

A PART OF THE

COMPREHENSIVE PLAN

FOR MARICOPA COUNTY

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- POPULATION
- COMMUNITY GROWTH
- EXISTING LAND USE

PREPARED BY THE
MARICOPA COUNTY PLANNING DEPARTMENT

PR-2

PART II

A PART OF THE
COMPREHENSIVE PLAN FOR
MARICOPA COUNTY, ARIZONA

- Population
- Community Growth
- Existing Land Use

By

THE MARICOPA COUNTY PLANNING AND ZONING DEPARTMENT

1964

Price: Five Dollars

MARICOPA COUNTY

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Arizona Employment Service

Roger Brady, Manager, Valley Area Transportation Study

Mr. E. H. Scofield, District Airport Engineer
Federal Aviation Agency, Phoenix

STAFF MEMBERS PARTICIPATING IN REPORT

Donald W. Hutton, Director
John W. Stansel, Principal Planner
A. Wayne Smith, Planner
John Crawford, Planner
Harold Buell, Office Engineer
Gerard Berube, Draftsman
Mont D. Bigler, Draftsman
Cleo Patterson, Typist

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PREFACE

This report is Part II of a comprehensive plan for Maricopa County. It is concerned with population growth and trends for the County as a whole, growth trends in various communities, and existing land use.

Chapter 1 discusses population growth and trends for Maricopa County and it takes into consideration findings of the 1960 U.S. Census and recent future population projections for the United States and states published by the U.S. Census Bureau. Since this study was begun Western Management Consultants were commissioned by various private and public sponsors to prepare an economic study, which is an extension and up-dating of their earlier study in 1959, and which will contain new population projections. The methodology used in this report is basically a step-down process after determining the relationship of local trends to state and national trends and projections. Therefore, future population projects contained herein may reasonably be expected to differ slightly from projections of Western Management Consultants since they are utilizing a different methodology that considers migration trends and other detailed factors and conditions. However, for purposes of general planning, the methodology contained herein should be sufficiently reliable since the major planning problem is to anticipate the direction and extent of growth that may be expected within a given geographical area and under any circumstances such projections contain inherent imponderables and limitations regardless of the methodology used to arrive at future population estimates for the County as a whole.

Chapter 2 of this report deals with community growth trends. This chapter consolidates in one place significant findings and projections for the various incorporated communities in Maricopa County where detailed land-use plans have been prepared in recent years by the County Planning Department. Such information should be of use to private agencies and individuals as well as public agencies that are concerned or have need of specific population and land use information, of relatively recent origin, for the various communities. Such information is also useful for comparative purposes.

Chapter 3 of this report deals with existing land use. This chapter is primarily concerned with general patterns of land use, quantitative trends in building and subdivisions, and trends of various types of commercial development. Insofar as feasible an attempt has been made to consider the County as a whole. However, because of the magnitude of population in the Phoenix Urban Area and availability of data considerable material has been included upon findings in the central portion of Maricopa County. This report does not contain the detailed quantitative estimates and projections found in the earlier report upon land use in the Phoenix Urban Area prepared by the City of Phoenix and Maricopa County Advance Planning Task Force in 1959, which report was based upon a detailed land-use survey of some 1,200 square miles of land. Detailed quantitative information on land use in the Phoenix Urban Area can be compiled at the completion of the land use inventory currently being completed by the Valley Area Transportation Study, which work is under the auspices of the State Highway Department.

This report has been carefully correlated with Part I of the Comprehensive Plan for Maricopa County, prepared in 1963, which dealt with the history of Maricopa County, economic trends, and major physical features that influence planning in the County.

It is intended that Part III of the Comprehensive Plan for Maricopa County will contain a future general land use plan for the County. This report, other reports mentioned herein, and a separate report on the general location, quantity, and quality of water supplies will provide information essential for the preparation of such a plan.



Donald W. Hutton
Director

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SUMMARY OF MAJOR FINDINGS

Total population for the United States has increased from 31,443,000 in 1860 to over 180,000,000 for the year 1960, the urban population of the United States comprised 19.8 percent of the total population in 1860 and accounted for 69.9 percent in 1960, indicating a tremendous movement to urban living. Population for the State of Arizona has increased from 9,658 persons in 1870 to over 1,300,000 in 1960, with its urban population increasing from 33.4 percent in 1870 to 74.5 percent for 1960.

Population movement throughout the United States has become quite active, with the migration rates for Colorado, Arizona, Nevada and California being considerably higher than the average for the rest of the nation. This indicates a general trend in major population movement to the Southwest. A secondary population movement involving non-whites indicates a general trend from the Southern states to Northern and Western states and cities; however, this movement of non-whites bypasses the State of Arizona for the most part.

In preparing population forecasts for Maricopa County a step-down ratio method was used to determine the County's population ratios to those of the state, the mountain region and the nation's population forecasts. The results of this

method of projection indicate population projections for 1980 for the United States of 252,056,000 persons, for the Mountain States, 11,670,000 which accounts for 4.63 percent of the United States; Arizona, 2,292,000 which accounts for 3.1 percent of the mountain region; and Maricopa County, 1,831,000 which will account for 62.5 percent of the state's population.

Maricopa County has 18 incorporated communities of which 5 were incorporated at the time of Arizona's statehood. Phoenix was the first city in the County to incorporate followed by Mesa, Tempe, Wickenburg, and Glendale. Population growth for each individual community within the County has been very erratic. Phoenix has been the fastest growing community, with population increasing from 1,708 persons in 1880 to a city of 513,667 in 1964; while Wickenburg, one of the oldest communities in the County, has grown very slowly from 104 persons in 1880 to 2,700 persons in 1964.

