

QUEEN CREEK

LAND USE PLAN
MARICOPA COUNTY

A480.941

OFFICE OF THE BOARD OF SUPERVISORS

MARICOPA COUNTY BOARD OF SUPERVISORS
County Administration Bldg. 301 W. Jefferson Phoenix, Arizona 85003



(602) 506-3415

April 14, 1992

Dear County Resident:

The Maricopa County Board of Supervisors is pleased to present the updated Queen Creek Area Land Use Plan which was adopted April 6, 1992.

This Plan is one of ten area plans Maricopa County has adopted as part of an on-going land use planning program for the unincorporated areas.

The Land Use Plan was originally adopted on April 18, 1988, and an updated version was adopted on October 1, 1990. This current edition of the Plan has been updated to reflect changing growth patterns, population projections, annexations and other changes to the planning area since the last adoption.

The Land Use Plan serves as a statement of goals and policies to direct growth through the year 2010. Future land use is also designated for those areas under County jurisdiction.

The Queen Creek Land Use Plan demonstrates Maricopa County's efforts to fulfill State mandated planning for the area of jurisdiction, as well as a significant commitment to the area, its future and its residents.

Very truly yours,

A handwritten signature in cursive script that reads "Betsey Bayless".

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Chairman, Board of Supervisors

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MARICOPA COUNTY LAND USE PLAN

QUEEN CREEK PLANNING AREA

Adopted April 6, 1992



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INTRODUCTION

This introduction provides an overview of the process used to prepare the Queen Creek Land Use Plan as part of the Maricopa County Comprehensive Land Use Plan. The Introduction is presented in three sections:

Area Plan Development
Organization of the Queen Creek Land Use Plan
Annual Update Process

AREA PLAN DEVELOPMENT

In July 1985, the Maricopa County Department of Planning and Development issued a public Request for Proposal to professional urban planning consultants for the preparation of the seven specific Land Use Plans as part of the Maricopa County Comprehensive Land Use Plan. One of the specific areas was the Queen Creek Planning Area.

For each specific area the County requested that the provided professional services include collection and analysis of existing data leading to specific goals and policies to guide general land development. Each specific study area was also to be provided with a Land Use Plan.

Throughout the planning process the community participation was emphasized through a number of means. Three public workshops for the Queen Creek Planning Area were held to solicit input from residents, property owners, business people, and Planning and Zoning Commission members. Newsletters announcing each workshop and providing project progress reports were prepared and distributed prior to each workshop. In addition, Planning and Zoning Commission workshops were held to review the project progress. Thorough coverage by the news media was also encouraged to create further awareness of the workshops and participation by the general public in the planning process.

ORGANIZATION OF THE QUEEN CREEK LAND USE PLAN

This document presents the results of the planning process for the Queen Creek Planning Area and is organized corresponding to the major work tasks.

"Inventory and Analysis," is a presentation and analysis of the data elements that describe existing conditions in the Queen Creek Planning Area.

"Resident Issue Identification" summarizes the major land development issues raised by the residents of the Queen Creek Planning Area.

"Goals and Policies", defines specific goals and policies which the County has adopted with regard to growth and development in the Queen Creek Planning Area.

"Queen Creek Land Use Plan," presents the Land Use Plan for the Queen Creek Planning Area with definitions for each Land Use category and discussion of the Land Use Plan, which will be implemented, in part, through the application of the policies presented in "Goals and Policies".

ANNUAL UPDATE PROCESS

Each year, the Queen Creek Land Use Plan is revised to reflect changes in information and data. The County Planning and Development Department updates each land use plan using the most current Maricopa Association of Governments' (MAG) data, U. S. Census data and population projections of the Department of Planning and Development. During 1989, the boundaries of the planning area were expanded from 48 to 92 square miles, including additional area to the west of Queen Creek and to the east of Williams Air Force Base. Incorporations by the Town of Queen Creek and annexations by the Town of Gilbert and City of Mesa have reduced the unincorporated area within the Planning Area to approximately 62 square miles. The Town of Queen Creek has also incorporated, but growth estimates for its area of jurisdiction are not included in this Plan. As each update is completed, it will be considered at public hearings before the Planning and Zoning Commission and at the Board of Supervisors.

INVENTORY AND ANALYSIS

Development of the *Queen Creek Land Use Plan* hinges on a thorough understanding of the various physical, social and economic aspects of life in the immediate and surrounding area. This chapter of the Land Use Plan identifies and describes the following elements:

- Natural Resources
- Social and Economic Characteristics
- Land Use and Zoning

The "Inventory and Analysis" Chapter of this *Queen Creek Land Use Plan* presents an analysis of data that describe existing conditions in the planning area. Population projections are also presented as part of the Inventory and Analysis so that the community, elected and appointed public officials and planning staff have a thorough understanding of the anticipated growth in the planning area.

NATURAL RESOURCES

In describing natural resources in the Queen Creek Planning Area the following five elements are identified:

- Physical Characteristics
- Hydrology
- Vegetation and Wildlife
- Archaeology
- Policy Implications

The purpose of this section of the *Queen Creek Land Use Plan* is to describe the physical setting, to identify existing groundwater supplies and flood control measures, to locate habitat areas, to note any archaeological resources and to identify policy implications.

Physical Characteristics:

The "Physical Characteristics" section describes key features of the natural and man-made environment which affect growth and development in the Queen Creek Planning Area. "Physical Characteristics" are presented in the following six sections:

Physical Setting
Soils
Topography
Geology
Visual Features
Air and Noise Quality

Each of the above factors will, to some extent, dictate the quality, character and direction of development in the planning area. The purpose of this section is to formulate an understanding of the environmental characteristics which are affecting, and continue to affect, growth and development in the planning area.

a) Physical Setting

The Queen Creek Planning Area, as illustrated on *Figure-1*, is located in the southeastern portion of Maricopa County, north of the Santan Mountains, and south and east of the Town of Gilbert.

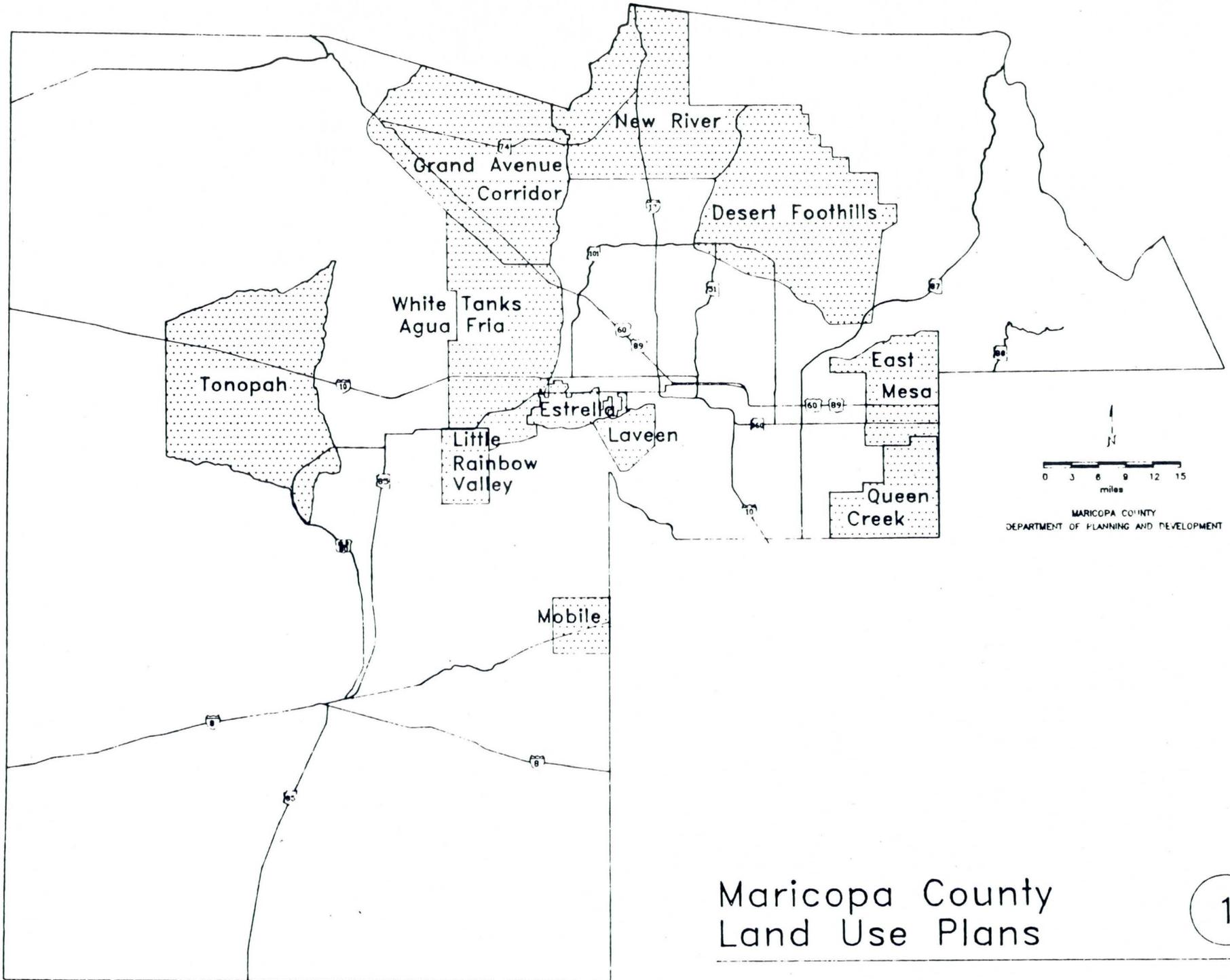
The Planning Area encompasses Williams Air Force Base and the Town of Queen Creek. Elevations within the planning area range from 1,305 feet above sea level at the northwestern boundary to 1,472 feet above sea level near the southeastern boundary. Terrain within the planning area is generally composed of alluvial plains, with mountains found just outside the southern boundary.

The Queen Creek Planning Area encompasses approximately 92 square miles. Landscapes in the southern part of the Planning Area are characterized by rural scenes composed of cultivated fields, citrus orchards, and farms. Facilities associated with Williams Air Force Base and the General Motors Proving Grounds dominate the landscape in the northern part of the study area.

The climate in the planning area is similar to the rest of the Phoenix area, with generally mild fall, winter and spring weather and hot, dry summer weather. *Table-1*, "Average Monthly Weather Characteristics", summarizes Queen Creek's monthly temperature and precipitation levels.

b) Soils

Three major soil associations are found within the Queen Creek Planning Area. The Antho-Valencia Association covers the area south of Riggs Road between the western boundary and Crismon Road. The Mohall-Contine Association is



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Maricopa County
Land Use Plans

MARICOPA COUNTY
DEPARTMENT OF PLANNING AND DEVELOPMENT

TABLE -1**Average Monthly Weather Characteristics**

Month	Average Daily Maximum Temperature (F)	Average Daily Minimum Temperature (F)	Average Total Precipitation Inches
January	64.9	35.6	0.84
February	69.3	38.5	0.60
March	73.6	42.9	0.77
April	83.0	49.5	0.34
May	92.1	56.8	0.14
June	100.8	64.4	0.09
July	104.3	74.1	0.82
August	101.8	72.9	1.20
September	98.5	65.9	0.76
October	88.3	54.4	0.53
November	75.4	42.7	0.50
December	66.9	36.8	0.93
Total	84.9	52.9	7.52

Information based on a thirty-year average.
Average Total Snow, Sleet and Hail Annual: Trace

Source: Arizona Department of Commerce

located in the southwest corner of the planning area as well as in the vicinity of Williams Air Force Base and the General Motors Proving Grounds. The Gilman-Estrella-Avondale Association covers the remainder of the planning area.

To further identify the soil associations found within the planning area, the following section describes the associations in terms of drainage, slope, texture, and terrain:

Antho-Valencia: well drained soils, nearly level to gently sloping sandy clay loams and gravelly sandy loams on old alluvial fans.

Mohall-Contine: well drained soils, nearly level loams and sandy clay loams with old alluvial materials on old alluvial fans.

Gilman-Estrella-Avondale: well drained soils, nearly level loams and clay loams on alluvial fans and floodplains.

The four general soil properties which affect soil suitability for development are permeability, available water capacity, shrink-swell potential and corrosivity.

Permeability refers to the rate at which water moves through the soil and is usually determined by the texture of the soil. Soils with a slow permeability pose severe limitations for septic tank absorption fields. Soils with slow permeability do not allow adequate absorption of effluent from tile or perforated pipe into natural soil. Approximately thirty percent of the Queen Creek Planning Area includes soils which pose severe restrictions for the use of septic tank absorption fields.

Available water capacity is the amount of water a soil can hold which is available for plants. The ability of soil to hold water in part determines the type of plants that can be used for landscaping and lawns. None of the soils in the Queen Creek Planning Area have low available water capacity.

Shrink-swell potential refers to the capacity of a soil to expand or shrink as the moisture content is increased or decreased. Generally, soils with a high percentage of clay have a tendency to have a high shrink-swell capacity. Soils with a high shrink-swell capacity can contribute to structural problems for buildings and roads.

Corrosivity refers to a soil's capacity to induce chemical reactions that will corrode or weaken metals and concrete. Most soils in the Queen Creek Planning Area are moderately corrosive to uncoated steel. Soils with a high

corrosivity may create potential problems for underground utilities, if installed unprotected.

Soil characteristics can play an important role in determining the quality and character of development in the Queen Creek Planning Area. For detailed information on soil types, their characteristics, and their locations in the planning area, refer to the U.S. Department of Agriculture Soil Conservation Service, "Soil Survey: Eastern Maricopa and Northern Pinal Counties Area, Arizona." The Eastern Maricopa survey is available from the Soil Conservation Service Office in Phoenix.

The characteristics of each soil association as related to development is illustrated in **Table-2. Figure-2**, "Soil Associations" illustrates the approximate location of each soil association within the planning area. Because of the locational variability of each soil type within the associations, soil testing should take place prior to actual development, particularly in any area that might contain soils which can pose severe problems for septic tank use, building and foundation placement.

c) Topography

The Queen Creek Planning Area, composed of alluvial plains, slopes from the southeast to the northwest. The highest point within the planning area is 1,472 feet on a hill in the southeast, while the lowest point is 1,305 feet at the intersection of Higley and Pecos Roads in the central portion of the area. Slope in the planning area ranges from zero to two percent.

d) Geology

General geology within the whole planning area consists of sedimentary rocks which are composed of sand, gravel and conglomerate.

Land subsidence, as illustrated in **Figure-3**, "Land Subsidence", in the Queen Creek area varies from 0-1 feet to 3-5 feet. Subsidence has occurred in this area from the extensive ground water harvesting to irrigate and support agriculture throughout the area. The rate of subsidence will lessen as the area develops, but recharge programs need to be considered for the immediate future.

e) Visual Features

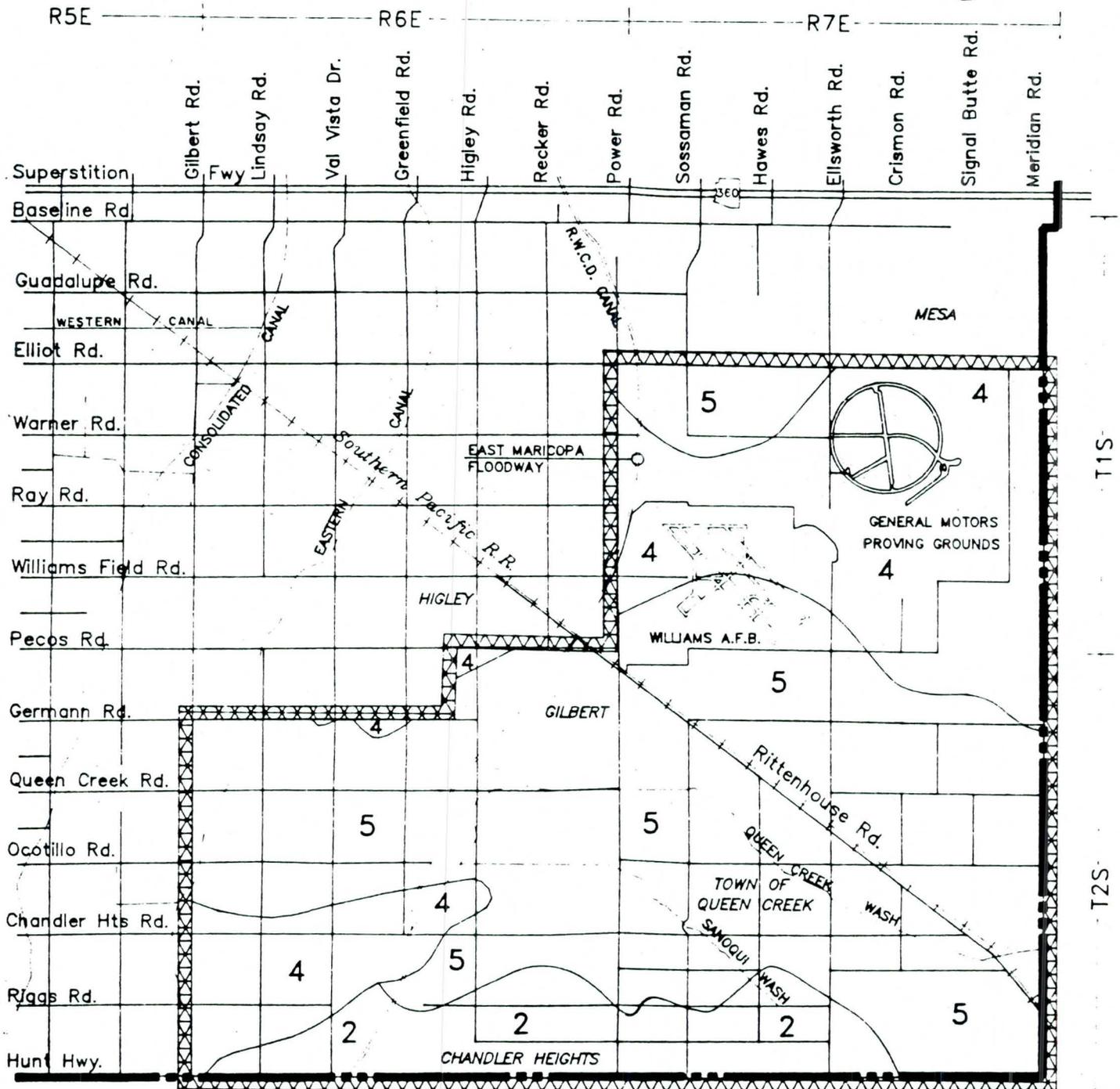
Visual character of the Queen Creek Planning Area is dominated by views

TABLE-2**DEVELOPMENT CONSTRAINTS BY SOIL ASSOCIATION**

Soil Assoc.	Septic Tank Absorp-Fields	Dwellings without Basements	Dwellings with Basements	Local Roads and Streets	Small Commercial Buildings	Lawns and Land-scaping
Antho-Valencia	Moderate to Severe	Moderate to Severe	Moderate to Severe	Severe	Moderate to Severe	Moderate to Severe
Gilman-Estrella-Avondale	Slight to Moderate	Moderate	Moderate	Moderate to Severe	Moderate	Moderate
Mohall-Contine	Severe	Moderate	Moderate	Moderate to Severe	Moderate	Moderate

