CAROL

MAY RANCH

TECHNICAL APPENDICES

VOLUME III OF III

May Ranch

OCTOBER 23, 1989

MAY RANCH
FINAL SPECIFIC PLAN/ENVIRONMENTAL IMPACT REPORT
SCH88012503
FEBRUARY, 1988

NOTE: Both the original and supplemental EIR's have been combined into this volume; please note that the Supplemental EIR is distinguished by yellow copies to assist the reader in differentiating between the two documents. Both the original and supplemental EIR's contain the following sections.

SECTION PAGE

TECHNICAL APPENDICES

May Ranch

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

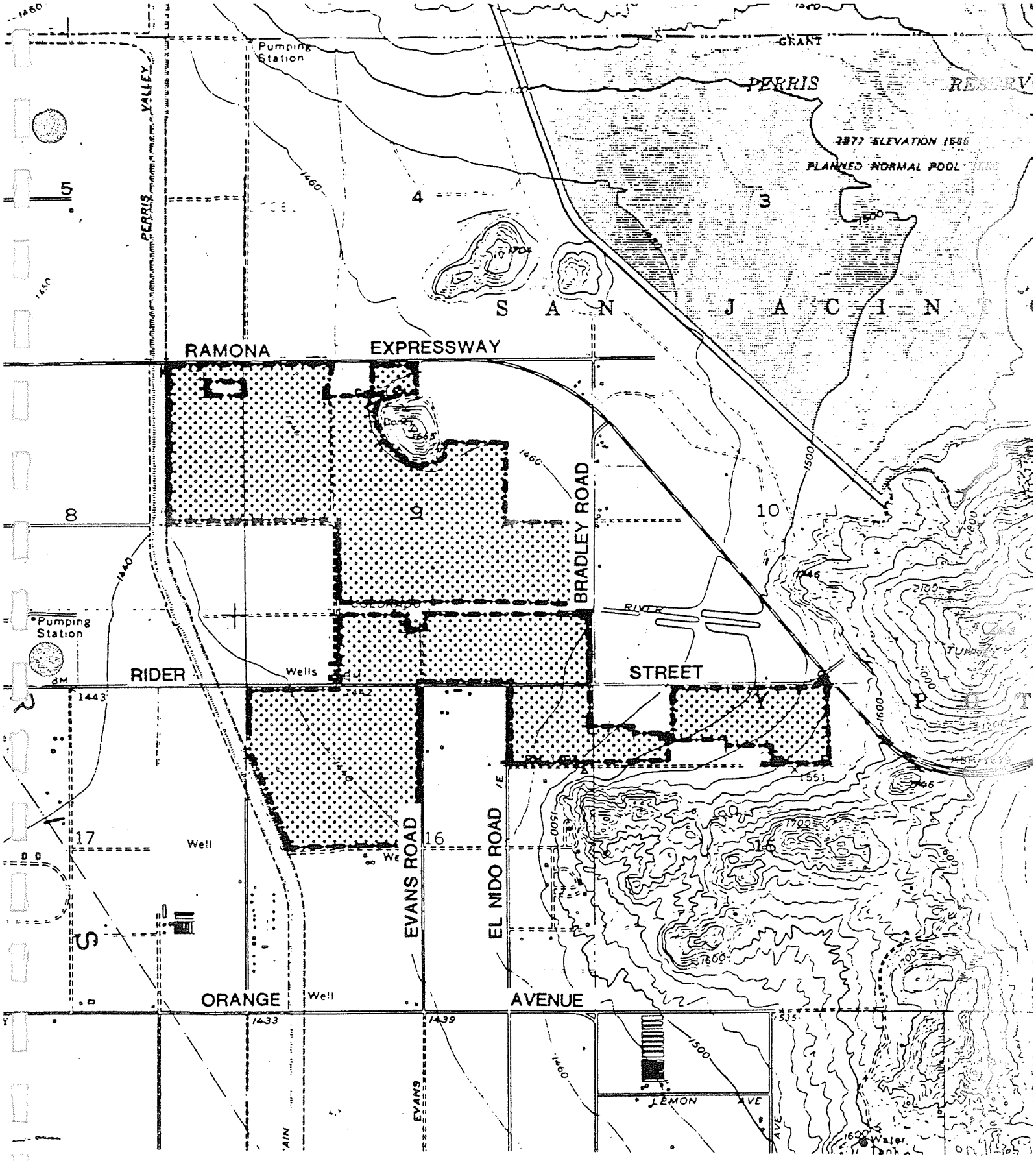
State Department of Water Resources
P.O. Box 6598
Los Angeles, CA 90055

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 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:

@ The Loss of Prime Farmland should be addressed.

⑥ 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,

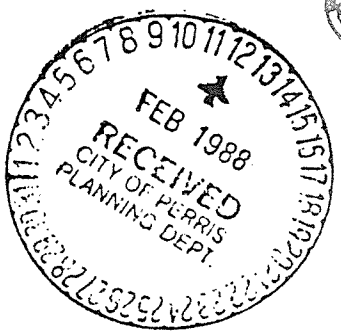
Robert S Hewitt

Robert S. Hewitt
Soil Conservationist, San Jacinto

TE OF CALIFORNIA—OFFICE OF THE GOVERNOR

GEORGE DEUKMEJIAN, Governor

E OF PLANNING AND RESEARCH
H STREET
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
of

Sgt. Jim Waddel
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
916/445-5332

Mel Schwartz
Reclamation Board
1416 Ninth Street Room 204-8
Sacramento, CA 95814
916/445-2458

Norris Milliken
S.F. Bay Conservation & Dev't. Comm.
30 Van Ness Avenue, Room 2011
San Francisco, CA 94102
415/557-3686

Mike Lesson
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 Laumer
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. Taylor, 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. Nokes, 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

Wolf E. Hall
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 Resources Control Board
Division of Water Rights
901 P Street
Sacramento, CA 95814
916/324-5716

OTHER: _____

Regional Water Quality Control Bo

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, Ro
  Fresno, CA 93726
  209/445-5116

- Redding Branch Office
  100 East Cypress Avenue
  Redding, CA 96002
  916/225-2045

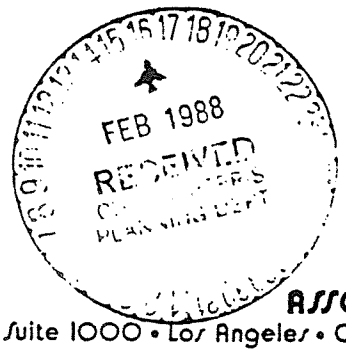
LAHONTAN REGION (6)
2092 Lake Tahoe Boulevard
P.O. Box 9428
South Lake Tahoe, CA 95731
916/544-3481

- 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 ON (9)
9771 ment Blvd.



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?

MAY RANCH
FINAL SPECIFIC PLAN/ENVIRONMENTAL IMPACT PLAN

CASE NO. 88-20
SCH NO. 88012503

Project Developers:

Kaufman and Broad of Southern California, Inc.
5500 East Santa Ana Canyon Road
Anaheim, California 92807

Contact Persons:
Kevin Kirk
Linda Horning

Specific Plan/EIR Prepared By:

Florian Martinez Associates
15641 Red Hill Avenue, Suite 205
Tustin, California 92680-7383

Contact Persons:
Gil Martinez
Keith Fichtner
Kathy Tong

Lead Agency:

City of Perris
101 North "D" Street
Perris, California 92370

Contact Person:
Carl Parsons

APPROVED BY CITY OF PERRIS COUNCIL DECEMBER 27, 1988

- 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, Gover

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.

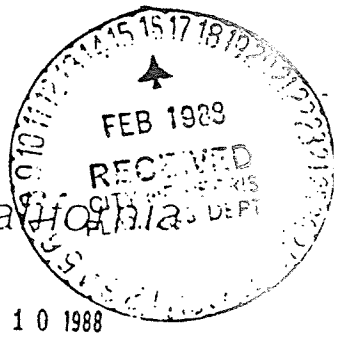
If you have any questions, please contact this office.

Sincerely,

Nancy A. Olson
Sanitary Engineering Technician

NAO:ww

The Metropolitan Water District of Southern California



FEB 10 1988

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.

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

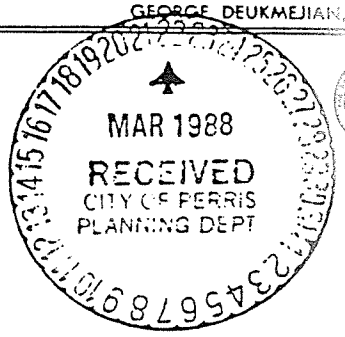
DON WARREN
Senior Planner

DRW/jh

STATE OF CALIFORNIA — GEORGE DEUKMEJIAN, Govern

DEPARTMENT OF FOOD AND AGRICULTURE
1220 N Street
P.O. 942871
Sacramento, CA 94271-0001

March 17, 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, Gover

DEPARTMENT OF CONSERVATION
DIVISION OF ADMINISTRATION
DIVISION OF MINES AND GEOLOGY
DIVISION OF OIL AND GAS
DIVISION OF RECYCLING

1416 Ninth Street
SACRAMENTO, CA 958

(916) 322-587
TDD (916) 324-255

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

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

JJ:lg

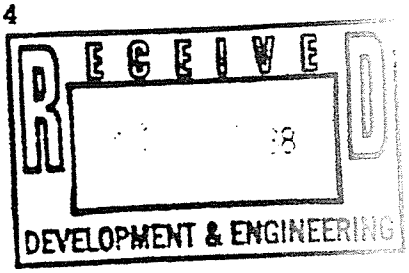
Attachment (map)

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 eardy 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.

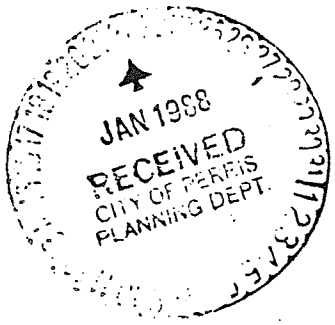
Very truly yours,

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,

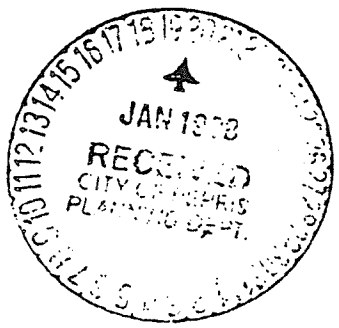
PERRIS UNION HIGH SCHOOL DISTRICT

Grover J. Moore, Ed.D.
Assistant Superintendent, Business

GJM:as

STATE OF CALIFORNIA—THE RESOURCES AGENCY GEORGE DEUKMEJIAN, Governor

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
DEPARTMENT OF WATER RESOURCES
P. O. Box 6598
LOS ANGELES
90055-1598

GEORGE DEUKMEJIAN, Govern

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

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.

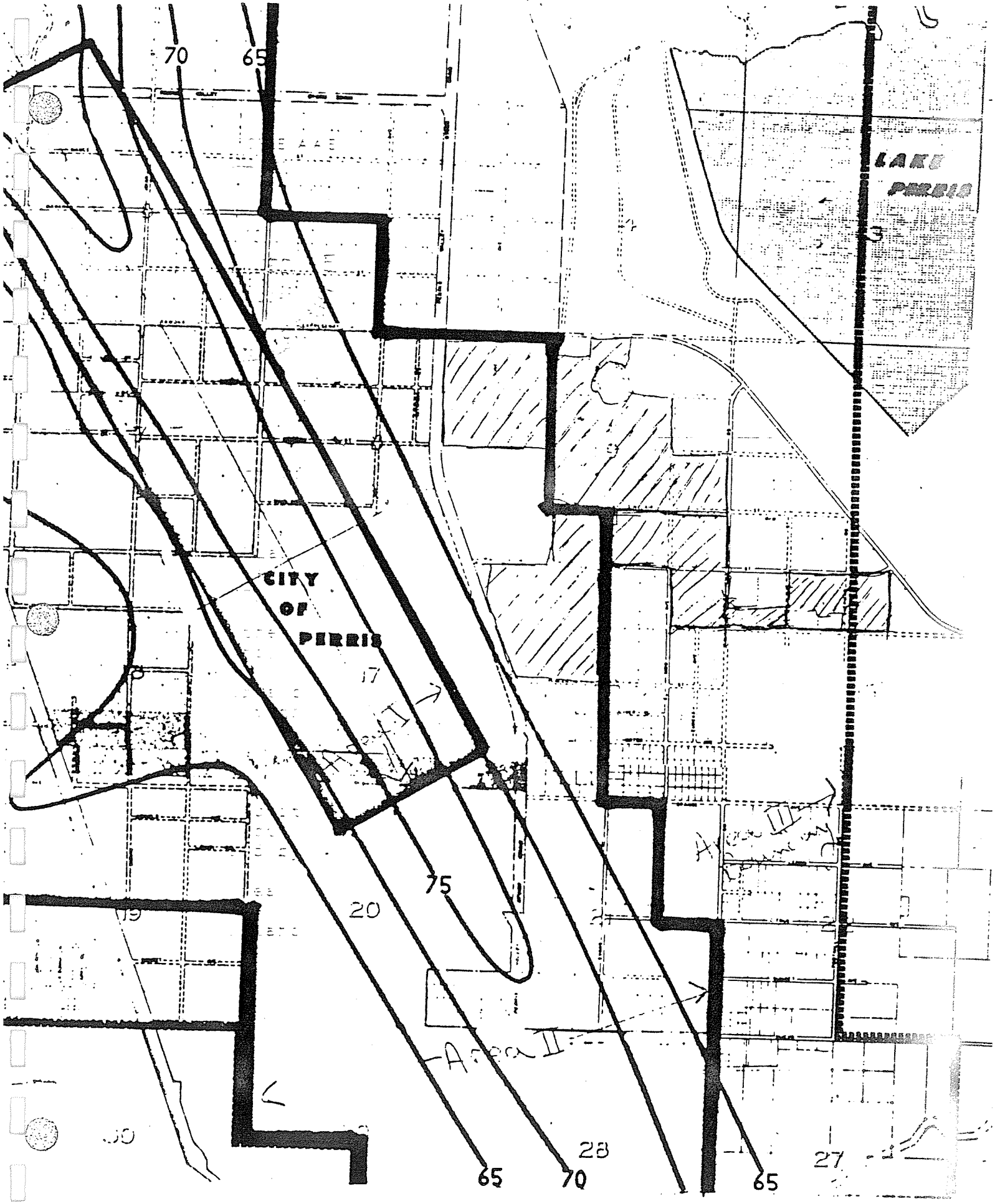
The ALUC Policies for compatible land uses in Area II are commercial, industrial, and agricultural uses are permitted. Residential uses must be a 2-1/2 acre lot size per dwelling unit. There are substantial land areas identified in the May Project which fall within Area II. Land use must be those identified 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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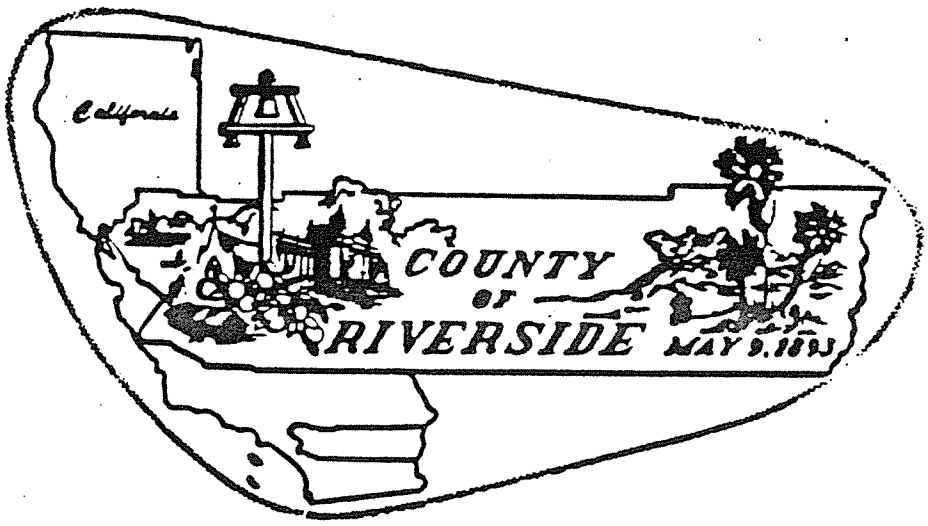
AIRPORT LAND USE PLAN

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 sub-committee 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 fi 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 con These safety concerns are due to aircraft maneuvering, ascending, descending, turning, and changing power settings when landing or takin 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 nois or produce other ancillary effects such as glare or vibration. Aviga-tion easements are a legal basis wherein the landowner basically acknow ledges that aircraft and ancillary effects are present in the airspace overhead, and gives up any future right to sue regarding the acknowledg 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

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

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

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

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

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 Members 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.

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.

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. Bl.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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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

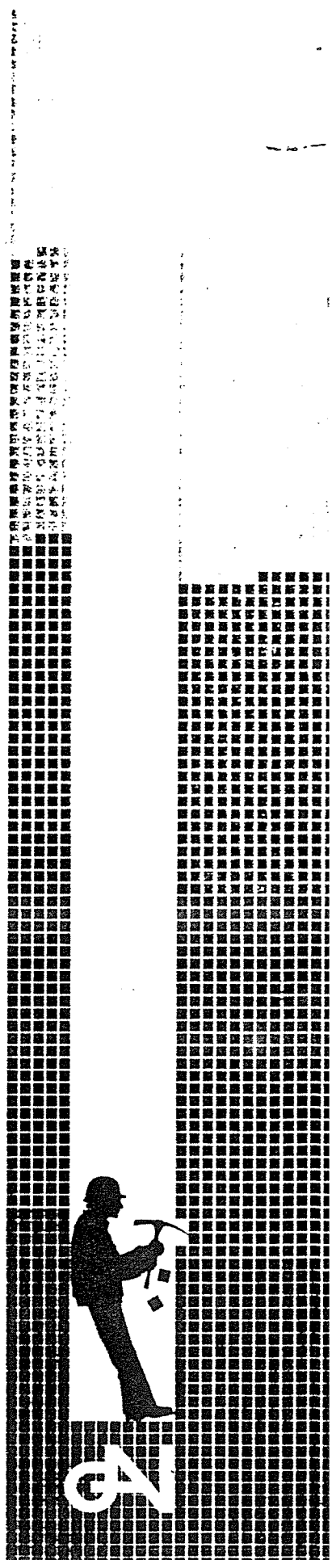
a) This report presents the results of our feasibility investigation for the proposed development in the Lake Perris area of California, encompassing approximately 1000 acres and consisting of two non-contiguous parcels.

