the staffing and equipment items identified above was determined to begin at $5,043 for the initial year of the project and amount to $868,352 at build-out.

Fire Protection

Fire protection in the City of Perris is provided by the County Fire Department/California Department of Forestry through a contract with the City.

In developing fiscal impact reports for projects located in the unincorporated area of Riverside County, the County Fire Department advises that the maintenance and operation cost of fire protection should be based on a factor of $100 per dwelling unit plus $0.16 per square foot of commercial/industrial. Based on those factors, the May Property Specific Plan project would experience a cost of $518,640.

However, based on the current level of service, which involves the maintenance and operation of one fire station located in Perris and one engine company, the City's contract cost for 1987-88, as indicated in the City Budget, amounts to $191,623. According to the Planning Department, the City has 1,689 acres of improved residential development; 328 acres of improved commercial development; and 2,044 acres of improved industrial development.

Based on a person-per-household average of 2.69 (City average as reported by the Planning Department), and a 1988 population of 12,500, there are in excess of 4,600 dwelling units in Perris.

It would appear obvious that the factors provided by the County Fire Department do not apply to the City of Perris. It would also appear inequitable to apply the much higher factor to the May development when the actual current cost based on existing levels of service is available in the City Budget.

For those reasons, the City Budget (and contract cost) amounts, converted to a per capita multiplier, were applied to the May Property development in this analysis. Based on that methodology, fire protection costs range from $797 the first year to $137,198 at residental build-out and to the end of the study.

It should be emphasized, however, that, as noted earlier, a comprehensive public safety study is currently underway in the City of Perris. The results of that study, including any action by the City to increase the levels of service, can alter these projections significantly. However, any major increase in the levels of service would, of course, impact the entire City and not just one particular development.

Parks and Recreation

This service cost was developed using a straight per capita multiplier. With a cost of $190,210 budgeted for 1987-88 and an estimated population of 12,500, the per capita cost of parks and recreation in the City of Perris comes to $15.22. This amount was used in projecting park and recreation costs for the project.

The resultant costs ranged from $787 the initial year to $135,500 at build-out and to the end of the study period.

Senior Citizen Services

The City Budget allocates $82,265 for this activity, resulting in a per capita cost of $6.58. This factor was used in the analysis, leading to an initial year cost of $340, rising to a build-out total of $58,580.

Public Works (Non-Road Costs)

This activity covers the Public Works shop and yard and the engineering function and was budgeted at $228,635 in the City's 1987-88 Budget. In this case, it was necessary to allocate the costs between population and commercial/residential land uses. As noted earlier, the residential allocation amounts to 46.1% of the total. Thus, the per capita cost of $18.29 for the City as a whole was discounted by 41.6%, leading to a cost for the project ranging from $393 to $67,738.

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General Government

In developing general government costs, the "net" cost discussed above was used as a base and converted to a per capita. The "net" cost for general government was calculated at $184,137. When the proportion related to population (41.6%) is factored in, a total of $76,601 results. This amounts to a citywide per capita of $6.13 which was applied to the annual population projection in the development. The cost, then, ranges from an initial year amount of $317 to a build-out expenditure of $54,557.

Miscellaneous

This budget category includes payroll expenses and liability insurance. Using the same methodology employed in developing general government projections, a "net" cost of $773,251 factored against the 46.1% allocable to population results in a total of $356,469 in population-related cost. Converted to per capita citywide, the result is $28.52, and that per capita was applied to the annual population projection, resulting in costs attributable to the development ranging from $1,330 in the first year to $229,101 at build-out and to the end of the study period.

General Fund Summary

As can be seen from the Tables on Pages 24-26, all costs related to the General Fund amount to $9,007 the first year of the development and rise in relation to the population of the project to $1,559,928 at build-out, and remain at that level in constant dollars throughout the remainder of the study period.

Road Maintenance Costs

At this stage in any development project, the actual timing and sequencing of street construction is still somewhat speculative. However, based on information provided by the developer, this study tracks road maintenance costs on a year-by-year and road-by-road basis. Costs are based on a factor of $3,484 per lane mile. This is the amount identified by the County of Riverside. In the absence of any more definitive cost data from the City, it was determined that the County's figure was reasonable and would be appropriate to use.

Table E in the Appendix details the development of road maintenance costs for the project. Each road is listed, together with the project phase or phases involved in its development; the number of lane-miles to be maintained; and the cost of maintenance by fiscal year. No maintenance costs are projected for the year in which the road is expected to go into service. The Table also provides the total maintenance costs of all backbone roads within the project by fiscal year.

These costs by road were then transferred to the summary table, with an estimate of the cost of internal (local) streets added. Together, the cost of maintaining the backbone roads and the internal streets amount to $52,524 the second year of the project and rise to $191,356 by 2001-02 and for the remainder of the study period in constant dollars.

Street Lights, Street Sweeping, Open Space Maintenance

These costs are not included in this analysis since it is assumed that the City will follow its standard policy and fund these activities through an assessment district which would raise revenues to offset the costs of these services.

As such, these costs would have no direct impact on the City of Perris.

Domestic Water, Liquid Waste Disposal, Flood Control

The first two services (water and liquid waste disposal) are the responsibility of the Eastern Municipal Water District. These services would be funded through user charges and would, therefore, be full cost-recovery activities. Again, these costs would not have any direct impact on the City of Perris.

Flood Control is the responsibility of the Riverside County Flood Control District. The District is funded, in part, through a dedicated portion of the property tax. Maintenance of the flood control channel that abuts the project on the west would be handled by the District and would not have a direct impact on the City of Perris.

SUMMARY OF COSTS

As detailed in the Tables following, General Fund costs are projected to range from $9,007 in 1988-89 to $1,559,928 in the final year of build-out (1998-99). Costs are projected to stabilize at that amount throughout the remainder of the study period.

Road Fund costs are not projected to begin until the second year of the project (1989-90). That year, these costs are projected to be $52,524. Expenditures for road maintenance will rise to a peak of $191,356 by 2001-02 and stabilize at that amount for the remainder of the study period.

TABLE VI

COST PROJECTIONS
For the Construction Period

	1988-89	1989-90	1990-91	1991-92	1992-93
POPULATION:					
Dwelling Unit Projections	20	316	497	473	434
Dwelling Unit Projections (Cumulative)	20	336	833	1,306	1,740
Population Projections (@ 2.75 persons per household) - Cumulative Totals	52	869	2,153	3,376	4,498
GENERAL FUND COSTS:	1988-89	1989-90	1990-91	1991-92	1992-93
Law Enforcement	5,043	84,717	210,028	329,288	438,714
Fire Protection	797	13,385	33,184	52,027	69,316
Parks and Recreation	787	13,219	32,773	51,383	68,458
Senior Citizen Services*	340	5,715	14,169	22,214	29,596
Public Works (Non-Road Costs)	393	6,609	16,384	25,687	34,223
General Government	317	5,323	13,196	20,688	27,563
Miscellaneous	1,330	22,351	55,413	86,878	115,748
TOTAL, GENERAL FUND COSTS	9,007	151,320	375,146	588,165	783,619
ROAD MAINTENANCE COSTS					
Loop Road	0	13,725	13,725	13,725	13,725
Center Street	0	0	0	0	0
Bradley Road	0	0	0	0	0
Morgan Street	0	2,639	2,639	2,639	2,639
Rider Street	0	0	0	0	0
El Nido Avenue	0	0	0	0	0
Evans Road	0	0	0	0	0
Walnut Avenue	0	0	0	0	0
Placentia Avenue	0	0	0	0	0
McCanna Road	0	0	0	0	0
Access Road	0	1,320	1,320	1,320	1,320
Local Streets	0	34,840	34,840	34,840	34,840
TOTAL, ROAD MAINTENANCE COSTS	0	52,524	52,524	52,524	52,524

TABLE VI (Continued)

COST PROJECTIONS
For the Construction Period

POPULATION:	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
Dwelling Unit Projections	400	450	347	350	137	20
Dwelling Unit Projections (Cumulative)	2,140	2,590	2,937	3,287	3,424	3,444
Population Projections (@ 2.75 persons per household) - Cumulative Totals	5,532	6,695	7,592	8,497	8,851	8,909

GENERAL FUND COSTS:	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
Law Enforcement	539,568	653,029	740,519	828,766	863,309	868,352
Fire Protection	85,251	103,177	117,001	130,944	136,401	137,198
Parks and Recreation	84,196	101,900	115,552	129,323	134,713	135,500
Senior Citizen Services*	36,400	44,054	49,956	55,910	58,240	58,580
Public Works (Non-Road Costs)	42,090	50,941	57,766	64,650	67,344	67,738
General Government	33,900	41,028	46,525	52,070	54,240	54,557
Miscellaneous	142,357	172,292	195,375	218,657	227,771	229,101
TOTAL, GENERAL FUND COSTS	963,761	1,166,421	1,322,695	1,480,319	1,542,018	1,559,928

ROAD MAINTENANCE COSTS						
Loop Road	17,948	17,948	17,948	17,948	17,948	17,948
Center Street	2,771	2,771	2,771	2,771	2,771	2,771
Bradley Road	4,355	4,355	4,355	4,355	4,355	4,355
Morgan Street	2,639	2,639	2,639	2,639	2,639	2,639
Rider Street	7,390	7,390	7,390	7,390	7,390	7,390
El Nido Avenue	0	0	0	0	3,431	3,431
Evans Road	0	0	0	0	0	0
Walnut Avenue	5,543	5,543	5,543	5,543	5,543	5,543
Placentia Avenue	0	0	0	0	2,639	2,639
McCanna Road	1,320	1,320	1,320	1,320	1,320	1,320
Access Road	1,320	1,320	1,320	1,320	1,320	1,320
Local Streets	69,680	69,680	69,680	69,680	104,520	104,520
TOTAL, ROAD MAINTENANCE COSTS	112,966	112,966	112,966	112,966	153,877	153,877