QUEEN CREEK

Figure 2



Soil Associations

- 2
- 4
- 5

Antho-Valencia

Mohall-Contine

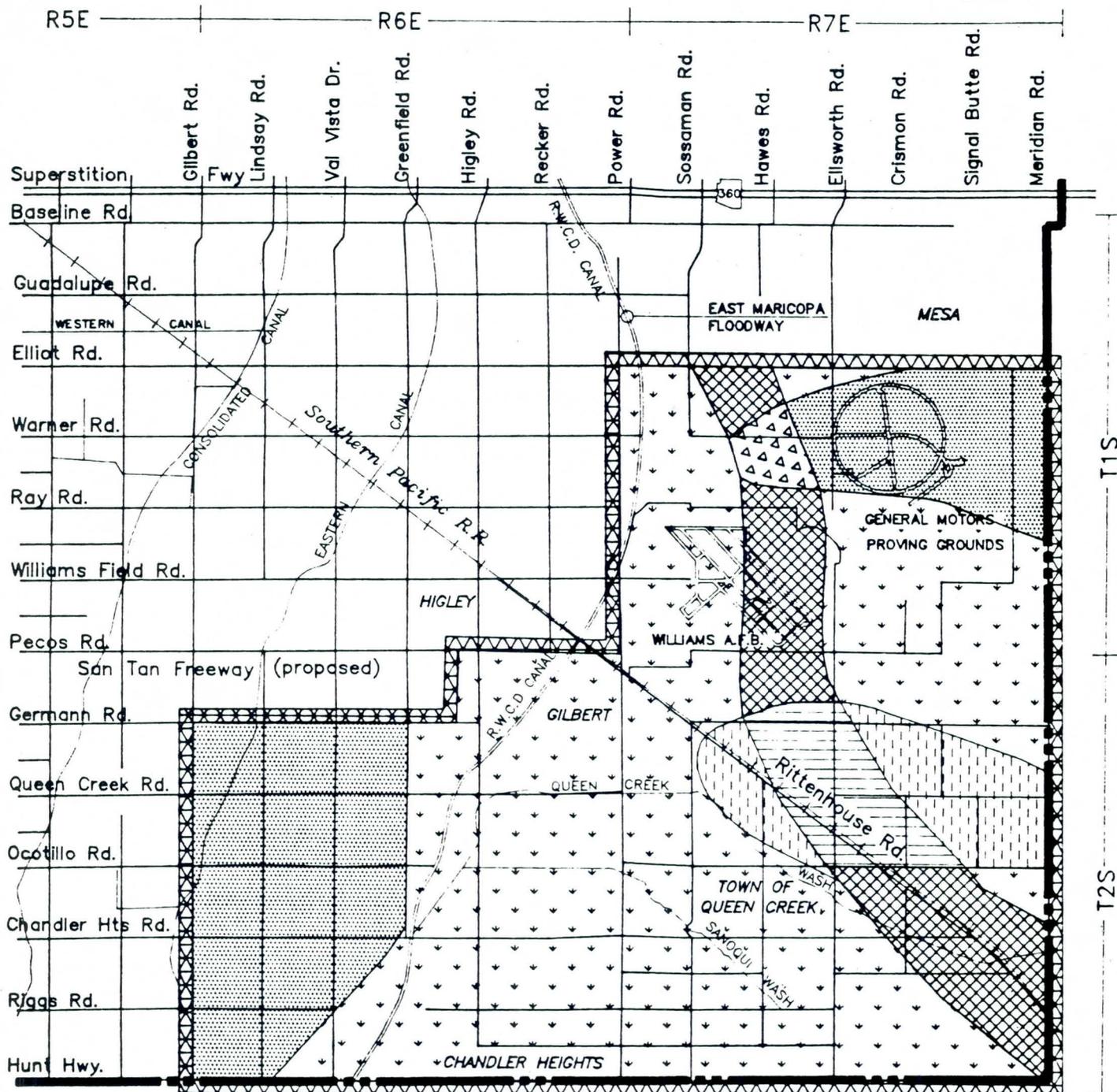
Gillman-Estrella-Avondale



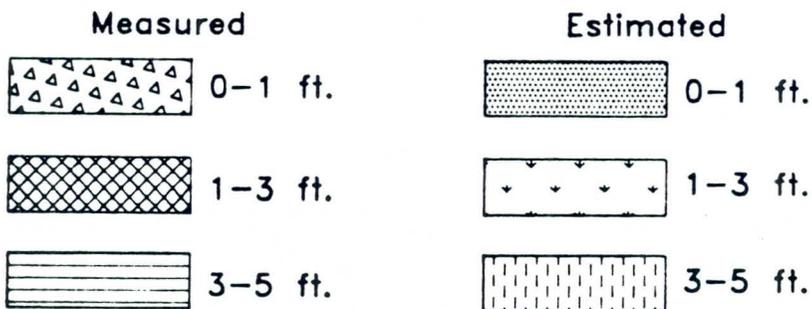
NORTH

QUEEN CREEK

Figure 3



Land Subsidence



towards the Santan Mountains to the south and the Superstition Mountains to the east. This dominance is strengthened by the extremely level terrain and provides a reference point as one travels through the planning area.

f) Air and Noise Quality

Air quality is affected in a number of ways as a result of a variety of activities. Sources of air pollutants may be mobile or stationary. One mobile source of air pollution results from motor vehicle use. Such vehicle-generated emissions include carbon monoxide, nitrogen oxides, and hydrocarbons. The pollutant of greatest concern is carbon monoxide because, under certain atmospheric and topographic conditions, concentrations may accumulate which are hazardous to health under prolonged exposure. Stationary sources of air pollution comes from roads, agricultural fields, vacant lots and construction sites where wind-borne particulates such as dust and microscopic debris originate. One pollutant which comes from both mobile and stationary sources is ozone.

While carbon monoxide and wind-borne particulates usually come from a known source, ozone originates from atmospheric chemical reactions between nitrogen oxides, hydrocarbons, and ultraviolet light.

For the Queen Creek Planning Area, pollution concentration measurements are unavailable. However, trends for three air pollutant concentration levels for the City of Mesa may be similar and are as follows:

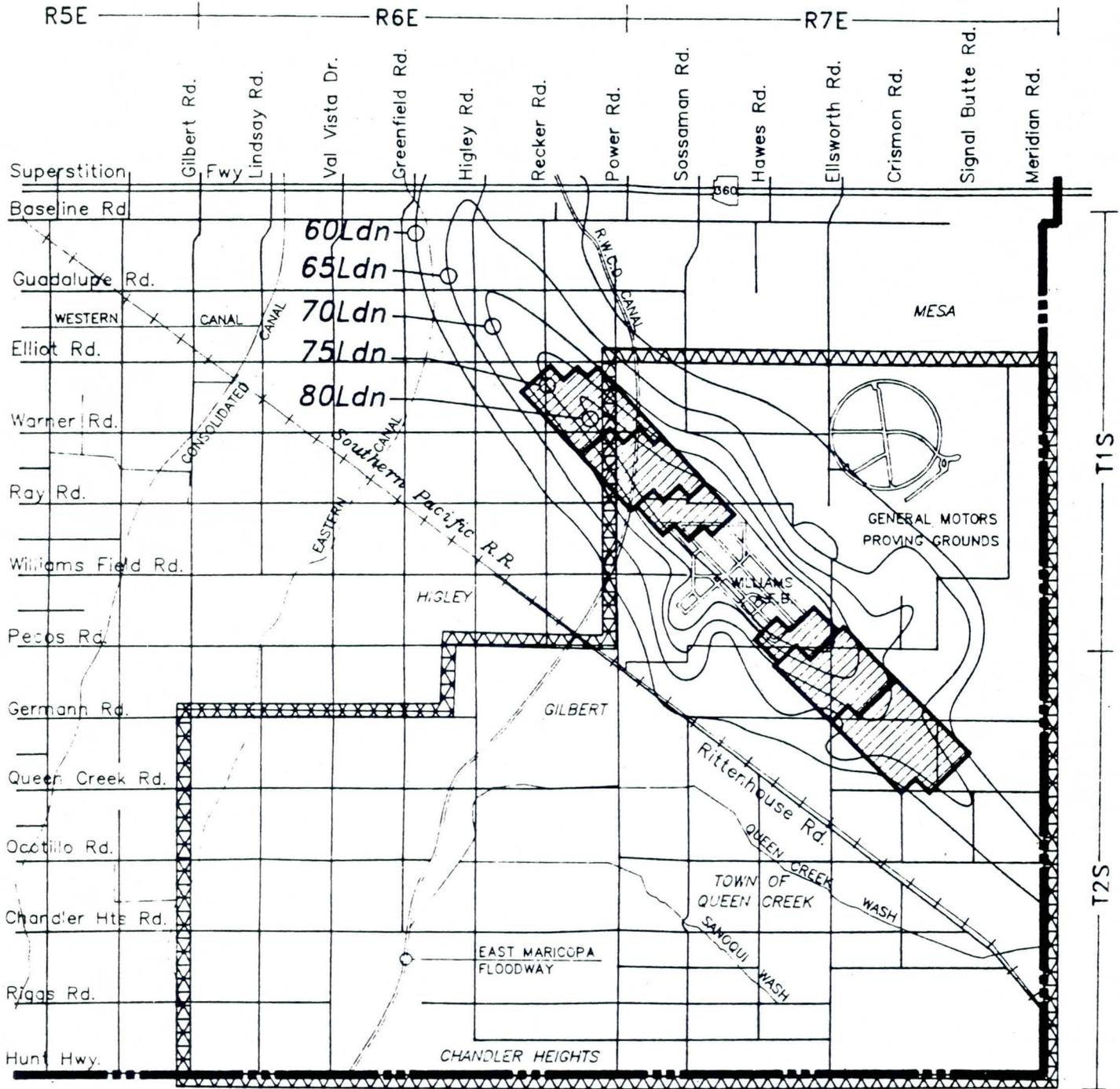
Carbon monoxide concentrations (PPM) are below Central Phoenix levels and appear to be decreasing; wind-borne particulates ($\mu\text{g}/\text{m}^3$) are below Central Phoenix levels and appear to be increasing; and ozone concentrations (PPM) are less than Central Phoenix levels and appear to be decreasing.

The effects of noise from airport and highway facilities are numerous. Noise, depending on the decibel level and the length of exposure, can affect health, disturb sleep, affect learning ability and task performance, and decrease property values. In addition, extended loud noise levels cause general community annoyance.

Within the Queen Creek Planning Area, one source of noise, generated by Williams Air Force Base (WAFB) flight operations, has been noted and illustrated on *Figure-4, "Noise Contours"*.

QUEEN CREEK

Figure 4



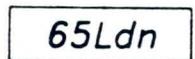
Noise Contours



Airport Overlay District



1991 MAG Study Noise Contours



65Ldn Noise Levels



NORTH

To identify noise contours, Williams AFB in 1984 completed an Air Installation Compatible Use Zone (AICUZ) study and the Maricopa Association of Governments prepared the Eastside Joint Land Use Study to address noise levels and land uses around Williams Air Force Base which identified noise levels ranging from 65 day/night sound level (Ldn) to greater than 80 Ldn. Ldn noise levels and community reaction to these levels are as follows:

<u>Noise Level (Ldn)</u>	<u>Community Reaction</u>
50	No reaction, although noise is generally noticeable
65	Sporadic complaints
65 - 70	Widespread complaints, threat of legal action to appeals to local officials to stop noise
75 +	Vigorous community action

Source: Environmental Impact Analysis Handbook (Ray and Wooten)

Williams AFB noise contours cover a large portion of the planning area. They range from 65 Ldn bordered generally by Rittenhouse Road to the southeast and the planning area boundary to the east, to 80 Ldn close to the air base.

The "Eastside Joint Land Use Study", completed in April, 1988, was a noise exposure and land use compatibility study for the area around Williams Air Force Base. This study recommended that: 1) Noise contours for land use planning purposes reflect 1992 aircraft operations at the Base. 2) Airport District Zones incorporated into the Maricopa County Zoning Code be maintained at a minimum. 3) New residential development be strongly discouraged between the 65 and 70 Ldn contour; prohibited between the 70 and 75 Ldn contours, except for existing developments; and new residential developments be prohibited within the 75 Ldn contour. 4) The 80 Ldn contour should be reserved for agricultural, open space, or outdoor recreation activities, and all others restricted. 5) A Military Overflight Area be established for public notification.

In early 1991, the Department of Defense stated that Williams Air Force Base would be closing in 1993.

Hydrology:

a) Surface Water

Queen Creek and Sanoqui Wash are the principal streams within the planning area, (**Figure 5**- "Surface Water"). Queen Creek flows generally from east to west as does Sanoqui Wash. The Eastern Maricopa Floodway (E.M.F.) is a major drainage structure which traverses the central portion of the planning area from north to south. The E.M.F. serves as a collector, channeling floodway southward and out of the planning area.

Two major canals are located within the Queen Creek Planning area. The Eastern Canal passes through the extreme western portion of the planning area while the Roosevelt Conservation Water District (RCWD) Canal traverses the central portion of the planning area, from north to south. The RCWD Canal, which is sometimes referred as the Auxillary Eastern Canal, lies west and parallel to the E.M.F.

In July of 1991, the Flood Control District of Maricopa County completed the Queen Creek Area Drainage Master Study (ADMS). Most of the planning area is included in this study. The ADMS program analyzes watershed areas experiencing localized flooding following rainstorms. Provisions in the Land Use Plan and corresponding development regulations should consider the studies' recommendations, especially with regard to land development conflicts.

The entire planning area is flat, with slopes less than two percent. So while flooding may rarely occur, retention of rainwater may be a problem.

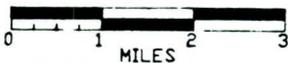
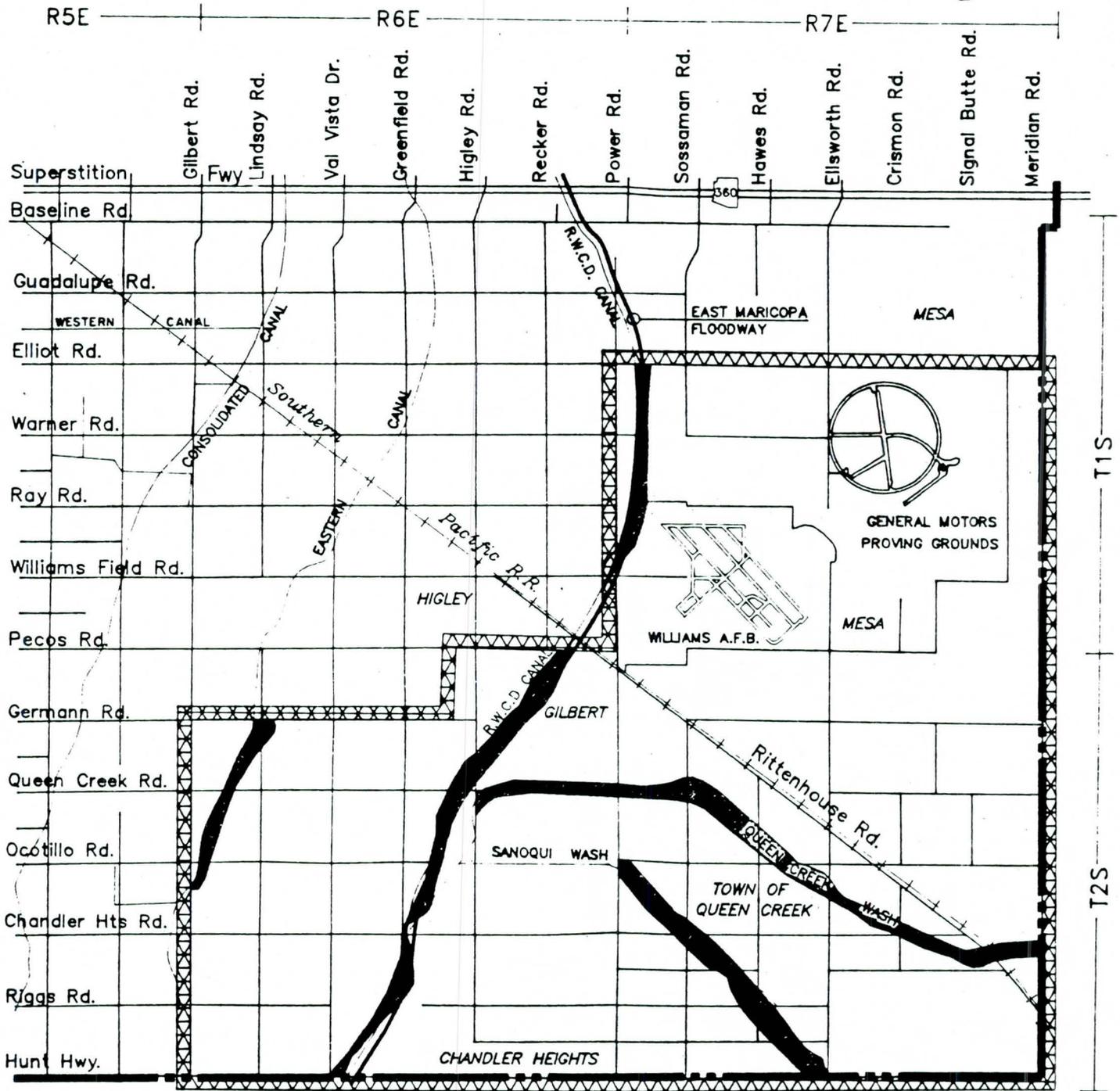
One-hundred-year floodplains, as designated by the Flood Insurance Administration, are illustrated on Figure-5. One-hundred-year floodplains are found along Queen Creek Wash.

b) Groundwater

The estimated amount of recoverable groundwater within the planning area, as illustrated on **Figure-6** "Groundwater", ranges from less than 30,000 acre-feet per square mile (acre feet per square mile) to 60,000 acre-feet per square mile. At the southern edge of the Planning Area the estimated amount of recoverable groundwater is less than 30,000 (ac. ft./sq. mi.). The estimated amount of recoverable groundwater for the rest of the planning area (north of Riggs Road) ranges up to 60,000 (ac. ft./sq. mi.) The relative amount of recoverable groundwater north of Riggs Road is comparable to other areas of Maricopa County. The

QUEEN CREEK

Figure 5



Surface Water



100 Year Flood Plain



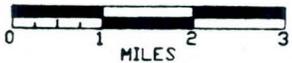
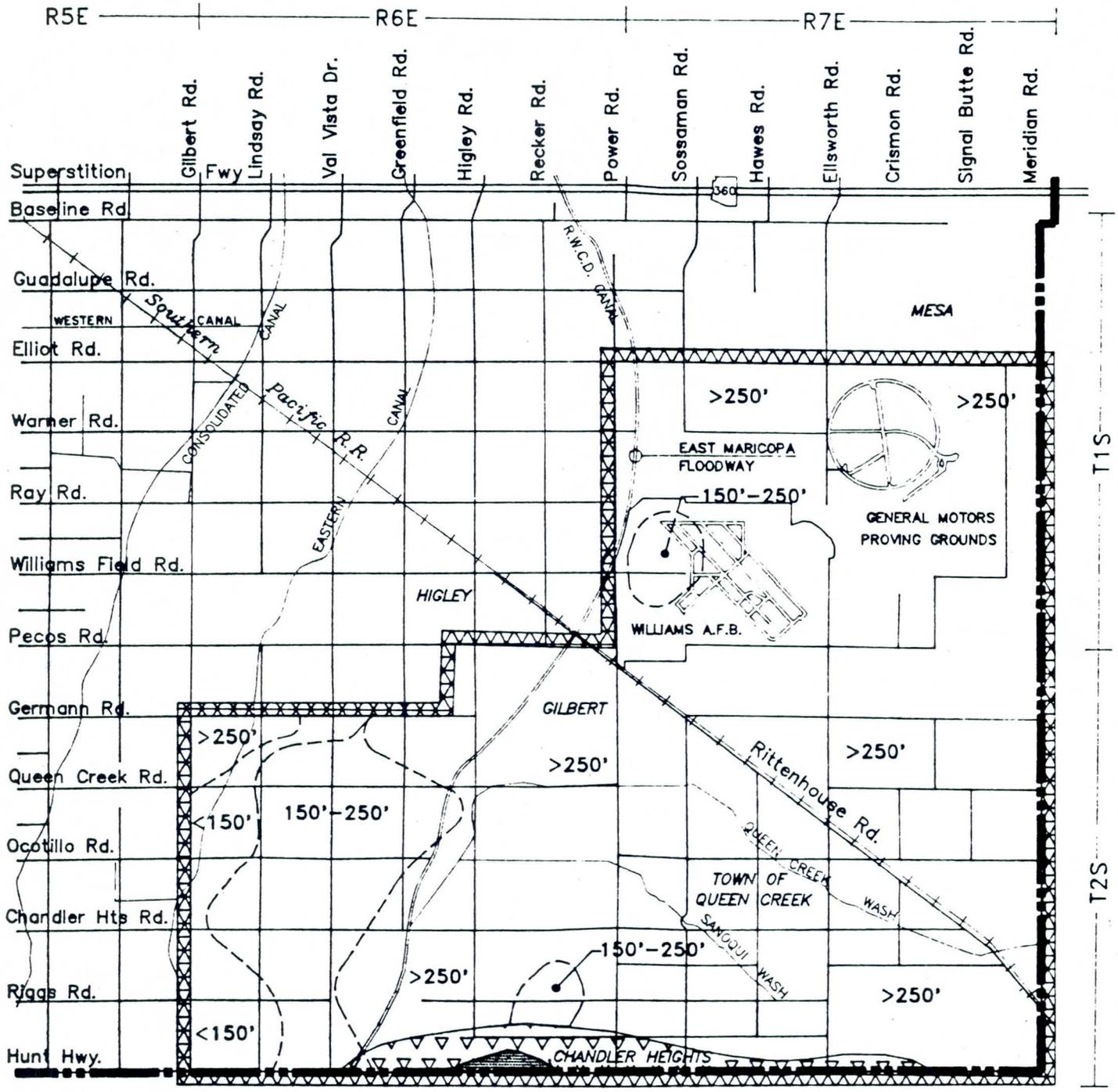
Flood Control Channel



NORTH

QUEEN CREEK

Figure 6



Groundwater

-  30,000-60,000 Acre-Feet
-  Rocks Containing Only Small Amounts
-  Less than 30,000 Acre-Feet
-  150' Depth to Water



Source: Arizona Department of Water Resources

groundwater aquifer from 1964-1977 has declined anywhere from 25 feet to 125 feet within the planning area, as identified in the Phoenix Active Management Area Management Plan. These declines are more than most other areas within Maricopa County. Identified on *Figure-3* is the generalized location of land subsidence. Subsidence is a result of large groundwater withdrawals, or groundwater harvesting.

c) Water Quality

Water quality for the area has been split into two categories, primary and secondary contaminants, as illustrated in *Figure-7* "Primary Contaminants" and *Figure-8* "Secondary Contaminants". Primary contaminants are nitrates above 45 mg/l and metals. Secondary contaminants are sulfates above 250 mg/l and total dissolved solids above 500 mg/l. The contamination is a result of the extensive agricultural uses throughout the area.

