Orange Park Acres

RESOLUTION NO. 3915

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ORANGE UPHOLDING THE RECOMMENDATION OF THE PLANNING COMMISSION OF THE CITY OF ORANGE AND APPROVING AND ADOPTING A LAND USE ELEMENT OF THE GENERAL PLAN FOR A PORTION OF THE CITY AND ADJACENT UNINCORPORATED PLANNING AREA IN THAT TERRITORY KNOWN AS ORANGE PARK ACRES AS SET FORTH IN THAT CERTAIN PLAN PREPARED BY J. L. WEBB PLANNING CONSULTANTS, DATED SEPTEMBER 1973.

CITY OF ORANGE

RECITALS:

After the Planning Commission of the City of Orange conducted a public hearing as required by law to adopt a land use element of the General Plan for a portion of the City and adjacent unincorporated planning area in territory known as Orange Park Acres, as set forth in that certain plan prepared by J. L. Webb Planning Consultants, dated September 1973 and after the Planning Commission made certain revisions in the plan as proposed, the City Council considered the recommendation of the Planning Commission and determined that this part of the land use element, to wit, the Orange Park Acres Plan, as more particularly described in a map and description now on file in the office of the Director of Development Services and the City Clerk of the City of Orange should be adopted as part of the required land use element of the General Plan for the City of Orange.

During the public hearing before the City Council, the following facts were established:

1. That the Orange Park Acres Plan approved and adopted herein is part of the required land use element to be included in a General Plan for the City of Orange.

2. That the Orange Park Acres Plan is an important link in the overall comprehensive general planning effort of the City of Orange and will serve as a valuable tool in guiding and directing the future development of the Orange Park Acres community.

3. That the Orange Park Acres Plan meets General Plan criteria set forth in Section 65302(a) of the California Government Code. Sections 65352 and 65357 further authorize local governments to adopt General Plan elements and amendments for all or a portion of a city and a surrounding planning area by resolution.

4. That Environmental Impact Report No. 141 filed in conjunction with the Orange Park Acres Plan has been considered and, based upon the independent analysis and recommendation by the Staff and Planning Commission, the City Council finds that the adoption of the Orange Park Acres Plan would have no significant adverse effect on the environment. Indeed, the City Council feels that the adoption of the Orange Park Acres Plan will enhance and improve the environment of the City of Orange.

5. That the adoption of the Orange Park Acres Plan will promote desired planning goals of the City of Orange and the general welfare of its citizens.

6. Four persons spoke concerning these plans and suggested certain modifications and conditions thereto.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Orange that the recommendation of the Planning Commission of the City of Orange be upheld and that the herein described General Plan for the Orange Park Acres area for a portion of the City and adjacent unincorporated planning area in that particular territory as set forth in that certain plan prepared by J. L. Webb Planning Consultants, dated September 1973 and as amended by the Planning Commission on November 19, 1973, be adopted and approved as a part of the land use element of the City of Orange and that copies of this plan be maintained on file in the office of the Director of Development Services, the City Clerk, and in the offices of other public entities as permitted or required by law in order that this plan may be readily accessible to members of the public.

BE IT FURTHER RESOLVED that copies of the herein described General Plan be forwarded to the Secretary of the Resources Agency of the State of California.

ADOPTED this 26th day of December, 1973.

Mayor of the City of Orange

ATTEST:

CHARLOTTE M. JOHNSTON
City Clerk of the City of Orange

I hereby certify that the foregoing resolution was duly and regularly adopted by the City Council of the City of Orange at a regular meeting thereof held on the 26th day of December, 1973, by the following vote:

AYES: COUNCILMEN: Hoyt, Jackman, Smith, Perez

NOES: COUNCILMEN: None

ABSENT: COUNCILMEN: Temple

CHARLOTTE M. JOHNSTON
City Clerk of the City of Orange

Orange Park Acres
Specific Plan

September, 1973

Prepared at the Request

of

The Orange Park Acres
Development Committee

by

J L WEBB PLANNING
DESIGN PLAZA, 220 NEWPORT CENTER DRIVE, SUITE 22
NEWPORT BEACH, CALIFORNIA 92660 (714) 644-7355

The Orange Park Acres Development Committee

NORMAN BROCK

WILLIAM D. FANSHER

SHIRLEY GRINDLE

JAMES A. JACKMAN

LOWELL KVINGE

DR. GERALD PODOLAK

DON E. SMITH

RICHARD B. SMITH

Representing

Residents

The City of Orange

The County of Orange

Developers

Landowners

Credits

HERMAN KIMMEL AND ASSOCIATES
Traffic and Circulation

PACIFICO MONTANO, C.E.
Geology and Soils

PHILIP W. RUNDEL AND ASSOCIATES
Biological Resources

ULTRASYSTEMS, INC.
Air Quality and Noise

WOODSIDE/KUBOTA AND ASSOCIATES
Hydrology and Service Systems

GRATEFUL APPRECIATION
FOR PLANNING INPUT TO:

THE CITY OF ORANGE
Especially To Robert Mickelson

THE COUNTY OF ORANGE

ORANGE UNIFIED SCHOOL DISTRICT

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Introduction

LOCATION

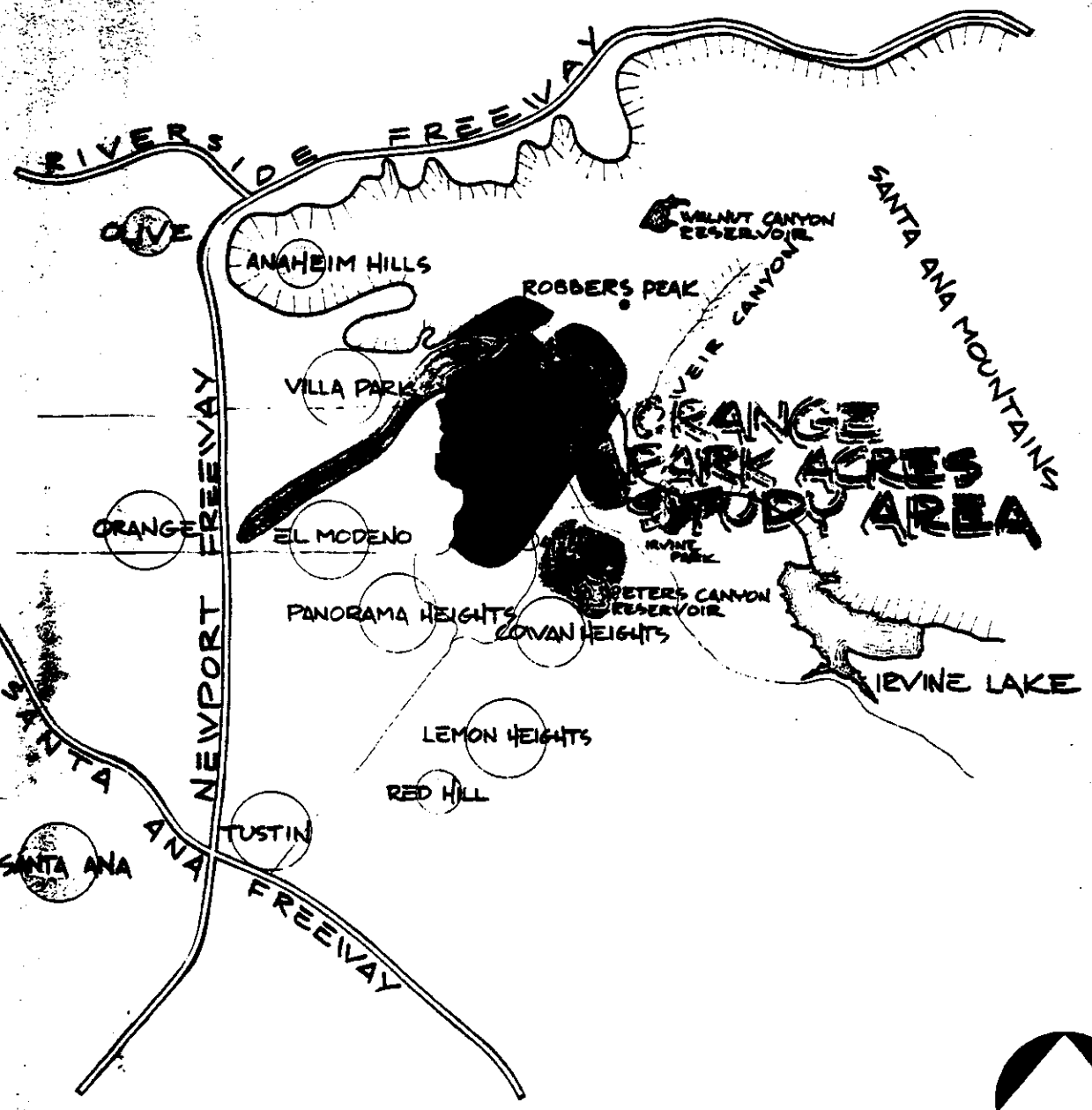
Orange Park Acres is located in the eastern foothills of the Santa Ana Mountains, south of the Peralta Hills and Santiago Creek and just north of the central plain area of Orange County known as the Tustin Plain. It is approximately three miles east from the Newport Freeway along Chapman Avenue or Santiago Canyon Road as shown on Exhibit # 1 (Vicinity Map).

PURPOSE

The development of Orange Park Acres has been an issue of major controversy between the developers, major landowners and residents of the area. It has been agreed that a Specific Plan identifying goals, objectives, policies and recommended land uses, in particular, is required in order to resolve the controversy. Toward this end, a Development Committee for Orange Park Acres was established on May 16, 1973. Members of this Committee represent the City of Orange, County of Orange, residents of Orange Park Acres, major landowners and developers of Orange Park Acres. This Committee has endorsed the preparation of this Specific Plan for Orange Acres. Because of financial impositions imposed upon major landowners who are ready to develop their property and the continual conflicts between landowners, developers and residents, an eight week time frame was established for the completion of this Plan.

SCOPE

This Plan involved the collection and study of information on the existing physical, social and economic environment and the identification of status of existing planning affecting the area. Upon a collection of this information, an evaluation of the opportunities and constraints to the development of a Specific Plan was made and a listing



ORANGE PARK ACRES

VICINITY MAP

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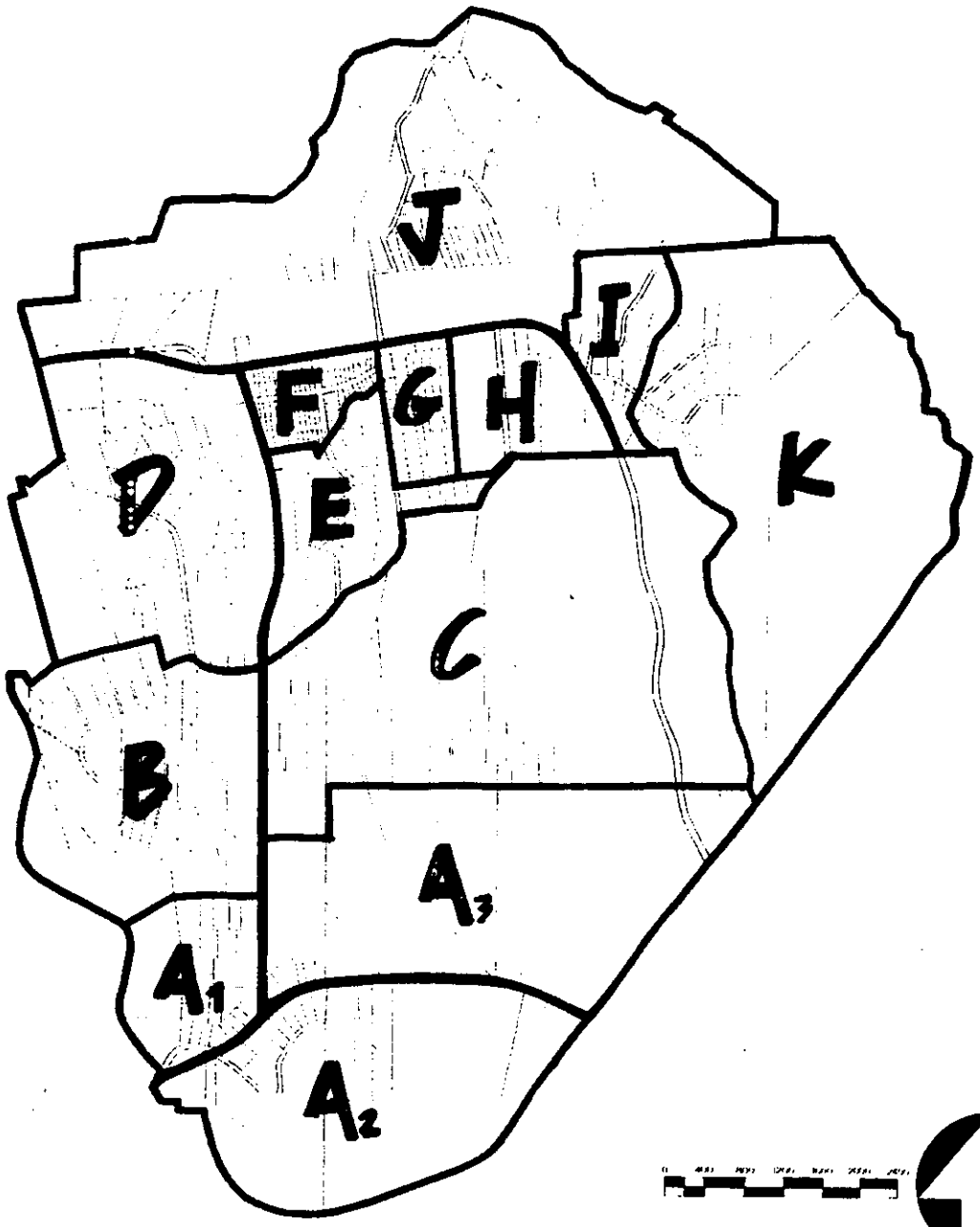
of the goals, objectives and potential policies was prepared. Within this context alternative plans were prepared and evaluated and specific recommendations made toward the development of the proposed Specific Plan for Orange Park Acres.

Special studies in the areas of Traffic and Circulation, Geology, Biological Resources, Air Quality, Noise, Water, Sewer and Drainage were conducted by specialists in each of these areas. Other special studies and analyses of note include a Resident/ Landowner Questionnaire, Market Research, Cost/Benefit Analysis, View and Image Analysis, Education Analysis, extensive field investigations and Trails Study carried out by J.L. Webb Planning. The County and City of Orange have supported this project through the cooperation of the various staff members in providing needed background information, maps and research material. The approach to this proposed Plan has been to include all of the relevant information and elements to the greatest degree possible in the time frame allowed.

In order to evaluate differences within the community, Orange Park Acres has been divided into study area "sectors" as shown on Exhibit # 2 (O.P.A. Study Area Sectors). These areas are reflected in the depiction of questionnaire results and identification of other statistical information within this report.

In the process of preparing this Specific Plan, questions, which need to be answered outside of the range of this Plan, have arisen and have been identified within the "Recommendations Section" of this report.



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STUDY AREA SECTORS

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HISTORY

The development of Orange Park Acres as it is known today had its beginning around 1929 with the establishment of Tract # 918. Deep wells were drilled near Santiago Creek and the Orange Park Acres Mutual Water Company was formed to serve the developing agriculture of the area. Most all of the area was planted in oranges, lemons and avocados. Also Eucalyptus hedgerows were planted to protect the crops. There were a few homes built in the area within some of the groves. In the late 1940's chicken ranchers began to establish operations within the area to such a degree that they received strong reactions from some of the other residents of the area. In the late 1950's, in conjunction with the poultrymen, there was an average one-acre minimum lot size, single-family residential zoning established for the area. This was intended to retain a balance between residential, farming and ranching activities and to perpetuate a rural life style. The next phase of development saw the further growth of residential development as agriculture diminished within the area. Lot splits from five down to one-acre parcels were typical in the 1960's and 1970's and the raising and keeping of animals increased sharply in the area. A large number of houses built on the lot-splits within the area were "move-ins" or houses that had been cut apart and trucked to a building site and reassembled at the site.

In 1962 and 1965 the City of Orange annexed an area surrounding the northern portion of the Orange Park Acres Study area.

Citrus and Eucalyptus hedgerows continued to decline in the area and a new element of change - large scale housing proposals and development - affected the area most dramatically. On a parcel just east of Meads Avenue, sixty-five new tract homes were constructed and sold in 1973. Another twenty-seven units were under construction in the vicinity of Winds

Drive and approximately 480 more houses on smaller than one-acre lots were proposed for development within the area by developers according to tentative tract maps. These proposals alone would more than double the number of homes in the area, but more than this, the residents saw this as a threat to the rural atmosphere in which they had purchased. Today the area is under great pressure for development and the viability of agriculture is questionable due to the high taxes and the fact that many trees are old and not producing good yields. The desire of some large landowners is obviously to sell their land for development. The area has demonstrated strong market appeal in the sales of the Klug and G.L. Lewis tracts and the sale of lots and move-in houses within the area. The question now is, "How can development be allowed to occur in a way which will maintain the rural atmosphere and yet provide for an economically viable Plan for development?" This report proposes to answer this question within the recommendations of the Specific Plan proposal.

Existing Environment

EXISTING PHYSICAL ENVIRONMENT

The physical environment contains those elements which directly affect the development potential of an area. This report deals with each of these major elements in enough depth to determine development feasibility and to aid in the establishment of policies which reflect the Goals and Objectives for Orange Park Acres.

CLIMATE

Orange Park Acres is at the eastern fringe of the Santa Ana Mountains Thermal Belt Zone which is ideal for citrus and only slightly influenced by the ocean with temperatures ranging from 23 degrees to near 100 degrees with peak summer averages of about 73 degrees. The precipitation is around 15 inches per year on an average. The winds in this area are typical to the Orange County area with northeasterlies and sea-land breezes being prevalent and the historic Santa Anas occurring less frequently with more velocity. Frost and fog are also typical for this temperature zone within Orange County. Further discussion of air quality may be noted in the "Air Resources" Section of this report.

PHYSIOGRAPHIC SETTING

The major land forms include the steep hills to the west and south whose ridgeline forms the boundary for the study area. To the north and east is Santiago Creek which also forms boundaries for the study area. Within the study area are the hills which make up a landmark known as Rattlesnake Peak and to the south are vacant rolling hills. Handy Creek bisects the flatter central valley area generally in a north-south direction (see Exhibit # 3 - Land Forms)., The elevations for this area range from 400 ± feet to 900 ± and much of the area contains steep categories of over

ORANGE PARK ACRES

MAJOR LAND FORMS

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thirty percent (see Exhibit # 4 - Slope Analysis). A distinctive topographic characteristic of the hills within the area is their abrupt transition from over thirty percent slopes to less than ten percent slopes. This makes development on the hillsides very difficult.

In summary, Orange Park Acres is a secluded valley bisected by a small creek and rolling hills and bounded by steep hills and a major creek.

VIEW AND SITE ANALYSIS

There are eight categories of view potential described on the Exhibit # 5 (View Analysis Map). These categories are comprised of various combinations of views to the Santiago Creek area, the surrounding hills, the central valley of Orange Park Acres, local canyon views, views to the Peters Canyon Lake area and distinct views to the western portion of Orange County. A dominant factor affecting views from the site today is the extensive presence of Eucalyptus hedgerows which restrict and limit much of the long range view potential identified on the View Analysis Map. Some of the most dramatic views occur from the hilltops surrounding the area and with the exception of homes west of Morada Drive and around Rattlesnake Peak, these views have not been taken advantage of by the existing development.

Separate from the views available from a given home site, is the view of the environment and the visual image one has of the total environment as one travels the roads and trails and generally experiences the area. Exhibit # 6 (Image Analysis) depicts this view by showing the following elements:

Paths - major and minor roads which are used within the area

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SLOPE ANALYSIS

0 - 10 %

10 - 20

20 - 30

30 - UP

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ORANGE PARK ACRES
-VIEW ANALYSIS-

- AND DISTANT HILLS
- AND IRVINE PLAIN
- ACRES AND EAST HILLS
- LOCAL CANYONS
- WATER
- NORTH ORANGE PARK ACRES AND WEST ORANGE COUNTY
- CENTRAL ORANGE PARK ACRES AND NORTH HILLS
- LOCAL ORANGE PARK ACRES AND SURROUNDING HILLS
- CENTRAL ORANGE PARK ACRES AND WEST HILLS

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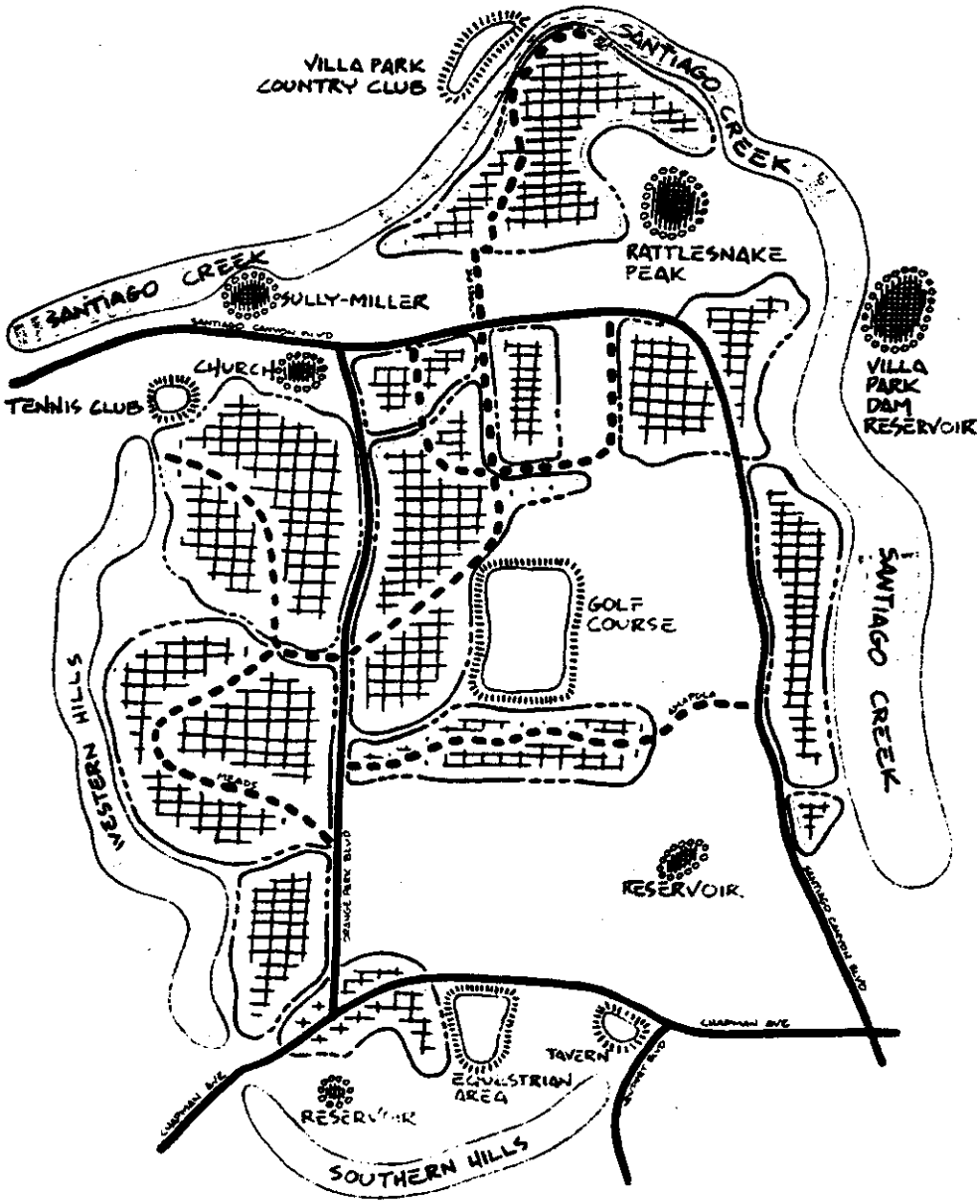
Nodes - the places where people come together such as the Villa Park Country Club, the Tavern, golf course, church, etc.

Edges - the major topographic factors which create a boundary or limit to the area

Districts - the areas with a sense of homogeneity including a similar land use and topographic setting and which may be served by a similar path such as the Mead's Loop area

Landmarks - those elements which when seen represent a distinct contrast to the surrounding area. They are often used as points of reference to locate an area such as Rattlesnake Peak or a reservoir

Some of the notable image components include the fact that Orange Park Acres has, for the most part, well defined limits. There are several notable landmarks, the most dramatic being Rattlesnake Peak. Orange Park Acres is somewhat unique in that the nodes do not help to form or give character to the existing districts. Rather, the minor paths seem to play the dominant role in providing a sense of commonality.



ORANGE PARK ACRES

- IMAGE ANALYSIS -

PATH

MINOR PATH

NODE

EDGE

DISTRICT

LANDMARK

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GEOLOGY AND SOILS

An overall engineering evaluation of the soils and bedrock of Orange Park Acres has been prepared as a part of this study to provide preliminary data on engineering properties of the soils and bedrock including relative soil textures, type, excavation characteristics of bedrock, foundation properties, drainage, anticipated seismic response and others.

Following is a description of the regional geology and geologic structure of Orange Park Acres. The bedrock consists of sedimentaries including sandstones, siltstones, shales, and conglomerates, as well as of intrusive and extrusive volcanics (El Modeno Volcanics). These volcanic rocks consist of basalt and andesite dikes, and of andesite flows and breccias and palagonite flows and breccias.

Alluvial areas are located along the Santiago Creek. The sands and gravels of the alluvial deposits have been practically all mined out for use as aggregates.

There are several levels of terraces on the site and the materials are generally sands and silts with beds of gravel, especially along Santiago Creek. The dip of the sedimentary beds varies considerably and the general trend is to the west. The volcanics are also roughly bedded showing widely varying attitudes.

A number of geologic fault lines are shown on the geologic map (see Exhibit # 7 [Geology]). Except for a relatively long fault line crossing various formations of the site from northwest to generally southeast most other fault lines are located in the area of the volcanic rocks.

ORANGE PARK ACRES

GEOLOGY

- RECENT ALLUVIUM
- TERRACES
- VOLCANICS: ANDESITE FLOWS, FLOW BRECCIA.
- VOLCANICS: ANDESITE BRECCIA, SANDSTONE MATRIX.
- VOLCANICS: PALASONITE TUFF, TUFF BRECCIA.
- PUENTE FORMATION, LA VIDA MEMBER.
- TOPANGA FORMATION
- TOPANGA FORMATION LIMY SILTSTONE.
- VAQUEROS & SESPE FORMATION, UNDIFFERENTIATED.
- ARTIFICIAL FILL
- LANDSLIDE; SLUMP AREA; OR SLOPE WHERE SURFACE REMOVED
- ERODED AND SURFICIAL SLOPE FAILURE AREA
- SAND AND GRAVEL
- D U FAULT ZONES: D-DOWNTHROWN U-UPTHROWN.
- STRIKE AND DIP OF BEDS

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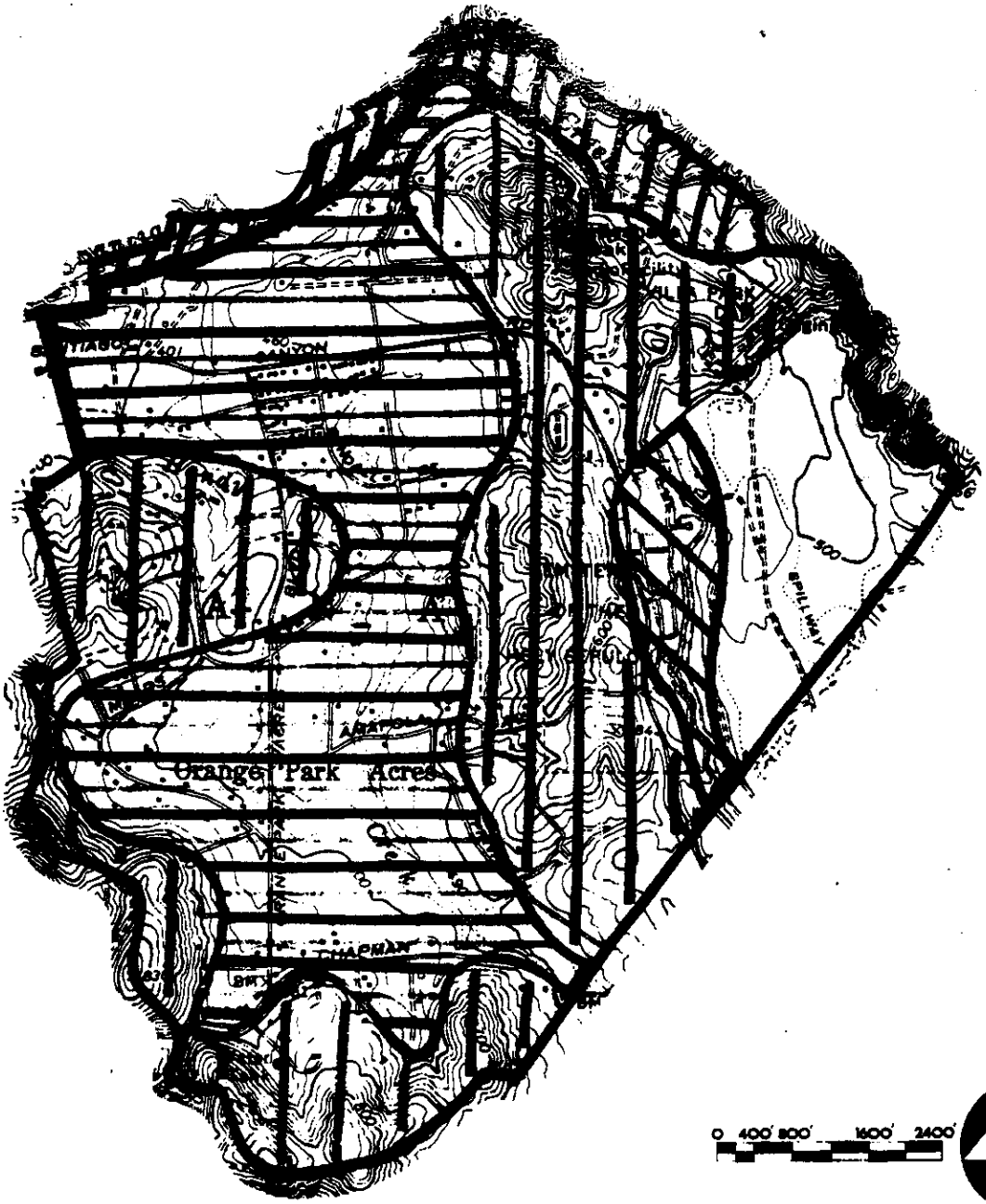
No major landslides have been identified by the writer or others. Our study revealed that there are only very minor areas that have undergone surficial slope failure in the past. Other areas that may be subject to the same type of failure, and perhaps to a somewhat deeper failure, have been identified and mapped in order that this element will be taken into account in the preparation of grading plans.

The engineering properties of soil and bedrock materials are shown in the Appendix in summary form and a complete description of these is included in the report prepared by Pacifico Montano dated August 14, 1973. Also discussed in this report in more detail are sections on Previous Earthwork, Surface Drainage and Groundwater, Seismic Safety Evaluation, Slope Stability, Anticipated Foundation Characteristics, Potential Problems and Remedial Measures, Natural Resources, Future Investigation and Grading Control and Certification. (Under separate cover)

In summary, in regard to land development feasibility, from the standpoint of grading and foundations, practically the entire site, excepting the limited areas of very steep slopes, can be developed for the purposes previously stated without excessive earthwork. The volcanic rock areas, even though steep sided, would provide exceptionally good foundation for buildings of several stories. The tops of the hills and ridges would have to be lowered somewhat to provide building space.

Following is a description of the soils of Orange Park Acres depicted on Exhibit # 8 (Soils). (These are covered in more detail in a report by Pacifico Montano dated August 21, 1973)



ORANGE PARK ACRES

SOILS

- RIV
- SE-SF-FG$_2$
- PN-RN-AC$_2$
- CI-AB
- VILLA PARK FLOOD CONTROL

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Soil Symbol - ci-AB
Corralitos Association, 0 to 5 percent slopes
Where cultivated, these soils are used for row, field crops, and citrus orchards. They are often used for range or pasture. The topsoils on this association are slightly to moderately organic and are only a few inches in depth.

Soil Symbol - Pn-Rn-AC_2
Perkins-Rincon Association, 0 to 9 percent slopes
Where they are cultivated, these soils are used mostly for field crops or for orchards. These soils are also in areas used for pasture or range. They are also used for urban purposes.
The topsoils within this association vary considerably in depth and organic matter content, depending on topographic position and lateral distance from Handy Creek.
The areas that are relatively distant from Handy Creek contain topsoils that are moderately organic and are only a few inches in depth. In contrast, the flood plain of Handy Creek and the immediately adjacent low terraces are capped by up to several feet of relatively highly organic soils. It may be well to consider conserving these organic soils for landscaping purposes (of course, this would depend on the land use plans for these low lying areas).

Soil Symbol - Se-Sf-FG_2
San Andreas-San Benito Association, 30 to 75 percent slopes, eroded.
These soils are used mostly for watershed and range.
The soils derived from the sedimentary rocks as well as from the volcanic rocks of the subject site are included in this association. The tops of the hills and ridges contain none to very little organic topsoil accumulation. The lower slopes, however, locally contain a foot or more of moderately organic topsoil.

Soil Symbol - RW
Riverwash
Use is mainly for wildlife, ground water recharge, and construction materials. Because of frequent flooding, these areas have not had the opportunity for organic topsoil development and accumulation.