In 1964 the area of incorporated cities and towns in Maricopa County contained approximately 367 square miles, accounting for less than 4 percent of the County's total area of 9,226 square miles. Phoenix is the largest city in the County and presently contains approximately 222.6 square miles, whereas Tolleson is the smallest incorporated city with only .44 square miles. Scottsdale is the fastest growing city in area; it has expanded from .62 square miles at the time of its incorporation in 1951 to over 63 square miles in 1964. The population explosion and rapid expansion of

the city of Phoenix and its adjoining communities have created a metropolitan area and all its ensuing metropolitan problems.

Major land uses for the County as contained within this report are broken down into 4 categories: agricultural lands, urban lands, open desert lands and mountainous lands. Agricultural lands utilize approximately 860 square miles or 10 percent of the County. Urban development uses roughly 160 square miles and accounts for less than 2 percent of the County area. Open desert lands generally level in nature account for 4,186 square miles or 45 percent of the County. The remaining area of 4,120 square miles is considered to be of mountainous or rough terrain with elevations varying from 2,000 to 7,000 feet above sea level.

Residential development over the past several years has gradually extended out from the central cities such as Phoenix, Tempe, Mesa, Glendale and Scottsdale. Also several new communities have been established in various parts of the County. In this report residential development is divided into two major categories: low density and high density. Low density residential includes all single-family dwellings, duplexes and apartments where the density remains less than 20 persons per acre. This type of development accounts for approximately 95 percent of all residential development.

A study of residential building permits for the unincorporated portion of the County indicates that apartment units increased from 3.8 percent of the total housing units for 1960 to approximately 30 percent in 1963, thus indicating a trend towards higher densities for the overall urban area.

Commercial development within the central area falls into 1 of 3 categories: central business district, highway or strip commercial, and shopping centers. Detailed information concerning the first two types of commercial development was not analyzed in this report; however, a study of shopping centers reveals that there were 58 neighborhood-type shopping centers, 29 community-type shopping centers and 4 regional shopping centers located within the Phoenix Urban Area in 1964. This study indicates that a considerable amount of overlap of the service area and trade territory exists for some shopping centers. However, this report does not attempt to evaluate the economic effect of this apparent duplication of service area.

Location of industrial land in the central portion is quite scattered with the greatest concentration being located along Glendale Avenue, the Santa Fe and Southern Pacific Railroad lines and near Sky Harbor Airport. Considerable new industrial development has taken place in recent years along Interstate Highway 17. Numerous small manufacturing and fabrication facilities are located within or adjoining the downtown areas of Phoenix, Mesa, Tempe, Scottsdale and Glendale. In addition a sizable number of agricultural developments such as cotton gins and cattle feed yards are located throughout the agricultural areas of the central portion. Industrial uses provide the highest source of income for the County and employed more than 40,000 persons in 1963 of which 45 percent were engaged in aircraft and electronics.

CHAPTER 1

POPULATION

A study of population is fundamental to any physical planning. The amount of present and future population that can be expected determines the magnitude and extent of physical facilities and governmental services that will be needed. This chapter contains an analysis of past population trends with a projection of possible future trends.

National and regional population trends affect local trends to a considerable extent. Therefore, an understanding of these trends is important.

This report takes into consideration national, regional, state and local trends in births, deaths, migration, age, sex, and race.

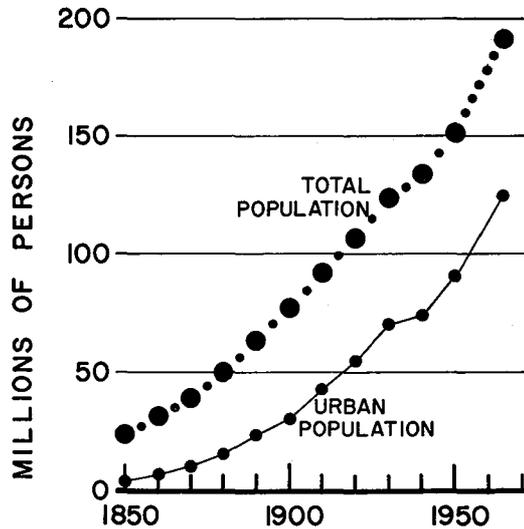
Future county population projections contained herein are based upon: the relationship of national, regional, and state trends from estimates prepared by the Bureau of Census and local natural increase and net-migration trends.

Past Growth Trends of the United States

This section discusses growth trends of the Nation.

Total Population

At the time of the first census in 1790, the population of the United States was 3,939,214 persons, most of whom resided along the Atlantic Seaboard. By 1860 this increased to 31,443,321 persons, most of whom resided east of the Mississippi River. As of June 1, 1964, the present population of the United States as reported by the Bureau of Census is 191,851,000 persons.

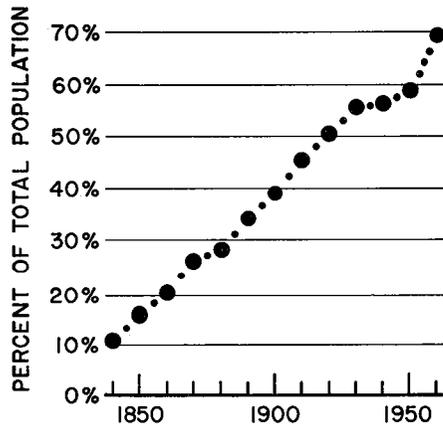


POPULATION of the UNITED STATES

Urban Population

In 1790 the United States urban population was 201,655 persons, which represented only 5.1 percent of the total population. By 1860 the urban population had increased to 6,216,518 persons or 19.8 percent of the total population. In 1910, there were 8 million more people in the rural areas than in the urban area, but by 1920 urban dwellers outnumbered rural dwellers by more than 3 million persons.