Vegetation and Wildlife:

This section of the *Queen Creek Land Use Plan* describes the natural vegetation and wildlife in the planning area, as illustrated on *Figure-9*.

a) Vegetation

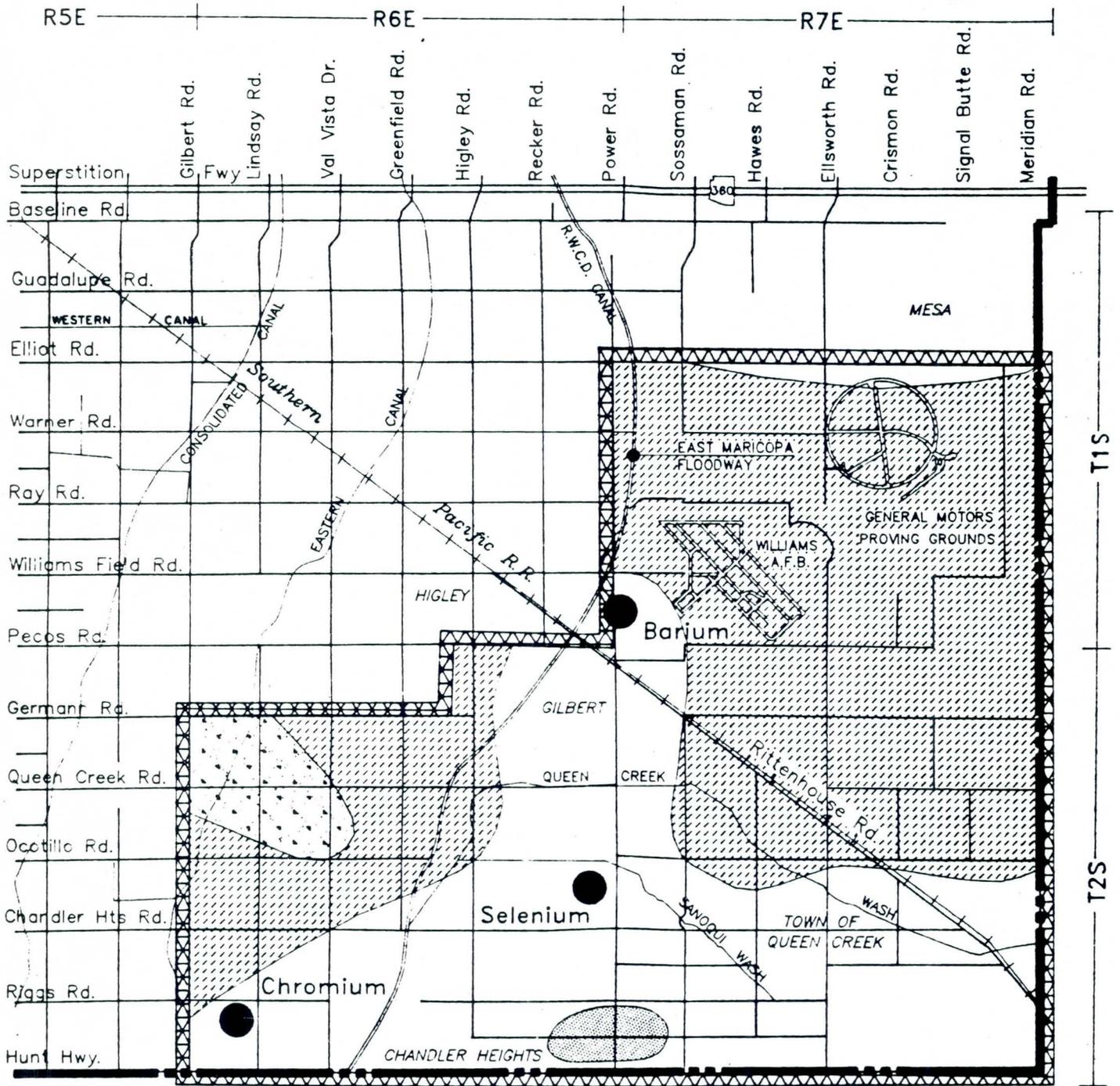
The majority of the Queen Creek Planning Area is composed of either developed or agricultural land except for portions of Queen Creek that have not been channeled and some areas in the northern part of the study area.

Based on the destruction of plant habitat by development and agricultural use, this area should be viewed unpreferentially in terms of preservation, except for the potential to restore riparian vegetation along portions of Queen Creek. The majority of the planning area is classified as a Creosote-Bursage Community. There are two small mixed Palo Verde Cacti Communities in the south and one small community in the extreme north part of the study area. A very small area on the south side of Germann Road, east of Gilbert Road is classified as a Saltbush Community.

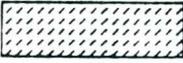
As previously mentioned, only un-channeled washes retain their original vegetation and wildlife. These un-channeled areas are located in the "Creosote-Bursage Community". This community's vegetation is characterized by Acacia, Agave, Bursage, Hedgehog Cactus, Barrel Cactus, Ocotillo, Cholla, and Mesquite varieties.

QUEEN CREEK

Figure 7

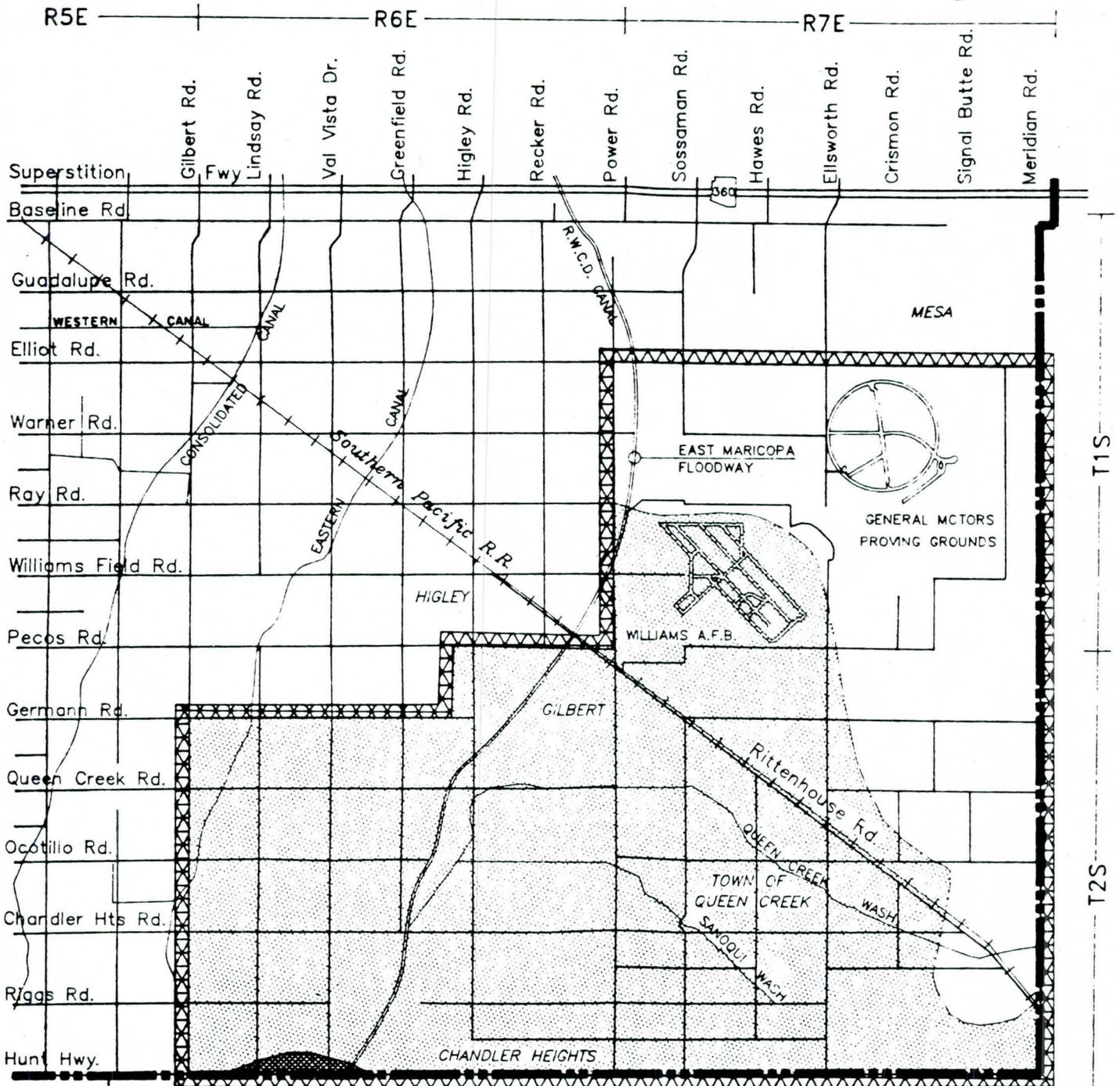


Groundwater Quality—Primary Contaminates

- | | | | |
|---|-----------------------|--|-----------------------------------|
|  | Nitrates Above 45mg/l |  | Pesticides above Detection Limits |
|  | Nitrates Above 90mg/l |  | Metals |

QUEEN CREEK

Figure 8



Groundwater Quality - Secondary Contaminates



Sulfate Greater Than 250mg/l

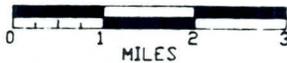
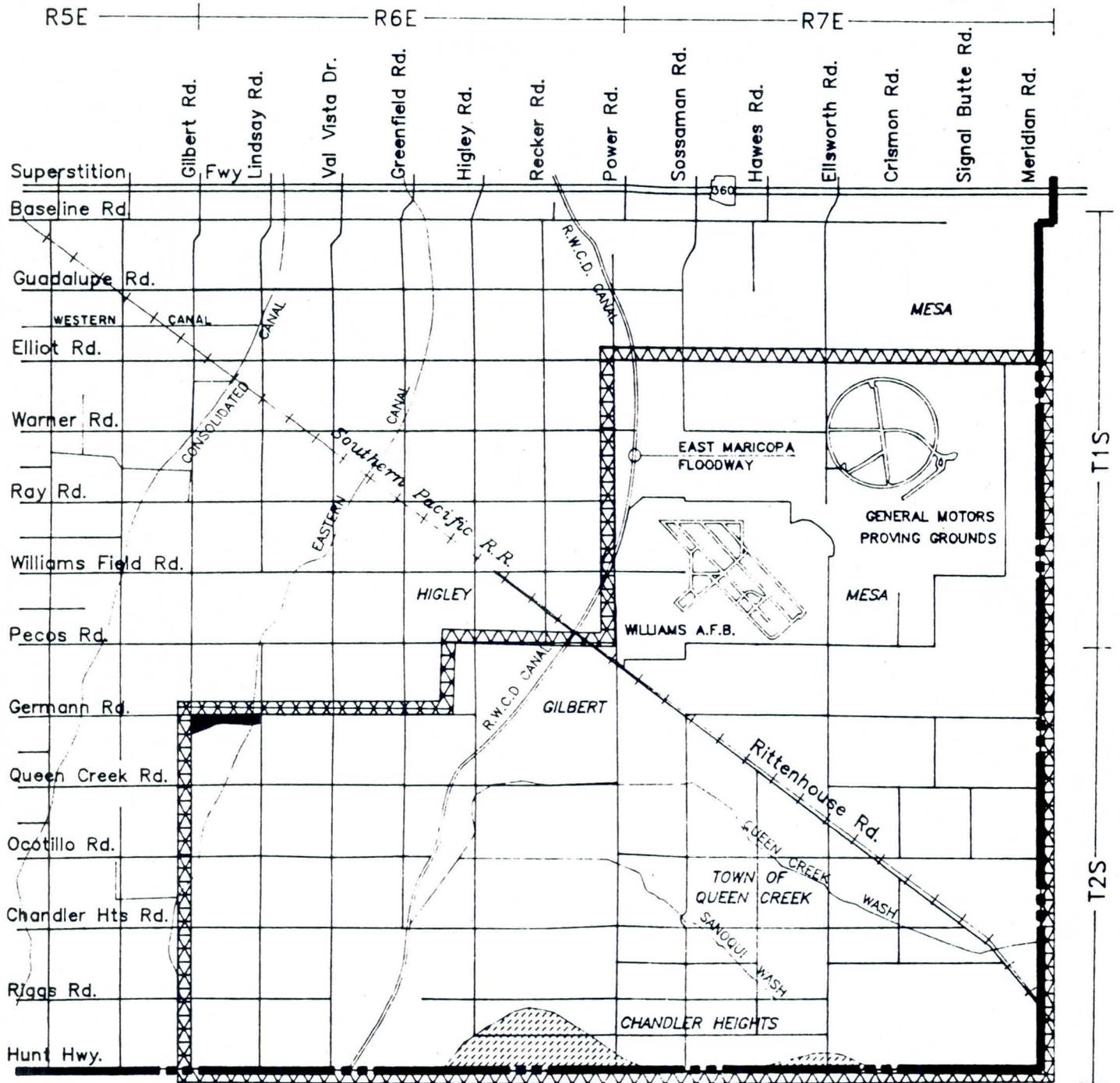


Total Dissolved Solids Greater Than 500mg/l



QUEEN CREEK

Figure 9



Natural Vegetation

-  Saltbush Communities
-  Creosote-Bursage Communities
-  Mixed Palo-Verde Cacti Communities



NORTH

b) Wildlife

Since most of the Queen Creek Planning Area has been developed for agriculture, this area has little or no native wildlife. Some birds and small animals are found in agricultural areas, including Mourning Doves, Inca Doves, Gila Woodpeckers, as well as many other species. The potential for riparian habitat restoration does exist, however, for portions of Queen Creek that are not yet channeled. Undisturbed Creosote-Bursage Communities will be inhabited by an occasional Javelina, Gray Fox or Kit Fox. Ground Squirrels, Kangaroo Rats, Pocket Mice, and Cottontails are more likely to be found where agriculture and land development have not yet been encroached.

Based on the destruction of native wildlife habitat by urban and agricultural use, this planning area should be viewed unpreferentially in terms of preservation. However, the potential exists for restoration of riparian habitat along unchanneled portions of Queen Creek.

Archaeology:

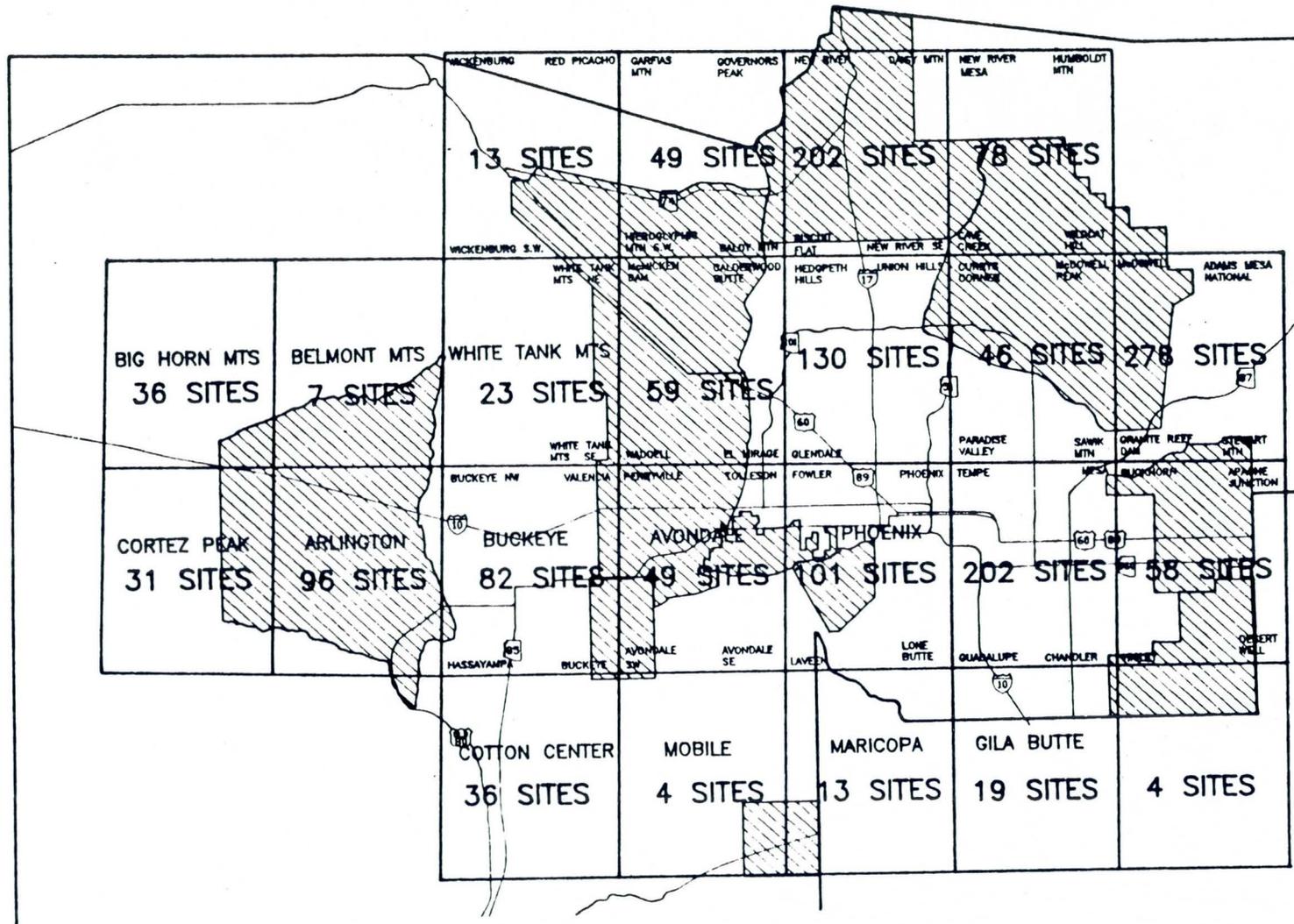
Arizona, and especially Maricopa County, has one of the highest concentrations of archaeological sites in the United States and possibly the world. *Figure-10* ("Archaeological Site Frequency"), summarizes known archaeological sites by U.S.G.S. quadrangles within and surrounding the study area. Detailed site locations are on file with the State Historic Preservation Office (SHPO) and may be confidentially examined, on a project basis; for the protection of the resource. To date no systematic reconnaissance field survey of the county has been conducted, so we must assume that unreported cultural resources, including historic resources, exist within the study area. Currently, there are no archaeological sites that have been identified in the study area.

Policy Implications:

This section, concerning the natural resources, summarizes the key issues identified previously which should be addressed during the development of the Queen Creek Planning Area.

a) Physical Characteristics

Approximately 30 percent of the soils in the planning area, with the majority located in the northern portion of the area, are characterized by slow permeability, which can limit the safe use of septic tanks.



Maricopa County
 Archaeological Site Frequency by U.S.G.S. Quadrangle

10

The Santan Mountains dominate views to the south and the Superstition Mountains dominate views to the east.