BIOLOGICAL RESOURCES

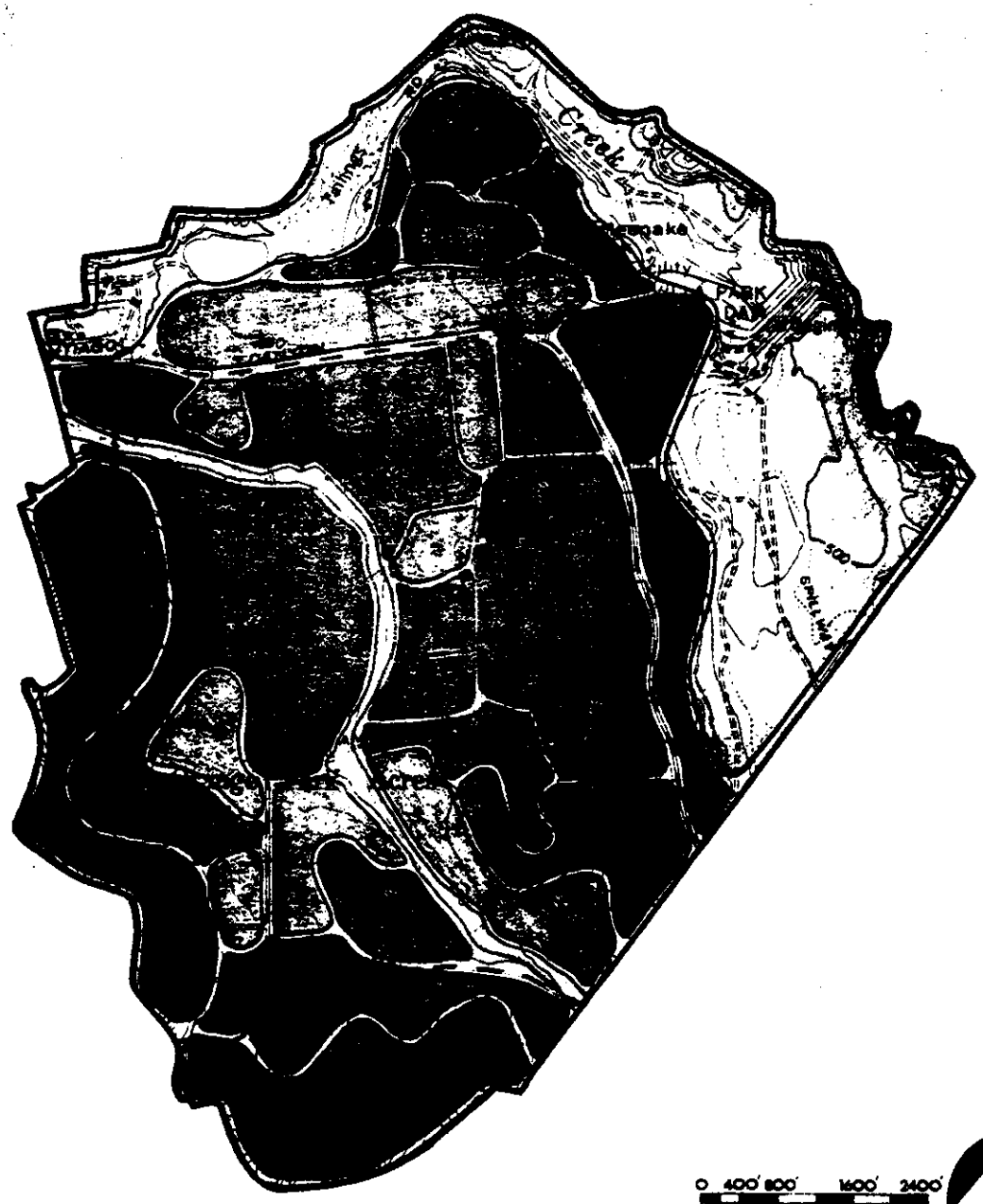
In order to assess the ecological impact of potential future development upon Orange Park Acres and to identify the opportunities within this area, a survey and report on the Biotic Communities of Plants and Vertebrates has been prepared. The following is a general assessment of the existing conditions generally found in Orange Park Acres. The Biotic Communities Map (Exhibit # 9) depicts the general location of the areas described. Also note Exhibit #10 (Existing Tree Conditions)

Although a major part of Orange Park Acres is developed, primarily in low density housing, significant areas of open space are present. The following will describe the existing vegetation on these areas in qualitative terms.

Hillsides west and south of Orange Park Acres

Hillsides for the southern and western margin of Orange Park Acres remain in a relatively undistrubed condition. While houses along Meads Drive and Morada Drive and nearby roads extend up to the base of the hills, there is little intrusion of construction onto the slopes of the hills.

The vegetation of these hillsides is a mosaic of coastal sage scrub and grassland communities. This mosaic is determined in part by changes in soil substrate from shallow rocky soils to deeper soils. Past grazing and fire history has also been a strong determining factor. Grazing favors the expansion of weedy European annual species of grasses over native species. Although there is no present evidence of significant grazing in the areas examined, grazing activity has clearly taken place in the past. Local evidence of at least small fires can be seen on the hillsides. Biological evidence, however, indicates that there has been no recent general fire.



ORANGE PARK ACRES

-BIOTIC COMMUNITIES-

- HILLSIDES
- GRASSLANDS
- TREES
- SANTIAGO CREEK
- N. HILLSIDES
- CEMETERY
- DEVELOPED LAND
- HANDY CREEK

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ORANGE PARK ACRES

-EXISTING TREE CONDITIONS-

ROWS IN GOOD CONDITION

ROWS IN MODERATE CONDITION - SOME DAMAGED OR DEAD TREES

ROWS IN POOR CONDITION - LARGE NUMBER OF DEAD OR DAMAGED TREES

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Opuntia "occidentalis", a fire intolerant species in its early stages, is rapidly expanding its range on the hillsides with young seedlings common.

Grassy areas are overwhelingly dominated by species of introduced European weeds. The presence of relict individuals of the shrub species described previously for areas of coastal sage scrub indicates that much of this grassland area was once dominated by a shrub community.

Holy Sepulchre Cemetery

Undeveloped portions of land owned by the Holy Sepulchre Cemetery west of Santiago Creek Boulevard comprise a large block of open space. The majority of the area has an aspect of grassland, with a species composition much like the hillside areas. Native stands of coastal sage scrub species are present, however, particularly on the ridge crests.

Grassy Fields

Grassy fields of considerable extent are present in Orange Park Acres. In most cases these are fallow agricultural fields with few native species remaining. European weeds overwhelmingly dominate these areas.

Santiago Creek

Santiago Creek forms the north and northeastern boundaries of the Orange Park Acres study area. Year-around water flow in the creek provides a prime prerequisite for a diverse biotic community along its channel, but varying levels of disturbance have reduces this potential diversity. The best development of riparian communities can be seen in the vicinity of Winds Drive where it deadends at Santiago Creek. Here disturbance has been only moderate and the creek channel reaches 100 to 200 feet in width.

Above the Winds Drive area at the northeastern margin of the Orange Park acres study area, Santiago Creek merges with the drainage basin of Villa Park Dam. This earth-fill dam, constructed in 1963, collects water from a drainage area of 83.4 square miles. The area of the dam basin itself is 517 acres, most of which falls outside of the study area. At the present time a large area of standing water is present in the basin, but this appears to be variable from year to year. Plant communities vary from well-developed riparian stands like those previously described to highly disturbed sites supporting only weedy herbaceous species.

At the northwestern margin of the Orange Park Acres study area Santiago Creek is highly disturbed. Extensive open-pit gravel operations have drastically altered the channel shape and natural vegetation is almost lacking.

Handy Creek

Handy Creek winds from its head at Peters Canyon Reservoir across the Orange Park Acres area. While its creekbed is relatively distrubed in many localities, this channel provides good potential to enhance wildlife and recreational values in Orange Park Acres. Much of the creekbed is lined with willows or eucalyptus. The creekbed itself, anywhere from four to nearly twenty feet in width, has a scattered flora of native riparian species and introduced European species.

Despite the fact that European introductions represent the majority of species along Handy Creek, the total flora of natives and exotics combines to form a valuable biotic community. The significance of this community is evident from the abundant evidence of a diverse assemblage of vertebrate species utilizing the habitat.

Other areas not specifically discussed here include developed lands and existing tree crops within the area. A checklist of vascular plants is included within the report prepared by Philip W. Rundel and Associates, August 17, 1973. This list includes 105 species within the boundaries of Orange Park Acres. (Under separate cover)

Description of Biotic Communities - Vertebrates

Eight hours of intensive on-site field observations of the vertebrate fauna were conducted during the daylight hours of 9 and 12 August 1973. Both were warm and cloudless days, suitable for detailed observations.

The intent of this portion of the study was to describe the impact of human disturbance on vertebrate associations. This was accomplished by examining habitats that were natural and undisturbed, partially disturbed such as rural communities, and heavily disturbed such as the graded land, tract-home community. The information was to be assimilated by comparing these habitats with each other and using these data as a predictive too. The goal was to indicate what could happen if an area was disturbed, or how a disturbed area could be treated to enhance its wildlife value and maintain an intact and functioning ecosystem.

A primary goal in efforts to preserve and protect wildlife is to ensure the protection of some of the components of a natural ecosystem of which man is an inescapable part. Stated very simply for emphasis an ecosystem functions by energy flowing from one level to the next, with the necessary presence of nutrients. All carnivores may be considered the top level, all herbivores an intermediate and the plants the lowest level. Energy flows from bottom to top in the form of captured food; carnivores eat herbivores and so on. Stable and healthy ecosystems have all the components

adequately represented. Unwise manipulation or disturbance of a natural ecosystem can lead to many varied and often unknown results, generally destructive. In some cases a disturbed condition can be restored to a more balanced condition.

Santiago Creek off of Winds Drive near Villa Park Dam is a fine example of a healthy ecosystem. This ecosystem includes the insects in and out of water, mosquito fish, streamside trees, grasses and shrubs, frogs, mice, birds, snakes, lizards, etc. This is by far the most stable and diverse area in the study site. It has representatives in all three levels and has tremendous community aesthetic value judging from the large numbers of children using it for recreational purposes. The important point to remember is that there is no destruction of habitat with the concomitant recreational use; only equestrian and foot paths intrude on this ecosystem.

A gravel pit site on Santiago Creek but southwest of the above area is an example of what disturbance can do to disrupt an ecosystem. In this situation too frequent dumping into the creek proper has impeded the flow of water in places and fouled some pond areas with an oily scum on the surface. These ponds are not now suitable either as drinking or foraging sites for water, shore or terrestrial birds. Only three Folica americana (American coot) on one pond, and two Anas platyrhynchos (mallards) were observed in the vicinity of the gravel pit. There were far fewer frogs and insects and generally the area exhibited a paucity of vertebrate life. A considerable portion of this problem could be alleviated by curtailing refuse dumping into the creek.

An example of a wildlife refuge and functioning ecosystem within close proximity of human dwellings is Handy Creek at its intersection with and west of

Orange Park Boulevard. In area this creek is substantially smaller than Santiago Creek. There was no flowing water and a few sites of standing ponds, where insects and Pacific treefrogs could be easily found. A fifteen year resident of adjacent property informed Philip Rundel of his hopes that the creek would remain undisturbed. He indicated that raccoons, opossums, frogs, coyotes and red tail hawks are to be found around this creek. Racoon tracks are frequent in the creekbed. The presence of large Eucalyptus trees all throughout the study site make fine roosting and nesting sites for birds and especially the raptors which prefer nesting in these high locations.

Upstream, Handy Creek flows through a relatively rural setting where the houses are widely spaced, separated often by pasture, active or inactive groves. The sum total of observations indicated that this degree of interaction of human and naturla wildlife functions was minimally perturbing and disrupting natural ecosystems. In this riparian community there is a diverse assemblage of animals, including raptorial birds, mockingbirds, house finches, brown towhees, California thrashers, racoons, skunks, opossums, quail coveys, frogs, toads, etc. By contrast, an area of new tract houses such as that bordered by Meads Avenue, Randall Street, Kenneymead Street and Santiago Canyon Road have absolutely nothing that could be considered wildlife except house finches and ravens flying overhead. This area was graded level before construction. Repopulation of wildlife from surrounding areas would be possible except here an adjacent area is a site of an older tract. In this older tract virtually the only vertebrates that can be found are house finches, house sparrows, mockingbirds and lizards. In this case, time alone cannot mitigate the disturbance of grading and building; the residences are so tightly packed that natural vegetation cannot reestablish and habitats suitable for nesting and foraging

just do not exist except for those species as house finches and troublesome insect pests which seem to prosper in the presence of human populations.

For a list of vertebrates, see the report prepared by Philip Rundel and Associates, August 17, 1973 for Orange Park Acres. Recommendations from that report are also included in subsequent sections of this report.

CULTURAL/SCIENTIFIC RESOURCES

Cultural/Scientific Resources covers the diciplines of archaeology, paleontology and history and refers to the actual physical remains of the previous occupation of an area from a human and biological standpoint.

Existing studies completed on Cultural/Scientific Resources have been identified by Archaeological Research Inc. and work has already been done within the area known as the Meads Ranch, Leadership Housing area, the proposed expansion of the Klug tract and the northernmost portion of the study area adjacent to Sully-Miller. Two archaeological sites are recorded on the north and south boundaries of the study area and a paleontological deposit also occurs on the northeast corner of the study area. In-field investigations for other areas were not prepared and it is recommended that these would be required prior to development since there is a high liklihood of more archaeological sites occuring in Orange Park Acres because of water availability around the two drainage areas of Handy Creek and Santiago Creek.

AIR QUALITY

Air Quality in Surrounding Community

The air quality currently prevailing in the surrounding community can be described by the Orange County Air Pollution Control District's Anaheim air monitoring station, located approximately six miles west of the project site on Harbor Boulevard near Ball Road in Anaheim.

The ambient data recorded at the Anaheim station for 1972 are summarized in Tables "A" and "B" in the Appendix of this report. Table "A" describes the number of days the Federal air quality standards were exceeded and Table "B" describes the maximum hourly averages realized at the station. The Ambient Air Quality Standards are presented in Table "C" for comparison (also in the Appendix of this report).

The community experiences excessive photochemical oxidant during the summer months and adverse levels of carbon monoxide and nitrogen dioxide October through early spring (Nitrogen dioxide to a lesser extent). All three pollutants are heavily dependent on the automobile. As the more restrictive emission standards planned for 1975, 1976 and 1977 take effect, the air quality should improve. The extent to which the quality of air improves and whether the air quality improves will depend upon the effectiveness and consumer maintenance of the control devices used and whether the reduced emissions continue to outweigh the increasing vehicular population.

Air Quality Local to the Site

The Anaheim monitoring station is located six miles west of the project site. The question arises: How well do the monitoring data reflect the air quality at the site?

Photochemical oxidant is produced in the atmosphere from primary pollutants in the presence of sunlight over a period of time. Hence, photochemical oxidant will vary little over a few miles relative to the variation of primary pollutant concentrations. The latter are influenced to a great extent by local sources, especially the automobile. The monitoring station, though sufficiently close to provide a representative picture of oxidant behavior at the site, may not be sufficiently close to adequately characterize the ambient levels of primary pollutants existing at the site.

The Anaheim monitoring station is located near major thoroughfares (Harbor Boulevard and Ball Road) and within two blocks of the Santa Ana Freeway. Emissions from these roadways likely have a significant impact upon the monitoring data. In the absence of monitoring data local to the site, therefore, the Anaheim monitoring data may be used only as an approximate indication of the prevailing air quality (relative to primary pollutant concentrations) at the project site.

HYDROLOGY

Underground Basin

Within the study area there is some local ground water in the more pervious soils. This is ground water that does not have sufficient quantity or quality to be considered as a source of supply. The individual septic tanks and leach systems at most of the homes constantly add low quality water to the underground.

Water Supply

Water for domestic and irrigation purposes is supplied to the area as follows:

1. Developed areas within the City of Orange are supplied by the City of Orange
2. Areas outside the City of Orange are supplied by the Orange Park Acres Mutual Water Company

The City of Orange system in this area is an extension of the main system of the City on the west and the water is a combination of ground water from the Santa Ana basin and imported water from the Metropolitan Water District of Southern California.

Water supplied by the Orange Park Acres Mutual Water Company is either ground water from two wells westerly of the study area or imported water from the M.W.D. system. The M.W.D. water comes from a six million gallon reservoir of the East Orange County Water District located in the vicinity of Peters Canyon Reservoir. This water is taken from the Santiago Aqueduct, then filtered and chlorinated by the E.O.C.W.D. before delivery to the Orange Park Acres Mutual Water Company. The O.P.A.M.W.C. system has adequate capacity to serve the present development, repair and replacement in the future.

Sewerage

Only the developed areas within the City of Orange are presently served by a sewer system connected to a regional collection and disposal system. The remainder of the area is without a community system and each dwelling provides for sewage disposal by septic tanks, seepage pits, leach lines, or combinations of these. This partially treated or untreated sewage is then percolated into the ground. Where the local soil conditions are good the local disposal systems work very well. In the areas where the soils are less pervious or the systems have been inadequately designed, the local disposal systems are a constant source of trouble.

Drainage

The study area is mostly within the "K" zone of rainfall intensity as designated by the Orange County Flood Control District for runoff calculations. The mean seasonal precipitation is between 15 and 16 inches per year. The principal drainage feature is Handy Creek which originates at Peters Canyon Reservoir and northerly and northwesterly through the area. Runoff is transported to Handy Creek both by sheet flow from the adjacent areas and by small washes from the larger areas.

The flood plain area along Handy Creek is generally about 200 feet wide. (See Exhibit # 11 - Flood Plains) At several locations the flood plain is 350 feet wide and immediately upstream from Amapola it is 700 feet wide. Below Orange Park Acres Boulevard the flood plain area is rather well defined and narrow, with only one major structure subject to inundation. Between Orange Park Acres Boulevard and Meads Avenue the existing flood plain is wide and inundation is indicated for several large structures. From Meads Avenue to Amapola the stream bed alignment is very good and the area of inundation is relatively small except for some low lying areas.

ORANGE PARK ACRES

FLOOD PLAIN

HANDY CREEK DIVERSION

POSSIBLE HANDY CREEK IMPROVEMENT

FLOOD PLAIN AREA

J.L. WEBB PLANNING

From Amapola to Chapman Avenue the channel alignment is again very good; however, there is a wide area just above Amapola which shows several large structures being inundated by the 100-year storm. The small tributary channels carry heavy silt loads during periods of heavy rainfall. This is deposited on the roadways and in Handy Creek, which tends to fill up the channel and cause damage to the adjacent property. Erosion of the hillsides is detrimental to the top soil as well as a problem to the flood plain.

Water Quality

Water served in the area meets the minimum requirements of the State of California, Department of Public Health Standards. Both the City of Orange and the Orange Park Acres Mutual Water Company operate in accordance with the permits issued by the State Department of Public Health.

Both the ground water and imported water are higher in mineral solids than desirable. Water quality is generally in the 750 to 800 parts per million range. It is anticipated that higher quality imported water (500 ppm) will be available in 1976 due to the blending of Northern California Water with Colorado River water. Water obtained from the Santiago Aqueduct, Irvine Lake, or the Santiago Lateral, which includes Northern California water, will require more extensive treatment than is now given to the Colorado River water by the East Orange County Water District. These additional facilities may be provided on a regional basis by some regional agency.

UTILITIES

Existing water lines, sewer lines, gas lines, telephone lines and power lines are located within street right-of-ways or within easements specifically conveyed to the utility. For the most part these are within the streets. Most of the streets contain all of the above listed utilities, except sewer lines. Sewer trunk lines are located in a portion of Santiago Canyon Road, Orange Park Acres Boulevard, Clark Street and Randall Street. Collection sewers are also located in Clydesdale Avenue, Wilderness Avenue, Suffold Circle, Arabian Way, Stallion Street and a portion of Meads Avenue.

NOISE ASSESSMENT

The existing noise environment in the Orange Park Acres area depends upon the proximity of roadways and developed areas. Since traffic noise is generally not noticeable except within about 1000 feet or less of a roadway, the ambient noise environment in undeveloped areas, away from roads is presently relatively quiet (35–45 dBA) – typical of rural areas. In the vicinity of roadways, noise levels are higher due to traffic; and near developed areas the noise from power mowers, occasional chain saws, air conditioners, etc. raises the existing ambient noise level to those typical of quiet residential (40–50 dBA) to average residential (50–60 dBA) neighborhoods depending upon the intensity of development, the time of day and the day of the week.

The existing noise levels due to traffic on the major roadways are very low according to HUD standards. Table "D" (shown in the Appendix of this report) shows the minimum distance from the road centerline at which noise levels are acceptable according to the HUDstandards. Thus, even very near the major roads with the existing traffic volumes, the traffic noise is well within acceptable levels.

FIRE CONDITIONS

Due to the rural environment of Orange Park Acres the possibilities of brush type fires are high. In 1969 the Paseo Grande Fire destroyed 100,000 acres, including sixty homes. This fire began near Corona and burned into Orange Park Acres.

As for fire conditions within the immediate area, both the City of Orange and the County of Orange Fire Departments emphasized the lack of enough fire hydrants in the area. The hydrants should be no more than 250 ft. from a dwelling unit and no more than 500 ft. apart.

Another fire condition problem in the area is the existence of dead trees and brush. Orange Park Acres is protected by both the City of Orange and the County Fire Departments, who coordinate assistance for each other in the event of a major fire in the area. Also, the Villa Park Volunteer Fire Department, consisting of volunteer residents in the area, is an additional asset for fire protection in Orange Park Acres.

TABLE # 1

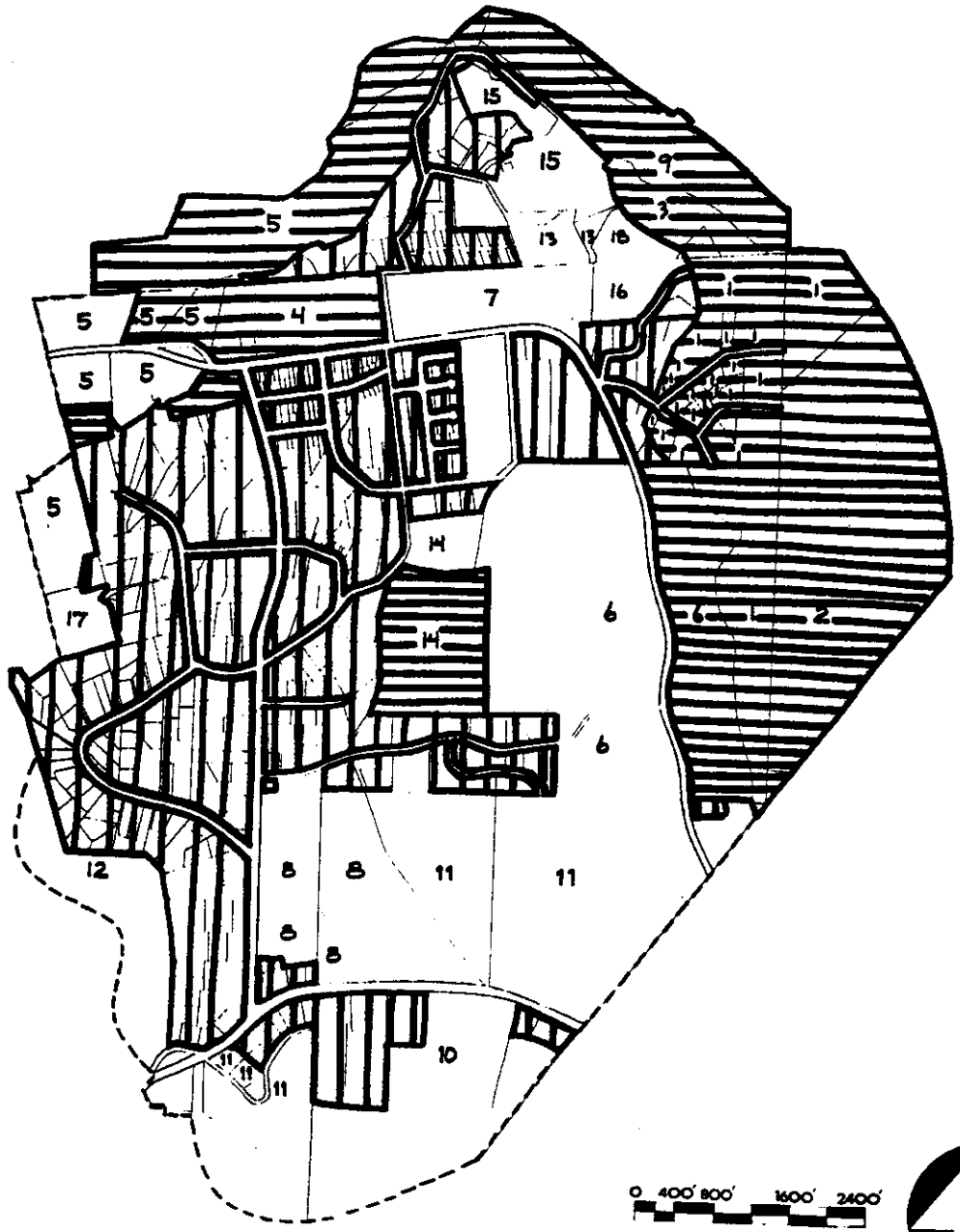
ORANGE PARK ACRES
PROPERTY INVENTORY

SECTOR	Total Acres	Total Lots	Total D.U.	D.U./ Acre
A_1	43.5	27	18	.41
A_2	151.0	25	16	.11
A_3	186.0	14	12	.06
B	128.5	82	67	.51
C	285.0	58	47	.16
D	155.8	68	50	.32
E	61.7	54	47	.75
F	21.0	87	75	3.57
G	16.2	65	65	4.06
H	43.0	20	15	.34
I	35.0	21	14	.40
J.	328.1	54	56	.17
K	266.0	29	0	0
Roads	73.0			
TOTAL	1793.8	604	482	.28

TABLE # 2

ORANGE PARK ACRES
DEVELOPMENT STATUS

	City	County	O.P.A.
Developed	29	660	689
Undeveloped	290	271	561
Non-developable	275	196	471
Roads			73
TOTAL	594 acres	1127 acres	1794 acres



ORANGE PARK ACRES

• EXISTING DEVELOPMENT STATUS • & MAJOR LAND OWNERS •

DEVELOPED

UNDEVELOPED

NON-DEVELOPABLE

1. O.C. FLOOD CONTROL DISTRICT
2. SERRANO IRRIGATION DISTRICT
3. CARPENTER IRRIGATION DISTRICT
4. ORANGE UNIFIED SCHOOL DISTRICT
5. SULLY-MILLER CONTRACTING CO.
6. ROMAN CATHOLIC ARCHDISHOP
7. J.W. KLUG
8. LEADERSHIP HOUSING SYSTEMS INC.
9. RINKER DEVELOPMENT CORP.
10. CHANDLER JOINT VENTURE
11. FRANK F. MEAD JR.
12. WANDA DIVORMAN
13. LAWRENCE COLLINS
14. H. H. LENZ
15. HAROLD BLOME
16. DON GREEK
17. PAUL HOWARD
18. L. COSTELLO

J.L. WEBB PLANNING

Major Land Ownerships

Major landowners in Orange Park Acres refer to governmental agencies, commercial enterprises and private parties which own land in excess of eight acres. Shown below in Table # 3 (Major Landowners) are major landowners by name and acreage size of holdings in Orange Park Acres. (See also Exhibit # 12 - Development Status)

MAJOR LANDOWNERS — Table # 3

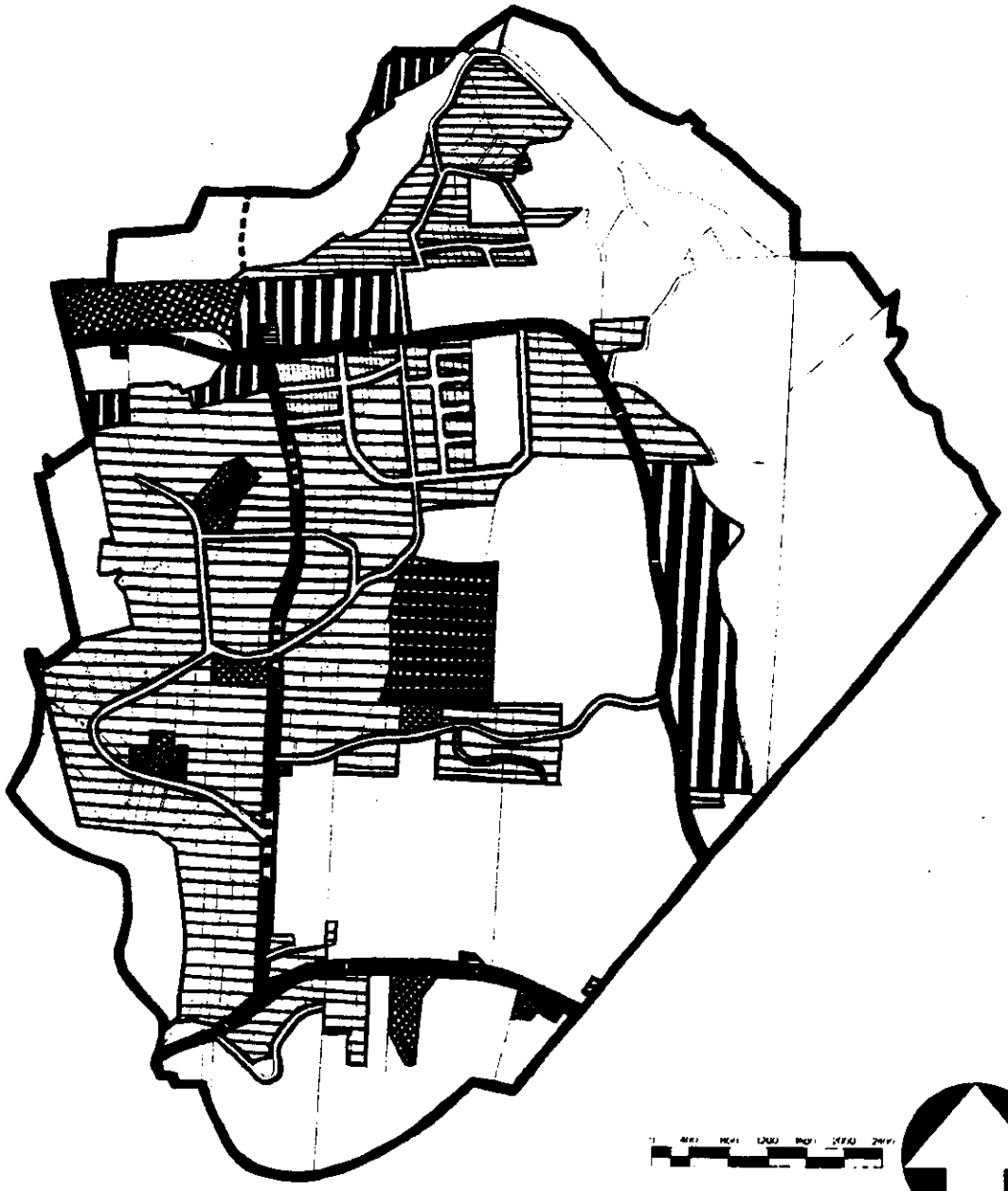
OWNER	ACRES
1. O.C. Flood Control District	112
2. Serrano Irrigation District	157
3. Carpenter Irrigation District	15
4. Orange Unified School District	28
5. Sully-Miller Contracting Co.	120
6. Roman Catholic Archbishop	157
7. J.W. Klug	30
8. Leadership Housing Systems, Inc.	60
9. Rinker Development Corporation	45
10. Chandler Joint Venture	72
11. Frank F. Mead, Jr.	140
12. Wanda Dworman	40
13. Lawrence Collins	9
14. H. Lenz	45
15. Harold Blome	9
16. Don Greek	11
17. Paul Howard	9
18. L. Costello	8

Land Uses

There are five classifications of land uses currently in Orange Park Acres. The following Table # 4 (Land Uses) lists the types of uses and total acreage for each. (See also Exhibit # 1 - Existing Land Use and Circulation)

LAND USES — Table # 4

Classification	Type of Use	Acres	TOTAL
Residential	Single-family detached	680	680
Commercial	Chicken ranches	19	
	Riding Stable	4	
	Tavern	2	
	Sully-Miller	30	
			55
Public-Quasi-public	Church	6	
	Tennis Club	4	
	Villa Park Country Club	8	
	School Site	29	
	Golf Ranch	34	
	Cemetery	41	
	Roads	73	
			195
Open Space	Riding & hiking trails, vistas & undeveloped open space	864	864
		TOTAL	1794



ORANGE PARK ACRES

EXISTING LAND USE AND CIRCULATION

ARTERIAL HIGHWAYS

PRIMARY

SECONDARY

SECONDARY PROPOSED

LAND USE

RESIDENTIAL

PUBLIC-QUASI PUBLIC

GOLF COURSE

COMMERCIAL

OPEN SPACE

J.L. WEBB PLANNING

Zoning

There are nine classifications of zoning in Orange Park Acres which are listed and defined below. Table # 5 (Existing Zoning) shows the amount of acreage for each zoning classification in Orange Park Acres area. (See Exhibit # 14 – Existing Zoning)

Zone	Definition
A_1	General Agriculture
AR-10,000	Agricultural Residential – 10,000 sq.ft. min.
S-G	Sand and gravel extraction
E4-1	Small estates – 1 acre min.
R-1-40	Residential – 40,000 sq.ft. lot min.
R-1-20	Residential – 20,000 sq.ft. lot min.
R-1-10	Residential – 10,000 sq.ft. lot min.
R-1	Residential – no min.
R-O	Recreation – open space

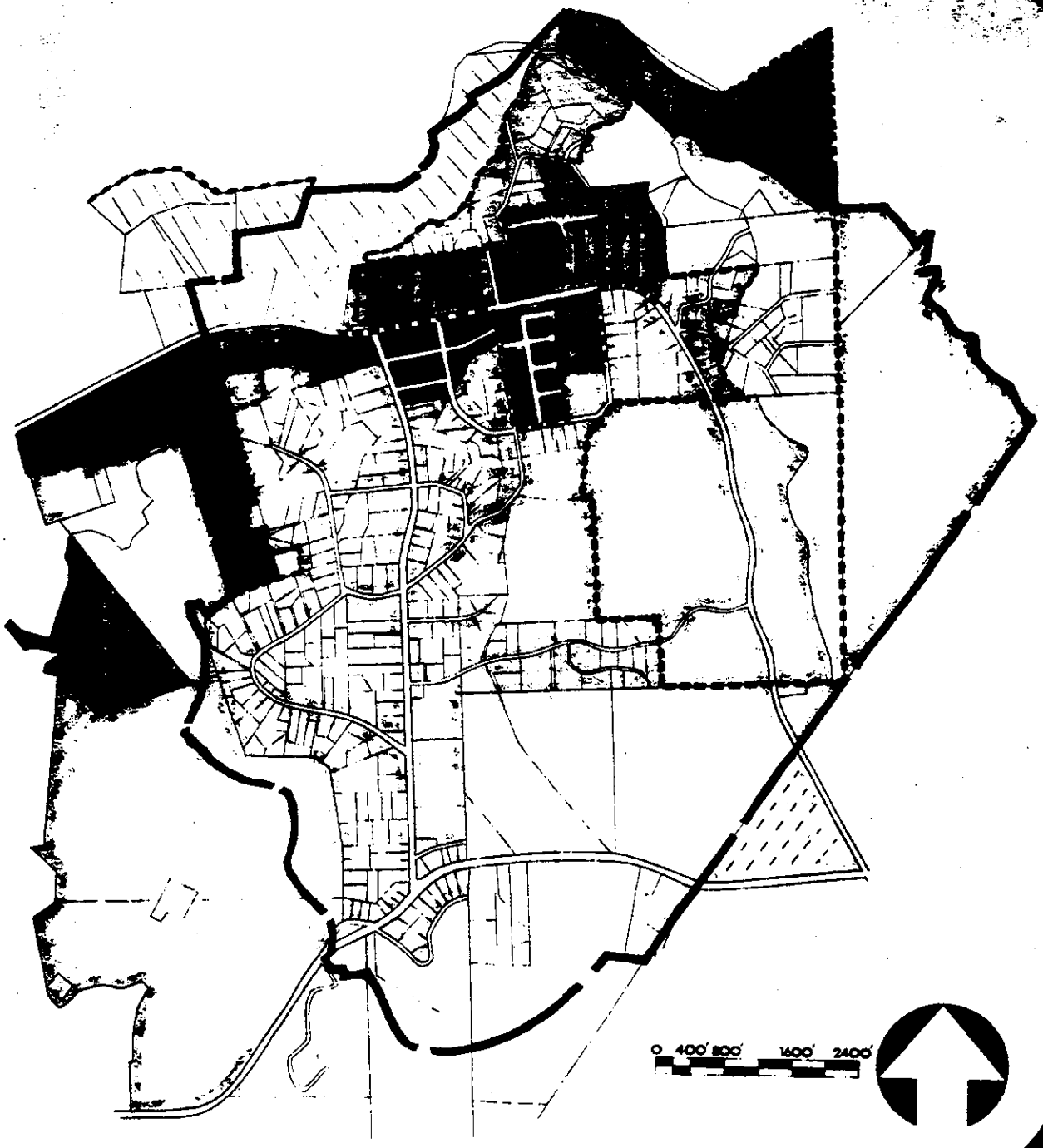
The existing City boundaries are depicted by the dotted line on Exhibit #14 (Existing Zoning).