By 1960 the urban population reached over 125 million and accounted for 69.9 percent of the nation's population. The adjoining charts indicate the past trends of urban population and its percent of the nation's total.

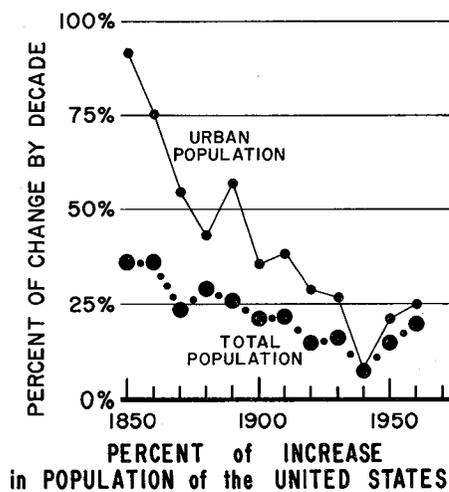


URBAN POPULATION of the UNITED STATES

Rate of Population Change

Although the total number of persons per decade has risen fairly steadily over the years, the accompanying chart shows that the rate of change over each preceding decade has generally decreased to 1940.

An upward trend has occurred since 1940 when the lowest rate of increase was reached.



PERCENT of INCREASE in POPULATION of the UNITED STATES

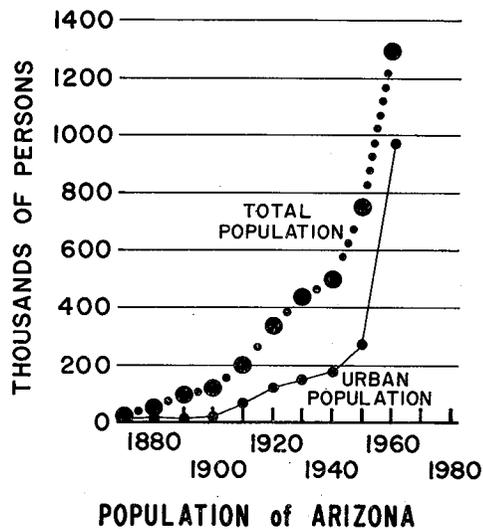
Until 1940 urban population increased at a slower rate each succeeding decade than the population for the County as a whole. Since 1940 increased urbanization is reflected in an increasing rate of urban growth.

Growth Trends of Arizona

This section discusses growth trends of Arizona.

Total Population

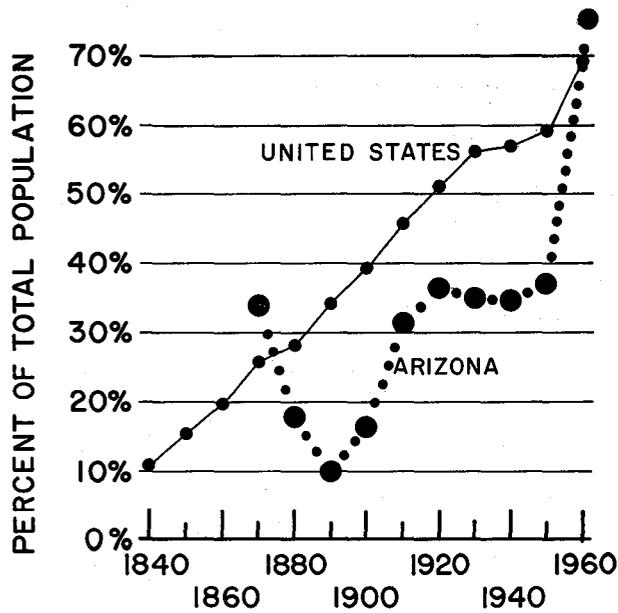
The magnitude of Arizona's growth is shown on the adjoining chart. The state grew from 9,658 persons in 1870 to 204,354 in 1910 then increased rapidly to 1,302,161 in 1960.



Urban Population

Urban population in Arizona increased steadily from 3,224 persons in 1870 to 175,981 in 1940. Between 1940 and 1960 it increased rapidly to 970,616 persons.

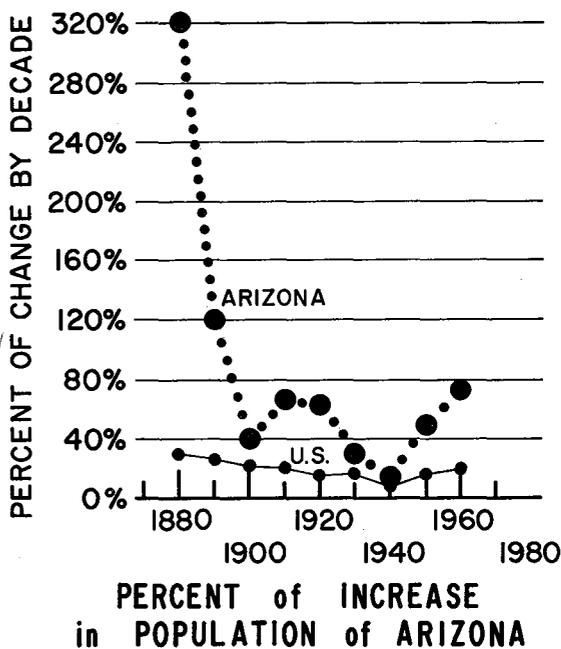
As of 1960, the urban population of Arizona amounted to 74.5 percent of its total population. By comparison the urban population of the nation amounted to 69.9 percent.