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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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

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

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.

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.

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/ft^3)
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/ft^2)	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.

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

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. ATTACHEMENTS 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.

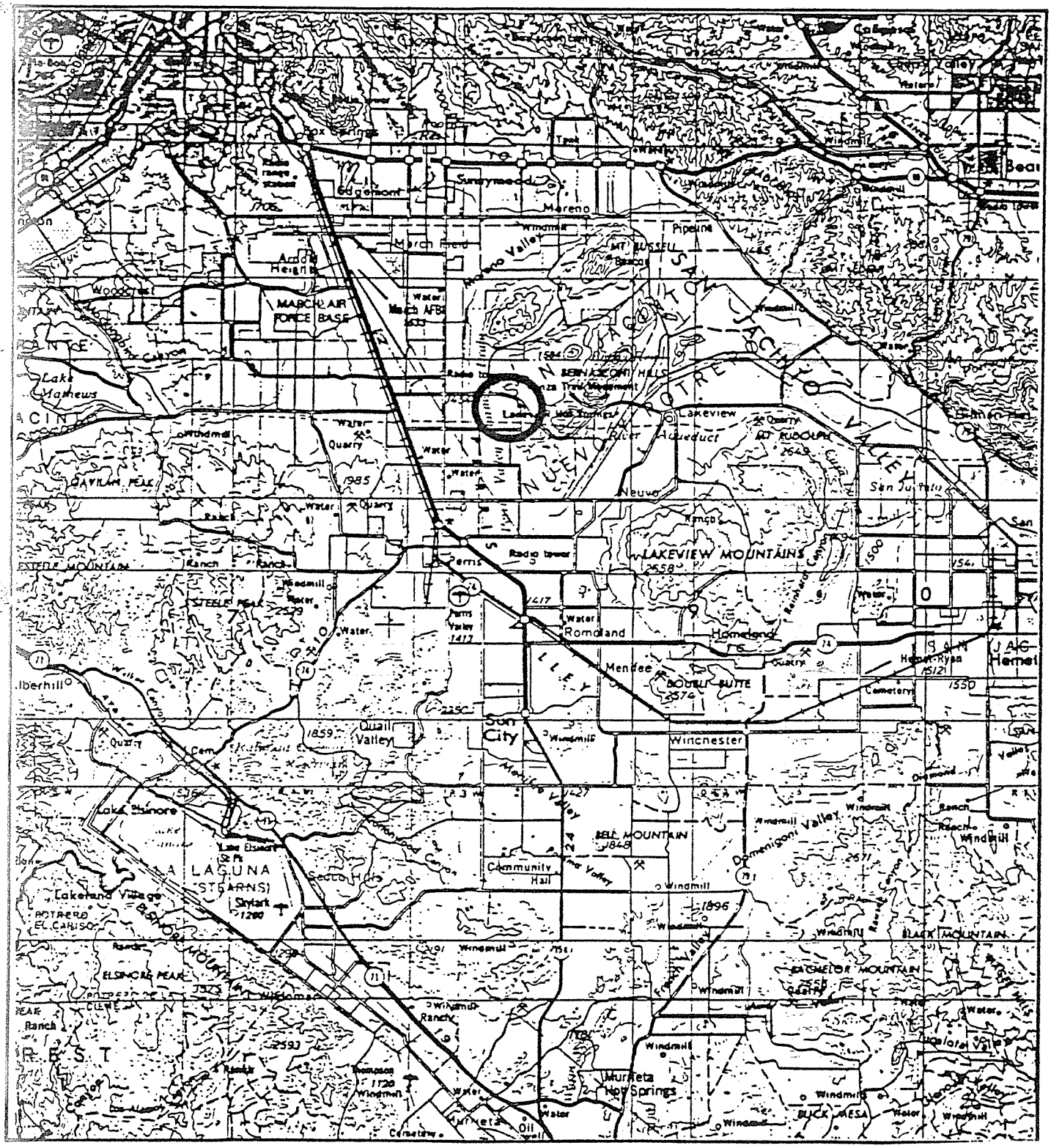

Figure 1. General Location of the May Property Project Area (circle), Riverside County, California. From: Santa Ana (1979) 15' Quadrangle. Scale = 1,250,000.

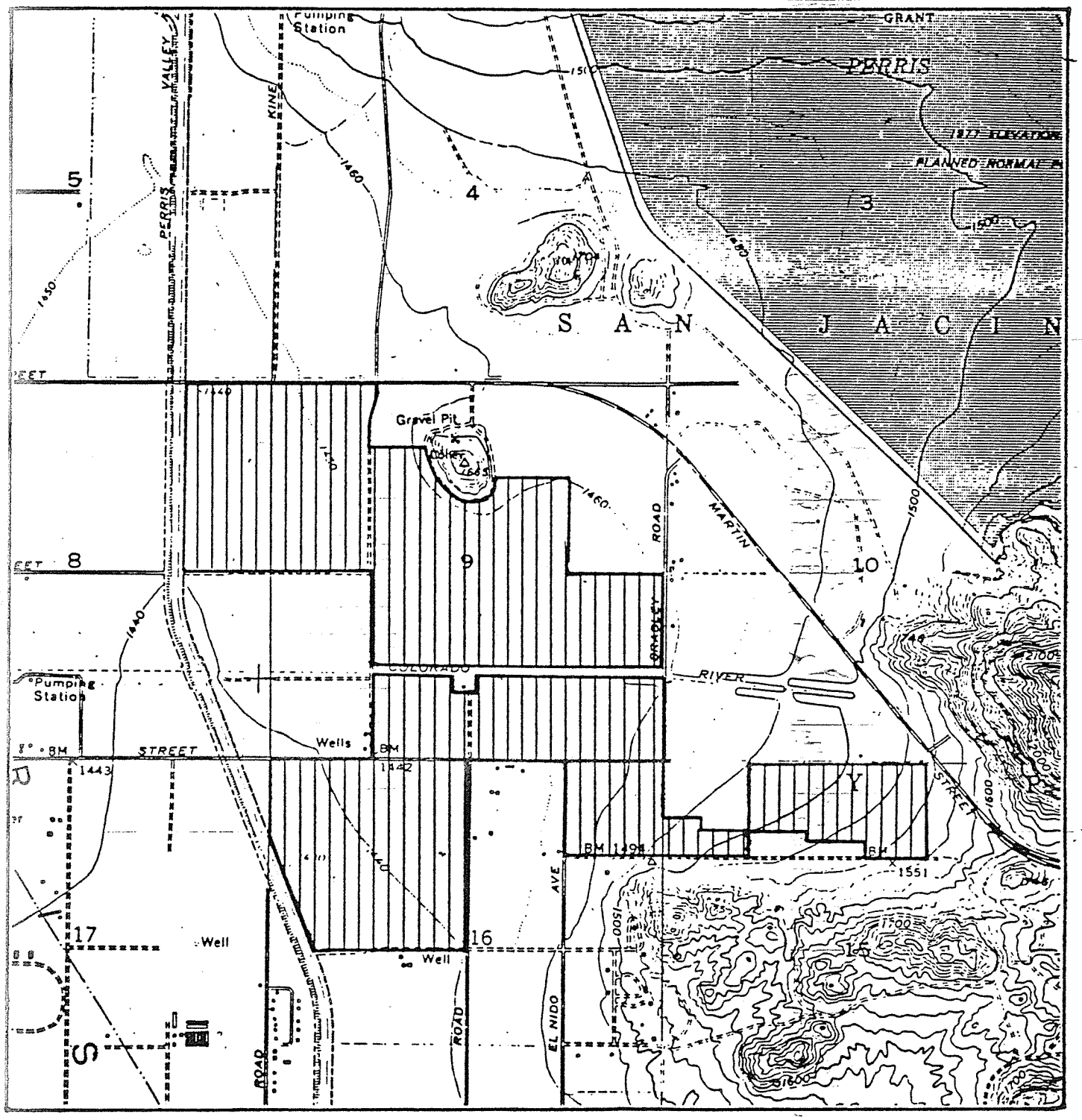

Figure 2. Specific Location of the May Property Project Area (vertical lines), Riverside County, California. From: Perris (1979) 7.5' Quadrangle. Scale = 1:24,000.

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.

TRAFFIC ANALYSIS

TRAFFIC ANALYSIS

Kaufman and Broad Development of the May Ranch (Revised Land Use Plan)

Prepared for

CITY OF PERRIS

Submitted by

MOHLE, GROVER & ASSOCIATES
901 East Imperial Highway Suite A
La Habra, CA 90631 · (714)738-3471

AUGUST 31, 1988

MOHLE, GROVER & ASSOCIATES
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August 31, 1988

Mr. Carl Parsons
Director of Planning and
Community Development
CITY OF PERRIS
101 North "D" Street
Perris, CA 92370

Dear Carl:

This is the traffic analysis report for the revised May Ranch Specific Plan dated August 5, 1988.

Of the several findings listed in the report, the most significant in our judgment is the conclusion that with or without the May Ranch development, the Ramona Expressway from at least Redlands Avenue to the I-215 Freeway will need grade separated intersections and a "freeway to freeway" interchange at I-215 to handle predicted future traffic volumes at a satisfactory level of service.

In spite of the assumed future widening of the Ramona Expressway that will provide six through traffic lanes, double left turn lanes and additional right turn only lanes, the calculated level of service at the intersections of Redlands Avenue and Perris Boulevard (even if the May Ranch is not developed) will be at the "F" level.

At the I-215 interchange, even assuming ramp widening, double left turns on the overcrossing structure and signalization at the ramp terminals, the calculated level of service is "F" with or without the May Ranch development.

It is emphasized that this study did not estimate the future traffic volumes that would use the Ramona Expressway that will be generated in the Hemet/San Jacinto area. Future developments in this area will add to the traffic volumes predicted from this particular study.

On a wider regional basis, it is concluded that serious consideration should be given to the conversion of the Ramona/Cajalco Expressway to freeway standards and that this freeway be extended into Orange County to join the eastern transportation corridor, thereby providing a completely separate route from the 91 Freeway to service the Perris/Moreno Valley/Hemet/San Jacinto area.

This study has put into some focus the need for extensive planning and implementation of additional arterial facilities needed to serve this growing area.

Respectfully submitted,

MOHLE, GROVER & ASSOCIATES

Henle

R. Henry Mohle
President

RHM:jh

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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. This study is based on the revised land use plan and specific plan dated August 5, 1988.

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 744 acres is proposed to have 3,508 single family dwelling units, 375 multi-family dwelling units and 77 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 development of land generally located westerly and southerly 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 5,373 dwelling units while the total of 26,224 dwelling units were assumed in the study area based on existing zoning. This means that 20 percent of the total dwelling units in the study area are located in 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.

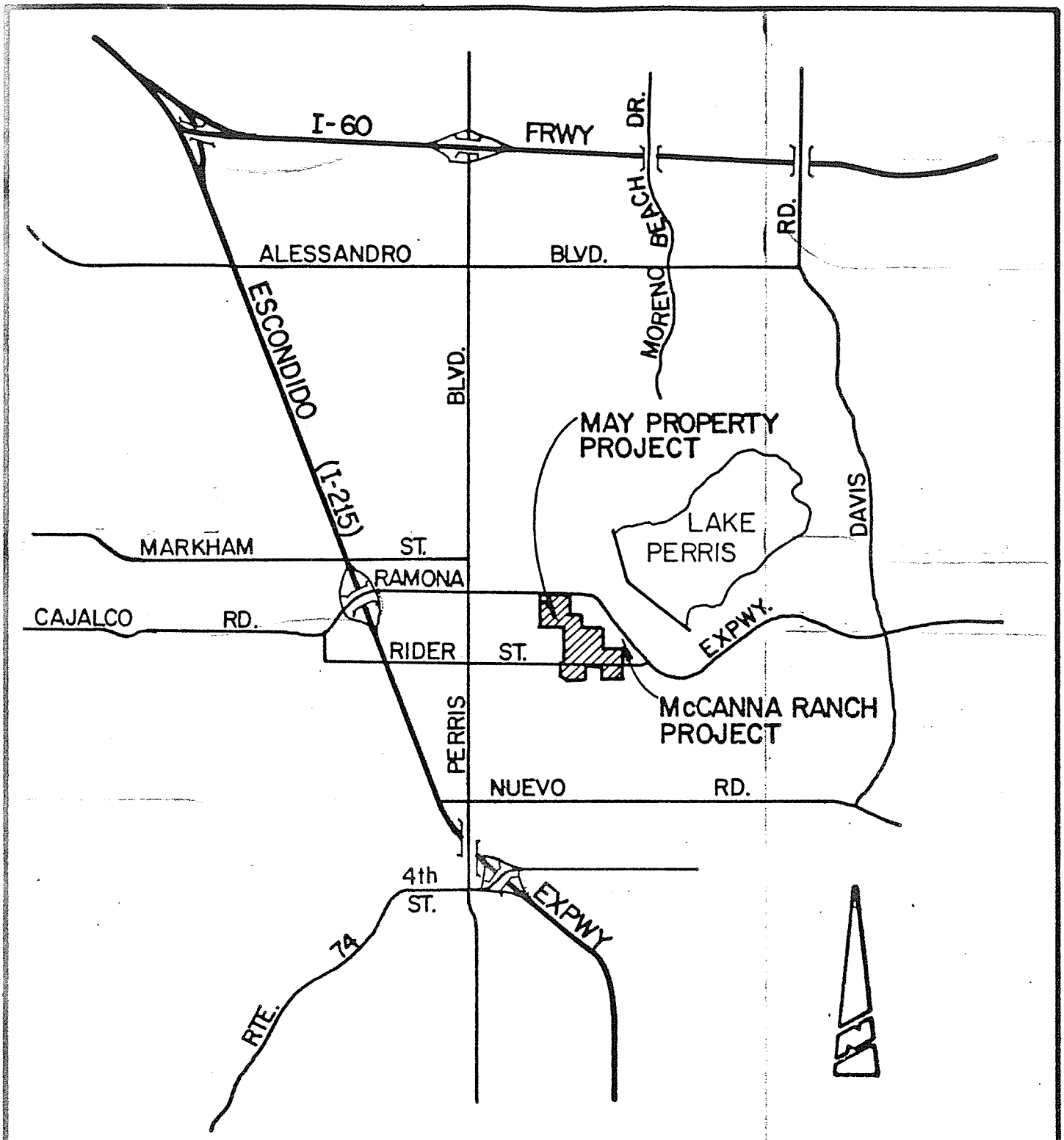

FIGURE 1

PROJECT LOCATION MAP

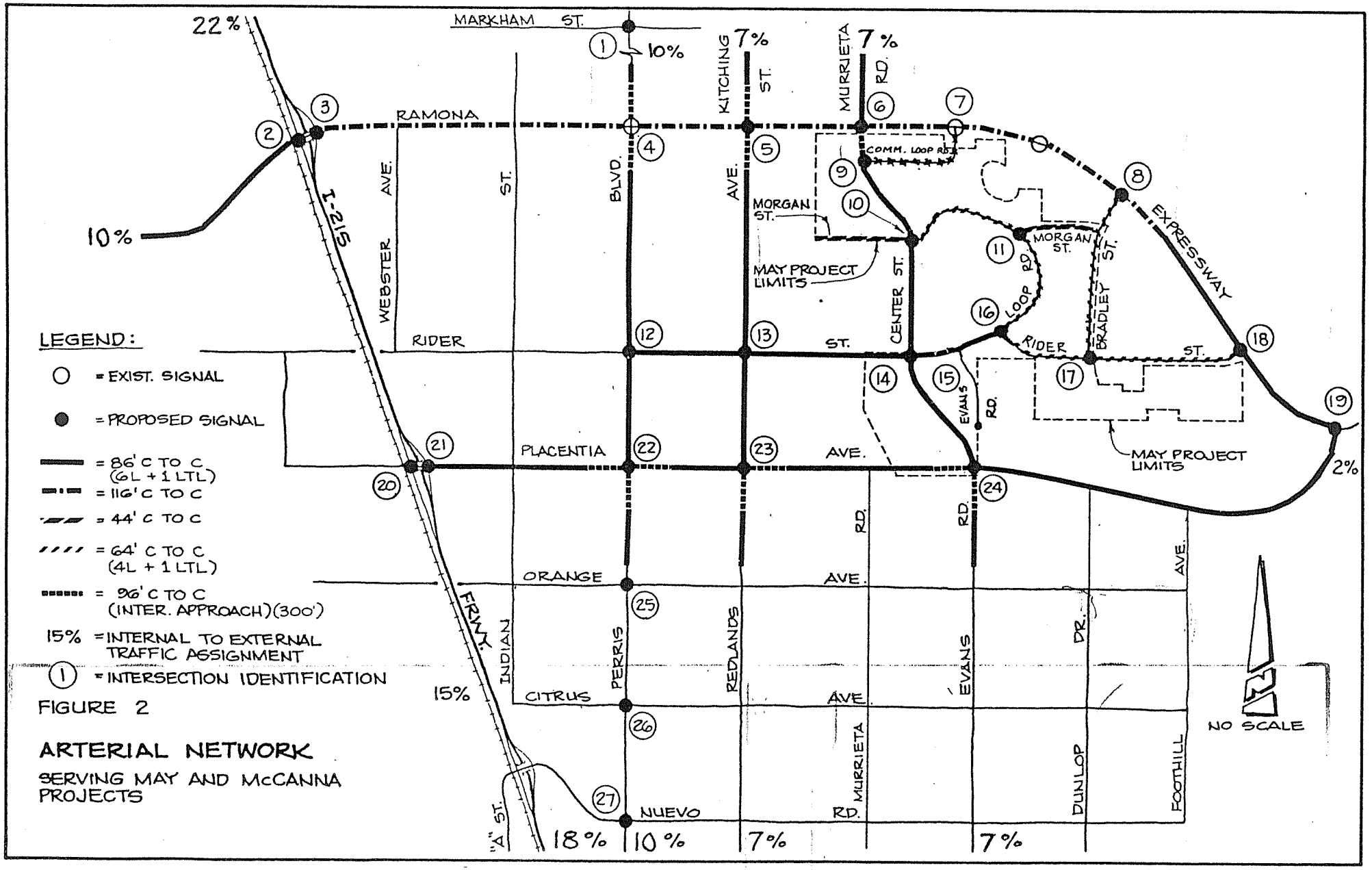

FIGURE 2

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. There were four scenarios analyzed in this study:

1. Existing traffic in addition to the traffic generated by the May Ranch project only.

2. Existing traffic plus the traffic produced by the May Ranch and McCanna Ranch projects.

3. Existing traffic along with the traffic generated by all zones in the North Perris area with the exception of the May Ranch.