TABLE # 5

ORANGE PARK ACRES

EXISTING ZONING

Zone Code	Acres	D.U./Ac.	Total Max. D.U.
A_1	510	.25	77
AR-10,000	40	4.0	160
S-G	98	0	0
R-1-40/E4-1	688	1.0	688
R-1-20	25	2.0	50
R-1-10	143	4.0	572
R-1	27	4.0	108
R-O	4	0	0
R-1-40c	158	1.0	158
School	29	0	0
Roads	73	0	0
TOTAL	1794		1813



ORANGE PARK ACRES

EXISTING ZONING

S-G	AR-10,000	E-4-1	R-1-10
A-1	R-1-40	R-1	R-1-8
AGRICULTURAL RESERVE	R-1-40C	R-1-20	R-O

J. L. WEBB PLAN

CIRCULATION

Access to the area is provided by Santiago Canyon Road, Chapman Avenue and Newport Boulevard, These are all primary highways on the Orange County Master Plan of Arterial Highways. A primary highway is a divided 4-lane facility that provides protected left-turn lanes. Orange Park Boulevard, which goes through the proposed development, is classified as a secondary highway. It will have four lanes, undivided. Exhibit # 15 (Existing & Ultimate Traffic Volumes) indicates existing traffic volumes on the arterials within the area of Orange Park Acres.

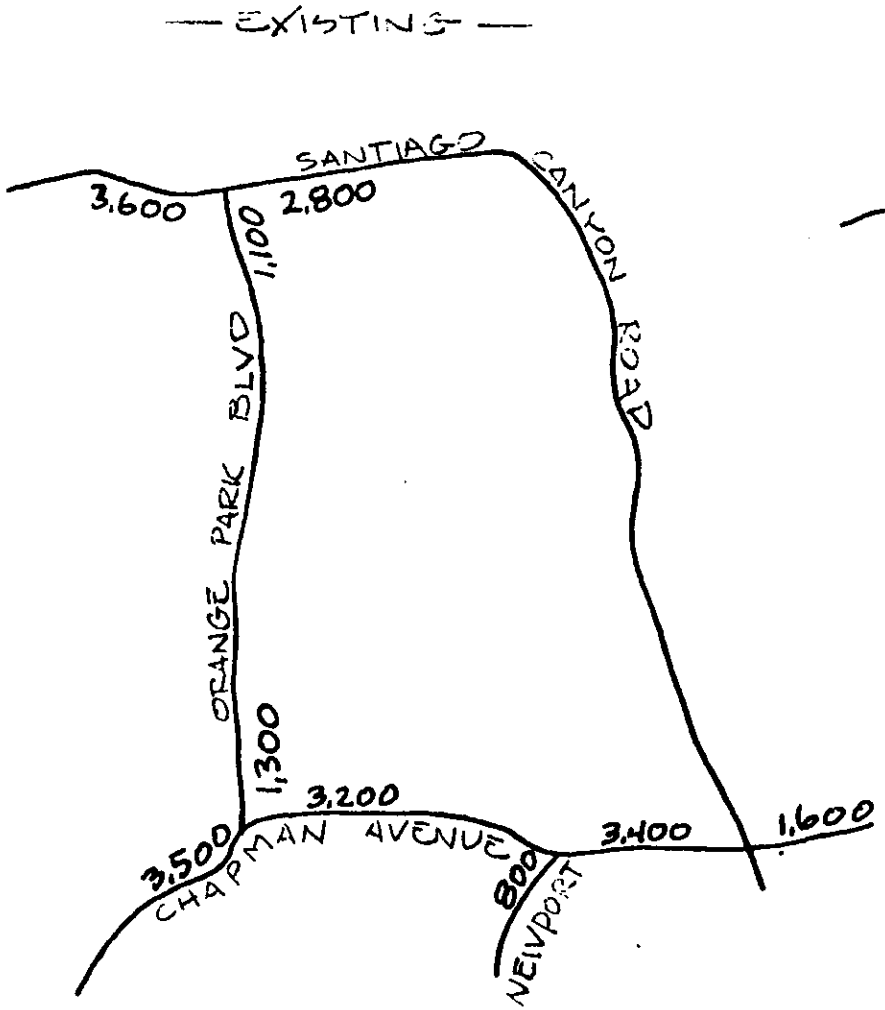
Exhibit #15 also indicates the estimated ultimate traffic volumes obtained from a combination of traffic studies prepared by the Orange County Road Department and The Irvine Company. These traffic studies used an average land use density in the proposed area of development of approximately three dwelling units per acre. The arterials depicted on the Ultimate Volume Map of Exhibit # 15 are those proposed on the Orange County Master Plan of Arterial Highways.

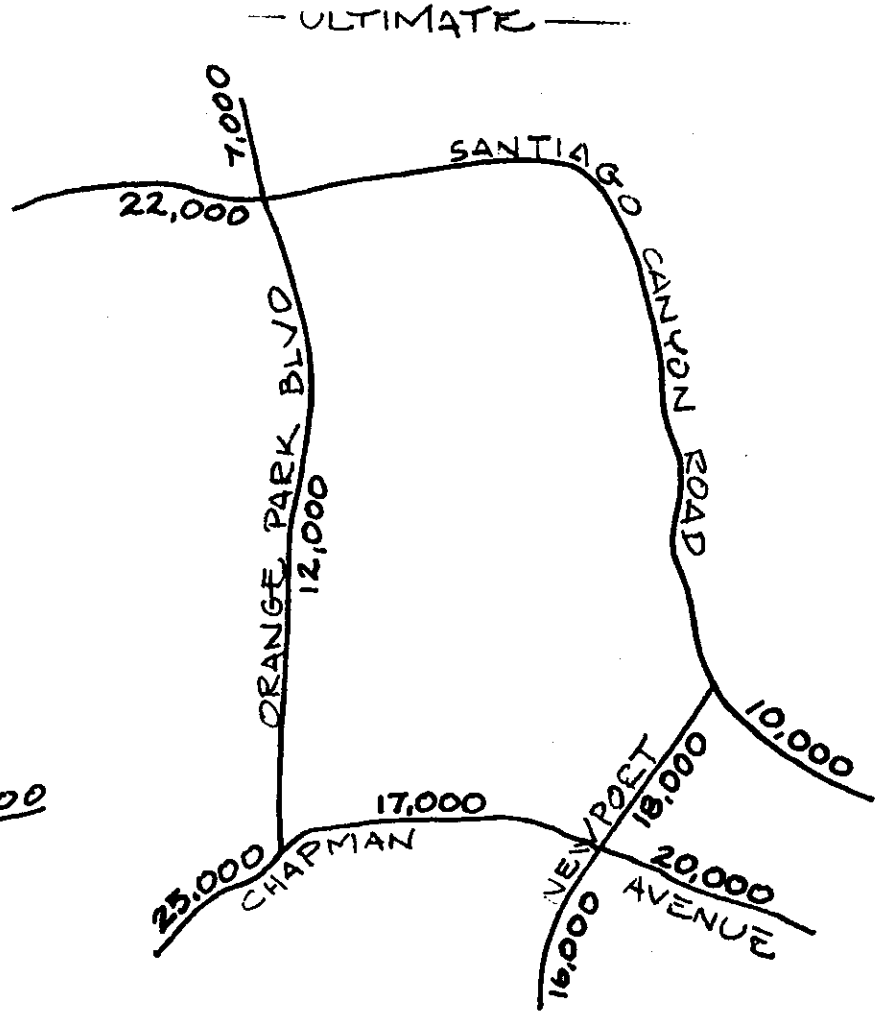
The capacities of the adjacent arterials are:

Primary (Chapman Ave., Santiago Canyon Rd., Newport Boulevard)	30,000 ADT
Secondary (Orange Park Boulevard)	20,000 ADT

The estimated volumes on the adjacent highways as shown on Exhibit # 15 are within the capacities listed above.

EXISTING AND ULTIMATE TRAFFIC VOLUMES





EXISTING SOCIO-ECONOMIC ENVIRONMENT

The purpose of the existing socio-economic environment section is to show the existing status of population characteristics, education, housing and land market and cost/revenue. Population characteristics measure the existing population size, growth, employment status and incomes per household. Education measures the number of students, facilities, and costs and revenues for education for the Orange Park Acres area. The market analysis measures assessed values, market values and absorption rates existing in Orange Park Acres. Cost-revenue measures the total revenues generated by property tax and other revenues received by the City and County of Orange from the residents in Orange Park Acres along with the costs generated by the area. In summation, it will be possible to forecast estimates for each of the above elements for the generation of alternative plans and for the Specific Plan.

POPULATION CHARACTERISTICS

Population

Currently in Orange Park Acres there are approximately 1755 persons of which 632 are students. There are approximately 3.9 persons per dwelling unit or .98 persons per acre. Since 1950 the population in the area has about doubled per decade. However, there has been an increase of about forty percent in population just since 1970. The median age of the population is about forty years. Table # 6 (Estimated Population Status) shows the population number, percentage and density per dwelling unit for each of the planning sectors in Orange Park Acres. Table # 7 (Population Density) shows the total density for each planning sector along with a comparison with the densities of the City of Orange and the County of Orange. Table # 8 (Population Growth: 1950-1973) shows the number and percentage increase and future projected growth trends of population for Orange Park Acres, the City of Orange and the County of Orange.

TABLE # 6

ORANGE PARK ACRES

ESTIMATED POPULATION STATUS

Sector	Elem. Stud. p/du	Jr.Hi Stud. p/du	H.S. Stud. p/du	Total Persons p/du	Elem. Stud. No. of	Jr. Hi Stud. No. of	H.S. Stud. No. of	Total Students No.	%	Total Population No.	%
A	.53	.29	.53	3.47	24.4	13.4	24.4	62	10	160	9
B	.66	.17	.60	4.08	42.2	10.9	38.4	92	15	261	15
C	.78	.44	.67	4.11	35.1	19.8	30.2	85	13	185	11
D	.72	.24	.52	3.96	36.0	12.0	26.0	74	12	198	12
E	.61	.21	.57	4.00	28.7	9.9	26.8	65	11	188	11
F	.53	.17	.13	3.35	39.6	12.6	9.8	62	10	251	14
G	.86	.28	.38	3.83	53.3	17.4	23.6	94	15	238	13
H	.60	.40	.80	4.20	9.0	6.0	12.0	27	4	63	4
I	.50	.25	.88	4.22	7.0	3.5	12.3	23	3	59	3
J	.63	.13	.13	3.75	18.3	3.8	3.8	26	4	109	6
L	1:25	.63	.63	4.89	11.3	5.7	5.7	23	3	44	2
Totals	.68	.26	.49	3.90	304.9	115.0	213.0	632	100	1755	100
Percentage of Total Population					17%	6%	12%	35%			

Population per dwelling unit = 3.9

Students per dwelling unit = 1.4

TABLE # 7

ORANGE PARK ACRES

POPULATION DENSITY

1973

Area	Per D.U.	Per Acre	Per Sq. Mile	Sq. Miles
A	3.47	.42		
B	4.08	2.37		
C	4.11	.64		
D	3.96	1.27		
E	4.0	3.04		
F	3.35	11.95		
G	3.83	14.69		
H	4.2	1.46		
I	4.22	1.68		
J	3.75	.33		
O.P.A.	3.9	.98	627	2.8
City of Orange	3.3	7.99	5,041	16.4
Orange County	3.2	3.1	2,001	782.0

TABLE # 8

ORANGE PARK ACRES

POPULATION GROWTH: 1950–1973

Area	1973 *%Inc.	1973 Number	1970 *%Inc.	1970 Number	1960 *%Inc.	1960 Number	1950 Number
O.P.A.	40	1,755	100	1,250	125	625	300
City of Orange	8	83,900	196	77,374	136	24,444	10,027
Orange Co.	14	1,600,000	100	1,420,386	225	703,925	216,224

*Percentage increase over prior census

PROJECTED GROWTH TRENDS

	Number	Year	%Increase
City of Orange	98,580	1980	27
	118,235	1990	20
Orange County	1,890,386	1980	24
	2,240,386	1990	15
O.P.A.	4,300	1980	125

Further projections for O.P.A. are dependent upon Specific Plan

Employment

Approximately forty-two percent of the population in Orange Park Acres is presently employed. Over ninety percent of the employed work in the Orange County area. Due to the near accessibility of the Newport Freeway, within a thirty minute drive there are the Irvine Industrial Complex, the Anaheim Industrial area and access to over half of the employment places in Orange County. Table # 9 (Employment Status) shows the percentages of the Orange Park Acres population by current activity status and the percentage of employed by occupation type along with comparisons with the employed population of the City of Orange and the County of Orange.

Income

The median family income for Orange Park Acres is approximately $22,000. Table # 10 (Household Income) shows the percentages of families by income range per planning sector within Orange Park Acres along with comparisons of family incomes of the City and County of Orange.

Summary

If the current trend continues, the population will continue to grow in Orange Park Acres to have again doubled before the end of this decade. The population density per dwelling unit will probably drop to below 3.6 persons per dwelling unit because of the low density and size of housing in the area. If higher density housing is developed in the area, the population density per dwelling unit may decrease but the total population would probably still be as great. Employment will remain high and possibly increase because more women may have to enter the work force in order to afford to live in Orange Park Acres. Since the area is developing rapidly, so are the property values and the median income range may climb per family. In conclusion, because of the lack of other areas like Orange Park Acres, which lies near urban facilities but retains a rural character, the demand will increase.

TABLE # 9

ORANGE PARK ACRES

EMPLOYMENT STATUS

PERCENTAGE OF POPULATION	OPA Sector A	B	C	D	E	F	G	H	I	J	OPA	City	Co.
Employed	42	30	28	35	31	43	40	39	32	39	39	36	36
Retired	4	5	4	1	5	2	0	0	3	14	2	*	*
Housewife	10	21	18	14	16	15	10	18	15	10	15	*	*
Adult Students	2	3	1	0	6	2	0	0	3	0	1	*	*
School Children	40	36	47	37	37	27	40	43	44	23	36	*	*
Non-school Children	2	5	2	13	5	11	10	0	3	14	7	*	*
PERCENTAGE OF EMPLOYED													
Men	64	86	90	72	80	70	62	72	84	76	74	64	65
Women	36	14	10	28	20	30	38	28	12	24	26	36	35
Professional	36	34	20	46	36	16	54	42	25	38	35	34	34
Non-professional	55	53	80	50	52	82	46	59	38	50	58	59	60
Self-employed	9	13	0	4	12	2	0	1	35	12	7	7	6

Sources:

All above are percentage estimates based upon data from O.P.A. Questionnaire and Quarterly Business Review, First National Bank of Orange County (4th quarter 1972).

* Not Calculated – insufficient availability of data

TABLE # 10

ORANGE PARK ACRES
HOUSEHOLD INCOME
PERCENTAGE OF HOUSEHOLDS BY INCOME RANGE
1973

Area	Under 10,000	10,000–19,999	20,000–29,999	30,000–39,999	40,000–50,000	Over 50,000	# of Households
A	14	21	42	7	14	2	46
B	4	27	31	12	13	13	67
C	7	29	30	19	10	5	47
D	0	50	20	20	0	10	50
E	3	42	31	16	7	1	47
F	6	59	29	6	0	0	75
G	0	60	36	4	0	0	65
H	0	40	20	20	20	0	15
I	0	0	50	18	16	16	14
J	14	14	28	2	42	0	29
O.P.A.	4	39	29	13	7	3	450
City of Orange	30	47	15	5	2	1	25,000
Orange County	35	45	13	4	2	1	400,000

Median Family Income

O.P.A.	$22,000
Orange	$14,600
County	$13,000

EDUCATION

Students and Facilities

Currently there are approximately 1.4 students per dwelling unit in Orange Park Acres adding up to a total of 632 students. Of the total number of students approximately 305 (17%) are in elementary school, 115 (6%) are in junior high school and 213 (12%) are in high school. (Also see Table # 6 - Population).

Orange Park Acres lies within the Orange Unified School District. Elementary school students attend Linda Vista School. Junior high students attend Santiago Junior High and high school students attend El Modena High School. There is an elementary and junior high school site in Orange Park Acres, but actual construction of the schools is projected to be sometime in the next five years. However, at the present time, there is no bonding to pay for school construction on this site. Elementary students must reside one mile and secondary students two miles from the school in order to be bused. Some elementary students in Orange Park Acres will require busing.

Cost/Revenue

The 1972-73 school year cost per student for education in the Orange Unified School District was $867. The sources of revenue for educational costs are as follow: 60 percent from property taxes, 38 percent from State aid and two percent from Federal aid. The total cost for educating the 632 Orange Park Acre students was $546,210 of which the property owners in the area paid $273,105 which is but 80 percent of the $327,726 needed from property tax revenues. This $54,621 deficit is approximately $121 per dwelling unit. Table # 11 (Educational Cost/Revenue) shows a complete breakdown of costs and revenues and deficits for Orange Park Acres.

Orange Unified School District has projected a 1973-74 school year cost of $977.00 per student. However, Legislative State Bill # 90, just passed this year, has increased state funds for education providing relief to property taxes. The current tax rate for education of $5.41 per $100 of assessed value will drop to $4.79 per $100 of assessed value. The new revenue sources for education for 1973-74 will be as follow: 54% from property tax, 43% from the State and 3% from the Federal Government. Table # 11 (Education Cost/Revenue) shows in the column under 1973-74 the projected breakdown of cost/revenue and deficit for Orange Park Acres. As shown in the Table, the deficit will increase to $84,111.

MARKET ANALYSIS

Assessed Values

The assessed value of a parcel is twenty-five percent of the market value and is computed for the purpose of property tax collection. The total assessed value in Orange Park Acres for land and improvements is $6,370,961. Multiplying by four will produce a total assessed market value of $25,483,845. Table # 12 (Assessed Values) shows by planning sector the total assessed market, assessed land and total assessed value. (See also Exhibit #16- Assessed Land Values Per Acre and Exhibit #17- Assessed Market Value - Improvement)

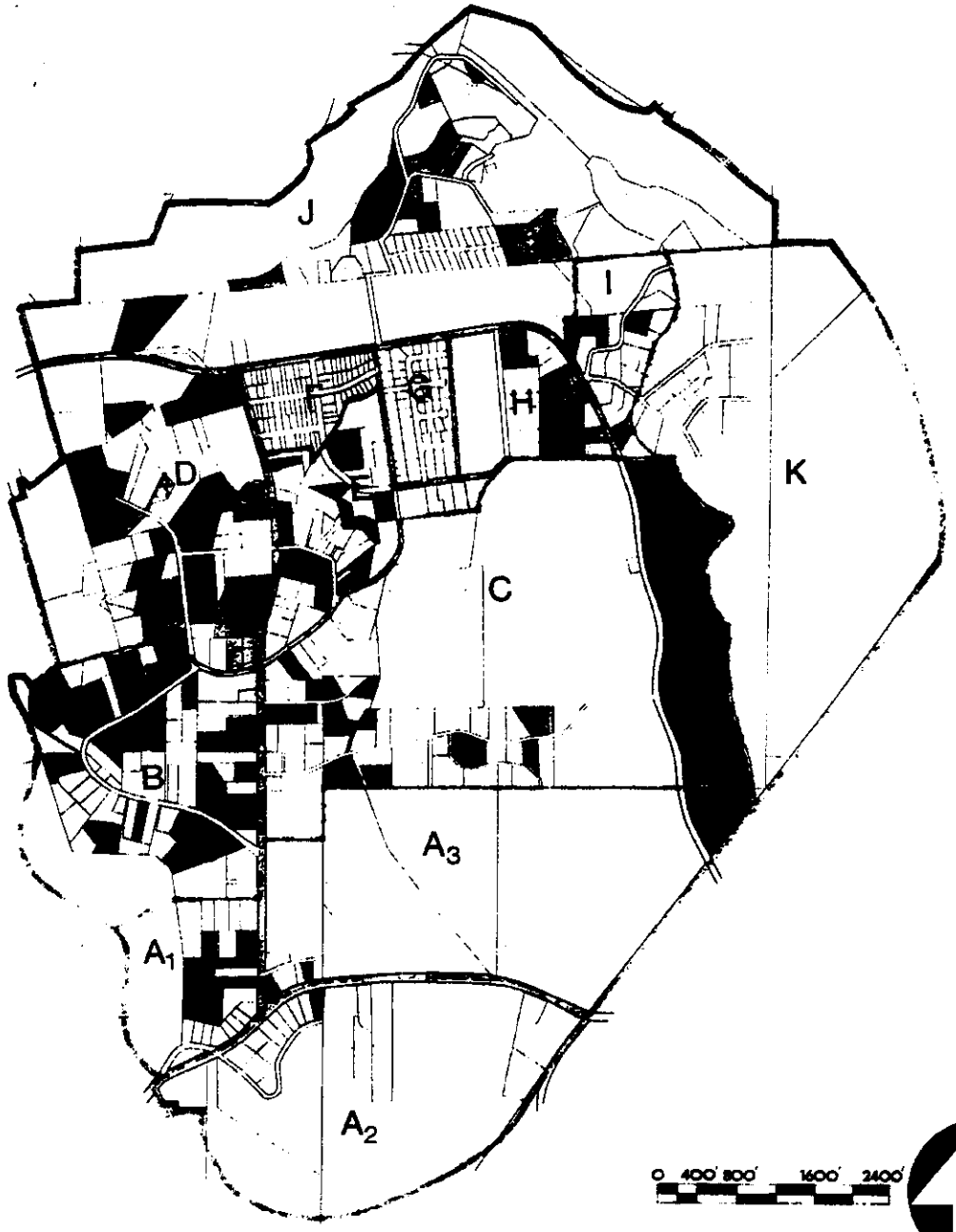
Market Values

The market value of property is that price which a buyer is willing to pay and is accepted by a willing seller. Through field investigations and research of recorded deeds, the true market value of property in Orange Park Acres has been estimated to be about thirty percent above the assessed market value. This brings the total real market value in Orange Park Acres to $33,883,845. The following list shows the average mean value per dwelling unit and acre for Orange Park Acres.

Average assessed value per/D.U.	$10,500
Average assessed market value per/D.U.	$53,000
Average market value per/D.U.	$68,000
Average market land value per/D.U.	$12,000

Absorption Rates

Absorption rate refers to the amount of time it takes to sell a dwelling unit. The various factors of mortgage market, interest rates, employment conditions and unit price are the prime determinators of an absorption rate at a given period of time. Currently, interest rates are nine



ORANGE PARK ACRES

ASSESSED MARKET VALUE

— IMPROVEMENT DOLLARS

UNDER 4,999	10,000 TO 14,999	20,000 TO 24,999	30,000 TO 34,999	40,000 TO 49,999
5,000 TO 9,999	15,000 TO 19,999	25,000 TO 29,999	35,000 TO 39,999	50,000 + OVER

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to ten percent and are affecting current absorption rates to an unusual low. Therefore, the rates for Orange Park Acres have been estimated using rates generated during the past two years.

There are three major types of housing development taking place in Orange Park Acres- new tract development, resales and lot subdividing and building. Orange Park Acres lies within Orange County's southern and eastern housing market area, which is one of the fastest development growth areas in Southern California. This conditions is due to the growth in employment in the area along with easy access by freeway to work locations and further compounded by desirability of the living environment. Based upon research of new developments in Orange Park Acres and the County, the number of total resales in the past two years and the population increase since 1970, Table # 13 (Estimated Housing Absorption Rates) shows the estimated absorption rates by type of housing per price range. Table # 14 (Current Development Profiles) shows three development profiles. Pacesetter and Colony Park Homes are both single-family detached units located in Orange Park Acres. Casitas Santiago is a condominium/townhouse development just outside of the area.

Summary

Orange Park Acres has a myriad of housing sizes, ages and values. However, as the price of land and the cost of housing is increasing at a rapid rate, and the demand for the rural environment is increasing while supply decreases, the value of property mayincrease far more rapidly in Orange Park Acres than in the past. This also means that a reassessment of property in the area may occur thus driving up future property tax revenue. With the present average home value on an acre lot at $68,000, it can be estimated that in the next five years that value may reach the $80,000 plus mark. This would allow fewer people to obtain residences there. If a

slight increase in housing density were allowed, the value per acre would increase but the value per dwelling unit would decrease and therefore, allow persons of the current economic status in Orange Park Acres to reside in the area.

TABLE # 13

ORANGE PARK ACRES

ESTIMATED HOUSING ABSORPTION RATES

(Units Per Month)

Price Range	O.P.A. Area			County
	New	Resales	Lots	New - Only
Under 25,000	25	.1		25
25 - 35,000	20	.5	1.2 Avg. for All Lots	20
36 - 50,000	16	.3		15
51 - 75,000	10	.4		5
76 - 100,000	2	.2		4
Over 100,000	1	.1		2

Sources:

Above estimates based upon data on New House Sales Rates in O.P.A., Orange County Progress Report, 1972, First American Title Insurance Surveys, 1972, Income Ranges and Population Growth Rates.

TABLE # 14

ORANGE PARK ACRES VICINITY
CURRENT DEVELOPMENT PROFILES

PACESETTER HOMES by Klug Tract # 6232

No. of dwelling units	65
D.U. per acre	4.1
Price range	$34,950 - $52,500
Size	All 4 bedrooms (1488 sq.ft.-2151 sq.ft.)
Absorption rate	Exceeded 3 per week
No. sold	All units sold

COLONY PARK By G.L. Lewis

No. of dwelling units	27
D.U. per acre	2.4
Price range	$55,000 - $65,000
Size	3,4, & 5 bedrooms (2100 - 2650 sq.ft.)
Absorption rate	Approx. 2 per week
No. sold	21

CASITAS SANTIAGO By Delta Construction Inc.

No. of dwelling units	79
D.U. per acre	9
Price range	$23,900 - $29,950
Size	2-4 bedrooms (850 - 1385 sq.ft.)
Absorption rate	5 per week
No. sold	25

COST/REVENUE ANALYSIS

Approach

Out of the total 1794 acres in Orange Park Acres 510 acres are within the City Limits of Orange while the other 945 acres lie within the Orange County unincorporated area. Thus, both costs and revenues for each jurisdiction must be measured separately in order to arrive at a proper estimate of costs and revenues for Orange Park Acres.

There exists no proven accurate cost/revenue methodology model for the City of Orange or Orange County currently. However, in the Proposed General Plan prepared by the Quinton-Budlong Corp. in February, 1972, the cost/revenue analysis utilized the per acre method. What is needed is a cost/revenue analysis model which incorporates a mix of both per acre and per capita. However, data is not available in a format where this method can and should be utilized. Therefore, property tax revenues will be estimated on the per acre basis, while all other revenues and costs will be estimated utilizing the per capita base for the following reasons.

1. Orange Park Acres is a rural area and it does not generate the higher costs required by urban areas.

2. The per acre method for property tax revenue measures actual revenues collected based upon values of the land.

3. The per acre method does not accurately measure most costs which are generated by persons,not land .

4. The per acre method based on developed land eliminates revenues from undeveloped land which has minimal cost requirements.

5. The per capita cost and revenue method accounts for population densities more accurately than the per acre method utilizing current available data.

Methodology

To determine the property tax revenues in Orange Park Acres the tax rates were first located (see Exhibit # 18 [Existing Tax Rate Zones]) then multiplied by the assessed values less exemptions for each parcel in the City and County of Orange. This was further classified by types of land use - developed, undeveloped and non-developable. Then the City tax and County tax rate portions were derived and calculated to a per acre base. The per capita revenue was determined by utilizing the 1972-73 City of Orange actual budget and the 1971-72 County of Orange actual budget. (See Table # 15 [Estimated City of Orange and County of Orange Revenues]) The per capita costs for the City of Orange were determined by dividing the November, 1972 population of 83,900 into the 1972-73 actual expenditures of $11,960,256. The Orange County Unincorporated area costs per capita were determined by dividing the estimated 1972 population of 1,500,000 into the estimated expenditures generated by those residents. The total results from the above processes are shown on Table # 16 (Existing Estimated Cost/Revenue Analysis). This table also lists the factors utilized in the financial computations.

Summary

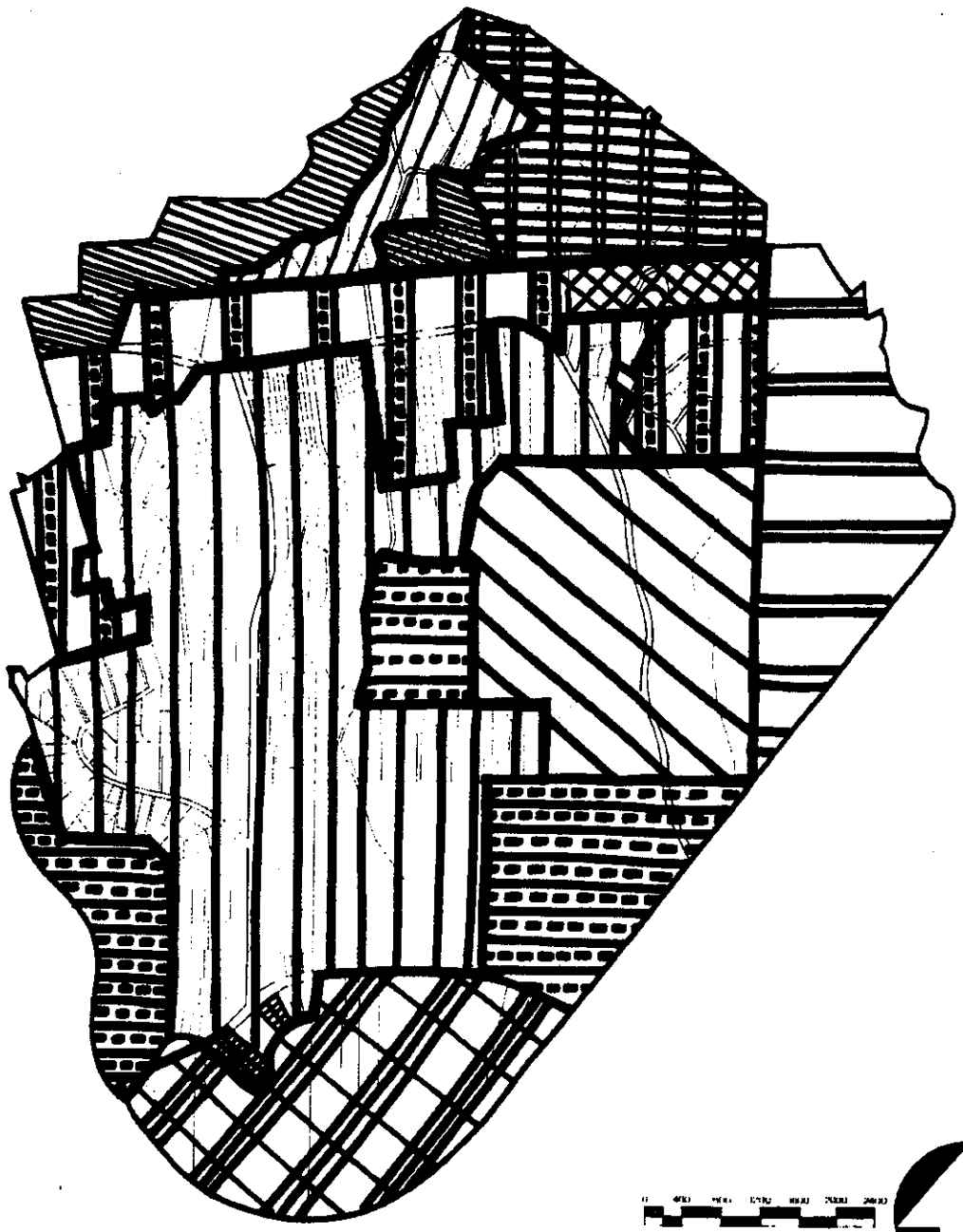
As shown in Table # 16 (Existing Estimated Cost/Revenue Analysis) Orange Park Acres produces a total surplus in revenue of $52,808 of which $5,462 goes to the City of Orange and $47,346 goes to the County of Orange. It must be emphasized that these figures are general estimates only. It is recommended that a special complete cost/revenue analysis be prepared for the following reasons:

1. This report provides only a general cost/revenue analysis and shows only a general indication of the results.

2. Data is too incomplete at this level of study to state precise costs generated by Orange Park Acres.

3. The characteristics of costs of Orange Park Acres differ from those generated by urban areas.

In conclusion, it is believed that an in-depth cost/revenue study will produce the same findings, only more definitively, that Orange Park Acres pays for itself.



ORANGE PARK ACRES

- EXISTING TAX RATE ZONES -

$9.79	10.29	10.47	10.89
9.87	10.36	10.55	10.97
10.28	10.46	10.86	

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TABLE # 15

ESTIMATED REVENUES

CITY OF ORANGE & COUNTY OF ORANGE

Source	City - 1972-73 Revenues	City - 1972-73 p/Capita	County - 1971-72 Revenues	County - 1971-72 p/Capita
Sales & Use Tax	3,391,982	40.42	1,625,153	8.12
Other Taxes	474,836	5.65	1,856,967	9.28
Licenses & Permits	278,017	3.31	2,823,339	14.11
Fines	319,441	3.80	4,247,083	21.23
Use of Money	479,541	5.71	3,966,988	19.83
Fees & Services	995,608	11.86	26,159,266	17.43
Other Revenue	559,607	6.66	754,791	3.77
Other Agencies	3,384,618	40.34	(Co.-wide)	-----
TOTAL	12,829,516	117.75	223,502,896	93.77

POPULATION FACTORS

City of Orange 83,900 (est. 1972)

County Unic. Area 1,500,000 (est. 1972)

TABLE # 16

EXISTING ESTIMATED COST/REVENUE ANALYSIS

FINDINGS:

Area	Property Tax Revenue	Other Revenue	Total Revenue	Total Expen.	Total Surplus
City of Orange	12,158	31,793	43,951	38,489	5,462
County Unic.	82,481	113,365	195,846	148,500	47,346
OPA TOTAL	94,639	145,158	239,797	186,989	52,346

FACTORS:

	City of Orange	Co. Unic.	OPA Total
Dwelling Units	70	380	450
Population	270	1485	1755
Prop. Tax Rate p/100 assessed	1.29	1.95	
Other Revenue p/Capita	117.75	93.77	
Expenditures p/Capita	142.55	*93.77	
Prop. Tax Revenue p/acre developed	171.72	105.13	
Prop. Tax Revenue p/acre undeveloped	19.91	48.29	
Prop. Tax Revenue p/acre non-developable	7.34		
Developed Acres	29	660	689
Undeveloped Acres	290	271	561
Non-developable Acres	191	14	205

*Used same p/Capita as revenue since no data is available on cost p/Capita for Co. Unincorporated area

RESULTS OF ORANGE PARK ACRES QUESTIONNAIRE

A resident/landowner questionnaire was mailed out as a part of this study and over 50 percent response was recorded. The purpose of the questionnaire was two-fold; one, to obtain objective information such as family size, the number of school children etc., and two, to obtain evaluations and input from the residents as to the considerations that should be given to the planning study.

