VENTURA COUNTY MULTI-MODAL TRANSPORTATION STUDY LAND USE FORECAST

The 1990 Transportation Study requires as one of its primary building blocks a land use forecast that must be adopted by VCAG. This forecast is described briefly in the following narrative.

Relationship of Land Use to Transportation Planning

The relationship between transportation and land use is of the "chicken and egg" syndrome. Arguments for each abound in the technical literature and it is not our purpose to settle the issue. Suffice it to say that a strong causal relationship exists and that sufficient consideration must be given to each in any plan involving one or the other, or urban chaos will be the result. This study will attempt to develop a transportation system that will have a definite influence in shaping the physical arrangement of the region toward its expressed goals.

The VCAG adopted Transportation Study goal and considerations relating to land use are as follows:

Goal - The development of a transportation system which is coordinated with and supportive of the adopted land use plans and guided by the current expression and desires of the people regarding limited population growth, preservation of open space and agriculture, and containment of future urban development within the adopted city growth boundaries.

Considerations - Develop a transportation system with full consideration of the land use plans and the planning processes of the region; recognize the expressed desires of citizens of the County of Ventura for lower population growth and preservation of our rural atmosphere; encourage the concentration of new development within community clusters, thus providing a closer relationship between employment opportunities and housing.

This goal and related considerations as well as others regarding economic, environmental, social, financial, technological, and political factors, are being utilized in the development of this study.

Legislative Factors

The Transportation Development Act of 1971 (Senate Bill 325) specifically requires that a regional transportation plan be developed and adopted by July 1, 1975. This law further provides transportation funds via gasoline sales tax monies to each local transportation fund and agency (the Board of Supervisors and VCAG). These funds are to be distributed after adoption of the study, only with a finding that the proposed expenditures are in conformity with the plan and its components (i.e., land use).

Further legislation, in the form of Assembly Bill 69, details the goals and contents of the regional transportation plan. It is clear that the regional plan must reflect the diversity of existing conditions and local plans on every level. The state intends to develop a balanced transportation system that improves efficiency and economy in land use, especially in the coastal zone, as well as significantly reducing pollution of the atmosphere, generation of noise, adverse impacts on the natural environment, disruption of community organization and hazards to human life. The Legislature quite clearly intends to achieve maximum optimization of the relationship between transportation and land use and it is our task to effect this.

The 1990 Regional Land Use Map

The methodology for the development of this map is quite simple. It reflects, insofar as possible, all extant county-wide plans. The adopted Ventura County Open Space Plan provides the base which gives the true regional aspect to the forecast. This plan outlines urbanized areas for 1990, as well as indicating open space. Within this open space framework all local plans have been placed, in full cooperation with all agencies involved. (See Notes).

The 1990 Transportation Corridor Network

This network has been developed with the County Circulation Element as a base and in coordination with the extant city land use plans and city input. It merely represents approximate locations of possible transportation corridor routes and does not attempt to indicate type or capacity. It is the basis for input to the computer gravity model. After population, land use, income, and employment are keyed to these corridors by analysis zone, the gravity model will indicate potential travel volumes.

Aviation Component

The servicing of the aviation needs of county residents is a prime and required consideration of the study. Assembly Bill 69 declares that it is the role of the state in transportation to "Assist in the development of an air transportation system that is consistent with the needs and desires of the public, and in which airports are compatible in location with, and provide services meeting statewide and regional goals and objectives" (Section 14000.5). Toward this end, and as further required by the state, aviation facility and land use alternatives are offered for consideration.

Land use compatibility for the location of airports has been our prime goal. The factors considered for land use around an airport alternative include aircraft accidents and flight patterns, existing land use (Maps 12-15), noise, air pollution, and land values. Compatible uses include: natural usage, agricultural, open space, highways and railroads, low intensity recreational use, some municipal uses and low density industry. Three alternative land uses are proposed for each airport: the existing land use plan of the appropriate agency, open space and low density industry.

The general aviation needs of the sub-region can be met satisfactorily by three airports: Santa Paula, Oxnard-County, Tierra Rejada (proposed) in the Moorpark sphere of influence (Appendix 1 - Maps 1 to 6). Open space and industrial land uses are proposed around each to the extent determined by the factors cited above.

The commercial aviation needs* of the sub-region are addressed by alternative approaches: An aviation facility, being either a high speed ground system (mass rapid transit - MRT) or a commercial airport with general aviation capacity could be located on the Oxnard Plain (Map Seven).

A real alternative to locally meeting the needs of county residents is to actually take the position that they will not be locally met. Map Eight shows this approach with a multi-use facility located at the abandoned Oxnard Air Force Base (OAFB), and Point Mugu Naval Air Station not changing its role.

Locating a commercial airport on the Oxnard Plain at the two existing potential sites obviates related land use plan changes only for OAFB. Because of the high aircraft accident hazard potential (Appendix 2) and forecast noise pollution, the land use patterns of the 2000 Oxnard General Plan should be changed as shown. The changes necessitated by the industrial land use alternative (Map Nine) are less than those caused by open space (Map Ten).

The third major method of meeting the aviation needs of county residents is to tie in with a mass transportation route to the south or north, connecting the Burbank, LAX, Palmdale, or Santa Barbara (Map Eleven).

---

* Commercial needs are defined to mean only local and short haul service (500 miles).

Environmental and Economic Aspects

After selection of alternatives has occurred, it is proposed to evaluate in detail the environmental and economic aspects of the chosen alternatives. This will occur after the January 10, 1974 VGAC General Assembly.

NOTES & RECOMMENDATIONS

1. Regarding the land use forecast map, the city of Oxnard has not yet formalized their position and, as a result, the map is blank in this area. The information to be used for Oxnard will be received shortly for inclusion in the final map. The City/ County Planning Association has adopted the 1990 Land Use Forecast with certain qualifications. No action was taken by the CCPA on the Transportation Corridor Network or the Aviation Component. The Planners were urged to work with their city engineers and the Transportation Technical Committee amended and adopted the Network for study.

   The Land Use Forecast qualifications are as follows:

1. The Forecast will be updated in January, 1975, per the requirements of AB 69, and the changing state of city and county plans.

2. Wherever a discrepancy is found between the forecast and a local plan, the local plan shall take precedence.

3. The following cities have requested inclusion of certain qualifications regarding their input to the Land Use Forecast:

   a. CAMARILLO- An entirely new land use plan is being developed, and as a result, the forecast shown reflects the 1965 General Plan that is not necessarily representative of present policy. This information is to be used only until the new plan is adopted.

   b. OJAI- The area designated residential includes many areas within it that are now of a rural character and should by land use project be recognized as remaining in that character of land use.

   c. OXNARD- The adopted 2000 Plan is the only one with a horizon year beyond 1990 in Ventura County. The population projections contained in this plan are also considerably out of phase with new City Planning Commission and Council adopted figures (also VCAG adopted). These two facts necessitated a study to adjust land use to the different horizon year and population figures. This study is now in progress and should be ready by December 26th for inclusion in the recommendation to the General Assembly. If not, the 2000 Plan will be used.

   d. VENTURA- A new general plan is presently being developed and may be adopted in early 1974. As a result, the patterns are to be changed in the first revision of the study.

The information shown is extracted from the following plans:

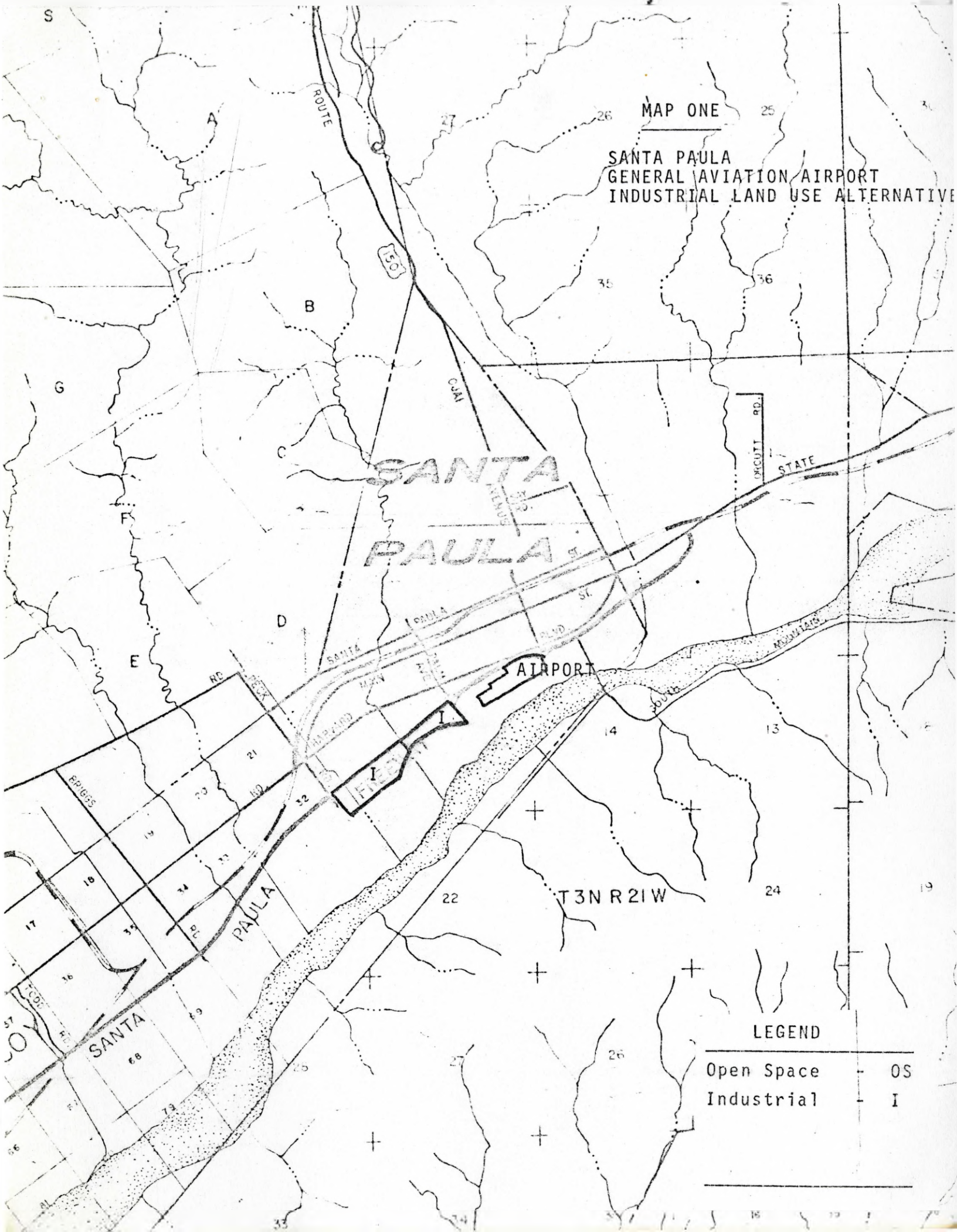
1. 1965 General Plan
2. Downtown amendment
3. Montalvo amendment
4. Ventura Avenue amendment
5. Open Space and Conservation Element