TABLE VII

COST PROJECTIONS
Costs for a Period of Five Years Following Build-Out

	1999-00	2000-01	2001-02	2002-03	2003-04
POPULATION:					
Dwelling Unit Projections	0	0	0	0	0
Dwelling Unit Projections (Cumulative)	3,444	3,444	3,444	3,444	3,444
Population Projections (@ 2.75 persons per household) - Cumulative Totals	8,903	8,903	8,903	8,903	8,903
GENERAL FUND COSTS:	1999-00	2000-01	2001-02	2002-03	2003-04
Law Enforcement	868,352	868,352	868,352	868,352	868,352
Fire Protection	137,198	137,198	137,198	137,198	137,198
Parks and Recreation	135,500	135,500	135,500	135,500	135,500
Senior Citizen Services*	58,580	58,580	58,580	58,580	58,580
Public Works (Non-Road Costs)	67,738	67,738	67,738	67,738	67,738
General Government	54,557	54,557	54,557	54,557	54,557
Miscellaneous	229,101	229,101	229,101	229,101	229,101
TOTAL, GENERAL FUND COSTS	1,559,928	1,559,928	1,559,928	1,559,928	1,559,928
ROAD MAINTENANCE COSTS					
Loop Road	17,948	17,948	17,948	17,948	17,948
Center Street	2,771	2,771	2,771	2,771	2,771
Bradley Road	4,355	4,355	4,355	4,355	4,355
Morgan Street	2,639	2,639	2,639	2,639	2,639
Rider Street	7,390	7,390	7,390	7,390	7,390
El Nido Avenue	3,431	3,431	3,431	3,431	3,431
Evans Road	0	0	2,639	2,639	2,639
Walnut Avenue	5,543	5,543	5,543	5,543	5,543
Placentia Avenue	2,639	2,639	2,639	2,639	2,639
McCanna Road	1,320	1,320	1,320	1,320	1,320
Access Road	1,320	1,320	1,320	1,320	1,320
Local Streets	104,520	104,520	139,360	139,360	139,360
TOTAL, ROAD MAINTENANCE COSTS	153,877	153,877	191,356	191,356	191,356

PART THREE - COST/REVENUE ANALYSIS

Tables VIII and IX on the following pages summarize the fiscal impact of the May Property Specific Plan development on the cost/revenue relationship of the General and Road Funds of the City of Perris.

As can be seen by the Tables, the General Fund experiences a surplus throughout the study period, while the Road Fund fluctuates between a deficit position and a surplus until the year prior to build-out (1997-98). At that point, a small deficit occurs. As the final roads are constructed and go into the maintenance system, the deficit grows and stabilizes.

For the General Fund, from the start of the project to build-out in 1998-99, the surplus grows from a projected $1,156 the initial year to $129,436 the final year of residential build-out. With the addition of commercial development following residential build-out, the surplus will rise to $168,828 at the end of the study period. As development occurs, the surpluses grow at rates in the range of 15-20% annually, as is demonstrated on Table VIII.

The Road Fund shows greater variations because it reacts directly to the inclusion of additional lane-miles to the system as the backbone is built. With revenues coming in from only State gas taxes, vehicle code fines and interest earnings, this Fund, as in most local agencies, experiences continuing deficits most years. At the end of the study period, the deficits level off at a total of $39,489.

Table IX, which shows the General, Road and combined funds for the five-year period following build-out, demonstrates the slowing down of revenue growth after new development values are no longer adding to the property tax base, except for some 50,000 square feet of commercial development annually to the end of the study period. As can be seen, revenue growth stabilizes between four and six percent annually in the General Fund.

When both Funds are combined, the fluctuations of the Road Fund tend to level off the surplus increases of the General Fund, an expected condition as General Fund revenues are used to offset Road Fund deficits. Nonetheless, the combined revenues show surpluses in all years but the second, stabilizing the final two years of the study period at over $120,000.

TABLE vIII

COST/REVENUE RELATIONSHIP - GENERAL, ROAD AND COMBINED FUNDS
CITY OF PERRIS
For the Construction Period

COST PROJECTIONS FOR THE STUDY PERIOD	1988-89	1989-90	1990-91	1991-92	1992-93
General Fund Costs (inc.struct.fire costs)	9,007	151,320	375,146	588,165	783,619
General Fund Revenues	10,163	170,649	420,837	633,330	834,450
General Fund Surplus/<-Deficit>	1,156	19,329	45,690	45,165	50,831
Road Fund Costs	0	52,524	52,524	52,524	52,524
Road Fund Revenues	882	14,816	36,732	57,590	76,727
Road Fund Surplus/<-Deficit>	882	-37,708	-15,792	5,066	24,203
Combined Funds, Costs	9,007	203,843	427,670	640,688	836,143
Combined Funds, Revenues	11,045	185,465	457,569	690,919	911,177
Combined Surplus/<-Deficit>	2,038	-18,378	29,898	50,231	75,034

COST PROJECTIONS FOR THE STUDY PERIOD	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
General Fund Costs (inc.struct.fire costs)	963,761	1,166,421	1,322,695	1,480,319	1,542,018	1,559,928
General Fund Revenues	1,020,530	1,233,487	1,397,405	1,573,839	1,650,293	1,689,364
General Fund Surplus/<-Deficit>	56,768	67,066	74,710	93,520	108,275	129,436
Road Fund Costs	112,966	112,966	112,966	112,966	153,877	153,877
Road Fund Revenues	94,366	114,209	129,510	144,944	150,985	151,867
Road Fund Surplus/<-Deficit>	-18,600	1,243	16,544	31,978	-2,891	-2,010
Combined Funds, Costs	1,076,727	1,279,387	1,435,661	1,593,285	1,695,895	1,713,804
Combined Funds, Revenues	1,114,895	1,347,696	1,526,915	1,718,783	1,801,278	1,841,231
Combined Surplus/<-Deficit>	38,168	68,308	91,255	125,497	105,383	127,427

TABLE IX

COST/REVENUE RELATIONSHIP - GENERAL, ROAD AND COMBINED FUNDS
CITY OF PERRIS
(For a Period of Five Years Following Build-Out)

COST PROJECTIONS FOR THE STUDY PERIOD	1999-00	2000-01	2001-02	2002-03	2003-04
General Fund Costs (inc.struct.fire costs)	1,559,928	1,559,928	1,559,928	1,559,928	1,559,928
General Fund Revenues	1,694,698	1,702,196	1,710,994	1,720,127	1,728,756
General Fund Surplus/<-Deficit>	134,770	142,268	151,066	160,199	168,828
Road Fund Costs	153,877	153,877	191,356	191,356	191,356
Road Fund Revenues	151,867	151,867	151,867	151,867	151,867
Road Fund Surplus/<-Deficit>	-2,010	-2,010	-39,489	-39,489	-39,489
Combined Funds, Costs	1,713,804	1,713,804	1,751,284	1,751,284	1,751,284
Combined Funds, Revenues	1,846,565	1,854,063	1,862,861	1,871,994	1,880,623
Combined Surplus/<-Deficit>	132,761	140,259	111,577	120,710	129,339

PART FOUR - CAPITAL COSTS

INTRODUCTION

Capital costs are discussed in detail in this Part for fire protection and traffic signals, which are the responsibility of the City of Perris. The capital costs for improvements of all streets within the development will be the responsibility of the developer. Capital costs for drainage are funded through a fee levied by the Riverside County Flood Control District. Sewer and water facilities are funded through fees levied by the Eastern Municipal Water District.

FIRE PROTECTION FACILITIES

The City of Perris is conducting a comprehensive public safety study to determine the levels of service, funding for those levels, and capital facility needs in both law enforcement and fire protection. The study will provide to the City recommendations involving the location of fire stations to serve the subject territory and the adjacent the McCanna Ranch Specific Plan as well as the equipment and apparatus required.

For projects in the unincorporated area, the County levies a fire mitigation fee of $400 per dwelling unit and $0.25 per square foot for commercial development. For the May Property Specific Plan, the fee would generate $2,005,450. The City of Perris does not currently have a similar mitigation fee. Instead, a one-time fire protection fee of $0.10 per square foot is charged to the developer at the time the building permits are issued. Based on the development plan for both residential and commercial, a total of 174.9 million square feet of buildings would be constructed over the study period, resulting in the generation of $1,749,000 in fire protection fees.

A fire station costs approximately $800,000, while the land required for the station site is estimated by the County Fire Department at another $200,000, for a total of $1 million. Based on County Fire standards of one engine company for each 3,200 dwelling units, the May Property Specific Plan project would generate the need for a fire station and engine company at build-out. It would appear that the fire protection fee would adequately cover the probable capital costs of this project.

DRAFT

It should be noted that a build-out period of ten years will result in staged collection of the City's fire protection fees. This may result in a delay in receiving sufficient revenues by the time the fire station and its associated apparatus and equipment are required. The developer and City should agree to a process (perhaps through inclusion of fire protection in the proposed Mello-Roos Public Facilities District) to assure availability of funds for the fire facilities as they are needed to serve the development.

TRAFFIC SIGNALS

At this stage in the planning process, it is expected that one traffic signal will be required by the project, to be located at the corner of the Ramona Expressway and the Loop Road. Traffic signal mitigation fees for the City are based on $150 per dwelling unit and $2,500 per commercial acre. With 3,444 dwelling units and 100 commercial acres, the May Property Specific Plan project would generate a total of $766,600 in traffic mitigation fees. A traffic signal costs approximately $150,000, so that the fees would more than cover the costs of the one signal currently included in the Specific Plan.

FLOOD CONTROL AND DRAINAGE FACILITIES

The subject property lies within the Perris Valley Area Drainage Plan. Fees levied by the Flood Control District amount to $5,083 per acre. Based on approximately 620 acres of development (excluding open spaces and roads), the project would generate some $3,151,460 in drainage fees at build-out. Additionally, the District would receive approximately $1,590,162 for Zone 4 in property taxes from 1988-89 through 1989-90. Property tax revenues following the build-out of residential properties will level off at about $135,000 annually. (For a detailed projection of property tax apportionments to the Flood Control District, see Table C in the Appendix.)

WATER AND SEWER FACILITIES

Sewer Facilities

Existing sewer lines to service the project are located one-quarter mile west of the project site with a 15-inch trunk sewer in Wilson Avenue and one-half mile west with an eight-inch force main in Redland Avenue. The projected completion of the development is expected to increase demand to an average of 100 gallons per day per capita.

There have been discussions between the developers and the District concerning which treatment plant will service the area to accommodate the increased growth from the project. The Sunnymead treatment plant is located north of the project and currently processed 7 mgd with an increase in capacity to 10 mgd by 1989. In addition, the District plans to expand the Romoland treatment plant, which lies south of the project, from its current capacity of 1 mgd to 2 mgd by 1989 and to a build-out capacity of 5 mgd as need arises.

The District charges a per dwelling unit fee of $1,920, of which $1,070 are capacity charges to finance expansion of the facility. The 3,444 dwelling units proposed in this project would provide a total of $6.612 million to the District by 1989-90.