Following is the objective information derived from the responses to the questionnaire. An estimated 1755 people live in Orange Park Acres which gives an average of 3.9 persons per dwelling unit with 1.4 students per dwelling unit. The average adult age is around forty years. The organizations listed most often were 4-H and Church.

There are definitely more animals than humans in Orange Park Acres. Chickens are the most numerous largely because of the chicken ranches. We estimate that there are more than 700 horses owned by the residents of Orange Park Acres. In numbers, dogs follow closely to horses then rabbits and cats which are estimated to number well over five hundred.

The typical resident has lived in Orange Park Acres over five years and the reasons most often given for moving to Orange Park Acres are: the rural atmosphere, a place to raise animals and have agriculture and the good environment for children to grow up in.

Those who rent in the area are less than two percent of the residents. Most of the residents came to Orange Park Acres from somewhere within Orange County. The majority live on one to two acre lots and reside in homes of over 2000 square feet in size. The average market value of a

residence is $68,000. A great majority of homes in the area are one-story and contain eight to nine rooms per house. The typical age of a house within the area is from ten to fifteen years. The main improvements listed were: patios, corrals, sheds, stalls, stables and barns. The prime uses of the lot other than for residential was for the raising and keeping of animals. About 50% listed this as one of the prime uses and around thirty percent included agriculture as a prime use of their land. The vast majority of the people work in Orange County or Los Angeles County and have an average annual income of between $20-25,000. In addition to approximately two cars per family in Orange Park Acres, there is at least one truck for every two families and at least one to two bicycles per family. One of every three to four families have motorcycles.

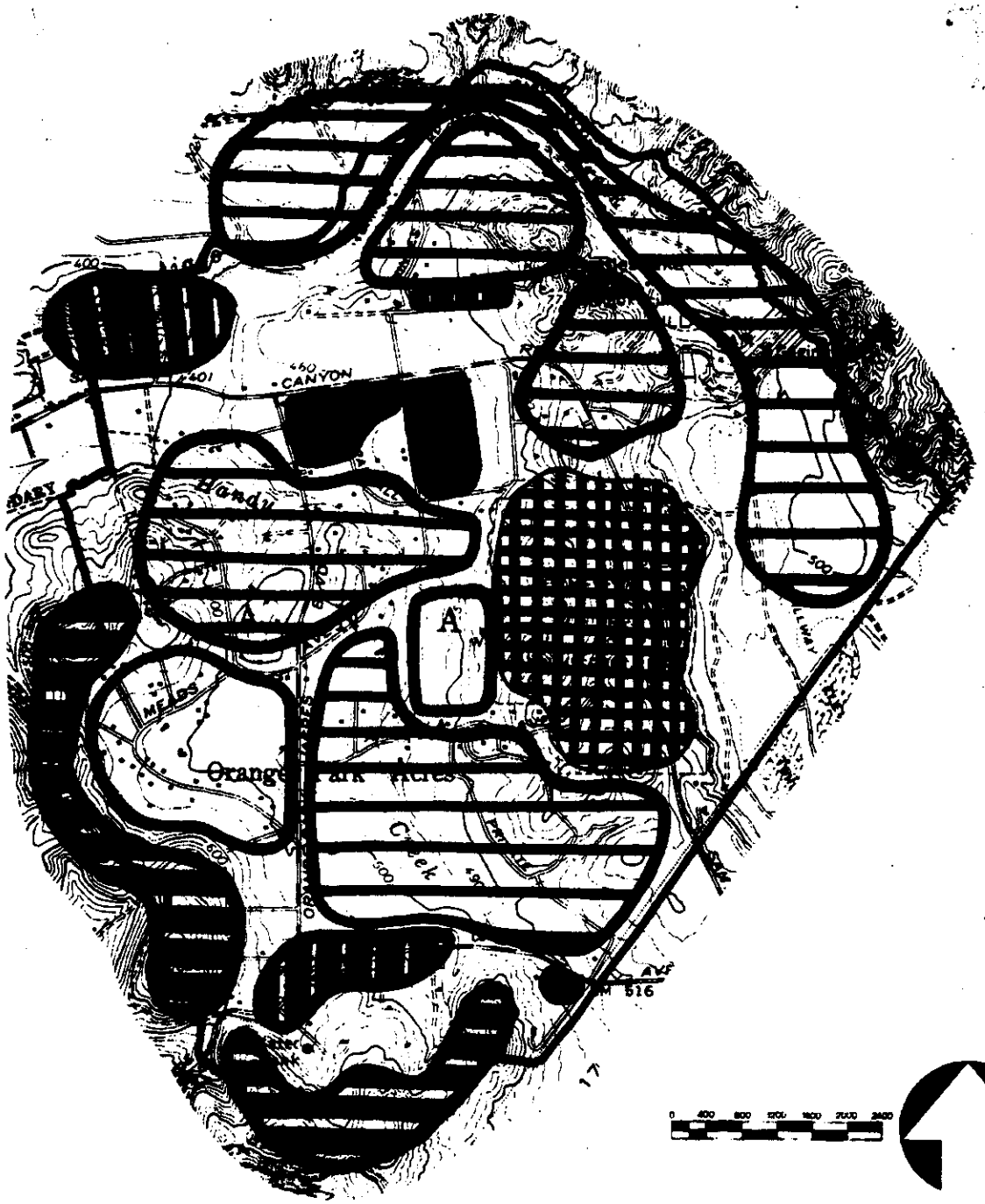
Activities in a typical week include an average of five hours horseback-riding, three hours shopping, three hours visiting friends, over two hours bicycling, two hours swimming, around one hour in club activities and over one-half hour each in hiking, civic activities and sightseeing. The average percentage of free time spent in Orange Park Acres is around eighty-six percent.

Following is a discussion of the qualitative evaluations of Orange Park Acres by the residents. The aspects of Orange Park Acres most often listed as positive include the rural-country atmosphere within convenient distance to the city, friendly neighbors who are willing to help, the low density of one acre minimum lot size and the natural beauty of the area such as its trees and openness. Also listed were the quietness, privacy and slow pace, the sense of belonging to a community, the ability to raise anaimals and to have agriculture as a part of the environment, the lack of streetlights and the distance between houses and the fact that it is a good place to raise children.

The elements of most concern about Orange Park Acres include, first and foremost, the intrusion of tract development upon the rural environment, specifically the Deerfield Tract along Santiago Boulevard. Other factors causing concern include the need for adequate sewers and drainage, the fact that the trees are dying and agriculture is diminishing within the area, the traffic and trucks along Santiago Canyon Road, Chapman and Orange Park Boulevard, the lack of planning or architectural controls and move-in housing. Also listed as concerns were the chicken ranches, dirt, flies and the odor from animals, loose dogs and tresspassers who have no respect for property, the need for more trails in the area and the sand and gravel operations in the area.

A composite map has been prepared from each of the maps submitted by the residents and landowners depicting positive and negative areas within Orange Park Acres as seen by these people.(See Exhibit # 19 (Negative and Positive Areas)

In summary, Orange Park Acres contains a relatively high income group with large families who desire a rural atmosphere. Most families have animals and many are involved in agriculture. There is a great variety of house types and ages within the area. There is a strong community spirit and the peoples' activities in a typical week are dominated with involvement in Orange Park Acres. (See Appendix for sample of O.P.A. Questionnaire)



ORANGE PARK ACRES

- POSITIVE OR NEGATIVE AREAS -

FROM STUDY AREA QUESTIONNAIRE RESPONSES

MOST POSITIVE

POSITIVE

LEAST POSITIVE

POSITIVE & NEGATIVE

NEGATIVE

MOST NEGATIVE

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EXISTING PLANNING STATUS

The purpose of this section is to identify and determine the significance of the existing applicable plans within the City and County of Orange which may have an affect on the preparation of a Specific Plan for Orange Park Acres.

SPHERE OF INFLUENCE

The Sphere of Influence - City of Orange has been filed with the Local Agency Formation Commission and is depicted on Exhibit #20 (Sphere of Influence). It is indicated that it is likely that in the future, if annexed, the entire study area would be within the City of Orange.

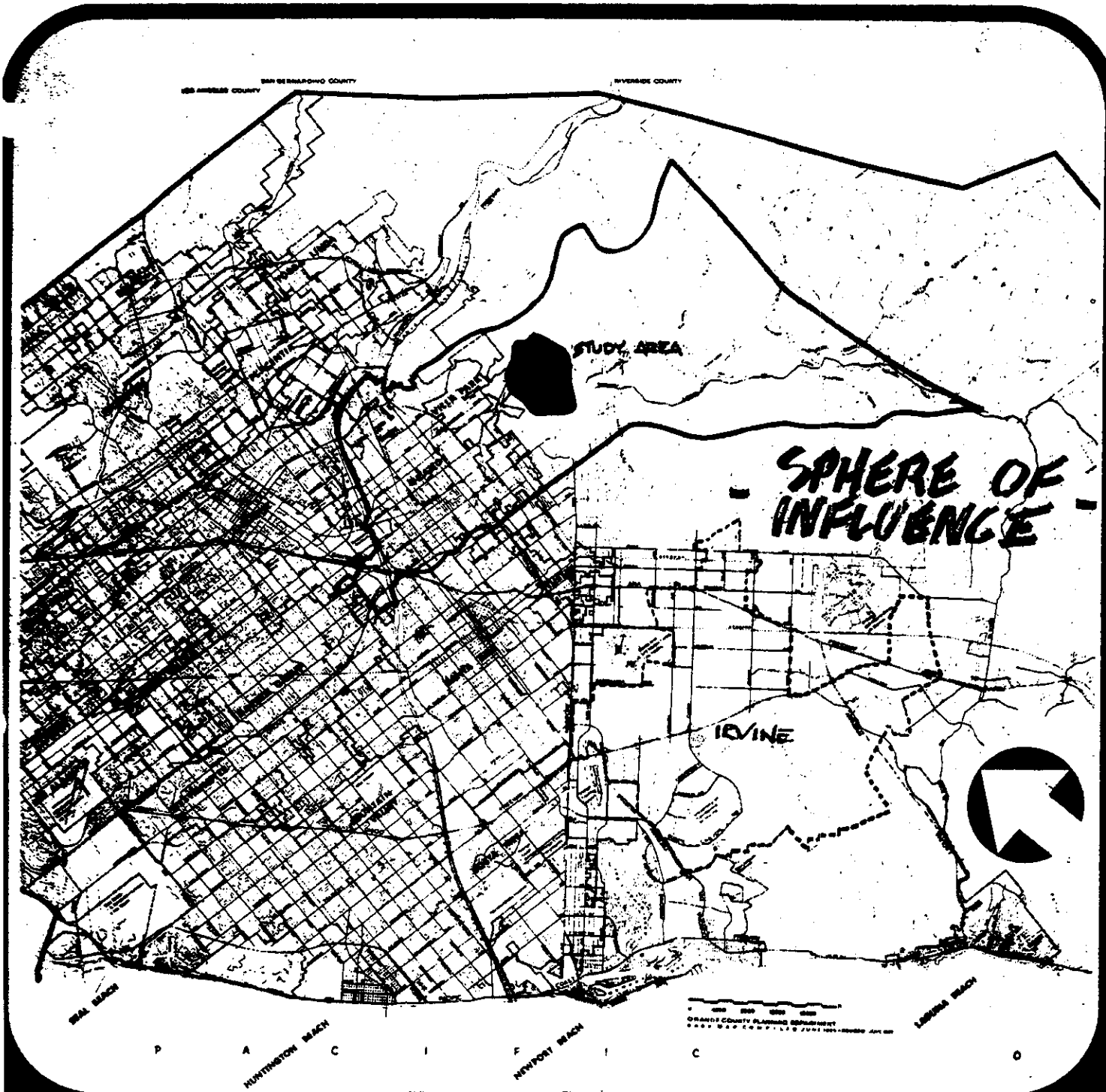
CITY OF ORANGE GENERAL PLAN

A General Plan Study for the entire City of Orange and surrounding areas including Orange Park Acres was completed in 1971, however, it has not been adopted by the City Council or Planning Commission. Therefore, it does not have any legal impact. Even so, this Plan has been used for reference in the preparation of the Orange Park Acres Specific Plan.

ORANGE COUNTY GENERAL PLANNING PROGRAM

Within the Orange County General Planning Program elements have been adopted and have application to this study:

1. The 1983 Orange County Land Use Element has been adopted and supersedes the Orange Community General Plan and the Tustin Area General Plan (see Exhibit #21 [1983 Land Use Element]). Not shown on the exhibit is the incorporation of the Santa Ana River - Santiago Creek Greenbelt Plan. These plans have been used for reference in this planning study. The Orange Park Acres Specific Plan will be proposed an an amendment to the 1983 Land Use Element.



ORANGE PARK ACRES

SPHERE OF INFLUENCE

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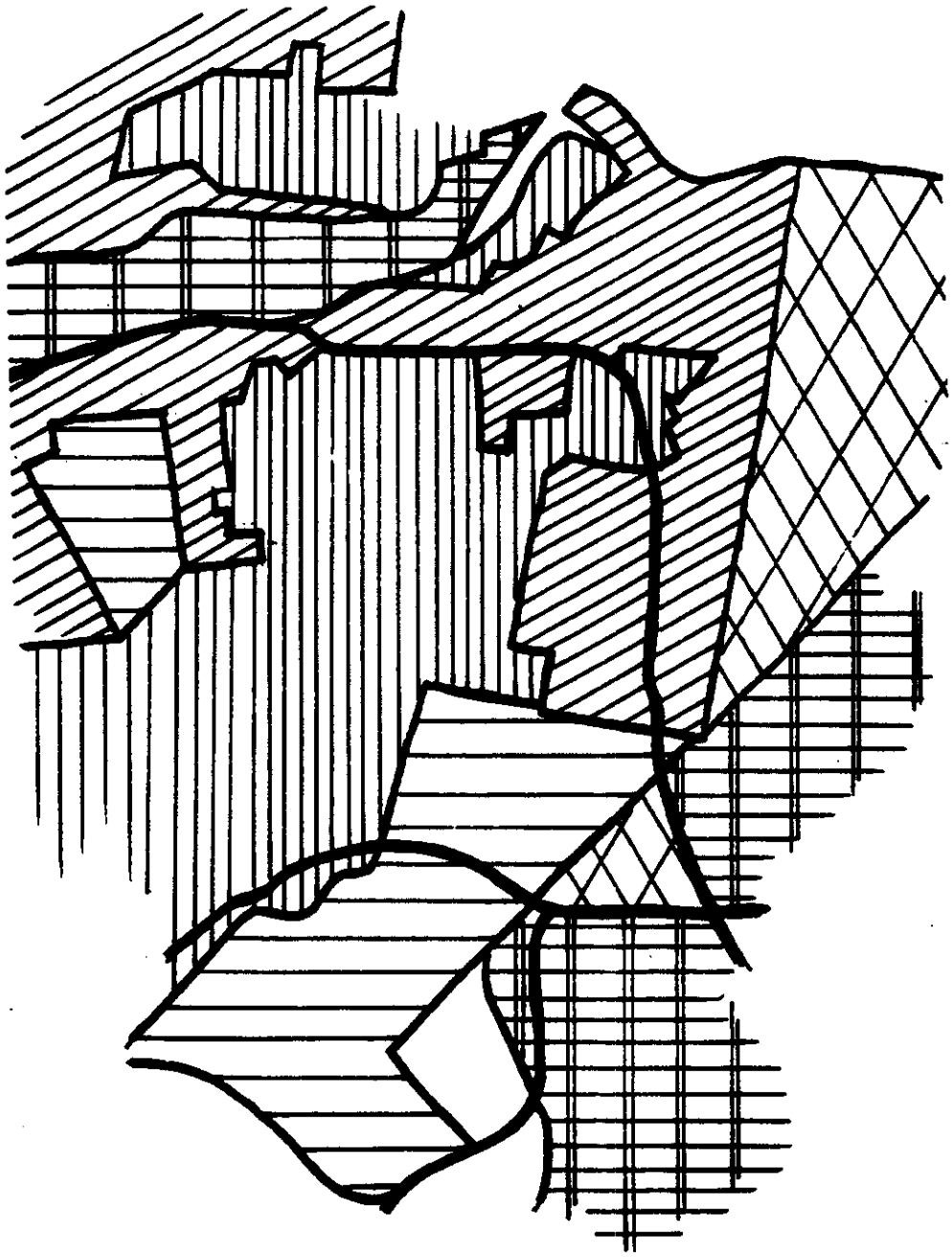

ORANGE PARK ACRES
1983 LAND USE ELEMENT

LOW DENSITY RESIDENTIAL
GENERAL AGRICULTURE
RECREATION
OTHER OPEN SPACE
INCORPORATED

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2. The Master Plan of Arterial Highways for the County has been utilized for this study and at this writing the City of Orange is considering revisions to their Arterial Master Plan which will make it compatible with the Master Plan of Arterial Highways for Orange County. Specific alignment studies have been prepared along Santiago Canyon Road and recommendations relative to this subject are made within subsequent sections of this report.

3. The following elements have been utilized as reference and have had application to the preparation of this Plan: Open Space and Conservation, Scenic Highways, Preliminary Housing, Regional Parks, Bicycle, Riding and Hiking Trails. See Exhibit # 22 (Trails) for a depiction of currently proposed trails in the area.

ORANGE PARK ACRES - PROPOSED PLANS

Other plans identified as relating to this study include the tentative tract for J.W. Klug, the R.B. Smith proposal for the Meads Ranch (120 acres), the Leadership Housing Systems, Inc. proposal for the Edwards and Trueblood property and the one-acre subdivisions of the properties owned by Don Greek, Lil Jenquist and H. Lenz.

Alternative Concept Plans

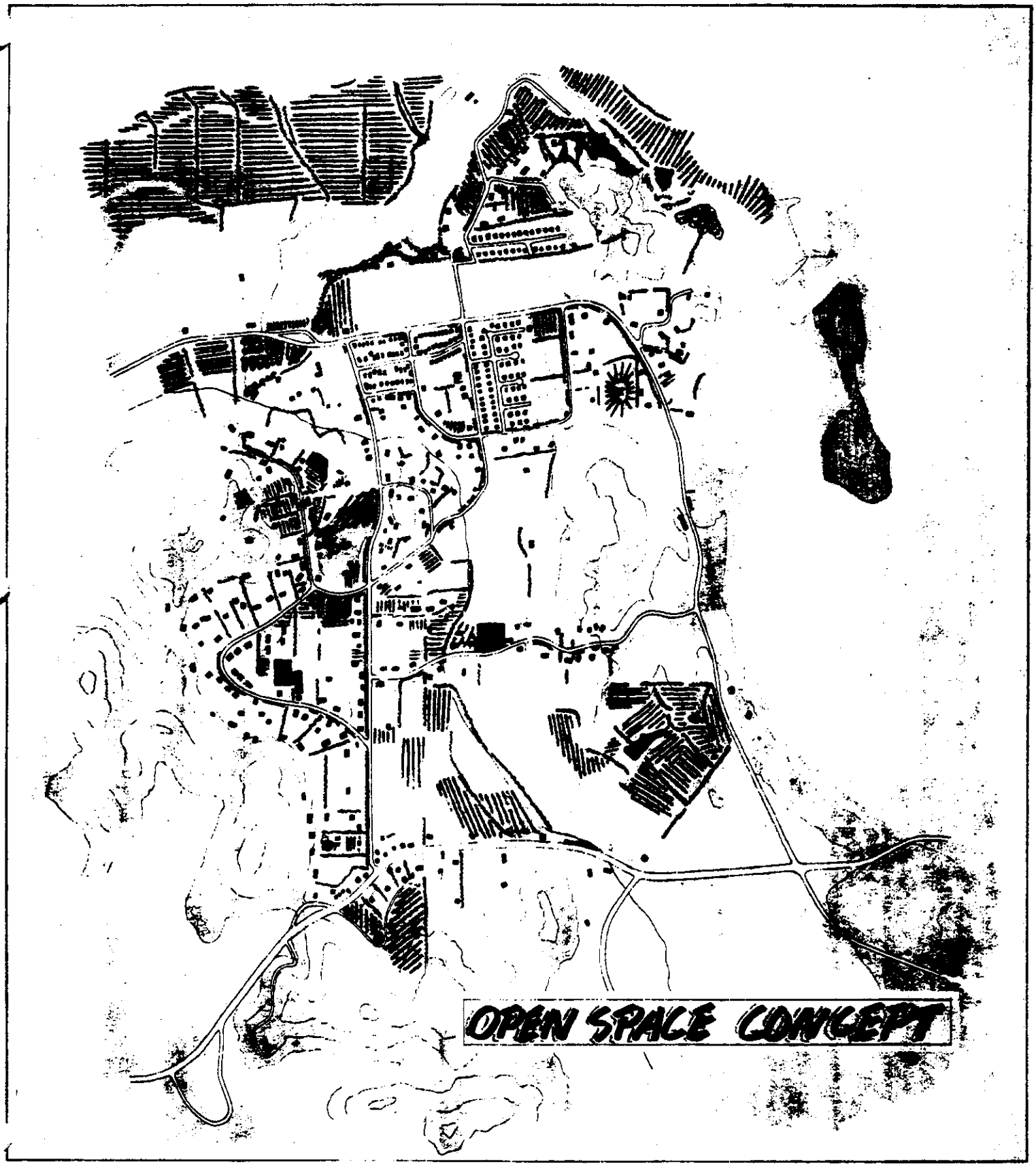
THE PURPOSE FOR PREPARING ALTERNATIVE PLANS IS TO EXAMINE AND EVALUATE THE DIFFERENT BASIC CHOICES AVAILABLE FOR SELECTION AS THE BEST POSSIBLE PLAN. THE FOUR BASIC ALTERNATIVES EVALUATED IN THIS REPORT INCLUDE: (1) AN OPEN SPACE CONCEPT, (2) A ONE-ACRE CONCEPT, (3) A CLUSTER CONCEPT AND (4) A CURRENT DEVELOPMENT TREND ALTERNATIVE. THESE CONCEPTS ARE PRESENTED IN GENERAL ALONG WITH A COMPARISON AND EVALUATION WITH ONE ANOTHER. THIS EVALUATION INCORPORATES A SYNTHESIS OF THE ABOVE ALTERNATIVES AND AN ESTABLISHMENT OF THE PARAMETERS FROM WHICH THE PROPOSED SPECIFIC PLAN SHALL BE DERIVED.

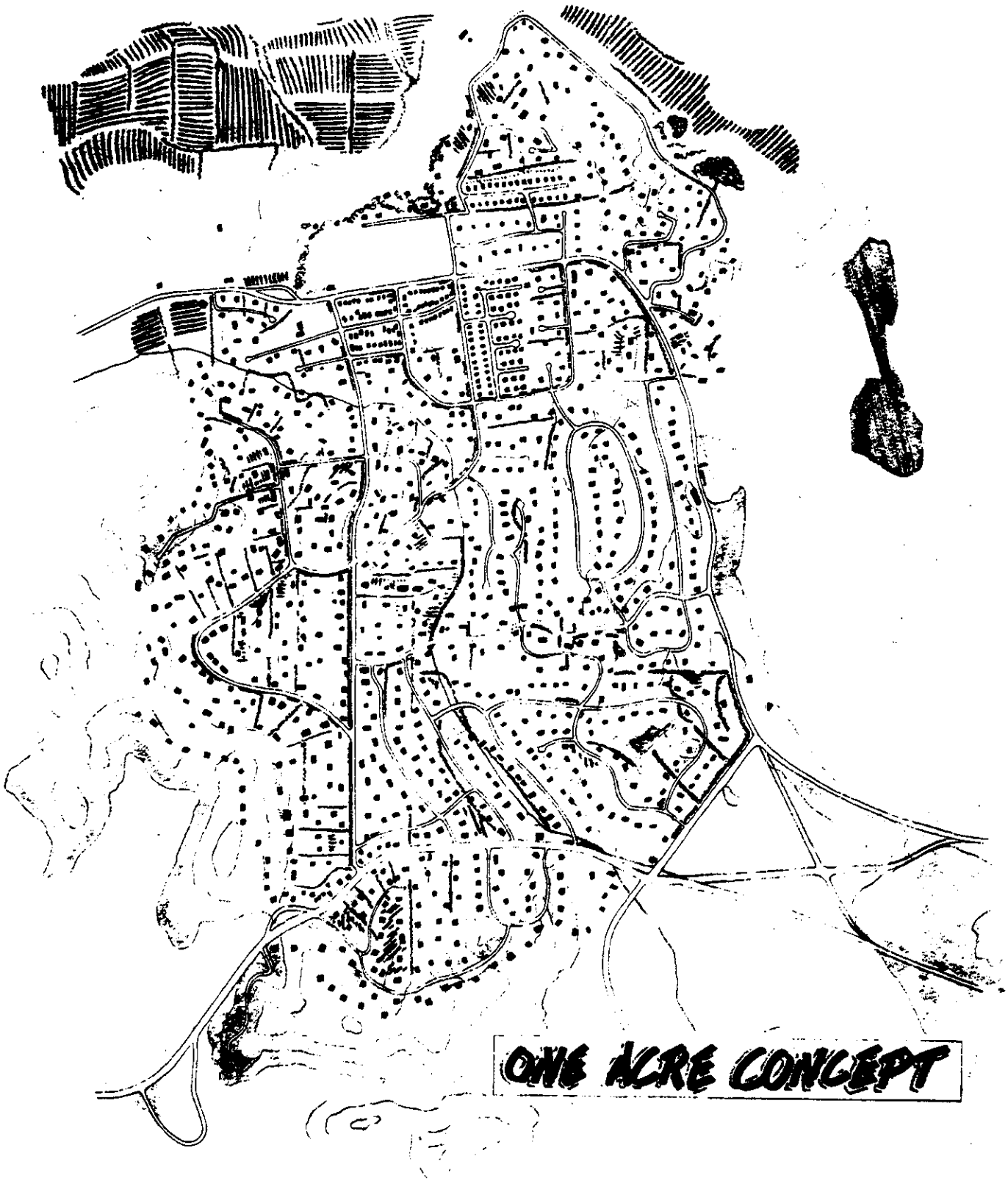
OPEN SPACE CONCEPT

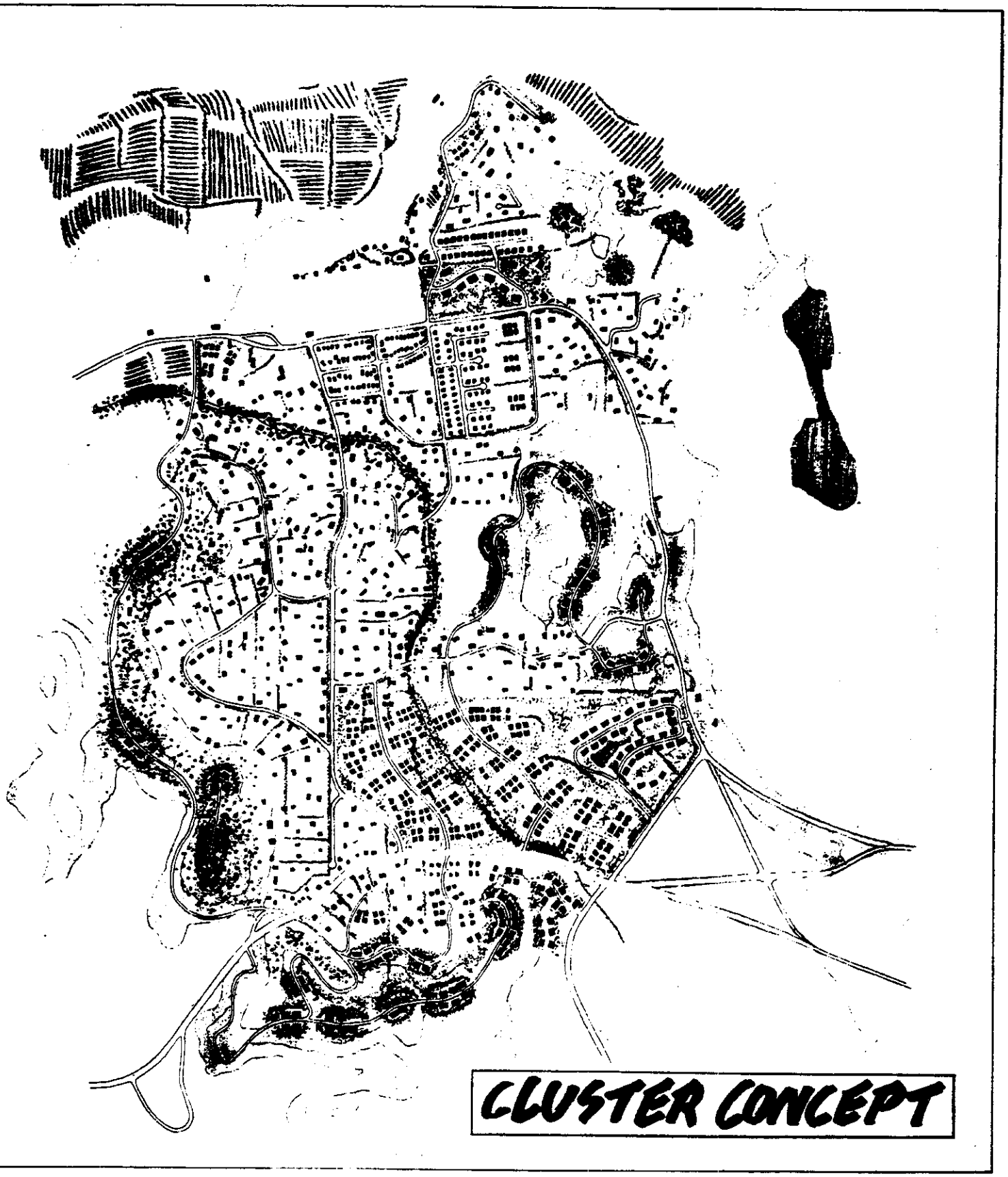
The Open Space Alternative Plan allows development and subdividing of parcels of less than ten acres, but limits the minimum parcel size to one acre. The remaining parcels of ten acres or more are to remain as open space to be used for recreation, equestrian use, hiking or scenic vistas. This Plan would be implemented by the residents by forming a special assessment district. This would provide the possibility for the borrowing of the necessary funds to purchase the open,undeveloped land and possibly make other improvements such as sewers, roads, drainage, trails, etc. In addition to repaying the loan, the residents would also have to pay the property taxes on the open land. This Plan is proposed as an opportunity to retain the one-acre minimum lot size in presently developed areas and in addition retain the existing open space. Exhibit # 23 (Open Space Concept) shows the Orange Park Acres area development if this Plan is implemented.

ONE ACRE CONCEPT

The One Acre Alternative Plan allows complete development for the entire Orange Park Acres area only, limiting all parcels to a one-acre minimum. There will be some local parks as required by the City of Orange and Orange County regulations. Also, trails and the Santiago Creek area will remain in open space for it is part of the County Open Space and Conservation Element. This Plan can be implemented by zoning the entire area R-1-40 for the area within the City limits of Orange and by zoning the County unincorporated area E4-1. This would allow only one residential structure per acre. This alternative reflects the Plan proposed by the residents of the area. Exhibit # 24 (One-Acre Concept) shows the Orange Park Acres area at full development if this Plan is implemented.

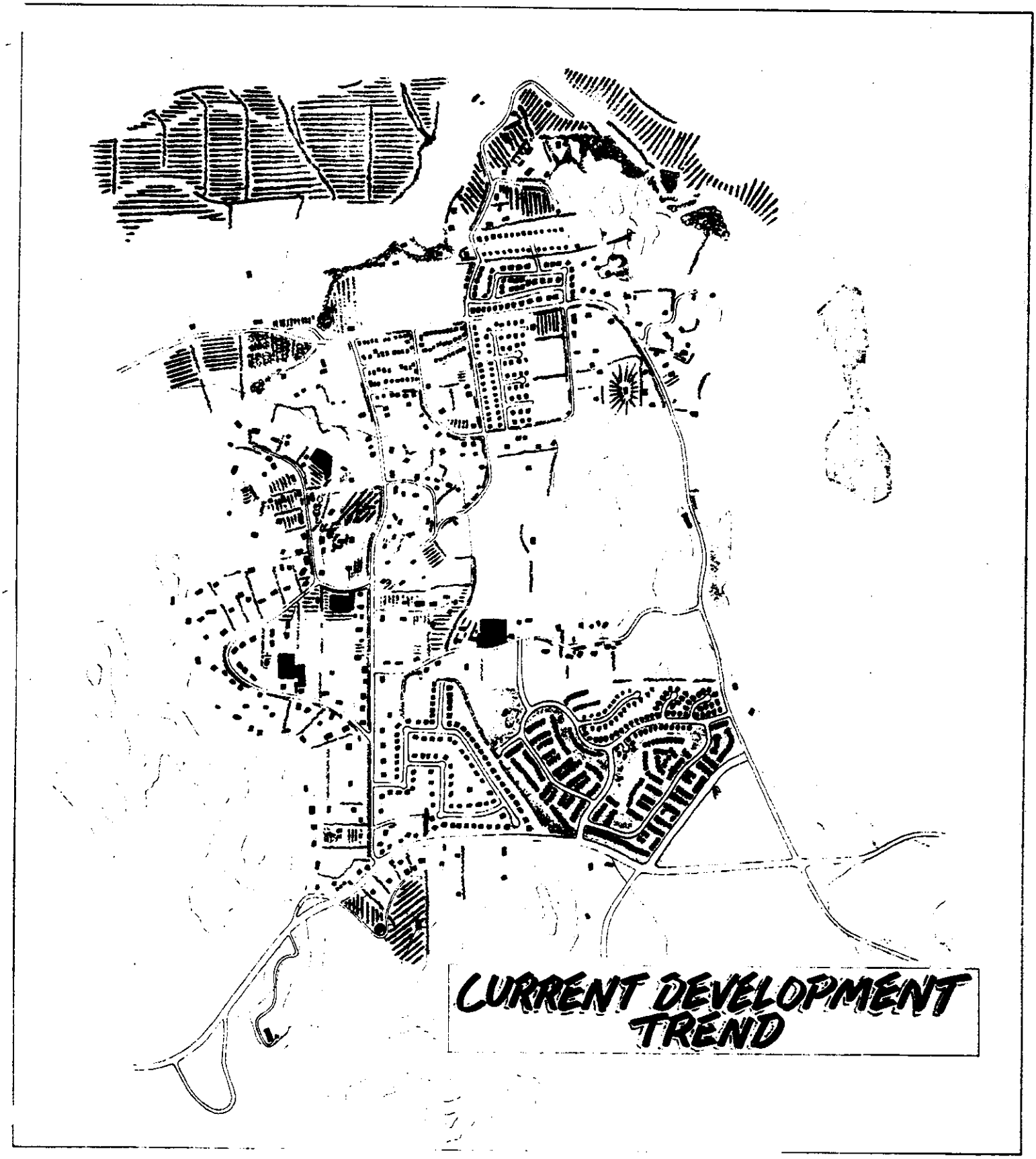

OPEN SPACE CONCEPT


ONE ACRE CONCEPT


CLUSTER CONCEPT

required local parks. It does allow for improvements in the area such as sewers, streetlighting, drainage, curbs, etc.