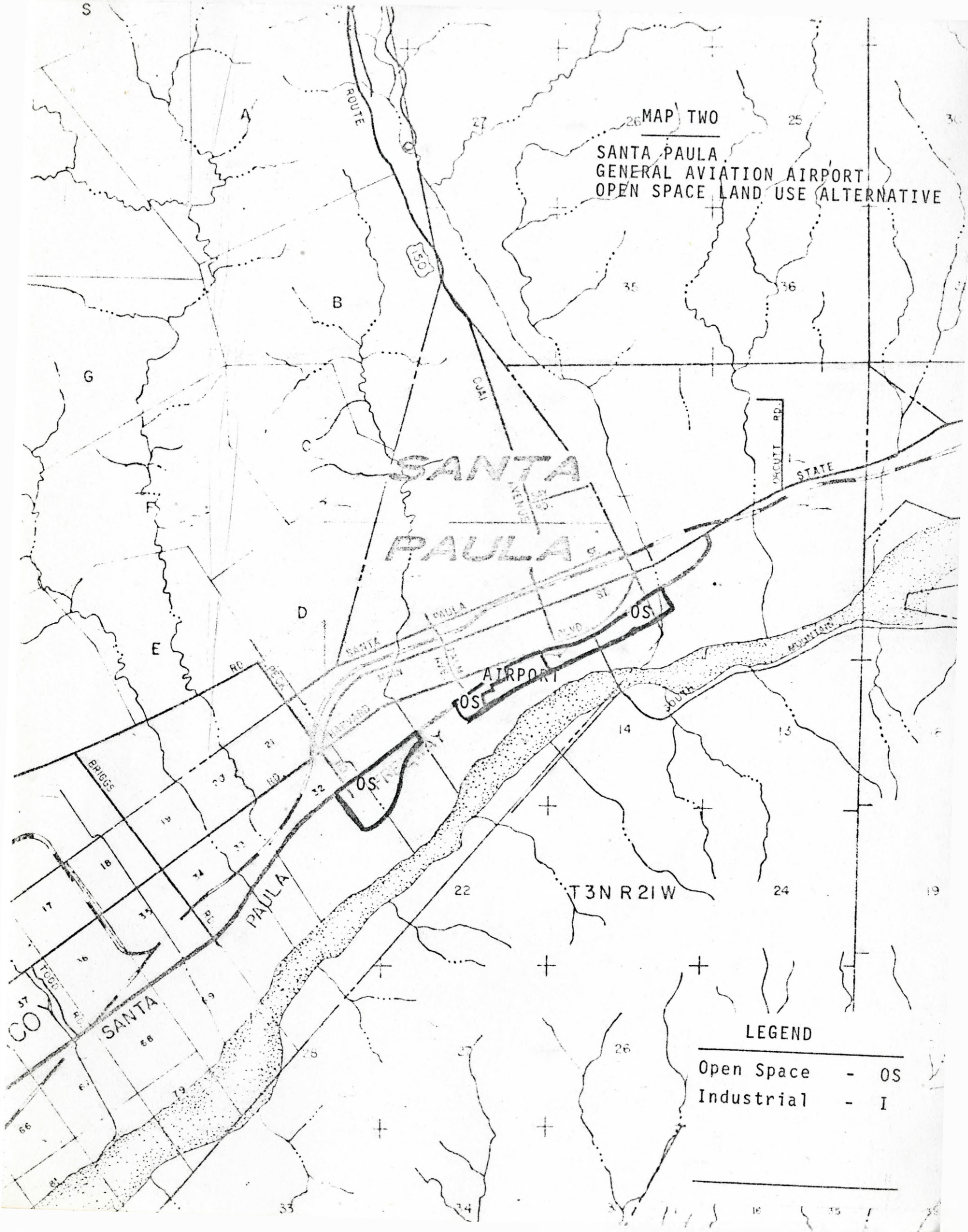
APPENDIX

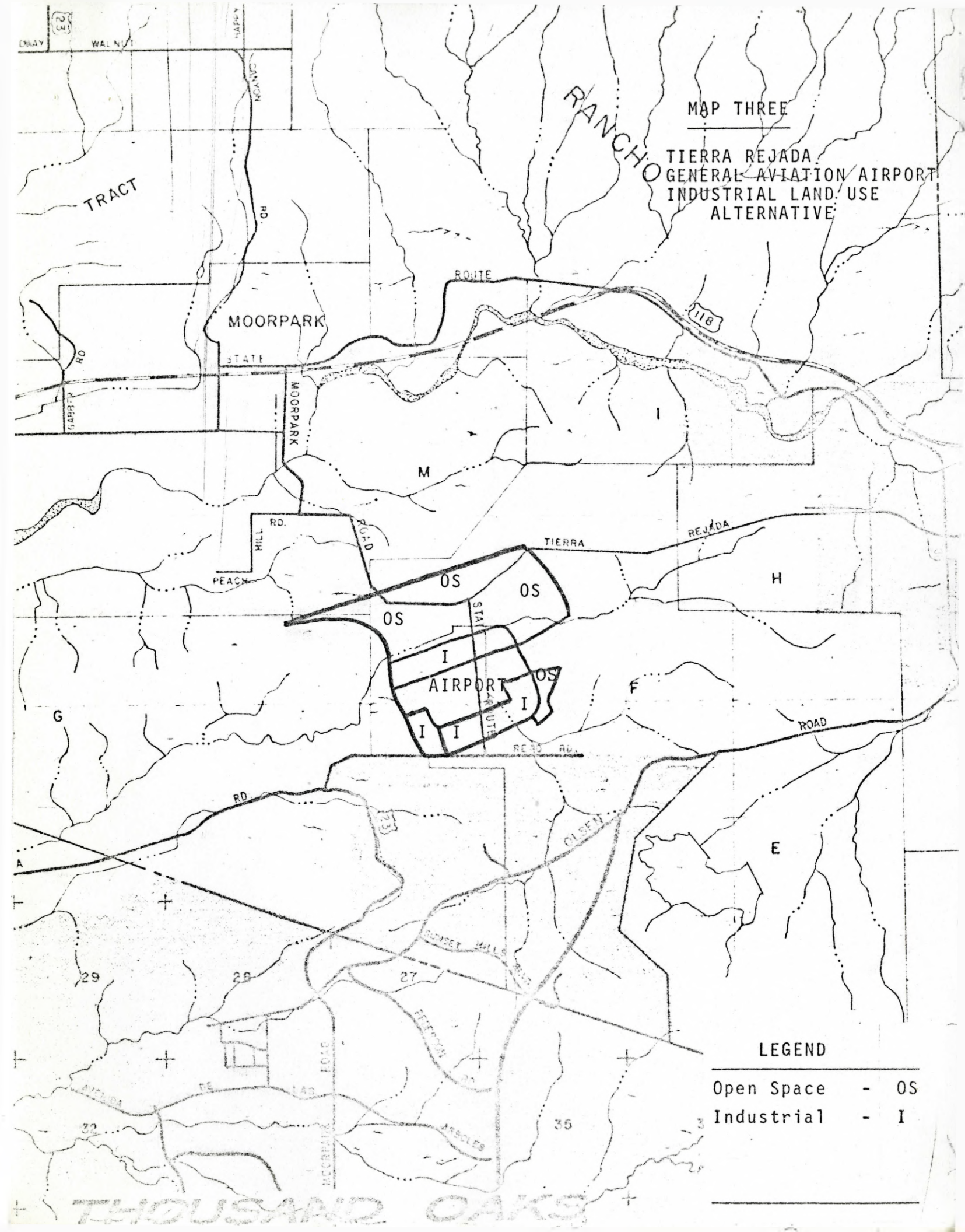
I

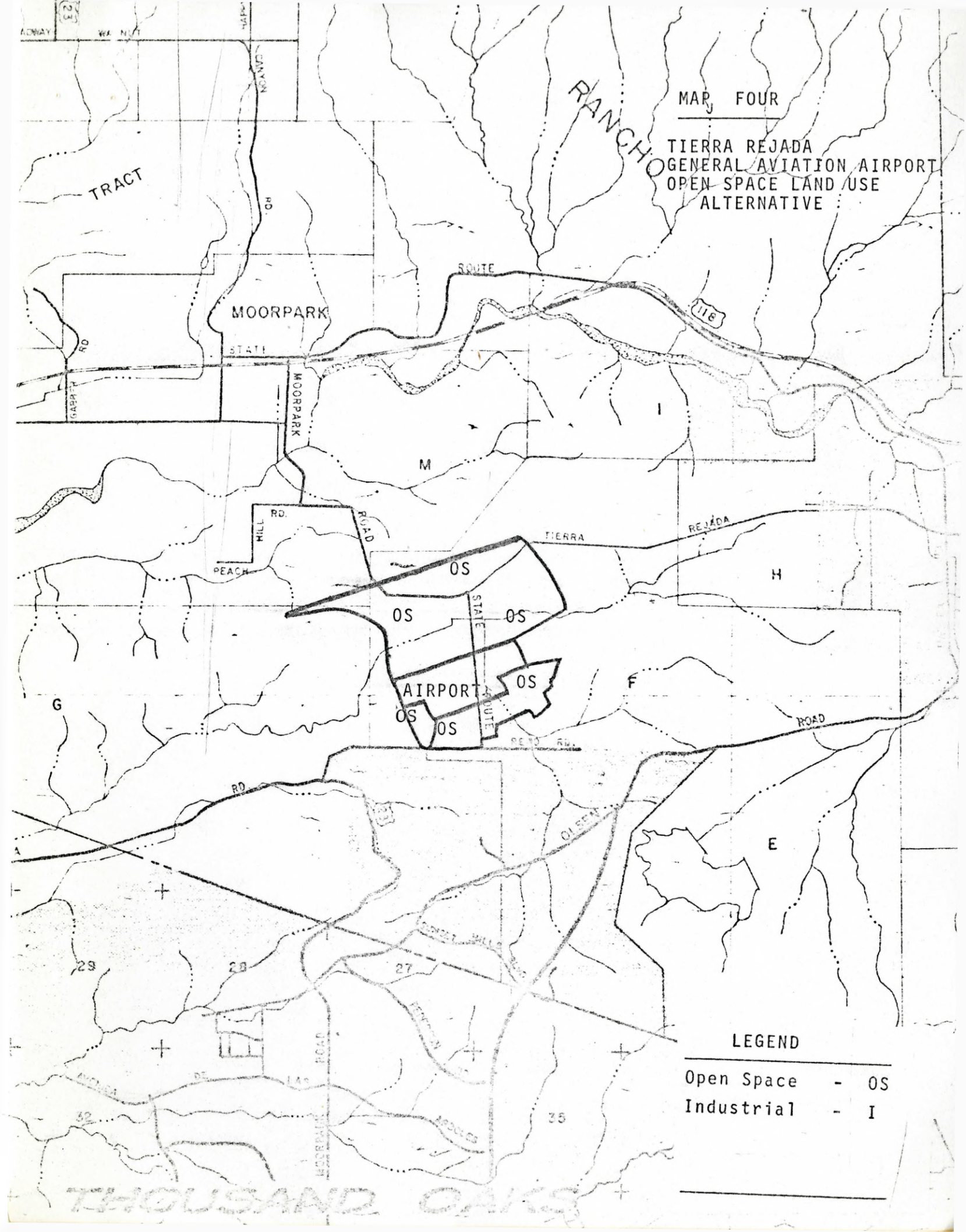
AVIATION FACILITY ALTERNATIVES

Note: The following maps only show changes that would be made to existing plans. The forecast for those areas not shown are on the land use forecast map (4,000 Scale).