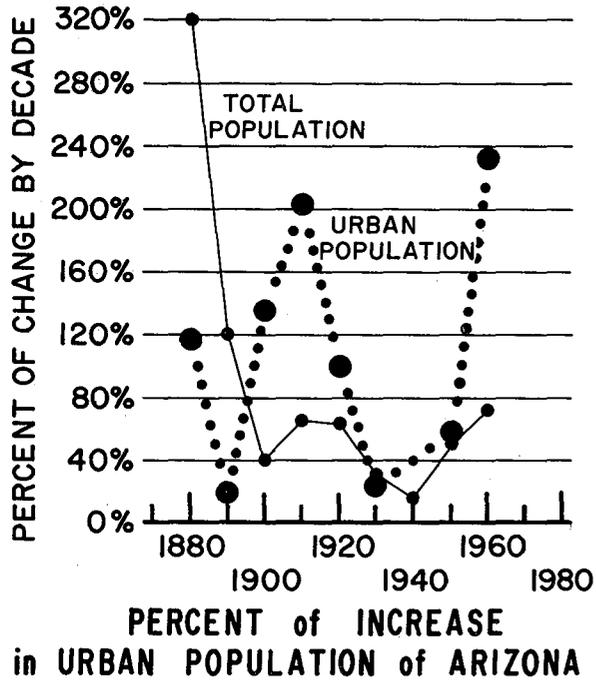
URBAN POPULATION of ARIZONA

Rate of Population Change

The decennial rate of population change for Arizona was higher than that of the United States from 1870 to 1960. Arizona's total rate of growth has been considerably higher than the national average.



Although its rate of total population growth has been steady, Arizona's urban growth rate has been very erratic compared with urban growth rates for the nation as a whole and total population increases in Arizona.



Two distinct periods mark the history of urbanization for Arizona. The first period occurred from 1890 to 1910 and the second from 1940 to 1960. The future urban growth rate is expected to level off and then decline slightly as the urban population nears 90 percent of the total population.

Population Movement

Population movement involves a change of residence from one place to another. Ordinarily, persons move to better their economic station in life or for other reasons such as retirement or health. People are prone to move during good times when money is plentiful and remain stationary during bad times. For example, during the depression of the 1930's migration within the country was very low. Since then the pace has quickened considerably; characteristics of migration have been considered in order to anticipate the number of persons who may arrive between 1964 and 1980.

Plate 1 shows in relative terms that net-migration experienced by each state during the 1950-60 decade. A positive net-migration means that more people moved into a state during the decade than those persons who moved out.

NET - MIGRATION BY STATES, 1950 - 60

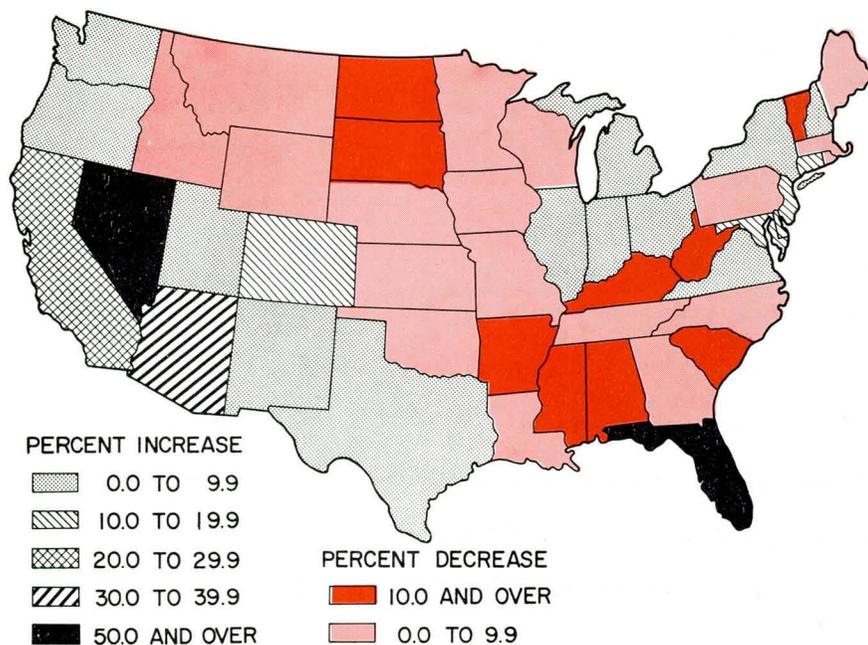


PLATE 1

Southwest Movement

The western and southwestern movement is clearly portrayed. During the last decade, all the Southwestern states from Texas to California and the Pacific States (e.g. Washington and Oregon) had a positive net-migration. The migration rates for Colorado, Arizona, Nevada and California were much higher than average and emphasize the trend of population movement.

Other sections of the country tended to have a lower net-migration rate than the Southwestern states. The New York and Washington, D.C. metropolitan areas had migration gains, as did much of the Great Lakes area. Here, the rates were low, but the migration in number of persons was high. Florida's rate of 58 percent was higher than any other state.

The Northern Rockies, the Great Plains, much of the South and most of the New England states indicate a migration loss, as shown in red on Plate 1. Economic and climatic factors appear as the principal cause of this exodus.