Water Facilities

Water is available to the site through a 12-inch line in Kine Avenue, a 12-inch trunk line in the Ramona Expressway, eight-inch and 12-inch lines in Bradley Road, 12-inch and 27-inch lines in Rider Street, 27- and 36-inch lines in Evans Road, and a 21-inch line along the Metropolitan Water District aqueduct. At build-out, the development is anticipated to increase usage to an average of 200 gallons per capita per day.

The District charges a dwelling unit fee of $770 for capital costs. This fee would generate $2.652 million based on the 3,444 dwelling units planned for this project.

It should also be noted that the developer plans to fund the required water and sewer facilities through a Mello-Roos Public Facilities District. On-site and off-site water and sewer facilities for the project will be provided by the developer as required.

SUMMARY

Other than the need to coordinate the generation of revenues at the time facilities are required, as noted above in the discussion relating to fire protection, there appear to be no major issues involving capital facilities in relation to this project. It is anticipated that funding for all required facilities will be resolved to the satisfaction of the affected local agencies as this project proceeds through the planning process.

A P P E N D I X

TABLE A

FISCAL IMPACT ANALYSIS OF THE MAY PROPERTY SPECIFIC PLAN
PROJECTION OF PROPERTY TAX GENERATION - RESIDENTIAL DEVELOPMENT

	No. Units	1988 Price	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Average Unit Price		75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
PHASE 1																		
Area 3	217		0	0	20	120	77	0	0	0	0	0	0	0	0	0	0	0
Area 5	225		10	120	95	0	0	0	0	0	0	0	0	0	0	0	0	0
PHASE 2																		
Area 14	240		0	0	0	0	50	120	70	0	0	0	0	0	0	0	0	0
Units Sold	682		10	120	115	120	127	120	70	0	0	0	0	0	0	0	0	0
Added Assessed Value			750,000	9,000,000	8,625,000	9,000,000	9,525,000	9,000,000	5,250,000	0	0	0	0	0	0	0	0	0
Depreciated Prior Year Assessed Value			N/A	727,500	9,435,675	17,518,855	25,723,289	34,190,840	41,895,115	45,814,577	44,628,932	43,604,041	42,773,480	42,132,342	41,625,653	41,185,651	40,808,791	40,491,680
Cumulative Assessed Value			750,000	9,727,500	18,060,675	26,518,855	35,248,289	43,190,840	47,145,115	45,814,577	44,628,932	43,604,041	42,773,480	42,132,342	41,625,653	41,185,651	40,808,791	40,491,680
ASSESSED VALUATION REVISED TO REFLECT RESALES:																		
Depreciated Unit Value			72,750	70,568	68,450	66,397	64,405	62,473	60,599	58,781	57,017	55,307	53,648	52,038	50,477	48,963	47,494	46,069
Units Resold (assumes a 5% turnover beginning the 5th year following construction)			0	0	0	0	0	0	6	12	18	25	31	34	34	34	34	34
Depreciated Value of Units Resold			N/A	N/A	N/A	N/A	N/A	N/A	363,592	705,369	1,026,312	1,382,670	1,663,076	1,769,298	1,716,219	1,664,733	1,614,791	1,566,347
Appreciated Value of Units Resold			N/A	N/A	N/A	N/A	N/A	N/A	450,000	900,000	1,350,000	1,875,000	2,325,000	2,550,000	2,550,000	2,550,000	2,550,000	2,550,000
Revised Cumulative Assessed Value			N/A	N/A	N/A	N/A	N/A	N/A	47,231,523	46,009,208	44,952,620	44,096,371	43,435,404	42,913,044	42,459,434	42,070,918	41,744,000	41,475,333
SUBTOTAL, PRODUCT ITEM PROPERTY TAX			7,500	97,275	180,607	265,189	352,483	431,908	472,315	460,092	449,526	440,964	434,354	429,130	424,594	420,709	417,440	414,753
SUBTOTAL, PRODUCT ITEM PROP. TRANSFER TAX			413	4,950	4,744	4,950	5,239	4,950	3,135	495	743	1,031	1,279	1,403	1,403	1,403	1,403	1,403

	No. Units	1988 Price	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Average Unit Price		80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
PHASE 2																		
Area 13	247		0	0	40	120	87	0	0	0	0	0	0	0	0	0	0	0
PHASE 3																		
Area 16	232		0	0	0	0	40	120	72	0	0	0	0	0	0	0	0	0
Units Sold	479		0	0	40	120	127	120	72	0	0	0	0	0	0	0	0	0
Added Assessed Value			N/A	N/A	3,200,000	9,600,000	10,160,000	9,600,000	5,760,000	0	0	0	0	0	0	0	0	0
Depreciated Prior Year Assessed Value			N/A	N/A	N/A	3,104,000	12,322,880	21,808,394	30,466,142	35,139,358	34,118,740	33,244,026	32,531,968	32,019,954	31,629,543	31,289,611	30,997,480	30,750,589
Cumulative Assessed Value			N/A	N/A	3,200,000	12,704,000	22,482,880	31,408,394	36,226,142	35,139,358	34,118,740	33,244,026	32,531,968	32,019,954	31,629,543	31,289,611	30,997,480	30,750,589
ASSESSED VALUATION REVISED TO REFLECT RESALES:																		
Depreciated Unit Value			77,600	75,272	73,014	70,823	68,699	66,638	64,639	62,699	60,818	58,994	57,224	55,507	53,842	52,227	50,660	49,140
Units Resold (assumes a 5% turnover beginning the 5th year following construction)			0	0	0	0	0	0	0	2	8	14	21	24	24	24	24	24
Depreciated Value of Units Resold			N/A	N/A	N/A	N/A	N/A	N/A	N/A	125,399	486,548	825,915	1,201,706	1,332,177	1,292,212	1,253,446	1,215,842	1,179,367
Appreciated Value of Units Resold			N/A	N/A	N/A	N/A	N/A	N/A	N/A	160,000	640,000	1,120,000	1,680,000	1,920,000	1,920,000	1,920,000	1,920,000	1,920,000
Revised Cumulative Assessed Value			N/A	N/A	N/A	N/A	N/A	N/A	N/A	35,173,959	34,272,192	33,538,111	33,010,261	32,607,776	32,257,331	31,956,165	31,701,638	31,491,222
SUBTOTAL, PRODUCT ITEM PROPERTY TAX			0	0	32,000	127,040	224,829	314,084	362,261	351,740	342,722	335,381	330,103	326,078	322,573	319,562	317,016	314,912
SUBTOTAL, PRODUCT ITEM PROP. TRANSFER TAX			0	0	1,760	5,280	5,588	5,280	3,168	88	352	616	924	1,056	1,056	1,056	1,056	1,056

TABLE A (Continued)

FISCAL IMPACT ANALYSIS OF THE MAY PROPERTY SPECIFIC PLAN
PROJECTION OF PROPERTY TAX GENERATION - RESIDENTIAL DEVELOPMENT

	No. Units	1988 Price	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Average Unit Price		85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000
PHASE 1																		
Area 6	196		0	20	120	56	0	0	0	0	0	0	0	0	0	0	0	0
Area 9	224		10	120	94	0	0	0	0	0	0	0	0	0	0	0	0	0
PHASE 3																		
Area 17	196		0	0	0	0	0	40	120	36	0	0	0	0	0	0	0	0
PHASE 4																		
Area 24	150		0	0	0	0	0	0	0	70	80	0	0	0	0	0	0	0
Area 25	210		0	0	0	0	0	0	0	0	70	120	20	0	0	0	0	0
Units Sold	976		10	140	214	56	0	40	120	106	150	120	20	0	0	0	0	0
Added Assessed Value			850,000	11,900,000	18,190,000	4,760,000	0	3,400,000	10,200,000	9,010,000	12,750,000	10,200,000	1,700,000	0	0	0	0	0
Depreciated Prior Year Assessed Value			N/A	824,500	12,342,765	29,616,782	33,345,479	32,345,114	34,672,761	43,653,232	51,404,282	62,644,801	71,114,094	71,169,560	69,766,511	68,590,119	67,734,609	67,154,016
Cumulative Assessed Value			850,000	12,724,500	30,532,765	34,376,782	33,345,479	35,745,114	44,872,761	52,663,232	64,154,282	72,844,801	72,814,094	71,169,560	69,766,511	68,590,119	67,734,609	67,154,016
ASSESSED VALUATION REVISED TO REFLECT RESALES:																		
Depreciated Unit Value			82,450	79,977	77,577	75,250	72,992	70,803	68,679	66,618	64,620	62,681	60,801	58,977	57,207	55,491	53,826	52,212
Units Resold (assumes a 5% turnover beginning the 5th year following construction)			0	0	0	0	0	0	8	18	21	21	23	29	34	42	48	49
Depreciated Value of Units Resold			N/A	N/A	N/A	N/A	N/A	N/A	549,428	1,199,127	1,357,012	1,316,302	1,398,414	1,710,321	1,945,048	2,330,626	2,583,665	2,558,366
Appreciated Value of Units Resold			N/A	N/A	N/A	N/A	N/A	N/A	680,000	1,530,000	1,785,000	1,785,000	1,955,000	2,465,000	2,890,000	3,570,000	4,080,000	4,165,000
Revised Cumulative Assessed Value			N/A	N/A	N/A	N/A	N/A	N/A	45,003,332	52,994,105	64,582,270	73,313,499	73,370,680	71,924,238	70,711,463	69,829,494	69,230,944	68,760,649
SUBTOTAL, PRODUCT ITEM PROPERTY TAX			8,500	127,245	305,328	343,768	333,455	357,451	450,033	529,941	645,823	733,135	733,707	719,242	707,115	698,295	692,309	687,606
SUBTOTAL, PRODUCT ITEM PROP. TRANSFER TAX			468	6,545	10,005	2,618	0	1,870	5,984	5,797	7,994	6,592	2,010	1,356	1,590	1,964	2,244	2,291