MAP ONE
SANTA PAULA
GENERAL AVIATION AIRPORT
INDUSTRIAL LAND USE ALTERNATIVE
ROUTE
150
OJAI
SANTA PAULA
STATE
AIRPORT
SANTA PAULA
T3N R21W
LEGEND
Open Space - OS
Industrial - I

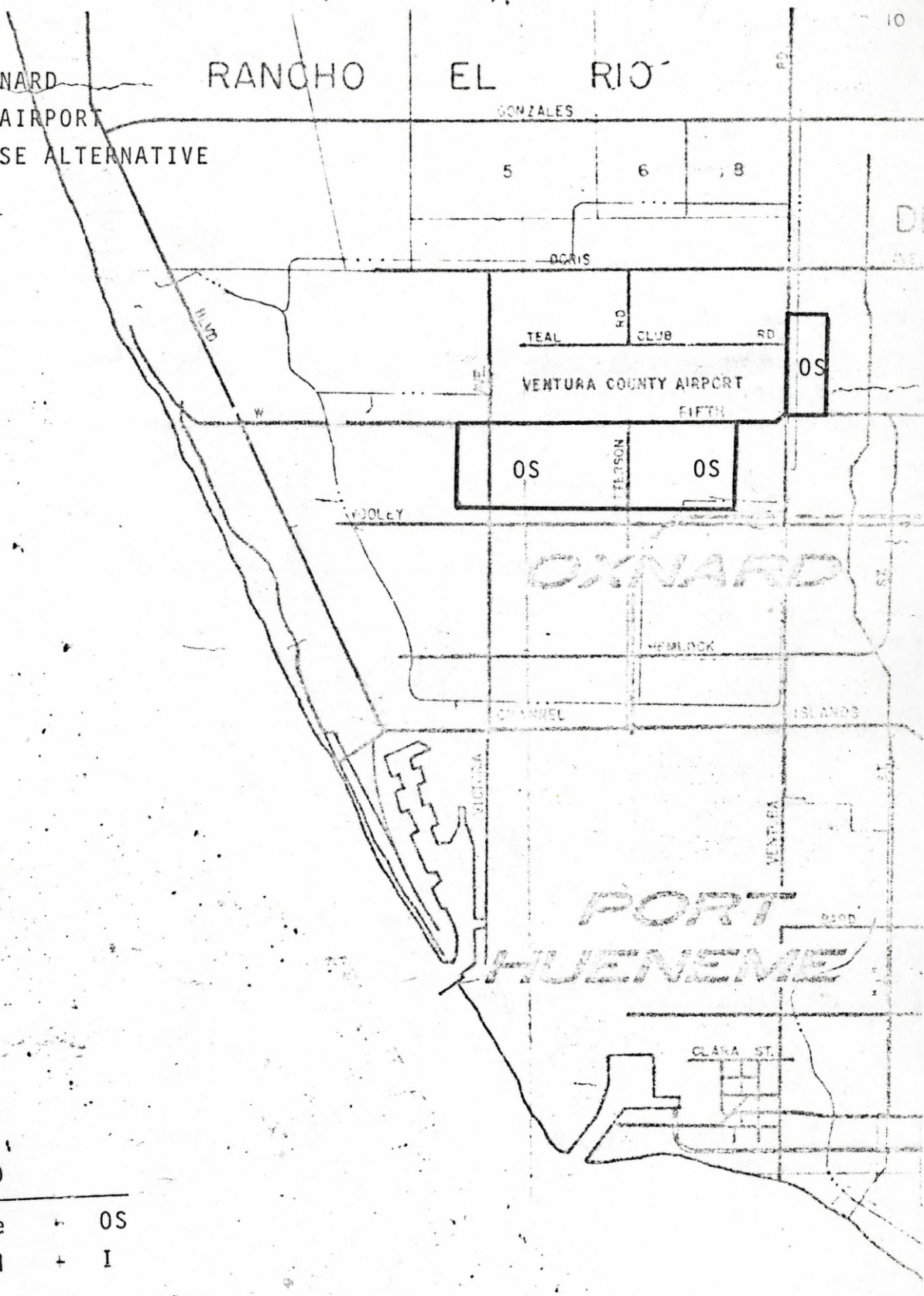

MAP TWO
SANTA PAULA
GENERAL AVIATION AIRPORT
OPEN SPACE LAND USE ALTERNATIVE
SANTA PAULA
AIRPORT
OS
OS
OS
T3N R21W
LEGEND
Open Space - OS
Industrial - I


MAP THREE
TIERRA REJADA
GENERAL AVIATION AIRPORT
INDUSTRIAL LAND USE
ALTERNATIVE
RANCHO
TRACT
MOORPARK
ROUTE
118
HILL RD.
PEACH
TIERRA REJADA
ROAD
AIRPORT
OS
I
M
H
F
G
E
A
LEGEND
Open Space - OS
Industrial - I
THOUSAND OAKS


MAP FOUR
TIERRA REJADA
GENERAL AVIATION AIRPORT
OPEN SPACE LAND USE
ALTERNATIVE
RANCHO
TRACT
MOORPARK
STATE
ROUTE
118
MOORPARK
ROAD
HILL
RD.
PEACH
TIERRA
REJADA
ROAD
OS
AIRPORT
I
M
H
F
G
E
LEGEND
Open Space - OS
Industrial - I
THOUSAND OAKS