High noise levels are generated by operations at Williams Air Force Base in the northeast portion of the planning area.

b) Hydrology

Two natural major drainage ways, Queen Creek Wash and Sanokai Wash, run through the planning area. The opportunity exists to preserve this area as open space and/or parks. The Roosevelt Water Conservation District Canal bisects the planning area running north to south, as indicated on Figure-5.

c) Archaeology

No significant archaeological sites have been found in the planning area, although major washes in the Sonoran Desert should be considered as possible sites.

SOCIAL AND ECONOMIC CHARACTERISTICS

In describing the Social and Economic Characteristics of the Queen Creek Planning Area, the following seven sections are presented:

- Population, Age, Sex and Ethnic Composition
- Economic Characteristics
- Area-wide, Economy/Economic Base
- Residential, Commercial and Industrial Demand
- Economic Base Potential
- Policy Implications

The purpose of this section of the Land Use Plan is to document population and economic characteristics, to examine existing economic conditions, and to present a population projection and associated development demands for the planning area.

Population, Age, Sex, and Ethnic Composition:

This section of the *Queen Creek Land Use Plan* highlights historic and projected population and housing unit data to the year 2010. Comparative 1980, 1985 and 1990. U.S. Census data are also reviewed for age, sex, and ethnic distributions for the planning area and Maricopa County populations. Population projections have been derived from Maricopa County models for the Planning Area using present and historical census figures.

The 92 square-mile Queen Creek Planning Area contains the Town of Queen Creek and the unincorporated community of Chandler Heights. Projections for the Planning area do not include the Town of Queen Creek.

In 1985, the unincorporated portion of the planning area had a population of 2446. By 1990, the planning area's population increased by 55 percent to 3,786. As shown in *Table-3*, the planning area's population will increase another 35.9 percent to 5,126 over the period 1990 to 1995. From a 1990 base of 3,786 persons, the population is projected to increase to 9,146 persons in 2010, an increase of more than 142 percent. In comparison, during the 1990-2010 period, Maricopa County's population is projected to increase by 54 percent.

In 1985, there were an estimated 652 planning area housing units with an average of 3.75 persons per housing unit. Housing Unit data for resident population from 1985 to 2010 is provided in *Table-4* and *Table-5*. As indicated in *Table-5*, the Queen Creek Planning Area has had, and is projected to have, a larger average persons per housing unit size than the County during the period 1985 to 2010.

**TABLE-3
Total Resident Population**

Area	Census 1985	Census 1990	1995	2000	2005	2010
Queen Creek	2,446	3,786	5,126	6,466	7,806	9,146
Maricopa County	1,837,954	2,122,101	2,504,254	2,693,024	2,981,794	3,270,564

**TABLE-4
Total Resident Housing Units**

Area	Census 1985	Census 1990	1995	2000	2005	2010
Queen Creek	652	1,058	1,464	1,870	2,276	2,682
Maricopa County	806,186	952,041	1,194,944	1,398,585	1,602,226	1,805,867

**TABLE-5
Persons per Total Resident Housing Unit**

Area	Census 1985	Census 1990	1995	2000	2005	2010
Queen Creek	3.75	3.57	3.50	3.45	3.42	3.41
Maricopa County	2.27	2.23	2.10	1.93	1.86	1.81

Source: 1985 and 1990 U.S. Census

Consistent with the Planning Area's larger household size is the younger age of the planning area's population as reflected in **Table-6**. The median age of the planning area's population is 25.6, while the median age in the County is 29.7.

In terms of ethnic population distribution, it is clear from the data in **Table-7** that the only large minority group is the hispanic population which composes a larger proportion of the planning area's population than it does in the County population.

Economic Characteristics:

Table-8 through **Table-10** illustrate income, education, and labor force characteristics of the planning area. As shown in **Table-8**, median household income in the Queen Creek Planning Area is about 95 percent of the County's median income. In addition to lower income, the Queen Creek Planning Area residents also have a lower median educational level than residents in the County, as illustrated in **Table 9**.

Table-10 reflects the fact that the Queen Creek Planning Area has nearly as high a labor force participation rate as the County, and also a lower unemployment rate. **Table-6** through **Table-10** are based on census data for three census tracts. **Table-11** shows that total employment in the Queen Creek Planning Area, including within the town of Queen Creek, is projected to decrease by 1,078 jobs over the period 1990 to 2010. The closure of Williams Air Force Base will be a loss of almost 5000 jobs by the year 1995. Employment, with the exception of Williams AFB, however, will increase by approximately 3,873 jobs during the 1990-2010 period. It is projected that retail jobs will represent about 32 percent of this planning area's 1990-2010 total job growth.

Area-Wide Economy/Economic Base:

The economic base of this approximate 92 square-mile planning area is almost entirely agricultural with three large employment centers, these being Williams Air Force Base, the GM Proving Grounds, and the TRW Safety Systems plant which is within the City of Mesa, but in the planning area. Clusters of low-density residential land uses, and some retail and service employment land uses are scattered throughout the Planning Area. The area is somewhat remote, but is generally well served by a grid system of roads, the major interruptions being Williams Air Force Base and the GM Proving Grounds -- especially those that run north/south. The planning area is also served by Southern Pacific's railroad line which runs diagonally through the planning area paralleling Rittenhouse Road on its way to serve the "copper belt" mines and communities in eastern Pinal County.

TABLE 6
Population Distribution by Age
and Sex in Percentages

Area	Male	Female	Under 5	5-19	20-44	45-64	65+	Median
Queen Creek	52.4	47.6	10.0	26.3	39.1	15.5	9.4	25.6
Maricopa County	49.6	51.4	7.8	21.3	41.5	17.4	12.0	29.7

Source: 1985 U. S. Census

TABLE - 7
Ethnic Composition in Percentages

Area	White	Black	Indian	Other	Hispanic
Queen Creek	57.4	.26	1.8	.13	40.4
Maricopa County	77.1	3.3	1.5	1.7	16.3

Source: 1990 U. S. Census

TABLE-8
Household Income Distribution
in Percentages and Median Income

Area	Less Than \$7,499	\$7,500 14,999	15,000 24,999	25,000 34,999	35,000 & over	Median Income
Queen Creek	18.9	24.2	25.9	22.5	10.9	16,768
Maricopa County	17.4	24.1	27.9	16.8	13.8	17,728

Source: 1980 U.S. Census

TABLE-9
School Years Completed in Percentages
by Population 25 Years and Older, and by Median School Years

Area	<i>Years Completed</i>					Median
	0-8	9-11	12	13-15	16+	
Queen Creek	32.0	15.8	31.7	14.2	6.3	12.1
Maricopa County	12.8	12.2	34.9	21.8	18.3	12.1

Source: 1980 U.S. Census

TABLE-10
Labor Force Characteristics of the Population

Area	Civilians 16 & Over	Civilian Labor Force	Employed	Unemployed Rate	Civilian Labor Force Participa- tion Rate
Queen Creek	6,336	3,786	3,612	4.6%	59.8%
Maricopa County	1,128,899	701,242	663,642	5.4%	62.1%

Source: 1980 U.S. Census

TABLE - 11

Total Employment and Retail Employment

Area	Mid-Year 1990	Mid-Year 1995	Mid-Year 2000	Mid-Year 2005	Mid-Year 2010
TOTAL EMPLOYMENT					
<i>Queen Creek</i>	7,689*	2,853	3,487	4,578	6,611
<i>Maricopa County</i>	1,027,007	1,219,907	1,453,731	1,667,757	1,893,732
RETAIL EMPLOYMENT					
<i>Queen Creek</i>	214	248	729	1,332	2,083
<i>Maricopa County</i>	239,720	293,273	339,456	422,847	472,607

Source: Maricopa Association of Governments, Transportation and Planning Office, 1989.

* The closure of Williams Air Force Base will result in a less of approximately 5,000 jobs by the year 1995.

The planning area's current population and labor force is small. The availability of water, while seemingly adequate in parts of the planning area for domestic, irrigation, and other needs, can nevertheless be viewed as an economic growth hurdle. Indeed, a significant portion of this planning area has suffered from a serious decline in the water table. Additionally, because of its remoteness, the planning area has an absence of basic infrastructure. Also, at this time, the area does not offer significant potential as a retail or service center because of its distance from large population centers.

At the present time, 6,453 residents and 50-60 employers are located in the planning area and the town of Queen Creek. As noted in *Table-11*, and as would be expected with few employers, the level of employment in the planning area and the town is also quite small. The vast majority of these businesses are small retail and service operations with a number of others being related to the agricultural industry (cotton gins, agricultural chemicals, service, and equipment). Williams Air Force Base, the General Motors Proving Grounds and TRW are the only large employers in the area.

Major development projects planned or underway in the planning area include Rancho Del Rey, a Planned Area Development; Power Ranch, a Planned Area Development in the Town of Gilbert; Sossaman Estates and Linda Vista, County Development Master Plans. Rancho Del Ray is a 500+ acre development with residential and commercial uses. Power Ranch is a 2,282 acre development within the Town of Gilbert. Sossaman Estates is an 882 acre development with residential, commercial, and industrial uses. Linda Vista is a 447 acre development with residential, commercial, and industrial uses.

Residential, Commercial, and Industrial Demand:

a) Residential Demand

Using the projections for housing units listed in *Table - 4*, 2,682 units will be needed in the Queen Creek Planning Area by the year 2010. It is assumed that 1,058 housing units existed in 1990. Based on these figures, and assuming residential development takes place at an average density of three dwelling units per acre, 541 acres of residential development will be required during the period 1990-2010.

b) Commercial Demand

Given the moderate growth in population and employment expected for the Queen Creek Planning Area over the period 1990 to 2010, moderate demand for commercial acreage is projected. By the year 2010, a total population of 9,146 residents is projected in the unincorporated portion of the planning area. Based on this

projection, it is estimated that 93 acres of commercial development will be required. Using a ratio of 5.27 acres per 1,000 people for retail trade and 4.87 acres per 1,000 people for general commercial land use, 48 acres and 45 acres will be needed respectively.

c) **Industrial Demand**

Moderate demand is projected for industrial uses within the Queen Creek Planning Area during the period 1990-2010. Currently, cotton ginning and General Motors Proving Grounds activity is occurring in the planning area, but this type of activity is not expected to increase in the future. The possibility of the development of industry exists because of the close proximity to rail or the planned freeway. Demand for industrial land use is calculated by the same method used for commercial land use. Based on the resident population projection of 9,146 by the year 2010, it is estimated that 69 acres of industrial development will be required (7.54 acres per 1,000 people).

Economic Base Potential:

The southern part of the Queen Creek Planning area will most likely remain in largely agricultural and large-lot residential land uses through the year 2010. The General Motors Proving Grounds is expected to continue to be the dominant use in the northern part of the planning area for the foreseeable future. Although the population is expected to grow steadily to 9,146 residents by the year 2010, significant development pressure will not be felt in this far southeastern corner of the Phoenix Metropolitan Statistical Area (MSA) until after the turn of the century. This pressure will stem from major factors such as regional population growth approaching 3.25 million and a push outward into what are now rural areas.

The planning area will benefit from positive development conditions such as:

- (a) rail access
- (b) availability of Williams AFB after closing
- (c) lower land costs, and
- (d) land which is almost entirely privately owned and with few development impediments.

Nevertheless, its current remoteness, absence of infrastructure, and inadequate labor force will dictate that the area's economic base potential will only be slightly significant during the 1990-2010 period.

Policy Implications:

In this section, social and economic issues are described, and should be addressed as the County formulates the Land Use Plan.

a) **Economic Base**

The amount and type of economic/employment growth that is to be encouraged by the County should be considered.

b) **Residential Demand**

An increase of approximately 1,624 residential dwelling units are projected for the period from 1990 to 2010. The density of housing development should be closely examined, especially in relation to water supply.

c) **Commercial and Industrial Demand**

Along with growth in the residential base, commercial and industrial growth will have to occur in areas already planned for growth and some areas yet to be planned. Locating commercial and industrial development in cores should be encouraged.

LAND USE AND ZONING

In describing land use and zoning in the Queen Creek Planning Area the following five sections are presented:

- General Pattern of Land Development
- Zoning
- Public Property Ownership
- Transportation
- Public Facilities and Utilities
- Locations of Special Development Concerns
- Policy Implications

The purpose of this section of the *Queen Creek Land Use Plan* is to document existing land uses and zoning regulations, to note public property ownership, to describe transportation, public facilities and utilities in the planning area.

General Pattern of Land Development:

Figure-11, "Existing Land Use," illustrates the general land use pattern within the Queen Creek Planning Area. Aside from the General Motors Proving Grounds, the majority of the area's developed land is residential in nature and is scattered throughout the area. Approximately 70 percent of the entire planning area is either undeveloped or being used agriculturally.

A number of very small neighborhood commercial activities are scattered throughout the planning area, principally along arterial streets such as Power Road and Ellsworth Road, to serve immediate neighborhoods.

The planning area contains some of the prime agricultural land in the valley and has a long history of intensive agricultural use, predominately citrus, cotton and alfalfa.

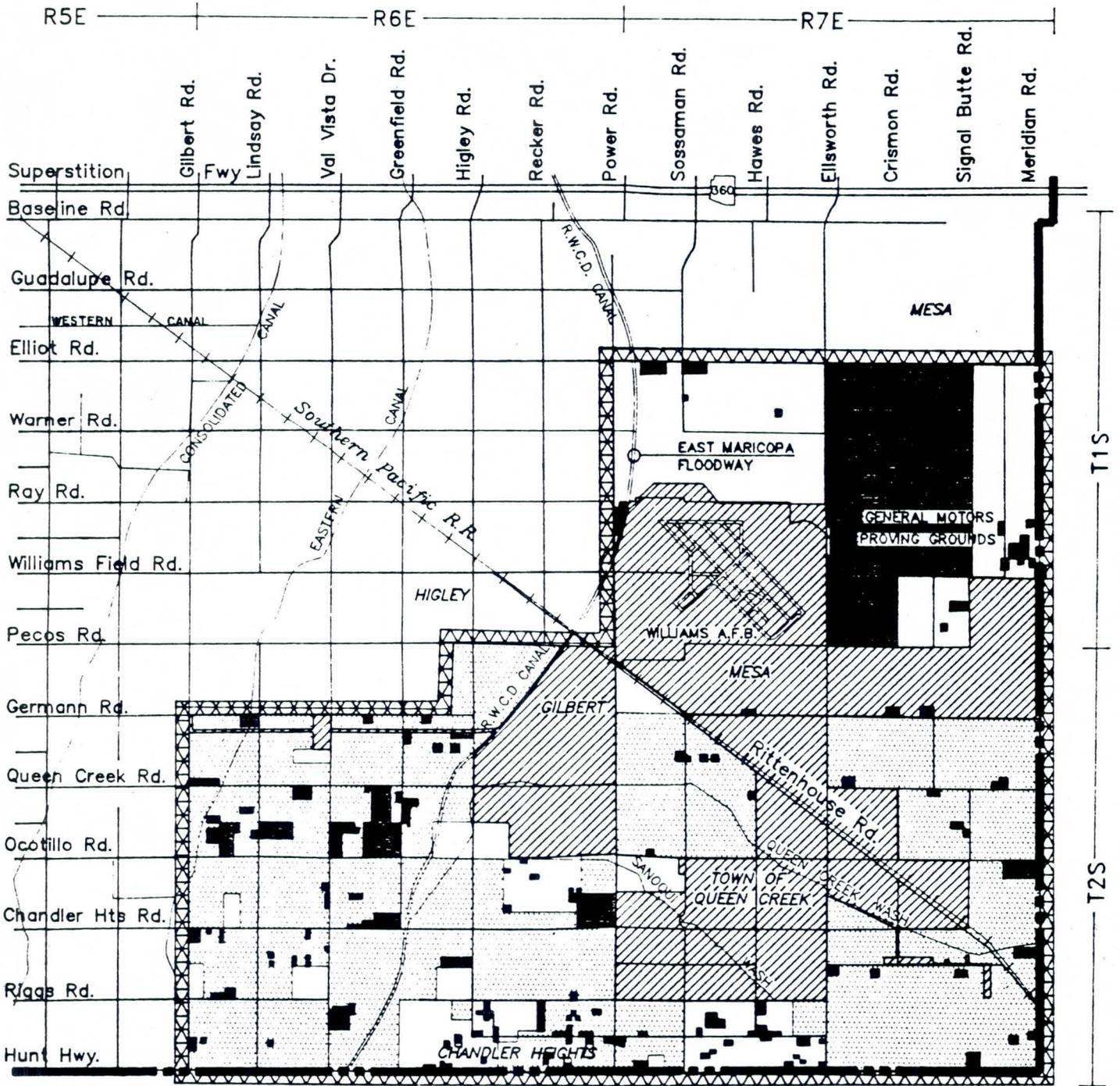
Zoning:

The majority of the Queen Creek Planning Area is zoned Rural-43: a Zoning District which permits one dwelling unit per acre. Over 7 square miles of the planning area is occupied by the General Motors Proving Grounds which is zoned Rural-43 with a Special Use Permit that allows this research and development use.

Maricopa County enforces a zoning ordinance to regulate land development. Established zones are described in part as follows and are illustrated on **Figure-12**, "Existing Generalized Zoning."

QUEEN CREEK

Figure 11



Generalized Existing Land Use



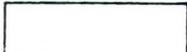
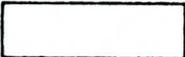
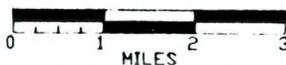
- | | | | |
|---|-------------|--|--------------|
|  | Vacant |  | Developed |
|  | Agriculture |  | Incorporated |

Figure 12

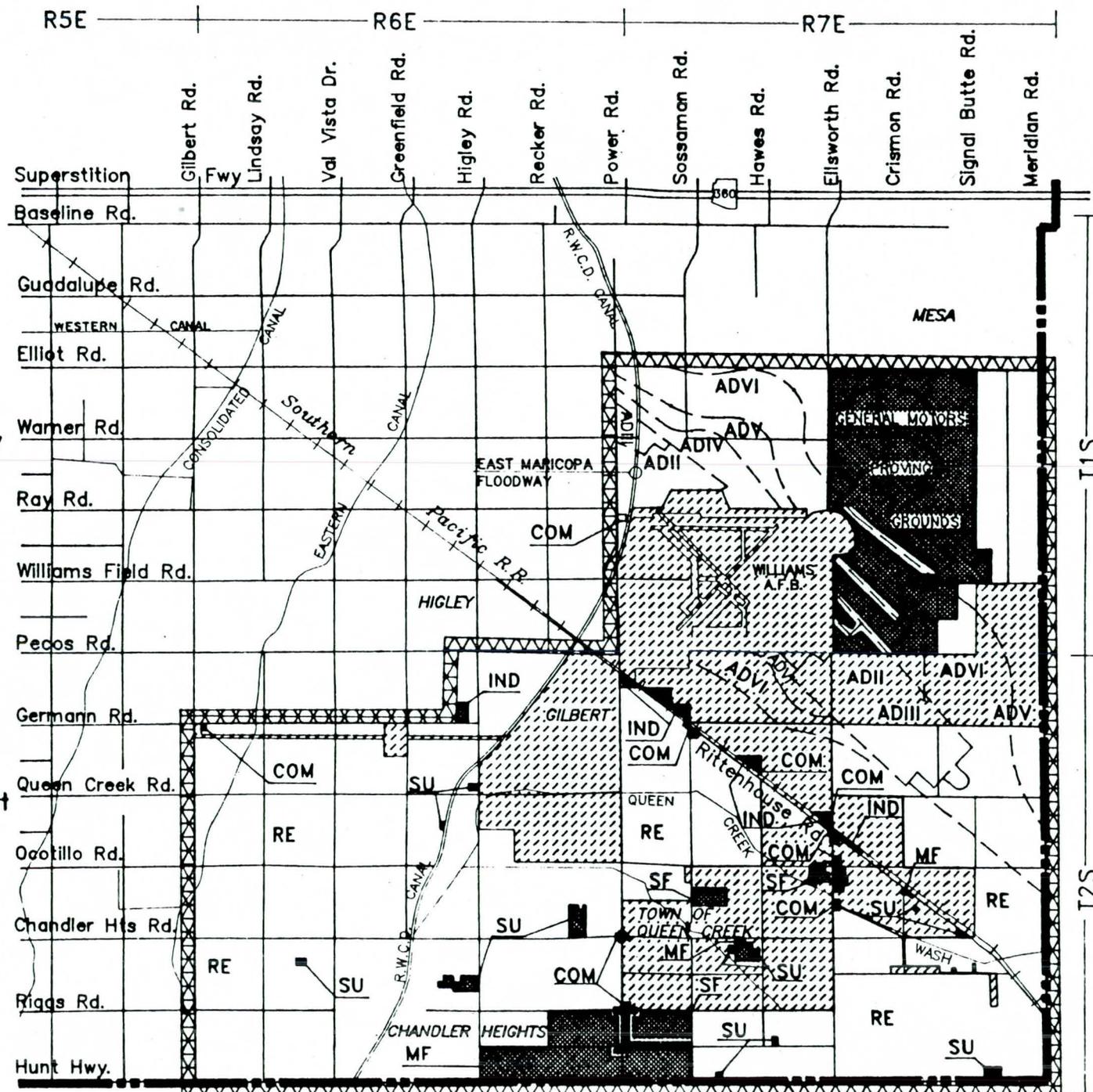
QUEEN CREEK

Generalized Existing Zoning

-  RE Residential Estates
-  SF Single Family
-  MF Multi-Family
-  COM Commercial
-  IND Industrial
-  SU Special Use
-  Military Airport District
-  Incorporated Areas