Non-White Movement

A secondary population movement involves the movement of Negroes from the South to Northern and Western cities. Most Northern states had a positive net-migration for non-white during the 1950-60 period, even when they showed a migration loss for total population. The Southern tier of states from Arizona to the Carolinas and Virginia all had a migration loss for non-whites during this decade.

Arizona is not within the principal path of the Negro movement. Furthermore, Arizona's Indians migrated out of the state at a 10 percent rate during the 1950 to 1960 decade.

Urban Movement

In recent years, people have moved to urban places at a high rate. Metropolitan areas have grown at a more rapid rate than smaller cities. In fact, today, almost two-thirds of the nation live in or near vast metropolitan areas. Many of the metro-urban migrants come from the smaller cities. These urban movement trends are expected to continue for many years to come.

Arizona Movement

The majority of persons who have moved to Arizona since 1940 have settled in the Maricopa and Pima County metropolitan areas. Internal movement within Arizona has been insignificant when compared to the influx from other states. The largest percentage of migration to Arizona's cities is from out of state.

In 1960 only 462,241 persons, or 36 percent of the total population, were natives of the state. The remaining 839,920 persons were born in other states and countries with about 60 percent of the non-native population originating in the central portion of the United States.

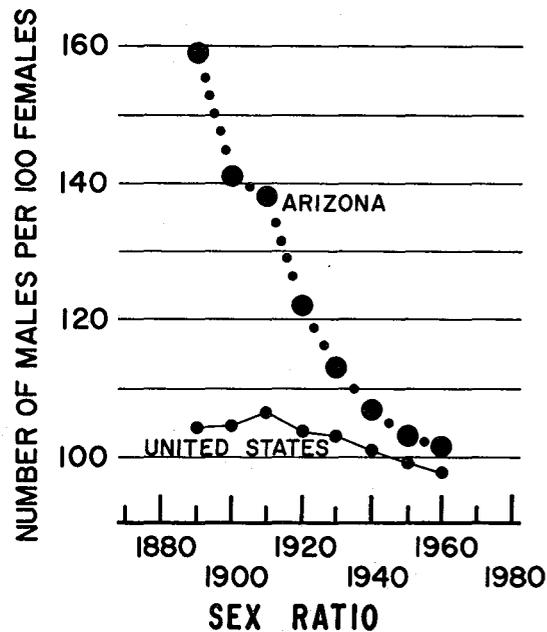
A surprising number of Arizona natives have left the state. By 1960 the U.S. Census indicated that 242,044 had left. The primary destination of this movement has been to California. In 1960, a 3 to 1 ratio existed of persons from Arizona living in California compared to the number of Californians living in Arizona.

Population Characteristics

The principal characteristics of a population pertain to sex, age, race, and household composition. Although characteristics do not directly cause population growth, they are often associated with growth and the prevalence of a specific characteristic may cause growth to take a certain shape or form. Information on population characteristics is useful in determining population needs for various type of facilities.

Sex Ratio

Unites States: Sex ratio is defined as the number of males per 100 females. During the early years of the United States the sex ratio remained fairly constant at about 104. A high level of male immigration from Europe kept the ratio over 100. Since 1910, immigration to this country has been insignificant, and the sex ratio started to drop at that time.

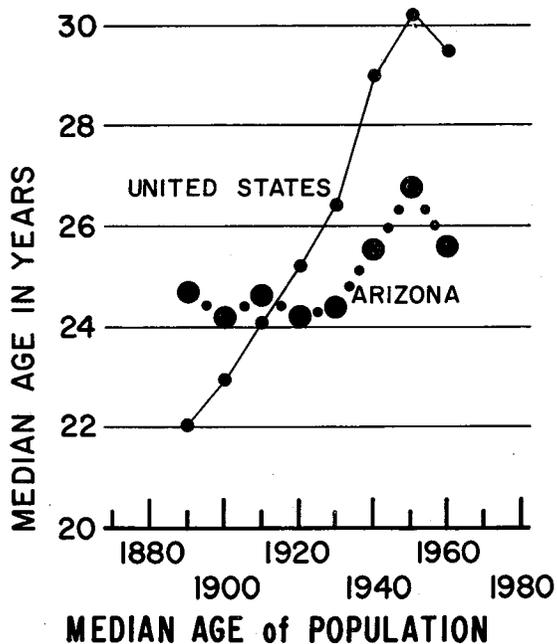


Arizona: In its early years, the Arizona sex ratio was very high but has dropped sharply to be only slightly above the 1960 national average.

Today, our aging population is the principal cause of the lowering trend in the sex ratio. Mortality rates for elderly women have declined somewhat compared to the little or no drop for elderly males. Such divergence in mortality is partly natural, and so the sex ratio decline will continue during the foreseeable future - for the nation, state and county. Because of favorable employment opportunities for women, urban places tend to have a lower sex ratio than rural places. Maricopa County's sex ratio is slightly lower than that of the state of Arizona as a whole.

Median Age

United States: During the previous century the median age of the nation's population steadily increased to reach 22.9 by 1900. This trend continued until 1950 when a high age of 30.2 was reached. Steadily decreasing birth and mortality rates were the primary cause for the continuation of this trend. During 1950-60, a reversal occurred which lowered



the age to 29.5 by 1960. Unusually low birth rates during the 1930-40 period coupled with high birth rates from 1940 to 1960 accounted for this reversal. It is expected that the median age will increase slightly in the future because of the ever increasing longevity and lower birth rates. Probably the 1970 median age level will resemble that of 1960 as it will take a while for the trend to reverse again.