	No. Units	1988 Price	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Average Unit Price		90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000
PHASE 4																		
Area 18	161		0	0	0	0	0	8	100	53	0	0	0	0	0	0	0	0
Area 19	161		0	0	0	0	0	0	0	56	100	5	0	0	0	0	0	0
Units Sold	322		0	0	0	0	0	8	100	109	100	5	0	0	0	0	0	0
Added Assessed Value			0	0	0	0	0	720,000	9,000,000	9,810,000	9,000,000	450,000	0	0	0	0	0	0
Depreciated Prior Year Assessed Value			N/A	N/A	N/A	N/A	N/A	N/A	698,400	9,407,448	18,640,925	26,811,697	26,443,846	25,650,531	25,014,652	24,578,205	24,325,777	24,108,279
Cumulative Assessed Value			0	0	0	0	0	720,000	9,698,400	19,217,448	27,640,925	27,261,697	26,443,846	25,650,531	25,014,652	24,578,205	24,325,777	24,108,279
ASSESSED VALUATION REVISED TO REFLECT RESALES:																		
Depreciated Unit Value			87,300	84,681	82,141	79,676	77,286	74,967	72,718	70,537	68,421	66,368	64,377	62,446	60,572	58,755	56,993	55,283
Units Resold (assumes a 5% turnover beginning the 5th year following construction)			0	0	0	0	0	0	0	0	0	0	0	5	11	16	16	16
Depreciated Value of Units Resold			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	312,229	666,297	940,084	911,882	884,525
Appreciated Value of Units Resold			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	450,000	990,000	1,440,000	1,440,000	1,440,000
Revised Cumulative Assessed Value			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25,788,301	25,338,356	25,078,121	24,853,895	24,663,753
SUBTOTAL, PRODUCT ITEM PROPERTY TAX			0	0	0	0	0	7,200	96,984	192,174	276,409	272,617	264,438	257,883	253,384	250,781	248,539	246,638
SUBTOTAL, PRODUCT ITEM PROP. TRANSFER TAX			0	0	0	0	0	396	4,950	5,396	4,950	248	0	248	545	792	792	792

	No. Units	1988 Price	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Average Unit Price		95,000	95,000	95,000	95,000	95,000	95,000	95,000	95,000	95,000	95,000	95,000	95,000	95,000	95,000	95,000	95,000	95,000
PHASE 4																		
Area 23			0	0	0	0	0	0	8	100	100	12	0	0	0	0	0	0
Units Sold	220		0	0	0	0	0	0	8	100	100	12	0	0	0	0	0	0
Added Assessed Value			N/A	N/A	N/A	N/A	N/A	N/A	760,000	9,500,000	9,500,000	1,140,000	0	0	0	0	0	0
Depreciated Prior Year Assessed Value			N/A	N/A	N/A	N/A	N/A	N/A	N/A	737,200	9,930,084	18,847,181	19,387,566	18,805,939	18,241,761	17,845,161	17,629,717	17,472,581
Cumulative Assessed Value			N/A	N/A	N/A	N/A	N/A	N/A	760,000	10,237,200	19,430,084	19,987,181	19,387,566	18,805,939	18,241,761	17,845,161	17,629,717	17,472,581
ASSESSED VALUATION REVISED TO REFLECT RESALES:																		
Depreciated Unit Value			92,150	89,386	86,704	84,103	81,580	79,132	76,758	74,456	72,222	70,055	67,954	65,915	63,938	62,019	60,159	58,354
Units Resold (assumes a 5% turnover beginning the 5th year following construction)			0	0	0	0	0	0	0	0	0	0	0	0	5	10	11	11
Depreciated Value of Units Resold			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	319,688	620,194	661,747	641,895
Appreciated Value of Units Resold			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	475,000	950,000	1,045,000	1,045,000
Revised Cumulative Assessed Value			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18,397,073	18,174,966	18,012,970	17,875,686
SUBTOTAL, PRODUCT ITEM PROPERTY TAX			0	0	0	0	0	0	7,600	102,372	194,301	199,872	193,876	188,059	183,971	181,750	180,130	178,757
SUBTOTAL, PRODUCT ITEM PROP. TRANSFER TAX			0	0	0	0	0	0	418	5,225	5,225	627	0	0	261	523	575	575

TABLE A (Continued)

FISCAL IMPACT ANALYSIS OF THE MAY PROPERTY SPECIFIC PLAN
PROJECTION OF PROPERTY TAX GENERATION - RESIDENTIAL DEVELOPMENT

	No. Units	1988 Price	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Average Unit Price		100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
PHASE 1																		
Area 4	165		0	56	100	9	0	0	0	0	0	0	0	0	0	0	0	0
PHASE 2																		
Area 10	220		0	0	0	88	100	32	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	385		0	56	100	97	100	32	0	0	0	0	0	0	0	0	0	0
Added Assessed Value			N/A	5,600,000	10,000,000	9,700,000	10,000,000	3,200,000	0	0	0	0	0	0	0	0	0	0
Depreciated Prior Year Assessed Value			N/A	N/A	5,432,000	14,969,040	23,928,969	32,911,100	35,027,767	34,032,811	33,179,642	32,486,601	31,970,460	31,536,046	31,154,213	30,822,198	30,537,355	30,297,152
Cumulative Assessed Value			N/A	5,600,000	15,432,000	24,669,040	33,928,969	36,111,100	35,027,767	34,032,811	33,179,642	32,486,601	31,970,460	31,536,046	31,154,213	30,822,198	30,537,355	30,297,152
ASSESSED VALUATION REVISED TO REFLECT RESALES:																		
Depreciated Unit Value			97,000	94,090	91,267	88,529	85,873	83,297	80,798	78,374	76,023	73,742	71,530	69,384	67,303	65,284	63,325	61,425
Units Resold (assumes a 5% turnover beginning the 5th year following construction)			0	0	0	0	0	0	3	8	13	18	19	19	19	19	19	19
Depreciated Value of Units Resold			N/A	N/A	N/A	N/A	N/A	N/A	242,395	626,995	988,300	1,327,363	1,359,073	1,318,300	1,278,751	1,240,389	1,203,177	1,167,082
Appreciated Value of Units Resold			N/A	N/A	N/A	N/A	N/A	N/A	300,000	800,000	1,300,000	1,800,000	1,900,000	1,900,000	1,900,000	1,900,000	1,900,000	1,900,000
Revised Cumulative Assessed Value			N/A	N/A	N/A	N/A	N/A	N/A	35,085,372	34,205,816	33,491,341	32,959,238	32,511,388	32,117,746	31,775,462	31,481,809	31,234,177	31,030,070
SUBTOTAL, PRODUCT ITEM PROPERTY TAX			0	56,000	154,320	246,690	339,290	361,111	350,854	342,058	334,913	329,592	325,114	321,177	317,755	314,818	312,342	310,301
SUBTOTAL, PRODUCT ITEM PROP. TRANSFER TAX			0	3,080	5,500	5,335	5,500	1,760	165	440	715	990	1,045	1,045	1,045	1,045	1,045	1,045

	No. Units	1988 Price	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Average Unit Price		120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000
PHASE 2																		
Area 11	160		0	0	28	80	52	0	0	0	0	0	0	0	0	0	0	0
PHASE 3																		
Area 15	220		0	0	0	0	28	80	80	32	0	0	0	0	0	0	0	0
Units Sold	380		0	0	28	80	80	80	80	32	0	0	0	0	0	0	0	0
Added Assessed Value			N/A	N/A	3,360,000	9,600,000	9,600,000	9,600,000	9,600,000	3,840,000	0	0	0	0	0	0	0	0
Depreciated Prior Year Assessed Value			N/A	N/A	N/A	3,259,200	12,473,424	21,411,221	30,080,885	38,490,458	41,085,717	39,992,691	39,067,984	38,326,751	37,782,773	37,372,423	37,019,038	36,713,568
Cumulative Assessed Value			N/A	N/A	3,360,000	12,859,200	22,073,424	31,011,221	39,680,885	42,330,458	41,085,717	39,992,691	39,067,984	38,326,751	37,782,773	37,372,423	37,019,038	36,713,568
ASSESSED VALUATION REVISED TO REFLECT RESALES:																		
Depreciated Unit Value			116,400	112,908	109,521	106,235	103,048	99,957	96,958	94,049	91,228	88,491	85,836	83,261	80,763	78,340	75,990	73,710
Units Resold (assumes a 5% turnover beginning the 5th year following construction)			0	0	0	0	0	0	0	1	5	9	13	17	19	19	19	19
			N/A	N/A	N/A	N/A	N/A	N/A	N/A	94,049	456,139	796,418	1,115,870	1,415,438	1,534,502	1,488,467	1,443,813	1,400,498
			N/A	N/A	N/A	N/A	N/A	N/A	N/A	120,000	600,000	1,080,000	1,560,000	2,040,000	2,280,000	2,280,000	2,280,000	2,280,000
			N/A	N/A	N/A	N/A	N/A	N/A	42,356,409	41,229,578	40,276,273	39,512,114	38,951,312	38,528,271	38,163,956	37,855,225	37,599,070	
			0	0	33,600	128,592	220,734	310,112	396,809	423,564	412,296	402,763	395,121	389,513	385,283	381,640	378,552	375,991
SUBTOTAL, PRODUCT ITEM PROP. TRANSFER TAX			0	0	1,848	5,280	5,280	5,280	5,280	2,178	330	594	858	1,122	1,254	1,254	1,254	1,254
TOTAL RESIDENTIAL PROPERTY TAX GENERATION			16,000	280,520	705,854	1,111,279	1,470,790	1,781,867	2,136,857	2,401,941	2,655,990	2,714,324	2,676,713	2,631,084	2,594,674	2,567,554	2,546,328	2,528,958
TOTAL PROPERTY TRANSFER TAX GENERATION			880	14,575	23,856	23,463	21,607	19,536	23,100	19,619	20,309	10,698	6,116	6,229	7,153	8,036	8,368	8,415

FISCAL IMPACT ANALYSIS OF THE MAY PROPERTY SPECIFIC PLAN
PROJECTION OF PROPERTY TAX GENERATION - COMMERCIAL DEVELOPMENT

PHASING OF COMMERCIAL DEVELOPMENT	Total Sq. Feet	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
PHASE 1 - Area 1	87,120		50,000	37,120					
Area 2	348,480			100,000	50,000	50,000	50,000	50,000	48,480
Area 8	163,350								
PHASE 4 - Area 21	130,680								
Area 22	300,000					25,000	25,000	25,000	25,000
TOTAL SQUARE FEET:	1,029,630	0	50,000	137,120	50,000	75,000	75,000	75,000	73,480
PROPERTY TAX GENERATION:									
*1988 Sq.Ft. Value = $60		$60	$60	$60	$60	$60	$60	$60	$60
Added Assessed Value (@ $60/sq.ft)		0	3,000,000	8,227,200	3,000,000	4,500,000	4,500,000	4,500,000	4,408,800
Depreciated Prior Yr. Assessed Value		N/A	N/A	2,910,000	10,803,084	13,388,991	17,352,322	21,196,752	24,925,850
Cumulative Assessed Value		0	3,000,000	11,137,200	13,803,084	17,888,991	21,852,322	25,696,752	29,334,650
Property Tax Generation		0	30,000	111,372	138,031	178,890	218,523	256,968	293,346
Property Transfer Tax Generation		0	1,650	4,525	1,650	2,475	2,475	2,475	2,425

PHASING OF COMMERCIAL DEVELOPMENT	Total Sq. Feet	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
PHASE 1 - Area 1	87,120								
Area 2	348,480								
Area 8	163,350	80,000	83,350						
PHASE 4 - Area 21	130,680			130,680					
Area 22	300,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
TOTAL SQUARE FEET:	1,029,630	105,000	108,350	155,680	25,000	25,000	25,000	25,000	25,000
PROPERTY TAX GENERATION:									
*1988 Sq.Ft. Value = $60		$60	$60	$60	$60	$60	$60	$60	$60
Added Assessed Value (@ $60/sq.ft)		6,300,000	6,501,000	9,340,800	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Depreciated Prior Yr. Assessed Value		28,454,610	33,711,972	39,006,583	46,896,961	46,945,052	46,991,701	47,036,950	47,080,841
Cumulative Assessed Value		34,754,610	40,212,972	48,347,383	48,396,961	48,445,052	48,491,701	48,536,950	48,580,841
Property Tax Generation		347,546	402,130	483,474	483,970	484,451	484,917	485,369	485,808
Property Transfer Tax Generation		3,465	3,576	5,137	825	825	825	825	825

*Construction value based on Marshall & Swift Valuation Service, June 1987 Edition, adjusted for inflation.