36



T1S

T2S

1) Rural Zoning District (Rural-190):

Permitted Uses: One dwelling unit per 190,000 square feet; agricultural activities

2) Rural Zoning District (Rural-70):

Permitted Uses: One dwelling unit per 70,000 square feet of site; agricultural activities

3) Rural Zoning District (Rural-43):

Permitted Uses: One dwelling unit per one (1) acre of site; agricultural activities

4) Single Family Residential Zoning District (R1-35):

Permitted Uses: One dwelling unit per 35,000 square feet of site

5) Single Family Residential Zoning District (R1-18):

Permitted Uses: One dwelling unit per 18,000 square feet of site

6) Single Family Residential Zoning District (R1-10):

Permitted Uses: One dwelling unit per 10,000 square feet of site

7) Single Family Residential Zoning District (R1-8):

Permitted Uses: One dwelling unit per 8,000 square feet of site

8) Single Family Residential Zoning District (R1-7):

Permitted Uses: One dwelling unit per 7,000 square feet of site

9) Single Family Residential Zoning District (R1-6):

Permitted Uses: One dwelling unit per 6,000 square feet of site

10) Two-Family Residential Zoning District (R-2):

Permitted Uses: One dwelling unit per 4,000 square feet of site; multiple-family dwelling

11) Multiple-Family Residential Zoning District (R-3):

Permitted Uses: One dwelling unit per 3,000 square feet of site; multiple-family dwellings

12) Multiple-Family Residential Zoning District (R-4):

Permitted Uses: One dwelling unit per 2,000 square feet of site; multiple-family dwellings

13) Multiple-Family Residential Zoning District (R-5):

Permitted Uses: One dwelling unit per 1,000 square feet of site; multiple-family dwellings

14) Planned Shopping Center Zoning District (C-S):

Permitted Uses: Retail and service businesses with a development site plan approved by the Board of Supervisors

15) Commercial Office Zoning District (C-O):

Permitted Uses: Professional, semi-professional and business office activities

16) Neighborhood Commercial Zoning District (C-1):

Permitted Uses: Food markets, drugstores and personal service shop activities

17) Intermediate Commercial Zoning District (C-2):

Permitted Uses: Hotels and motels, travel trailer parks, restaurants, and some commercial, recreational and cultural facilities, such as movies and instruction in art and music

18) General Commercial Zoning District (C-3):

Permitted Uses: Retail and wholesale commerce and commercial entertainment activities

19) Planned Industrial Zoning District (Ind-1):

Permitted Uses: Business and manufacturing activities with a development site plan approved by the Board of Supervisors

20) Light Industrial Zoning District (Ind-2):

Permitted Uses: Light industrial activities with a development site plan approved by the Board of Supervisors

21) Heavy Industrial Zoning District (Ind-3):

Permitted Uses: Heavy industrial activities with a developed site plan approved by the Board of Supervisors

In addition to the zoning districts listed above, Overlay Zoning Districts, Special Uses and Unit Plans of Development are also established to allow development which protects the environment, provides alternative housing types, and promotes age-specific residential areas. These include:

1) **Hillside Development Standards (HD):**

To allow the reasonable use and development of hillside areas while maintaining the character, identity and image of the hillside area. This district applies to development on slopes of 15 percent and greater.

2) **Manufactured House Residential Overlay Zoning District (MHR):**

To provide for housing which is similar to conventional on-site built housing in subdivisions or on individual lots where manufactured housing is appropriate.

3) **Senior Citizen Overlay Zoning District (SC):**

To provide for planned residential development designed specifically for residency by persons of advanced age.

4) **Planned Development Overlay Zoning District (PD):**

To establish a basic set of conceptual parameters for the development of land and supporting infrastructure, which is to be carried out and implemented by precise plans at the time of actual development.

5) **Special Uses (SU)**

To permit a class of uses that are otherwise prohibited by the Ordinance.

6) **Unit Plans of Development (UPD)**

To provide for large scale development where variations in lot size, dwelling type and open space is warranted due to topographic or other considerations.

Public Land Ownership:

As shown on **Figure-13 "Public Property Ownership"**, the Arizona State Land Department owns approximately three (3) square miles of land within the planning area. State Land can be sold or leased for private development. The Federal Government owns about six (6) square miles of land within the planning area, specifically, Williams Air Force Base.

Transportation:

The existing and dedicated street/highway system is shown on **Figure-14, "Existing Transportation Facilities"**. Freeways, existing and proposed, are shown along with arterial and other County highways that are paved. Those not shown are collector and local roads.

a) Freeways/Expressways

In the functional classification hierarchy, freeways are at the top, serving through traffic for regional and/or inter-city travel. The nearest existing freeway is Superstition Freeway, State Route 360, 2 1/2 miles to the north and accessible via Power Road. The Superstition extends eastward to U. S. Highway 60. The proposed Santan Freeway, State Route 220, will be located 1/2 mile north of Williams Air Force Base. These elements of the regional highway network will enhance the accessibility of the Queen Creek Planning Area to the balance of the Phoenix metropolitan region. The shorter travel times will make the area more attractive to development.

b) Principal Arterials and Arterial Streets

The primary function of Arterial streets is to provide through traffic service. Access to adjacent property is a secondary function. The principal arterials shown on **Figure-14** include:

North - South

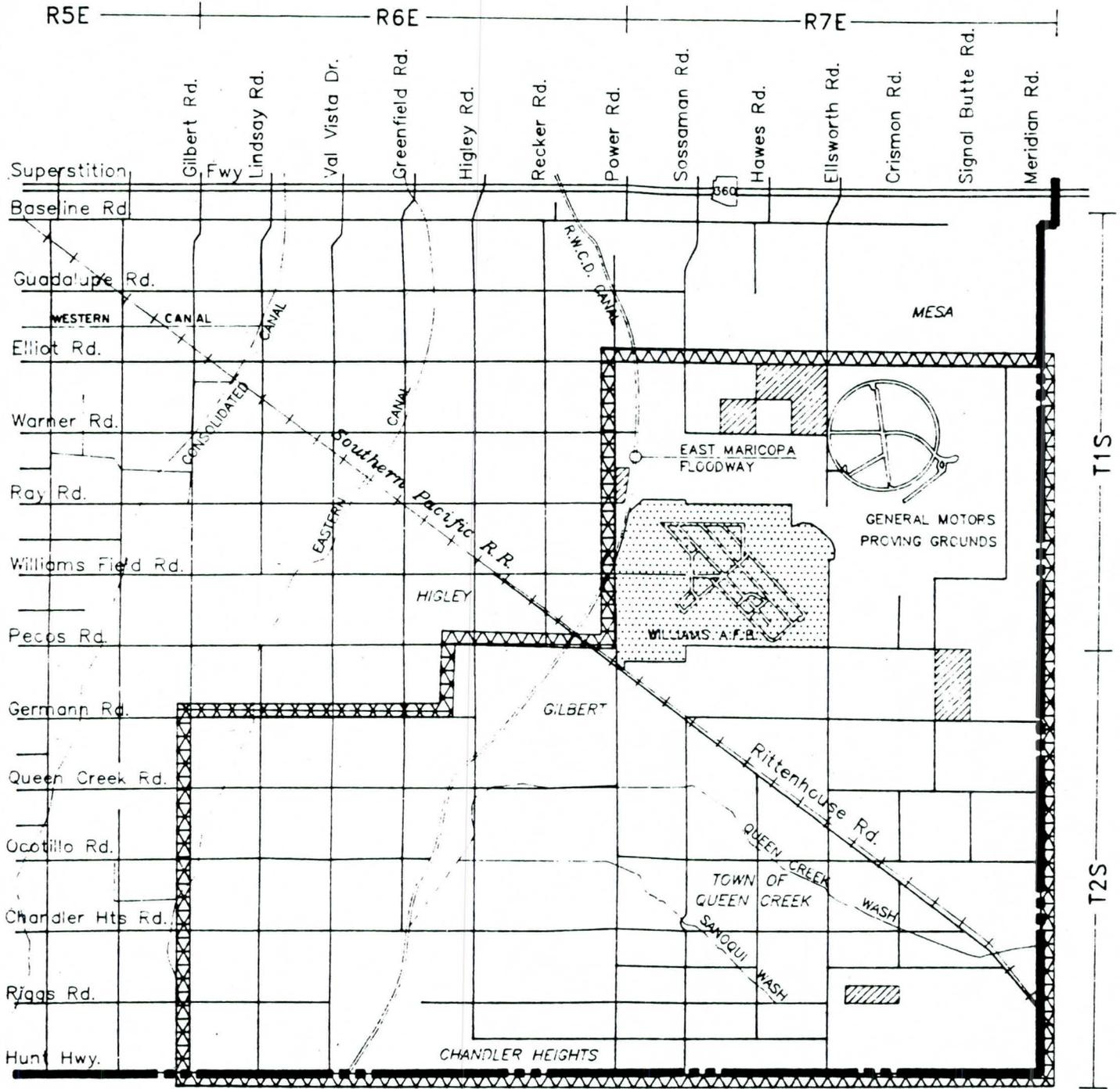
Power Road
Ellsworth Road

East - West

Germann Road
Ocotillo Road
Riggs Road

QUEEN CREEK

Figure 13



Public Land Ownership

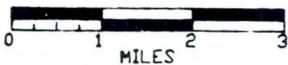
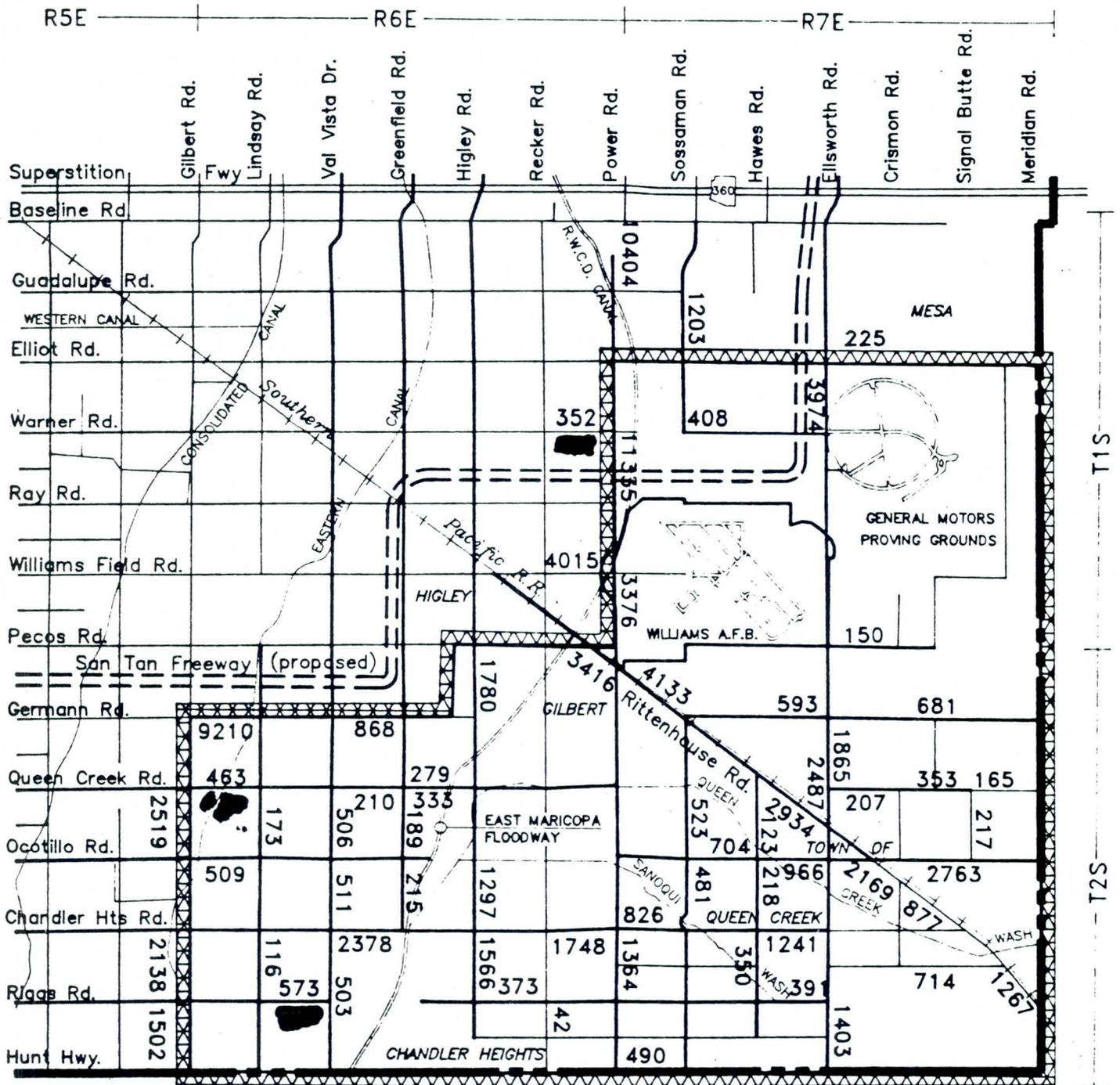
 Federal

 State

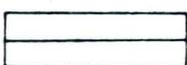
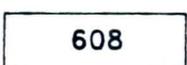


QUEEN CREEK

Figure 14



Existing Transportation Facilities

-  Freeway
-  County Road
-  Arterial
-  608 Average Daily Traffic County



Except for Rittenhouse Road, which parallels the diagonal Southern Pacific Railroad tracks, the principal arterials form a grid pattern following section lines at one to three mile intervals. Traffic counts, as prepared by the County Highway Department, indicate that Rittenhouse, Guadalupe, Power and Chandler Heights Roads are the major transportation corridors in Queen Creek.

Ellsworth, Power, Gilbert, Val Vista, and Higley Roads provide north-south continuity through the entire planning area. Ellsworth Road serves Queen Creek (in the vicinity of Ocotillo, Rittenhouse and Queen Creek Roads) and the General Motors Desert Proving Ground and continues northward as Usery Pass Road all the way to Bush Highway. Power Road provides similar through service for Chandler Heights (near Santan Boulevard) and Williams Air Force Base and becomes Bush Highway. Higley Road serves Chandler Heights on the western edge of the planning area.

East-west arterials are not continuous through the planning area. Chandler Heights Road is continuous from Ellsworth Road west to Arizona Avenue, but does not cross Queen Creek Wash east of Ellsworth Road. Ocotillo and Germann Roads essentially provide east-west arterial connections between the north-south arterials. Riggs Road provides access to Interstate Highway 10 to the west.

Rittenhouse Road connects with Williams Field Road to the northwest and continues southeast to Florence. As a diagonal roadway it provides an attractive direct route toward the center of the Phoenix area. However, skewed intersections with the grid street network result, causing traffic flow problems. Intersection realignments should be sought to improve geometric's, particularly with other arterials. Skewed railroad crossings exist at five locations on roads adjacent to Rittenhouse Road. These are:

- 1) Power
- 2) Sossaman
- 3) Ellsworth
- 4) Ocotillo and
- 5) Riggs Roads

Additional arterials will have to be provided to serve future development and to improve east-west travel continuity in the area. A 110 foot right-of-way is usually secured by Maricopa County by requiring adjacent property owners to dedicate 55 feet of their frontage from the centerline at the time of rezoning or platting. In the future, 130 feet may be secured for major arterials. This practice minimizes costly right-of-way purchases and should be continued.

c) Collector Streets

Collector streets provide the connection between local streets (which provide property access) and arterial streets (which provide traffic service).

In the Queen Creek Planning Area, collectors include the roads at one mile and half-mile intervals such as Santan Boulevard, and Cloud Road.

d) Public Transit Service

There is no public transit service to the planning area, which is too low in population density to support fixed-route transit service. The East Valley Transit Study, compiled by MAG in January 1986, recommended express transit service on the Superstition Freeway to about Ellsworth Road by the year 2000. No regular fixed-route transit service is recommended for the study area through that period. Carpool matching assistance is provided by Regional RideShare, a service of the Maricopa Association of Governments.

e) Bicycle/Pedestrian Facilities

There are no bicycle facilities or sidewalks in this rural area. Adequate paved shoulder area may be provided beyond the travel lanes of arterial and collector streets to accommodate bicycles and pedestrians or disabled vehicles until the planning area urbanizes. Candidates for such shoulder treatments may be Santan Boulevard in Chandler Heights and Ocotillo and Ellsworth Roads in Queen Creek. These routes serve residential areas, schools and other community facilities.

Public Facilities and Utilities:

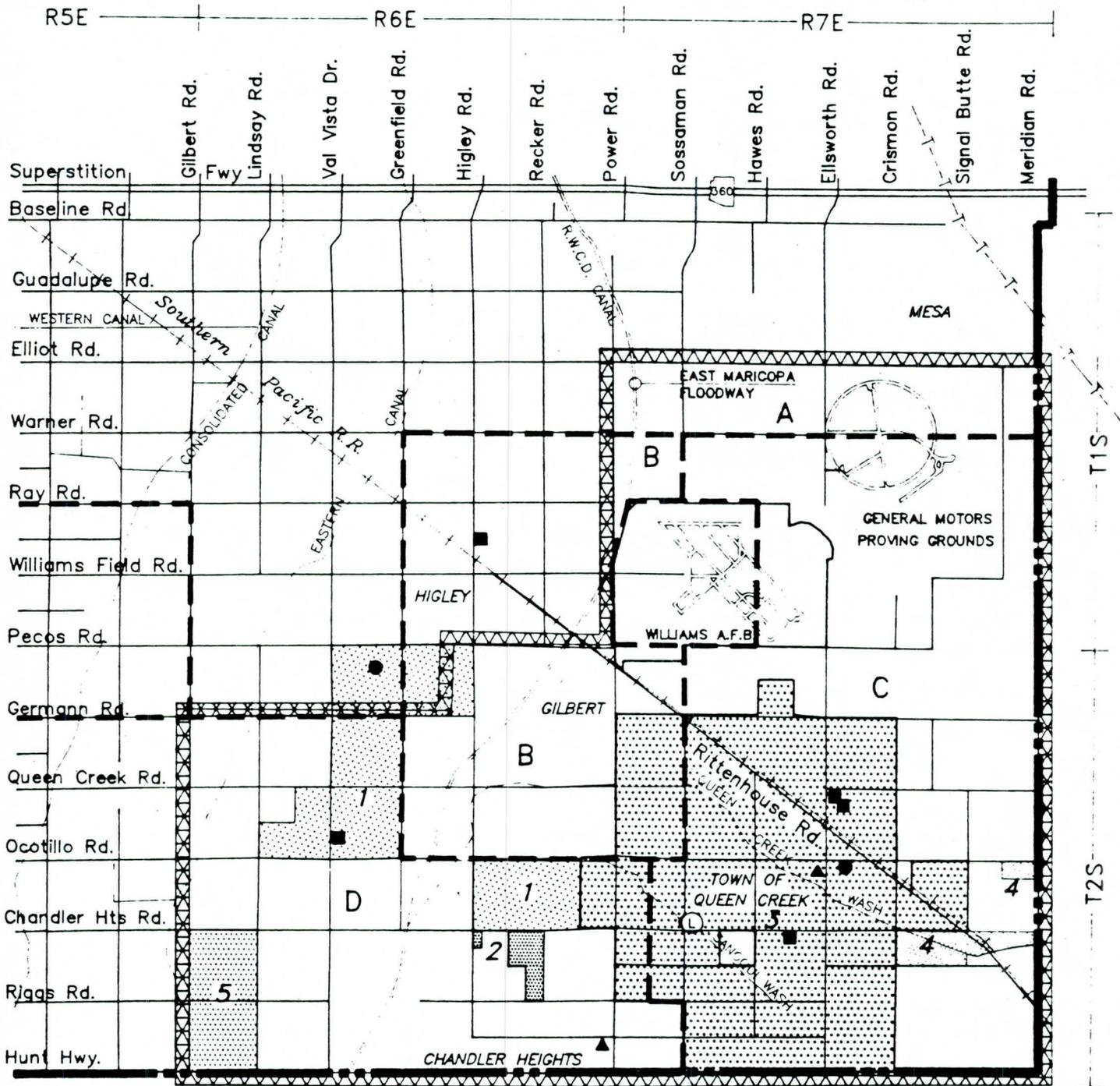
The Public Facilities and Utilities section, as illustrated on **Figure-15 "Existing Public Facilities and Utilities,"** provides an overview of the various public and semi-public utilities, public safety facilities and semi-public facilities in the Queen Creek Planning Area. This section is presented in five sub-sections:

- Water Distribution System
- Sanitary Sewer System
- Sheriff's Department
- Fire Department
- Educational Facilities

The purpose of this section of the **Queen Creek Land Use Plan** is to inventory and document present conditions, and use of the above community facilities and services. The assessment of the various community facilities and services presented is not intended to be an in-depth evaluation of their operations or programs, but rather an overview of their physical plants in terms of how they currently, and can in the future, support increased development.