The purpose for including this alternative is that it represents the most current proposals for the area. It is not desired by the residents of Orange Park Acres but it offers a positive economic return to the landowners of large undeveloped parcels. It also would allow persons of lower income levels to enjoy living in the area. However, it may destroy the present lifestyle and rural character - a main attraction of the area. Exhibit # 26 (Current Development Trends) shows the area if the present proposals for development were implemented. This development alternative would assume extension of similar development on all larger parcels in the area,although it only depicts those which are presently proposed for smaller than one-acre lot development.


CURRENT DEVELOPMENT TREND

EVALUATION

The evaluation of the alternative concept plans is measured in two formats. The first is a quantitative analysis, which measures all physical and socio-economic data for each alternative plan in a comparative quantitative format. The second format is a qualitative analysis measuring the negative, positive and moderate acceptance of each alternative plan with regard to the goals, objectives and policies for the Specific Plan.

QUANTITATIVE ANALYSIS

The quantitative data utilized in analysis of each alternative plan is derived from factors developed from the existing status of each physical and socio-economic element. Since the purpose here is to be able to measure relationships of different elements with each alternative plan, all cost/revenue factors were based upon the existing City of Orange factors. This allows for a more precise relationship measurement and decreases complexity. It does not assume incorporation of Orange Park Acres into the City of Orange. Table # 17 (Quantitative Analysis - Totals) shows the totals for each element for each alternative. Table # 18 (Quantitative Analysis - Factors) shows the factors used to determine the totals for each element in each alternative.

TABLE # 17

ORANGE PARK ACRES

QUANTITATIVE ANALYSIS - TOTALS

Data Item	Open Space	One Acre	Cluster	Exist. Trend
Dwelling Units	680	1,100	1,770	2,700
Population	2,600	4,300	6,300	8,600
Prop. Tax Revenue	81,640	135,020	197,820	270,040
Other Tax Revenue	306,150	506,325	741,825	1,012,650
Total Revenue	387,790	641,345	939,645	1,282,690
Expenditures	370,630	612,965	898,065	1,225,930
Surplus Revenue	17,160	28,380	41,580	56,760
Students	950	1,550	2,125	2,700
Student Deficit Cost	126,350	206,150	142,308	0 *
Median Family Income	22,000	28,000	24,000	20,000
Total ADT's	8,160	13,200	21,240	32,400
Absorption Time	3-5 yrs	8-12 yrs	5-10 yrs	5-10 yrs
Land Use Acreage				
Residential	680	1,250	1,020	1,130
Public/quasi-public	195	195	195	195
Commercial	55	55	55	55
Recreation, Open Space	864	294	524	414
Total Acres	1,794	1,794	1,794	1,794

*This alternative assumes one student per dwelling unit
All figures are estimates
All revenues, costs & taxes in constant U.S. dollars
Sources: Assessor Records, O.P.A. Questionnaire & J.L. Webb Planning

TABLE # 18

ORANGE PARK ACRES

QUANTITATIVE ANALYSIS - FACTORS

Data Item	Open Space	One Acre	Cluster	Exist. Trend
Dwelling Units/ac.	.65	.88	1.4	2.2
Persons/D.U.	3.9	3.9	3.6	3.2
Persons/ac.	2.5	3.4	5.1	6.8
Property tax rate/100	1.29	1.29	1.29	1.29
Mkt. Land Value/ac.	12,000	15,000	20,000	30,000
Total Mkt. Value/D.U.	68,000	70,000	60,000	50,000
Property tax/capita	31.40	31.40	31.40	31.40
Other Taxes/capita	117.75	117.75	117.75	117.75
Expenditures/capita	142.55	142.55	142.55	142.55
Students/D.U.	1.4	1.4	1.2	1.0
Cost per Student	977	977	977	977
Deficit Cost per Student	133	133	67	0
ADT's per D.U.	12	12	12	12

All figures are estimates
All revenues, costs & taxes in constant U.S. Dollars
D.U. = dwelling unit
ac. = acre
Capita = person
Sources: Assessor Records, O.P.A. Questionnaire & J.L. Webb Planning

QUALITATIVE ANALYSIS

The qualitative analysis measures the positive, negative and moderate compatibility of each alternative plan with general parameters of objectives utilized in formulating the proposed Specific Plan for Orange Park Acres. Table # 19 (Qualitative Analysis) lists the general objectives and shows with a negative (−), positive (+) or moderate (o) sign the compatibility of each alternative plan.

Summary

Based upon the results displayed in the quantitative and qualitative analyses, some basic evaluation parameters have been established for a proposed Specific Plan. First, the Open Space Alternative offers the best plan to achieve the best rural environment, but economically it would cost the homeowners approximately $4,000,000 to purchase the land. Property taxes would be approximately $40,100 annually and if sewer improvements and maintenance of the area were included, it would cost each homeowner approximately $200 per month for this plan to become a reality.

The Existing Trend Alternative is the least desirable in that it destroys the rural environment and lifestyle. However, it offers the greatest density and therefore provides housing for the greatest range of income groups and the greatest increase in land values and revenue surplus. It is this positive economic factor that is causing the existing trend of development to occur in the area today.

Since one of the above alternatives offers the rural environment but is not economical and the other alternative is economical but destroys the rural environment, neither of the above alternative plans should be the solution.

TABLE # 19

ORANGE PARK ACRES

QUALITATIVE ANALYSIS

Objective	Open Space	One Acre	Cluster	Exist. Trend
1. Preserves rural environment	+	o	+	-
2. Provide for compatible development	+	+	o	-
3. Promotes common lifestyle	+	+	o	-
4. Preserves open space	+	-	o	-
5. Preserves natural features	+	o	+	-
6. Provides for equestrian activity	+	o	+	o
7. Provides best visual image	+	o	+	-
8. Promotes increase in land values	o	o	+	+
9. Provides housing for a variety of income levels	-	-	o	+
10. Provides greatest revenue for generated costs	o	-	o	+
11. Economically feasible	-	o	+	+
12. Socially feasible	+	+	o	-

Compatibility Level
(+) positive
(-) negative
(o) moderate

Therefore, an examination of the One-Acre and Cluster Alternatives will be considered.

The One-Acre Alternative offers a rural environment put provides less open space., thus, it is a rural setting subdivided in an urban format. Economically it provides housing for only those in the upper income groups while generating just enough revenue to pay for itself.

The Cluster Alternative offers a rural environment in that it provides open space although it offers some differentiation in life styles. Economically it pays for itself while allowing those with moderate incomes to reside in the area. The Cluster Alternative is more feasible economically in addition to preserving the rural environment.

In conclusion, due to the strong support of the One-Acre Alternative by the homeowners in the area, it is thought that a mix concept of both the Cluster and One-Acre Alternatives would provide the best solution. It would retain the rural environment and open space, provide for moderate income requirements, provide the one acre parcels desired by the residents of Orange Park Acres and be economically feasible.

Proposed Specific Plan

THIS SECTION FIRST DESCRIBES THE PROPOSED PLAN BY ENUMERATING THE GOALS, OBJECTIVES AND POLICIES ESTABLISHED AND RECOMMENDED IN THE COURSE OF STUDY. THE SECOND STEP GENERALLY DESCRIBES THE CONCEPT AS IT HAS BEEN DERIVED FROM AN ANALYSIS OF THE EXISTING OPPORTUNITIES AND CONSTRAINTS, STATEMENT OF GOALS, OBJECTIVES AND POLICIES AND AN EVALUATION OF THE ALTERNATIVES. THE ELEMENTS OF THE PROPOSED PLAN ARE THEN DESCRIBED AND AN EVALUATION OF THE TOTAL PLAN IS MADE. THIS SECTION IS CONCLUDED WITH RECOMMENDATIONS FOR THE IMPLEMENTATION OF THE SPECIFIC PLAN.

GOALS, OBJECTIVES AND POLICIES

A goal is the end toward which effort is directed. The goal is the most general of the three categories, goals, objectives and policies. It is best characterized as a "motherhood" statement in that it is so general that everyone can agree upon it (i.e. "create a quality environment").

Objectives are similar to goals except that they are more specific but still general enough that they are not specifically measurable.

Policies on the other hand can be measured in one of three ways, either by comparison, performance or dimension. Therefore, the most controversial areas are those dealing with specific policy. The purpose of this section is to identify the general and specific directions recommended by this Plan. Following is a listing of Goals and Objectives followed by the Policies recommended for this Plan.

GOALS AND OBJECTIVES

1. Establish a Distinctive Community Theme

   a. Maintain a free, open and informal type of development uninhibited by regimentation

   b. Provide a wholesome rural atmosphere emphasizing a quiet seclusion close to nature

   c. Foster compatible residential development within the area visually and functionally

   d. Link the various areas through a system of trails and identifiable streetscape landscaping

   e. Offer a positive entry treatment and visual distinction of the main elements within Orange Park Acres

   f. Establish a "theme" element, such as a specific tree type or style of fence to be used throughout the area

g. Promote a distinctive "lifestyle" which allows for a diversity of activities

h. Foster a unity of interest and purpose among the residents

i. Emphasize the rural, green image promoting the maintenance of trees and the inclusion of landscaped corrals and fence lines

j. Establish a rural District Code for roads, lighting, setbacks, landscaping and other criteria for rural development to promote a distinctive theme

2. Preserve and Enhance Natural Features

a. Maintain the existing trees where possible and replant new trees recommended by a landscape-agricultural specialist

b. Preserve a positive image of the hillsides through special development controls

c. Identify and preserve the positive features of the major drainage courses and bodies of water within the area utilizing them for recreational purposes where appropriate

d. Identify and protect unique and valuable flora and fauna

e. Preserve distinctive geological features

f. Insure maintenance of view of positive features of and from the site

g. Reflect a visual unity within the geological boundaries of the Hanging Valley

h. Preserve and enhance the natural beauty of the area

i. Enhance the natural setting through planning and landscape design

3. Provide For Economic Viability

a. Establish a balance between facilities and services provided and revenues collected for this area

b. Promote an increase in land value over time through appropriate planning

c. Provide housing for a variety of incomes within the economic parameters of today's costs

d. Insure that housing development proposed by the Plan is economically viable today

e. Provide for appropriate phasing of development

4. Promote the Safety, Health and Welfare of the People

a. Provide, where possible, safe, low-trafficked roads discouraging through traffic compatible with existing and proposed arterial roads

b. Propose improved treatment of sewerage for problem areas

c. Include adequate roads, clear areas and water to protect against fire

d. Recommend treatment of drainage to minimize danger during heavy rains

e. Provide for adequate police surveillance and protection

f. Provide recommendations for clean-up and maintenance within the area

g. Promote a reduction of residential uses in areas with noise or pollution problems

h. Promote safe trails and their crossings of streets, providing grade separation where appropriate

POLICIES FOR ORANGE PARK ACRES

1. Promote the use of wood-rail fencing, either natural or painted white, to give a sense of openness - while restricting the use of block walls, chain link or other opaque fencing

2. Provide for a variety of house and structure setbacks to avoid the straight line affect caused by structures being "lined up"

3. Encourage the use of natural exteriors for the structures including wood and warm, earth colors

4. Emphasize the use of one-story structures to create a ranch type or low profile rural feeling

5. Utilize natural drainage courses and landscaped swales, discouraging lined channels etc.

6. Provide rural road standards with minimum pavement sections - no curbs, gutters or sidewalks and incorporate equestrian, hiking and bicycle trails along the road

7. Create a positive view from the roads emphasizing landscaped or open space features through open wood fences

8. Provide for continuous trail linkages throughout O.P.A. connecting to County proposed trails, major land use elements and natural features such as Santiago Creek and Handy Creek

9. Retain a positive view to the hills, preserving the undeveloped hillsides of O.P.A. Provide a landscaped screen for all housing in those areas and incorporate sensitive grading criteria throughout

10. Preserve Santiago Creek as a balanced ecological system and riparian area, maintaining the diversity of plant and vertebrate species while allowing for light recreational

use such as equestrian and hiking trails. Specifically support the Santiago Creek Greenbelt Proposal by the County of Orange

11. Promote the phasing-out of gravel pit operations along Santiago Creek and promote restoration of natural amenities within the area

12. Provide for the establishment and preservation of a greenbelt along Handy Creek incorporating an equestrian trail

13. Establish a greenbelt strip through the undeveloped portion of the Holy Sepulcher Cemetery west of Santiago Canyon Road. Utilize the natural drainage channel to provide for the enhancement of wildlife values through an open space corridor, helping to retain a rural character and provide for an equestrian and hiking link

14. Retain and provide for the maintenance of the Eucalyptus hedgerows within the area and provide for the planting of a more suitable variety of Eucalyptus tree in conjunction with the Plan development

15. Preserve, if feasible, the lake on the Mead Ranch in order to maintain the number of species of plants and animals which depend upon it for food and water

16. Promote the continued use of agriculture within the area

17. Provide for landscape, greenbelt or open space buffer between differing housing types

18. Restrict, through design and ordinances, the parking along all of the streets. Provide off-street parking on lots or parking bays which are completely screened from view

19. Promote incorporation of certain "theme" elements, such as trees, fences or other landscaping, along the major roads within O.P.A.

20. Recommend a requirement for low-level rural character lighting on each lot to reflect individual architecture and landscaping styles in order to replace the typical cobra head streetlight

21. Establish as local scenic roads: Chapman, Santiago Canyon Road, Newport, Orange Park Boulevard, Meads Avenue, Winds Drive and Amapola. These would receive any "theme" treatment established for O.P.A.

22. Adopt proposed trails as shown on Exhibit #33 as the main trail system to serve O.P.A. and promote future grade separated crossings at arterial road crossings

23. Provide for special landscape and entry treatment at all main entry points into O.P.A. via arterial roads and on to Orange Park Boulevard and Amapola off of these arterials

24. Discourage any through traffic along Orange Park Boulevard and other local roads for the area. To help accomplish this, promote the relocation of the extension of Orange Park Boulevard north of Santiago Boulevard shown on the Master Plan of Arterials

25. Support a future traffic study for O.P.A. to determine the need, location and traffic volumes in and around O.P.A. to be carried out jointly by the City and County of Orange

26. Re-evaluate the alignment studies along Santiago Canyon Road along the cemetery property to determine if an alternative to extensive filling of an important canyon area can be avoided or minimized

27. Develop an overall planning Committee for O.P.A. to guide the implementation of the Specific Plan and subsequent planning within the area including architectural controls, maintenance requirements and special development standards. This Committee should have representatives from the County, City, residents, developers and landowners within the area

28. Preserve the steep slopes along the hillsides maintaining a constant band of open space and trails along these areas

29. Provide the flexibility for raising and keeping of animals in all development on the flatland areas where possible

30. Adopt a specific grading ordinance for all future development such as the example submitted with this report prepared by J.L. Webb (see Appendix)

31. Provide a landscape screen to shield massive cut slopes along Chapman as seen upon entering the study area from the west. Also screen any other cut or fill areas which expose only dirt and rocks and are unsightly

32. Provide for minimum setbacks along Chapman, Santiago Canyon Road and Newport to shield from noise, air pollution and to aid in providing a visual corridor along these important roads

33. Locate corrals, stalls, pens, storage areas, etc. so as not to detract from a positive view from the roads within the area. Attention should be given to the placement of effective landscape mounds or shrubs on the lot.

34. Promote the incorporation of a trunk sewer to serve the entire area of existing and proposed development

35. Require all new development to produce a cost/revenue impact report

CONCEPT PLAN

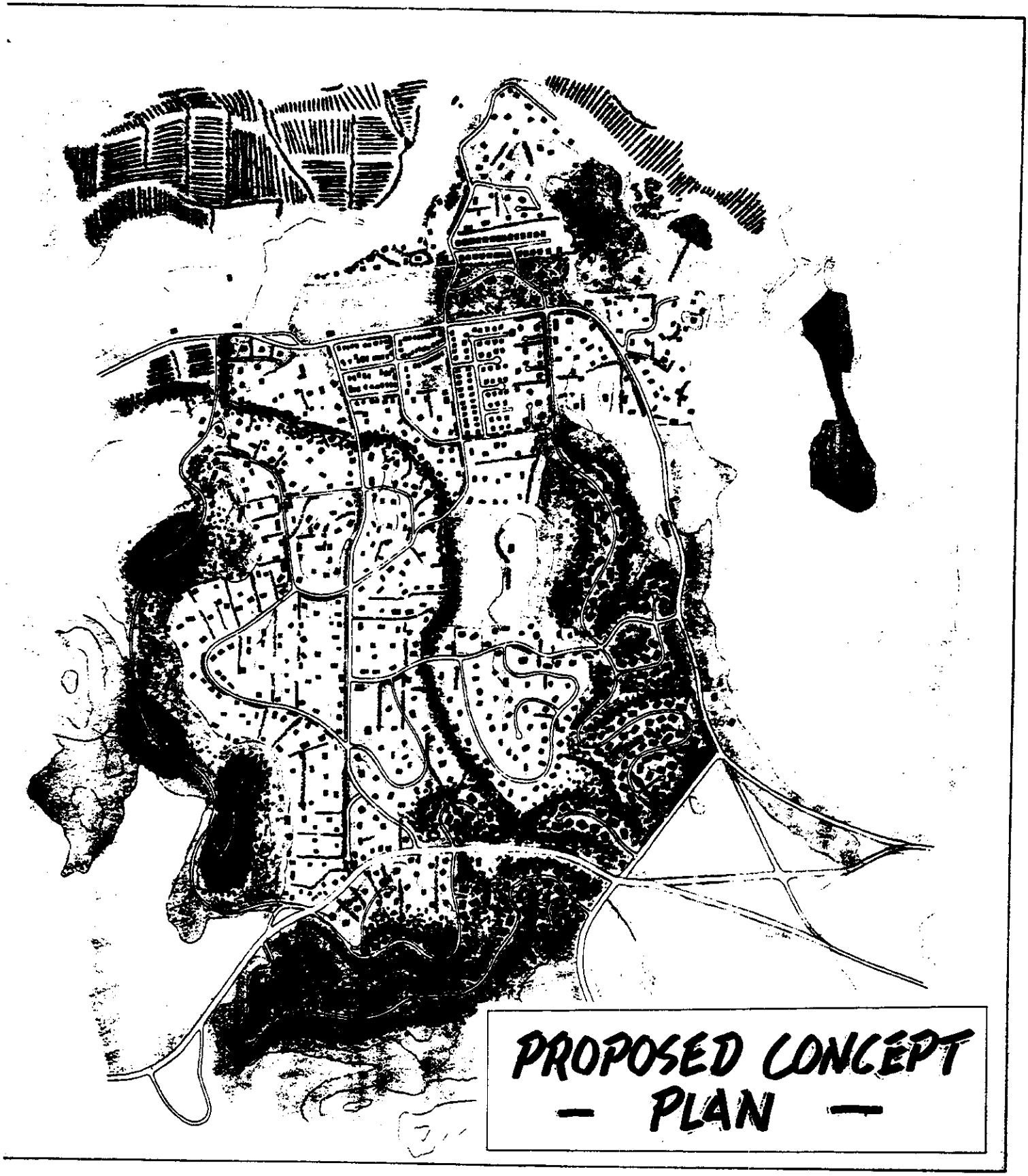
The proposed Specific Plan is a mix of the One-Acre and the Cluster Alternative Plans. This Plan will offer a rural environment which will allow the one-acre lots to continue developing in the area while also allowing for a viable economic community. There are three proposed housing concepts presented in the Plan: (1) single-family detached, (2) hilltop clusters and (3) flatland clusters. Exhibit # 27 (Proposed Concept Plan) shows the overall proposed Plan as it will be when fully developed. A further explanation is provided for each housing concept.

SINGLE-FAMILY DETACHED

The single-family detached housing unit is presently the only housing type in Orange Park Acres. It is one dwelling unit on a single parcel. The proposed concept provides for a maximum of 790 of this type of unit, allowing for an increase of 310 single-family units in the area. The Plan also proposes that the architectural design, layout and image of these units be of rural character in order to give positive visual attention and sense of openness.

HILLTOP CLUSTERS

The reason for proposing hilltop clusters is to preserve open space on the hillsides and thus preserve the rural visual image. Also, hilltop development is less damaging to the geology and topography and yet offers panoramic views to the occupants of this type of housing. In order to preserve the positive aspect of hilltop clustering, landscaping should be provided to screen it from view by those living at lower elevations and in flatlands.



PROPOSED CONCEPT — PLAN —

Hilltop developers should utilize the attached unit concept in order to provide enough units to make them economically viable and yet occupy a minimum of space. The proposed Specific Plan allows for approximately 560 hilltop units in Orange Park Acres. Exhibit # 28 (Hilltop Cluster Concept) shows both an elevation and sectional close-up of a standard hilltop cluster proposal.

FLATLAND CLUSTERS

Flatland clusters can be either attached or detached units. The proposed Plan allows for approximately 320 of this housing concept type. Due to the proximity to heavily traveled roads and easy access, special consideration must be given to retain the rural visual image. Controls in architectural design, setbacks and landscaping are the major factors that will determine the success that this housing concept will have in retaining and even adding to the rural visual image of Orange Park Acres. Exhibit #29 (Tract #7560 Cluster Alternative) shows the affect which can be obtained by attached clusters on flatland. It accomplishes all of the following objectives: open space, economic viability, low circulation, no congestion with off-street parking and provides heavy landscape buffering from noise and enhances the visual image. Exhibit # 30 is an illustration showing the architectural rurality of one of the clusters in Exhibit# 29.

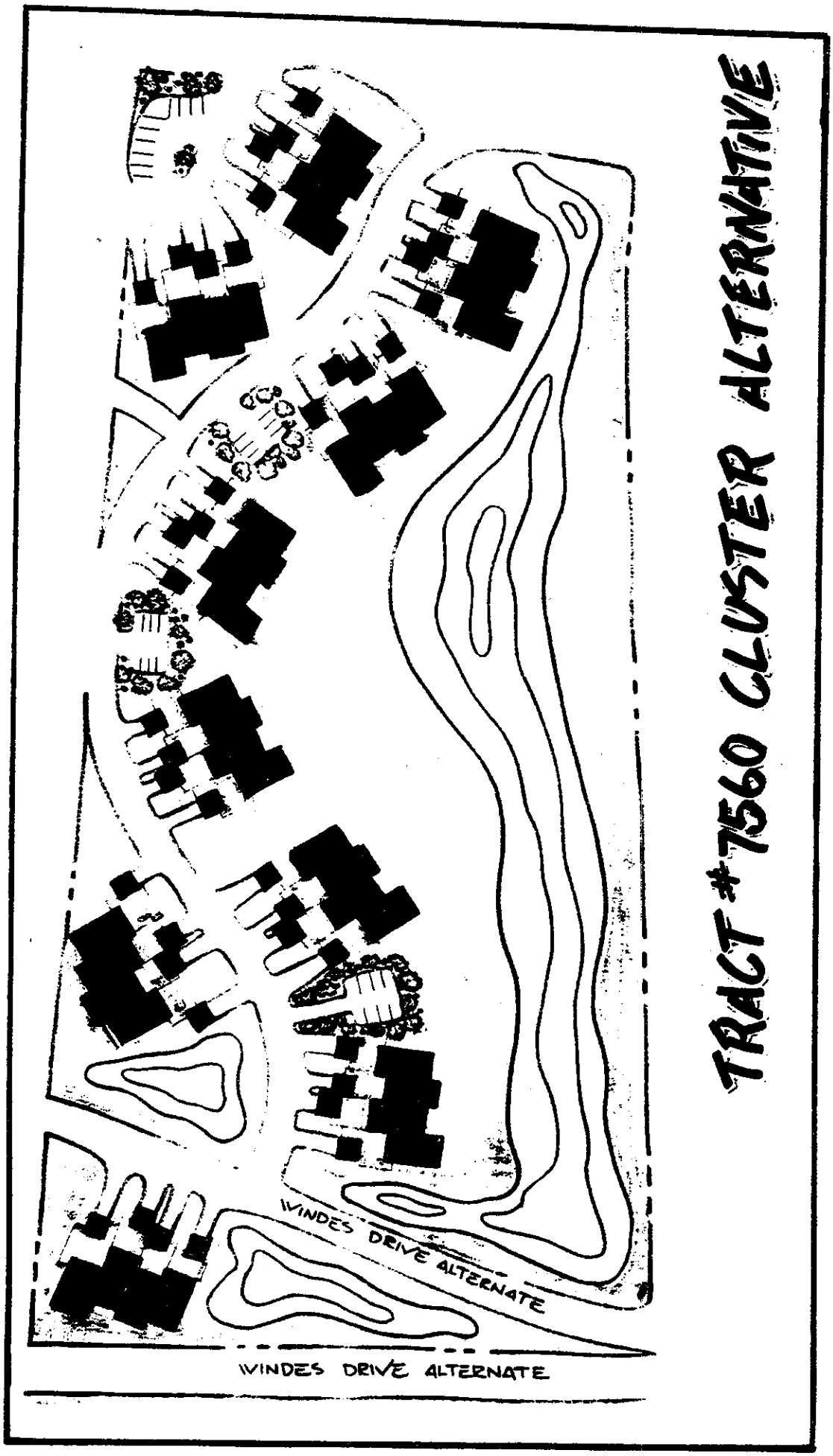
The detached clustered housing units are also proposed for flatland areas. They obtain the same objectives as the attached clusters except they are detached. It is recommended that there be a minimum distance of 200 ft. between clusters and that there be access to a community stable area for all units by road along with a greenbelt or pasture area. The criteria for development of this type of clustering was reviewed by the Orange Park

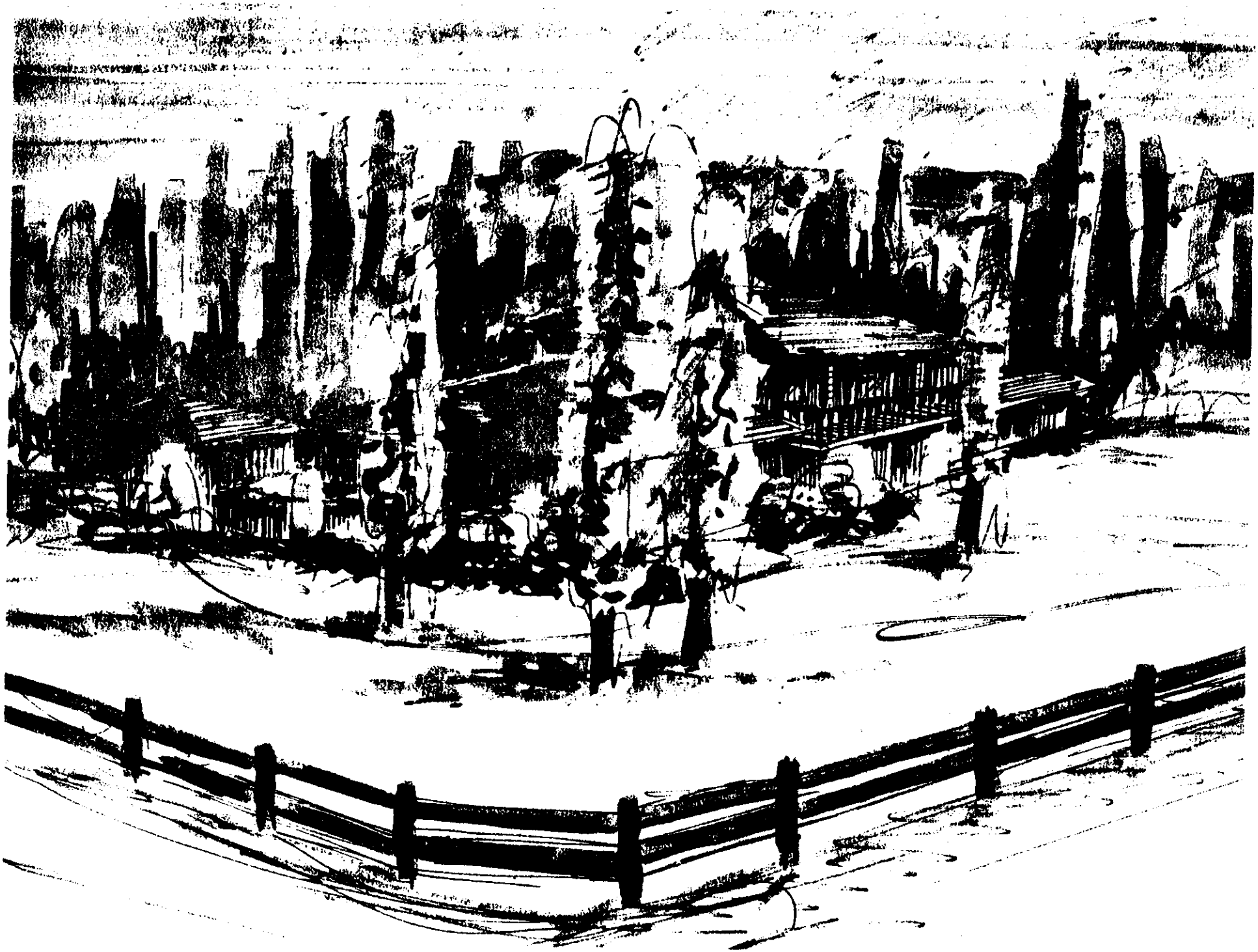
Acres Development Committee so as to allow for the keeping of animals in a collective manner while giving independence to the occupant but not destroying the rural openness image. See Exhibit # 31 for an example of detached clustering housing concept.

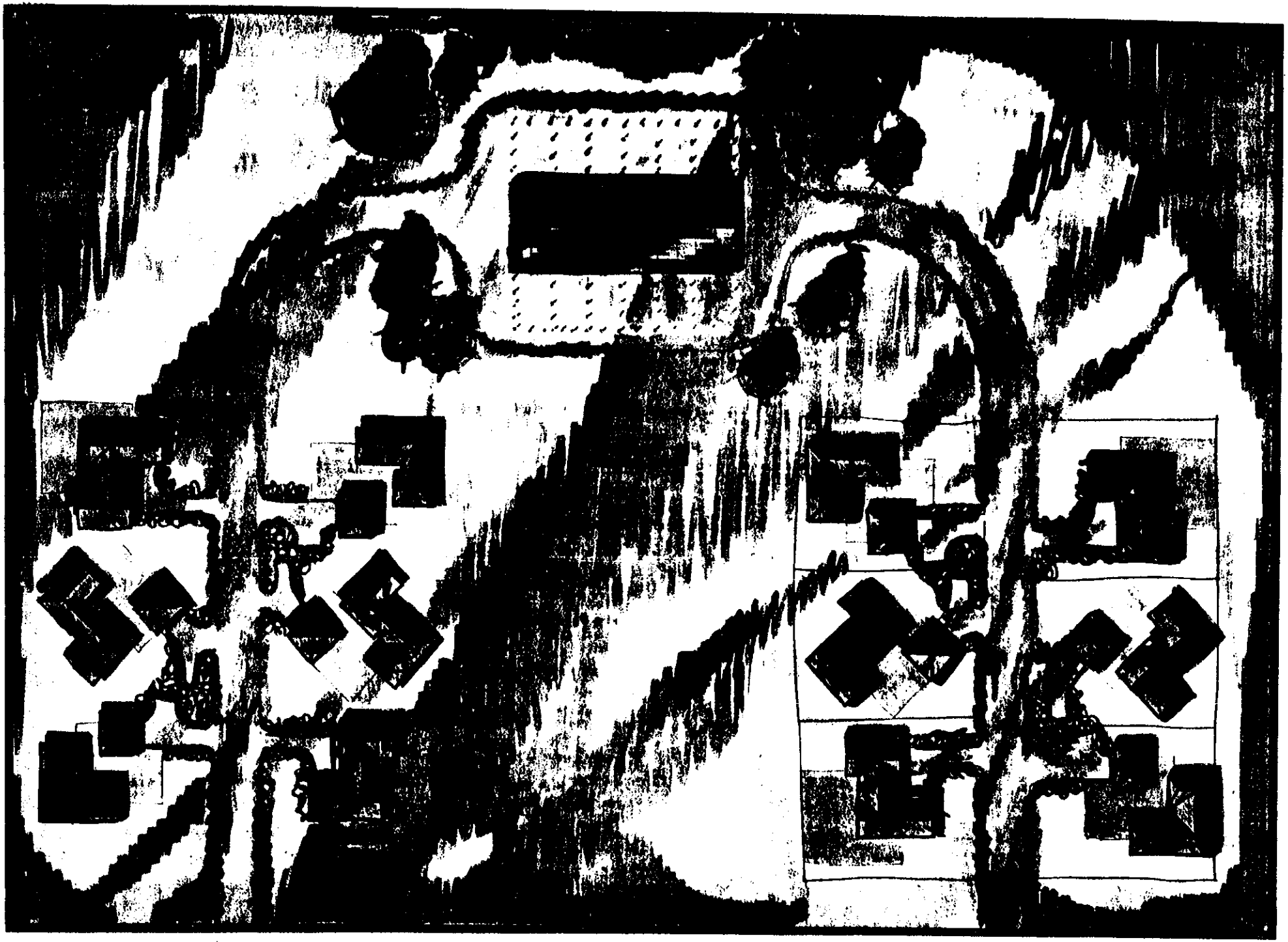
SECTION

— HILLTOP CLUSTER CONCEPT —

ELEVATION


TRACT #7560 CLUSTER ALTERNATIVE
WINDES DRIVE ALTERNATE
WINDES DRIVE ALTERNATE





PHYSICAL ELEMENTS

The proposals for the physical elements of this Plan are included in the following sections based upon the existing opportunities and constraints and the applications of the goals and objectives and policies established for the area.