MAP FIVE

VENTURA COUNTY-OXNARD
GENERAL AVIATION AIRPORT
INDUSTRIAL LAND USE ALTERNATIVE

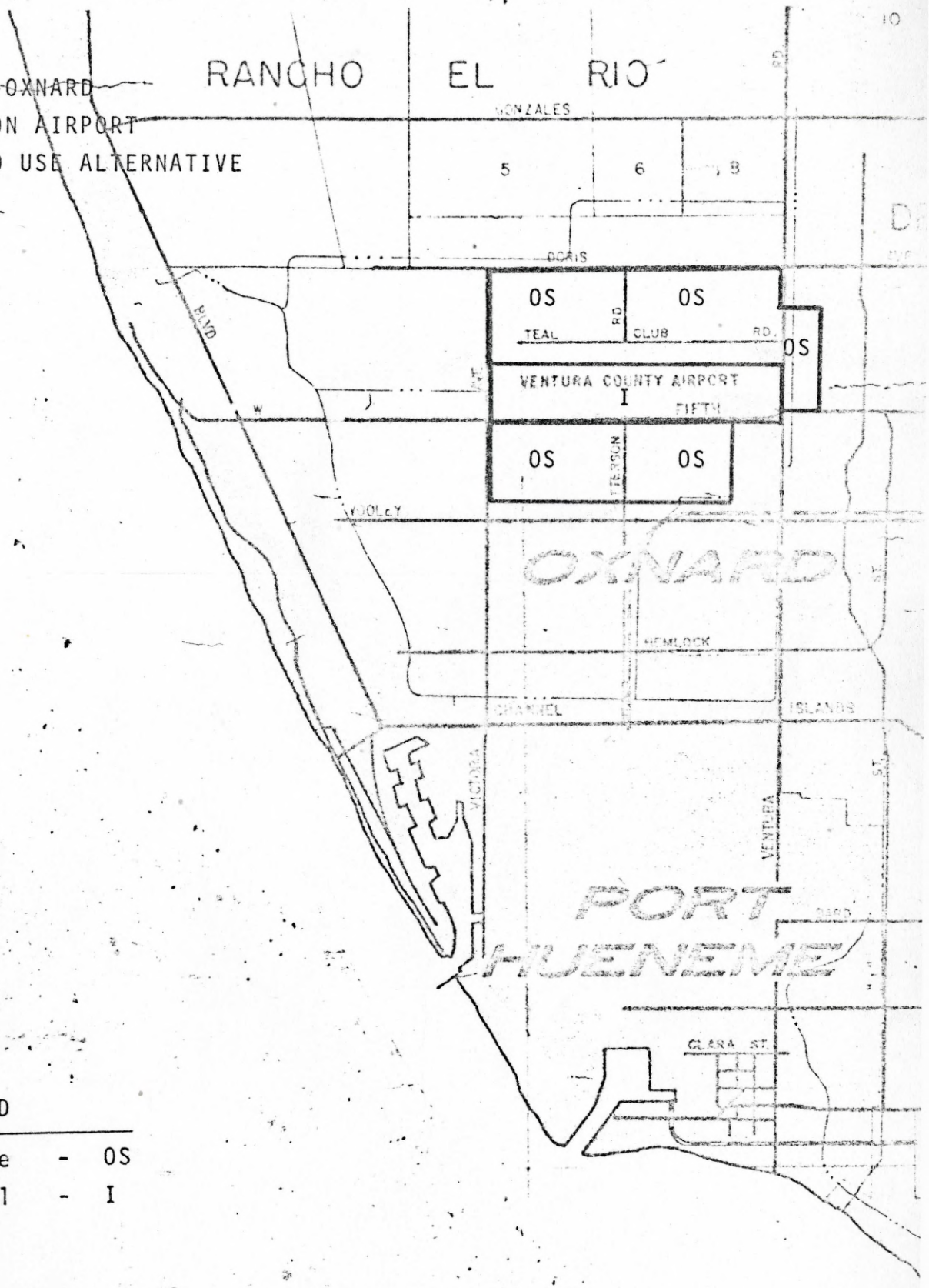


LEGEND

Open Space	+	OS
Industrial	+	I

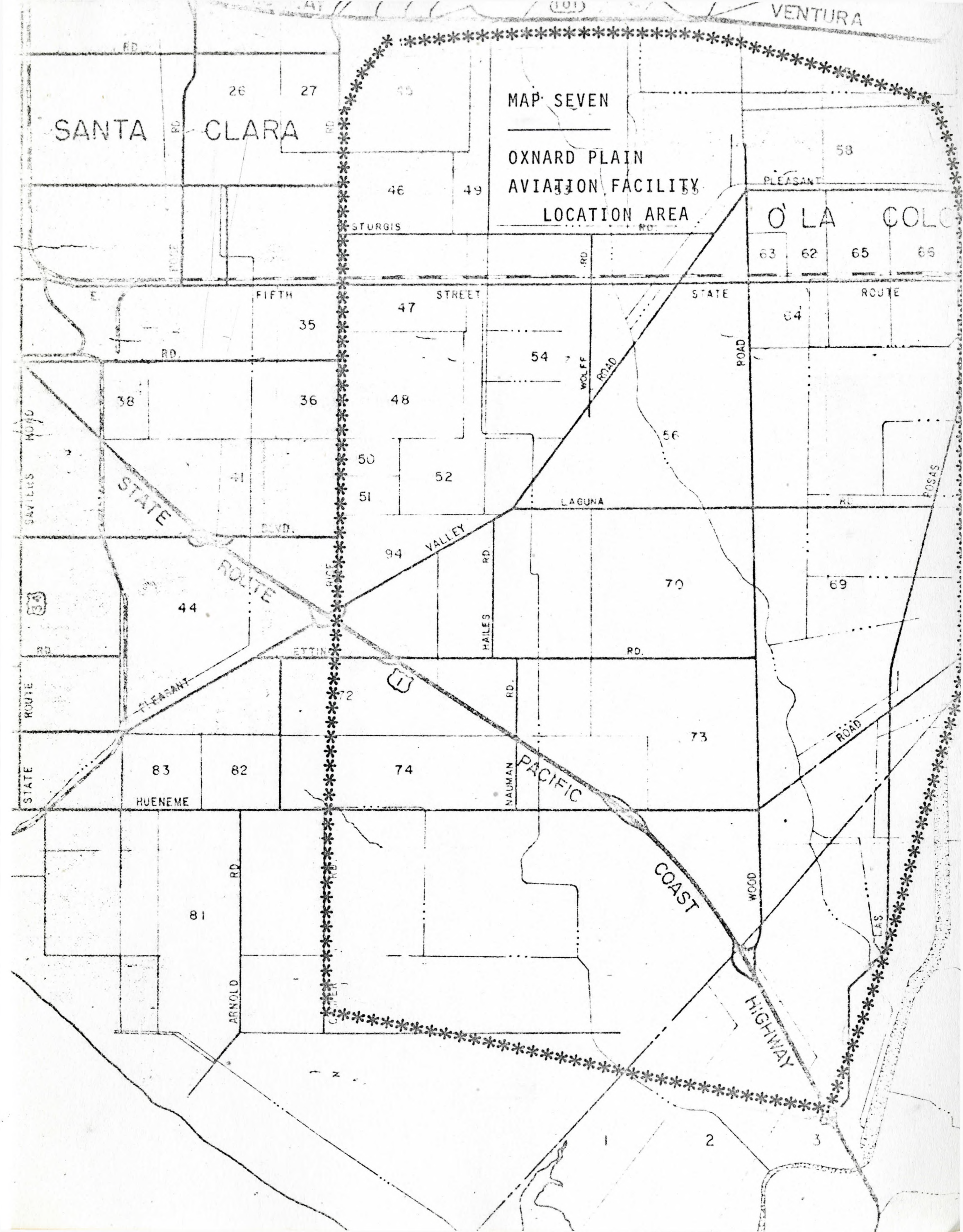
MAP SIX

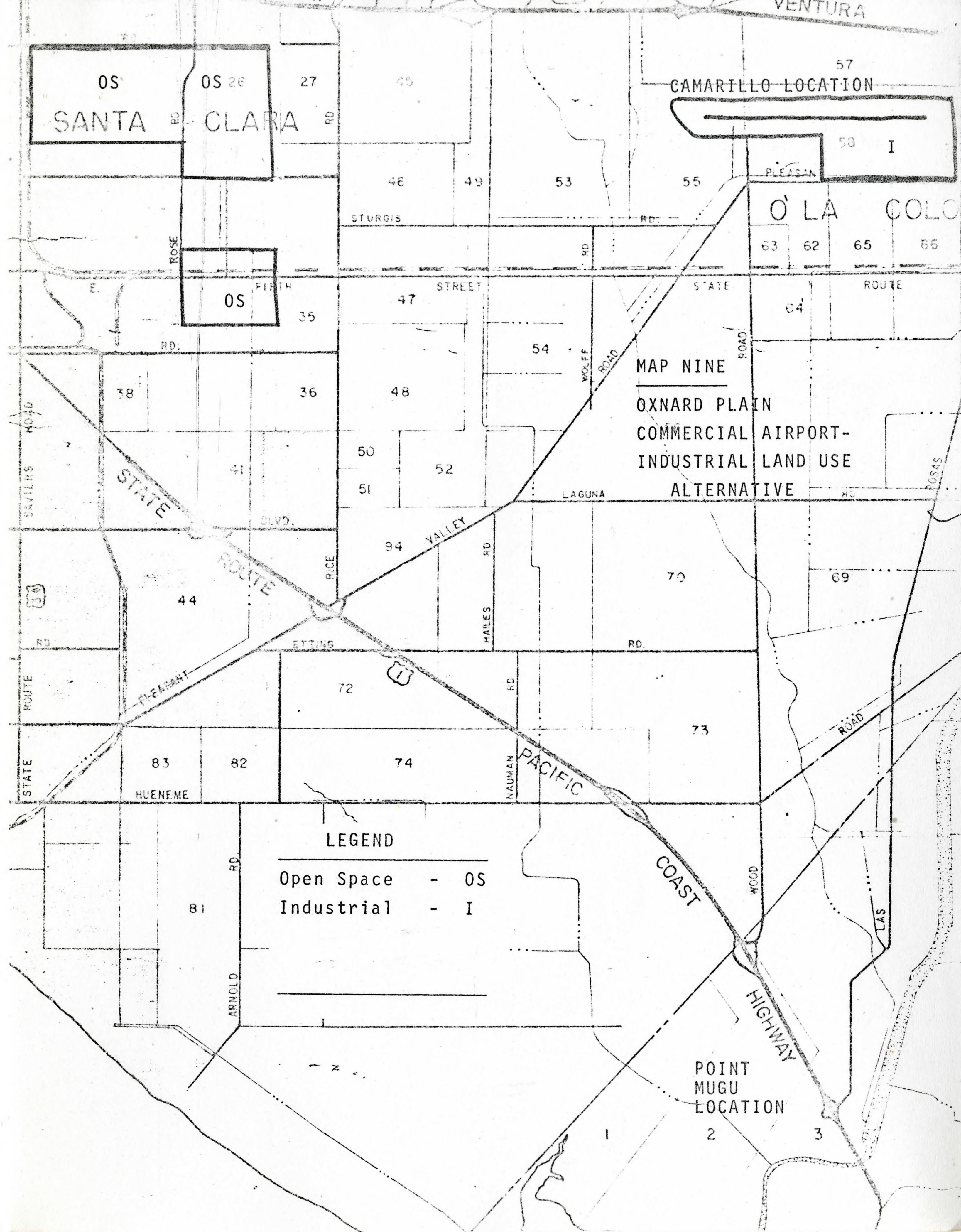
VENTURA COUNTY-OXNARD
GENERAL AVIATION AIRPORT
OPEN SPACE LAND USE ALTERNATIVE



LEGEND

Open Space - OS
Industrial - I


MAP SEVEN
OXNARD PLAIN
AVIATION FACILITY
LOCATION AREA
VENTURA
101
SANTA CLARA
RD.
26
27
46
49
58
PLEASANT
STURGIS
RD.
O LA COLO
63
62
65
66
E. FIFTH STREET
STATE ROUTE
35
47
64
RD.
54
WOLFF ROAD
ROAD
38
36
48
56
SAVIERS ROAD
41
50
52
51
LAGUNA
RD.
ROSAS
STATE ROUTE
BLVD.
94
VALLEY
RD.
34
44
70
69
RICE
HAILES
RD.
ETTING
RD.
1
PLEASANT
STATE ROUTE
72
RD.
73
ROAD
83
82
74
NAUMAN
PACIFIC
HUENEME
RD.
COAST
WOOD
81
LAS
ARNOLD
HIGHWAY
1
2
3