QUEEN CREEK

Figure 15



Existing Facilities and Utilities

- | | | |
|---|--|--|
|  School |  Major Utility Line |  1 Water Company Service Area |
|  Fire Station |  School District | 1 Tankersley Water Co. |
|  Post Office | A Gilbert Unified | 2 Blue Goose Water Co. |
|  Landfill | B Higley Unified | 3 Queen Creek Water Co. |
| | C Queen Creek Unified | 4 H2O, Inc. |
| | D Chandler Unified | 5 City of Chandler |



a) Water Distribution System

This section of public facilities and services inventory discusses the quality of water and its use as well as the location of the water distribution system within the Queen Creek Planning Area.

Domestic Water Supply

Several water companies provide domestic water in the Queen Creek Planning Area. They are as follows:

Queen Creek Water Company
Tankersley Water Company
Blue Goose Water Company
H₂O - Inc.
City of Chandler

All of the domestic water supply in the Planning Area comes from groundwater. The Queen Creek Water Company is the largest water provider in the area. They estimate a total domestic water demand of 21,528 acre feet per year. The Arizona Department of Water Resources is currently reviewing an application for an assured water supply certificate for the Queen Creek Water Company. Other water providers in the area have an adequate supply of water.

Overall, the quality of domestic water in the Queen Creek Planning Area is good. Tests are run periodically by the water companies testing the quality of water being extracted from the local wells. In addition to these tests, chemical analysis tests, as required by the State of Arizona, are conducted on a three (3) year basis.

Agricultural Water Supply

The Queen Creek Planning Area contains a significant amount of agricultural activity. This activity is supported by water from the Roosevelt Water Conservation District, which received its water from Salt River Project, from wells, and from the Chandler Heights Citrus Irrigation District. Application for Central Arizona Project water on about 6,000 acres of agricultural land in the area will greatly reduce groundwater withdrawals. The canal system serving the Queen Creek Planning Area is shown on *Figure-5*.

Future Water Supply Alternatives

As development occurs in the Queen Creek Planning Area, greater amounts of domestic water will be needed. As agricultural lands are retired to make way for new

development, groundwater withdrawals will decrease. In addition, other sources of water, including Central Arizona Project water, will increasingly be used for agricultural uses, reducing even more the dependence on groundwater in the area. Accordingly, future water supply problems are not anticipated in the Queen Creek Planning Area.

b) Sanitary Sewer System

The Queen Creek Planning Area operates on individual septic tanks. Currently, there are no major contamination problems with septic tanks. Eventually the entire area could be served by a sanitary sewer system.

c) Sheriff's Department

The Maricopa County Sheriff's Department, located at 102 West Madison Street, in downtown Phoenix, serves the unincorporated areas in Maricopa County. Presently, the Mesa Substation, and Jail Facility (S.E.R.G.), located at 1840 South Mesa Drive, Street B, Mesa, houses all prisoners. According to the Maricopa County Sheriff's Department, burglaries are generally a problem in areas such as Queen Creek because of the large distances between households, providing minimal deterrence of criminal activities.

d) Fire Department

The Rural Metro Fire Department, a privately owned company, operates from its main facility located at 3200 North Hayden, Suite 200, Scottsdale. Rural Metro Corporation will provide fire and ambulance services to the unincorporated areas in the County on a contractual basis. Station 54, located at 15944 East Willis Road, in the Town of Gilbert's strip annexation area, and Station 55 located at 22407 South Ellsworth Road, in Queen Creek, serve the Queen Creek Planning Area.

Station 54 operates with a staff of one full-time fire fighter and ten volunteers. The facility is equipped with one (1) engine and one (1) pumper. A response time of less than 10 minutes is provided by Station 54. Station 55 operates with a staff of five (5) volunteers. The facility is equipped with one (1) pumper. Each station can be assisted by the Town of Gilbert, the City of Mesa, and Williams Air Force Base fire departments. As the area grows, it will be prudent to examine expansion and/or relocation of the existing fire stations.

e) Educational Facilities

The Queen Creek School system operates one (1) elementary school, one (1) junior high school and one (1) high school in the Queen Creek Planning Area. The Queen Creek School System currently serves grades one through twelve with a total of 873 students, 517 in elementary and 356 in grades seven through twelve.

The Gilbert School System serves the northern portion of the planning area with two elementary schools: Greenfield Elementary, 634 students; and Pioneer Elementary, 836 students; one junior high school, Mesquite Junior High, 825 students; and one high school, Gilbert High School with 886 students. None of the aforementioned schools are within the planning area.

The Chandler School System serves the southwestern portion of the planning area with one elementary school, Weinberg Elementary, 1,958 students; one junior high school, Willis Junior High School, 663 students; and one high school, Chandler High School with 707 students. Only Weinberg Elementary is located within the planning boundary.

Higley Elementary School serves the central portion of the planning area with one K-8 facility, Higley Elementary School, 218 students (449 K-6 and 361 junior high).

Higley School District allows their high school age students to attend Gilbert High, Chandler High, or Queen Creek High Schools. Williams Air Force Base students attend Higley Elementary and Gilbert High Schools.

Special Development Concerns:

The area east of the GM Proving Grounds has been effectively cut off from access and infrastructures. So long as General Motors maintains this facility in its current use, access and services will have to be extended around or brought in from existing services to the north or south.

The consolidation of private parcels of land into large land holdings or the transfer of large holdings of public land (State/Federal), into private ownership, will have serious impacts on land use plans and areas without land use plans. When such a holding is the subject of a Development Master Plan (DMP), population, housing, and land use projections and distribution for the area will change dramatically. The developer of such an area is going to have to demonstrate and verify how the DMP's projections will be attained and how they will impact the land use plan and the plan's projections set forth in the area plan. This type of holding is normally rural in nature while a DMP is going to be urban in scale and use. To urbanize an area, a DMP will be required to establish urban level services, i.e., water, sewer, fire and police protection, and if large enough, government. Water supply is the most restricting factor for a DMP. If an adequate water supply cannot be obtained

an urban project cannot be realized. Any owner/developer wishing to urbanize a rural area will have to address the aforementioned constraints before any large scale planning or development can occur.

Policy Implications:

This section describes the key land use and zoning issues that should be addressed by the county when reviewing development projections in the Queen Creek Planning Area.

a) Public Facilities and Utilities

The County should discuss a plan for public facilities (fire, law enforcement, school, parks and open space, etc.) in certain areas and should work closely with the newly incorporated Town of Queen Creek and direct growth in appropriate directions.

b) Domestic Water Supply

Quality of groundwater in the area should be protected.

c) Sanitary Sewer System

A public sanitary sewer system should be developed for all new urban development.

QUEEN CREEK RESIDENT ISSUE IDENTIFICATION

The Resident Issue Identification element of the *Queen Creek Land Use Plan* summarizes the major land development issues raised by the residents of the Queen Creek Planning Area.

QUEEN CREEK ISSUE IDENTIFICATION WORKSHOP

On February 6, 1986, Queen Creek Community Issue Identification Workshops were held at Queen Creek Elementary School. Residents, business people, property owners, Maricopa County Planning and Zoning Commission members and the Maricopa County Board of Supervisors were invited to attend the workshops through the issuance of a workshop newsletter and coverage in East Valley newspapers prior to the workshop.

Approximately 50 people attended the workshop. Participants at the workshops identified specific issues and expressed general ideas they felt should be pursued to resolve their issues. Twenty-six total issues were identified in the areas of Land Use, Transportation and Public Utilities. These issues were prioritized by the residents in terms of relative importance, each issue was rated as low, medium or high. Twelve issues were rated as high in importance. These issues are shown in *Table-12*, "Queen Creek Resident Issue Identification."

On May 24, 1990, a public workshop was held at the Queen Creek High School regarding the proposed updated and expanded Land Use Plan. Representatives from the newly incorporated Town of Queen Creek attended in addition to members of the public.

On February 3, 1992, an additional public meeting was held to present the updated Queen Creek Land Use Plan. Public input on issues and concerns since the last workshop were received.

SUMMARY OF RESIDENT ISSUES (February 6, 1986)

As the Inventory and Analysis document was prepared for the *Queen Creek Land Use Plan*, specific issues surfaced as a result of the extensive inventory documentation. Those issues correspond very closely to many issues identified at the Community Issue Identification Workshop. The issues include:

Land Use

The residents of Queen Creek perceived the importance of maintaining the existing rural lifestyle by encouraging low density and cluster development and also promoting commercial and industrial development within the planning area as major resident issues, which need to be addressed while preparing the Land Use Plan.

Transportation

The residents of Queen Creek perceived the need to improve the existing streets and to lower the speed limit near schools for a safe and efficient transportation system.

Public Utilities

The residents of Queen Creek perceived the need to improve law enforcement and to promote a park/open space system within their area.

SUMMARY OF RESIDENT ISSUES (May 24, 1990)

Residents expressed interest in higher density along with balanced employment in the Queen Creek area. Also, there was a concern about what kind of development should occur along the railroad tracks and how industrial development will coincide with rural residential uses. Residents also stated that trails should be shown along major drainage areas.

SUMMARY OF RESIDENT ISSUES (February 3, 1992)

Residence expressed interest in the transportation system, specifically maintenance, improvements and paving of existing roads in the planning area.

TABLE-12

Queen Creek Resident Issue Identification

ISSUES

Land Use

More Commercial Development (daily shopping)
More Industrial Development/Light Industrial
Maintain Existing Rural Lifestyle
Encourage Low Density Development
Encourage Cluster Development

Transportation

Lower Speed Limit Near Schools
Upgrade Dirt Roads
Quality Street Improvements
No Extension of Grapefruit Road

Public Utilities

Construct Medical Facilities
Promote a Park/Open Space System
Improve Law Enforcement

QUEEN CREEK GOALS AND POLICIES

The formulation of a realistic and implementable Land Use Plan for the Queen Creek Planning Area is predicated upon the definition of a set of comprehensive goals and policies. The Land Use Goals and Policies are presented in three subject areas:

Natural Resources
Socio-Economic Development
Land Use

The following are generalized definitions which should be referred to as a guide when reading this chapter of the *Queen Creek Land Use Plan*.

GOAL: *A desired end which, if pursued over the long-term, will ultimately result in the attainment of a desired living environment.*

POLICY: *A means to attain the established goals. Policies prescribe or represent a course of action.*

The goals and policies are intended to set the stage for public and private actions geared to guide orderly and planned growth within the Queen Creek Planning Area and its fringe; promote high quality residential, commercial, and industrial development; and continue to improve and expand transportation and public facilities for the Planning Area.

NATURAL RESOURCES

A. Physical Characteristics

GOAL: *Permit developments which are compatible with natural environmental features and which do not lead to its destruction.*

Policy A-1: Encourage compatible land use relationships with sources of excessive noise.

Policy A-1.1: Encourage land development which will not be adversely impacted by noise generated by Williams Air Force Base relative to Military Airport Zoning.

- Policy A-2: Encourage land uses and development designs that are compatible with environmentally sensitive areas such as parks, open space, floodplains, hillsides, wildlife habitat, scenic areas, and unstable geologic and soil conditions.
- Policy A-2.1: Encourage land development which is compatible with environmental constraints, especially south of Cloud Drive where soil characteristics present constraints to development activities.
- Policy A-3: Encourage the preservation of the scenic quality of the Santan Mountains and develop other preservation programs as deemed appropriate.

B. Hydrology

GOAL: *Protect and preserve existing water resources and minimize flood hazards.*

- Policy B-1: Encourage cooperation with the Flood Control District to minimize land development conflicts and achieve compatibility with the development and implementation of Area Drainage Master Studies and other relevant investigations.
- Policy B-1.1 Encourage cooperation with the Flood Control District to minimize land development conflicts relative to the development and implementation of the Queen Creek Area Drainage Master Study and other drainage studies.
- Policy B-2: Limit the location of land uses, which rely on direct extraction of groundwater to where subsidence is neither an existing condition nor is projected to occur in the future.
- Policy B-3: Support the regulation of land uses which are consistent with water conservation efforts mandated in the Arizona 1980 Groundwater Management Act or successor legislation.
- Policy B-4: Encourage developments which maximize recharges of groundwater supplies and utilize treated wastewater for water amenities and irrigation.

- Policy B-5: Encourage the use of drought tolerant and low water consumptive landscape materials.
- Policy B-6: Support Flood Control District policies and regulations on development within all floodplains of the County.
- Policy B-6.1: Support Flood Control District policies and regulations on development within the 100-year floodplain of Queen Creek and adjacent to the planning area's irrigation canals.
- Policy B-7: Discourage the location of structures which would increase water ponding and sheetflow in areas of extremely flat land and areas susceptible to sheetflow.

C. Vegetation and Wildlife

GOAL: *Preserve existing habitat areas of threatened or endangered wildlife species.*

- Policy C-1: Encourage the protection of threatened and endangered species.
- Policy C-2: Support preservation practices in the mixed Palo Verde Cacti Community.
- Policy C-3: Encourage the use of replacement vegetation that is primarily indigenous to the mixed Palo Verde-Cacti Community for land developments which disturb that community.
- Policy C-4: Encourage repair and/or preservation of existing riparian habitats.

D. Archaeology

GOAL: *Protect the County's historical and archaeological resources.*

- Policy D-1: Prior to development, excavation, or grading, require the submittal of a letter by the applicant from the Arizona Historical Preservation Officer stating that the proposed land development will have no effect on historical and cultural resources.

SOCIO-ECONOMIC DEVELOPMENT

A. Commercial/Industrial Development

GOAL: *Permit major commercial and job employment centers where the labor force and infrastructure exist or are expanding.*

GOAL: *In developments with densities greater than one dwelling unit per acre create a land use environment that generates a diversified economic base which fosters varied employment opportunities, and encourages business formation and expansion.*

- Policy A-1: Commercial development is only to be encouraged when its demand can be justified and with the provision that construction will be completed on the proposed facilities within a specified time period.
- Policy A-1.1 Encourage the development of new neighborhood commercial land uses when their demand can be justified by the population residing within the Queen Creek Planning area.
- Policy A-1.2: Encourage the planning and location of new light industrial land uses with direct access to transportation routes of appropriate size to facilitate anticipated traffic generation for the purpose of providing employment opportunities and creating an economic base.
- Policy A-2: Encourage industrial development of property zoned industrial prior to rezoning of additional property for industrial use.
- Policy A-3: Encourage commercial development in areas currently zoned for such activity, and in areas that are a portion of a large scale or planned development, provided that proposed acreage may be supported by on-site population.
- Policy A-4: Requiring building permit issuance, require existing industrial and commercial operations with salvage or storage yard activities to be screened from public view.
- Policy A-5: Require proposed industrial and commercial operations with salvage or storage yard activities to be screened from public view.

Policy A-6: Discourage strip commercial development.

LAND USE

A. Land Use

GOAL: *Create orderly, efficient, and functional development patterns.*

GOAL: *Create high quality residential, commercial, and industrial land developments that are compatible with adjacent land uses.*

Policy A-1: Encourage residential developments within urban residential land use categories as a part of a planned community with a mixture of housing types and intensities.

Policy A-2: Encourage the use of "planned developments" for suburban development projects which incorporate quality and cluster development.

Policy A-3: Encourage the location of rural density residential development (less than one dwelling unit per acre) in areas where infrastructure to support higher density housing is lacking, and where natural environmental conditions suggest low intensity development.

Policy A-4: Encourage residential development at one (1) unit per acre or greater intensities to be directed toward urbanizing portions of the County.

Policy A-4.1: Residential development will be discouraged when in excess of one dwelling unit per acre, except where adjacent to urbanizing town sites to preserve the existing rural character of the Queen Creek Planning Area.

Policy A-5: Development proposals along major streets and adjacent to existing and approved land uses, will be reviewed to determine compatibility with those uses.

Policy A-6: Discourage the location of commercial or industrial developments in locations specified for development with rural density land uses.

Policy A-7: Encourage signage to be located on the site for which it pertains.

Policy A-8: Development applications where the application will greatly affect current population, housing and land use projections and distribution, the impacts of the application must be thoroughly considered and the effects on the current plan noted.

B. Transportation

GOAL: *Establish a circulation system that provides for the safe, convenient and efficient movement of goods and people throughout Maricopa County.*

Policy B-1: Support the Arizona Department of Transportation's efforts to improve existing regional transportation links and their planning and construction of new regional freeways and expressways.

Policy B-2: Encourage the planning and construction of frontage roads adjacent to regional transportation links where needed to provide for safe, convenient and efficient movement of local traffic.

Policy B-3: Support the continued maintenance of roadways and the paving of new and existing local roads consistent with adopted engineering and design standards.

Policy B-4: Encourage the extension of local roadways only when needed to provide for the safe, convenient, and efficient movement of local traffic.

Policy B-4.1: Discourage any planning or construction of the extension of Grapefruit Road, to maintain the existing rural life style by limiting traffic volumes to the rural residential areas.

Policy B-5: Support the County Highway Department's efforts to provide for all-weather travel over washes on County roads.

Policy B-6: Encourage the location of drought tolerant landscaping along new and existing major roadways, thereby enhancing the visual character of public transportation routes.

Policy B-7: Support the County Highway Department's efforts to obtain land dedications for roadways during rezoning and subdivision processes.

Policy B-8: Require the development of an arterial street system based upon the existing section line grid pattern unless, as part of approved developments, alternative arterial patterns are deemed superior or more appropriate.

C. Public Facilities and Utilities

GOAL: *Provide for a functional, efficient and cost effective system of utilities, facilities and services to serve county population and employment centers.*

Policy C-1: Continue to establish and maintain a system of park and recreational facilities to serve the residents of the County.

Policy C-2: Encourage the inclusion of private open space and recreational opportunities to meet the needs of occupants in large and/or high density residential developments.

Policy C-3: Support public agency coordination to provide a balanced system of recreational opportunities in the County.

Policy C-4: Preserve natural drainageways as linear open space corridors leading to various water canals.

Policy C-5: Encourage canal utilization as multiple use trails for recreational purposes.

Policy C-5.1: Preserve Queen Creek and other natural drainageways as linear open space corridors for recreational purposes.

Policy C-6: Permit residential developments that exceed one dwelling unit per acre only if they have community water and sanitary sewer systems provided.

D. GROWTH GUIDANCE

Goal: *Provide sufficient public services for intensity of land use.*

Goal: *Minimize conflicts between urban and rural land uses.*

Policy D-1: New urban development is to be in accordance with the Queen Creek Land Use Plan and respective land use categories.

- Policy D-2: New urban development shall 1) supply evidence of an adequate supply of potable water, and 2) provide for public wastewater treatment.
- Policy D-3: New urban zoning shall be within one mile of existing urban development.
- Policy D-4: New urban development shall identify sites for parks and schools. The following standards apply:

Space Standards

<u>Type of Facility</u>	<u>Amount of Acres</u>
Neighborhood Park/Recreation Open Space Area	5 Acres/1000 People
Community Parks/Recreation Facilities	5 Acres/1000 People
Elementary School	3.1 Acres/1000 People
Junior High School	2.7 Acres/1000 People
Senior High School	1.9 Acres/1000 People

Location Standards

Neighborhood Park	To be located within 1/4 mile of all residential uses proposed for development (without arterial street bisecting).
Community Park Recreation Facility	Should serve a population of approximately 20,000 people, be centrally located and within 1 to 1 1/2 miles of every home.