LAND USE

Residential

There are four residential density classifications proposed for the Specific Plan: (1) low density - one acre, (2) low density - one-half acre, (3) medium -low density and (4) medium density. The total acreage allowed for each proposed density by planning sector is shown on Table # 20 (Land Use Acreage). Table # 21 (Dwelling Unit Densities) shows the maximum dwelling units and densities proposed for each sector. An allowance of acreage for steep topography and adjacent open space was included in the gross density acreage proposed for cluster units. The following are the specific land use descriptions for each residential area as depicted on the Land Use Map for Orange Park Acres (Exhibit # 32). For comparison with Alternative Concept Plan exhibits see Exhibit # 27 (Proposed Concept Plan).

Low Density - One Acre

This category covers 708 gross acres of the Orange Park Acres area and provides for a minimum one-acre lot size for a maximum density of one dwelling unit per acre. The maximum number of dwelling units and density is shown by each sector on Table # 21 (Dwelling Unit Density). This density category includes many lots, one acre and over in size, and the maximum number of lots accounts for "lot splits" of each of the larger lots down to one acre in size. Therefore, if a five acre lot is not divided and only one house occupies this lot, it would account for five of the

TABLE # 20

ORANGE PARK ACRES
PROPOSED SPECIFIC PLAN
LAND USE ACREAGE

Sector	Residential D.U./Ac. 1	2	3	4	Total	Public Quasi-public	Open Space Recreation	Total Acreage
A_1	24.8	4	17.2	–	46			46
A_2	15	6	132.5	–	153.5	.5(1)	4(6)	158
A_3	99	3	84	–	186	–	5(6)	191
B	109	–	24	–	133	–	–	133
C	110	–	111	–	221	41(2)	34(3) 5(6)	301
D	130	–	25	–	155	6(4)	4(5)	165
E	64	–	–	–	64	–	3(6)	67
F	–	–	–	25	25	–	–	25
G	–	–	–	21	21	–	–	21
H	48	–	–	–	48	–	–	48
I	35	–	–	–	35	–	–	35
J	67	11	40	–	118	29(7)	184(8) 7(9)	338
K	–	–	–	–	–	–	266(10)	266
Total	701.8	24	433.7	46		76.5	512	
Grand Total	1205.5					588.5		1794

(1) Water Tank– .5 ac.
(2) Cemetery – 41 ac.
(3) Golf Course – 34 ac.
(4) Church – 6 ac.
(5) Tennis Club – 4 ac.
(6) Local Parks – 17 ac.
(7) School Sites – 29 ac.
(8) Santiago Greenbelt – 184 ac.
(9) Villa Park Country Club – 7 ac.
(10) Villa Park Dam area – 266 ac.

TABLE # 21

ORANGE PARK ACRES
PROPOSED SPECIFIC PLAN
DWELLING UNIT DENSITIES

	Low Den-1Ac		Low Den-1/2ac		Med-Low		Medium		Total	
Sector	DU	DU/AC	DU	DU/Ac	DU	DU/Ac	DU	DU/Ac	DU	DU/Ac
A_1	20	.81	7	1.75	48	2.79	–	–	75	1.63
A_2	15	1.0	8	1.33	300	2.26	–	–	323	2.10
A_3	90	.91	5	1.67	250	2.98	–	–	345	1.85
B	92	.84	–	–	24	1.0	–	–	116	.87
C	75	.68	–	–	150	1.35	–	–	225	1.02
D	105	.81	–	–	40	1.60	–	–	145	.94
E	57	.89	–	–	–	–	–	–	57	.89
F	–	–	–	–	–	–	87	3.48	87	3.48
G	–	–	–	–	–	–	65	3.10	65	3.10
H	39	.81	–	–	–	–	–	–	39	.81
I	33	.94	–	–	–	–	–	–	33	.94
J	65	.97	27	2.45	68	1.70	–	–	160	1.36
K	–	–	–	–	–	–	–	–	–	–
Total	591	.84	47	1.96	880	2.04	152	3.30	1670	1.38

790 single-family detached – 1.02 DU/ac
880 single-family cluster – 2.04 DU/ac
Total Gross developed acres

775 acres
431 acres
1206 acres

Low Density – 1 ac (1Du/ac max.)
Low Density – 1/2 ac (2 DU/ac max.)
Med – Low – 1/2 ac (3 DU/ac max.)
Medium – (4 DU/ac max.)

dwelling units allowed within the area. Only one single-family detached structure is allowed per lot. It is recommended that the E-4-1 zoning as described in the Orange County Zoning Code apply to this residential area.

Low Density - One-half Acre

This area includes twenty-four (24) acres of Orange Park Acres and depicts only those lots which exist and are greater than one-half acre but less than one acre in size. (See Table #21 -Dwelling Unit Density) for a maximum density of two dwelling units per acre.

Medium-Low Density

This category of residential land use contains 428 gross acres within Orange Park Acres and provides for single-family attached and detached clusters referred to as "rural clusters" within a greenbelt or open space context. Table # 21 (Dwelling Unit Density) depicts the gross density and maximum number of dwelling units proposed for each sector within Orange Park Acres. The maximum gross density for these areas is three dwelling units per acre. Overall density is calculated on the gross area including directly associated permanent open space or greenbelt areas included at the time development is proposed. Therefore, in the hillside areas the development is restricted generally to the hilltops or flatter slope areas as depicted on the Land Use Map (Exhibit # 32). However, the steep hillsides which would remain as open space and are included as proposals of the project would be calculated to derive gross density. The same is true of the flatland areas near Chapman Avenue and along Santiago Boulevard where a greenbelt or pasture area buffer is shown adjacent to the road to protect from noise, air pollution and to provide a better visual setting. The total area including this greenbelt area would be used to derive gross density.

Landscaping is recommended to visually screen these units from view. Also, architectural crietria to blend with a rural atmosphere is to include use of wood exteriors and warm, earth-tone colors. Examples of how this concept would apply to the area along Santiago Canyon Boulevard are depicted on Exhibit # 29 (Tract #7560 Cluster Alternative) and Exhibit #30 (Cluster Unit Illustration). These exhibits show the conceptual approach of using rural road standards, screened parking bays and exterior landscaped and pasture areas to improve the visual image while allowing for agriculture and the raising and keeping of animals to occur within the common area.

Medium Density

These areas are shown for those existing developments on lots of around 10,000 square feet or less. There is a total of forty-six acres in this category. Table # 21 (Dwelling Unit Densities) lists the number of dwelling units and densities for the sectors within Orange Park Acres. Criteria recommendations related to these developments include the provision of landscape screening to be planted to hide the block walls and houses backed up to the roads within the areas.

In summary of the residential development proposals, the existing development of residential is retained and one-acre minimum lots are proposed for all of the flatland areas adjacent to the existing one-acre developed areas. A "rural clustering" of attached and detached housing is proposed along the hilltops in order to preserve the steep hillside areas. Also, a dense landscape screen is proposed to provide a positive view of the hills. Other " rural clustering"occurs along along Chapman and Santiago Boulevard where there can be separation from noise, air pollution and where there is potential open space vistas. These development areas are

separated from the one-acre lot areas by large open spaces, pasture or greenbelt areas but are connected to the main trails proposed throughout the area. Although the "rural clustering" offers a different housing type, it is felt that the potential for raising and keeping of animals and agriculture, even on a common area concept, provides a lifestyle common to that which dominates the area at the present time.

Commercial

Several commercial operations such as the chicken ranches, the tavern, the equestrian center and others exist within the area. Many are subject to a "use permit" A guiding principal for the inclusion of commercial is whether or not it could be supported solely by the residents of Orange Park Acres. Another equally important consideration is compatibility with the rural environment. It has been the recommendation of the Orange Park Acres Development Committee that no commercial land use be depicted for this Plan. This recommendation stems from the thought that any commercial use located along the major arterials would attract customers from many other areas which would create more traffic and would be incompatible with the rural atmosphere objectives. It is possible that a "mom and pop" type of grocery or feed and seed store might be compatible with Orange Park Acres if it only served the Orange Park Acres residents. It is the fear, however, that this could not be controlled and therefore, no local commercial land uses are shown as proposal on the Plan. Commercial operations which are within the area or wish to come into the area would therefore, be subject to a "use permit" or "use variance."

Public-Quasi-public

Included within this category of land use is the cemetery, a ten acre church site, a .5 acre reservoir and an elementary and junior high school site of

twenty-nine acres. It is assumed that the cemetery will be contained on the east side of Santiago Canyon Road and will encompass approximately 41 acres. Other uses which may also be considered public or quasi-public are included within the Open Space land use category. Because of the rural character and small relative number of projected population, no specific public uses are proposed within the area and are expected to be served by both the City and County of Orange to the west of this site.

Open Space

The Orange Park Acres Specific Plan proposes the incorporation of that portion of the County adopted Santa Ana River - Santiago Creek Greenbelt Plan within the Santiago Creek to the north and east of this study area. This covers approximately 450 acres of the study area.

The Plan proposes the incorporation of presently proposed trails within the Master Plan of Riding and Hiking Trails for Orange County, the Proposed Orange County Skeletal Bicycle Plan and the Santiago Creek Project Priority Map. The Plan also depicts the proposed local routes to form the main trail system for Orange Park Acres to link to these routes. (See Exhibit # 33 (Parks, Trails & Open Spaces) Of specific note is the incorporation of Handy Creek as a trail link. It is recommended that it be acquired to provide for trails and drainage.

This Plan advocates the permanent retention of the 34 acre golf course within Orange Park Acres. If the private ownership cannot sustain a vialbe economic return, public acquisition is suggested in order to preserve a substantial amenity for recreation and open space within the area. It is recommended that the property immediately to the east of the golf course, owned by the Catholic Church, would use the "rural cluster" in

order to preserve the vast majority of its natural hillsides and canyon area, leaving open the steep slopes and large canyon areas. This canyon has been identified as a natural asset since the water table is high and it would easily support plant life and could become a handscome greenbelt if properly planted. The area is also recommended for acquisition by the community to allow for a trail linkage through this area. Care should also be taken not to destroy this natural asset by filling it with dirt to accomodate the future alignment of Santiago Canyon Road.

In addition to the golf course, there is a four acre Tennis Club and the seven acre Villa Park Country Club to be sustained within the proposed Plan.

Local parks at the County and City standard of four acres per 1000 persons would generate a requirement for around 17 acres of park to serve the added population. These are shown on Exhibit # 32 (Land Use Map) which depicts their connection through the proposed trail system. The Plan proposes that the parks would have very low maintenance requirements (i.e. pasture instead of highly manicured landscaping). It should be planned to provide service to the rural character environment oriented to community activities such as B-B-Q's, livestock shows, fairs, etc.

Another significant proposal related to open space is the retention of the steep slopes of hillside areas creating a continuous band of open space along the hills to the south and west. Also included as a recommendation within the residential development is the retention of open space, greenbelt or pasture areas along Santiago Boulevard and Chapman Avenue and on those hillsides on the Mead Ranch and on vacant land belonging to the Catholic Church. This is depicted on Exhibit # 32 (Land Use Map).

Summary

In summary, the proposed Land Use Element offers a balance in types of residential, public-quasi-public, open space and recreational land use. This balance provides for the retaining of the rural environment, offers economic viability and offers a visually compatible climate for the preservation of the Orange Park Acres lifestyle. Thus, it is believed that the goals of the community have been met. Therefore, the Land Use Statistics on Table # 22 and the Land Use and Circulation Map (Exhibit # 32) are presented here for adoption as the Specific Land Use Plan for Orange Park Acres.

TABLE # 22

ORANGE PARK ACRES

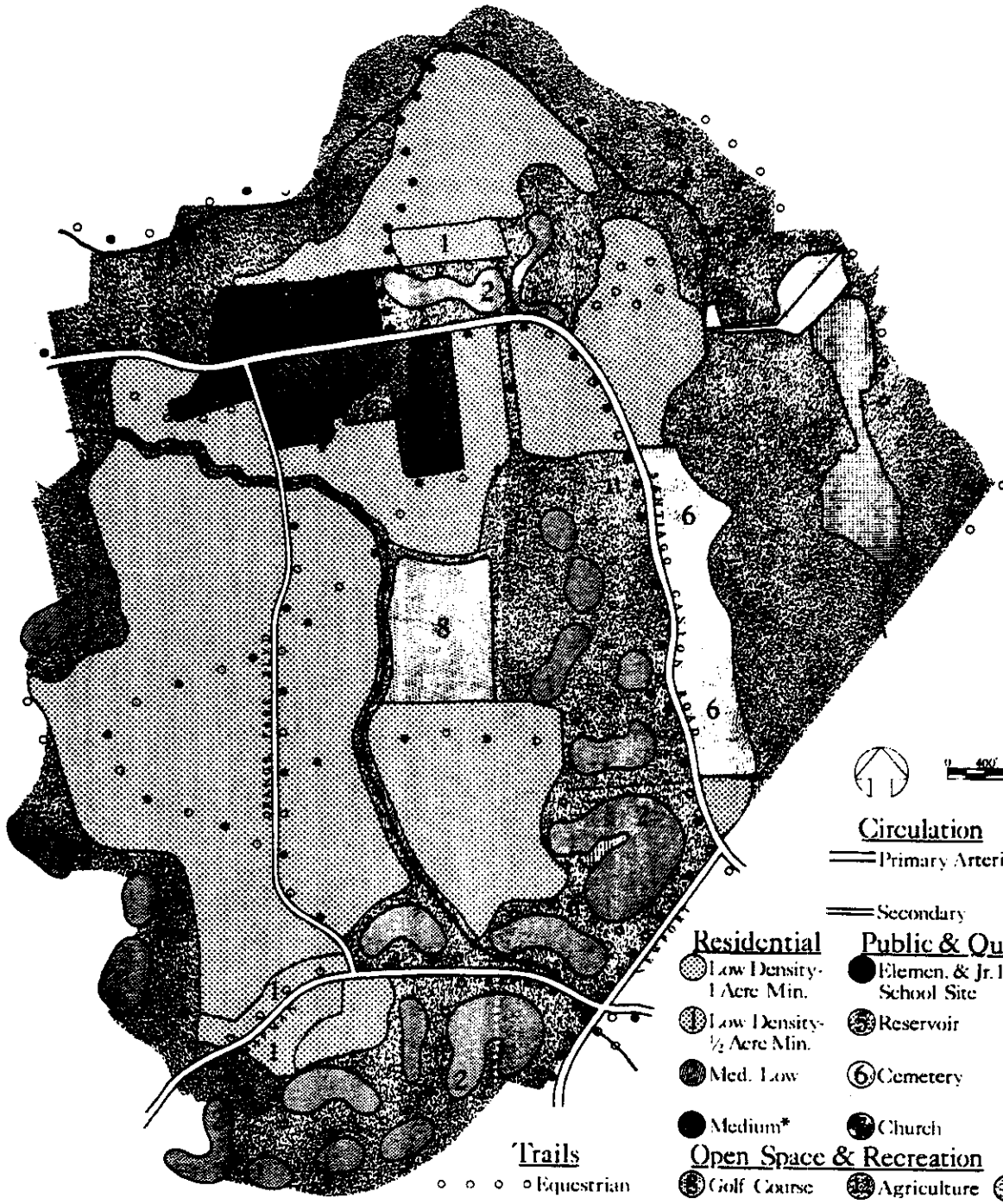
PROPOSED LAND USE - STATISTICS

RESIDENTIAL	Gross Acres	Total D.U.	Avg. D.U./ Acres	Persons/ D.U.	Total Persons
Low Density - 1 Acre	704.8	591	.84	3.9	2305
Low Density - 1/2 Acre	24	47	1.96	3.9	183
Med.-Low Density	430.7	880	2.04	3.4	2992
Medium Density	46	152	3.30	3.5	532
TOTAL	1205.5	1670	1.38	3.6	6012

PUBLIC/QUASI-PUBLIC	Gross Acres
Water Tank	.5
Cemetery	41
Church	6
School Sites	29
TOTAL	76.5 acres

OPEN SPACE - RECREATION	
Golf Course	34
Tennis Club	4
Santiago Greenbelt	184
Villa Park Country Club	7
Villa Park Dam Greenbelt	266
Local Parks (4 ac/1000 persons)	17
TOTAL	512 acres

TOTAL GROSS ACRES	1794 Acres



Orange Park Acres Land Use and Circulation Plan

Circulation

Primary Arterial

Secondary

Residential

- Low Density-1 Acre Min.
- Low Density-½ Acre Min.
- Med. Low
- Medium*

Public & Quasi-Public

- Elemen. & Jr. High School Site
- (5) Reservoir
- (6) Cemetery
- (7) Church

Trails

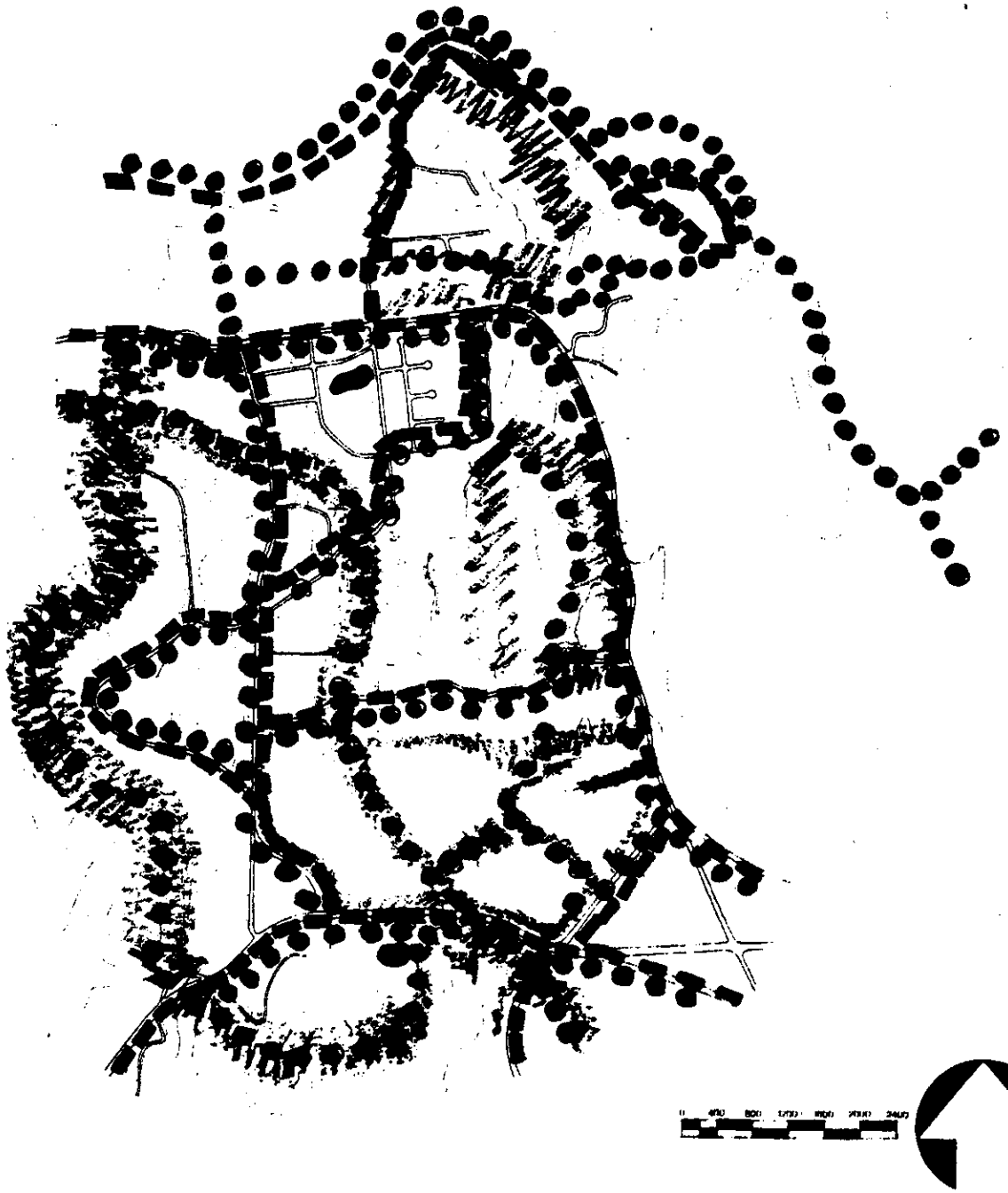
- Equestrian
- Bicycle
- Combined

Open Space & Recreation

- (8) Golf Course
- (9) Tennis Club
- (10) Villa Park C.C.
- (11) Local Parks
- (12) Agriculture
- (13) Creek Bed
- (14) Santiago Green Belt Plan
- Water
- (15) Villa Park Dam
- Other

* Includes adjacent open space in density calculation.

J. L. WEBB PLANNING
NEWPORT BEACH, CA.



ORANGE PARK ACRES

PARKS - TRAILS - AND OPEN SPACES

EQUESTRIAN

BICYCLE

OTHER

J.L. WEBB PLANNING

CIRCULATION

Traffic Volumes

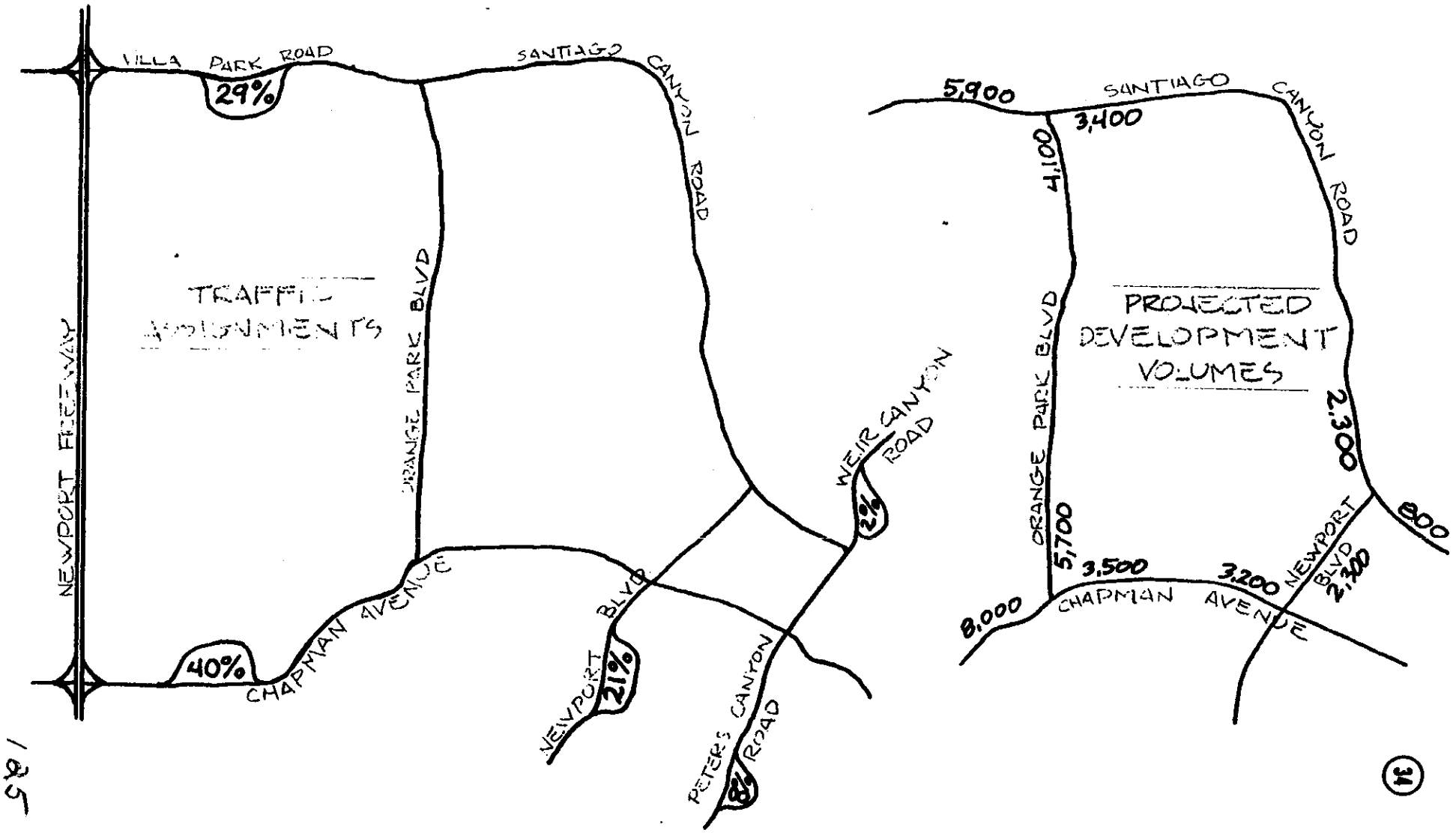
Based on traffic studies of similar type developments, it is anticipated that each single family dwelling unit will generage an estimated 12 vehicles per day to the adjacent streets. Therefore, this proposed development will generate a total of 20,160 vehicles per day to the adjacent streets. Exhibit #34a(Traffic Assignments) indicates the assignment of this traffic to the adjacent streets. Exhibit #34b(Projected Development Volumes) indicates the actual volumes of vehicles on the adjacent streets from the proposed development.

Roadway Sections

One of the concerns in Orange Park Acres is maintaining the existing rural atmosphere. This is one of the reasons for proposing cluster type housing. In accordance with this concern, the Orange County Planning Commission has adopted rural standards for streets within the County. These sections are shown on Exhibit # 35 (Rural Road Sections & Trails).

Exhibit # 35 shows the typical section for local streets. A collector street, such as Amapola or Meads, should have the paved shoulders. On the short cul-de-sac streets, these paved shoulders are not so necessary. It would be best to construct the paved shoulders wherever possible to help prevent erosion of the street edges by water and by vehicles. These shoulders could also serve as a place for bicyclists to ride off the traveled way and still be on a paved surface.

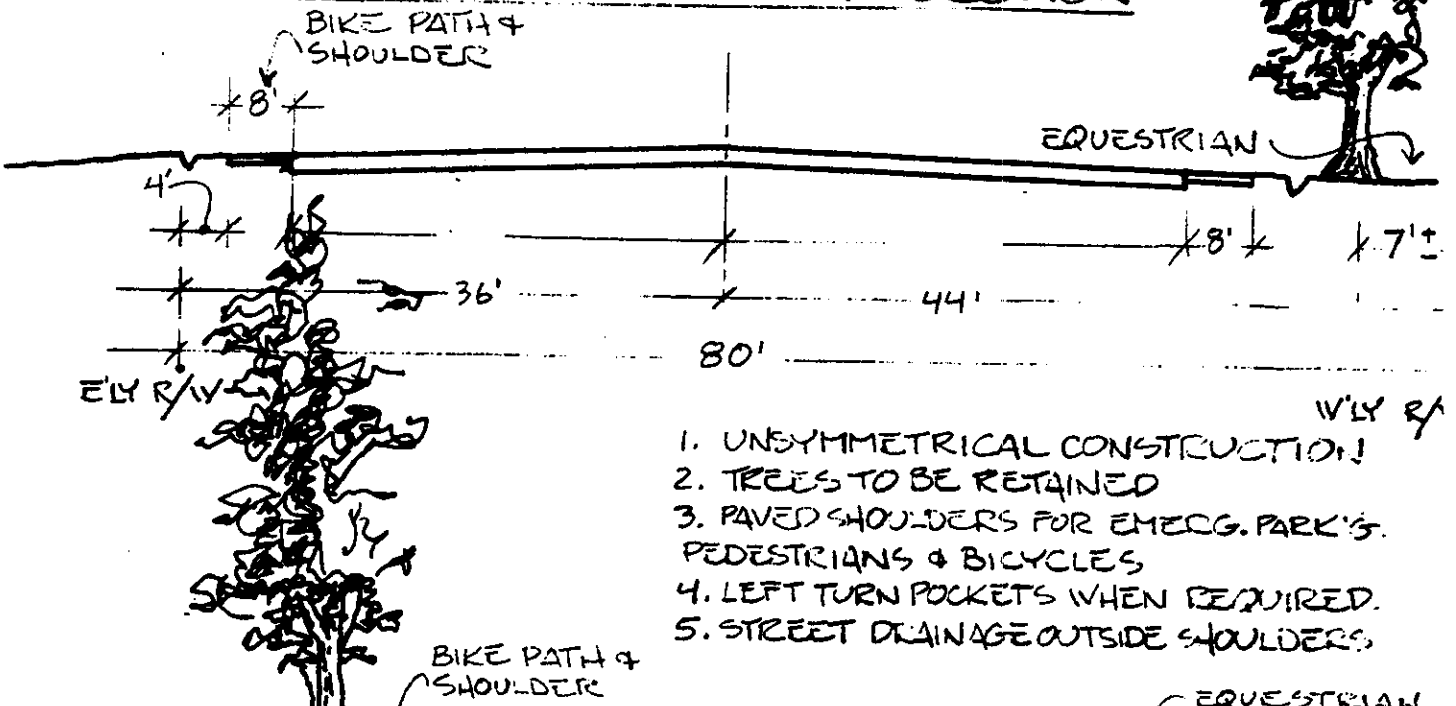
TRAFFIC ASSIGNMENTS & PROJECTED DEVELOPMENT VOLUMES



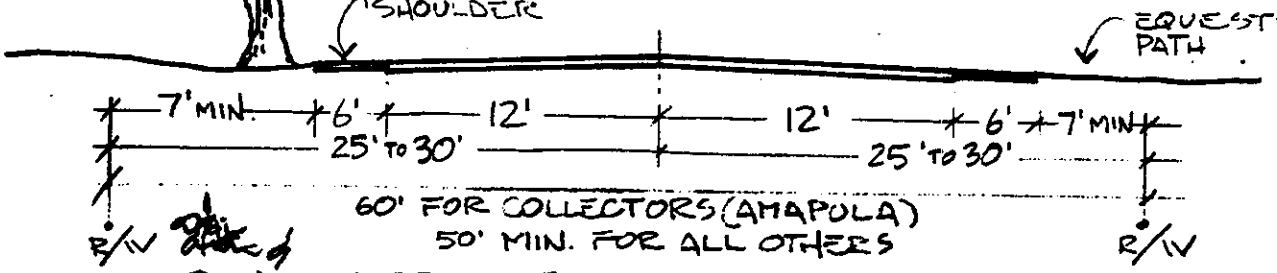
RURAL ROAD SECTIONS AND TRAILS

- NO SCALE

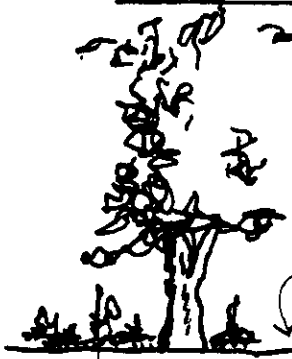
— ORANGE PARK BLVD - RURAL SECTION —



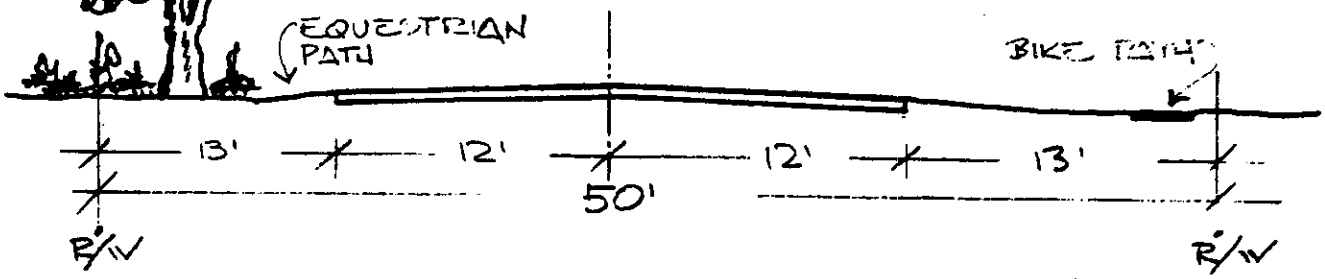
1. UNSYMMETRICAL CONSTRUCTION!
2. TREES TO BE RETAINED
3. PAVED SHOULDERS FOR EMERG. PARK'S. PEDESTRIANS & BICYCLES
4. LEFT TURN POCKETS WHEN REQUIRED.
5. STREET DRAINAGE OUTSIDE SHOULDERS.



— LOCAL STREET - RURAL SECTION —



1. PAVED SHOULDER FOR EMERG. PARK'S PEDESTRIANS & BICYCLES
2. STREET DRAINAGE OUTSIDE SHOULDERS
3. GRADED EARTH AREAS – EQUESTRIAN



— ALTERNATIVE LOCAL STREET - RURAL SECTION —

1. GRADED EARTH AREAS - EQUESTRIAN
2. LANDSCAPED SWALES FOR DRAINAGE.

Vehicle Safety

There are several stretches of substandard designed arterial highway within the proposed development area. On Orange Park Boulevard near Santiago Canyon Road there is a "blind" spot due to the vertical alignment. This can and should be eliminated during any reconstruction to widen Orange Park to the proposed four lanes.

Secondly, the intersection of Orange Park Boulevard and Chapman Avenue should be redesigned. Orange Park Boulevard intersects Chapman Avenue at an acute angle in the middle of a horizontal curve. This makes it difficult for southbound traffic on Orange Park Boulevard to see westbound traffic on Chapman Avenue. Orange Park Boulevard should be realigned to intersect Chapman Avenue at right angles easterly of the horizontal curve on Chapman Avenue.

There are also several curves along Santiago Canyon Road that have a substandard radius for the required primary highway design speed. The Orange County Road Department is currently working on an alignment for Santiago Canyon Road that would eliminate or improve these curves.

Conclusions and Recommendations – Circulation

1. The proposed development will generate an estimated 20,160 vehicles per day to the adjacent streets.

2. The arterial highways in the area have sufficient capacity to carry the estimated ultimate traffic volumes of the proposed development.

3. The typical sections for rural streets (Exhibit # 35) are acceptable alternates to the standard typical sections.

4. The intersection of Orange Park Boulevard and Chapman Avenue should be realigned to intersect at right angles easterly of the horizontal curve on Chapman Avenue.

5. An overall traffic study is needed to determine whether Orange Park Boulevard must tie in at the presently proposed location north of Santiago Canyon Road. It is recommended that, if possible, this connection be changed to discourage through traffic within Orange Park Acres.

6. Further study is recommended to determine if an alternate route of Santiago Canyon Road along the cemetery may be obtained to avoid extensive fills of the adjacent canyon to the west.

7. Where feasible, landscaped medians are proposed to be included within Chapman Avenue, Santiago Canyon Road and Newport to enhance the rural nature of the area.

SERVICE SYSTEMS

Water

The additional water facilities can be furnished through either the Orange Park Acres Mutual Water Company or the City of Orange, depending on the jurisdiction.

The Orange Park Acres Mutual Water Company mains would have to be extended into the area to be developed and additional storage and pumping facilities constructed to meet the demands. By using the existing wells and taking more water from the East Orange County Water District, the delivery demands can be met. It is possible that economics would dictate that an additional well should be provided. Expansion of the system would be at the developer's expense.