FISCAL IMPACT ANALYSIS OF THE MAY PROPERTY SPECIFIC PLAN
APPORTIONMENT RATIOS OF AFFECTED LOCAL AGENCIES

PROPERTY TAX REVENUE		1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Total Property Tax Generation		16,000	310,520	817,226	1,249,310	1,649,680	2,000,390	2,393,824	2,695,288
Co. Gen. Fund (*)	0.27776147	3,333	64,688	170,246	260,258	343,663	416,723	498,684	561,485
City of Perris (*)		1,111	21,563	56,749	86,753	114,554	138,908	166,228	187,162
Co. Structural Fire Apport.	0.05794098	927	17,992	47,351	72,386	95,584	115,905	138,701	156,168
Co. Library Apportionment	0.01704973	273	5,294	13,933	21,300	28,127	34,106	40,814	45,954
Flood Control Administration	0.00270168	43	839	2,208	3,375	4,457	5,404	6,467	7,282
Flood Control Zone 4	0.04453544	713	13,829	36,396	55,639	73,469	89,088	106,610	120,036
Perris Valley Cemetery	0.00210365	34	653	1,719	2,628	3,470	4,208	5,036	5,670
Eastern Municipal Water Dist	0.05034451	806	15,633	41,143	62,896	83,052	100,709	120,516	135,693
Eastern Mun.Water Imp.Dis.13	0.00864912	138	2,686	7,068	10,805	14,268	17,302	20,704	23,312
San Jacinto Basin Res.Consrv	0.00022514	4	70	184	281	371	450	539	607
Val Verde School	0.07980028	1,277	24,780	65,215	99,695	131,645	159,632	191,028	215,085
Perris Union High School	0.18034859	2,886	56,002	147,386	225,311	297,518	360,767	431,723	486,091
Riverside City Com. College	0.05070802	811	15,746	41,440	63,350	83,652	101,436	121,386	136,673
Total:	0.77216861								
School Subtot:	0.31085689								

(*) County apportionment based on 75% of apportionment ratio;
City apportionment on 25%, in accordance with Master Agreement.

PROPERTY TAX REVENUE		1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Total Property Tax Generation		3,003,536	3,116,453	3,160,186	3,115,053	3,079,124	3,052,471	3,031,698	3,014,766
Co. Gen. Fund (*)	0.27776147	625,700	649,223	658,334	648,931	641,447	635,894	631,567	628,039
City of Perris (*)		208,567	216,408	219,445	216,310	213,816	211,965	210,522	209,346
Co. Structural Fire Apport.	0.05794098	174,028	180,570	183,104	180,489	178,407	176,863	175,660	174,679
Co. Library Apportionment	0.01704973	51,209	53,135	53,880	53,111	52,498	52,044	51,690	51,401
Flood Control Administration	0.00270168	8,115	8,420	8,538	8,416	8,319	8,247	8,191	8,145
Flood Control Zone 4	0.04453544	133,764	138,793	140,740	138,730	137,130	135,943	135,018	134,264
Perris Valley Cemetery	0.00210365	6,318	6,556	6,648	6,553	6,477	6,421	6,378	6,342
Eastern Municipal Water Dist	0.05034451	151,212	156,896	159,098	156,826	155,017	153,675	152,629	151,777
Eastern Mun.Water Imp.Dis.13	0.00864912	25,978	26,955	27,333	26,942	26,632	26,401	26,222	26,075
San Jacinto Basin Res.Consrv	0.00022514	676	702	711	701	693	687	683	679
Val Verde School	0.07980028	239,683	248,694	252,184	248,582	245,715	243,588	241,930	240,579
Perris Union High School	0.18034859	541,684	562,048	569,935	561,795	555,316	550,509	546,762	543,709
Riverside City Com. College	0.05070802	152,303	158,029	160,247	157,958	156,136	154,785	153,731	152,873
Total:	0.77216861								
School Subtot:	0.31085689								

(*) County apportionment based on 75% of apportionment ratio;
City apportionment on 25%, in accordance with Master Agreement.

TABLE D

FISCAL IMPACT ANALYSIS OF THE MAY PROPERTY SPECIFIC PLAN
DEVELOPMENT OF LAW ENFORCEMENT COSTS

(All amounts in constant dollars)		1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
POPULATION:	TOTALS								
Dwelling Unit Projections	3,444	20	316	497	473	434	400	450	347
Dwelling Unit Projections (Cumulative)		20	336	833	1,306	1,740	2,140	2,590	2,937
Population Projections (@ 2.75 persons per household) - Cumulative Totals		52	869	2,153	3,376	4,498	5,532	6,695	7,592
PERSONNEL									
Police Officers (1:670 population)									
No. of Officers		0.08	1.30	3.21	5.04	6.71	8.26	9.99	11.33
Salary cost of Officers @ $34,401 each		2,655	44,596	110,561	173,340	230,944	284,034	343,761	389,817
Police Agents (1:3559 population)									
No. of Police Agents		0.01	0.24	0.61	0.95	1.26	1.55	1.88	2.13
Salary cost of Agents @ $37,000 each		537	9,030	22,386	35,098	46,761	57,511	69,604	78,929
Police Sergeants (1:4685 population)									
No. of Police Sergeants		0.01	0.19	0.46	0.72	0.96	1.18	1.43	1.62
Salary cost of Sergeants @ $47,262 each		522	8,762	21,722	34,057	45,375	55,805	67,540	76,589
Police Dispatchers (1:3521 population)									
No. of Dispatchers		0.01	0.25	0.61	0.96	1.28	1.57	1.90	2.16
Salary cost of Dispatchers @ $23,265 each		342	5,739	14,228	22,307	29,720	36,552	44,238	50,165
Police Records Clerks (1:3559 population)									
No. of Records Clerks		0.01	0.24	0.61	0.95	1.26	1.55	1.88	2.13
Salary cost of Records Clerks @ $21,258 each		309	5,188	12,862	20,165	26,866	33,042	39,990	45,348
Total Personnel		0.13	2.22	5.50	8.62	11.48	14.12	17.09	19.37
Total Personnel Costs		4,364	73,315	181,759	284,967	379,665	466,944	565,134	640,849
EQUIPMENT									
Police Vehicles (1:1764)		498	8,370	20,752	32,535	43,347	53,312	64,522	73,167
Officers' Equip. (1:586)		115	1,927	4,777	7,489	9,978	12,272	14,853	16,843
Dispatch Equipment (1:4685)		7	121	299	468	624	767	929	1,053
Portable Radios (1:1764)		59	985	2,441	3,828	5,100	6,272	7,591	8,608
Total Equipment Costs		679	11,403	28,269	44,321	59,049	72,624	87,895	99,671
TOTAL COST, LAW ENFORCEMENT		5,043	84,717	210,028	329,288	438,714	539,568	653,029	740,519

TABLE D (Continued)

FISCAL IMPACT ANALYSIS OF THE MAY PROPERTY SPECIFIC PLAN
DEVELOPMENT OF LAW ENFORCEMENT COSTS

(All amounts in constant dollars)	TOTALS	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
POPULATION:									
Dwelling Unit Projections	3,444	350	137	20	0	0	0	0	0
Dwelling Unit Projections (Cumulative)		3,287	3,424	3,444	3,444	3,444	3,444	3,444	3,444
Population Projections (@ 2.75 persons per household) - Cumulative Totals		8,497	8,851	8,903	8,903	8,903	8,903	8,903	8,903
PERSONNEL									
Police Officers (1:670 population)									
No. of Officers		12.68	13.21	13.29	13.29	13.29	13.29	13.29	13.29
Salary cost of Officers @ $34,401 each		436,271	454,455	457,109	457,109	457,109	457,109	457,109	457,109
Police Agents (1:3559 population)									
No. of Police Agents		2.39	2.49	2.50	2.50	2.50	2.50	2.50	2.50
Salary cost of Agents @ $37,000 each		88,335	92,017	92,554	92,554	92,554	92,554	92,554	92,554
Police Sergeants (1:4685 population)									
No. of Police Sergeants		1.81	1.89	1.90	1.90	1.90	1.90	1.90	1.90
Salary cost of Sergeants @ $47,262 each		85,716	89,289	89,810	89,810	89,810	89,810	89,810	89,810
Police Dispatchers (1:3521 population)									
No. of Dispatchers		2.41	2.51	2.53	2.53	2.53	2.53	2.53	2.53
Salary cost of Dispatchers @ $23,265 each		56,143	58,483	58,825	58,825	58,825	58,825	58,825	58,825
Police Records Clerks (1:3559 population)									
No. of Records Clerks		2.39	2.49	2.50	2.50	2.50	2.50	2.50	2.50
Salary cost of Records Clerks @ $21,258 each		50,752	52,867	53,176	53,176	53,176	53,176	53,176	53,176
Total Personnel		21.60	22.59	22.72	22.72	22.72	22.72	22.72	22.72
Total Personnel Costs		717,218	747,111	751,475	751,475	751,475	751,475	751,475	751,475
EQUIPMENT									
Police Vehicles (1:1764)		81,886	85,299	85,797	85,797	85,797	85,797	85,797	85,797
Officers' Equip. (1:586)		18,850	19,635	19,750	19,750	19,750	19,750	19,750	19,750
Dispatch Equipment (1:4685)		1,179	1,228	1,235	1,235	1,235	1,235	1,235	1,235
Portable Radios (1:1764)		9,634	10,035	10,094	10,094	10,094	10,094	10,094	10,094
Total Equipment Costs		111,548	116,198	116,876	116,876	116,876	116,876	116,876	116,876
TOTAL COST, LAW ENFORCEMENT		828,766	863,309	868,352	868,352	868,352	868,352	868,352	868,352