4. Existing traffic in addition to the traffic producted by all zones in the North Perris region, May Ranch inclusive.

The steps involved with each scenario 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 the projects included in this study, when necessary. Figure 3 titled "Zone Map" shows how the study area was subdivided into 62 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, North Perris Area" 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 62 zones. The table shows that on an overall 24 hour basis there are approximately 483,000 vehicle trip ends generated by the traffic zones in the study area. Likewise, Table 2 titled "Trip Generation, May Ranch" lists data for 27 zones within the May ranch project for convenience. This table indicates there will be about 84,000 trip ends produced by the May Ranch daily.

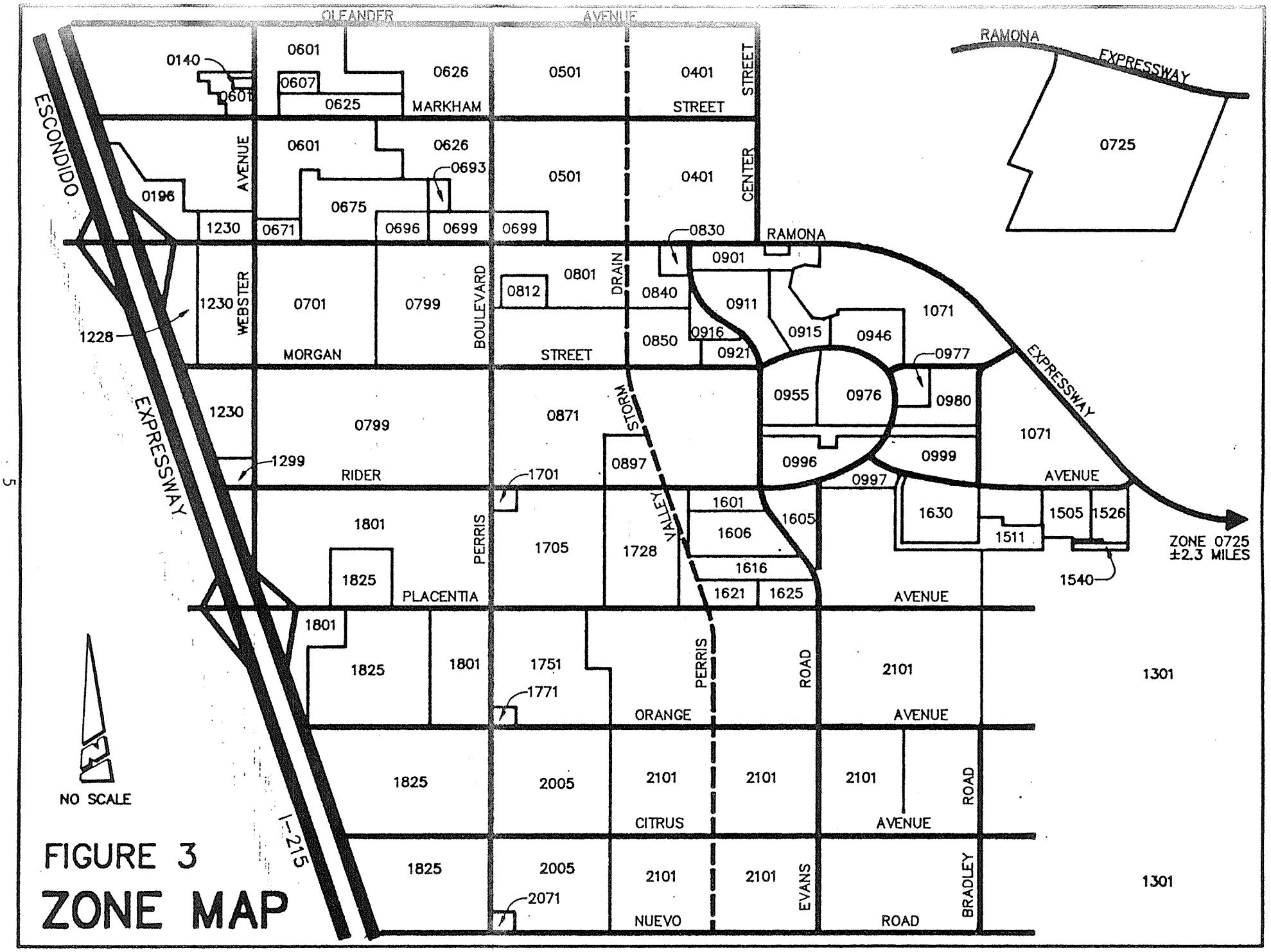

FIGURE 3

ZONE MAP

TABLE 1
TRIP GENERATION
NORTH PERRIS AREA

ZONE	LAND USE	SIZE	TRIP RATES AM IN	AM OUT	PM IN	PM OUT	24 HOUR	TRIP ENDS AM IN	AM OUT	PM IN	PM OUT	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
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
0830	COMMERCIAL	109 KSF	1.18	0.51	2.93	3.05	72.1	129	56	319	332	7859
0901	COMMERCIAL	381 KSF	0.72	0.31	1.68	1.90	43.8	274	118	640	724	16688
0840	RESIDENTIAL	225 DU	0.20	0.55	0.64	0.37	10.1	45	124	144	83	2273
0911	RESIDENTIAL	231 DU	0.20	0.55	0.64	0.37	10.1	46	127	148	85	2333
0915	RESIDENTIAL	198 DU	0.20	0.55	0.64	0.37	10.1	40	109	127	73	2000
0850	RESIDENTIAL	217 DU	0.20	0.55	0.64	0.37	10.1	43	119	139	80	2192
0916	PUBLIC PARK	9 AC	5.47	0.00	0.00	3.33	36.6	49	0	0	30	329
0921	RESIDENTIAL	187 DU	0.09	0.44	0.46	0.21	6.1	17	82	86	39	1141
0946	RESIDENTIAL	300 DU	0.20	0.55	0.64	0.37	10.1	60	165	192	111	3030
0955	RESIDENTIAL	172 DU	0.20	0.55	0.64	0.37	10.1	34	95	110	64	1737
0976	RESIDENTIAL	203 DU	0.20	0.55	0.64	0.37	10.1	41	112	130	75	2050
0977	PUBLIC PARK	6 AC	5.47	0.00	0.00	3.33	36.5	33	0	0	20	219
0980	RESIDENTIAL	252 DU	0.20	0.55	0.64	0.37	10.1	50	139	161	93	2545
0999	RESIDENTIAL	280 DU	0.20	0.55	0.64	0.37	10.1	56	154	179	104	2828
1630	RESIDENTIAL	128 DU	0.20	0.55	0.64	0.37	10.1	26	70	82	47	1293
1505	RESIDENTIAL	150 DU	0.20	0.55	0.64	0.37	10.1	30	83	96	56	1515
1526	RESIDENTIAL	128 DU	0.20	0.55	0.64	0.37	10.1	26	70	82	47	1293
1511	RESIDENTIAL	81 DU	0.20	0.55	0.64	0.37	10.1	16	45	52	30	818
1540	RESIDENTIAL	16 DU	0.20	0.55	0.64	0.37	10.1	3	9	10	6	162
0996	RESIDENTIAL	300 DU	0.20	0.55	0.64	0.37	10.1	60	165	192	111	3030
0997	PUBLIC PARK	10 AC	5.47	0.00	0.00	3.33	36.6	55	0	0	33	366
1601	COMMERCIAL	152 KSF	1.03	0.44	2.50	2.60	64.2	157	67	380	395	9758
1605	RESIDENTIAL	203 DU	0.20	0.55	0.64	0.37	10.1	41	112	130	75	2050
1606	RESIDENTIAL	192 DU	0.20	0.55	0.64	0.37	10.1	38	106	123	71	1939
1616	RESIDENTIAL	232 DU	0.20	0.55	0.64	0.37	10.1	46	128	148	86	2343
1621	RESIDENTIAL	188 DU	0.09	0.44	0.46	0.21	6.1	17	83	86	39	1147
1625	COMMERCIAL	174 KSF	0.98	0.42	2.34	2.44	61.2	171	73	407	425	10649
							TOTALS	15817	16884	24348	24155	482998

TABLE 2
TRIP GENERATION
MAY RANCH

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
0830	COMMERCIAL	109 KSF	1.18	0.51	2.93	3.05	72.1	129	56	319	332	7859
0901	COMMERCIAL	381 KSF	0.72	0.31	1.68	1.90	43.8	274	118	640	724	16688
0840	RESIDENTIAL	225 DU	0.20	0.55	0.64	0.37	10.1	45	124	144	83	2273
0911	RESIDENTIAL	231 DU	0.20	0.55	0.64	0.37	10.1	46	127	148	85	2333
0915	RESIDENTIAL	198 DU	0.20	0.55	0.64	0.37	10.1	40	109	127	73	2000
0850	RESIDENTIAL	217 DU	0.20	0.55	0.64	0.37	10.1	43	119	139	80	2192
0916	PUBLIC PARK	9 AC	5.47	0.00	0.00	3.33	36.6	49	0	0	30	329
0921	RESIDENTIAL	187 DU	0.09	0.44	0.46	0.21	6.1	17	82	86	39	1141
0946	RESIDENTIAL	300 DU	0.20	0.55	0.64	0.37	10.1	60	165	192	111	3030
0955	RESIDENTIAL	172 DU	0.20	0.55	0.64	0.37	10.1	34	95	110	64	1737
0976	RESIDENTIAL	203 DU	0.20	0.55	0.64	0.37	10.1	41	112	130	75	2050
0977	PUBLIC PARK	6 AC	5.47	0.00	0.00	3.33	36.5	33	0	0	20	219
0980	RESIDENTIAL	252 DU	0.20	0.55	0.64	0.37	10.1	50	139	161	93	2545
0999	RESIDENTIAL	280 DU	0.20	0.55	0.64	0.37	10.1	56	154	179	104	2828
1630	RESIDENTIAL	128 DU	0.20	0.55	0.64	0.37	10.1	26	70	82	47	1293
1505	RESIDENTIAL	150 DU	0.20	0.55	0.64	0.37	10.1	30	83	96	56	1515
1526	RESIDENTIAL	128 DU	0.20	0.55	0.64	0.37	10.1	26	70	82	47	1293
1511	RESIDENTIAL	81 DU	0.20	0.55	0.64	0.37	10.1	16	45	52	30	818
1540	RESIDENTIAL	16 DU	0.20	0.55	0.64	0.37	10.1	3	9	10	6	162
0996	RESIDENTIAL	300 DU	0.20	0.55	0.64	0.37	10.1	60	165	192	111	3030
0997	PUBLIC PARK	10 AC	5.47	0.00	0.00	3.33	36.6	55	0	0	33	366
1601	COMMERCIAL	152 KSF	1.03	0.44	2.50	2.60	64.2	157	67	380	395	9758
1605	RESIDENTIAL	203 DU	0.20	0.55	0.64	0.37	10.1	41	112	130	75	2050
1606	RESIDENTIAL	192 DU	0.20	0.55	0.64	0.37	10.1	38	106	123	71	1939
1616	RESIDENTIAL	232 DU	0.20	0.55	0.64	0.37	10.1	46	128	148	86	2343
1621	RESIDENTIAL	188 DU	0.09	0.44	0.46	0.21	6.1	17	83	86	39	1147
1625	COMMERCIAL	174 KSF	0.98	0.42	2.34	2.44	61.2	171	73	407	425	10649
							TOTALS	1603	2411	4163	3334	83587

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 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 significant proportion of trips will be oriented along the I-215 corridor in a southerly direction as home-based peak hour work trips originate 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 external percentage orientation of traffic from the general study area. According to SCAG, 85 percent of the vehicle trips generated within the study area in the a.m. peak hour will terminate or originate outside of the study area, while 80 percent of the traffic will be external in the p.m. peak hour. 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. This distribution scheme was applied to each of the four scenarios.

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. A computerized iterative procedure known as "multi-path assignment" was then utilized to simulate the rerouting of traffic along other streets as intersections approached capacity. For the purposes of this report, 27 signalized intersections were selected for quantitative analysis. These intersections are shown on Figure 2. 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. The same traffic network scheme, including the 27 intersections and lane configurations, was used when analyzing each scenario with the exception of scenario 4, which requires three through lanes in each direction along Rider Street from Perris Boulevard to Center Street.

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, shown on the adopted Freeway Agreement, will be constructed concurrently with the upgrading of the existing expressway to Interstate standards.

INTERSECTION TRAFFIC VOLUME ESTIMATES

The generated and attractor traffic as shown in each of the respective traffic zones on Table 1 was "loaded" onto the arterial network 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 observed along the Ramona Expressway and Perris Boulevard was analyzed at the 27 intersections indicated on Figure 2, the Arterial Network map. Additional external zone to external zone trips passing through the study area were not included in the analysis because levels of service along arterials within the study area already reach the "F" level at some locations as shown in scenario 4. MGA's "MONITOR" computer program, which is based on TRANSYT 7-F, was used to analyze the 27 intersections.

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 directional 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.

Tables 3, 7, 11 and 14 titled "Intersection Peak Hour Volumes" show the estimated a.m. and p.m. peak hour volumes for each of the predicted through and turning movements at each of the 27 study intersections for each respective scenario.

Tables 4, 8, 12 and 15 titled "Intersection Analysis Results - A.M." and Tables 5, 9, 13 and 16 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 for each respective scenario. Predicted levels of service for the p.m. peak hour are illustrated on the following four pages (Figures 4, 5, 6 and 7).

A review of these tables indicates that with the proposed lane arrangements, the majority of intersections will operate at a level of service "D" or better when the May Ranch and McCanna Ranch projects and study area are fully developed. Level of service "D" has an upper limit of 40 seconds of stop time delay per vehicle. The stop time delay numbers shown in the tables labeled "Intersection Analysis Results" column 4 indicate the weighted average delay at the particular intersection. Appendix A gives a description of the various levels of service.

Table 19 demonstrates the traffic conditions that will exist at key intersections under each scenario. Some levels of service may improve as one progresses from one scenario to the next. This is due to the selection of different routes taken by drivers as some intersections reach capacity.

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.