The City of Orange has a report prepared by Boyle Engineering dated February 1973 which shows several alternative methods of supplying water to this and the surrounding area within the City of Orange sphere of influence. Even though the plans do not directly relate to this Specific Plan, they could be modified for this Plan.

Sewer

To accomplish this Specific Plan the area should annex to County Sanitation District No. 7. Trunk sewers should then be extended into the area and local sewers constructed to serve the new developments and as many of the existing residences as possible. All or a portion of the trunk and local sewers could be included in an improvement district along with other improvements for the area.

If an improvement district is formed to provide for improvements to Handy Creek, the trunk and local sewers and other improvements, such as equestrian trails, it is recommended that the trunk sewer be located adjacent to Handy Creek drainage channel above Meads Avenue. Vehicular access would have to be included in the total plan, but this could be combined with the equestrian trails.

Electrical, Telephone and Gas Utilities

These would all be extended into the development areas by the respective utilities. All utilities should be underground.

DRAINAGE

Handy Creek

This is the main drainage facility in the area and should be developed as a greenbelt with an open earth channel. Some realignment and removing of obstructions will be necessary, including new crossings at the existing and proposed streets. Location of an equestrian trail system and a portion of the trunk sewer within this greenbelt is contemplated.

It is felt that the most practical way to fund the necessary improvements to Handy Creek is by an improvement district with contributions from the developers and the Orange County Flood Control District. Local drainage facilities could also be included in the improvements.

A great deal of attention must be given to the construction of a diversion channel across Santiago Canyon Road to Santiago Creek in order not to conflict with the existing character of the area and the treatment of the flood plain above the point of diversion. Considerable study is also required for the area between Orange Park Acres Boulevard and Meads Avenue. This is the only area which should be considered for actual channel improvement to the extent of purchasing right-of-way realignment and reconstruction. It is possible that an improved channel section from Meads Avenue to Orange Park Acres Boulevard and then continuing to the diversion structure and out into Santiago Creek would be the best solution for this particular area. Additional study is required, however.

Local Drains

Tributary channels to Handy Creek will require closed conduits in most cases. However, where an equestrian trail can be located adjacent to a drainage course, an open earth channel should be considered. Feasibility

will depend on the slope, size, soil conditions, and street crossing conditions. Every attempt should be made to retain the natural channels wherever possible. Tributary drainage facilities could be included in an improvement district.

AIR QUALITY ASSESSMENT

In summary, the overall emissions in Orange County will increase at most by about one percent if the highest development density is followed. This is in comparison to no development; in comparison to continued one-acre minimum development the high density development represents about 0.5 percent increase in emissions. The recommended development density, on the other hand represents about a 0.2 percent increase over the one-acre minimum development. The recommended development, therefore, represents a negligable increase in total pollutants emitted over and above those that would be emitted by the continuation of the one-acre minimum development.

The carbon monoxide concentrations in the development, calculated for the worst-case atmospheric condition and for maximum development density are below the ambient air quality standards applicable in California. The concentration for the recommended development will be even lower.

The calculated carbon monoxide concentrations along major roadways, assuming worst-case meterological conditions, show that the concentration within 100 to 200 feet of major roadways (especially near the Orangepark Boulevard-Chapman Avenue intersection) may reach levels approaching the ambient air quality standards. For the recommended development density about 10 percent of these levels are contributed by development-generated traffic compared to about a 6 percent contribution from development-generated traffic if the one-acre development continues. With the proposed setbacks from the major roadways, however, residential sites are exposed to very low pollutant concentrations from traffic on the major roadways. (See Appendix for complete discussion of Air Quality Impact on the Region and the Project)

NOISE EVALUATION

The principal increase in noise due to the proposed development - that due to increased traffic on local streets generated by the development - even in the worst case of various alternatives considered, does not represent a substantial increase in the projected noise levels that would exist in the absence of the proposed development. That is, the noise impact of the proposed development is negligible relative to the noise impact due to the continuation of present development trends.

The setbacks from major roadways to provide acceptable traffic noise levels for residential sites as shown in the Appendix, can be easily achieved with the proposed development concept. In fact, most of the proposed residential areas, because of a combination of distance from major roadways and terrain elevation differences will be relatively quiet with respect to traffic noise; this is consistent with a quiet residential or rural setting. A report on the noise impact is presented in detail within the Appendix of this report.

SOCIO-ECONOMIC ELEMENTS

The socio-economic elements of the proposed Specific Plan are housing, population, education and cost/revenue. Each element includes projected estimates on housing units and values, population size, density, employment and income. Also, estimates on student population and costs along with overall costs and revenues are projected in order to give a total summation of the socio-economic status of Orange Park Acres at full development if this Specific Plan is implemented.

HOUSING

The proposed Specific Plan projects a total of 1670 units at maximum development, which is estimated to occur by the year 1984. Two types of housing units are proposed. One is the single-family detached units which will total 790 units and the other is the single-family attached or detached cluster, which will total 880 units. The clustered units will have no more than four units attached in one structure. It is recommended that no structure be more than two stories in height. The architectural character is recommended to be of ranch of country style using wood and stone, not stucco. It is important that these factors be maintained if the rural visual image is to be conveyed throughout the area. The acceptance of rural clustering in Orange Park Acres will allow families of moderate incomes to live in the area. The attached units can range in market price from $45,000 to $60,000 and detached units on one acre lots will range in price from $60,000 to $75,000. Property values are estimated to average about $20,000 per acre for detached units and about $30,000 for attached units per acre.

POPULATION

The proposed Specific Plan projects a total estimated population of 6,012 persons by the time full development occurs. At the current rate of population increase, full development is estimated to occur in approximately ten years or by the year 1984. This projection estimates a population increase of approximately 343 % from the existing population of 1755 persons. The number of persons per dwelling unit will drop from the current 3.9 to approximately 3.6 . This is due to the increase in housing density and a decrease in the average unit size of the attached units. Also, the declining birth rate will cause the number of children per family to decrease. This trend is especially reflected in the higher income groups.

The percentage of employed is projected to be 10 to 15% higher than the current 42 % due to the increase in number of women employed. This will especially be necessary for new families since the average income per household will have to be $20,000 to $25,000 in order to qualify for the purchase of a home of over $45,000 in Orange Park Acres.

EDUCATION

It is estimated that the student population will be approximately 2000 by the time the proposed Specific Plan is totally implemented. The elementary and junior high school sites will have to be completed in order to accomodate this 300 % increase in the number of students. Therefore, new bonds must be voted upon to pay for the capital improvements. The The student cost is estimated to remain a deficit due to the above average 1.2 students per household that is projected. The per-student cost was estimated using the 1973-74 projection as a constant. The inflationary

factor affects both cost and revenue concurrently and thus is not utilized in cost/revenue projections.

COST/REVENUE

The proposed Specific Plan projects that there will be a surplus revenue of pproximately $39,679 annualy at full development. Many of the improvements costs for sewers, streets, drainage, etc. will be incorporated in the new housing sales price. Reassessment of property in Orange Park Acres will increase the revenues to offset any operating cost to the City or County of Orange. To determine exact costs, a cost/revenue statement should be required of each new development in the area in order to see that all new costs are absorbed by the development and not by outside residents. However, this proposed Plan does not recommend that the usual urban improvements such as streetlighting, sidewalks, curbs, etc. be utilized and thus, overall costs will be less in capital outlay.

Summary

In summary, the proposed Specific Plan for Orange Park Acres projects that approximately 6012 persons will reside in a total of 1670 dwelling units. The average family of 3.6 persons will have an annual income of $25,000 and will be living in homes with an average value of $60,000. The area will generate a surplus in revenue for public services but continue to have a deficit in costs to the educational system with approximately 2000 students living in the area. It is projected that with this proposed Plan this will be Orange Park Acres by the year 1984.

EVALUATION

The proposed Specific Plan is evaluated in two formats: quantitative and qualitative analyses. The physical and socio-economic elements of the proposed Plan are measured against the existing status along with the alternative plans. The objective of the evaluation of the proposed Specific Plan is to analyze the positive features of the Plan along with problem areas in a comparable format.

QUANTITATIVE ANALYSIS

The proposed Specific Plan is a comprehensive plan utilizing both the cluster and the one-acre concepts. Thus, the total dwelling unit number of 1670 is less than the alternative cluster plan but more than the one-acre alternative plan. This Plan allows for a maximum dwelling unit density of 1.38 for the entire gross developed area of 1206 acres in Orange Park Acres. The number of persons per dwelling unit drops to 3.6 from the present 3.9 due to clustering of units and the average decrease in unit size thus attracting smaller size families.

The value of land and property will increase due to the higher density (more than 1 DU/Ac.) but most of all, the area will have a Plan that limits growth while providing open space. This limits the supply, while the demand is great for a planned preserved rural area. Laguna Beach limited its growth and values increased greatly in two years. This may present the problem of allowing moderate income families to purchase in the area, especially toward the latter years of full development when the growth limit is almost attained.

The costs and revenues generated are estimated to pay for themselves. The revenues from high property taxes due to high property values, along

with the sales tax revenues of high income families, will more than cover costs generated by an area that maintains a rural character. Such things as open space create revenue from property tax but generate almost no costs. See Table #23 (Quantitative Analysis - Proposed Specific Plan) for quantitative tables and factors.

QUALITATIVE ANALYSIS

The proposed Specific Plan achieves the ultimate goal - preservation of the rural environment without destroying the right of a property owner to have a "fair" economic return on his property. The clustering of units allows for economic viability while preserving the open space and further allowing for equestrian activity which is prevalent in the rural lifestyle of Orange Park Acres. Clustering also preserves the natural features of the area such as hillsides, lakes, trees and topography. This in turn adds to the visual image of the area as a rural environment.

Allowing further development of one-acre lots not only cornplies with the wishes of the residents but allows for the continuation of a development characteristic which has given the community its image and most of all - its unique identity. Thus the proposed Plan allows for further development which is compatible in identity with the existing community and does not destroy the rural atmosphere and equestrian lifestyle. (See Table # 24 Qualitative Analysis - Specific Plan)

Summary

Based upon the results found in the examination of the existing status of Orange Park Acres and the results derived from the examination of the proposed alternative plans, the proposed Specific Plan offers the best

feasible solution to the planning problems of Orange Park Acres. First, it provides for the retaining of the rural environment. Second, it provides for the economic appreciation of property values without destroying the environment. Third, it provides the social climate necessary to retain the rural characteristic lifestyle. Fourth, it provides enough revenue, thus, it will not become a burden to any other group of persons not enjoying the benefits of the area. Most of all, it can feasibly be accomplished, for it provides for the needs and desires of the homeowners, property owners, developers and governmental agencies without destroying the goals of any one of them.

TABLE # 23

ORANGE PARK ACRES

PROPOSED SPECIFIC PLAN

QUANTITATIVE ANALYSIS

ITEM	FACTOR	TOTAL
Dwelling Units	1.38/ac	1,670
Population	3.6/DU	6,012
Property Tax Revenue	31.40/capita	188,777
Other Revenue	117.75/capita	707,913
Total Revenue	149.15/capita	896,690
Total Expenditures	142.55/capita	857,011
Surplus Revenue	6.60/capita	39,679
Students	1.2/DU	2,000
Student Deficit Cost	67.00/student	134,000
Total ADT's	12/DU	20,040
Absorption Time	1 - 10 years	1981 - 1984

Persons per acre - 4.99
Average land value per acre - attached units = $30,000
Average land value per acre - detached units = $20,000
Average market value per D.U. - Attached unit = $45,000-$60,000
Average market value per D.U. - detached unit = $60- 75,000

TABLE # 24

ORANGE PARK ACRES

PROPOSED SPECIFIC PLAN

QUALITATIVE ANALYSIS

Compatibility Level
(+) positive
(o) moderate
(−) negative

OBJECTIVE	COMPATIBILITY LEVEL
1. Preserves rural environment	+
2. Provides for compatible development	o
3. Promotes common lifestyle	o
4. Preserves open space	+
5. Preserves natural features	+
6. Provides for equestrian activity	+
7. Provides best visual image	+
8. Promotes increase in land values	+
9. Provides housing for a variety of incomes	o
10. Provides greatest revenues for generated costs	o
11. Economically feasible	+
12. Socially feasible	o

RECOMMENDATIONS

Although specific recommendations are made throughout this report, this section focuses upon those actions suggested for the implementation of this Specific Plan. This Plan will be presented to the County of Orange and the City of Orange and the following items are proposed to be recommendations of the Orange Park Acres Development Committee for the various public hearings on this Plan.

1. Accept the Orange Park Acres Specific Plan Report and adopt it as a general guide for further development in Orange Park Acres including:

    a. Adoption of the Land Use and Circulation Map and statistics proposed for Orange Park Acres

    b. Adoption as guidelines the "Goals, Objectives and Policies" for the Orange Park Acres Specific Plan as implementation tools for subsequent development in Orange Park Acres.

2. Establish an Orange Park Acres Planning Committee composed of representatives from the County and City of Orange, landowners, developers and residents to further interpret the guidelines set down within the Orange Park Acres Specific Plan and to carry out the recommended reviews and proposals such as:

    a. Architectural, site planning, landscape and design review.

    b. Promote additional traffic and circulation studies for the area as needed.

    c. Establish and maintain a cost/revenue model to determine impact on the County, City and the Orange Park Acres area.

d. Establish an assessment district or other means to furnish or develop trunk sewers, landscaping, drainage, roads, equestrian trails and other improvements recommended in the Plan or established by the Planning Committee.

e. Establish specific "theme" elements such as tree types, materials for fencing etc. as necessary for the maintenance of the policies for Orange Park Acres.

f. Include other functions to be carried out by the Planning Committee deemed appropriate for the orderly implementation and communication of the Orange Park Acres Specific Plan and to function as liaison with the County and City Staffs and other agencies on planning matters.

3. Promote the establishment of a master "Planned Community District Regulations" (P.C.) or "Planned Development Unit" (P.U.D.) zoning for the entire area of Orange Park Acres to be coordinated by the Planning Committee for Orange Park Acres.

Appendix

REFERENCES

1. Annual Budget - 1973-74, City of Orange, City of Orange, Finance Dept.

2. Bicycle Trails, Orange County General Planning Program (April 1972)

3. Chart of Accounts, County of Orange, July 1973, Auditor-Controller

4. Characteristics of Housing Units & Population, By Blocks - 1970, Orange County, (U.S. Commerce Dept.)

5. City of Orange General Plan, Feb. 1972, (Quinton-Budlong & Planning Research Corp.)

6. City of Orange Zoning Ordinance, 1973, City of Orange Department of Community Development

7. Community Labor Market Surveys - Orange County, 1971-72, HRD.

8. Cost/Benefit Analysis- Orange County, Concept Plan for Open Space and Conservation, May, 1973, (Williams- Kuebelbeck & Associates)

9. Orange County Assessor Roll Books and Map Books, Orange Park Acres Area, 1973, Orange County Assessor's Office.

10. County Zoning Code, County of Orange, 1967.

11. 1983 - Land Use Element - Orange County General Plan, July, 1973.

12. County of Orange Preliminary Housing Element, Orange County General Planning Program, April, 1971.

13. Declaration of Restrictions & Architectural Control, Tract # 7238, Orange Park Acres, (Herman L. Lenz property).

14. Environmental Impact Report - Orange Park Acres, Leadership Housing Systems, Inc., June 1973.

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16. Financial Report - 1971-72, County of Orange, V.A. Heim, Auditor-Controller.

REFERENCES - CONTINUED

17. General Development Plan Report - Villa Park Dam Regional Park & Irvine Park, linesch & Reynolds/Environmental Planners.

18. The Growth and Economic Stature of Orange County, May 1967, Security Pacific Bank, Economic Research Division.

19. Historical Landmarks, Orange County, Orange County Planning Dept., 1969.

20. The Interpreter, July, 1973, Title Insurance & Trust Co.

21. Master Plan - Orange Unified School District, June, 1973, Westinghouse Learning Corp.

22. The Master Plan of Regional Parks - Amendment No. 3, Orange County General Planning Program, July, 1972.

23. Oasis Report - Suggested General Plan Orange Community Area, Orange Chamber of Commerce, Nov. 1959.

24. Open Space & Conservation, The General Plan, City of Orange, 1973.

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26. The Orange Park Acres Community Plan, Aug. 1971, (Orange Park Acres Planning Committee).

27. People, Policy & Growth, Dec., 1972, Orange County General Planning Program.

28. The Physical Environment of Orange County, Orange County General Planning Program, Nov., 1971.

29. A Proposed Orange County Conservation & Open Space Program, 1973, Orange County General Planning Program.

30. Proposed Master Plan & Hiking Trails for Orange County , 1965, Orange County General Planning Program.

31. Quarterly Business Review of Orange-Santa Ana- Tustin-Villa Park Area, Fourth Quarter, 1972, First National Bank of Orange County.

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32. Residential Sales Survey, South, North & West Orange County, Nov., 1972, First American Title Insurance Co.

33. Santa Ana River, Santiago Creek Greenbelt Plan, Orange County General Planning Program, July, 1972.

34. Santiago Creek Bicycle, Equestrian and Hiking Linkages, Aug. 7, 1973 & Aug. 10, 1973, Orange County General Planning Program.

35. The Scenic Highways Element, General Planning Program Report, June, 1973.

36. Tax Rates, County of Orange, 1972-73, V.A. Heim, Auditor-Controller.

37. Telephone Directory - Criss Cross (Orange Park Acres), 1973, Orange Park Association, Inc.

38. Tustin Area General Plan, Orange County Planning Dept.

39. Use Districting Map, City of Orange, 1973, Dept. of Development and Community Services.

REFERENCE CONTACTS

COUNTY OF ORANGE:

Auditor-Controller

Planning Research Department

Advance Planning Department

Administration Office

Assessor's Office

Flood Control

Road Department

Fire Department

Sheriff's Department

Harbor, Beaches & Parks

Library

CITY OF ORANGE:

Development & Community Services

Police Department

Finance Department

Public Works

Fire Department

Library

City Manager

Park Department

ORANGE UNIFIED SCHOOL DISTRICT

QUINTON-BUDLONG - ECONOMIC RESEARCH ASSOCIATION

APPENDIX

SUMMARY OF THE PRINCIPAL ENGINEERING PROPERTIES OF THE SOIL AND BEDROCK MATERIALS

Engineering Properties / Map Symbol	Description of Materials	Excavation Characteristics	Foundation Properties
Qal	Sands and silts with gravel and clay. Organic silty topsoil.	No ripping.	Removal and Recompaction Required.
Qt	Sands and silts with some lenses of gravel. Organic topsoil.	No ripping.	Good structural support. Erosic Control required
Tema	Glassy volcanic rocks. Andesite and Breccia.	Heavy ripping. Local use of explosives.	Excellent Structural support.
Temx	Fragmented glassy volcanic rocks (andesite) in sandstone matrix.	Heavy ripping. Local use of explosives.	Excellent structural support.
Temt	Altered glassy volcanic rocks. Highly fractured.	Heavy ripping. Local use of explosives.	Excellent structural support.
Tplv	Thinly bedded shales and siltstones. Some sandstone.	Light to moderate ripping.	Good structural support. Expansive residual soil.
Tt	Well cemented sandstones with conglomerates. Some siltstone.	Heavy ripping.	Excellent structural support.
Ttls	Limy or calcareous siltstones.	Moderate to heavy ripping.	Good structural support. Expansive residual soils.

Engineering Properties / Map Symbol	Description of Materials	Excavation Characteristics	Foundation Properties
Tvs	Siltstones with not well cemented sandstones and conglomerates.	Moderate to heavy ripping.	Good structural support. Expansive residual soils
Af	Variable soil materials.	No ripping.	Variable, depending on placement control.

TABLE A

PREVAILING AIR QUALITY

ANAHEIM AIR MONITORING STATION

1972

Month	Number of Days Level Exceeded		
	Oxidant 0.08 ppm/1 hr	NO_2 0.25 ppm/1 hr	CO 9ppm/ 8 hrs
January	0	3	15
February	3	0	9
March	9	0	2
April	5	0	0
May	10	0	2
June	8	0	0
July	20	0	0
August	10	0	0
September	10	0	0
October	3	2	0
November	2	0	10
December	0	1	12
TOTAL	80	6	50

Source: California Air Quality Data, Vol. IV, No. 4, California Air Resources Board, 1972

TABLE B

EXISTING AIR QUALITY

1972 (1)

Month	Oxidant(2)	CO(2)	SO(2)	NO(2)	NO(2)	NO(2)	HC(2)
January	.06/.01	34/12	.08/.02	.29/.12	.79/.37	.94/.45	18/11
February	.17/.05	20/10	.06/.03	.23/.10	.64/.27	.73/.33	15/9
March	.16/.06	13/8	.06/.02	.16/.08	.47/.14	.52/.20	11/7
April	.11/.05	11/5	.09/.02	.18/.07	.36/.16	.42/.22	10/6
May	.29/.08	12/6	.06/.01	.13/.06	.30/.11	.37/.16	15/5
June	.19/.06	8/5	.05/.02	.10/.05	.23/.08	.28/.12	11/4
July	.35/.11	10/5	.07/.02	.19/.07	.33/.10	.40/.14	10/5
August	.26/.07	13/5	.05/.01	1.3/.06	.37/.09	.451.13	12/6
September	.25/.07	11/6	.08/.62	.20/.06	.21/.11	.31/.15	15/8
October	.15/.03	15/8	.08/.03	.33/.09	.44/.25	.56/.31	14/9
November	.09/.03	23/9	.03/.03	.21/.09	.34/.35	.98/.42	15/9
December	.06/.02	21/9	.16/.02	.29/.09	.85/.37	1.02/.45	17/8
Applicable 1 hour CA Standard	.10	40	.5	.25	none	none	.24(3)

(1) Orange County APCD Anaheim Station

(2) Max. hourly average/ average of maximum hourly averages, ppm

(3) Federal Primary Standard

Source: California Air Quality Data, California Air Resources Board, Vol IV, Nos. 1,2,3 and 4.

TABLE C

AMBIENT AIR QUALITY STANDARDS APPLICABLE IN CALIFORNIA

POLLUTANT	Averaging Time	California Standards	Federal Standards[3]	
		Concentration	Primary[1]	Secondary[2]
Photochemical Oxidents (corrected for NO_2)	1 Hour	0.10 ppm	0.08 ppm	Same as Primary Standards
Carbon Monoxide	12 Hours	10 ppm	-	Same as Primary Standards
	8 Hours	-	9 ppm	
	1 Hour	40 ppm	35 ppm	
Nitrogen Dioxide	Annual Average	-	0.05 ppm	Same as Primary Standards
	1 Hour	0.25 ppm	-	
Sulfur Dioxide	Annual Average	-	0.03 ppm	0.02 ppm
	24 Hours	0.04 ppm	0.14 ppm	0.10 ppm
	3 Hours	-	-	0.5 ppm
	1 Hour	0.5 ppm	-	-
Suspended Particulate Matter	Annual Geometric Mean	60 $\mu g/m^3$	75 $\mu g/m^3$	60 $\mu g/m^3$
	24 Hours	100 $\mu g/m^3$	260 $\mu g/m^3$	150 $\mu g/m^3$
Lead (Particulate)	30 Day Average	1.5 $\mu g/m^3$	-	-
Hydrogen Sulfide	1 Hour	0.03 ppm	-	-
Hydrocarbons (Corrected for Methane)	3 Hours (6-9 a.m.)	-	0.24 ppm	Same as Primary Standards
Visibility Reducing Particles	1 Observation	Visibility to 10 miles when the relative humidity is less than 70%	-	-

NOTES:

1. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health. Each state must attain the primary standards no later than three years after that state's implementation plan is approved by the Environmental Protection Agency (EPA).
2. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a "reasonable time" after implementation plan is approved by the EPA.
3. Federal standards, other than those based on annual averages or annual geometric means, are not to be exceeded more than once per year.

SOURCE: Air Resource Board, Control of Air Pollution in California, 1971, p. 21.

ORANGE PARK ACRES

AIR QUALITY

The impact of the project on regional air quality is described in Tables "D", "E", and "F". The air emissions inventory for stationary sources is presented in Table "D", and emission inventory for mobile sources is presented in Table "E". Table "F" summarizes the contribution from stationary and mobile sources and compares the results to the Orange County emission inventory for Orange County as a whole.

Two cases are considered for calculation of the emissions inventory for the development.

Case I: one-acre lot development of over 1100 dwelling units

CaseII: higher density development of 2700 dwelling units (worst case)

Table "F" indicates that, for the worst case (Case II) emissions will increase only by about 1% in Orange County as a result of the project. It should be noted that emission factors for 1973 were used in compiling Tables "E" and "F" for mobile sources. By 1986, it is estimated that emission factors will be reduced by 90%* Although this will not affect the fractional contribution of the development to the air pollution burden in Orange County, the overall air quality in the county should improve as discussed in the "Existing Physical Environment - Air Quality" Section of this report.

A second impact to be considered under regional air quality is the increase in pollutant concentration produced within the first few miles downwind of the development as a result of activities at the development. The modelling

*Air Quality Manual, appendix, Mathe atical Approach to Estimating Highway Impact on Air Quality, July 1973, Pages 88 7 98.

Table D

Estimate of Peak Incremental Increase in Emissions - Stationary Sources

Source	Pollutant	Emission[1] Factor lb/10^6 ft^3[3]	Usage Rate[2] Case I	Usage Rate[2] Case II	Total Tons per day Case I	Total Tons per day Case II
Natural gas combustion	Particulates	19	366,900 ft^3/day	811,200 ft^3/day	.003477	.007714
Space heating	Oxides of sulfur	0.6	"	"	.000110	.000243
Water Heating	Carbon monoxide	20	"	"	.0003660	.008120
	Hydrocarbons	8	"	"	.001464	.003248
	Oxides of nitrogen	80	"	"	.014640	.032480

[1]Compilation of Air Pollutant Emission Factors (Revised), EPA, Feb. 1972, pp. 1-9.

[2]Considered by taking 300 ft^3/day (So. Calif. Gas Co.) times the number of residences

[3]Pounds of pollutant per millio n cubic feet of gas

Table E

Estimate of Incremental Increase in Emissions - Mobile Sources

Pollutant	1973 Emission Factor[1] (Urban) gm/mi	Usage Rate Per Vehicle[2] Miles/Day	Miles Generated Per Day[3] Case I	Miles Generated Per Day[3] Case II	Case I Total Tons/Day	Case II Total Tons/Day
Carbon monoxide	62	10.2	134,725	297,872	9.176	20.336
Hydrocarbons	8.5	10.2			1.258	2.788
Nitrogen oxides	5.4	10.2	"	"	.799	1.771
Particulates	.58	10.2	"	"	.086	.190
Oxides of sulfur	.2	10.2	"	"	.030	.066

[1]Compilation of Air Pollutant Emission Factors (Revised), EPA, April, 1973.

[2]Taken from "1967 Origin - Destination Survey" from LARTS BASE YEAR REPORT.

[3]10.8 vehicle trips per dwelling unit

Table F

Total Estimated Increased Incremental Emissions - All Sources

Pollutant	Orange County 1971 (Tons/Day)	Proposed Development (Tons/Day)						Incremental Increase Relative to Orange County (Percent)	
		Stationary		Mobile		Total			
		Case I	Case II	Case I	Case II	Case I	Case II	Case I	Case II
Carbon monoxide	1796	.0036	.008	9.176	20.336	9.181	20.344	.5	1.1
Organics (including aldehydes and hydro-carbons)	370	.0015	.003	1.258	2.788	1.260	2.791	.3	.75
Nitrogen oxides	188	.014	.032	.799	1.771	.815	1.803	.4	.95
Particulares	22	.0035	.008	.086	.190	.090	.198	.4	.9
Oxides of sulfur	24	.0001	.0002	.030	.066	.030	.066	.1	.27
Totals	2400					11.376	25.202	.47	1.05

[1]OCAPCD - 1971.

technique employed here to assess this impact is the "box" model where, the concentration of a pollutant is given by the equation:

$$C = \frac{Q}{uWD}$$

where

C = concentration of pollutants

Q = emissions from automobiles

u = wind speed

W = width of box

D = mixing layer depth

The following assumptions were made in order to calculate pollutant concentrations using this model:

1. The box is oriented to represent worst case (i.e. maximum vehicle miles emitting pollutants directed at residential areas at near-calm wind speed of 2 mph

2. Box is 5000 feet wide over the entire portion of Orange Park Acres, east to west

3. Maximum vehicular density for the two cases below are used:
   a. Highest density development with development of golf course & cemetery (pollutants due to development traffic only)

   b. Pollutant levels due to estimated full development traffic

4. Mixing layer is typically 300 feet deep

5. Urban emission factors were used

6. Carbon monoxide concentration was calculated

7. A completely mixed ground layer was assumed

8. No dispersion was allowed outside the 5000 foot width or 300 foot height of the box

The results of the calculation are as follow:

Case	CO ppm*
(a)	0.4
(b)	6.7

Nineteen hundred seventy-three (1973) emission factors were used for the box model calculation. As noted previously, emission factors are estimated to be reduced by a factor of 90% by 1986. The CO concentrations shown above are reduced in proportion to emission factor reductions.

Convective mixing outside of the box caused by vertical and horizontal wind currents allow pollutants to disperse and will substantially reduce the above levels. This can be appreciated by comparing the box model results to the Gaussion plume modelling described in the following section.

Impact on Local Air Quality

Local air quality near major roadways will be affected by emissions from the heavily traveled roadways in the development area. The impact is assessed by applying Gaussion plume modelling methods for each of the above cases (a), traffic from development with higher density land use (with golf course and cemetery) and Case (b), estimated ultimate traffic volumes. Results of the analysis are presented in Figures 1 (Case a) and 2 (Case b).**

*Concentration in parts per million

**Assumptions: Stability Class F (stable atmosphere), 1973 emission factors, peak hourly traffic volumes ten (10) percent of ADT

The wind is representative of calm conditions, 2 mph. The wind is directed parallel to the more heavily travelled roadways as a worst case condition. Here, the pollutants can accumulate in higher concentrations as the winds sweep along the roadway.

The pollutant concentrations fall off rapidly normally to the west-east roadway (hence, normal to the wind direction). The gradient is best described by way of the following table:

Feet From Roadway	Concentration (%of roadway centerline)
50	85
100	6
200	0.2
600	0.00004

The major impact is then within the first hundred feet or so of the roadway. The impact of winds directed normal to the roadway (crosswind) is also illustrated in Figures 1 and 2. Note Orangepark Boulevard; the concentration of carbon monoxide is substantially lower adjacent to the roadway than along Chapman Avenue (for comparable traffic densities)

The plots were generated using 1973 emission factors. Again, emission factors for mobile sources should decrease 70 % by 1986. The concentrations shown in Figures 1 and 2 would then be 10 % of those values shown. For other development options, the concentrations shown in Figure 1 should be simply reduced by the percent reduction in traffic volume

A worse case than that shown could be the situation posed by winds directed at a small angle to a major roadway, say Santiago Canyon Road. Such a wind would decrease the peak concentration at the roadway but

CO CONCENTRATION PROFILES, PPM, PEAK HOURLY

FIG. 1

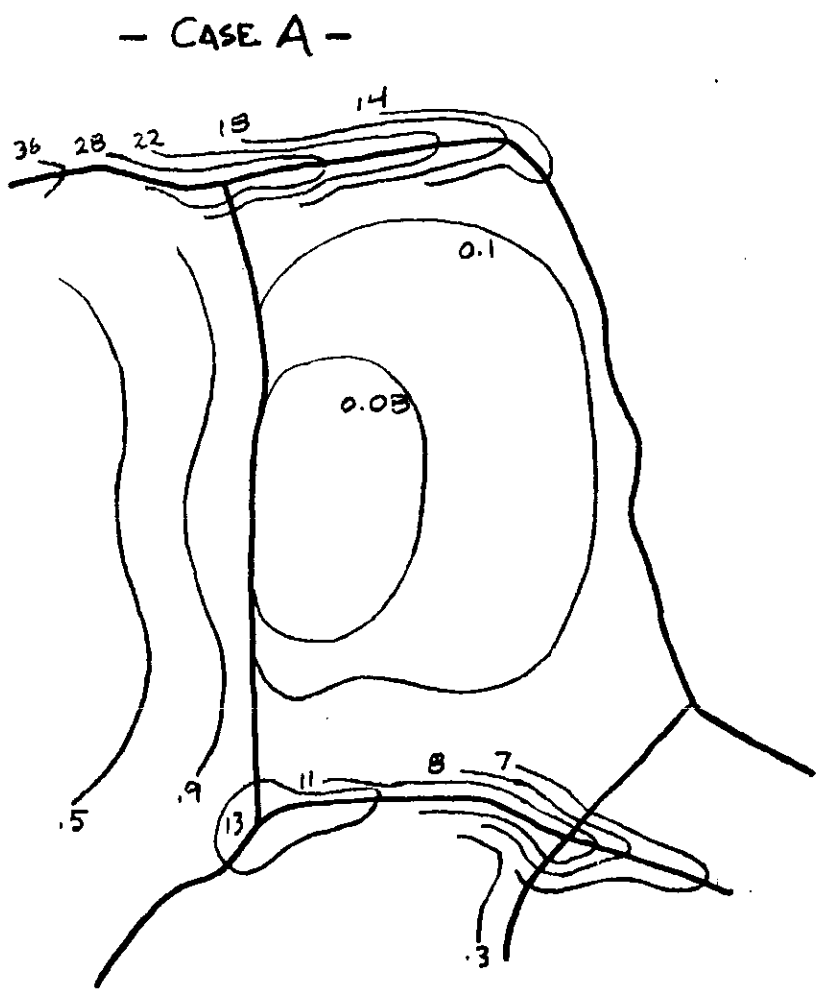
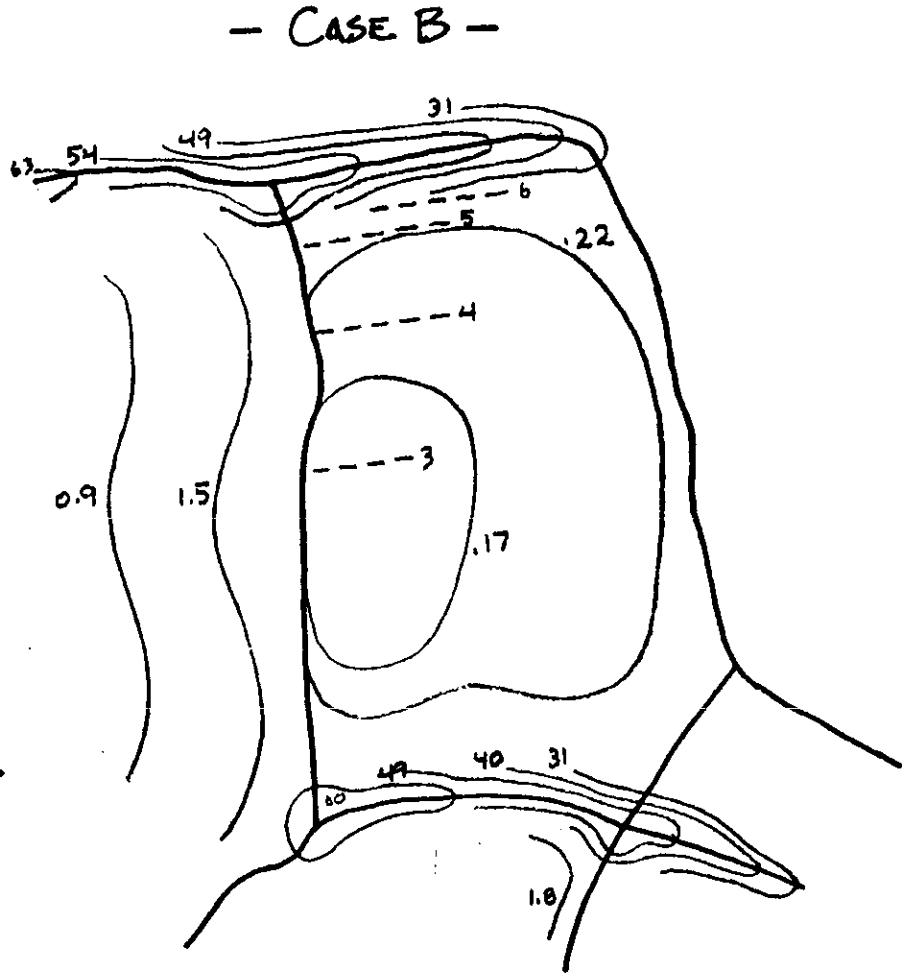


FIG. 2



spread the pollutants over adjacent homesites. The impact would be more adverse than for a crosswind because the accumulative effect of the wind sweep.