TABLE

FISCAL IMPACT ANALYSIS OF THE MAY PROPERTY SPECIFIC PLAN
DEVELOPMENT OF ROAD MAINTENANCE COSTS

(All amounts in constant dollars)	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Loop Road - Ramona Ex'way to Morgan St. (I)								
Lane-miles to maintain	0	3.939	3.939	3.939	3.939	3.939	3.939	3.939
Maintenance cost @ $3,484/lane mile	0	13,725	13,725	13,725	13,725	13,725	13,725	13,725
Loop Road - Morgan St. to Rider Ave. (II)								
Lane-miles to maintain	0	0	0	0	0	1.212	1.212	1.212
Maintenance cost @ 3,484/lane mile	0	0	0	0	0	4,223	4,223	4,223
Morgan St. - Bradley Rd. to Loop Road (I)								
Lane-miles to maintain	0	0.758	0.758	0.758	0.758	0.758	0.758	0.758
Maintenance cost @ $3,484/lane mile	0	2,639	2,639	2,639	2,639	2,639	2,639	2,639
Center St. - Loop Rd. to Linear Park (I)								
Lane-miles to maintain	0	0	0	0	0	0.795	0.795	0.795
Maintenance cost @ $3,484/lane mile	0	0	0	0	0	2,771	2,771	2,771
Rider St. - Loop Rd. to Ramona Ex'way (II)								
Lane-miles to maintain	0	0	0	0	0	2.121	2.121	2.121
Maintenance cost @ $3,484/lane mile	0	0	0	0	0	7,390	7,390	7,390
Bradley St. - Morgan to Rider Streets (II)								
Lane-miles to maintain	0	0	0	0	0	1.250	1.250	1.250
Maintenance cost @ $3,484/lane mile	0	0	0	0	0	4,355	4,355	4,355
El Nido Ave. - Rider St. south (III)								
Lane-miles to maintain	0	0	0	0	0	0	0	0
Maintenance cost @ $3,484/lane mile	0	0	0	0	0	0	0	0
Evans Rd. - Rider St. south (IV)								
Lane-miles to maintain	0	0	0	0	0	0	0	0
Maintenance cost @ $3,484/lane mile	0	0	0	0	0	0	0	0
Walnut Ave. - Center St. west (II)								
Lane-miles to maintain	0	0	0	0	0	1.591	1.591	1.591
Maintenance cost @ $3,484/lane mile	0	0	0	0	0	5,543	5,543	5,543
Placentia Ave. - Evans Rd. west (III)								
Lane-miles to maintain	0	0	0	0	0	0	0	0
Maintenance cost @ $3,484/lane mile	0	0	0	0	0	0	0	0
Access Road - Ramona Ex'way to McCanna Rd. (I)								
Lane-miles to maintain	0	0.379	0.379	0.379	0.379	0.379	0.379	0.379
Maintenance cost @ $3,484/lane mile	0	1,320	1,320	1,320	1,320	1,320	1,320	1,320
McCanna Road - (II)								
Lane-miles to maintain	0	0	0	0	0	0.379	0.379	0.379
Maintenance cost @ $3,484/lane mile	0	0	0	0	0	1,320	1,320	1,320
Total lane-miles to be maintained	0	5.076	5.076	5.076	5.076	12.424	12.424	12.424
Total maintenance cost	0	17,684	17,684	17,684	17,684	43,286	43,286	43,286

TABLE E (Continued)

FISCAL IMPACT ANALYSIS OF THE MAY PROPERTY SPECIFIC PLAN
DEVELOPMENT OF ROAD MAINTENANCE COSTS

(All amounts in constant dollars)	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Loop Road - Ramona Ex'way to Morgan St. (I)								
Lane-miles to maintain	3.939	3.939	3.939	3.939	3.939	3.939	3.939	3.939
Maintenance cost @ $3,484/lane mile	13,725	13,725	13,725	13,725	13,725	13,725	13,725	13,725
Loop Road - Morgan St. to Rider Ave. (II)								
Lane-miles to maintain	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Maintenance cost @ 3,484/lane mile	4,223	4,223	4,223	4,223	4,223	4,223	4,223	4,223
Morgan St. - Bradley Rd. to Loop Road (I)								
Lane-miles to maintain	0.758	0.758	0.758	0.758	0.758	0.758	0.758	0.758
Maintenance cost @ $3,484/lane mile	2,639	2,639	2,639	2,639	2,639	2,639	2,639	2,639
Center St. - Loop Rd. to Linear Park (I)								
Lane-miles to maintain	0.795	0.795	0.795	0.795	0.795	0.795	0.795	0.795
Maintenance cost @ $3,484/lane mile	2,771	2,771	2,771	2,771	2,771	2,771	2,771	2,771
Rider St. - Loop Rd. to Ramona Ex'way (II)								
Lane-miles to maintain	2.121	2.121	2.121	2.121	2.121	2.121	2.121	2.121
Maintenance cost @ $3,484/lane mile	7,390	7,390	7,390	7,390	7,390	7,390	7,390	7,390
Bradley St. - Morgan to Rider Streets (II)								
Lane-miles to maintain	1.250	1.250	1.250	1.250	1.250	1.250	1.250	1.250
Maintenance cost @ $3,484/lane mile	4,355	4,355	4,355	4,355	4,355	4,355	4,355	4,355
El Nido Ave. - Rider St. south (III)								
Lane-miles to maintain	0	0.985	0.985	0.985	0.985	0.985	0.985	0.985
Maintenance cost @ $3,484/lane mile	0	3,431	3,431	3,431	3,431	3,431	3,431	3,431
Evans Rd. - Rider St. south (IV)								
Lane-miles to maintain	0	0	0	0	0	0.758	0.758	0.758
Maintenance cost @ $3,484/lane mile	0	0	0	0	0	2,639	2,639	2,639
Walnut Ave. - Center St. west (II)								
Lane-miles to maintain	1.591	1.591	1.591	1.591	1.591	1.591	1.591	1.591
Maintenance cost @ $3,484/lane mile	5,543	5,543	5,543	5,543	5,543	5,543	5,543	5,543
Placentia Ave. - Evans Rd. west (III)								
Lane-miles to maintain	0	0.758	0.758	0.758	0.758	0.758	0.758	0.758
Maintenance cost @ $3,484/lane mile	0	2,639	2,639	2,639	2,639	2,639	2,639	2,639
Access Road - Ramona Ex'way to McCanna Rd. (I)								
Lane-miles to maintain	0.379	0.379	0.379	0.379	0.379	0.379	0.379	0.379
Maintenance cost @ $3,484/lane mile	1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320
McCanna Road - (II)								
Lane-miles to maintain	0.379	0.379	0.379	0.379	0.379	0.379	0.379	0.379
Maintenance cost @ $3,484/lane mile	1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320
Total lane-miles to be maintained	12.424	14.167	14.167	14.167	14.167	14.924	14.924	14.924
Total maintenance cost	43,286	49,357	49,357	49,357	49,357	51,996	51,996	51,996

TABLE F

FISCAL IMPACT ANALYSIS OF THE MAY PROPERTY SPECIFIC PLAN
PHASING OF RESIDENTIAL PRODUCT LINES

	No. Units	1988 Price	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
PHASE 1																		
Area 3	217	75,000			20	120	77											
Area 5	225	75,000	10	120	95													
PHASE 2																		
Area 14	240	75,000					50	120	70									
SUBTOTAL	682		10	120	115	120	127	120	70	0	0	0	0	0	0	0	0	0

	No. Units	Avg. Price	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
PHASE 2																		
Area 13	247	80,000			40	120	87											
PHASE 3																		
Area 16	232	80,000					40	120	72									
SUBTOTAL	479		0	0	40	120	127	120	72	0	0	0	0	0	0	0	0	0

	No. Units	Avg. Price	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
PHASE 1																		
Area 6	196	85,000		20	120	56												
Area 9	224	85,000	10	120	94													
PHASE 3																		
Area 17	196	85,000						40	120	36								
PHASE 4																		
Area 24	150	85,000								70	80							
Area 25	210	85,000									70	120	20					
SUBTOTAL	976		10	140	214	56	0	40	120	106	150	120	20	0	0	0	0	0

	No. Units	Avg. Price	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
PHASE 4																		
Area 18	161	90,000						8	100	53								
Area 19	161	90,000								56	100	5						
SUBTOTAL	322		0	0	0	0	0	8	100	109	100	5	0	0	0	0	0	0

	No. Units	Avg. Price	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
PHASE 4																		
Area 23	220	95,000							8	100	100	12						
SUBTOTAL	220		0	0	0	0	0	0	8	100	100	12	0	0	0	0	0	0

	No. Units	Avg. Price	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
PHASE 1																		
Area 4	165	100,000		56	100	9												
PHASE 2																		
Area 10	220	100,000				88	100	32										
SUBTOTAL	385		0	56	100	97	100	32	0	0	0	0	0	0	0	0	0	0

	No. Units	Avg. Price	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
PHASE 2																		
Area 11	160	120,000			28	80	52											
PHASE 3																		
Area 15	220	120,000					28	80	80	32								
SUBTOTAL	380		0	0	28	80	80	80	80	32	0	0	0	0	0	0	0	0
TOTAL UNITS	3,444	3,444	20	316	497	473	434	400	450	347	350	137	20	0	0	0	0	0

PERSONS/AGENCIES CONTACTED IN DEVELOPING THE STUDY

Persons	Agency/Area of Responsibility
	City of Perris
Ray Leland	Finance Dir./Acting City Mgr.
Carl Parsons	Dir. Community Development
Louis Mazie	Planning Department
Sgt. Bill Gasgons	Police Department
	County of Riverside
Ray Boyer	County Auditor's Office
Jeff Ashbaker	County Auditor's Office
Raymond Regis	County Fire/CDF
Capt. Michael Gray	County Fire/CDF
	Kaufman & Broad of Southern California, Inc.
Linda Horning	
Kevin Kirk	
	FMA
James Norton	

5.7 INFRASTRUCTURE DESIGN ANALYSIS

PSOMAS

DRAFT

MODIFIED DRAINAGE PLAN

FOR

MAY PROPERTY

PERRIS VALLEY

January, 1988

for

KAUFMAN AND BROAD
Southeast Division
5500 East Santa Ana Canyon Road
Anaheim, California 92807

Prepared by:

PSOMAS AND ASSOCIATES
3187 Redhill Avenue, Suite 250
Costa Mesa, California 92626

PSOMAS

PERRIS VALLEY

MASTER DRAINAGE PLAN

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EXHIBIT A - Perris Valley Master Drainage Plan

FIGURE NO. 1 - Perris Valley Storm Drain Flood Plain Limits

PERRIS VALLEY
MASTER DRAINAGE PLAN
LINES S AND T

Section I - Purpose:

The purpose of this report is to review the appropriate portion of the adapted "Master Drainage Plan for the Perris Valley", dated April, 1987, by J.F. Davidson Associates, Inc., and prepare a modified study which will serve the May, Watkins, and McCanna properties. These properties are bounded by the Perris Valley Channel on the west, Ramona Expressway on the north and east, and Placentia Street on the south.