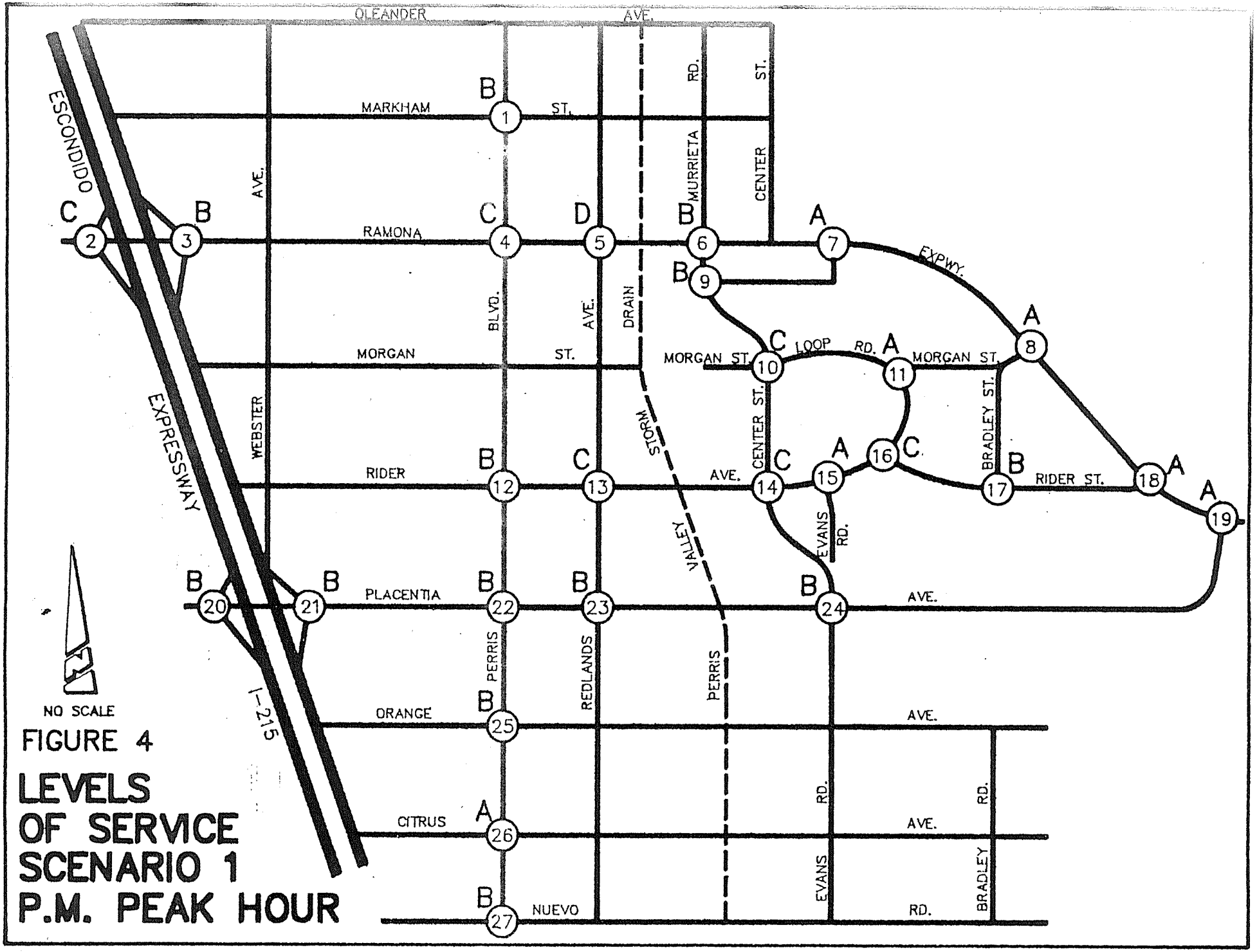

FIGURE 4

LEVELS OF SERVICE SCENARIO 1 P.M. PEAK HOUR

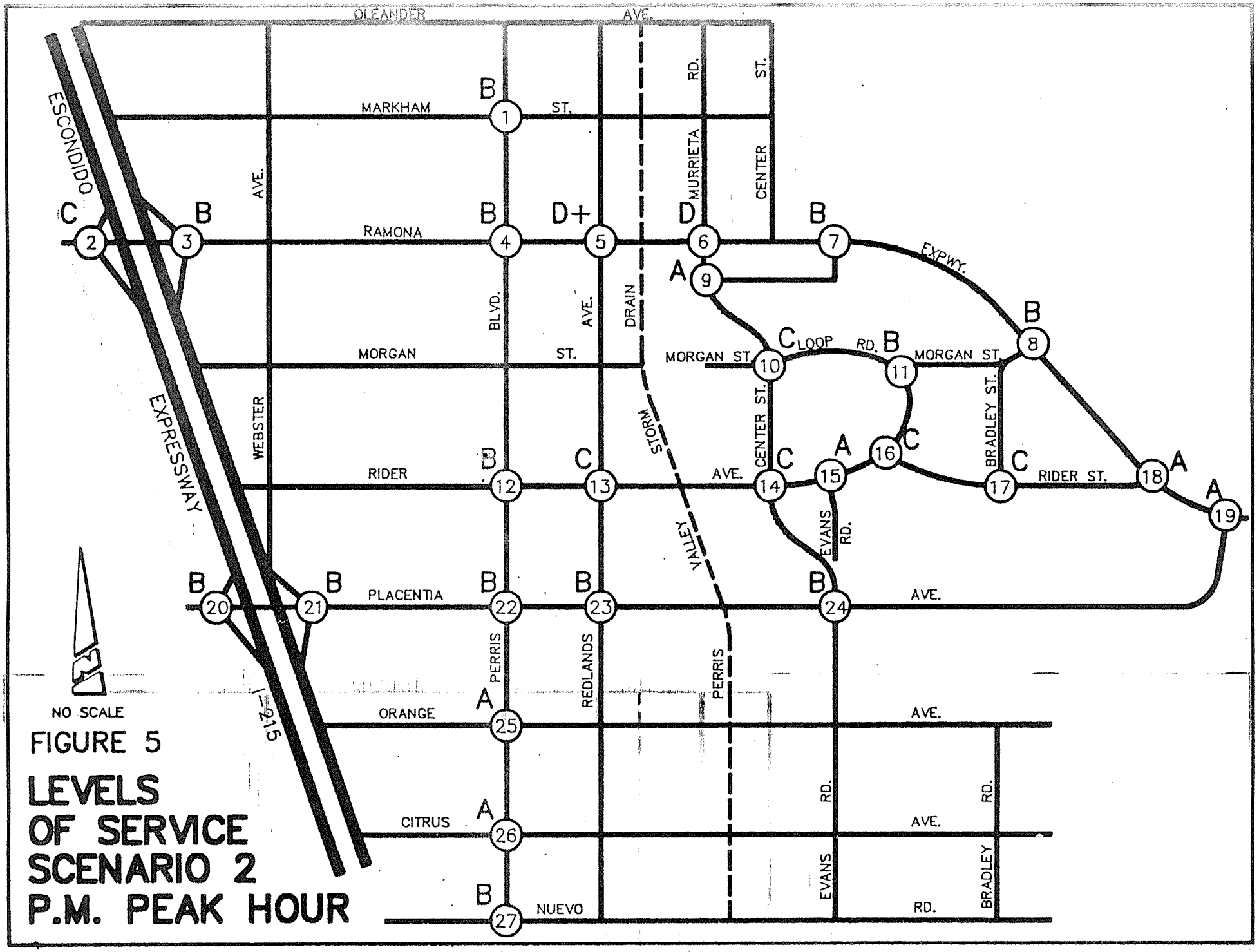

FIGURE 5

LEVELS OF SERVICE SCENARIO 2 P.M. PEAK HOUR

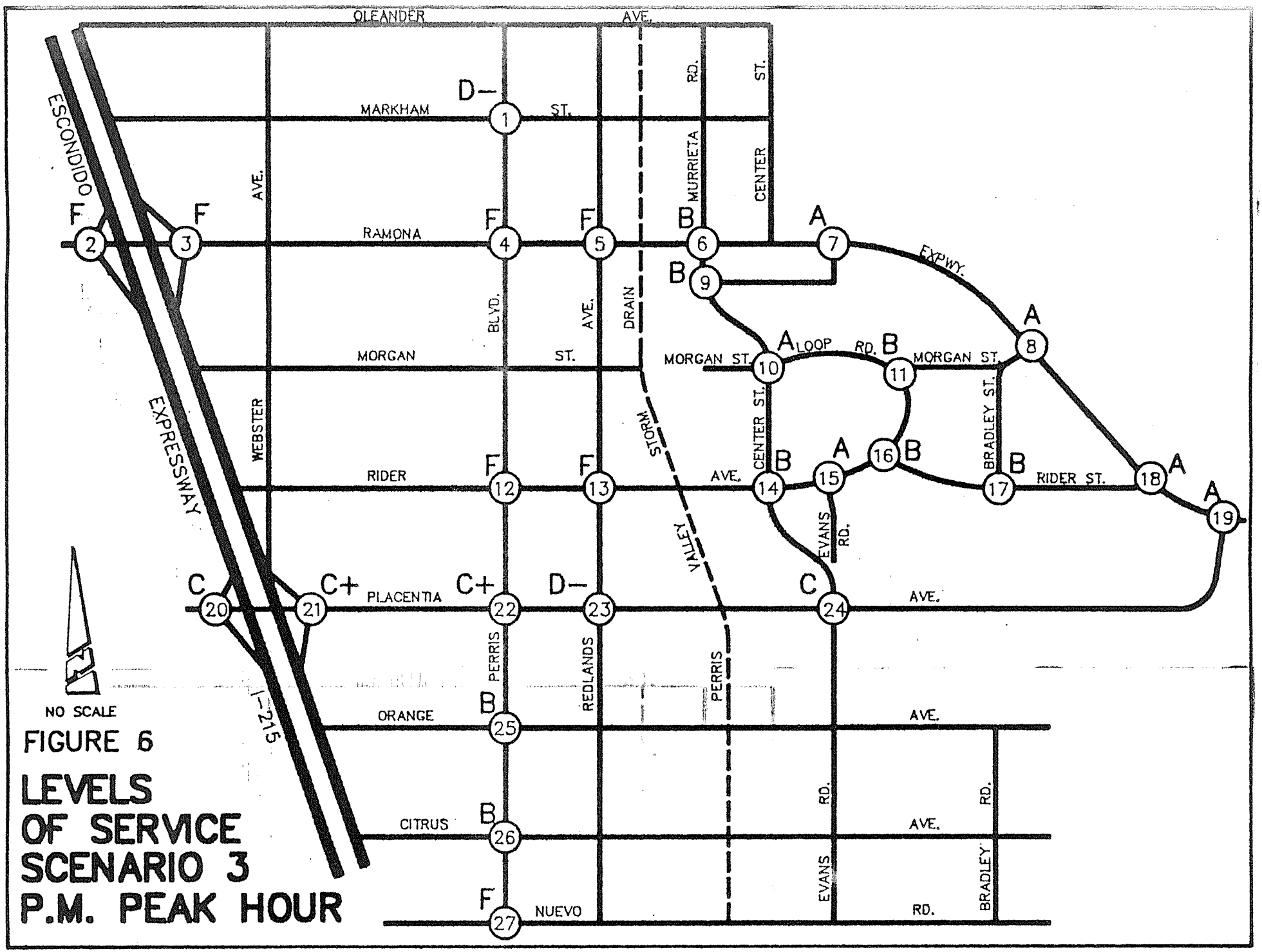

FIGURE 6

LEVELS OF SERVICE SCENARIO 3 P.M. PEAK HOUR

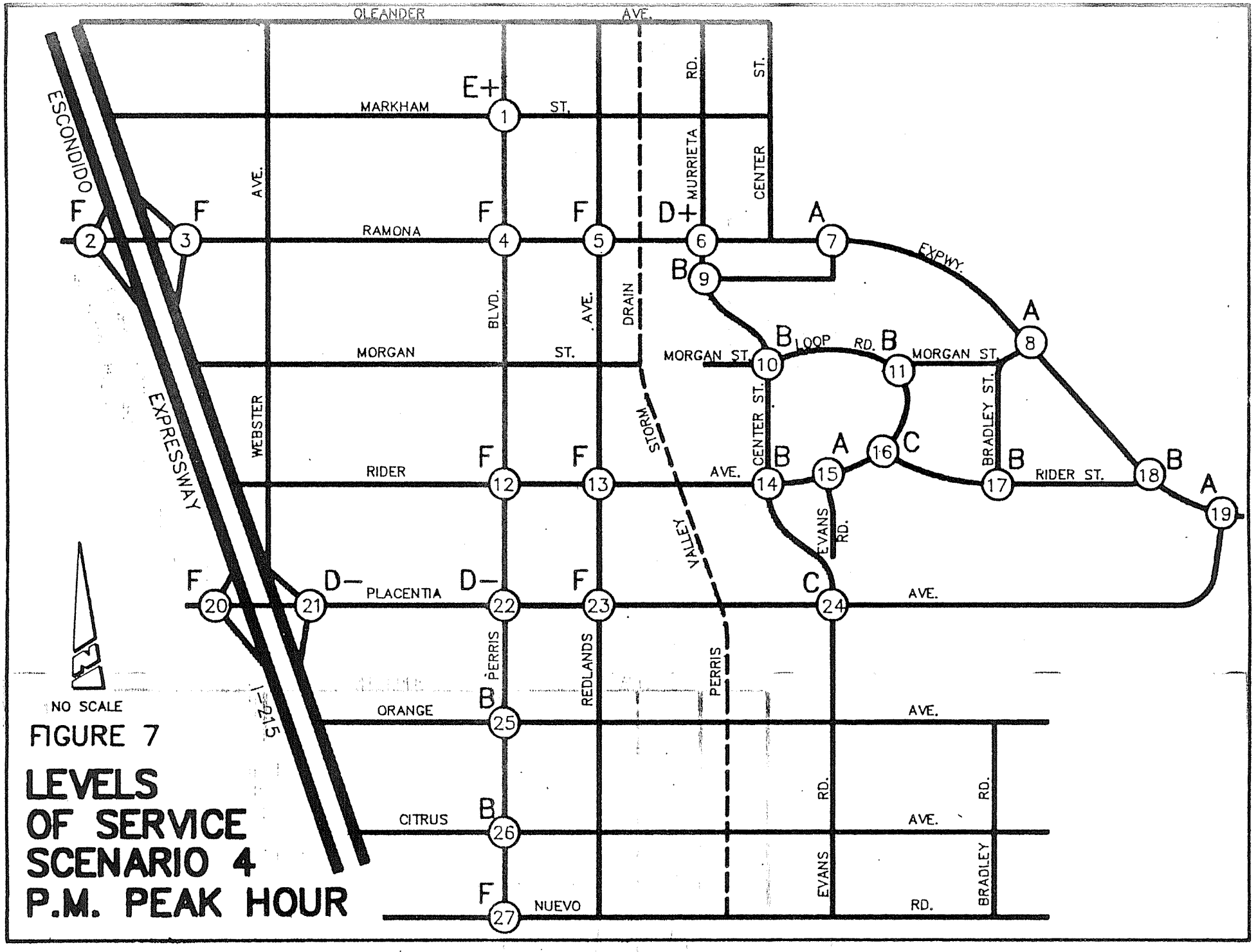

FIGURE 7

LEVELS OF SERVICE SCENARIO 4 P.M. PEAK HOUR

SCENARIO 1

NOTE: For all scenarios, an estimate of the 24 hour traffic volumes may be made by multiplying the p.m. peak hour volumes by a factor of 10.

It is emphasized that this study is based on analyzing the peak hour volumes at the signalized intersections since these locations are the capacity-limiting points in the arterial network.

TABLE 3

INTERSECTION PEAK HOUR VOLUMES

EXISTING + MAY RANCH TRAFFIC ONLY

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	853	0	0	0	0	0	670	0	0
		PM	0	0	0	917	0	0	0	0	0	1001	0	0
2	CAJALCO RD @ I-215 S/B	AM	363	0	190	0	577	44	482	211	0	0	0	0
		PM	619	0	187	0	999	120	621	440	0	0	0	0
3	RAMONA EXPWY @ I-215 N/B	AM	708	232	0	0	0	0	520	0	909	0	173	156
		PM	1534	84	0	0	0	0	860	0	641	0	202	240
4	RAMONA EXPWY @ PERRIS BLVD	AM	648	128	88	400	221	232	1128	57	302	240	68	67
		PM	1510	192	72	308	465	144	1265	112	381	428	82	114
5	RAMONA EXPWY @ REDLANDS AVE	AM	880	0	56	20	96	0	1456	17	130	15	41	24
		PM	1967	0	122	34	219	0	1626	72	177	34	143	54
6	RAMONA EXPWY @ MURRIETA RD	AM	319	0	671	104	12	0	540	16	5	158	1063	5
		PM	617	0	1613	238	15	0	445	22	3	208	1429	1
7	RAMONA EXPWY @ EVANS RD	AM	326	0	0	0	0	0	557	0	0	0	0	0
		PM	625	0	0	0	0	0	472	0	0	0	0	0
8	RAMONA EXPWY @ BRADLEY ST	AM	326	0	0	0	0	0	557	12	0	0	0	12
		PM	625	0	0	0	0	0	472	13	0	0	0	0
9	COMM. LOOP RD @ MURRIETA RD	AM	0	195	12	429	0	62	0	0	0	1016	13	0
		PM	0	129	8	1131	0	189	0	0	0	831	21	0
10	LOOP RD @ CENTER ST	AM	0	0	39	231	209	0	0	98	544	365	25	31
		PM	0	0	30	508	570	0	0	71	381	447	57	93
11	MORGAN ST @ LOOP RD	AM	0	0	0	177	28	0	0	0	0	307	0	0
		PM	0	0	0	334	0	0	0	0	21	274	0	0
12	RIDER AVE @ PERRIS BLVD	AM	0	0	0	545	0	0	0	247	0	375	0	76
		PM	0	0	0	492	0	0	0	276	0	634	0	269
13	RIDER AVE @ REDLANDS AVE	AM	86	0	0	19	73	0	247	270	25	45	0	187
		PM	279	0	0	81	147	0	276	222	152	69	0	384
14	RIDER AVE @ CENTER ST	AM	149	86	0	170	85	152	336	107	146	203	0	39
		PM	351	209	0	354	161	121	237	101	112	319	0	99
15	RIDER AVE @ EVANS ST	AM	178	0	0	0	0	0	323	0	0	0	0	0
		PM	333	0	0	0	0	0	270	0	0	0	0	0
16	RIDER ST @ LOOP RD	AM	0	0	0	140	80	0	0	201	198	66	0	67
		PM	0	0	0	105	208	0	0	149	142	140	0	196
17	RIDER ST @ BRADLEY ST	AM	55	0	24	0	12	0	126	11	1	0	79	1
		PM	120	0	72	0	0	0	104	12	3	0	57	0
18	RAMONA EXPWY @ RIDER ST	AM	315	0	24	0	0	0	519	23	0	0	49	29
		PM	584	0	51	0	0	0	448	45	0	0	37	13
19	RAMONA EXPWY @ PLACENTIA AVE	AM	330	0	14	0	0	0	531	15	0	0	11	13
		PM	585	0	13	0	0	0	479	22	0	0	14	0
20	PLACENTIA AVE @ I-215 S/B	AM	0	0	0	0	55	0	0	318	0	0	0	0
		PM	0	0	0	0	122	0	0	360	0	0	0	0
21	PLACENTIA AVE @ I-215 N/B	AM	55	0	0	0	0	0	318	0	52	0	0	0
		PM	122	0	0	0	0	0	360	0	127	0	0	123
22	PLACENTIA AVE @ PERRIS BLVD	AM	55	0	0	637	0	144	217	110	0	451	0	26
		PM	135	111	0	589	0	170	307	111	0	803	0	86
23	PLACENTIA AVE @ REDLANDS AVE	AM	81	0	0	120	12	157	160	33	11	221	0	66
		PM	203	29	0	168	20	116	292	52	5	429	0	161
24	PLACENTIA AVE @ EVANS RD	AM	11	46	6	133	12	80	13	0	1	92	23	0
		PM	0	97	34	175	0	58	18	0	4	207	42	0
25	ORANGE AVE @ PERRIS BLVD	AM	0	0	0	738	0	0	0	0	0	477	0	0
		PM	0	0	0	689	0	0	0	0	0	889	0	0
26	CITRUS AVE @ PERRIS BLVD	AM	0	0	0	738	0	0	0	0	0	477	0	0
		PM	0	0	0	689	0	0	0	0	0	889	0	0
27	NUEVO RD @ PERRIS BLVD	AM	190	0	0	738	0	0	0	0	0	477	0	0
		PM	357	0	0	689	0	0	0	0	0	889	0	0

TABLE 4

INTERSECTION ANALYSIS RESULTS

EXISTING + MAY RANCH TRAFFIC ONLY

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	MARKHAM ST @ PERRIS BLVD	B	7	2	1	S	3	1	S	2	1	S	3	1	S
2	CAJALCO RD @ I-215 S/B	B	13	2	-	1	S	2	1	2	2	-	-	-	-
3	RAMONA EXPWY @ I-215 N/B	B	11	2	2	-	-	-	-	2	-	1	S	1	2
4	RAMONA EXPWY @ PERRIS BLVD	C	17	3	2	1	3	2	1	3	2	1	3	2	1
5	RAMONA EXPWY @ REDLANDS AVE	A	4	3	2	S	3	1	S	3	2	1	3	1	S
6	RAMONA EXPWY @ MURRIETA RD	B	7	3	2	2	3	2	1	3	2	1	3	2	1
7	RAMONA EXPWY @ EVANS RD	A	1	3	-	S	-	-	-	3	2	-	-	1	1
8	RAMONA EXPWY @ BRADLEY ST	A	2	3	-	S	-	-	-	3	2	-	-	1	1
9	COMMERCIAL LOOP RD @ MURRIETA RD	B	6	1	S	S	3	2	S	2	1	S	3	2	S
10	LOOP RD @ CENTER ST	C	15	2	1	S	3	2	S	2	2	S	3	2	S
11	MORGAN ST @ LOOP RD	A	2	-	-	-	2	1	-	-	1	1	2	-	S
12	RIDER ST @ PERRIS BLVD	B	10	2	1	S	3	1	S	2	1	S	3	1	S
13	RIDER ST @ REDLANDS AVE	B	13	2	1	S	3	1	S	2	1	S	3	1	S
14	RIDER ST @ CENTER ST	B	13	2	2	S	3	1	S	2	2	S	3	2	S
15	RIDER ST @ EVANS RD	A	1	2	-	S	-	-	-	2	1	-	-	1	S
16	RIDER ST @ LOOP RD	B	14	1	S	S	2	1	S	S	2	S	2	1	S
17	RIDER ST @ BRADLEY ST	B	10	2	1	S	S	1	1	2	1	S	1	S	S
18	RAMONA EXPWY @ RIDER ST	B	6	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	6	2	-	S	S	2	1	2	2	-	-	-	-
21	PLACENTIA AVE @ I-215 N/B	A	2	2	2	-	-	-	-	2	-	1	S	1	2
22	PLACENTIA AVE @ PERRIS BLVD	B	10	3	2	1	3	2	1	3	2	1	3	2	1
23	PLACENTIA AVE @ REDLANDS AVE	B	10	3	1	S	3	1	S	3	1	S	3	1	S
24	PLACENTIA AVE @ EVANS RD	B	9	3	2	S	3	2	S	2	1	2	3	2	S
25	ORANGE AVE @ PERRIS BLVD	A	3	2	1	S	3	2	S	2	1	S	3	2	S
26	CITRUS AVE @ PERRIS BLVD	A	4	2	1	2	3	2	S	2	1	S	3	2	S
27	NUEVO RD @ PERRIS BLVD	B	7	3	2	1	3	1	S	3	1	S	3	2	S