An example of wind angled to Santiago is shown in Figure 2 by the dashed lines. Concentrations are less than 10 ppm.

The development option that would produce the lowest impact on air quality is that for which the number of dwelling units (hence traffic generated) is the least. This would correspond to the one-acre sites with golf course and cemetery not developed.

If, as time progresses, the number of dwelling units or traffic density estimates change the air pollutant emissions and concentrations will change correspondingly.

That change is linear and can be calculated by ratioing the emission inventory results given herein. However, for the Gaussian model the change is not linear but dependent on the traffic densities on each roadway. As a first approximation, however, the change can be assumed to be linear, keeping in mind that the results are sensitive to changes on major roadways and insensitive to changes on small roadways.

TABLE G

ORANGE PARK ACRES

EXISTING NOISE ENVIRONMENT

(Near Roadways)

	Present Traffic (ADT)	* Dist. to Acceptable (ft.)
Santiago Canyon Road		
E. of Orangepark Blvd.	3600	50
N. of Chapman Ave.	1600	18
Orangepark Blvd.		
N. of Chapman Ave.	1300	12
S. of Santiago Canyon Road	1100	11
Chapman Ave.		
E. of Orangepark Blvd.	3200	45
W. of Orangepark Blvd.	3500	49
W. of Newport Blvd.	3400	47
Newport Blvd.		
S. of Chapman Ave.	800	10

* Distance from road & to HUD "Normally Acceptable" noise levels

ORANGE PARK ACRES

NOISE ASSESSMENT

Noise Impact of Development

The assessment of the noise impact due to the proposed development shoul be examined from two standpoints. First, since this is a residential d - velopment, an assessment should be made of the future noise exposure; this is the noise to which future residents of the development will be exposed. (Since there are no industrial sites or airports located in the vicinity of the proposed development, the noise source of greatest significance is roadway traffic). The second aspect of environmental noise related to the proposed development is the noise increase in the community that may be attributed to the development itself. Noise sources in this category include traffic noise from traffic generated by the development, and community noise sources associated with human habitation, the most significant of which are air-conditioning and other power equipment noises. Both of these aspects of noise relative to the proposed Orange Park Acres development plan are discussed in the following.

Traffic Noise Increase Due to Development

In the absence of nearby airports or industrial activities, the dominant source of noise in the Orange Park Acres community will be the traffic noise on local roads. Although there will be the usual noise increases associated with residential developmet such as barking dogs, air conditioning equipment, etc., and these noise increases may cause annoyance of nearby residents, the dominant factor contributing to the background or ambient noise levels will be traffic on streets in the development area. The increase in traffic noise due to traffic generated by the proposed development can be calculated. The increase in noise levels, calculated relative to full development traffic volumes are shown in Table "H" for the highest development density alternative. This increase is the

TABLE H

Increase in Full-Development Traffic Noise
Due to Traffic Generated by Highest
Development Density Alternative

Road Segment	Increase in Median Noise Level (dBA)
Santiago Canyon Road	
E. of Orangepark Boulevard	1.4
N. of Chapman Avenue	0.2
Orangepark Boulevard	
N. of Chapman Avenue	2.5
S. of Santiago Canyon Road	1.7
Chapman Avenue	
E. Of Orangepark Boulevard	2.5
W. of Orangepark Boulevard	0.9
E. of Newport Boulevard	0.4
W. of Newport Boulevard	0.2
Newport Boulevard	
S. of Champan Avenue	0.5

additional noise exposure due to development-generated traffic that will be experienced within 500 to 1000 feet of the various major roads in the development.

For most of the road segments shown, the increase in noise levels is less than 1 dBA (A-weighted decibels). Even the greater increases are barely noticeable, however, since a 2 to 3 dBA increase in noise is the minimum increase that can be detected by humans with good hearing. It is therefore concluded that traffic noise increases due to development-generation will not cause a significant increase in the noise environment of the Orange park Acres area.

Traffic Noise Considerations for Residential Development

Although California limits the noise levels from motor vehicles, including motorcycles, buses, and trucks (Vehicle Code, Section 23130), at the present time there are no State or local guidelines concerning the acceptability of traffic noise in residential areas. In addition, the noise ordinance presently under consideration by Orange County specifically excludes noise from licensed motor vehicles operating on public streets. In the absence of State and local guidelines, therefore, the U.S. Department of Housing and Urban Development (HUD) assessment guidelines for traffic noise will be used here.*

According to the HUD noise evaluation criteria for residential sites, the traffic noise is classified as clearly acceptable, normally acceptable, normally unacceptable, and clearly unacceptable.** These classifications are defined as follows:

> Clearly Acceptable - The noise is such that both the indoor and outdoor environments are pleasant.

*U.S. Department of Housing and Urban Development, Noise Assessment Guidelines, HUD Report No. TE/NA-171 (1971)
**Ibid.

Normally Acceptable – The noise exposure is great enough to be of some concern but common building constructions will make indoor environment acceptable, even for sleeping quarters, and the outdoor environment will be reasonably pleasant for recreation and play.

Normally Unacceptable – The noise exposure is significantly more severe so that unusual and costly building constructions are necessary to ensure some tranquillity indoors, and barriers must be erected between the site and prominent noise sources to make the outdoor environment tolerable.

Clearly Unacceptable – The noise exposure at the site is so severe that the construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would still be intolerable.

The estimated ultimate traffic volumes on the major roadways in the Orange Park Acres Development were used to assess the minimum setbacks required to remain in the HUD "normally acceptable" noise category. The required setbacks for each road segment are shown in Table "I". The assumptions used in these calculations were: (1) the peak-hour traffic volume is 10% of the ADT, (2) the mean traffic speed is 45 mph at peak hour, (3) there are no sound barriers or sound attenuating effects due to terrain, and (4) vehicles operating in the future when full development is reached will produce as much noise as present vehicles. These assumptions are certainly worst-case assumptions and so the setbacks shown in Table "I" are conservative distances that should provide residential sites that fall well within the "normally acceptable" noise category. For example, an elevation difference between a roadway and an adjacent residential site may serve as an effective barrier to roadway noise. A depressed elevation of a site relative to the roadway may also offer a shielding effect. The amount of shielding depends upon the relative location of the site and roadway as well as the elevation difference. The use of natural terrain to achieve elevation difference therefore offers a useful method of reducing the impact of roadway traffic noise upon adjacent residential sites.

TABLE I

SETBACKS REQUIRED FOR ACCEPTABLE TRAFFIC NOISE LEVELS ACCORDING TO HUD STANDARDS

	Estimated Ultimate Traffic (ADT)	Distance To* HUD Normally Acceptable Category (ft)
Santiago Canyon Road		
East of Orangepark Blvd.	22,000	220'
North of Chapman Avenue	20,000	215'
Orangepark Boulevard	12,000	145'
Chapman Avenue		
East of Orangepark Blvd.	17,000	190'
West of Orangepark Blvd.	25,000	250'
East of Newport Blvd.	18,000	200'
West of Newport Blvd.	17,000	190'
Newport Boulevard		
South of Chapman Avenue	16,000	180'

* Distance from Road to "Normally Acceptable" noise levels.

With reference to assumption (4) above, an important factor that should be considered in traffic noise projections for the future is the fact that the noise from automobiles and trucks is likely to decrease substantially over the next 10 to 20 years. The noise reduction potential deemed achievable in the near future for existing vehicle concepts with current technology, and the potentials which should result from further research and development efforts were outlined in a recent Environmental Protection Agency sponsored study.* Short-term noise reduction of about 5 dBA and longer-term potential reduction of 10 to 15 dBA are projected in this study. The Office of Noise Abatement and Control within the Environmental Protection Agency has been given far-reaching responsibility for noise control at the Federal level, especially by the recent passage of the Noise Pollution Control Act of 1972 (Senate Bill S-3342).

Because of increasing emphasis on traffic noise reduction by the Office of Noise Abatement and Control, and because of the technical potential of vehicle noise reduction that is believed possible, an overall traffic noise reduction of 10 to 15 dBA may take place over the next 10 to 15 years. A noise reduction of this magnitude has the effect of moving the HUD noise category to the next more acceptable level. That is, a 15 dBA noise reduction would change a "normally acceptable" site to a "clearly acceptable" site.

In summary, the acceptability of a homesite relative to roadway noise depends upon several factors. These include traffic volume, distance from the roadway, traffic speed, percent of truck traffic, road grade, the possible presence of nearby stop signals, and the presence of barriers such as an acoustical wall or differences in elevation between the site and the roadway. Each of these factors offer a means of controlling the noise

*"Transportation Noise and Noise from Equipment Powered by Internal Combustion Engines", U.S. E.P.A., NTID 300.13 (Dec. 31, 1971).

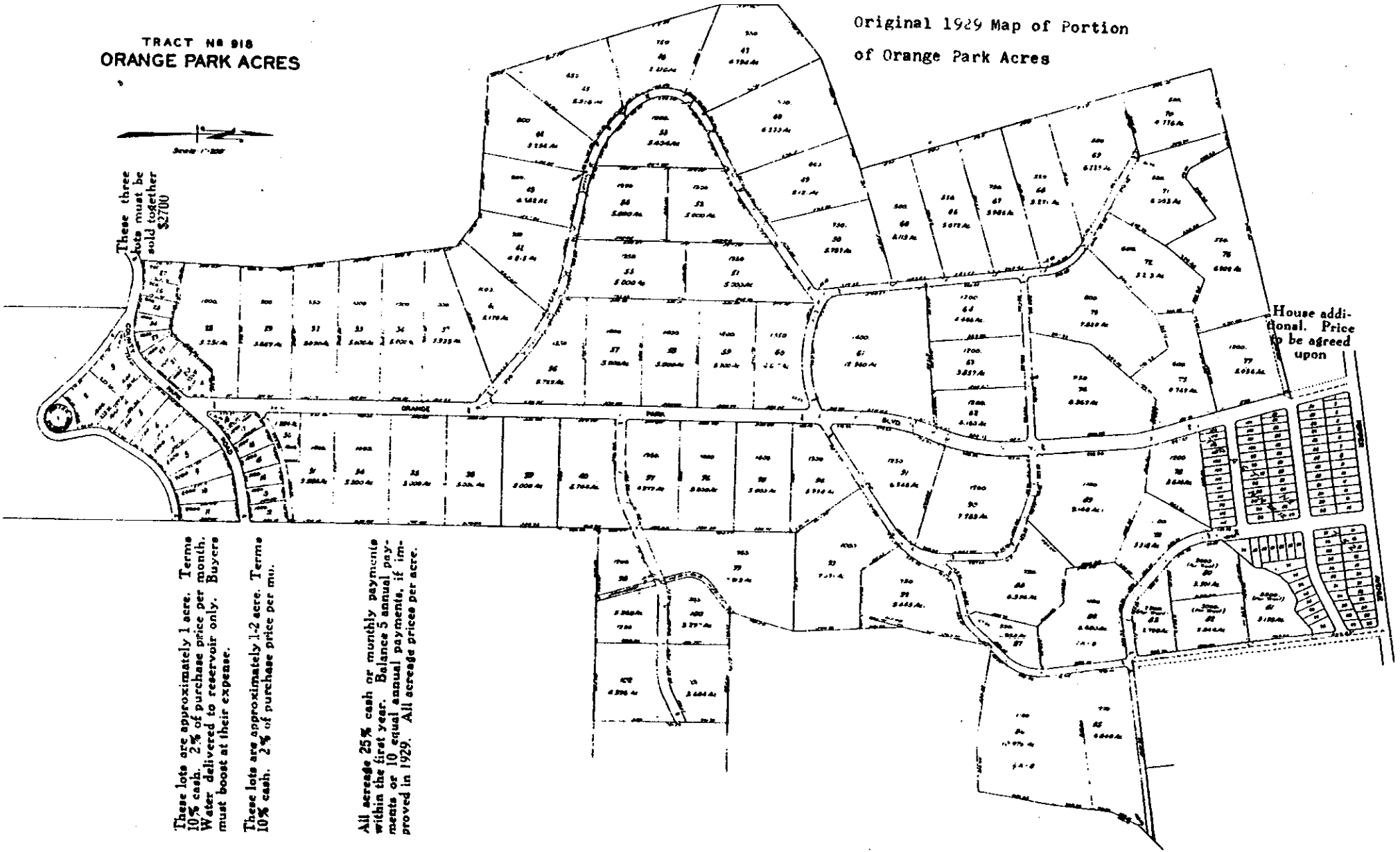
exposure of a residential site to roadway noise.

For a given traffic volume and speed, the most direct method of assuring that a homesite is in the acceptable category relative to traffic noise is to locate the structure as far away from the road as possible. This may require setbacks, in some cases, of up to 250 feet from the road centerline to place a site in the acceptable noise category for full development traffic volumes. If such setbacks are not economically practical, the desired noise reduction may be achieved by utilizing natural terrain in such a way that an elevation difference between the roadway and the site provides a natural noise barrier. A third alternative would be to build a wall to serve as a noise barrier between the roadway and the site. The degree of noise reduction that can be achieved by an elevation difference of wall depends upon the distance of the site from the roadway, the location of the barrier, the elevation difference and the height of the barrier. Each situation in which these parameters differ must be assessed separately to determine whether the noise environment at a given site will be acceptable.

TRACT Nº 918

ORANGE PARK ACRES

Original 1929 Map of Portion of Orange Park Acres



These lots are aproximately 1 acre. Terms 10% cash. 2% of purchase price per month. Water delivered to reservoir only. Buyers must boost at their expense.

These lots are approximately 1-2 acre. Terms 10% cash. 2% of purchase price per mo.

All acreage 25% cash or monthly payments within the first year. Balance 5 annual payments or 10 equal annual payments, if improved in 1929. All acreage prices per acre.

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GRADING FOR HILLSIDE DEVELOPMENT

1. OBJECTIVES: The following is a listing of objectives and specific requirements to be reflected in the Whiting Ranch Development Plan in order that the development respects and reinforces the existing environment providing a positive adaptation to the hillsides.

   a. Development is to be done in such a way that it will preserve the natural character of the hills. Outstanding natural features such as major ridgelines, rock outcroppings, oak woodlands etc., should be retained and incorporated in the development plan.

   b. Create a hillside development which encourages a clustering of dwelling units to retain expanses of open space in natural areas not emulating development of level terrain.

   c. All cut and fill banks shall be finished to harmonize with the existing topography and geology. This includes maintaining a percentage slope of cut and fill similar to the areas within which the slope occurs if geologically stable. Abrupt changes of graded areas are to be avoided, rounding all edges into the natural topography and planting with compatible vegetation.

   d. All cut and fill banks shall be planted with appropriate erosion retardant cover where geological and soil conditions permit, and native fire resistant plants should be used near structures or along fire break areas where appropriate.

   e. Hillside land should not be classified as unbuildable solely on the basis of the percentage of natural slope; rather, the geological and soil conditions should be evaluated and recommendations made based on these conditions and the ability to adhere to the recommendations of this section.

f. The extent of cut or fill should be based upon good engineering practices, the recommendations of a geologist and foundation engineer, not an arbitrary limit. However, the amount and treatment of slope banks should adhere to the recommendations in this section.

g. Maintain prominent views of and from hill areas which will reinforce the image and quality of the natural environment.

h. Roads should be located and sized to minimize the amount of grading required following the natural contours where possible.

2. Grading For Housing And Other Structures

a. For single-family detached lots (minimum 10,000 sq.ft.), which are located on an average natural slope of greater than 20 percent, the maximum land coverage shall be determined by the following chart unless a portion of the lot requires cut or fill from the development of roads. In such cases, grading may exceed the percentage shown in an area only with respect to grading not contributing to the usable site area for the lot caused by road grading.

GRADING FOR HILLSIDE DEVELOPMENT (Continued)

Maximum Land Coverage – Over 20 % Slope
(for min. 10,000 sq.ft. lots)

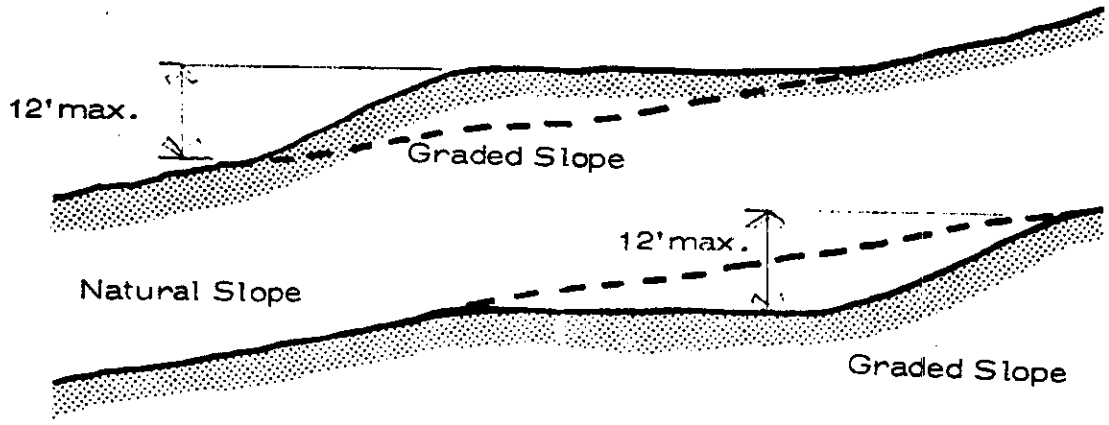
Average Slope (%)	Maximum Land Coverage (% of Parcel)
20–25	40
25–30	35
30–35	30
35–40	25
40–45	20
45–50	10
Over 50	5

GRADING FOR HILLSIDE DEVELOPMENT (Continued)

b. Grading for the attached unit areas shall only be done to accomodate the roads, parking, private patios and the structure itself for areas where the average slope is over 20 percent and shall conform to the criteria listed below.

c. In order to provide grading which is sensitive to the natural topography and to produce a slope which is manageable in scale, the following criteria shall apply to grading all residential lots and other structures within the Whiting Ranch.

i. From any graded pad, no distance of graded slope shall exceed twelve (12) feet in elevation above or below the pad as shown in the following diagram.



iv. For side slopes, wherever possible, a cut and fill balance will be utilized to minimize the amount of grading required (see Sec. V-E, 3-b).

v. A landscape palette shall be established compatible with natural vegetation in the area and shall be planted to retard erosion and to screen unsightly graded areas.

Incorporating the above specific guidelines for grading, it is felt that a most sensitive adaptation of housing to the rolling hills of the Whiting Ranch can be accomplished. It is also the expressed intent to vary the house type to best suit the topography. In some cases where steep topography exists, the grading criteria as outlined is not possible to be met. Therefore, special foundation designs and house types will be incorporated to provide development which can fit onto steeper topography adapting the house to the natural contour of the land.

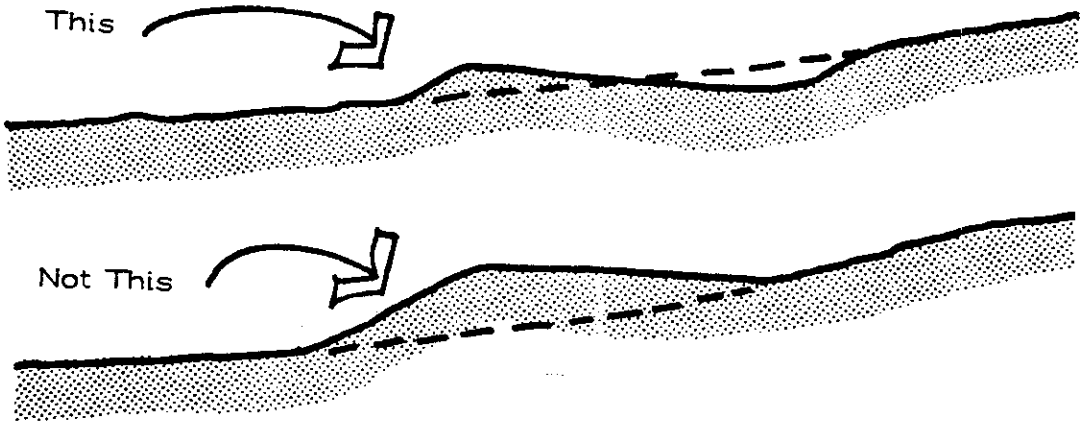
3. Grading For Roads

Because of limitations on percentage grade and radius of curvature for various roads, it may be necessary for the cut and fills to exceed the maximums listed for lot grading. However, the following criteria shall be utilized for road grading throughout the Whiting Ranch in order to provide the most sensitive adaptation of roads to the topography.

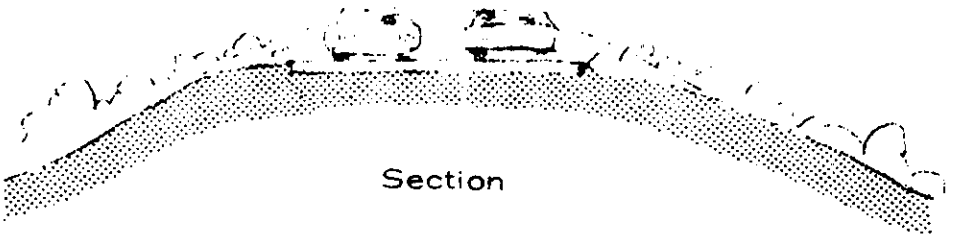
GRADING FOR HILLSIDE DEVELOPMENT (Continued)

a. The percentage slope of cut or fill shall be compatible with the geological and structural capabilities of the soils in the area.

b. Where road is cut into a side slope to the maximum extent possible, there shall be a balance of cut and fill in order to minimize the overall amount of grading required.

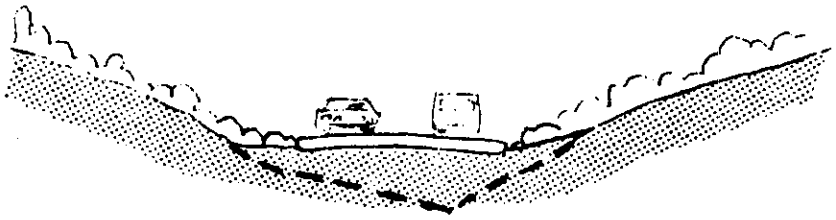


c. For roads that are located along ridgelines or hilltops the grading which is done must be daylighted below the elevation of the center line of the road and is to be rounded into the natural topography and planted with appropriate vegetation.



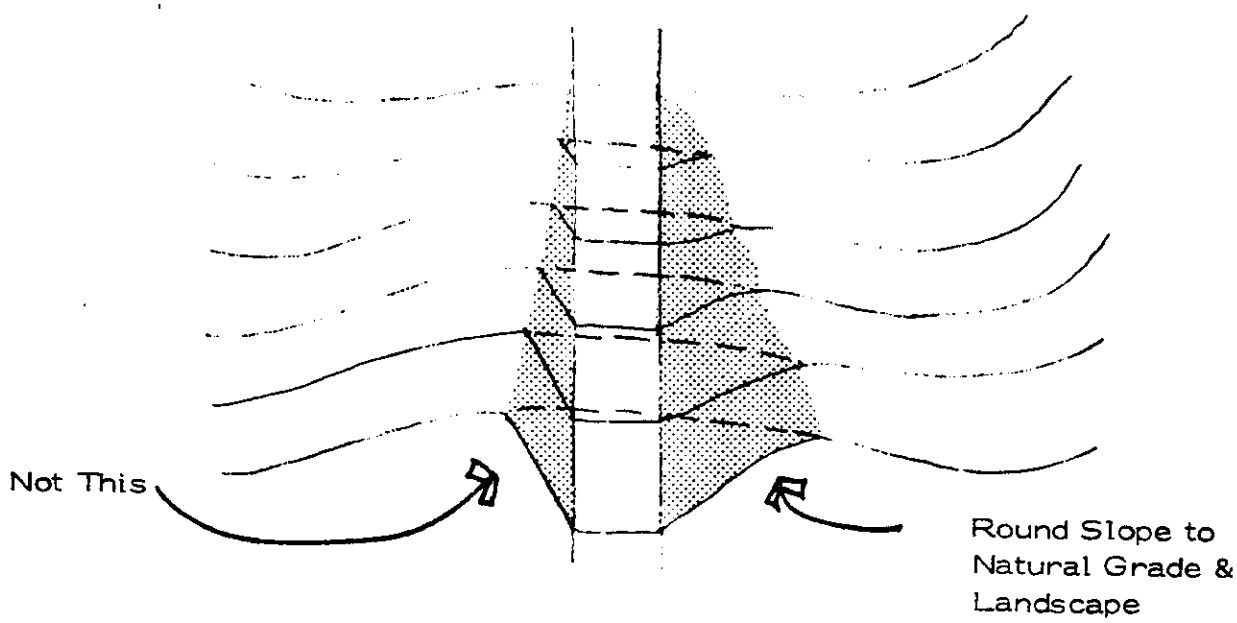
GRADING FOR HILLSIDE DEVELOPMENT (Continued)

d. For road alignments in the valley, except where drainage channel is adjacent to the road, the grading shall be rounded into the natural slope bank at a location above the center-line of the road again incorporating vegetation native to the area or compatible to the natural conditions.



Section

e. Roads across ridges or valleys are to be minimized, however, when utilized, the following criteria shall apply to grading. Cut and fill slopes are to transition into the same percentage slope as the natural topography and are to be rounded into the natural topography to give a "natural" appearance

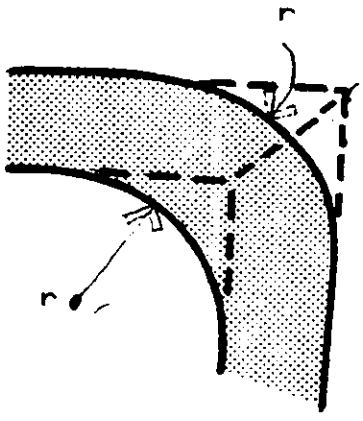


f. Where benches are required, they shall be designed so as to fit with the natural character of the area giving a variation in elevation compatible with the natural topography and the drainage requirement and, to the extent possible, shielded with vegetation compatible to the natural vegetation of the area.

Where practical from a geological and soils standpoint, where grading occurs, an appropriate cover of topsoil shall be applied in order to sustain the plantlife which will then be utilized to prevent erosion and to provide a visual compatibility with the surrounding area.

Where the edge of any cut or fill slope meets or intersects, the corners shall be rounded to a minimum radius of the vertical height of the cut or fill slope or that radius which is typical within the surrounding natural environment.

Radius of Curve =
Height of Slope



g. Where the natural grade and a cut and fill slope meet, there shall be a gradual transition from the graded slope to the natural configuration consistent to the topography within the area. The minimum radius required as the slope bank cut or fill blends into the natural topography shall be the minimum radius existing within the natural topography. Obvious exceptions to this would include areas where erosion has occured or stream bed areas or specific slide areas or other unstable or irregular areas unique to a specific locality.

J L WEBB PLANNING

220 NEWPORT CENTER DRIVE, SUITE 22 • NEWPORT BEACH, CALIFORNIA 92660 • (714) 644-7355

August 6, 1973

Dear Orange Park Acres Resident and Property Owner,

As you may have been advised by the Orange Park Association, Inc., my firm has been selected to prepare a "Specific Plan" for Orange Park Acres. The selection was made by the Orange Park Acres Development Committee which is composed of representatives of the County of Orange, City of Orange, landowners, developers and residents in Orange Park Acres. The purpose of the "Specific Plan" is to guide the future zoning and development for Orange Park Acres.

As a resident or property owner in Orange Park Acres, your assessment of the physical, economic and social environment along with an indication of your needs and goals will be a great value in the preparation of this Plan.

Enclosed you will find a Questionnaire designed to acquire the needed planning input. Your answers are anonymous and will be individually held in strict confidence.

Since we have limited time in which to complete this Plan, we would appreciate your response within one week. Enclosed is a self-addressed, postage-paid envelope to facilitate a prompt return of the Questionnaire. Your early response will allow us to incorporate your reflections of the problems, needs and goals for the area in the formative stages of our planning process.

Your cooperation is greatly appreciated by us and by the Orange Park Acres Development Committee.

Respectfully yours,

J. Larry Webb

Enc.

ORANGE PARK ACRES
RESIDENT AND PROPERTY OWNER QUESTIONNAIRE

1. Please indicate the number and age of persons residing in your home

	Men	Women	Boys	Girls
Number				
Age				

2. List the clubs and/or organizations you and your family are most active in (such as 4H, FFA, Scouts, church, etc.)

_____

3. How many animals do you have on your property during a typical year?

____ Horses	____ Goats	____ Dogs
____ Cattle	____ Rabbits	____ Cats
____ Swine	____ Chickens	____ Other

4. How long have you lived in Orange Park Acres? _____years _____months

5. Why did you choose to live in O.P.A. rather than some other area?

_____

6. Are you a: ____resident owner, ____non-resident owner or ____renter?

7. Where did you live before you moved to O.P.A.? _____
city state

8. What is the approximate size of your property? _____
Sq.Ft. or Acres

9. What is the estimated size of your house? _____
Sq.Ft.

0. What is the estimated market value of your home and/or property today?
$_____

1. Is your home: ____one story, ____two story or ____split level?

2. What are the numbers of rooms in your home?
____bedrooms ____baths ____car garage ____ total number of rooms

3. What is the age of your home? _____

4. What other improvements are included on your property in addition to your residence?

____ Guest House	____ Patio	____ Corral
____ Stables	____ Barn	____ Swimming Pool
____ Shed	____ Stalls	Other _____

5. What are the prime uses of your land? (check all applicable spaces)

____ Vacant	____ Agricultural	____ Raising and keeping of animals
____ Residential	____ Commercial	

6. What are the occupations of: Man _____ Woman _____

7. In what area is your work located? _____

(over)

ORANGE PARK ACRES QUESTIONNAIRE - CONT.

18. Please indicate the total annual family income

____ 0 - $10,000	____$25,000 - $30,000	____$45,000 - $50,000
____$10,000 - $15,000	____$30,000 - $35,000	____$50,000 - $55,000
____$15,000 - $20,000	____$35,000 - $40,000	____$55,000 - $60,000
____$20,000 - $25,000	____$40,000 - $45,000	____$60,000 and above

19. Please indicate which major items your family owns:

____ Cars	____ Camper	____ Bicycles	____ Airplane
____ Truck	____ Motorcycle	____ Boat	Others _____

20. Please circle the types of activities your family engages in and the approximate number of hours/week spent in each.

Shopping	___hrs	Bicycling	___hrs	Club activities	___hrs
Boating	___hrs	Hiking	___hrs	Horseback riding	___hrs
Swimming	___hrs	Visiting friends	___hrs	Civic activities	___hrs
		Sightseeing	___hrs	Other_____	___hrs

21. What percentage of your free time in a typical week does your family spend:

_____% in the Orange Park Acres area

_____% outside of the Orange Park Acres area

22. Where do you spend your vacations and long weekends?

_____

23. In your own terms, state what you believe to be the most positive aspects of Orange Park Acres. _____

_____

_____

_____

_____

_____

24. In your own terms, state what you believe to be the most negative aspects of Orange Park Acres. _____

_____

_____

_____

_____

_____

25. On the back of the following page is a map of the Orange Park Acres study area. Please draw a line around the areas which you believe are the most desirable and identify them with a (+). Also, draw a line around the areas you consider least desirable and identify them with a (-).

ORANGE PARK ACRES QUESTIONNAIRE - CONT.

6. Please indicate the level of quality for each of the following community characteristics as they exist today in Orange Park Acres. Also indicate whether this item is very important, important or not important to you.

	Good	Adequate	Poor	Very Important	Important	Not Important
Schools						
School Transportation						
Public Transportation						
Traffic Conditions						
Road Conditions						
Storm Drainage						
Trash Pick-up						
Sewerage Disposal						
Septic Tank Systems						
Street Cleaning						
Postal Service						
Water - Drinking						
Police Protection						
Fire Protection						
Hospital Facilities						
Medical Services						
Neighborhood Parks						
Regional Parks						
Recreational Facilities						
Library Service						
Shopping Facilities						
Community News						
Social Activities						
Churches						
Visual Image						
Architecture						
Landscaping						
Property Maintenance						
Noise						
Natural Features						
Hillside Development						
Open Space						
Air Quality						
Housing Conditions						
Housing Density						
Local Government						
Community Identity						
Animal waste clean-up						

Please feel free to enclose any additional comments that you feel would be valuable in the preparation of a "Specific Plan" for Orange Park Acres.

(over)

ORANGE PARK ACRES

ESTIMATED DWELLING UNITS

BY PARCEL

Sector	Owner	D.U. 1 Ac.	D.U. Cluster	D.U. Total	Total Ac.	D.U./Ac.
A_3	Mead Ranch	45	202	247	117	2.11
A_3	Leadership	45	48	93	60	1.55
A_2	F. Mead	5	46	51	24	2.13
A_2	La Vene	4	177	181	72	2.51
A_2	Renacer Inc.	-	49	49	16.5	2.97
A_2	C.E.C.	-	24	24	8.2	2.93
A_2	B. Boone	-	4	4	1.43	2.8
A_1 & B	W. Dworman	-	72	72	40	1.80
C	Cemetery	-	150	150	117	1.28
D	P. Howard	-	14	14	8.2	1.71
D	Sully-Miller	-	26	26	16.6	1.57
J	J.W. Klug	-	56	56	30	1.87
J	L. Collins	-	12	12	7.2	1.67
	TOTALS	99	880	979	518	1.89

All other vacant property over one acre in size shall have a maximum density of one dwelling unit per acre.

10-10-73

Revised 10-17-73