MAP NINE
OXNARD PLAIN
COMMERCIAL AIRPORT-
INDUSTRIAL LAND USE
ALTERNATIVE
LEGEND
Open Space - OS
Industrial - I
CAMARILLO LOCATION
POINT
MUGU
LOCATION
VENTURA
SANTA CLARA
OS
OS
OS
I
O' LA COLO
STURGIS
RD.
E. FIFTH STREET
STATE ROUTE
ROSE
WOLFF ROAD
ROAD
LAGUNA
RD
VALLEY
RICE
HAILES
ETTING
RD.
PLEASANT
STATE ROUTE
PACIFIC COAST HIGHWAY
HUENEME
NAUMAN
ARNOLD
WOOD
LAS POSAS
26
27
35
36
38
41
44
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52
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94
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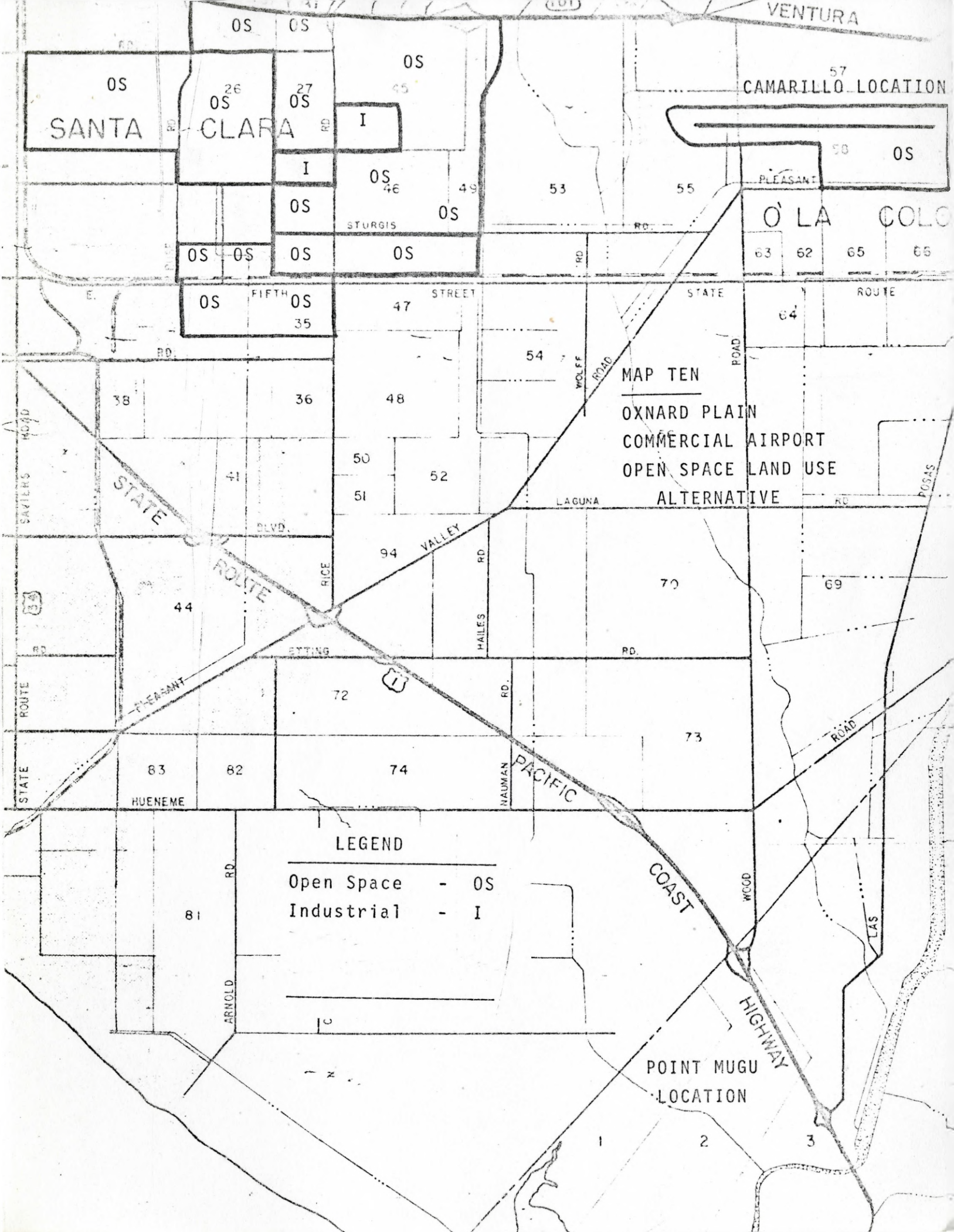
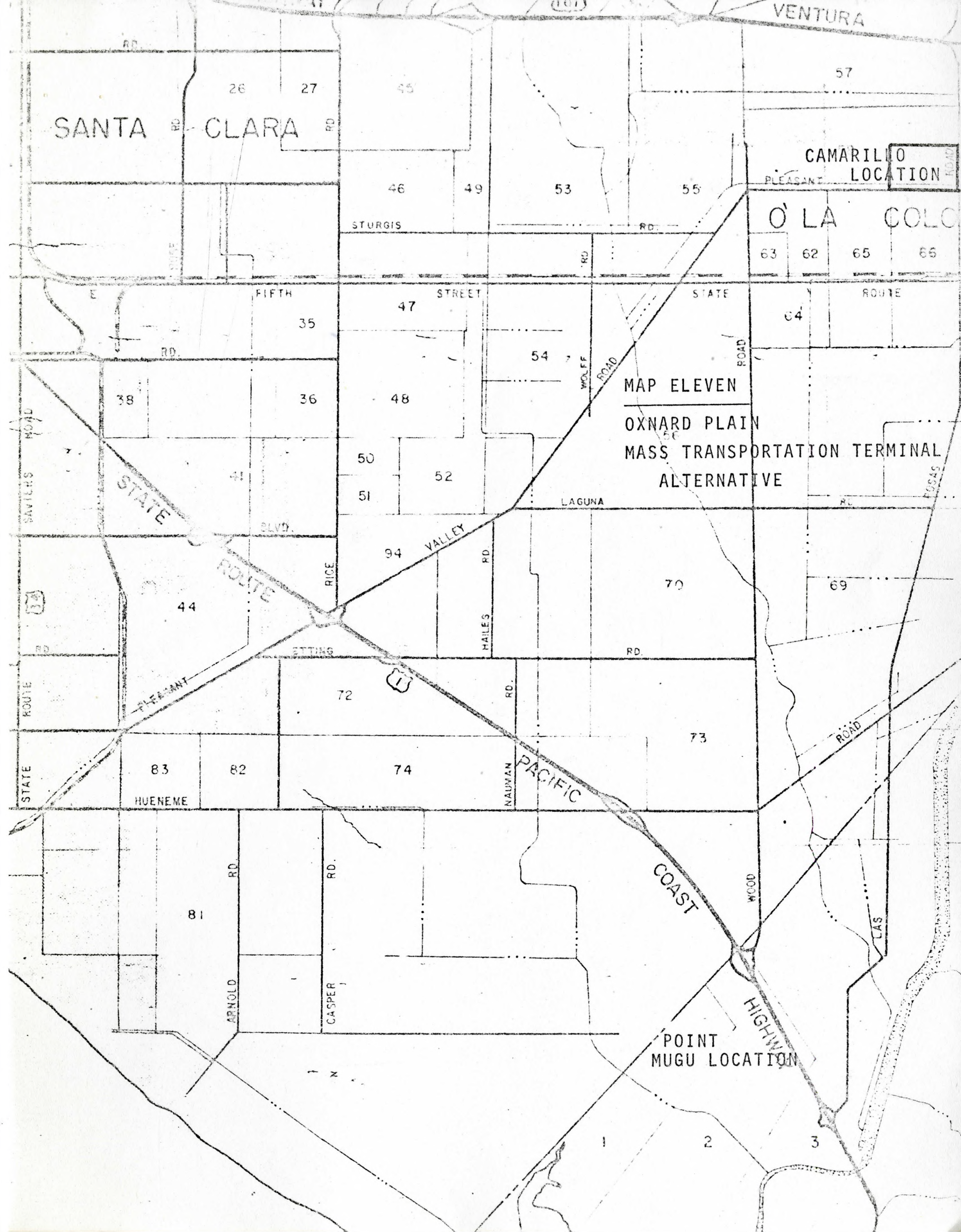

VENTURA
CAMARILLO LOCATION
SANTA CLARA
O' LA COLO
PLEASANT
STURGIS
FIFTH STREET
STATE ROUTE
WOLFF ROAD
LAGUNA ROAD
SAVIERS ROAD
STATE ROUTE
VALLEY
RICE
HAILES
ETTING
PLEASANT
ROUTE
HUENEME
NAUMAN
PACIFIC COAST HIGHWAY
WOOD ROAD
LAS POSAS
ARNOLD
MAP TEN
OXNARD PLAIN
COMMERCIAL AIRPORT
OPEN SPACE LAND USE
ALTERNATIVE
LEGEND
Open Space - OS
Industrial - I
POINT MUGU
LOCATION