Elementary School

To be located within 1/2 - 3/4 mile (without arterial street bisecting) of all residential uses proposed for development.

Junior High School

To be located within 1 to 1 1/2 mile of all residential uses proposed for development.

Senior High School

To be located within 5 miles of all residential uses proposed for development.

Policy D-5: New urban development shall provide evidence of adequate fire protection. Prior to rezoning the following standards apply:

- a) Four (4) minute response time
- b) 500 gallons per minute pressure rating
- c) Minimum two (2) engines able to respond

Policy D-6: New urban development shall have access to a four (4) lane improved arterial road (110 foot right-of-way).

LAND USE PLAN

This Chapter of *Queen Creek Land Use Plan* identifies the intended use of the Plan as a guide to future development. The Plan's relationship to environmental protection, transportation, public facilities and services is discussed. This discussion is presented in the following five sections:

- Community Issues
- Planning Area Growth and Development Needs
- Land Use Plan
- Use of the Land Use Plan
- Related Planning Elements

COMMUNITY ISSUES

A number of land use issues were identified in the, "Inventory and Analysis," as a result of the data collection process and, most importantly, the community participation process. The major land use issues identified by the residents of the area included:

- Provide for higher density development
- Provide more employment related development
- Maintain existing rural lifestyle
- Promote park/trail system

A more detailed list of issues is presented in the "Inventory and Analysis."

PLANNING AREA GROWTH AND DEVELOPMENT NEEDS

Using the population projections presented in the "Inventory and Analysis," a reasonably accurate prediction of the amount of land needed for residential, commercial and industrial development was prepared.

The estimated population of Queen Creek is expected to grow from a 1990 population of 3,786 persons in 1,058 housing units to a year 2010 population of 9,146 persons in 2,682 housing units. As shown in *Table-13*, "Resident Population and Housing Units, 1990-2010," this growth represents an average increase of 142 percent in housing units and 155 percent in population.

Assuming residential development takes place at average densities of three dwelling units per acre (3 du/acre), approximately 541 acres of new residentially developed land will be necessary by the year 2010. The land use pattern portrayed on the Land Use Plan can easily accommodate this population, even if growth is concentrated near the Town of Queen Creek.

In addition to the residential land needs, commercial and industrial land needs were calculated. As discussed in the, "Inventory and Analysis," and illustrated in *Table-14*, "Projected Land Use Demand," industrial and commercial development would not appear to be needed. Within the area, undeveloped or properly zoned property meets short the projected demand through the year 2010.

LAND USE PLAN

The Land Use Plan, illustrated in *Figure-16*, indicates the intended density and use of land for the different parts of the planning area. The plan does not reflect the intended zoning of individual parcels, but generalizes desired future land uses.

The land use boundaries shown on the Land Use Plan are intended to represent natural or man-made demarcations where possible. Where such boundaries are not readily distinguishable, transitions may be allowed, provided the intent of the Land Use Plan is not violated. With proper buffering and site planning techniques, transitions may be allowed without diminishing the intended purpose of the Land Use Plan.

Land Use Definitions:

The following land use definitions have been established to be used in understanding the Land Use Plan. For each land use designated, the corresponding definition is to be used to assure consistent interpretation of the Land Use Plan. (*Note: Definitions have been listed for only those land use categories shown on the Land Use Plan*).

Open Space, OS

The Open Space category denotes areas which would be best precluded from development except as open space and recreational areas. However, such environmentally sensitive areas as steep slopes and floodplains may be developed when in compliance with the Hillside Development Regulations and Floodplain Development Regulations. Additional uses in this category include parks, recreation areas, drainage ways and scenic areas.

Residential

The Land Use categories which permit residential development are divided into two areas based upon the availability of urban services (sewer, water, law enforcement, fire protection, schools, parks, etc.). Those categories in which some or all of these services do not exist and are not anticipated to be provided have been defined as rural, while those categories in which these services exist or are anticipated to be provided have been defined as suburban and urban. Permitted uses in all residential use categories include schools and churches. Special attention to the location of

Table-13

Projected Resident Population and Housing Units, 1990-2010

	Census 1990	1995	2010	Total Increase	Percent Increase
Population	3,786	7,806	9,146	5,360	142%
Housing Units	1,058	1,464	2,682	1,624	155%

Table-14

Projected Land Use Demands

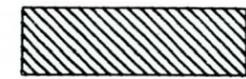
Land Use	Acres Needed	Acres Zoned/ Developed 1989	Additional Zoning Needed
Residential	541 Acres	4,510	0
Commercial	93 Acres	128	0
Industrial	69 Acres	140	0

* Includes all residential zoning of Rural-43 or higher density that is subdivided or developed.

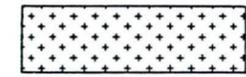
QUEEN CREEK

Figure 16

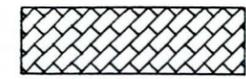
Land Use Plan



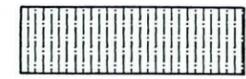
Open Space



Rural Residential/High
(0-1 dwelling units/acre)



Suburban Residential
(0-2 dwelling units/acre)



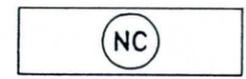
Urban Residential/Very Low
(0-4 dwelling units/acre)



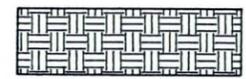
Urban Residential/Low
(0-6 dwelling units/acre)



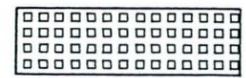
Neighborhood Commercial



Multi-Neighborhood
Commercial



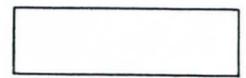
Mixed Use Center



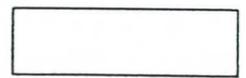
Light Industrial Center



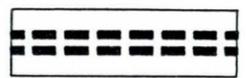
Development Master Plan



Incorporated Areas



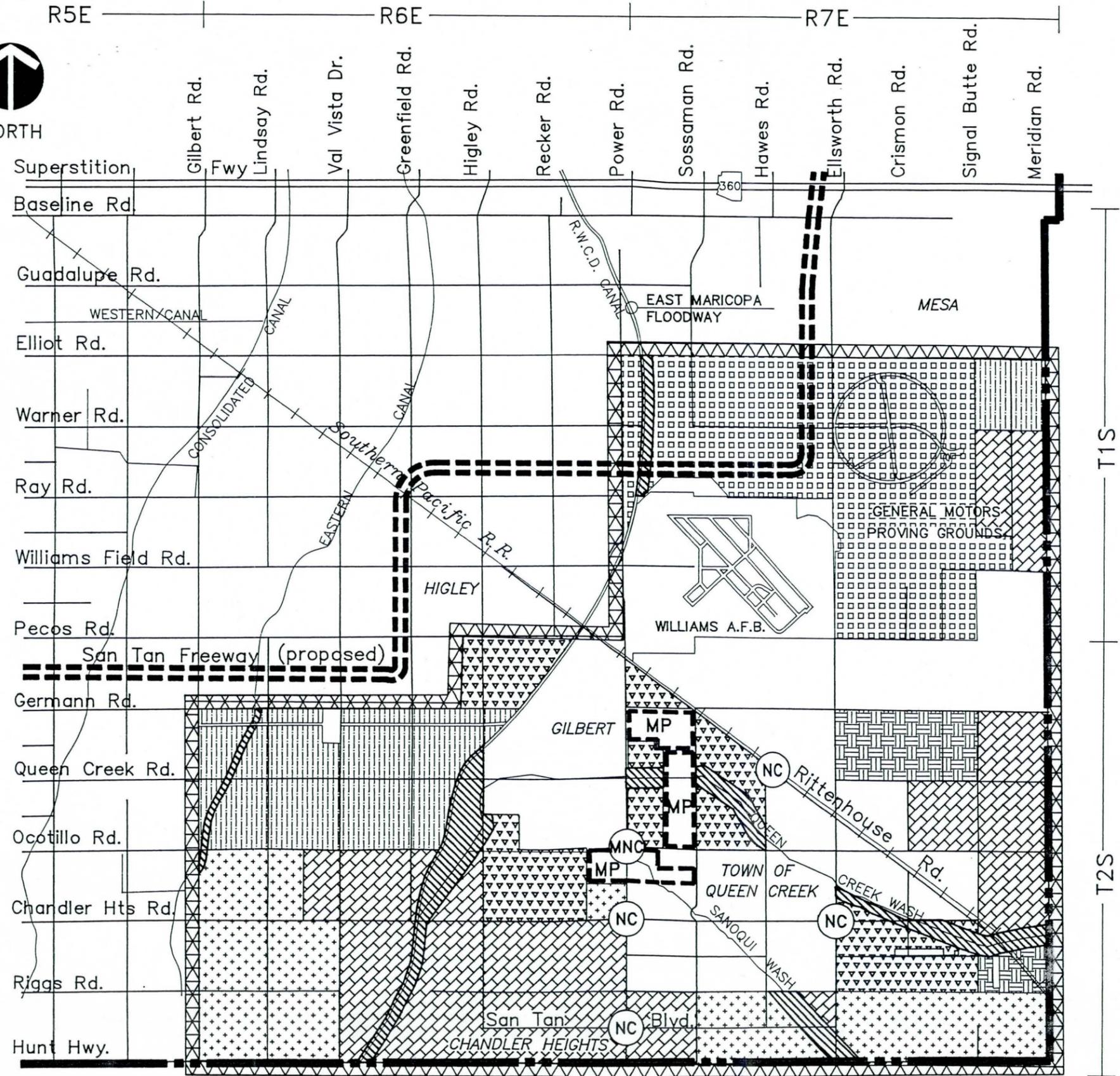
Principal Arterials



Freeway (Proposed)



NORTH



T1S

T2S

Adopted April 6, 1992

these uses should be given with regard to access, traffic and proximity to arterials.

Rural Residential/High Density, RR/H, (0-1.0 Dwelling Units per Acre)

The Rural Residential/High Density category denotes areas where single family residential development is desirable but urban services (sewer, water, law enforcement, fire protection, schools, parks, etc.) are limited. Suitability is determined on the basis of location, access, existing land use patterns, and natural or man-made constraints. Within any particular development, densities greater than 1.0 du/acre may be permitted, but only if areas of lower densities offset the increase such that an average of less than 1.0 du/acre is maintained. Uses in this category include agricultural and single family residential.

Suburban Residential, SR, (0-2.0 Dwelling Units per Acre)

The Suburban Residential category denotes areas where single family residential development is desirable and urban services (sewer, water, law enforcement, fire protection, schools, parks, etc.) are available or will be provided. Suitability is determined on the basis of location, access, existing land use patterns and natural or man-made constraints. Within any particular development, densities greater than 2.0 du/acre may be permitted, but only if areas of lower densities offset the increase such that an average of less than 2.0 du/acre is maintained. In addition to residential uses, limited convenience commercial uses may also be permitted, provided there is direct access to arterial streets. A community sewer and water system will be required for developments above 1.0 du/acre and may be required for those below 1.0 du/acre.

Urban Residential/Very Low Density, UR/VL (0-4.0 Dwelling Units per Acre)

The Urban Residential/Very Low Density category denotes areas where higher density residential development is appropriate and all urban services (sewer, water, law enforcement, fire protection, schools, parks, etc.) are available or will be provided. Single family development may be permitted, provided overall development densities do not exceed 4.0 du/acre. Within any particular development densities greater than 4.0 du/acre may be permitted, but only if areas of lower densities offset the increase such that an average of 4.0 du/acre or less is maintained. Convenience commercial development may be located within the area with direct arterial street access. A community sewer and water system will be required for development at these densities.

Urban Residential/Low Density, UR/L, (0-6.0 Dwelling Units per Acre)

The Urban Residential/Low Density category denotes areas where higher density residential development is appropriate and all urban services (sewer, water, law enforcement, fire protection, schools, parks, etc.) are available or will be provided. Single family development may be permitted, provided overall development densities do not exceed 6.0 du/acre. Within any particular development densities greater than 6.0 du/acre may be permitted, but only if areas of lower densities offset the increase such that an average of 6.0 du/acre or less is maintained. Convenience commercial development may be located

within the area with direct arterial street access. A community sewer and water system will be required for development at these densities.

Commercial

Four Land Use categories have been developed which permit different intensities of commercial activities. Direct frontage on arterial streets is an essential element for each category.

Convenience Commercial, CC

The Convenience Commercial category denotes areas for the location of small convenience shops and services for the benefit of local residents. This category permits developments of 1 acre or less. Convenience Commercial locations are designated in areas having a more rural character. Permitted uses in this category include gasoline stations, minor auto repair and maintenance, convenience food marts, mini-banks, barber shops, beauty shops, package liquor stores, laundromats, and eating and drinking establishments. Urban level services are not required, however uses allowed should be appropriate for the services available.

Neighborhood Commercial, NC

The Neighborhood Commercial category denotes areas providing for the sale of convenience goods (food, drugs, and sundries) and personal services which meet the daily needs of an immediate neighborhood trade area. Such a trade area shall have a minimum population of approximately 5,000 people. This category permits developments of 5 acres or less per trade area. A limited number of permitted activities should be provided. A market analysis may be required. A community sewer and water system will be required for development. All uses within this category are subject to plan review and approval.

Multi-Neighborhood Commercial, MNC

The Multi-Neighborhood Commercial category denotes areas providing for the sale of convenience goods (food, drugs, and sundries) and personal services which meet the daily needs of a multi-neighborhood trade area. Such a trade area shall have a minimum population of approximately 10,000 people. Use of this category in a trade area shall prohibit the use of the Neighborhood Commercial category in the trade area. This category permits buildings of 10,000 square feet or less per use and developments of 10 acres or less per trade area. A broader number of activities may be provided than those in a

Neighborhood Commercial category. A market analysis may be required. A community sewer and water system will be required for development. All uses within this category are subject to plan review and approval.

Employment Centers

The Employment Center categories denote areas for the concentration of major employers. In recognition of the diverse nature of major employers, three categories have been developed which attempt to group uses by their impacts on the surrounding area.

Mixed-Use Center, MUC

The Mixed-Use Center category denotes areas for the location of major employment centers which would have minimal impacts on surrounding areas outside of increased traffic demands. Uses permitted in this category would include offices, light industrial parks, business parks, research parks, government facilities, post secondary educational facilities, hospitals and major medical facilities. Access to a principal arterial or freeway will be required. No noise, vibration, smoke, dust, odor, heat or glare will be permitted. Only the minimum of truck traffic will be allowed. Urban services are available or will be provided. A community sewer and water system will be required for development. All uses within this category are subject to plan review and approval.

Light Industrial Center, LIC

The Light Industrial Center category denotes areas for the location of major employment centers which would have greater impacts on surrounding areas than those uses in a Mixed-Use Center. Uses permitted in this category would include warehousing, storage, wholesale distribution activities limited manufacturing and assembly. Access to a principal arterial or freeway will be required. Very limited noise, vibration, smoke, dust, odor, heat or glare will be permitted. Limited truck traffic will be allowed. Urban services are available or will be provided. A community sewer and water system will be required for development. All uses within this category are subject to plan review and approval.

Freeways and Principal Arterial Streets

Freeways and Principal Arterial Streets represent the streets carrying the majority of trips leaving and entering the Planning Area. These represent the area's highest traffic volume corridors and are designated on the Land Use Plan.

Land Use Development Patterns:

Through the inventory and analysis of both natural and man-made features, and the application of the goals and policies, the Land Use Plan was prepared. While the goals and policies formed the basis of the desired land use patterns for the area, the ultimate development pattern was tempered by recognition of existing development activities and patterns that had been established in the past. This included consideration for land uses and features outside the Planning Area which might positively or negatively impact the desired future development patterns within the planning area, including the land use planning concepts of the Town of Gilbert, the City of Chandler, and the City of Mesa.

Residential Development

There are two projected concentrations for residential development. One extends along Ocotillo Road, from the Town of Queen Creek, to Power Road. The most intense development is centered around the Town of Queen Creek along Rittenhouse Road. This area could develop at an average density of 6 du/acre. The other extends north of Ocotillo Road and is intended to accommodate growth from the Town of Gilbert. These areas, with consideration for impact generated by Williams Air Force Base and the existence of the major drainageways, form the basis for the residential land use patterns. By permitting this urban density, the desire is to encourage the development of master planned communities that capitalize on the existence of the Town of Queen Creek. It also encourages developments to make improvements along Queen Creek such as parks, trails, etc.

Residential development southwest of the Town of Queen Creek is planned to have a suburban rural density. Northeast of Queen Creek, development is limited to density residential (2 dwellings per acre). This area (north of the railroad and surrounding the Airbase Zoning Districts), should have special consideration regarding allowed densities. It is recognized that portions of the area may be suitable for higher densities. Level farmland, abundant groundwater, CAP allocation and developed arterials suggest no natural barriers in regards for development of this property. It is difficult at this time, due to changing noise contour lines and development patterns, to know which areas should remain Suburban Residential and which should have higher densities. Consideration on a case by case basis should be made.

Two Development Master Plans are shown north of Ocotillo Road between Power Road and Sossaman Road. Another is shown adjacent to Rittenhouse Road, north of Chandler Heights Road. These developments are urban in nature and have specific residential densities approved. The approved Master Plan should be consulted for detailed information.

Non-Residential Development

Although minor commercial developments can be located at various locations throughout the area as part of master planned developments, two major commercial nodes have been established to serve the existing and future residents of Queen Creek Planning Area. Two other locations for neighborhood commercial sites have also been shown.

North of Rittenhouse Road and east of Ellsworth Road are several Mixed-Use Centers which have been designated next to low density residential areas. This Employment Center district encompasses areas of noise impact to residential development. This area is within the noise contours of Williams Air Force Base and is generally unsuitable for residential development, the area will be retained as the potential basic service (industrial-agricultural) employment center for the Queen Creek Planning Area.

The Chandler Heights area, currently zoned R-4 and R1-35, is designated as Suburban Residential (0 to 2 dwellings per acre). While existing zoning is recognized, it is incompatible with some of the community desires and existing infrastructure. Development at one (1) or less dwellings per acre should be encouraged until adequate infrastructure is in place to support higher density.

A few areas along the railroad tracks are designed for industrial development. Industrial development may be more desirable than residential development in some cases. However, it is not the intent of this plan to establish an industrial strip along the entire length of the railroad tracks.

USE OF THE LAND USE PLAN

Consistency in zoning for specific areas or parcels of land within the Queen Creek Planning Area must be evaluated in terms of overall furtherance of plan goals and policies. The following guidelines have been formulated to help insure that the intent and integrity of the Land Use Plan is retained over the life of its use. The land use guidelines are presented in the following categories:

- Development Master Plans
- Residential Land Use Guidelines
- Commercial Land Use Guidelines
- Industrial Land Use Guidelines
- Buffering and Transitional Land use Guidelines
- Amendments to the Land use Plan

Development Master Plans:

The use of Development Master Plans (DMP's) should be promoted by the County, as a means of implementing the generalized land use identified on the Land Use Plan map. The use of DMP's is intended to allow flexibility in the master planning of large tracts of land located outside of municipal boundaries. Master Plans may be initiated by property owners and should have the following features:

- Mixed-use development,
- A separation of vehicular and pedestrian traffic which promote open space networks,
- Dispersal of through traffic when practical and desirable,
- A high level of integrated development design, and
- A mix of intensities which are transitional with spatial, structural, and visual buffers

The Queen Creek Planning Area currently contains three adopted Development Master Plans; 1) Linda Vista (MP 88-6), 2) Sossaman Estates (MP 88-3), and 3) Rancho Del Ray (MP 82-4). Each of these plans have been adopted by the Maricopa County Board of Supervisors. Rancho Del Ray, however, has been annexed into the Town of Queen Creek.

Residential Land Use Guidelines:

The following guidelines shall aid in governing the development of land designated as residential in the Land Use Plan.

Allowable Residential Densities:

Rural Residential/Low Density	0 - 0.2 du/acre
Rural Residential/High Density	0 - 1.0 du/acre
Suburban Residential	0 - 2.0 du/acre
Urban Residential/Very Low Density	0 - 4.0 du/acre
Urban Residential/Low Density	0 - 6.0 du/acre
Urban Residential/Medium Density	0 -12.0 du/acre
Urban Residential/High Density	0 -25.0 du/acre

Note: Residential densities within any given development project will be calculated based upon the Gross Acreage of the project.

Commercial uses are allowed by most of the residential categories. In an effort to create quality neighborhoods in the Queen Creek Planning Area, retail and service commercial uses will be permitted as part of the planned development pattern. However, any commercial development must be sited and designed such that the activities present will not detrimentally affect adjacent residential neighborhoods. To this end, the following guidelines will influence the siting of commercial uses.