Lines S and T of the Adopted Plan are designed to serve these areas. They currently are shown to follow the existing rectangular street pattern.

This study is necessary because the properties in questions are under development studies which includes major street realignments which affect the routing of drainage facilities. Also, the development except for the facilities size and alignment changes, all other conclusions of the adopted plan should apply.

Section II - Scope

The tributary drainage area covered by this plan is approximately 2.3 square miles or 1470 acres. In addition, there is 100 cfs of drainage entering the site from the east in a pipe under Ramona Expressway at Rider Street. The topography slopes from east to west with a mild tilt to the south. The ground slopes from a high of 3% in the southeast to a low of 0.0036 near the channel.

The scope of the master plan includes:

1. Determination of quantity and points of concentration of storm runnoff for a 100-year frequency event.

2. The preparation of a drainage area map.

3. Determination of the location, size, and capacity of the proposed facilities.

4. Investigations of alternative routes and methods as a basis for selecting the most effective plan.

Section III - General Discussion

This modified drainage plan examines the approximate size and type of facilities needed to transport runoff from the described area to the Perris Valley Channel.

These facility sizes are estimted based on a 100-year storm and slopes of the land using the topography of the adopted plan.

Section IV - Criteria

Utilizing the Flood Control District topography and the Adopted Master Plan, the drainage flows were calculated for areas of about 30 to 50 acres in size.

The rational method was used using a 10-minute period of concentration.

This study assumes all the flow will be carried in the facility. When more specific designs are completed, these sizes may change due to different slopes, and carrying some flow in the streets.

Also, the final street alignments can result in tributary flows entering the system at locations other than as shown.

Hunsaker Engineering has provided information regarding drainage flows from the McCanna Ranch to the east, both as to quantities, points of entry, and pipe locations. Their assistance is appreciated.

Pipe is assumed to be R.C.P. Channels are assumed to be concrete lined. The facilities sizes and alignment may vary from those shown in this study when final design is done.

Section V - Hydrology Development

The rational method was used to determine the 100-year peak discharges generated from project site. Methodology and supportive data for the rational hydrology can be found in the "Riverside County Flood Control and Water Conservation District Hydrology Manual", dated April, 1978. This method was used primarily for sizing drainage facilities throughout the project.

Peak discharges generated from Mc Canna Ranch was taken from a preliminary hydrology study prepared by Hunsaker and Associates, dated July 20, 1987. Projected land uses for the

study area were obtained from a land use plan prepared by Florian Martinez Associates, dated December 2, 1987. Maximum size of pipe used was 78" in diameter. Open channels were used to handle higher discharges.

The Master Drainage Plan was designed assuming that no drainage course will be allowed to cross MWD aqueduct. The system outlet is in three locations at the Perris Valley Channel.

Section VI - Existing Drainage Facilities and Master Plans

Existing facilities consist of shallow culverts at intersections, earth ditches and the Perris Valley Channel.

This study relies heavily on the adopted plan for basic routing and some flow quantities, and the format of this report.

Section VII - Recommended Drainage Improvements

The recommended facilities are shown on the attached plan titled "Master Plan Storm Drains, May Property, Kaufman and Broad", dated 11/28/87. The supporting data is available for review by qualified individuals upon request.

This study covers the area of the adopted plan where Lines S and T are proposed. These lines have been modified as to line size type and alignment. In addition, we herein propose two additional lines labeled Ta and Tb as supplements to Line T.

Line S has been relocated to empty into the Perris Channel approximately 1300 feet north of its adopted terminus at Placentia. This reduces the length of channel by nearly 2500 feet.

Line S-2 is extended south from its terminus in Evans to Line S-1 at Placentia. This adds 1300 feet of 60-inch pipe.

Line S-1 is extended west to the channel in Placentia Street. This adds 800 feet of channel and 1300 feet of 78" pipe.

Lines S-1 and S-2 are not needed to serve the area of this study. They both lie in streets that border the study area and divert flow from entering the study area.

Line S angles from its channel outlet across a proposed residential area to the intersection of Rider Street and Evans Avenue. Thence it runs east in Rider to Ramona Expressway as before.

Line S-3 runs north 1200 feet to the aqueduct and then east to McCanna Ranch to serve that development.

Line T is on the same alignment as in the adopted plan. Line T-1, 1300 feet of pipe is deleted.

Line T-2 is unchanged as is Line T-3.

Line Ta starts from the channel at a point 1300 feet north of Lint T and runs east 3400 feet, varying in size from 60 inches to 42 inches.

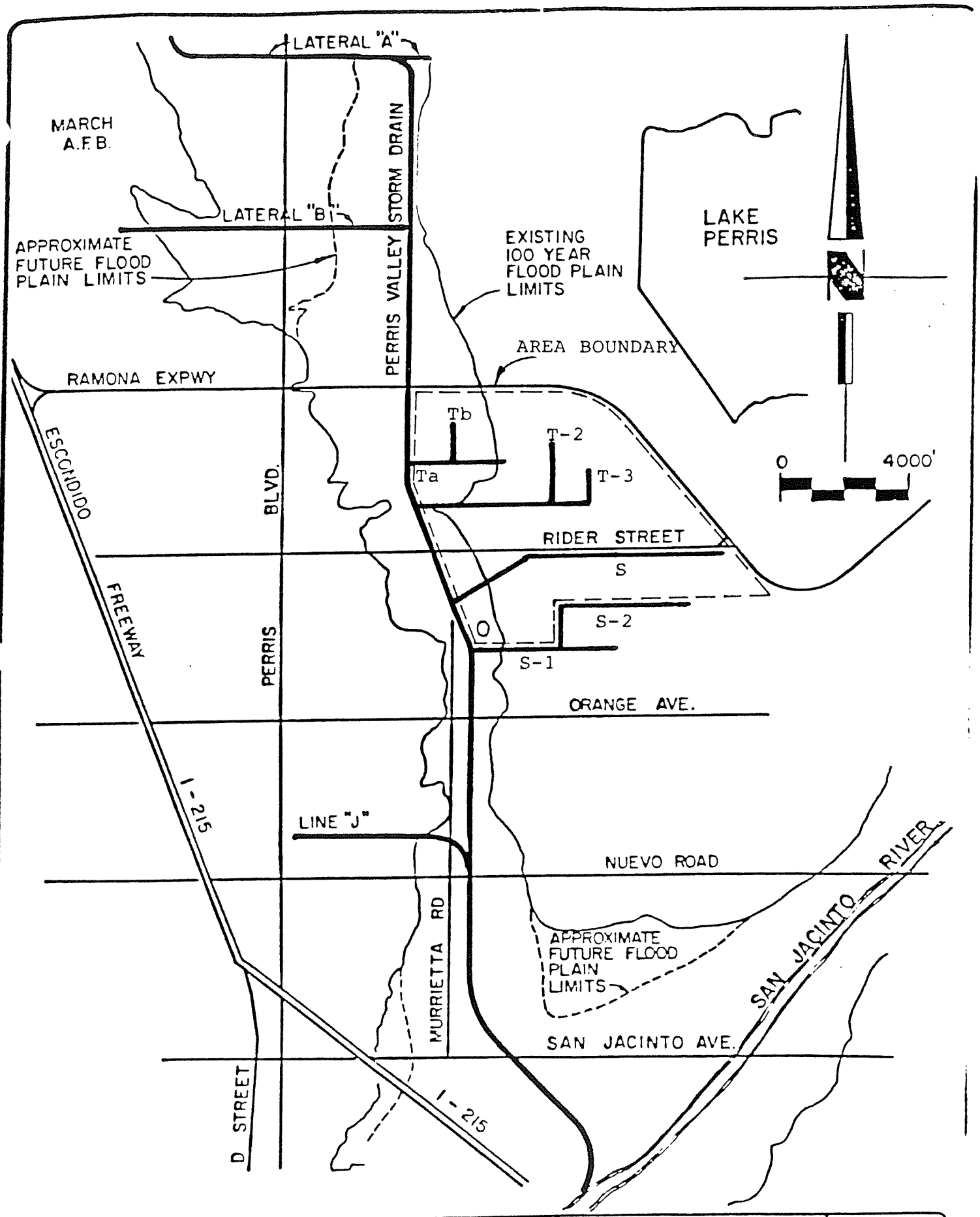
Line Tb enters line Ta 1300 feet east of the channel and runs north 1800 feet to pick up flow from the commercial area proposed along Ramona Expressway.

PSOMAS

Section VIII - Table of Facilities

LINE	NODE TO NODE	SIZE	TOTAL L.F.	TOTAL Q	MAY PROPERTY Q	MAY PROPERTY %	McCANNA Q	McCANNA %	OTHERS Q	OTHERS %
Ta	1-2	48"	900	120	120	100	---		---	
	2-3	54"	900	127	127	100	---		---	
	3-5	60"	1,200	229	229	100	---		---	
Tb	4-3	42"	2,500	70	70	100	---		---	
T	6-7	48"	1,200	148	---	---	148	100	---	---
	7-10	72"	1,400	308	38	12	270	88	---	---
	10-11	78"	1,300	349	79	23	270	77	---	---
	11-12	b=5',d=5',z=1.5'	1,300	403	133	33	270	67	---	---
	12-13	b=5',d=6',z=1.5'	1,100	441	171	39	270	61	---	---
Tc	8-9	48"	400	122	---	---	122	100	---	---
	9-7	54"	1,100	129	7	5	122	95	---	---
S	14-15	48"	100	100	---		---		100	100
	15-16	48"	850	138	38	28	---	---	100	72
	16-17	48"	1,250	194	94	48	---	---	100	52
	17-18	60"	1,300	286	146	52	40	14	100	35
	18-20	66"	1,400	321	73*	23	148	46	100	31
	20-21	b=5',d=5',z=1.5	1,400	490	242	49	148	30	100	21
	21-22	b=5',d=6',z=1.5	1,400	572	324	57	148	26	100	17
	22-23	b=5',d=6',z=1.5	1,400	602	354	59	148	25	100	17
S-3	19-20	48"	2,400	108	---	---	108	100	---	---

*Part of the cost to be covered by future development south of Line "S".