S = SHARED WITH THRU LANE

TABLE 5

INTERSECTION ANALYSIS RESULTS

EXISTING + MAY RANCH TRAFFIC ONLY

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	MARKHAM ST @ PERRIS BLVD	B	9	2	1	S	3	1	S	2	1	S	3	1	S
2	CAJALCO RD @ I-215 S/B	C	19	2	-	1	S	2	1	2	2	-	-	-	-
3	RAMONA EXPWY @ I-215 N/B	B	7	2	2	-	-	-	-	2	-	1	S	1	2
4	RAMONA EXPWY @ PERRIS BLVD	C	21	3	2	1	3	2	1	3	2	1	3	2	1
5	RAMONA EXPWY @ REDLANDS AVE	D	32	3	2	S	3	1	S	3	2	1	3	1	S
6	RAMONA EXPWY @ MURRIETA RD	B	9	3	2	2	3	2	1	3	2	1	3	2	1
7	RAMONA EXPWY @ EVANS RD	A	1	3	-	S	-	-	-	3	2	-	-	1	1
8	RAMONA EXPWY @ BRADLEY ST	A	1	3	-	S	-	-	-	3	2	-	-	1	1
9	COMMERCIAL LOOP RD @ MURRIETA RD	B	7	1	S	S	3	2	S	2	1	S	3	2	S
10	LOOP RD @ CENTER ST	C	19	2	1	S	3	2	S	2	2	S	3	2	S
11	MORGAN ST @ LOOP RD	A	2	-	-	-	2	1	-	-	1	1	2	-	S
12	RIDER ST @ PERRIS BLVD	B	7	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	2	S	3	1	S	2	2	S	3	2	S
15	RIDER ST @ EVANS RD	A	1	2	-	S	-	-	-	2	1	-	-	1	S
16	RIDER ST @ LOOP RD	C	18	1	S	S	2	1	S	S	2	S	2	1	S
17	RIDER ST @ BRADLEY ST	B	14	2	1	S	S	1	1	2	1	S	1	S	S
18	RAMONA EXPWY @ RIDER ST	A	3	3	-	S	-	-	-	3	2	-	-	1	1
19	RAMONA EXPWY @ PLACENTIA AVE	A	2	3	-	S	-	-	-	3	2	-	-	2	1
20	PLACENTIA AVE @ I-215 S/B	B	7	2	-	S	S	2	1	2	2	-	-	-	-
21	PLACENTIA AVE @ I-215 N/B	B	14	2	2	-	-	-	-	2	-	1	S	1	2
22	PLACENTIA AVE @ PERRIS BLVD	B	10	3	2	1	3	2	1	3	2	1	3	2	1
23	PLACENTIA AVE @ REDLANDS AVE	B	11	3	1	S	3	1	S	3	1	S	3	1	S
24	PLACENTIA AVE @ EVANS RD	B	9	3	2	S	3	2	S	2	1	2	3	2	S
25	ORANGE AVE @ PERRIS BLVD	B	6	2	1	S	3	2	S	2	1	S	3	2	S
26	CITRUS AVE @ PERRIS BLVD	A	2	2	1	2	3	2	S	2	1	S	3	2	S
27	NUEVO RD @ PERRIS BLVD	B	10	3	2	1	3	1	S	3	1	S	3	2	S

S = SHARED WITH THRU LANE

TABLE 6

PERCENT INTERSECTION PEAK HOUR VOLUME
FROM
MAY RANCH PROJECT
EXISTING + MAY RANCH TRAFFIC ONLY

INTERSECTION NUMBER	INTERSECTION NAME	TOTAL INTERSECTION VOLUME	MAY RANCH PMPH VOLUME	MAY RANCH VOLUME PERCENT
1	MARKHAM ST @ PERRIS BLVD	1918	618	32
2	CAJALCO RD @ I-215 S/B	2986	1438	48
3	RAMONA EXPWY @ I-215 N/B	3561	2089	58
4	RAMONA EXPWY @ PERRIS BLVD	5073	2829	55
5	RAMONA EXPWY @ REDLANDS AVE	4398	3390	77
6	RAMONA EXPWY @ MURRIETA RD	4537	3529	77
7	RAMONA EXPWY @ EVANS RD	1077	69	6
8	RAMONA EXPWY @ BRADLEY ST	1080	72	6
9	COMMERCIAL LOOP RD @ MURRIETA RD	2261	2261	100
10	LOOP RD @ CENTER ST	2107	2107	100
11	MORGAN ST @ LOOP RD	589	589	100
12	RIDER ST @ PERRIS BLVD	1661	701	42
13	RIDER ST @ REDLANDS AVE	1550	1550	100
14	RIDER ST @ CENTER ST	1994	1994	100
15	RIDER ST @ EVANS RD	563	563	100
16	RIDER ST @ LOOP RD	900	900	100
17	RIDER ST @ BRADLEY ST	325	325	100
18	RAMONA EXPWY @ RIDER ST	1138	130	11
19	RAMONA EXPWY @ PLACENTIA AVE	1073	65	6
20	PLACENTIA AVE @ I-215 S/B	442	442	100
21	PLACENTIA AVE @ I-215 N/B	692	692	100
22	PLACENTIA AVE @ PERRIS BLVD	2272	1312	57
23	PLACENTIA AVE @ REDLANDS AVE	1400	1400	100
24	PLACENTIA AVE @ EVANS RD	581	581	100
25	ORANGE AVE @ PERRIS BLVD	1578	618	39
26	CITRUS AVE @ PERRIS BLVD	1578	618	39
27	NUEVO RD @ PERRIS BLVD	1925	965	50

SCENARIO 2

TABLE 7

INTERSECTION PEAK HOUR VOLUMES

EXISTING + WAY RANCH + McCANNA RANCH TRAFFIC ONLY

INTERSECTION NUMBER	INTERSECTION NAME	PEAK HOUR	EBT	EBL	EBR	SBT	SBL	SBR	WBT	WBL	WBR	NBT	NBL	NBR
1	MARKHAM ST @ PERRIS BLVD	AM	0	0	0	929	0	0	0	0	32	745	0	0
		PM	0	0	0	787	283	0	0	0	36	1040	0	0
2	CAJALCO RD @ I-215 S/B	AM	439	0	190	0	744	44	588	282	0	0	0	0
		PM	753	0	195	0	1286	120	696	502	0	0	0	0
3	RAMONA EXPWY @ I-215 N/B	AM	951	232	0	0	0	0	703	0	1204	0	167	222
		PM	1955	84	0	0	0	0	995	0	792	0	203	252
4	RAMONA EXPWY @ PERRIS BLVD	AM	957	128	88	400	297	232	1607	50	377	240	68	101
		PM	1905	192	110	308	335	144	1541	133	420	428	92	106
5	RAMONA EXPWY @ REDLANDS AVE	AM	1301	0	53	20	149	0	2013	21	200	15	30	49
		PM	2247	0	99	41	133	0	1973	84	114	37	130	62
6	RAMONA EXPWY @ MURRIETA RD	AM	826	0	663	103	66	0	1305	49	125	166	929	20
		PM	1213	0	1219	529	275	0	888	44	95	315	1283	23
7	RAMONA EXPWY @ EVANS RD	AM	562	0	357	0	0	0	967	0	0	0	537	0
		PM	1056	0	468	0	0	0	718	0	0	0	344	0
8	RAMONA EXPWY @ BRADLEY ST	AM	327	0	245	0	0	0	555	19	0	0	421	23
		PM	627	0	440	0	0	0	470	30	0	0	258	20
9	COMM. LOOP RD @ MURRIETA RD	AM	0	187	13	429	0	61	0	0	2	956	14	0
		PM	0	127	9	1031	11	179	0	0	0	822	24	0
10	LOOP RD @ CENTER ST	AM	0	0	46	263	207	0	0	103	532	345	26	32
		PM	0	0	30	449	537	0	0	71	368	451	58	90
11	MORGAN ST @ LOOP RD	AM	0	0	0	178	26	0	0	188	12	301	0	48
		PM	0	0	0	316	11	0	0	77	23	263	0	270
12	RIDER ST @ PERRIS BLVD	AM	0	0	0	538	0	0	0	460	0	409	0	118
		PM	0	0	0	513	48	0	0	344	0	626	0	514
13	RIDER ST @ REDLANDS AVE	AM	128	0	0	23	71	0	460	439	14	69	0	286
		PM	562	0	0	93	131	0	355	318	142	76	0	620
14	RIDER ST @ CENTER ST	AM	285	88	0	177	84	190	686	262	143	187	0	122
		PM	820	237	1	308	146	123	399	196	108	294	0	218
15	RIDER ST @ EVANS RD	AM	395	0	0	0	0	0	825	0	0	0	0	0
		PM	919	0	0	0	0	0	525	0	0	0	0	0
16	RIDER ST @ LOOP RD	AM	0	0	0	320	81	0	0	526	192	104	0	248
		PM	0	0	0	171	194	0	0	338	133	399	0	526
17	RIDER ST @ BRADLEY ST	AM	57	188	24	0	12	318	125	11	1	0	79	1
		PM	125	332	69	0	12	190	98	12	3	0	56	1
18	RAMONA EXPWY @ RIDER ST	AM	326	0	24	0	0	0	527	32	0	0	48	44
		PM	598	0	49	0	0	0	464	58	0	0	36	35
19	RAMONA EXPWY @ PLACENTIA AVE	AM	356	0	14	0	0	0	547	14	0	0	11	14
		PM	620	0	13	0	0	0	508	21	0	0	14	13
20	PLACENTIA AVE @ I-215 S/B	AM	0	0	0	0	55	0	0	494	0	0	0	0
		PM	0	0	0	0	159	0	0	433	0	0	0	0
21	PLACENTIA AVE @ I-215 N/B	AM	55	0	0	0	0	0	494	0	50	0	0	0
		PM	159	0	0	0	0	0	433	0	140	0	0	382
22	PLACENTIA AVE @ PERRIS BLVD	AM	55	0	0	721	0	267	267	133	0	527	0	26
		PM	282	260	0	634	0	213	350	140	0	890	0	142
23	PLACENTIA AVE @ REDLANDS AVE	AM	81	0	0	214	12	237	154	33	11	344	0	67
		PM	292	141	0	219	19	173	307	53	4	560	0	116
24	PLACENTIA AVE @ EVANS RD	AM	11	47	6	227	13	84	13	0	1	144	24	0
		PM	11	135	34	226	12	68	18	0	4	306	42	0
25	ORANGE AVE @ PERRIS BLVD	AM	0	0	0	844	0	0	0	0	0	553	0	0
		PM	0	0	0	764	0	0	0	0	0	1032	0	0
26	CITRUS AVE @ PERRIS BLVD	AM	0	0	0	844	0	0	0	0	0	553	0	0
		PM	0	0	0	764	0	0	0	0	0	1032	0	0
27	NUEVO RD @ PERRIS BLVD	AM	262	0	0	844	0	0	0	0	0	553	0	0
		PM	343	0	0	764	0	0	0	0	0	1032	0	0

TABLE 8

INTERSECTION ANALYSIS RESULTS

EXISTING + MAY RANCH + McCANNA RANCH TRAFFIC ONLY

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	MARKHAM ST @ PERRIS BLVD	B	13	2	1	S	3	1	S	2	1	S	3	1	S
2	CAJALCO RD @ I-215 S/B	B	14	2	-	1	S	2	1	2	2	-	-	-	-
3	RAMONA EXPWY @ I-215 N/B	C	25	2	2	-	-	-	-	2	-	1	S	1	2
4	RAMONA EXPWY @ PERRIS BLVD	B	11	3	2	1	3	2	1	3	2	1	3	2	1
5	RAMONA EXPWY @ REDLANDS AVE	B	5	3	2	S	3	1	S	3	2	1	3	1	S
6	RAMONA EXPWY @ MURRIETA RD	E	45	3	2	2	3	2	1	3	2	1	3	2	1
7	RAMONA EXPWY @ EVANS RD	B	10	3	-	S	-	-	-	3	2	-	-	1	1
8	RAMONA EXPWY @ BRADLEY ST	B	8	3	-	S	-	-	-	3	2	-	-	1	1
9	COMMERCIAL LOOP RD @ MURRIETA RD	A	4	1	S	S	3	2	S	2	1	S	3	2	S
10	LOOP RD @ CENTER ST	C	16	2	1	S	3	2	S	2	2	S	3	2	S
11	MORGAN ST @ LOOP RD	B	10	-	-	-	2	1	-	-	1	1	2	-	S
12	RIDER ST @ PERRIS BLVD	B	11	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	C	18	2	2	S	3	1	S	2	2	S	3	2	S
15	RIDER ST @ EVANS RD	A	2	2	-	S	-	-	-	2	1	-	-	1	S
16	RIDER ST @ LOOP RD	B	15	1	S	S	2	1	S	S	2	S	2	1	S
17	RIDER ST @ BRADLEY ST	C	17	2	1	S	S	1	1	2	1	S	1	S	S
18	RAMONA EXPWY @ RIDER ST	A	5	3	-	S	-	-	-	3	2	-	-	1	1
19	RAMONA EXPWY @ PLACENTIA AVE	A	2	3	-	S	-	-	-	3	2	-	-	2	1
20	PLACENTIA AVE @ I-215 S/B	B	8	2	-	S	S	2	1	2	2	-	-	-	-
21	PLACENTIA AVE @ I-215 N/B	A	2	2	2	-	-	-	-	2	-	1	S	1	2
22	PLACENTIA AVE @ PERRIS BLVD	B	10	3	2	1	3	2	1	3	2	1	3	2	1
23	PLACENTIA AVE @ REDLANDS AVE	B	10	3	1	S	3	1	S	3	1	S	3	1	S
24	PLACENTIA AVE @ EVANS RD	B	6	3	2	S	3	2	S	2	1	2	3	2	S
25	ORANGE AVE @ PERRIS BLVD	A	4	2	1	S	3	2	S	2	1	S	3	2	S
26	CITRUS AVE @ PERRIS BLVD	A	3	2	1	2	3	2	S	2	1	S	3	2	S
27	NUEVO RD @ PERRIS BLVD	B	9	3	2	1	3	1	S	3	1	S	3	2	S

S = SHARED WITH THRU LANE

TABLE 9

INTERSECTION ANALYSIS RESULTS

EXISTING + MAY RANCH + McCANNA RANCH TRAFFIC ONLY

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	MARKHAM ST @ PERRIS BLVD	B	11	2	1	S	3	1	S	2	1	S	3	1	S
2	CAJALCO RD @ I-215 S/B	C	20	2	-	1	S	2	1	2	2	-	-	-	-
3	RAMONA EXPWY @ I-215 N/B	B	7	2	2	-	-	-	-	2	-	1	S	1	2
4	RAMONA EXPWY @ PERRIS BLVD	B	15	3	2	1	3	2	1	3	2	1	3	2	1
5	RAMONA EXPWY @ REDLANDS AVE	D+	26	3	2	S	3	1	S	3	2	1	3	1	S
6	RAMONA EXPWY @ MURRIETA RD	D	33	3	2	2	3	2	1	3	2	1	3	2	1
7	RAMONA EXPWY @ EVANS RD	B	8	3	-	S	-	-	-	3	2	-	-	1	1
8	RAMONA EXPWY @ BRADLEY ST	B	9	3	-	S	-	-	-	3	2	-	-	1	1
9	COMMERCIAL LOOP RD @ MURRIETA RD	A	4	1	S	S	3	2	S	2	1	S	3	2	S
10	LOOP RD @ CENTER ST	C	16	2	1	S	3	2	S	2	2	S	3	2	S
11	MORGAN ST @ LOOP RD	B	5	-	-	-	2	1	-	-	1	1	2	-	S
12	RIDER ST @ PERRIS BLVD	B	7	2	1	S	3	1	S	2	1	S	3	1	S
13	RIDER ST @ REDLANDS AVE	C	16	2	1	S	3	1	S	2	1	S	3	1	S
14	RIDER ST @ CENTER ST	C	16	2	2	S	3	1	S	2	2	S	3	2	S
15	RIDER ST @ EVANS RD	A	1	2	-	S	-	-	-	2	1	-	-	1	S
16	RIDER ST @ LOOP RD	C	16	1	S	S	2	1	S	S	2	S	2	1	S
17	RIDER ST @ BRADLEY ST	C	21	2	1	S	S	1	1	2	1	S	1	S	S
18	RAMONA EXPWY @ RIDER ST	A	4	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	5	2	-	S	S	2	1	2	2	-	-	-	-
21	PLACENTIA AVE @ I-215 N/B	B	12	2	2	-	-	-	-	2	-	1	S	1	2
22	PLACENTIA AVE @ PERRIS BLVD	B	12	3	2	1	3	2	1	3	2	1	3	2	1
23	PLACENTIA AVE @ REDLANDS AVE	B	14	3	1	S	3	1	S	3	1	S	3	1	S
24	PLACENTIA AVE @ EVANS RD	B	10	3	2	S	3	2	S	2	1	2	3	2	S
25	ORANGE AVE @ PERRIS BLVD	A	2	2	1	S	3	2	S	2	1	S	3	2	S
26	CITRUS AVE @ PERRIS BLVD	A	3	2	1	2	3	2	S	2	1	S	3	2	S
27	NUEVO RD @ PERRIS BLVD	B	10	3	2	1	3	1	S	3	1	S	3	2	S