MAP ELEVEN
OXNARD PLAIN
MASS TRANSPORTATION TERMINAL
ALTERNATIVE
CAMARILLO
LOCATION
POINT
MUGU LOCATION
VENTURA
SANTA CLARA
O'LA COLO
STATE ROUTE
PACIFIC COAST HIGHWAY
PLEASANT VALLEY ROAD
FIFTH STREET
STURGIS RD.
LAGUNA RD.
HUENEME
WOLFF ROAD
RICE
HAILES RD.
NAUMAN RD.
ARNOLD RD.
CASPER RD.
WOOD ROAD
SAVIERS ROAD
ETTING RD.
LAS POSAS ROAD
26
27
46
49
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57
63
62
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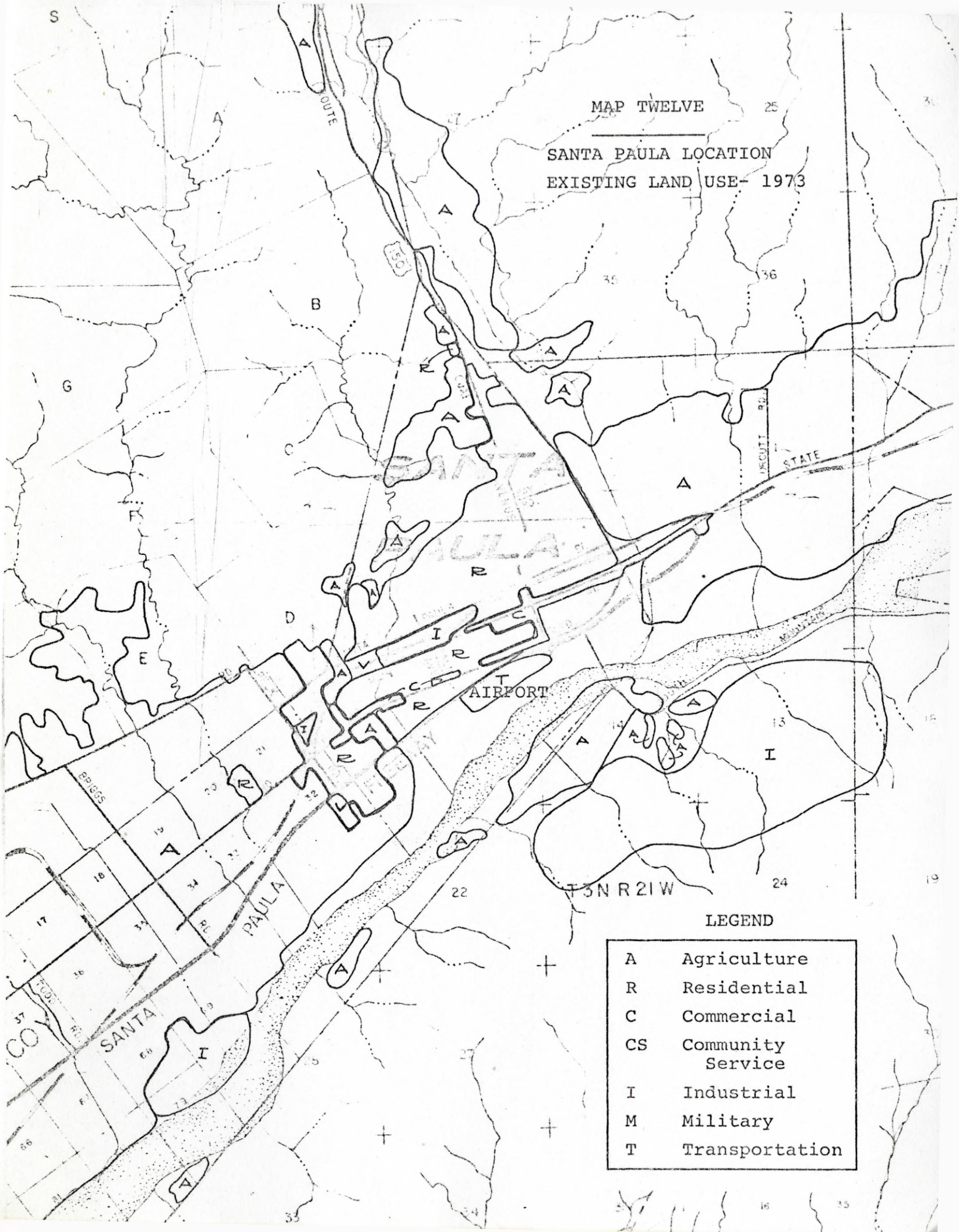
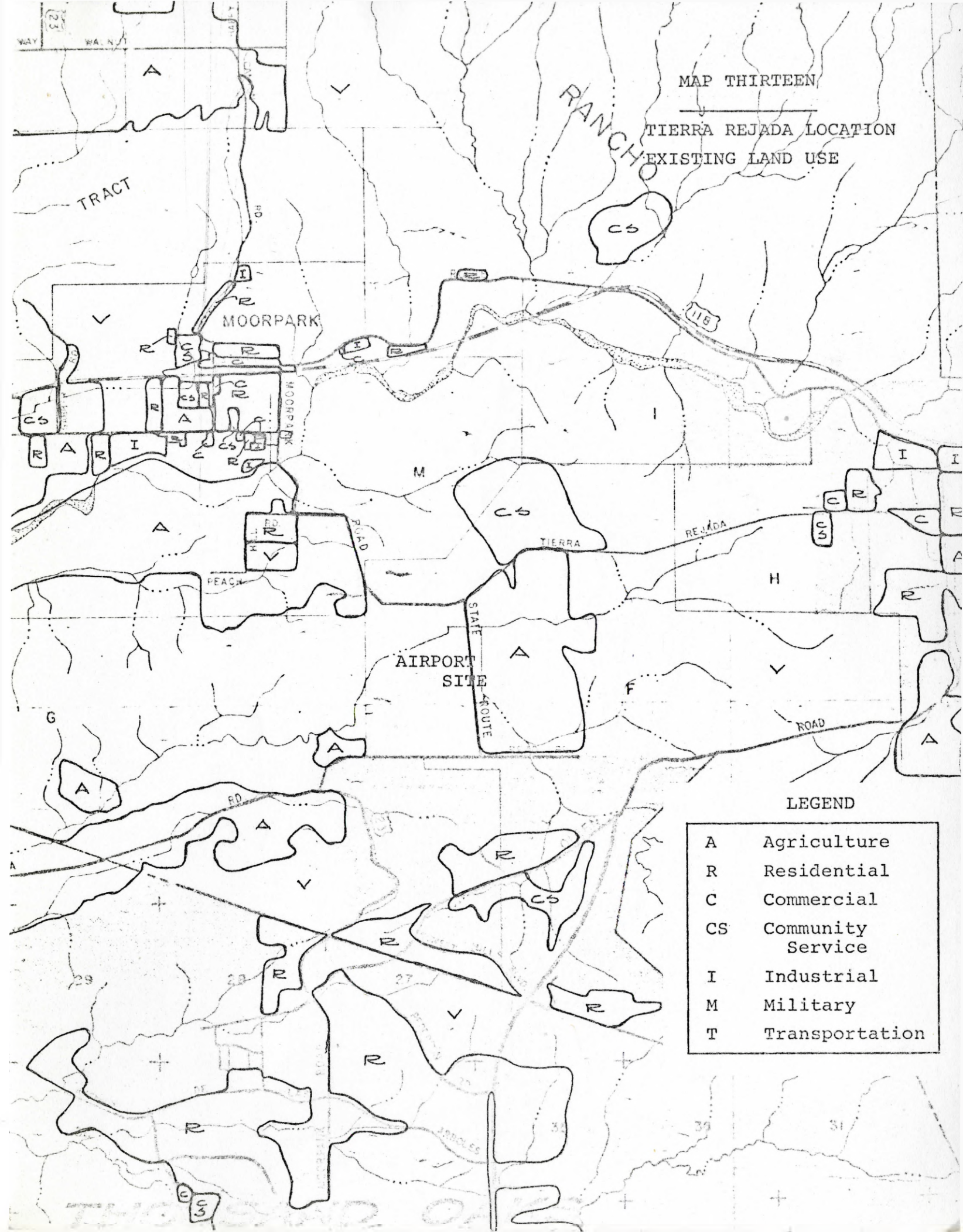
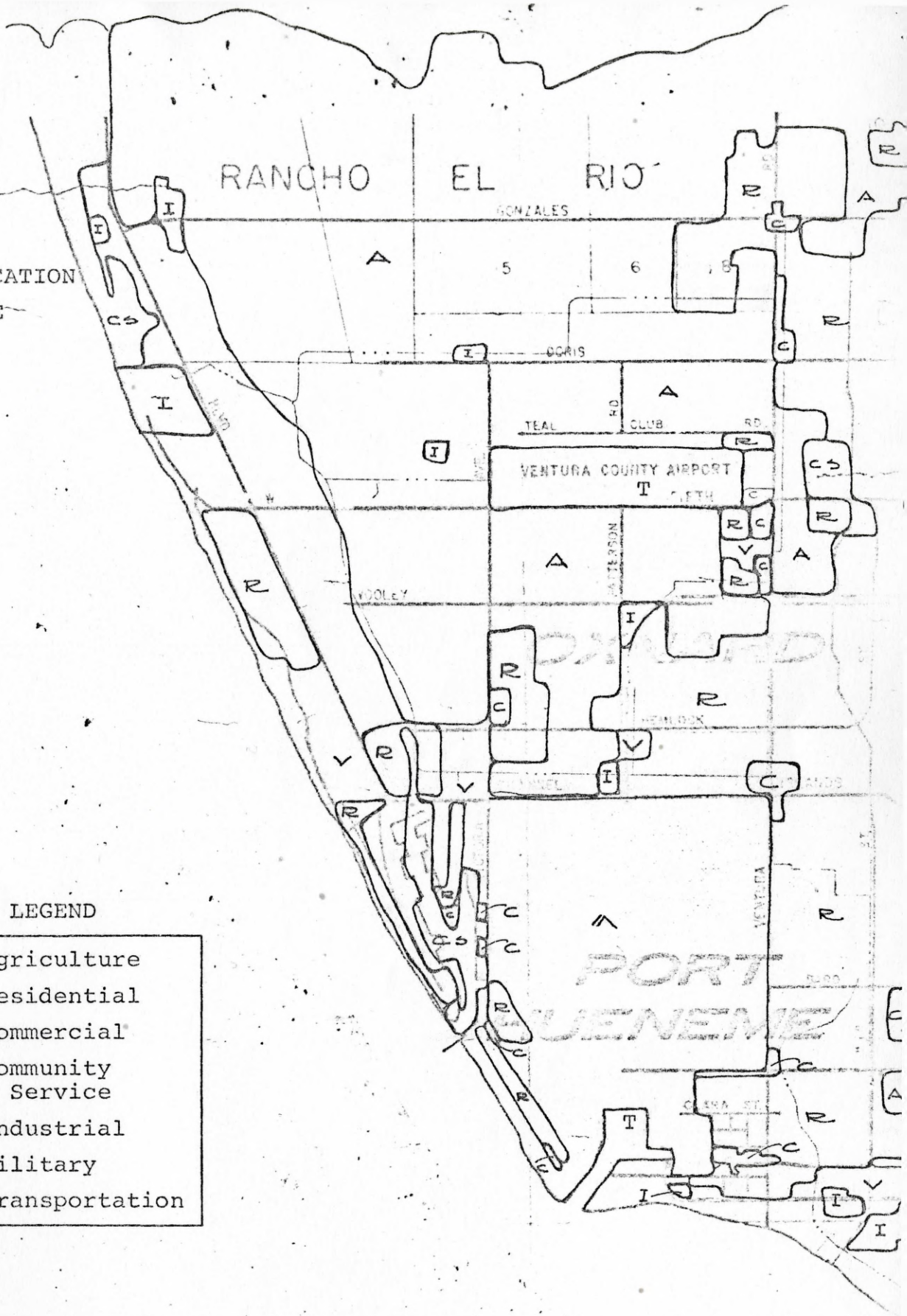
3


MAP TWELVE
SANTA PAULA LOCATION
EXISTING LAND USE- 1973
AIRPORT
T3N R21W
LEGEND
A Agriculture
R Residential
C Commercial
CS Community Service
I Industrial
M Military
T Transportation


MAP THIRTEEN
TIERRA REJADA LOCATION
EXISTING LAND USE
RANCHO
TRACT
MOORPARK
TIERRA REJADA
AIRPORT SITE
STATE ROUTE
ROAD
LEGEND
A Agriculture
R Residential
C Commercial
CS Community Service
I Industrial
M Military
T Transportation

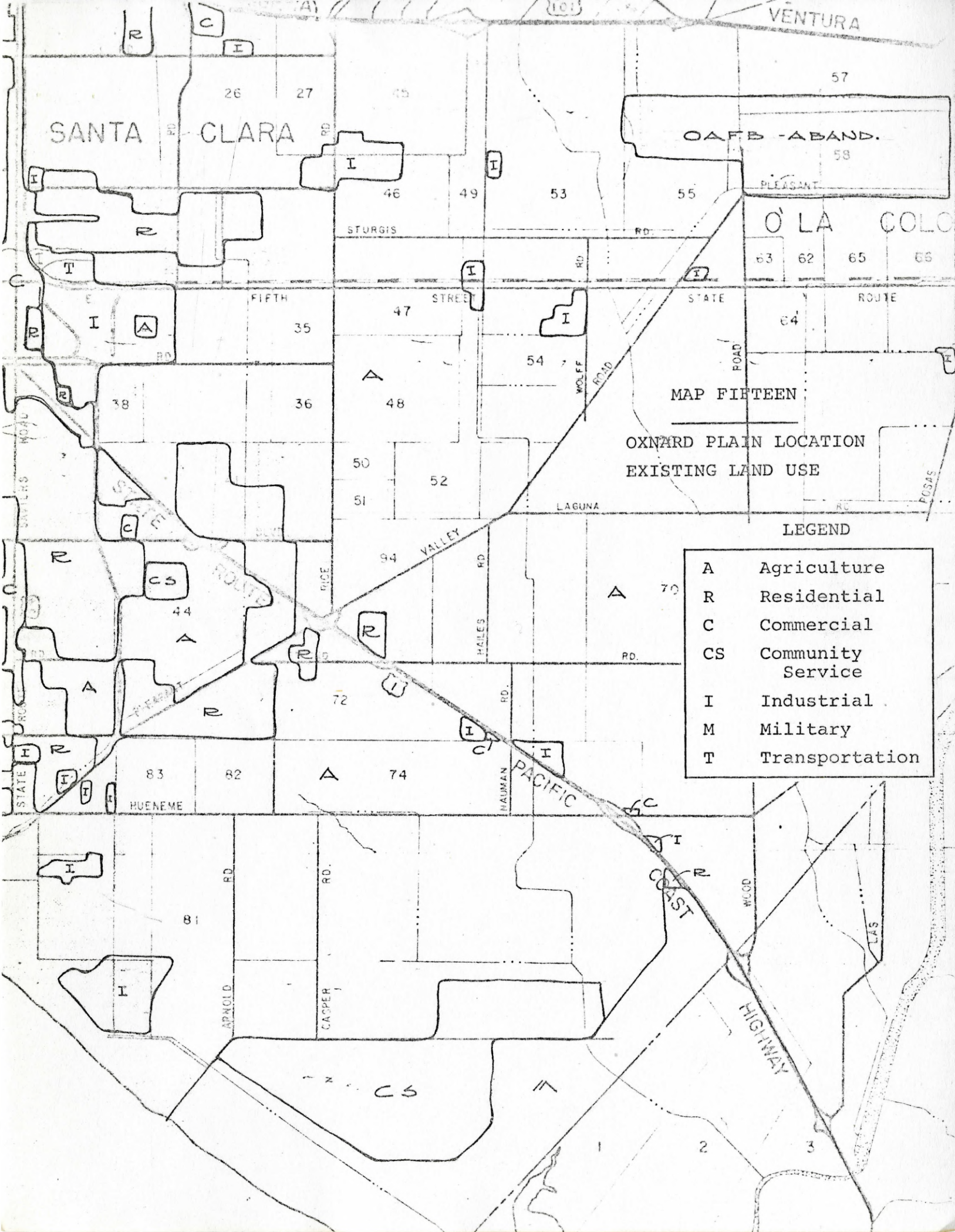
MAP FOURTEEN

OXNARD-COUNTY LOCATION
EXISTING LAND USE



LEGEND

A	Agriculture
R	Residential
C	Commercial
CS	Community Service
I	Industrial
M	Military
T	Transportation