Commercial uses will be located at the intersections of arterial streets. It is the County's intent not to permit the proliferation of commercial development at every arterial intersection; therefore, only major intersections will be considered for commercial development.

Professional offices, retail and service commercial uses may be permitted in neighborhood commercial centers, but only at a development scale compatible with adjacent residential development.

Commercial Land Use Guidelines:

The following guideline shall aid in governing all land use planning pertaining to the development of land designated as Commercial.

Commercial activity in designated areas include appropriate service, retail and professional office uses.

All commercial development should be landscaped utilizing consistent landscaping themes that will tie adjacent projects together. Landscaped easements along public rights-of-way using shrubs, trees and/or earth berming will be provided and installed at the time of street construction. Signage should be controlled in terms of placement and maximum size.

Employment Center Land Use Guidelines:

The following guidelines shall aid in governing all land use planning pertaining to the development of land designated as employment centers on the Land Use Plan.

Proposed uses must be appropriate for the type of employment center in which they are located.

Heavy industrial uses and warehousing activities should be located away from arterial streets, allowing garden-type light industrial and business park uses to buffer the general view of heavy industrial activities. Industrial development may also be required to landscape and/or to screen unattractive uses from public view.

Buffering and Transitional Land Use Guidelines:

When any two different land use types are shown on the Land Use Plan or are approved as part of a Development Master Plan, buffering or a transitional land use between the two uses may be necessary. Buffering may consist of the placement of open space between two incompatible uses and will be required of the more intensive use where a less intensive use already exists, or where the Land Use Plan shows that a less intensive use is intended adjacent to the more intensive use. The use of transitional land uses consists of placing uses of intermediate intensity between two incompatible uses.

Situations necessitating transitional land uses may include:

Low density, single family development adjacent to multi-family development,
Single family development adjacent to commercial.

In cases where buffering is proposed, the following examples may be considered:

Areas consisting of landscaped open space,
Arterial and collector streets with landscaping,
Major transmission line easements, if landscaped,
Block walls, landscaping, earth berms; or,
Combinations of the above

Amendments to the Land Use Plan:

An amendment to this adopted plan may be filed with or without a rezoning request or Development Master Plan application. According to Article 28, Section 2809 of the Maricopa County Zoning Ordinance, "all applications for changes of zoning district boundaries that include property which totals 40 acres or more in size must be in compliance with the County's Comprehensive Plan and/or adopted area plan."

Amendments to the Plan should never be allowed to occur in a haphazard manner. Amendments should only occur after careful review of the request, findings of fact in support of the revision, and a public hearing. The statutory requirements which guided the adoption of the Land Use Plan will be followed for all amendments as they pertain to public hearings and otherwise. The term amendment will apply to both text and map revisions.

The findings of fact shall conclude that:

1. The amendment constitutes an overall improvement to the Land Use Plan and is not solely for the good or benefit of a particular landowner or owners at a particular point in time.
2. The amendment will not adversely impact the planning area as a whole or a portion of the planning area by:
 - a) Significantly altering acceptable land use patterns to the detriment of the plan,
 - b) Requiring public expenditures for larger and more expensive public improvements to roads, sewer, or water systems than are needed to support the prevailing land uses,
 - c) Adversely impacting existing uses because of increased traffic.
 - d) Affecting the livability of the area or the health and safety of the residents.
 - e) Adversely impacting the natural environment or scenic quality of the area.
3. The amendment is consistent with the overall intent of this Land Use Plan.

Amendments to the Land Use Plan may be initiated by the County or may be requested by private individuals or agencies.

It shall be the burden of the party requesting the amendment to prove that the change constitutes an improvement to the plan. It shall not be the burden of the County to prove that an amendment should be denied.

Related Planning Elements:

Closely related to land use planning are the concerns for the protection of the natural environment and for facilities to support the desired land use patterns. This section briefly addresses the following elements as they relate to the Land Use Plan.

- Environmental Conservation
- Transportation
- Facilities and Services

Environmental Conservation

There are four general conditions within Maricopa County which deserve consideration of the application of environmental protection measures. These include floodplains and drainageways, mountainsides where slopes exceed 15 percent, areas within the Palo Verde-Saguaro Community and areas impacted by airport operations. Floodplains and drainage ways require protection or restrictive development standards to minimize destruction of property during periods of flooding. Areas of steep slopes (greater than 15 percent) should be subjected to minimal development due to the potentially destructive nature of cut and fill operations that are often necessary for providing property access and building pads.

The Palo Verde-Saguaro Community represents the stereotypical desert environment and the natural beauty associated with arid landscapes. Although development can be compatible with Palo Verde-Saguaro Communities, it must usually be maintained at relatively low densities (not much greater than 2.0 du/acre), and the developments must be sensitively designed so that the image of the Palo Verde-Saguaro Community is retained.

In many instances within Maricopa County, the Palo Verde-Saguaro Community exists in, or near, areas of steep slopes. Therefore, development restraints that are intended for either steep slope or Palo Verde-Saguaro Communities will be compatible with the other situation.

Most of the designated open space within the Queen Creek area exists along major irrigation canals and major wash, Sanokai and Queen Creek Wash. These spaces will be encouraged to be developed as linear parks providing nonvehicular access

throughout the planning area and if there is pressure for development of certain lands, amendments to the Land Use Plans must be made prior to approving development.

The amendment process can then include preparation of a Development Master Plan which can be approved under terms that will assure environmentally sensitive design.

Transportation

The Land Use Plan illustrates only principal arterial streets. These streets include Rittenhouse, Germann, Ocotillo, Riggs, Power, Ellsworth and Higley. The principal arterial streets will carry the majority of trips into and out of the area. Other streets will certainly be necessary as the area develops. Although other arterial streets are not depicted, the County will continue its policy of requiring the standard, 110-foot or 130 foot right-of-way for major arterials for section line (arterial) roadways unless, as part of a planned development, an equally efficient transportation system is adopted. In such a case the County will require 110 feet of right-of-way (or greater) for the street or streets that were approved to substitute for the section line roads.

Collector and local level streets will make up the remainder of the vehicular transportation system, with collector streets being generally located on or near the half-section lines. An adequate collector system will be necessary to help relieve potential congestion on the arterial streets.

In addition to providing collector streets to relieve arterial street congestion, careful consideration should be given to access onto arterial streets. Arterial streets should be intended to primarily move traffic. A multitude of access points along an arterial street, particularly in commercial areas will severely restrict traffic flow and traffic volumes. **Table-15** illustrates the general design principles of the arterial, collector, and local street system. When reviewing development requests, each street's intended function and the function's relationship to access control should be considered. **Table-16** provides recommended minimum driveway spacing to insure proper street function. The driveway spacings do represent minimums, and additional spacing may be necessary under certain circumstances.

Serious consideration should be given to minimizing the proliferation of commercial intersections. Linear, or "strip" commercial development along arterial streets should be prohibited. For arterial streets adjacent to residential development, reverse fronting lots should be provided so that direct access to the arterial streets from individual driveways is eliminated.

Facilities and Services

For much of the development within the Queen Creek Planning Area, a full compliment of facilities and services will not be required and is usually not expected by the prospective resident, with the exception of park and recreation, law enforcement and fire protection services. This situation will generally apply to developments where densities remain less than 1.0 du/acre as in the Rural Residential categories. However, the County will be faced with reviewing major developments where densities exceed 1.0 du/acre and are more urban in nature. In these situations, community sewer and water service is required and other facilities expected, depending upon the actual character and magnitude of the development. Although each development must be considered on its own merits, **Table-17** should be used as a reference when determining and sizing necessary facilities for a given development.

TABLE-15**Functional Classification Definitions**

Category	Primary Function	Degree of Private Access Control
Freeways	Traffic Mobility	Total Control
Expressways	Traffic Mobility	Very High
Principal Arterial Streets	Traffic Mobility	High
Arterial Streets	Traffic Mobility	Moderate
Collector Streets	Mobility/Accessibility Transition	Moderate
Local Streets Accessibility	None	

TABLE-16**Minimum Driveway Spacing
(Centerline to Centerline)**

Facility Spacing (Feet)	Land Use	Minimum
Principal Arterial	Commercial, High Density/Activity	200
	Industrial/Office Park, Low to Moderate Activity	275
Arterial	Commercial, High Density/Activity	150
	Industrial/Office Park, Low to Moderate Activity	230
	Multi-Family Residential, Low to Moderate Activity	150

Source: Adapted from "Guidelines for Control of Direct Access to Arterial Highways", FHWA.

TABLE-17

Facilities Space Standards

Type	Space Requirements	Source
<u>PARKS AND RECREATION FACILITIES</u>		
General Recreational Standard	10 Acres*/1,000 persons (Does not include regional parks)	National Parks and Recreation
Individual Park Type Standards		National Parks and Recreation
Playgrounds	1.5 acres/1,000 persons	
Neighborhood Parks	2.0 acres/1,000 persons	
Playfields	1.5 acres/1,000 persons	
Community Parks	3.5 acres/1,000 persons	
Indoor Recreation Center	1.5 acre/1,000 persons	
Golfing	1 18-hole course/50,000 persons	
Swimming	1 outdoor pool/25,000 persons	
<u>PUBLIC SAFETY FACILITIES</u>		
Law Enforcement	400 s.f./1,000 persons (Does not include garage space)	Colorado Division Impact Assistance
Fire	800-1,000 s.f./1,000 persons (Four-minute response time)**	Colorado Division Impact Assistance
<u>GENERAL SERVICE FACILITIES</u>		
Administrative (Branch County Offices)	800 s.f./1,000 persons	Colorado Division Impact Assistance
Library	700 s.f./1,000 persons (1,000 s.f. minimum)	National Library Association
<u>EDUCATION FACILITIES</u>		
Elementary School	8-12 acres, 1 school/1,500-5,000 persons	U.S. Department of Health Education and Welfare; Urban Planning and Design Criteria, 3rd Edition
Junior High School	20-25 acres, 1 school/1,000-16,000 persons	
Senior High School	30-45 acres, 1 school/14,000-25,000 persons	

* Standard is highly variable and dependent upon community values.

** Dependent upon factors of water availability, storage and flow; trained personnel; equipment response time; building types, codes.

GLOSSARY

acre feet: The amount of water required to cover one acre of land one foot deep; or 325,851 gallons.

affordable housing: Housing whose cost (rent or mortgage plus tax and insurance) is not more than 25 percent of the occupant's gross income.

air pollutant emission: Discharges into the atmosphere, usually specified in terms of weight per unit of time for a given pollutant from a given source.

alluvial: A general term for the sediments laid down in river beds, floodplains, lakes, fans at the foot of the mountain slopes, and estuaries during relatively recent geologic times.

annex: To incorporate an area/territory into a city, service district, etc.

aquifer: A geologic formation that stores, transmits, and yields significant quantities of water to wells and springs.

area plan: Plans adopted by Maricopa County which cover specific subareas of the unincorporated County. These plans provide basic information on the natural features, resources and physical constraints that affect the development of the planning area. They also specified detailed land use designations which are then used to review specific development proposals and the plan services and facilities.

arterial: A street providing traffic service for large areas. Access to adjacent property is incidental to serving major traffic movements.

artifact: A simple object (such as a tool or ornament) showing early human workmanship or modifications.

available water supply: The amount of water a soil can hold which is available for plants.

average daily traffic (ADT): The amount of traffic that passes any given intersection within a 24-hour time frame.

candidate species: Those species or subspecies for which threats are known or suspected, but for which substantial population declines from historical levels have not been documented (though they appear likely to have occurred).

carbon monoxide (CO): A colorless odorless very toxic gas that burns to carbon dioxide with a blue flame and is formed as a product of the incomplete combustion of oxygen.

Comprehensive Plan: A master or general plan containing guidelines for growth and development of the land within a jurisdiction, and coordinating policies affecting public services, benefits and regulations.

corrosivity: A soil's capacity to induce chemical reactions that will corrode or weaken metals and concrete.

critical habitat: Key land areas used by wildlife for forage, reproduction or cover.

cultural resource: Cultural resources are the tangible and intangible aspects of cultural systems, living and dead, that are valued by a given culture or contain information about the culture. Cultural resources include, but are not limited to, sites, structures, buildings, districts and objects associated with or representative of people, cultures and human activities and events.

decibel (dB): A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

dependent species: A species for which a habitat element (e.g. snags, vegetative type) is deemed essential for the species to occur regularly to produce.

developed recreation site: Distinctly defined area where facilities are provided for concentrated public use (e.g. campgrounds, picnic areas, boating sites, and interpretive facilities).

dwelling unit: Any building or portion thereof, including a mobile home or portion thereof which contains living facilities, including provisions for sleeping, eating, cooking and sanitation as required by the Development Code and Uniform Building Code, for not more than one family.

endangered species: Any species listed as such in the Federal Register which is in danger of extinction throughout all or a significant portion of its range unless conservation efforts are undertaken soon.

flood hazard areas: Areas in an identified floodplain.

floodplain: The lowland and relatively flat areas that are subject to a 1 percent (100-year recurrence) or greater chance of flooding in any given year.

game species: Any species of wildlife or fish for which seasons and bag limits have been prescribed and which are normally harvested by hunters, trappers, and fishermen under state or federal laws, codes and regulations.

goal: A goal describes a desired state of affairs. It is the broad public purpose toward which policies and programs are directed. Since it is a general statement, more than one set of actions could be taken in achieving the goal.

groundwater: Water beneath the earth's surface and stored in aquifers, accumulating as a result of recharge and serving as the source of springs, wells, etc.

habitat: The sum of environmental conditions of a specific place that is occupied by an organism, a population or a community.

household: The person or persons occupying a housing unit.

housing unit: A house, apartment, mobile home or trailer, group of rooms, or single room occupied as a separate living quarter or, if vacant, intended for occupancy as a separate living quarter. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall.

incorporated city: Area(s)/neighborhood(s) joined together for the purpose of self-government.

infilling: Development of vacant or underutilized parcels within urban areas.

infrastructure: The basic facilities on which the continuance and growth of a community depends such as roads, schools, power plants, transmission lines, transportation and communication systems.

ISO rating: A numerical value published by the Insurance Services Office (ISO) which classifies fire suppression agencies and districts throughout the United States for the purpose of establishing the basis for fire insurance rates. The point scale ranges from 1 to 10, with one representing the best rating for lower insurance rates.

landfill: A disposal site which disposes of solid wastes on land. Wastes are deposited and compacted. At specific intervals, a layer of soil covers the waste and the process of deposit and compaction is repeated without creating nuisances or hazards to public health or safety. The purpose is to confine the

wastes to the smallest practical area, to reduce them to the smallest practical volume.

land use: The primary or secondary use(s) of land such as family residential, multi-family residential, commercial, industrial, agriculture, etc. The description of a particular land use should convey the dominant character of a geographic area, and thereby establish the types of activities which are appropriate and compatible with primary use(s).

Ldn, day-night noise level: The average equivalent A-weighted sound level during a 24-hour day obtained by adding ten decibels to the hourly noise levels measured during the night (10 p.m. to 7 a.m.). In this way, Ldn takes into account the lower tolerance of people for noise during nighttime periods. Ldn noise level measurements are typically plotted onto a map to identify noise contours around a significant noise generator (e.g. freeways, airports, etc.).

manufactured housing: A dwelling unit installed at the building site by connecting one or more segments which have been made in a manufacturing facility located off of the site. A manufactured home is built in compliance with the federal Manufactured Housing Construction and Safety Standards Act of 1974.

median: The mid-point in a range of numbers.

mobile home: A movable, factory-built home, built prior to the 1974 federal Manufactured Housing Construction and Safety Standards Act.

National Register of Historic Places: A listing maintained by the U.S. National Park Service of areas which have been designated as historically significant. The Register includes places of local and state significance, as well as those of value to the nation in general.

neighborhood park: A recreation site developed for active and passive activities which is designed to serve one or a few neighborhoods within a short walking or driving distance to the park site. Typical equipment and facilities in a neighborhood park can include a mix of playground equipment, playing fields, picnic tables, landscaping and on-site parking. Neighborhood parks are generally smaller than a community park, and they lack the variety of recreation experiences available in a larger park.

noise exposure contours: Lines drawn about a noise source indicating constant energy levels of noise exposure.

nongame: Species of animals which are not managed for sport hunting.

nonmotorized recreation: Recreational opportunities provided without the use of any motorized vehicle. Participation in these activities travel by foot, or horseback, etc. Bicycle riding is generally included under nonmotorized recreation, but some land management agencies may restrict their use.

objective: An objective is a specific statement of the desired result of public action. An objective should be measurable, or precise enough so the community can determine when they have reached the objective. Objectives may define intermediate steps toward a goal or may address a single aspect of the goal.

open space/open space use: Open space use means the current employment of land, the preservation of which conserves and enhances natural or scenic resources, protects streams and water supplies or preserves sites designated as historic pursuant to law.

park and ride: A voluntary system where participants drive to a central location in order to carpool or gain access to public transportation to another location.

particulates: Small particles suspended in the air and generally considered pollutants.

permeability: Rate at which water runs through soil.

policy: A policy is a statement of government intent against which individual actions and decisions are evaluated. The wording of policies conveys the level of commitment to action: policies which use the word "shall" are mandatory directives, while those using the word "should" are statements of direction to be followed unless there are compelling reasons to do otherwise.

population density: The number of people in a given area. The number may be obtained by multiplying the number of dwellings per acre by the number of residents per dwelling.

potable: Water suitable for drinking.

protected species: Any species or subspecies subject to excessive taking and with significant threats or declining populations making it illegal to take them under the auspices of a hunting or fishing license.

raptor: A bird of prey such as eagle, hawk or owl.

rare species: One that, although not presently threatened with extinction, is in such small numbers throughout its range that it may be endangered if its environment worsens.

regional park: A recreation site, typically larger than 100 acres, developed for diversified use by large numbers of people. Regional parks are intended to serve all residents of the County as compared to neighborhoods or smaller communities. Regional parks can accommodate active and passive activities, and special facilities including boat ramps, shooting ranges, zoos, etc.

response time: The time interval between the receipt of a request for public service or assistance, and the arrival of the service provider. Typically, response time measures the ability to get emergency service to a specific location, with delays attributed to dispatch time, driving distance, traffic conditions, ability to find the specific location, and the backlog of service requests.

rideshare: A techniques employed in traffic reduction programs which encourages commuters to carpool to work or other designations (e.g. shopping, medical visits, etc.).

right-of-way: The width of publicly dedicated streets, including the pavement, sidewalks, and planting area; the width between the property lines on either side of the street.

rural: When used in the context of this Plan, rural areas shall be those areas intended for residential development on no greater than one acre lots, with limited supporting nonresidential uses.

scenic area: An area of outstanding or unique visual quality.

scenic corridor: A roadway with recognized high quality visual amenities that include background vistas of mountains, open country, or city.

shrink-swell potential: Capacity of a soil to expand or shrink as the moisture is increased or decreased.

subdivision: Any land, vacant or improved, which is divided or proposed to be divided into five or more lots, parcels, sites, units or plots, for the purpose of any transfer, development or any proposed transfer or development of the original parcel.

subsidence: The gradual, settling or sinking of the earth's surface with little or no horizontal motion. Subsidence is usually the result of water extraction from

underground supplies, compaction, and not the result of a landslide or slope failure.

suburban: When used in the context of a Maricopa County Land Use Plan, suburban includes residential uses at generally two to three single family units per acre, and supportive nonresidential and public development.

threatened species: Any species or subspecies which is likely to become endangered within the foreseeable future because serious threats have been identified and populations are (a) lower than they are historically or (b) extremely local and small.

total suspended particulates (TSP): Total amount of solid material suspended in the air.

Traffic Analysis Zones (TAZ): A small geographic area within a municipal planning area designated by the Maricopa Association of Governments for the purpose of estimating and projecting population.

trip: A one-way vehicle movement that either begins or ends at the location being considered; thus, a vehicle leaves a home and later returns to it would account for two trips under this designation.

urban: When used in the context of a Maricopa County Land Use Plan, urban includes development of three or more residential units per acre and comparable nonresidential and public development.

visual resource: The composite of basic terrain, geologic features, water features, vegetative patterns, and land use effects that typify a land unit and influence the visual appeal the unit may have for visitors.

wastewater: Includes sewage and all other liquid waste substances associated with human habitation, or of human or animal origin, or from any producing, manufacturing or processing operation of whatever nature.

watershed: The entire area that contributes water to a drainage system or stream.

zoning: A local ordinance that divides a community into districts to guide, control and regulate the future growth and development in order to promote orderly and appropriate use of the land.