S = SHARED WITH THRU LANE

TABLE 10

PERCENT INTERSECTION PEAK HOUR VOLUME
FROM
MAY RANCH PROJECT
EXISTING + MAY RANCH + McCANNA RANCH TRAFFIC ONLY

INTERSECTION NUMBER	INTERSECTION NAME	TOTAL INTERSECTION VOLUME	MAY RANCH PMPH VOLUME	MAY RANCH VOLUME PERCENT
1	MARKHAM ST @ PERRIS BLVD	2136	618	28
2	CAJALCO RD @ I-215 S/B	3552	1438	40
3	RAMONA EXPWY @ I-215 N/B	4281	2089	48
4	RAMONA EXPWY @ PERRIS BLVD	5714	2829	49
5	RAMONA EXPWY @ REDLANDS AVE	4870	3390	69
6	RAMONA EXPWY @ MURRIETA RD	5834	3529	60
7	RAMONA EXPWY @ EVANS RD	2556	69	2
8	RAMONA EXPWY @ BRADLEY ST	1805	72	3
9	COMMERCIAL LOOP RD @ MURRIETA RD	2261	2261	100
10	LOOP RD @ CENTER ST	2107	2107	100
11	MORGAN ST @ LOOP RD	900	589	65
12	RIDER ST @ PERRIS BLVD	2025	701	34
13	RIDER ST @ REDLANDS AVE	2237	1550	69
14	RIDER ST @ CENTER ST	2779	1994	71
15	RIDER ST @ EVANS RD	1404	563	40
16	RIDER ST @ LOOP RD	1721	900	52
17	RIDER ST @ BRADLEY ST	834	325	38
18	RAMONA EXPWY @ RIDER ST	1200	130	10
19	RAMONA EXPWY @ PLACENTIA AVE	1149	65	5
20	PLACENTIA AVE @ I-215 S/B	552	442	80
21	PLACENTIA AVE @ I-215 N/B	1074	692	64
22	PLACENTIA AVE @ PERRIS BLVD	2871	1312	45
23	PLACENTIA AVE @ REDLANDS AVE	1810	1400	77
24	PLACENTIA AVE @ EVANS RD	782	581	74
25	ORANGE AVE @ PERRIS BLVD	1796	618	34
26	CITRUS AVE @ PERRIS BLVD	1796	618	34
27	NUEVO RD @ PERRIS BLVD	2129	965	45

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INTERSECTION PEAK HOUR VOLUMES
OVERALL TRAFFIC WITHOUT MAY RANCH

INTERSECTION NUMBER	INTERSECTION NAME	PEAK HOUR	EBT	EBL	EBR	SBT	SBL	SBR	WBT	WBL	WBR	NBT	NBL	NBR
1	PERRIS BLVD @ MARKHAM ST	AM	98	23	24	1534	87	118	696	137	464	962	240	22
		PM	727	173	309	1293	512	94	375	162	376	1626	45	156
2	CAJALCO RD @ I-215 S/B	AM	1150	0	477	0	1505	44	1485	350	0	0	0	0
		PM	1620	0	455	0	1725	120	1998	882	0	0	0	0
3	RAMONA EXPWY @ I-215 N/B	AM	2423	232	0	0	0	0	1599	0	1560	0	237	752
		PM	3261	84	0	0	0	0	2500	0	1508	0	380	708
4	RAMONA EXPWY @ PERRIS BLVD	AM	1221	187	319	888	464	403	2023	208	450	945	476	124
		PM	2479	531	442	1507	456	249	1841	94	471	1184	519	130
5	RAMONA EXPWY @ REDLANDS AVE	AM	1182	202	447	853	213	278	2300	152	338	320	131	168
		PM	2519	354	208	744	367	277	1877	194	257	1091	330	295
6	RAMONA EXPWY @ MURRIETA RD	AM	1070	224	268	115	239	306	1810	0	796	678	674	0
		PM	1588	415	1179	231	1489	231	1546	0	682	209	551	0
7	RAMONA EXPWY @ EVANS RD	AM	1125	0	183	0	0	0	2372	0	0	0	244	0
		PM	2800	0	277	0	0	0	2083	0	0	0	156	0
8	RAMONA EXPWY @ BRADLEY ST	AM	1023	0	112	0	0	0	2230	16	0	0	152	16
		PM	2596	0	214	0	0	0	1963	17	0	0	130	13
9	COMM. LOOP RD @ MURRIETA RD	AM	0	0	0	383	0	0	0	0	0	1343	0	0
		PM	0	0	0	1410	0	0	0	0	0	749	0	0
10	LOOP RD @ CENTER ST	AM	0	0	0	383	0	0	0	0	249	1093	0	0
		PM	0	0	0	1410	0	0	0	0	0	749	0	26
11	MORGAN ST @ LOOP RD	AM	0	0	0	0	0	0	0	144	37	233	0	37
		PM	0	0	0	0	36	0	0	85	0	0	0	136
12	RIDER AVE @ PERRIS BLVD	AM	26	17	17	1051	83	68	543	461	516	1259	168	325
		PM	652	125	237	1835	448	67	297	473	241	1561	195	395
13	RIDER AVE @ REDLANDS AVE	AM	109	301	17	285	143	443	658	476	293	874	423	69
		PM	538	429	484	1119	334	485	394	389	244	592	147	649
14	RIDER AVE @ CENTER ST	AM	122	15	77	352	0	32	806	53	0	1088	613	20
		PM	1047	70	422	1404	0	6	529	28	0	715	383	71
15	RIDER AVE @ EVANS ST	AM	142	0	0	0	0	0	849	0	0	0	0	0
		PM	1118	0	0	0	0	0	547	0	0	0	0	0
16	RIDER ST @ LOOP RD	AM	0	0	0	144	0	0	0	715	223	37	0	105
		PM	0	0	0	85	0	0	0	472	0	136	0	981
17	RIDER ST @ BRADLEY ST	AM	18	107	0	0	0	198	740	0	0	0	0	0
		PM	777	224	0	0	0	100	372	0	0	0	0	0
18	RAMONA EXPWY @ RIDER ST	AM	1028	0	0	0	0	0	2236	747	0	0	0	25
		PM	2599	0	0	0	0	0	1970	381	0	0	0	782
19	RAMONA EXPWY @ PLACENTIA AVE	AM	1043	0	0	0	0	0	2969	68	0	0	13	47
		PM	3369	0	11	0	0	0	2341	48	0	0	0	50
20	PLACENTIA AVE @ I-215 S/B	AM	0	0	0	0	1148	0	0	925	0	0	0	0
		PM	0	0	0	0	1338	0	0	1125	0	0	0	0
21	PLACENTIA AVE @ I-215 N/B	AM	1128	30	0	0	0	0	925	0	1175	0	0	858
		PM	1310	38	0	0	0	0	1120	0	1287	0	16	1105
22	PLACENTIA AVE @ PERRIS BLVD	AM	558	351	103	987	79	516	1915	231	35	1323	289	46
		PM	2083	426	242	2098	100	403	1119	85	120	1682	90	86
23	PLACENTIA AVE @ REDLANDS AVE	AM	373	269	93	203	18	569	1302	161	269	804	181	111
		PM	976	925	228	1109	295	598	573	134	76	383	119	294
24	PLACENTIA AVE @ EVANS RD	AM	230	0	61	302	175	5	1294	15	1083	629	475	17
		PM	911	69	612	655	1195	3	375	24	549	551	223	6
25	ORANGE AVE @ PERRIS BLVD	AM	0	0	0	1426	0	8	61	0	0	1461	157	0
		PM	160	28	307	2219	58	3	14	29	0	1985	63	4
26	CITRUS AVE @ PERRIS BLVD	AM	0	0	5	1426	0	0	11	193	4	1604	14	0
		PM	12	0	44	2545	0	0	11	29	0	2042	14	333
27	NUEVO RD @ PERRIS BLVD	AM	1031	488	11	1256	23	340	1335	484	87	1060	94	407
		PM	1577	877	15	1195	222	1188	1353	866	54	1503	51	614

TABLE 12

INTERSECTION ANALYSIS RESULTS

OVERALL TRAFFIC WITHOUT MAY RANCH

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	MARKHAM ST @ PERRIS BLVD	D+	27	2	1	S	3	1	S	2	1	S	3	1	S
2	CAJALCO RD @ I-215 S/B	D	31	2	-	1	S	2	1	2	2	-	-	-	-
3	RAMONA EXPWY @ I-215 N/B	F	137	2	2	-	-	-	-	2	-	1	S	1	2
4	RAMONA EXPWY @ PERRIS BLVD	C+	17	3	2	1	3	2	1	3	2	1	3	2	1
5	RAMONA EXPWY @ REDLANDS AVE	C+	19	3	2	S	3	2	S	3	2	1	3	2	S
6	RAMONA EXPWY @ MURRIETA RD	C	15	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 ST	A	3	3	-	S	-	-	-	3	2	-	-	1	1
9	COMMERCIAL LOOP RD @ MURRIETA RD	B	6	1	-	-	3	2	S	2	1	S	3	2	S
10	LOOP RD @ CENTER ST	B	6	2	1	S	3	2	S	2	2	S	3	2	S
11	MORGAN ST @ LOOP RD	B	8	-	-	-	2	1	-	-	1	1	2	-	S
12	RIDER ST @ PERRIS BLVD	C	15	2	1	S	3	1	S	2	1	S	3	1	S
13	RIDER ST @ REDLANDS AVE	C	20	2	1	S	3	1	S	2	1	S	3	1	S
14	RIDER ST @ CENTER ST	A	1	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 @ LOOP RD	B	8	1	S	S	2	1	S	S	2	S	2	1	S
17	RIDER ST @ BRADLEY ST	B	14	2	1	S	1	1	1	2	1	S	1	S	S
18	RAMONA EXPWY @ RIDER ST	A	5	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	13	2	-	S	S	2	1	2	2	-	-	-	-
21	PLACENTIA AVE @ I-215 N/B	B-	12	2	2	-	-	-	-	2	-	1	S	1	2
22	PLACENTIA AVE @ PERRIS BLVD	C	17	3	2	1	3	2	1	3	2	1	3	2	1
23	PLACENTIA AVE @ REDLANDS AVE	B-	14	3	1	S	3	1	S	3	1	S	3	2	S
24	PLACENTIA AVE @ EVANS RD	B-	10	3	2	S	3	2	S	2	1	2	3	2	S
25	ORANGE AVE @ PERRIS BLVD	A	3	2	1	S	3	2	S	2	1	S	3	2	S
26	CITRUS AVE @ PERRIS BLVD	B	8	2	1	2	3	2	S	2	1	S	3	2	S
27	NUEVO RD @ PERRIS BLVD	D	35	3	2	1	3	1	S	3	2	S	3	2	S

S = SHARED WITH THRU LANE

TABLE 13

INTERSECTION ANALYSIS RESULTS

OVERALL TRAFFIC WITHOUT MAY RANCH

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	MARKHAM ST @ PERRIS BLVD	D-	38	2	1	S	3	1	S	2	1	S	3	1	S
2	CAJALCO RD @ I-215 S/B	F	246	2	-	1	S	2	1	2	2	-	-	-	-
3	RAMONA EXPWY @ I-215 N/B	F	182	2	2	-	-	-	-	2	-	1	S	1	2
4	RAMONA EXPWY @ PERRIS BLVD	F	118	3	2	1	3	2	1	3	2	1	3	2	1
5	RAMONA EXPWY @ REDLANDS AVE	F	110	3	2	S	3	2	S	3	2	1	3	2	S
6	RAMONA EXPWY @ MURRIETA RD	B	14	3	2	2	3	2	1	3	2	1	3	2	1
7	RAMONA EXPWY @ EVANS RD	A	3	3	-	S	-	-	-	3	2	-	-	1	1
8	RAMONA EXPWY @ BRADLEY ST	A	2	3	-	S	-	-	-	3	2	-	-	1	1
9	COMMERCIAL LOOP RD @ MURRIETA RD	B	6	1	-	-	3	2	S	2	1	S	3	2	S
10	LOOP RD @ CENTER ST	A	5	2	1	S	3	2	S	2	2	S	3	2	S
11	MORGAN ST @ LOOP RD	B	11	-	-	-	2	1	-	-	1	1	2	-	S
12	RIDER ST @ PERRIS BLVD	F	88	2	1	S	3	1	S	2	1	S	3	1	S
13	RIDER ST @ REDLANDS AVE	F	92	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	A	1	2	-	S	-	-	-	2	1	-	S	1	S
16	RIDER ST @ LOOP RD	B	6	1	S	S	2	1	S	S	2	S	2	1	S
17	RIDER ST @ BRADLEY ST	B	7	2	1	S	1	1	1	2	1	S	1	S	S
18	RAMONA EXPWY @ RIDER ST	A	3	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	C	16	2	-	S	S	2	1	2	2	-	-	-	-
21	PLACENTIA AVE @ I-215 N/B	C+	59	2	2	-	-	-	-	2	-	1	S	1	2
22	PLACENTIA AVE @ PERRIS BLVD	C+	20	3	2	1	3	2	1	3	2	1	3	2	1
23	PLACENTIA AVE @ REDLANDS AVE	D-	37	3	1	S	3	1	S	3	1	S	3	2	S
24	PLACENTIA AVE @ EVANS RD	C	17	3	2	S	3	2	S	2	1	2	3	2	S
25	ORANGE AVE @ PERRIS BLVD	B	7	2	1	S	3	2	S	2	1	S	3	2	S
26	CITRUS AVE @ PERRIS BLVD	B	7	2	1	2	3	2	S	2	1	S	3	2	S
27	NUEVO RD @ PERRIS BLVD	F	116	3	2	1	3	1	S	3	2	S	3	2	S

S = SHARED WITH THRU LANE

SCENARIO 4

TABLE

INTERSECTION PEAK HOUR VOLUMES

OVERALL TRAFFIC

INTERSECTION NUMBER	INTERSECTION NAME	PEAK HOUR	EBT	EBL	EBR	SBT	SBL	SBR	WBT	WBL	WBR	NBT	NBL	NBR
1	MARKHAM ST @ PERRIS BLVD	AM	96	26	25	1559	170	132	736	209	478	1093	247	32
		PM	596	319	460	1423	412	108	474	195	570	1618	40	271
2	CAJALCO RD @ I-215 S/B	AM	1283	0	479	0	1556	44	1689	449	0	0	0	0
		PM	1906	0	503	0	1910	120	2266	1050	0	0	0	0
3	RAMONA EXPWY @ I-215 N/B	AM	2607	232	0	0	0	0	1793	0	1782	0	345	722
		PM	3731	84	0	0	0	0	2866	0	1856	0	450	905
4	RAMONA EXPWY @ PERRIS BLVD	AM	1357	198	333	1012	481	487	2377	166	493	1079	427	133
		PM	2714	475	512	1671	621	220	2262	102	422	1403	681	195
5	RAMONA EXPWY @ REDLANDS AVE	AM	1384	211	398	845	307	248	2717	169	333	454	98	187
		PM	2939	316	258	982	565	246	2235	363	330	1310	332	180
6	RAMONA EXPWY @ MURRIETA RD	AM	908	126	845	263	260	261	1756	21	1201	652	1202	6
		PM	1391	146	2147	543	1709	83	1519	30	893	614	1327	37
7	RAMONA EXPWY @ EVANS RD	AM	1040	0	134	0	0	0	2701	0	0	0	287	0
		PM	2745	0	312	0	0	0	2269	15	0	0	160	1
8	RAMONA EXPWY @ BRADLEY ST	AM	945	0	105	0	0	0	2507	24	0	0	204	18
		PM	2429	0	326	0	0	0	2148	22	0	0	135	23
9	COMM. LOOP RD @ DAWES ST	AM	18	154	39	765	12	60	0	11	0	1648	14	0
		PM	14	123	26	2197	18	146	69	0	1	1459	47	3
10	LOOP RD @ CENTER ST	AM	11	0	49	661	170	0	14	200	388	1197	23	24
		PM	36	0	21	1772	375	0	48	28	309	1162	53	228
11	MORGAN ST @ LOOP RD	AM	0	0	0	147	31	0	0	93	75	233	0	72
		PM	0	0	0	385	77	0	0	89	32	326	0	125
12	RIDER AVE @ PERRIS BLVD	AM	31	16	18	1069	148	121	621	581	537	1338	217	482
		PM	774	245	275	2144	179	246	323	611	382	1568	255	819
13	RIDER AVE @ REDLANDS AVE	AM	318	310	39	295	164	376	931	767	267	1038	423	311
		PM	889	348	516	1402	542	435	696	577	373	679	192	914
14	RIDER AVE @ CENTER ST	AM	388	86	105	640	58	267	1175	234	69	1096	519	54
		PM	1540	231	379	1711	57	75	897	158	59	1197	384	238
15	RIDER AVE @ EVANS ST	AM	409	0	0	0	0	0	1237	0	0	0	0	0
		PM	1596	0	0	0	0	0	944	0	0	0	0	0
16	RIDER ST @ LOOP RD	AM	0	0	0	223	63	0	0	1041	122	159	0	201
		PM	0	0	0	316	155	0	0	631	103	359	0	1247
17	RIDER ST @ BRADLEY ST	AM	72	112	23	0	12	169	746	11	1	15	74	1
		PM	982	176	63	23	11	102	452	12	3	11	55	1
18	RAMONA EXPWY @ RIDER ST	AM	941	0	22	0	0	0	2481	648	0	0	49	53
		PM	2384	0	68	0	0	0	2135	404	0	0	36	893
19	RAMONA EXPWY @ PLACENTIA AVE	AM	979	0	16	0	0	0	3113	75	0	0	16	54
		PM	3249	0	27	0	0	0	2517	61	0	0	23	71
20	PLACENTIA AVE @ I-215 S/B	AM	0	0	0	0	1281	0	0	1019	0	0	0	0
		PM	0	0	0	0	1586	0	0	1418	0	0	0	0
21	PLACENTIA AVE @ I-215 N/B	AM	1264	27	0	0	0	0	1019	0	1111	0	0	957
		PM	1586	0	0	0	0	0	1413	0	1526	0	15	1413
22	PLACENTIA AVE @ PERRIS BLVD	AM	828	416	118	1348	57	320	1994	129	121	1479	243	62
		PM	2325	734	156	2300	161	602	1423	104	143	1828	133	44
23	PLACENTIA AVE @ REDLANDS AVE	AM	526	396	71	255	20	835	1079	452	395	968	205	186
		PM	1177	970	217	1473	327	695	762	290	121	696	156	766
24	PLACENTIA AVE @ EVANS RD	AM	341	46	65	439	176	412	966	16	898	658	508	19
		PM	911	508	687	770	1266	101	504	31	471	831	286	11
25	ORANGE AVE @ PERRIS BLVD	AM	0	0	0	1732	0	7	158	25	45	1566	244	0
		PM	135	97	227	2262	160	1	24	72	67	1928	51	152
26	CITRUS AVE @ PERRIS BLVD	AM	0	0	6	1747	0	0	11	359	0	1800	117	0
		PM	12	0	248	2524	37	0	11	22	0	2122	14	779
27	NUEVO RD @ PERRIS BLVD	AM	1068	692	4	1445	53	606	1619	506	128	1103	70	523
		PM	1595	1285	16	1148	270	1382	1238	1181	5	1643	72	788