VENTURA
SANTA CLARA
OAFB - ABAND.
PLEASANT
O'LA COLO
STURGIS RD.
FIFTH STREET
STATE ROUTE 34
WOLFF ROAD
MAP FIFTEEN
OXNARD PLAIN LOCATION
EXISTING LAND USE
LAGUNA RD.
VALLEY RD.
RICE
HALES RD.
STATE ROUTE 1
PACIFIC COAST HIGHWAY
HUENEME
NAUMAN
ARNOLD RD.
CASPER
WOOD
LEGEND
A Agriculture
R Residential
C Commercial
CS Community Service
I Industrial
M Military
T Transportation

APPENDIX II

AIRCRAFT
PROBABILITY OF ACCIDENTS FOR 1990

ACCIDENTS WITHIN ONE MILE OF A.P.	OXNARD A.F.B.		SANTA PAULA AIRPORT		TIERRA REJADA AIRPORT	
	LOW	HIGH	LOW	HIGH	LOW	HIGH
0	64%	56%	75%	72%	67%	62%
1	28%	33%	22%	24%	27%	30%
2	6%	10%	3%	4%	5%	7%
3	1%	3%	0%	1%	1%	1%
4	0%	1%	0%	0%	0%	0%

OXNARD-COUNTY
AIRPORT

YEAR	ACCIDENTS WITHIN ONE MILE	PROBABILITY OF OCCURRENCE
1974	0	76%
	1	20
	2	3
	3	1
	4	0
1990	0	66-68%
	1	26-27
	2	5
	3	2
	4	0

NOTE: The above factors are calculated from data obtained from the National Transportation Safety Board by the Assembly Committee on Natural Resources & Conservation (written by J.L. Mc Elroy); Jan., 1973. They are based on the mean accident rate for most of the nation's airports in 1970 and forecast levels of operation.

APPENDIX III

CONTENTS:

a. Proposed 1990 Transportation Corridor Network (TPPC adopted, Nov. 19, 1973).

b. Summary-Aviation Facility Alternatives (Table 1)

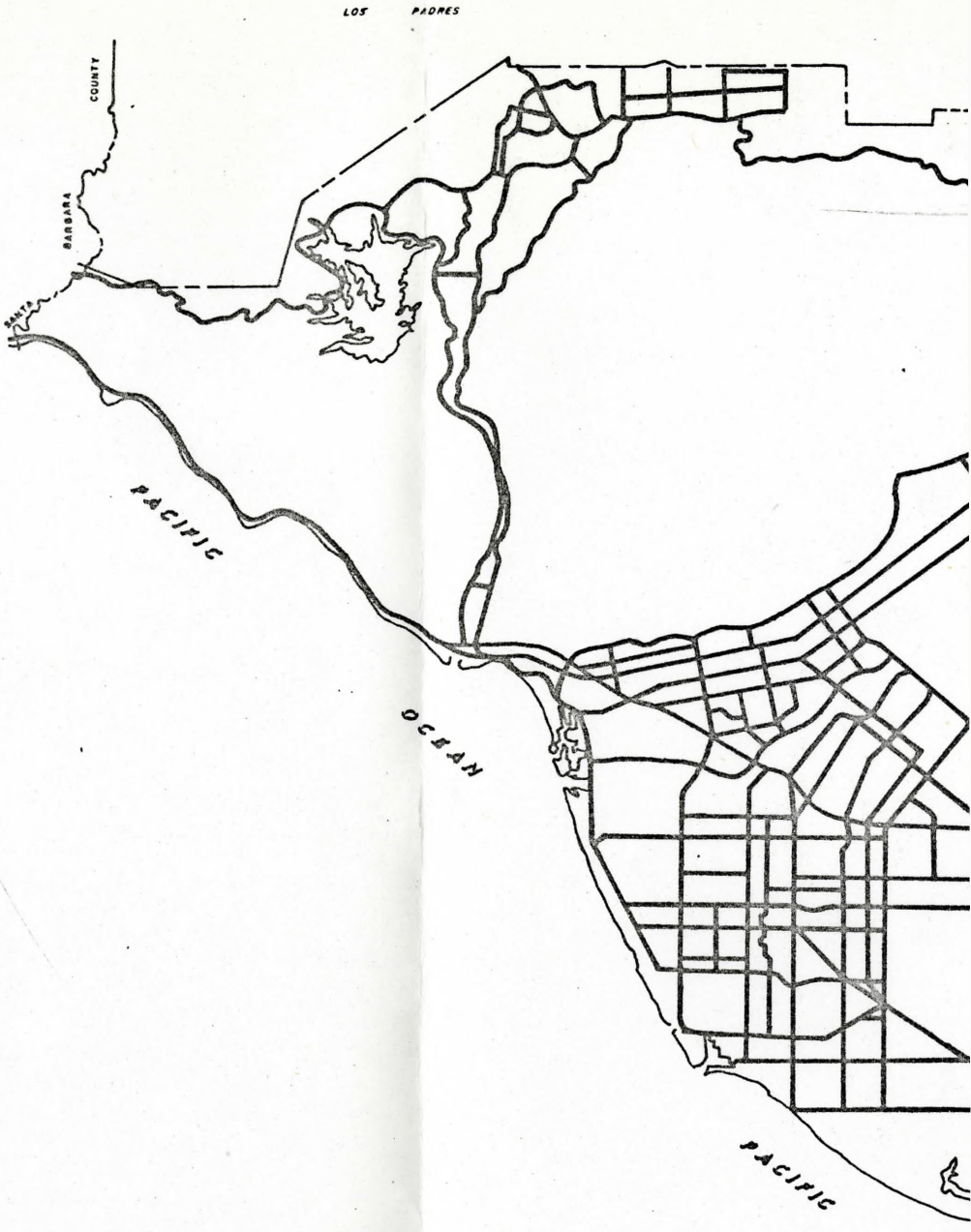
c. Rapid Transit System Cost

d. Oxnard Air Force Base, Capital Improvements and Anticipated Revenues

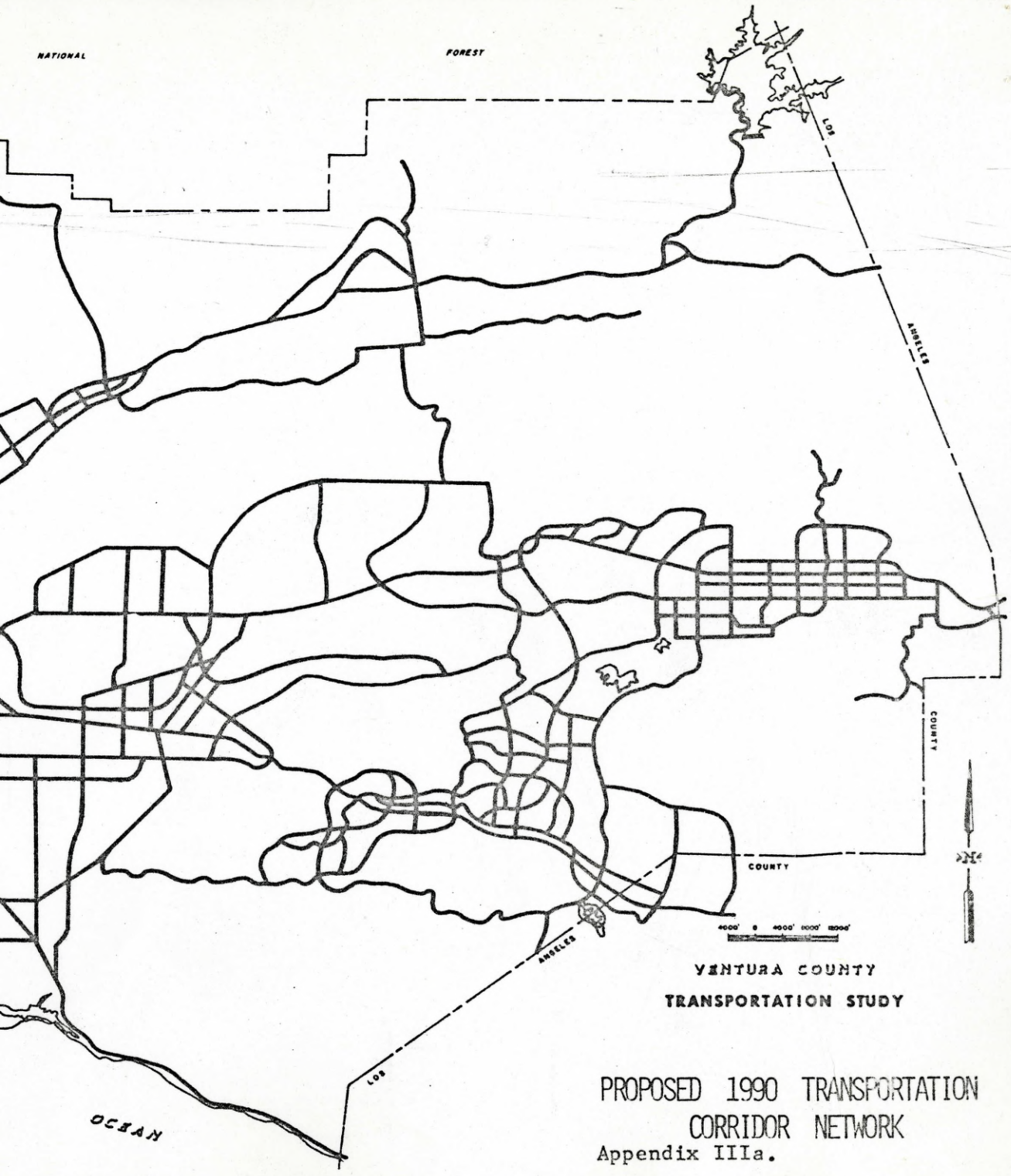
e. Development Costs for the Tierra Rejada Airport

f. Ventura County Population, July 1, 1973 Estimate

g. Ventura County Population Forecast, Urbanized Areas, 1990



Revised per TPPC recommendations (11.19.73)



VENTURA COUNTY
TRANSPORTATION STUDY

PROPOSED 1990 TRANSPORTATION CORRIDOR NETWORK

Appendix IIIa.