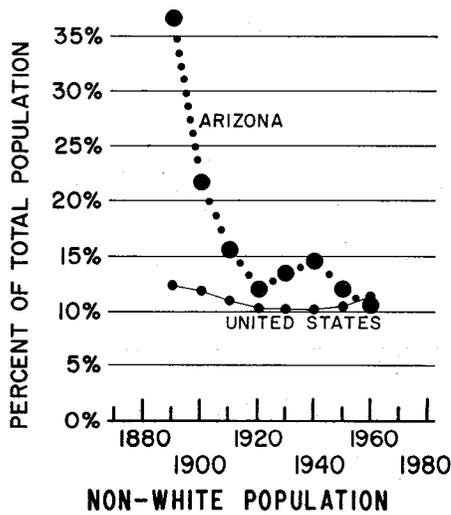
If in-migration to Arizona continues at a high pace the median age will remain low as long as the migrants are young adults, especially families with children. A complete switch to elderly migration would obviously raise the age level, but this movement has not been significant in the past, and it is doubtful if Arizona's median age will exceed the national average within the foreseeable future. An increasingly higher median population age could result if there were a complete reversal in net-migration trends such as an exodus of young adults seeking job opportunities elsewhere.

Non-White

United States: The percentage of non-white population for the United States and Arizona has remained somewhat constant, although higher non-white birth rates have caused a slight rise since 1930. This trend is expected to decline slightly in the future.

Arizona: Arizona experienced a considerable drop in percentage from 1890 to 1920 as the statewide population developed to maturity. As indicated earlier, most of Arizona's in-migration has been white and is expected to continue. Therefore, the non-white percentage should continue to drop during the foreseeable future. Whether non-white migration will ever become a positive factor

depends upon employment opportunities that may become available in the metropolitan areas.

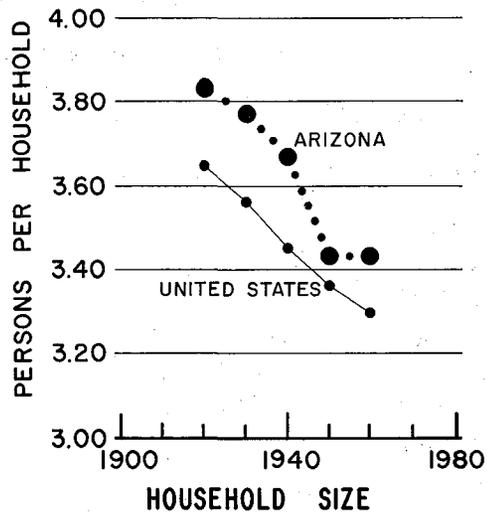


In the past, birth and death rates have been higher for non-white than for whites. This difference is disappearing and ultimately becomes an unimportant factor in projecting birth and death rates. However, currently it remains as an important factor for Arizona as a whole, particularly in the case of the Indian population.

Household Size

The size of households has tended to decline for both the state and nation, although Arizona had a slight upturn from 1950 to 1960. The state has always been well above the national average.

Urban places tend to have smaller households than rural areas. Continued urbanization of the nation and state will tend to lower the future household size, especially in metropolitan areas such as Maricopa County.



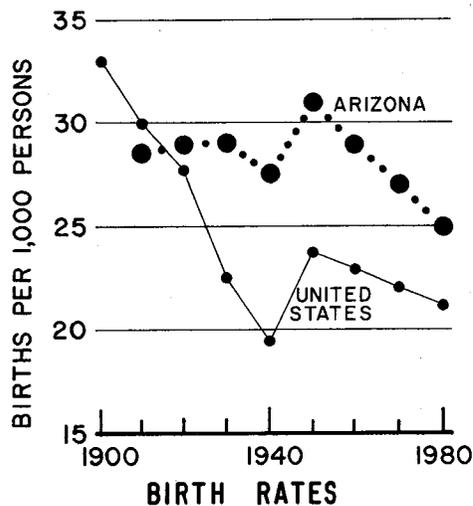
Household size plays an important part in the refinements of land-use planning, particularly for residential use. The composition of the population clearly affects the average household size whether it be by age groups, income level, percent married, or percent non-white. A combination of all these characteristics influences detailed community and neighborhood unit planning.

Population Growth

The basic factors of population growth are natural increase and net-migration. Natural increase refers to the number of births minus the number of deaths and the result is usually a positive value. However, because of prevailing individual characteristics it is preferable to analyze birth and death rates separately - rather than to combine them as a natural increase rate. Net-migration equals the number of in-migrants minus the number of out-migrants, and can be either positive or negative. Unfortunately, sufficient information is not available to discuss in and out-migration separately at any length; therefore, the migration factors will be discussed under the single-heading of "net-migration."

Birth Rates

United States: The birth rate of the United States declined constantly during the previous century, from about 55 in 1800 to 33 in 1900.¹ This degree of decrease remained constant until 1920 when a value of 27.7 was reached. The adjoining chart shows a sharper decline occurred during the 1920's and 30's, and the rate dipped to a low 19.4 in 1940. The post-war baby boom reversed the downward trend and raised the rate to 24.1 in 1950. During the 1950's the rate remained high - declining slightly to 23.7 by 1960.



The drop in the U.S. birth rate from 1920 to 1940 was most unusual and has been popularly attributed to a result of the depression years. However, the decrease during the prosperity of the 1920's was greater than the decrease of the 30's so economic factors do not fully control the trends of the birth rate. In many respects, the rise from 1940 to 1950 merely put the long-range trend back to the proper level. By extending the 1800-1900 curve to 1950 on a straight-line basis a rate of 22 becomes the result. Consequently, the "high" rates of the 1940's and 50's were not

¹ Annual births per 1,000 population, Our Growing Population, Page 2.

terribly high after all, and the birth rate of 1960 was slightly above a "normal" value. Future birth rates are expected to decline slightly and then hold constant between 20 and 22 per thousand.