TABLE 15

INTERSECTION ANALYSIS RESULTS

OVERALL TRAFFIC

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	MARKHAM ST @ PERRIS BLVD	C	21	2	1	S	3	1	S	2	1	S	3	1	S
2	CAJALCO RD @ I-215 S/B	F	70	2	-	1	S	2	1	2	2	-	-	-	-
3	RAMONA EXPWY @ I-215 N/B	F	380	2	2	-	-	-	-	2	-	1	S	1	2
4	RAMONA EXPWY @ PERRIS BLVD	C-	23	3	2	1	3	2	1	3	2	1	3	2	1
5	RAMONA EXPWY @ REDLANDS AVE	C-	24	3	2	S	3	1	S	3	2	1	3	1	S
6	RAMONA EXPWY @ MURRIETA RD	C	25	3	2	2	3	2	1	3	2	1	3	2	1
7	RAMONA EXPWY @ EVANS RD	B	8	3	-	S	-	-	-	3	2	-	-	1	1
8	RAMONA EXPWY @ BRADLEY ST	B	6	3	-	S	-	-	-	3	2	-	-	1	1
9	COMMERCIAL LOOP RD @ MURRIETA RD	B	9	1	S	S	3	1	S	2	1	S	3	1	S
10	LOOP RD @ CENTER ST	B	9	2	1	S	3	1	S	2	2	S	3	1	S
11	MORGAN ST @ LOOP RD	B	15	-	-	-	2	1	-	-	1	1	2	-	S
12	RIDER ST @ PERRIS BLVD	C	19	2	1	S	3	1	S	2	1	S	3	1	S
13	RIDER ST @ REDLANDS AVE	C	23	2	1	S	3	1	S	2	1	S	3	1	S
14	RIDER ST @ CENTER ST	C	16	2	2	S	3	1	S	2	2	S	3	2	S
15	RIDER ST @ EVANS RD	A	1	2	-	S	-	-	-	2	1	-	-	1	S
16	RIDER ST @ LOOP RD	B	10	1	S	S	2	1	S	S	2	S	2	1	S
17	RIDER ST @ BRADLEY ST	B	10	2	1	S	S	1	1	2	1	S	1	S	S
18	RAMONA EXPWY @ RIDER ST	A	5	3	-	S	-	-	-	3	2	-	-	1	1
19	RAMONA EXPWY @ PLACENTIA AVE	A	2	3	-	S	-	-	-	3	2	-	-	2	1
20	PLACENTIA AVE @ I-215 S/B	B	13	2	-	S	S	2	1	2	2	-	-	-	-
21	PLACENTIA AVE @ I-215 N/B	B	8	2	2	-	-	-	-	2	-	1	S	1	2
22	PLACENTIA AVE @ PERRIS BLVD	C	25	3	2	1	3	2	1	3	2	1	3	2	1
23	PLACENTIA AVE @ REDLANDS AVE	C	22	3	1	S	3	1	S	3	1	S	3	1	S
24	PLACENTIA AVE @ EVANS RD	C	19	3	2	S	3	2	S	2	1	2	3	2	S
25	ORANGE AVE @ PERRIS BLVD	B	6	2	1	S	3	2	S	2	1	S	3	2	S
26	CITRUS AVE @ PERRIS BLVD	B	6	2	1	2	3	2	S	2	1	S	3	2	S
27	NUEVO RD @ PERRIS BLVD	F	65	3	2	1	3	1	S	3	1	S	3	2	S

S = SHARED WITH THRU LANE

TABLE 16

INTERSECTION ANALYSIS RESULTS

OVERALL TRAFFIC

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	MARKHAM ST @ PERRIS BLVD	E+	41	2	1	S	3	1	S	2	1	S	3	1	S
2	CAJALCO RD @ I-215 S/B	F	434	2	-	1	S	2	1	2	2	-	-	-	-
3	RAMONA EXPWY @ I-215 N/B	F	715	2	2	-	-	-	-	2	-	1	S	1	2
4	RAMONA EXPWY @ PERRIS BLVD	F	111	3	2	1	3	2	1	3	2	1	3	2	1
5	RAMONA EXPWY @ REDLANDS AVE	F	212	3	2	S	3	1	S	3	2	1	3	1	S
6	RAMONA EXPWY @ MURRIETA RD	D+	26	3	2	2	3	2	1	3	2	1	3	2	1
7	RAMONA EXPWY @ EVANS RD	A	3	3	-	S	-	-	-	3	2	-	-	1	1
8	RAMONA EXPWY @ BRADLEY ST	A	2	3	-	S	-	-	-	3	2	-	-	1	1
9	COMMERCIAL LOOP RD @ MURRIETA RD	B	10	1	S	S	3	1	S	2	1	S	3	1	S
10	LOOP RD @ CENTER ST	B	8	2	1	S	3	1	S	2	2	S	3	1	S
11	MORGAN ST @ LOOP RD	B	10	-	-	-	2	1	-	-	1	1	2	-	S
12	RIDER ST @ PERRIS BLVD	F	88	3	1	S	3	1	S	3	1	S	3	1	S
13	RIDER ST @ REDLANDS AVE	F	113	3	1	S	3	1	S	3	1	S	3	1	S
14	RIDER ST @ CENTER ST	B	10	3	2	S	3	1	S	3	2	S	3	2	S
15	RIDER ST @ EVANS RD	A	1	2	-	S	-	-	-	2	1	-	-	1	S
16	RIDER ST @ LOOP RD	C	24	1	S	S	2	1	S	S	2	S	2	1	S
17	RIDER ST @ BRADLEY ST	B	9	2	1	S	S	1	1	2	1	S	1	S	S
18	RAMONA EXPWY @ RIDER ST	B	10	3	-	S	-	-	-	3	2	-	-	1	1
19	RAMONA EXPWY @ PLACENTIA AVE	A	2	3	-	S	-	-	-	3	2	-	-	2	1
20	PLACENTIA AVE @ I-215 S/B	F	109	2	-	S	S	2	1	2	2	-	-	-	-
21	PLACENTIA AVE @ I-215 N/B	D-	36	2	2	-	-	-	-	2	-	1	S	1	2
22	PLACENTIA AVE @ PERRIS BLVD	D-	38	3	2	1	3	2	1	3	2	1	3	2	1
23	PLACENTIA AVE @ REDLANDS AVE	F	100	3	1	S	3	1	S	3	1	S	3	1	S
24	PLACENTIA AVE @ EVANS RD	C	16	3	2	S	3	2	S	2	1	2	3	2	S
25	ORANGE AVE @ PERRIS BLVD	B	7	2	1	S	3	2	S	2	1	S	3	2	S
26	CITRUS AVE @ PERRIS BLVD	B	8	2	1	2	3	2	S	2	1	S	3	2	S
27	NUEVO RD @ PERRIS BLVD	F	299	3	2	1	3	1	S	3	1	S	3	2	S

S = SHARED WITH THRU LANE

TABLE 17

PERCENT INTERSECTION PEAK HOUR VOLUME
FROM
MAY RANCH PROJECT
OVERALL TRAFFIC

TERSECTION NUMBER	INTERSECTION NAME	TOTAL INTERSECTION VOLUME	MAY RANCH PMPH VOLUME	MAY RANCH VOLUME PERCENT
1	MARKHAM ST @ PERRIS BLVD	6486	638	9
2	CAJALCO RD @ I-215 S/B	7755	955	12
3	RAMONA EXPWY @ I-215 N/B	9892	1451	14
4	RAMONA EXPWY @ PERRIS BLVD	11278	1375	12
5	RAMONA EXPWY @ REDLANDS AVE	10056	1543	15
6	RAMONA EXPWY @ MURRIETA RD	10439	2308	22
7	RAMONA EXPWY @ EVANS RD	5501	175	3
8	RAMONA EXPWY @ BRADLEY ST	5083	150	2
9	COMMERCIAL LOOP RD @ MURRIETA RD	4109	1890	45
10	LOOP RD @ CENTER ST	4042	1797	44
11	MORGAN ST @ LOOP RD	1034	747	72
12	RIDER ST @ PERRIS BLVD	7821	1295	16
13	RIDER ST @ REDLANDS AVE	7563	1759	23
14	RIDER ST @ CENTER ST	6926	2241	32
15	RIDER ST @ EVANS RD	2560	855	33
16	RIDER ST @ LOOP RD	2851	1127	39
17	RIDER ST @ BRADLEY ST	1887	364	19
18	RAMONA EXPWY @ RIDER ST	5920	168	2
19	RAMONA EXPWY @ PLACENTIA AVE	5948	119	2
20	PLACENTIA AVE @ I-215 S/B	3024	521	17
21	PLACENTIA AVE @ I-215 N/B	5963	1087	18
22	PLACENTIA AVE @ PERRIS BLVD	9953	1419	14
23	PLACENTIA AVE @ REDLANDS AVE	7650	1940	25
24	PLACENTIA AVE @ EVANS RD	6377	1204	18
25	ORANGE AVE @ PERRIS BLVD	5175	295	5
26	CITRUS AVE @ PERRIS BLVD	5779	729	12
27	NUEVO RD @ PERRIS BLVD	10618	1103	10

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.

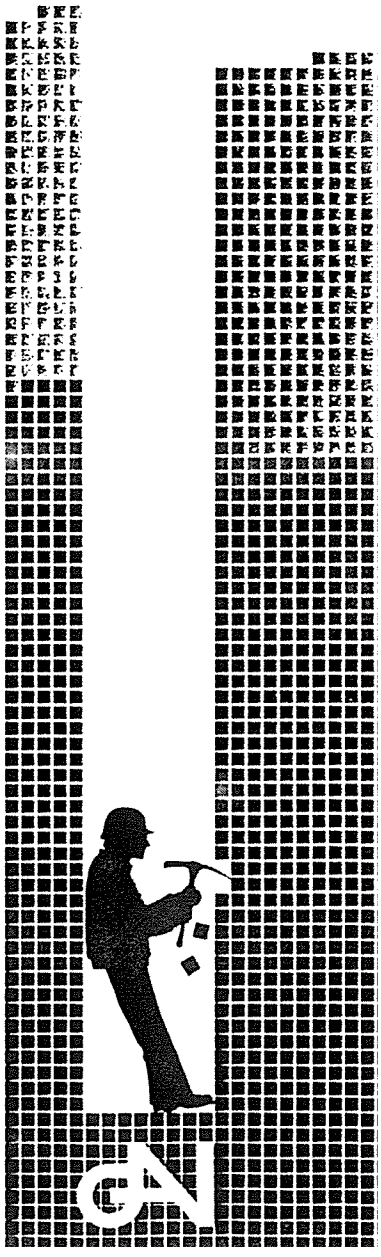
Gentlemen:

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.



MAY RANCH PROJECT TRAFFIC CONTRIBUTION

Tables 6, 10 and 17 titled "Percent Intersection P.M. Volume from May Ranch Project" show the percentage of estimated intersection p.m. peak hour volumes attributable to traffic generated within the May Ranch project for scenarios 1, 2 and 4. The third scenario did not include the May Ranch traffic.

These percentages are indicative of the specific impact that the May Ranch project has on the various 27 intersections studied and give a measure of the May Ranch's share of the impact of these locations. local improvement funds for streets and intersections.

RAMONA EXPRESSWAY

A review of Figures 6 and 7, together with corresponding tables, indicates that for scenarios 3 and 4; that is, buildout of the study area without the May Ranch and the entire study area, the predicted peak hour levels of service at the intersections on the Ramona Expressway at Redlands Avenue, Perris Boulevard and at the I-215 Freeway interchange are at the "F" level.

In calculating the levels of service at these intersections, it has been assumed that the Ramona Expressway will be widened to provide three through lanes of traffic in each direction, double left turn lanes in all directions and separate right turn lanes in all directions. At the I-215 Freeway, the overcrossing has been assumed to be widened in order to provide double left turn lanes and widening has been assumed for the respective off ramps.

Even with these extensive improvements, operation of these intersections as conventional signalized intersections has still resulted in a very unsatisfactory level of service "F" condition.

It is concluded that grade separations on the Ramona Expressway at these locations are needed to improve the peak hour level of service. In effect, the Ramona Expressway should be converted to a type of freeway at least from Redlands Avenue westerly to the I-215 Freeway.

It is believed pertinent to recognize that this particular study did not analyze future traffic volumes that will use the Ramona Expressway generated from new developments in the Hemet/San Jacinto area. When these projects are analyzed, the traffic volumes would be even higher than predicted in this study for these intersections and, therefore, the case would still be stronger for conversion of the expressway to some type of grade separation design.

This project is also focused on the need to consider on a regional basis the extension of the Ramona/Cajalco Expressway alignment into Orange County and to connect the Ramona/Cajalco Expressway alignment to the eastern transportation corridor to be constructed in Orange County.

This new freeway would provide a separate corridor between the Perris/Moreno Valley/Hemet/San Jacinto area to the Orange County area, thereby bypassing the unreasonable congestion occurring daily on the Route 91 Freeway.

It is recognized that such a Ramona/Cajalco Expressway connection into Orange County might necessitate tunneling under the mountains; however, it is believed that such a routing is needed enough to warrant serious consideration.

Separation structures at the intersections of the Ramona Expressway at Redlands Avenue and at Perris Boulevard could cost $3 million dollars each. Based on scenario 4, the May Ranch traffic contribution during the p.m. peak hour to the Redlands Avenue at Ramona Expressway intersection is estimated to be 15 percent while at the Perris Boulevard intersection with the Ramona Expressway the May Ranch project percentage is estimated to be 12 percent.

Obviously, when external traffic originating in the San Jacinto/Hemet area is added to the Ramona Expressway total, the percentage contribution attributable to the May Ranch would be lower.

A discussion of the specifics of implementation of a conversion of the Ramona Expressway to some type of grade separated routing is beyond the scope of this study. However, the study has documented clearly the need to seriously consider as a public policy issue the revision of the classification of at least a portion of the Ramona Expressway to some type of facility that will handle higher volumes of traffic at a satisfactory level of service which undoubtedly means grade separations at the key critical intersections.

STATE ROUTE 215

The purpose of this portion of the report is to discuss the impact of the predicted traffic volumes from the study area, including the May Ranch, on State Highway Route 215.

State Route 215 will be upgraded to interstate standards with completion scheduled by the early 1990's. At the present time this route through the study area has four lanes for moving traffic. Signalization exists at the Alessandro Boulevard and Nuevo Road intersections. The upgrading to interstate standards will replace these signalized intersections with interchanges.

Based on the 1987 "Traffic Volumes on California State Highways," the 24 hour volume during the peak month on Route 215 northerly of the Ramona Expressway was 45,500 vehicles per day. The peak hour traffic volume in both directions was reported to be 5,200 vehicles per hour. Assuming a 55/45 directional split during the peak hour, the peak hour volume in the heaviest direction would be 2,860 vehicles per hour.

When the route is converted to interstate standards, three lanes in each direction will be initially constructed with provisions for an ultimate fourth lane in each direction.

Based on the p.m. peak hour analysis of this report, it is expected that an additional 3,600 vehicles per hour in the southbound direction northerly of the Ramona Expressway will be using I-215 for access to destinations within the study area. The 1987 estimated directional peak hour flow of 2,860 vehicles added to the 3,600 southbound volume generated from the study area totals 6,460 vehicles per hour. The capacity of the freeway in the southbound direction with three lanes available will be approximately 6,000 vehicles per hour.

Considering only the traffic generated by the May Ranch, it is predicted that during the p.m. peak hour in the southbound direction on I-215 northerly of the Ramona Expressway interchange, the traffic volume destined to the May Ranch area would be approximately 620 vehicles. This volume added to the estimated current peak hour directional volume of 2,860 vehicles per hour means that the total would be approximately 3,500 vehicles per hour which is substantially less than the 6,000 vehicle per hour freeway capacity in the southbound direction.

This overall traffic study, together with this discussion, points out the necessity that consideration be given to expanding the I-215 Freeway to four lanes in each direction. This need has been substantiated by MGA's study for the City of Perris concerning the 4th Street interchange and a proposed new interchange at Ellis Avenue.

In addition to the need for an eight lane facility for I-215, a corridor study is justified to find an acceptable routing for another freeway in the north/south direction to be located easterly of the City of Perris. Based on the knowledge of land use developments in the general region, it is believed that an additional north/south freeway will be needed in the future and that cooperative arrangements involving the various political entities should consider formation of a corridor study task force to determine the need and feasibility of such a second north/south freeway to serve this general area.

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 15 and 16 at the time the area is fully developed.

Specifically, the recommended street sections within the May Ranch project are shown on Figure 2.

Table 18 titled "Street Sections" shows the recommended street sections for the arterial network within the May Ranch project area.

TABLE 18

STREET SECTIONS

STREET	CURB TO CURB WIDTH, FEET
Evans Road/Center Street	86
Evans Road/Center Street Approaches to:	
Placentia Avenue	96
Rider Street (Northbound)	96
Ramona Expressway	96
Placentia Avenue	86
Placentia Avenue Approaches to:	
Evans Road/Center Street	96
Perris Boulevard	96
Loop Road	64
Bradley Street	64
Rider Street (Perris Boulevard to Loop Road)	86
Rider Street (Loop Road to Ramona Expressway)	64
Rider Street Approach to:	
Center Street (Eastbound)	96
Ramona Expressway	116
Morgan Street	44
Commercial Loop Road	40

TABLE 19

LEVEL OF SERVICE COMPARISON

FOR KEY INTERSECTIONS

INTERSECTION NUMBER	INTERSECTION NAME	PEAK HOUR	EXISTING AND MAY RANCH TRAFFIC ONLY	EXISTING, MAY RANCH AND McCANNA RANCH TRAFFIC ONLY	OVERALL TRAFFIC WITHOUT MAY RANCH	OVERALL TRAFFIC
2	CAJALCO RD @ I-215 S/B	AM	B	B	D	F
		PM	C	C	F	F
3	RAMONA EXPWY @ I-215 N/B	AM	B	C	F	F
		PM	B	B	F	F
4	RAMONA EXPWY @ PERRIS BLVD	AM	C	B	C+	C-
		PM	C	B	F	F
5	RAMONA EXPWY @ REDLANDS AVE	AM	A	B	C+	C-
		PM	D	D+	F	F
6	RAMONA EXPWY @ MURRIETTA RD	AM	B	E	C	C
		PM	B	D	B	D+
12	RIDER ST @ PERRIS BLVD	AM	B	B	C	C
		PM	B	B	F	E-
20	PLACENTIA AVE @ I-215 S/B	AM	B	B	B	B
		PM	B	B	C	F
21	PLACENTIA AVE @ I-215 N/B	AM	A	A	B-	B
		PM	B	B	C+	D+
22	PLACENTIA AVE @ PERRIS BLVD	AM	B	B	C	C
		PM	B	B	C+	D-
24	PLACENTIA AVE @ EVANS RD	AM	B	B	B-	C
		PM	B	B	C	C
25	ORANGE AVE @ PERRIS BLVD	AM	A	A	A	B
		PM	B	A	B	B
26	CITRUS AVE @ PERRIS BLVD	AM	A	A	B	B
		PM	A	A	B	B
27	NUEVO RD @ PERRIS BLVD	AM	B	B	D	F
		PM	B	B	F	F

Figure 8 titled "Project Area Traffic Signal Locations" illustrates the intersections that will require signalization pending the completion of the May Ranch and McCanna Ranch projects. Traffic signals should be constructed at the intersections shown on Figure 8 when either anticipated traffic within a short time in the future or existing traffic meets one of the accepted traffic signal warrants.