TABLE 1.-- 1990 AVIATION FACILITY CONCEPT

NAME AND LOCATION	TYPE	EST. COST TO DEVELOP AIRPORT FACILITIES (4)	BASED AIRCRAFT	COMMERCIAL PASS./YEAR	EST. COST OF IMPROVING SUPPORTING GROUND TRANSP. SYSTEM	EXISTING ENVIRONMENTAL CONSIDERATIONS	REMARKS
Existing Oxnard Airport	Gen.	Negligible	279	0		None	Assumes no expansion of existing facilities.
Santa Paula Airport	Gen.	Negligible	249	0		None	Assumes no expansion of existing facilities.
Tierra Rejada	Gen.	$6,031,200	396	0	$1,452,000 (1)	Env. Impact Statement, Nov. 14, 1972 County Airport and Harbor Department	See Attachment 1 for details of cost estimate.
The abandoned Oxnard Air Force Base	Comm.	$6,758,600	398	549,000	$ 672,200 (2)	Env. Impact Study Oct. 8, 1970, Adrian Wilson and Associates.	See Attachment 2 for details of cost estimate.
High Speed Ground System to LAX	Mass Rapid Transit	NA	NA	5 Million	$450,000,000 (3)	None	See Attachment 3 for details of cost estimate.

(1) 1973 Cost Estimate
(2) 1970 Cost Estimate
(3) 1973 Dollars
(4) Does not include costs of improving supporting ground transportation system.

NOTE: Surrounding land use alternatives will be shown on a display map.

RAPID TRANSIT SYSTEM COST

One of the alternatives considered in lieu of a commercial airport in the Oxnard Plains was an MRT System to Los Angeles Airport. Accordingly, some conservative rough cost estimates were developed regarding the most economical and beneficial route.

According to information received from the SCRTD, the overall cost for a comparable mass rapid transit (MRT) system in the Los Angeles basin is approximately 22 million dollars/route mile expressed in 1973 dollars. This price includes controls, stations, right-of-way, landscape, utility relocations, etc. but does not include rolling stock. For a line from Camarillo to Canoga Park, which is the closest point it can connect to the SCRTD system, the right-of-way cost and the number of stations/mile are not as high as for the SCRTD system. On the other hand, special techniques would have to be utilized to allow the system to traverse the Conejo Grade. Based on the foregoing facts, and assuming that the vast majority of the system can be constructed utilizing existing freeway right-of-way, it is estimated that the system will cost 15 million dollars/route mile.

Assuming five stops between Camarillo and Canoga Park, an average speed of 64 mph can be obtained if the maximum speed is 80 mph and the time lost due to deceleration, acceleration, and station stop is one minute.

The distance between Camarillo and Canoga Park is approximately 30 miles, therefore, the capital cost outlay for the construction of such a line would be approximately 450 million dollars. It is further estimated that it will take approximately eight years to build this MRT; and should construction begin in 1978 this would increase construction costs to an amount of 950 million dollars. The increase in cost is caused by

construction cost inflation assumed to be 9% per year.

According to SCRTD, operation costs will amount to approximately 1.5 million dollars/route mile expressed in 1986 dollars. Assuming a fare of $3.00/ride which is rather high, 15 million passengers/year would have to be attracted to break even. Assuming that all potential airport passengers would use the MRT and an additional four million passengers/year could be attracted as commuters, an operating subsidy of 30 million dollars/year would be required.

At present, the County receives approximately 2½ million dollars in revenues from SB 325. The difference would have to be covered either with increased sales tax or an added ad valorem tax.

The following calculation is included to give an indication of the magnitude of the financial impact of a project of this nature on the County. With the present assessed valuation in the County of 1.2 billion dollars, an added tax of $2.30/$100.00 assessed value would have to be charged in order to make up for the net operating loss of the system for the assumed hypothetical case. Assuming further that 2/3 of the construction cost will be financed through a federal grant by UMTA, it would leave 315 million dollars to be financed by bonds to be repaid over 20 years. The repayment of the bonds at an assumed 6% interest would increase the ad valorem tax by another $2.10/$100.00 assessed value. Thus, the total property tax rate increase to finance and operate the system would be $4.40/$100.00 assessed value.

It is significant to note that the average operating speed of 64 mph between Camarillo and Canoga Park will not significantly reduce the existing ground travel time between Camarillo and Los Angeles Airport as the route is more circuitous, and the average speed between Canoga Park and Los Angeles Airport is less than 64 mph due to numerous station stops.

OXNARD AIR FORCE BASE

SECTION IV

CAPITAL IMPROVEMENTS AND ANTICIPATED REVENUES

A. Capital Improvements

	1975	1980	1985	Total
Land	600,000	780,000	-	1,380,000
Paving Costs	648,100	80,600	1,754,500	2,483,200
Grading & Drainage	136,000	-	176,800	312,800
Runway Lighting	148,200	-	372,500	520,700
Roads	262,500	37,500	372,000	672,200
Fencing	33,500	22,000	-	55,500
Turf and Sodding	174,000	-	200,000	374,000
Terminal Buildings		462,800	925,000	1,387,800
Tie Downs	29,600	27,600	27,000	84,200
ILS	160,600	-	-	160,600
TOTALS:	2,192,500	1,410,500	3,827,800	7,430,800

NOTE: All prices are based on 1970 dollar costs.

Phase III Commercial Aviation Feasibility Study
Adrian Wilson & Assoc. 1970

DEPARTMENT OF PUBLIC WORKS

7-12-73

Development Costs for the Tierra Rejada Airport

Distribution of Estimated Costs

Item	Est. Cost	G. F.	Road Fund	VCFCD	State	Federal
1. Land Acquisition						
Approx. 170 Acres	$1,650,000	$233,000	-	-	$97,000	$1,320,000
Sub. Total	1,650,000	233,000	-	-	97,000	1,320,000
2. FC Channel 3-32B						
a. Design						
Channel	37,800	2,500	-	5,100	-	30,200
Debris Basin	16,200	3,200	-	-	-	13,000
b. Construction						
Channel	1,196,000	120,000	-	714,000	37,000	625,000
Debris Basin	180,000	36,000	-	-	-	144,000
Sub Total	1,730,000	161,700	-	719,100	37,000	812,200
3. Moorpark Rd. Reloc.						
a. Design	79,000	-	15,800	-	-	63,200
b. Construction	1,373,000	192,700	320,000	-	94,300	845,000
Sub Total	1,452,000	192,700	335,800	-	94,300	908,200
4. Utility Relocation						
a. SCE Power Lines	750,200	74,100	-	-	74,100	602,000
b. Gen Tel. Lines	16,000	1,600	-	-	1,600	12,800
Sub Total	766,200	75,700	-	-	75,700	614,800
5. Airport Facilities						
a. Design	225,000	27,000	-	-	18,000	180,000
b. Construction	1,600,000	192,000	-	-	128,000	1,280,000
Sub Total	1,825,000	219,000	-	-	146,000	1,460,000
6. Sewer System (Interim)	60,000	12,000	-	-	-	48,000
Sub Total	60,000	12,000	-	-	-	48,000
7. Totals	$7,483,200	$894,100	$335,800	$719,100	$450,000	$5,163,200

Appendix IIIe

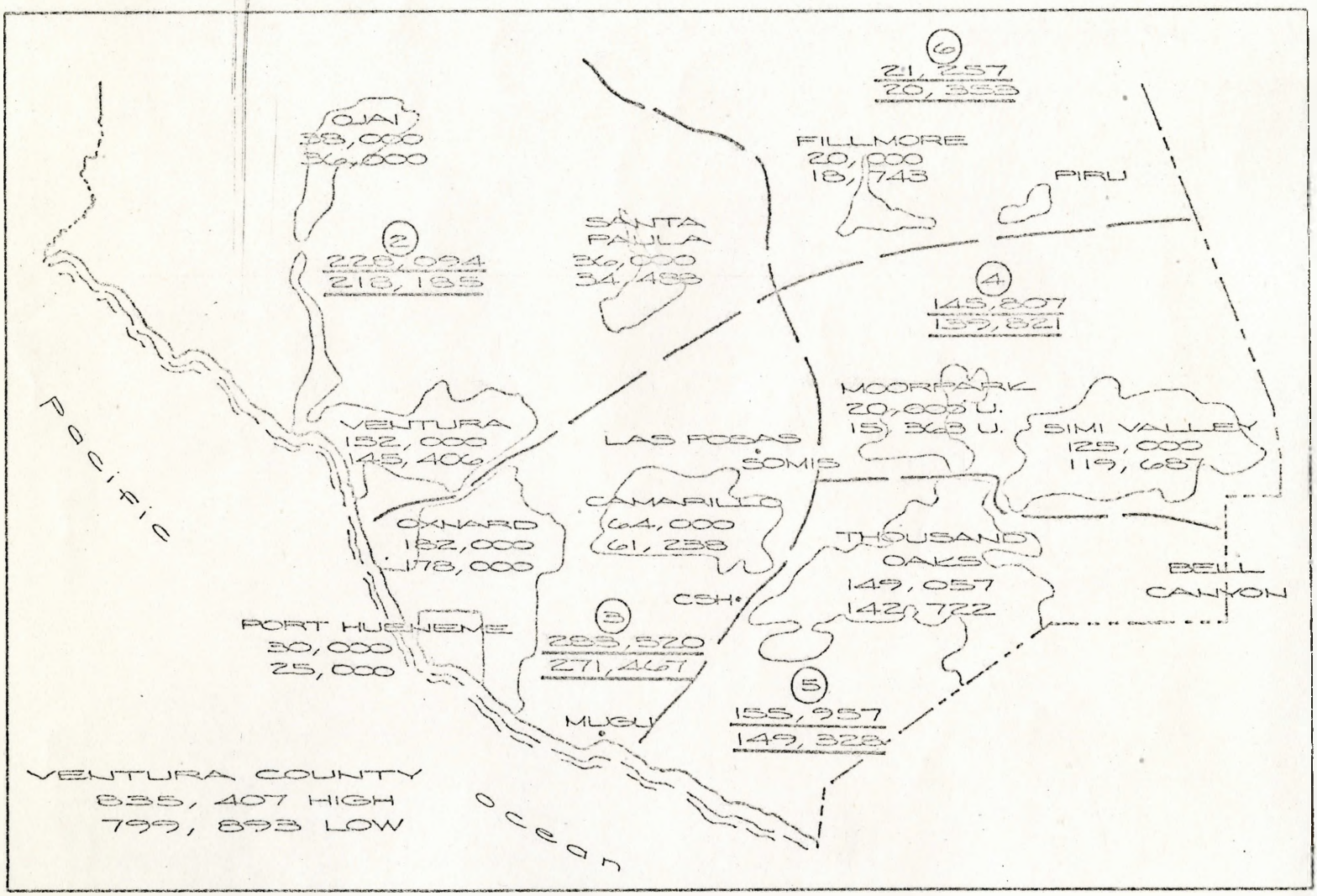
VENTURA COUNTY
POPULATION
JULY 1, 1973 ESTIMATE

LEGEND

	Incorporated areas only	81,685
	Unincorporated Area	U
—— —— (2)	Regional Statistical Area	154,327
	Census Tract	**

11.19.73
11.27.73 Revised mkh

VENTURA COUNTY
URBANIZED AREAS
POPULATION FORECAST-1990
HIGH-LOW



LEGEND

Urbanized Area*	81,684
Unincorporated Area	1,400U
(2) Regional Statistical Area	154,327

*Urban Take Line from Ventura County Open Space Plan

11.19.73