Arizona: The trends for Arizona have paralleled national trends since 1930, with the exception that the rates have been above the national average.

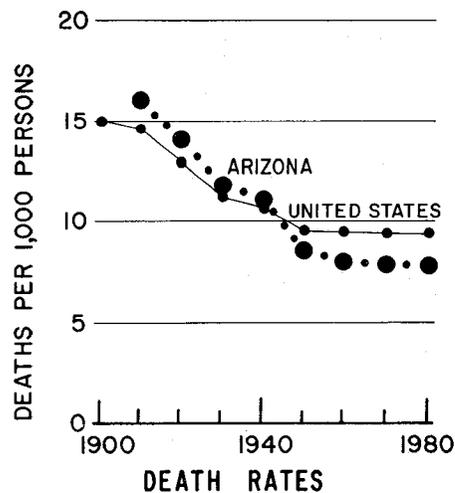
With smaller family size and a concentration of elderly population living in the city, the urban birth rates are usually less than those of rural areas. As the nation and Arizona become more and more urbanized, and the percentage of elderly persons increases, the future birth rates should lower, and metropolitan areas such as Maricopa and Pima Counties will put Arizona's rate down near the U.S. average.

Death Rate

United States: The death rate of the United States declined from about 15² in 1900 to 9.5 in 1950. As shown by the adjoining chart, the degree of decline began to lessen in 1930 and a level-off point seems to have been reached. Mortality rates by specific ages have continued to show a decline in recent years so the age is currently increasing. However, the higher proportion of elderly persons will in turn have a tendency to raise the over-all death rate. The death rate will level-off somewhere, and a static condition seems to be in prospect for the near future.

² Annual deaths per 1,000 population, Our Growing Population, Page 2, Bureau of Census U.S. Department of Commerce, June 1961.

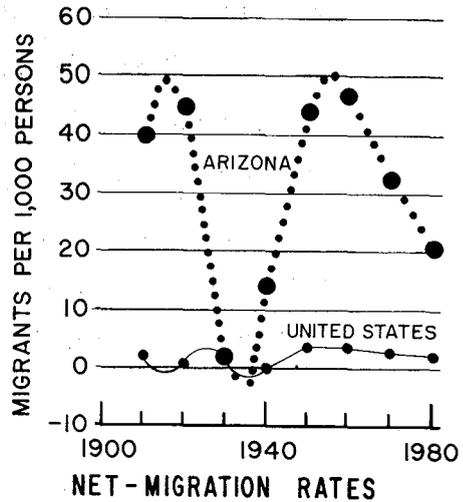
Arizona: Arizona's situation greatly resembles that of the whole nation. Because of improved living conditions the death rate in cities is now less than that of rural areas. A relatively high proportion of elderly males in rural areas has partly accounted for the higher rural rate. Maricopa County's rate is less than that of Arizona and will probably remain slightly under the statewide average.



Arizona's youthful population should keep its death rate below the U.S. rate for some time to come. As the state becomes more populated the sex ratio will continue to lower, which will tend to lower the death rate. Also, a prospective lower percentage of non-white will tend to lower the death rate. However, as in the case of the nation as a whole, the relative increase in elderly persons will offset these factors, and Arizona's death rate should remain near the existing value.

Net-Migration

United States: Immigration to the United States has occurred at a low rate since 1910. In fact, at times the out-migration has exceeded the in-migration. However, the rate has been positive since 1940. In the future, in-migration is expected to remain at a constant low level.



Arizona: Migration to Arizona has undergone three explosive periods. First, there was a period of initial settlement from 1870 to 1890 (mining and ranching period); second, a period of continued settlement from 1900 to 1920 (introduction of large-scale irrigation projects); and third, a period of intensive urbanization from 1940 to the present day (in the Phoenix and Tucson areas).