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.

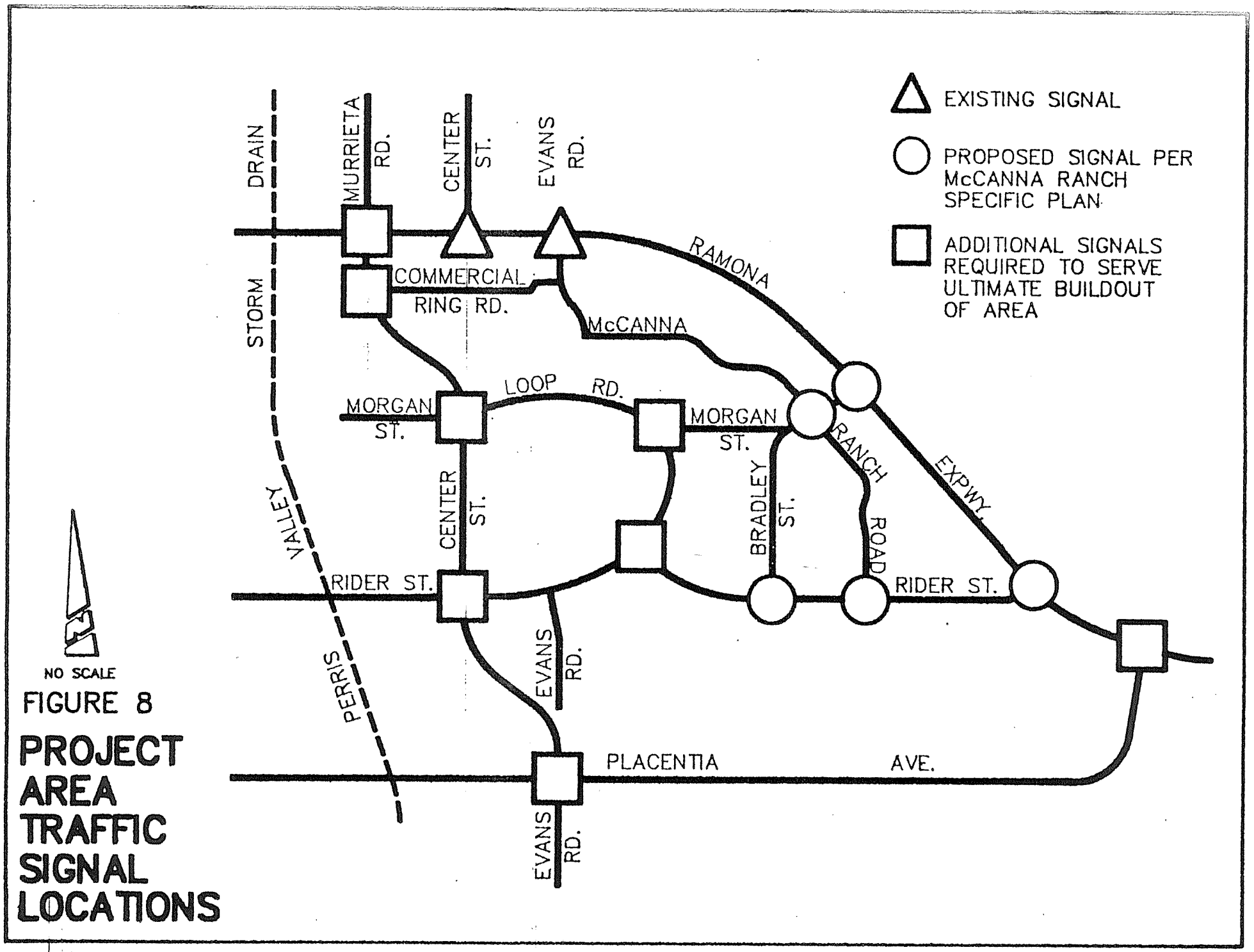


FIGURE 8

PROJECT AREA TRAFFIC SIGNAL LOCATIONS

APPENDIX "A"

Level of Service Definitions

LEVEL OF SERVICE PER 1985 HIGHWAY CAPACITY MANUAL

Level of Service (LOS) in accordance with the new 1985 Highway Capacity Manual (HCM)(1) considers a variety of prevailing conditions including the amount and distribution of traffic movements, traffic composition, maximum possibe flow rate (saturation flow), geometrics and the intersection signal timing.

Level of service for signalized intersections is defined in terms of delay. According to the HCM, "Delay is a measure of driver discomfort, frustration, fuel consumption and lost travel time." The delay is stated as the average stopped delay per vehicle for a peak one hour analysis period. The seconds of delay are related to a letter grade for ease of communication. The level of service methodology incorporates the delay formula developed by F. V. Webster and the critical lane method of Interim Materials on Highway Capacity (Transportation Research Circular No. 212). The relationship between delay and the level of service is shown in Table 1.

TABLE 1

Level of Service Criteria for Signalized Intersections

Level of Service	Stopped Delay per Vehicle (Seconds)
A (minimal delay)	- 5.0
B (short delay)	5.1 - 15.0
C (average delay)	15.1 - 25.0
D (long delay)	25.1 - 40.0
E (very long delay)	40.1 - 60.0
F (extreme delay or jammed)	60.1 -

These levels of service are defined in the 1985 HCM as follows:

- Level of Service A - describes operations with very low delay, i.e, 5.0 seconds or less per vehicle. This occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

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(1) "Chapter 9, Signalized Intersections," Highway Capacity Manual, Special Report 209, Transportation Research Board, National Research Council, Washington D.C., 1985.

- Level of Service B - describes operations with delay in the range of 5.1 to 15.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service "A," causing higher levels of average delay.

- Level of Service C - describes operations with delay in the range of 15.1 to 25.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

- Level of Service D - describes operations with delay in the range of 25.1 to 40.0 seconds per vehicle. At Level "D" the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths or high volume to capacity (v/c) ratios. Many vehicles stop and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

- Level of Service E - describes operations with delay in the range of 40.1 to 60.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high v/c ratios. Individual cycle failures are frequent occurrences.

- Level of Service F - describes operations with delay in excess of 60.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

The equation for calculating delay is very complex and is fully explained in the HCM. Due to the complexity, it will not be further discussed in this report; however, the most important variable in the equation will be briefly discussed. That variable is relative saturation ("X") defined by the following simple equation:

$$X = (q * C)/(g * S)$$

where,

X = Relative Saturation
q = Traffic Flow (vph)
C = Cycle Length (sec)
g = Effective Green (sec)
S = Saturation Flow (vph)

Essentially, this equation defines the volume/capacity ratio adjusted for the amount of green time a given movement receives. The key to this relationship is that when "X" becomes larger than approximately 0.85, vehicle delay begins to increase rapidly as shown in the attached figure, "Stopped Time Delay (or Level of Service) vs Degree of Saturation (at a Signal Stopline)." For reference purposes, Relative Saturation ("X") is equivalent to intersection capacity utilization (ICU).

FIGURE 2

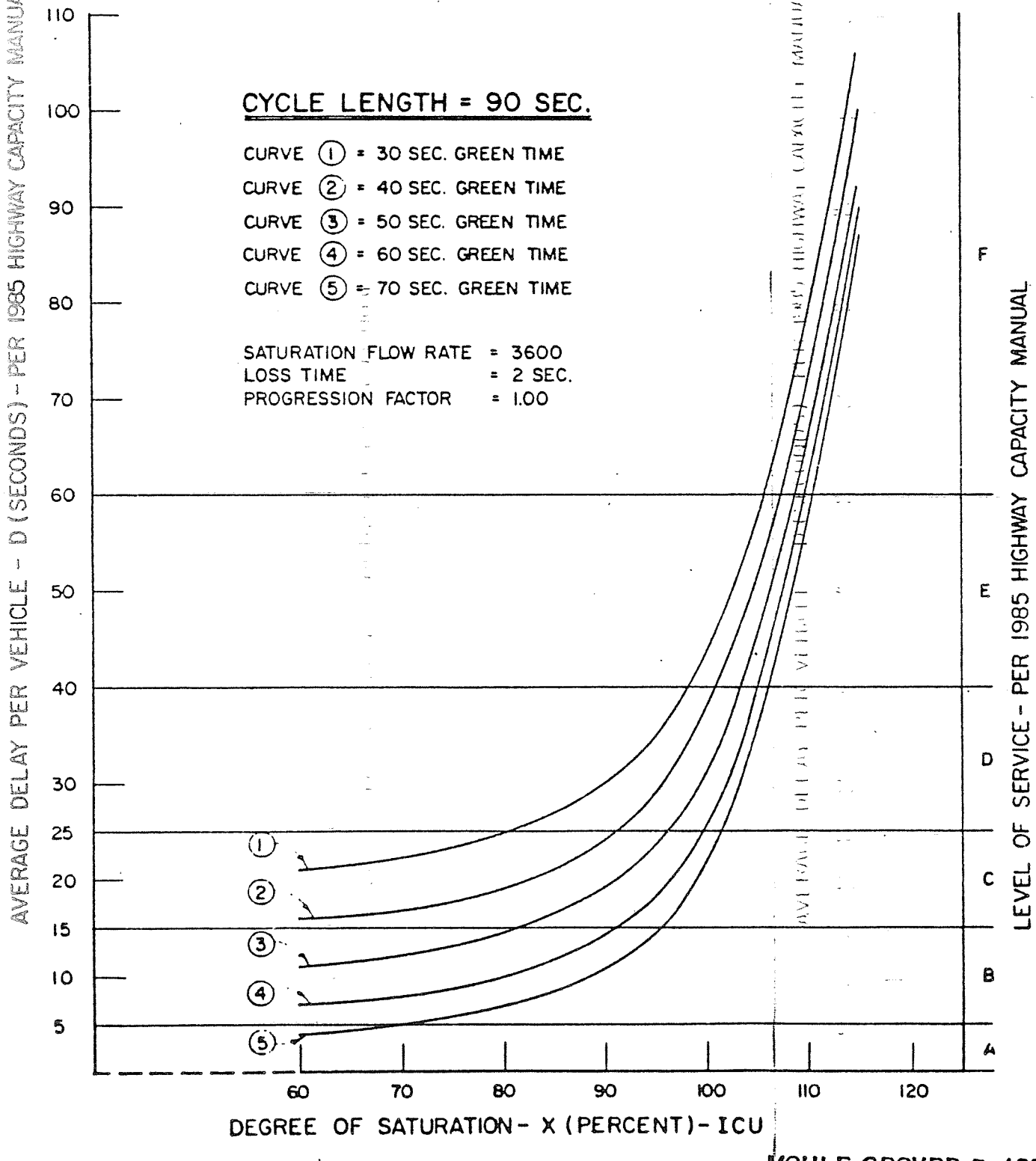
STOPPED TIME DELAY

(OR LEVEL OF SERVICE)

VS

DEGREE OF SATURATION

(AT A SIGNAL STOPLINE)



MOHLE, GROVER & ASSOCIATE

FISCAL IMPACT

DRAFT

FISCAL ANALYSIS OF THE IMPACT OF THE DEVELOPMENT OF THE MAY PROPERTY SPECIFIC PLAN PROJECT ON THE CITY OF PERRIS

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April 4, 1988

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.

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FISCAL ANALYSIS OF THE IMPACT OF
THE MAY PROPERTY SPECIFIC PLAN ON THE CITY OF PERRIS

PART ONE - EXECUTIVE SUMMARY

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.

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.

FISCAL ANALYSIS OF THE IMPACT OF
THE MAY PROPERTY SPECIFIC PLAN ON THE CITY OF PERRIS

PART TWO - ANALYSIS OF REVENUES AND COSTS

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.

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

DETERMINATION OF COSTS

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.

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

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
POPULATION:						
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	8,903
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

FISCAL ANALYSIS OF THE IMPACT OF THE MAY PROPERTY SPECIFIC PLAN ON THE CITY OF PERRIS

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	802	14,816	36,732	57,590	76,727
Road Fund Surplus/<-Deficit>	802	-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 buildout. It would appear that the fire protection fee would adequately cover the probable capital costs of this project.

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	369,592	705,369	1,026,312	1,382,670	1,663,076	1,769,338	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

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	36,719,561
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	36,719,561
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	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

T. B

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

(*) County apportionment based on 75% of apportionment ratio;
City apportionment on 25%, in accordance with Master Agreement.

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								

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

(*) County apportionment based on 75% of apportionment ratio;
City apportionment on 25%, in accordance with Master Agreement.

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								

TABLE D

FISCAL IMPACT ANALYSIS OF THE MAY PROPERTY SPECIFIC PLAN
DEVELOPMENT OF LAW ENFORCEMENT COSTS

(All amounts in constant dollars)	TOTALS	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
POPULATION:									
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)		1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
POPULATION:	TOTALS								
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		21.68	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 E

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

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Costa Mesa, California 92626
(714) 751-7373

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

TABLE OF CONTENTS

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.

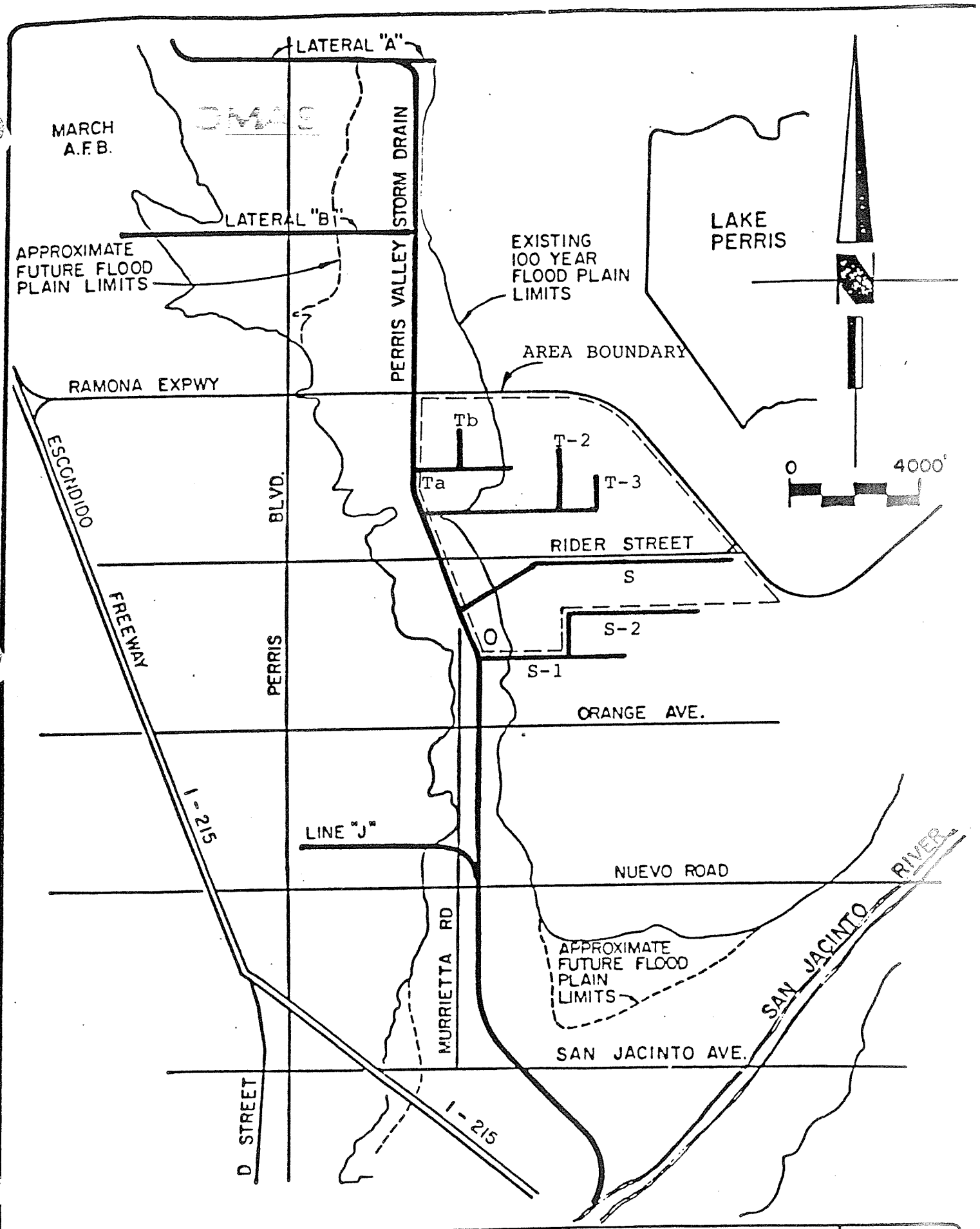
Line Ta starts from the channel at a point 1300 feet north of Lint T and runs east 3400 feet, varying in size from 60 inches to 42 inches.

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.

Section VIII - Table of Facilities

LINE	NODE TO NODE	SIZE	TOTAL L.F.	TOTAL Q	MAY PROPERTY Q	%	McCANNA Q	%	OTHERS Q	%
Ta	1-2	48"	900	120	120	100	---		---	
	2-3	54"	900	127	127	100	---		---	
	3-5	60"	1,200	229	229	100	---		---	
b	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
-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

5.9 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

COMMERCIAL ZONE USE AND DEVELOPMENT REGULATIONS

Chapter 19.40

C-1 DISTRICTS (RETAIL COMMERCIAL)

Sections:

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).