VICINITY MAP

5.8 COMMERCIAL ZONE USE AND DEVELOPMENT REGULATIONS

Chapter 19.40

C-1 DISTRICTS (RETAIL COMMERCIAL)

Sections:

19.40.010 General regulations.
19.40.020 Permitted uses.
19.40.030 Conditions.
19.40.050 Prohibited uses.
19.40.060 Building height limit.
19.40.070 Building site area requirement.
19.40.080 Width of lot.
19.40.090 Front yard required.
19.40.100 Side yard.
19.40.110 Rear yard.
19.40.120 Distance between buildings.
19.40.130 Fences, walls or screening--C-1 retail commercial.

19.40.010 General regulations. The regulations contained in this chapter shall apply in all C-1 districts. (Ord. 178 Art. VIII (part), 1953).

19.40.020 Permitted uses. Uses permitted in the C-1 districts shall be as follows:

A. Any uses permitted in R-1, R-2 and R-3 districts;

B. The following commercial uses:

1. Agencies, including financial institutions, automobile clubs and real estate offices,

2. Personal service establishments, including barber and beauty shops, physical culture establishments, mortuaries, hospitals and clinics, but not including hospitals for the

treatment of mental or communicable disease or veterinary or dog and cat hospitals,

3. Offices, including medical, dental, legal, scientific, engineering, fine arts and literary offices,

4. Trade service establishments, including retail dyeing and cleaning service, employing not more than five persons on the premises, and providing that only nonexplosive cleaning fluids shall be used; cafes and restaurants which include sale of alcoholic beverages, provided, that the alcoholic beverages sold and consumed on the premises are served with meals; cocktail lounges are allowed by conditional use permit; tailors and dress makers; show, watch and jewelry repair shops; minor mechanical repair shops, such as locksmith, typewriter repair, bicycle shops and gunsmiths; interior decorators; automobile parking lots, filling stations, provided all storage tanks for gasoline shall be below the surface of the ground,

5. Commercial amusements, including theaters and ballrooms, but not including boxing and wrestling arenas, pool and billiard parlors, race tracks, stadiums, carnivals and circuses, and games of chance, card rooms, and penny arcades,

6. Stores or shops for the conduct of general retail business and retail bakeries, drugs, groceries, hardware, meats, the sale of used or secondhand goods or merchandise, dressed poultry; provided no live poultry shall be kept or maintained on the premises; notions, stationery, confectionery, Turkish baths, or other similar enterprises; or other enterprises or businesses which, in the opinion of the city council, are not more obnoxious or detrimental to the public welfare than the businesses enumerated in this section,

7. Recreational vehicle parks upon the granting of a conditional permit and plot plan approval in compliance with the standards set forth in Chapter 19.58,

8. The sale of sex-oriented books, pictures and film strips subject to the provisions of Chapter 9.22 of this code. (Ord. 657 §1; 1986; Ord. 643 §6, 1986: Ord. 529 §1, 1980; Ord. 429 §4, 1974; Ord. 394 §1, 1972; Ord. 178 Art. VIII §8.1, 1953).

19.40.030 Conditions. The conditions under which uses described in Section 19.40.020 are permitted to be erected, established or maintained are as follows:

A. Except as otherwise provided in subsection B of this section storage of any type is prohibited.

B. Outside storage may be permitted with an approved conditional use permit;

C. That the architectural and general appearance of all commercial buildings and grounds is in keeping with character of the neighborhood and such as not to be detrimental to the public health, safety and general welfare of the community in which such use or uses are located. (Ord. 642 §19, 1986: Ord. 178 Art. VIII §8.2, 1953).

19.40.050 Prohibited uses. No enterprise is permitted which produces or causes any dust, smoke, gas, noise, fumes, odors, or vibrations which are or may be detrimental to other property in the neighborhood or to the welfare of the occupants thereof. (Ord. 178 Art. VIII §8.4, 1953).

19.40.060 Building height limit. The maximum building height limit shall be fifty feet or three stories. (Ord. 178 Art. VIII §8.5, 1953).

19.40.070 Building site area requirement. There shall be no minimum requirement for C-1 district uses. For residential uses, see Section 19.12.180. (Ord. 178 Art. VIII §8.6, 1953).

19.40.080 Width of lot. There shall be no minimum requirement for C-1 district uses. For residential uses, see Section 19.12.180. (Ord. 178 Art. VIII §8.7, 1953).

19.40.090 Front yard required. There shall be a front yard of not less than fifteen feet in depth. (Ord. 178 Art. VIII §8.9, 1953).

19.40.100 Side yard. There shall be no minimum requirement. (Ord. 178 Art. VIII §8.10, 1953).

19.40.110 Rear yard. There shall be a rear yard not less than ten feet in depth, or for each building a yard:

A. Which is adjacent to and extends the full length of all rear sides thereof;

B. Which is not less than ten feet in depth; and

C. Which is accessible to an alley, street, or public thoroughfare. (Ord. 178 Art. VIII §8.11, 1953).

19.40.120 Distance between buildings. There shall be no minimum requirements, except that no detached dwelling shall be less than ten feet from any other dwelling or main building on the same building site; provided however, that such distance may be less than ten feet and not less than five feet if either such dwelling or main building has no opening on the side between the buildings. (Ord. 178 Art. VIII §8.12, 1953).

19.40.130 Fences, walls or screening--C-1 retail commercial. A. Fences, walls or screening providing a minimum six feet of height may be erected along the property boundaries of C-1 lots or parcels of land whose use is retail commercial on all such properties or portions thereof where such construction is feasible. Solid fencing, walls or screening shall be required whenever C-1 zoned property abuts R-1, R-2 or R-3 zoned property. Screening through natural vegetation may be provided, providing that vegetation used shall achieve a mature growth equal to the required six-foot minimum, shall have a permanent irrigation system installed to insure growth.

B. Wherein the primary use of a lot or parcel of land is R-1, R-2 or R-3, the standards of that use shall apply.

Exception: Where a C-1 property is located on a corner, the height of any fence shall not exceed three feet along the side or front yard line for a distance of fifty feet from the corner, nor shall the fencing provide less than fifty percent open vision through materials used. Walls or screening shall not be permitted within fifty feet of the corner of the lot or parcel of land closest to a public street or thoroughfare. (Ord. 642 §20, 1986; Ord. 436 §4 (8), 1975).

5.9 NOISE ASSESSMENT

DISTANCE FROM ROADWAY CENTERLINE TO CNEL IMPACT CONTOUR, FEET.

May Property Specific Plan

Location (ADT)	Distance To 70 dB CNEL Contour	Distance To 65 dB CNEL Contour	Distance To 60 dB CNEL Contour	Distance To 57 dB CNEL Contour	Distance To 55 dB CNEL Contour
RAMONA EXPRESSWAY					
Existing					
(1) 6935	32	69	206	409	648
(2) 7240	33	72	215	427	676
(3) 9590	38	93	284	565	896
(4) 5100	21	50	151	301	476
(5) 5100	21	50	151	301	476
Existing Plus Project					
(1) 20,235	65	191	598	1192	1889
(2) 23,880	75	224	705	1407	2229
(3) 46,570	140	435	1375	2743	4347
(4) 11,625	42	111	344	685	1085
(5) 7,335	26	70	217	432	685
INTERSTATE 15					
Existing					
(1) 40,300	200	625	1973	3936	6238
(2) 35,700	178	554	1748	3487	5526
Existing Plus Project					
(1) 56,595	279	877	2770	5528	8760
(2) 41,135	204	638	2014	4018	6367
PERRIS BOULEVARD					
Existing					
(1) 8160	14	41	130	259	411
(2) 6325	12	32	101	201	318
(3) 6190	12	32	99	197	311
(4) 6485	112	33	103	206	326
Existing Plus Project					
(1) 21,105	47	111	337	671	1062
(2) 13,725	40	77	221	437	691
(3) 9,235	36	57	151	295	466
(4) 9,235	36	57	151	295	466
RIDER STREET					
Existing					
(1) 205	6	6	6	7	9
(2) 150	6	6	6	7	8
Existing Plus Project					
(1) 21,285	40	81	236	468	740
(2) 2,495	7	11	28	55	87

5.9 NOISE ASSESSMENT

DISTANCE FROM ROADWAY CENTERLINE TO CNEL IMPACT CONTOUR, FEET.

May Property Specific Plan

Location (ADT)	Distance To 70 dB CNEL Contour	Distance To 65 dB CNEL Contour	Distance To 60 dB CNEL Contour	Distance To 57 dB CNEL Contour	Distance To 55 dB CNEL Contour
R A M O N A E X P R E S S W A Y					
Existing					
(1) 6935	32	69	206	409	648
(2) 7240	33	72	215	427	676
(3) 9590	38	93	284	565	896
(4) 5100	21	50	151	301	476
(5) 5100	21	50	151	301	476
Existing Plus Project					
(1) 20,235	65	191	598	1192	1889
(2) 23,880	75	224	705	1407	2229
(3) 46,570	140	435	1375	2743	4347
(4) 11,625	42	111	344	685	1085
(5) 7,335	26	70	217	432	685
I N T E R S T A T E 1 5					
Existing					
(1) 40,300	200	625	1973	3936	6238
(2) 35,700	178	554	1748	3487	5526
Existing Plus Project					
(1) 56,595	279	877	2770	5528	8760
(2) 41,135	204	638	2014	4018	6367
P E R R I S B O U L E V A R D					
Existing					
(1) 8160	14	41	130	259	411
(2) 6325	12	32	101	201	318
(3) 6190	12	32	99	197	311
(4) 6485	112	33	103	206	326
Existing Plus Project					
(1) 21,105	47	111	337	671	1062
(2) 13,725	40	77	221	437	691
(3) 9,235	36	57	151	295	466
(4) 9,235	36	57	151	295	466
R I D E R S T R E E T					
Existing					
(1) 205	6	6	6	7	9
(2) 150	6	6	6	7	8
Existing Plus Project					
(1) 21,285	40	81	236	468	740
(2) 2,495	7	11	28	55	87