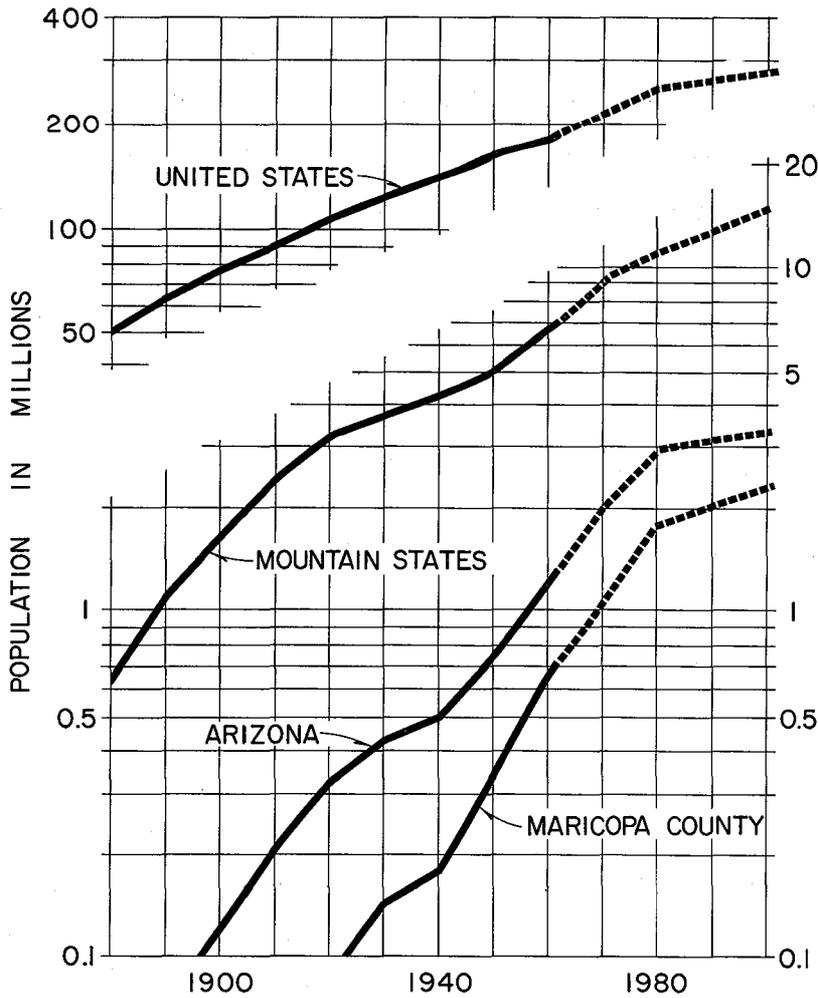
All states of the United States have undergone similar periods of explosive initial settlement, and most have experienced a rejuvenation period of industrialization and urbanization. However, Arizona's period of initial settlement was not as significant nor as prolonged, and later in time as most states. Consequently, Arizona's population was small to begin with at the start of the present century. Poor transportation, arid conditions and hot weather obviously kept Arizona's population low in the early days. Furthermore, during the 1800's more favorable areas existed for settlement than the Southwestern deserts. Only when most other parts of the country became heavily populated did large-scale migration come to the Southwest.

With a modern resurgence to movement and urbanization occurring over the entire nation, Arizona has experienced a population explosion of considerable significance since 1940.

Although a future drop in the rate of net-migration is expected the total number of persons involved will remain nearly the same as in the 1950-60 decade.

As a rule, metropolitan and large urban places have gained migrants in recent years, with rural areas and small urban places losing migrants. Most rurally oriented states have had out-migration, while most urbanized states have gained migrants. Arizona's experience has been slightly different than the above generalization because in 1940 the state was rurally oriented - yet migration came into the state. However, most of the movement went to Maricopa and Pima Counties thereby creating metropolitan conditions. The remaining non-metropolitan counties of Arizona have had only slight gains in migration since 1940, although this mere condition of positive net-migration in the outlying counties for the 1950-60 period is a strong mark for Arizona's future which in turn will bolster, rather than diminish, the economy of Maricopa County. Also, it must be acknowledged that Arizona has no heavily populated rural areas to feed migrants into the metropolitan centers. Therefore, the bulk of the population increase must originate from outside the state - a condition that will depend upon a prosperous national economy.

Following is a brief discussion of trends and forecast, area by area, using the step-down ratio method, except for the fundamental U.S. forecast which uses the natural increase



POPULATION PROJECTIONS

PLATE 2

ESTIMATED FUTURE POPULATION TO 1985
 UNITED STATES - MOUNTAIN STATES - ARIZONA - MARICOPA COUNTY

UNITED STATES ⁽¹⁾			MOUNTAIN STATES ⁽²⁾		
JULY 1 TO JUNE 30 YEAR	POPULATION AT BEGINNING OF PERIOD	PERCENT INCREASE	POPULATION AT BEGINNING OF PERIOD	PERCENT OF UNITED STATES	
1960-61	180,676,000	—	6,920,000	3.83	
1965-66	195,129,000	8.0	7,942,000	4.07	
1970-71	211,430,000	8.4	9,091,000	4.30	
1975-76	230,415,000	9.0	10,300,000	4.47	
1980-81	252,056,000	9.4	11,670,000	4.63	
1985-86	275,622,000	9.3	13,230,000	4.80	

ARIZONA ⁽³⁾				MARICOPA COUNTY ⁽⁴⁾		
JULY 1 TO JUNE 30 YEAR	POPULATION AT BEGINNING OF PERIOD	PERCENT OF MOUNTAIN STATES	PERCENT OF UNITED STATES	POPULATION AT BEGINNING OF PERIOD	PERCENT OF ARIZONA	PERCENT OF UNITED STATES
1960-61	1,322,000	19.1	0.73	677,000	51.2	0.37
1965-66	1,684,000	21.2	0.86	919,000	54.6	0.47
1970-71	2,118,000	23.3	1.00	1,226,000	57.9	0.58
1975-76	2,493,000	24.2	1.08	1,501,000	60.2	0.65
1980-81	2,929,000	25.1	1.16	1,831,000	62.5	0.73
1985-86	3,440,000	26.0	1.25	2,229,000	64.8	0.81

(1) SERIES, A, "HIGH" PROJECTION, CURRENT POPULATION REPORT, SERIES P-25, NO. 279, FEB. 4, 1964.
 (2) TABLE A, APPENDIX.

(3) TABLE B, APPENDIX.
 (4) TABLE C, APPENDIX.

TABLE 1

and net-migration method.³ The future step-down ratios projected for Arizona and Maricopa County have included basic assumptions and trends discussed in the previous sections.

United States

Ordinarily, death and net-migration rates to the United States are not subject to a great deal of change and have minimum effect upon a population forecast for a twenty-year period. Fluctuation in the birth rate remains as the primary question, consequently a "high" and "low" birth rate estimate produces a "high" and "low" population forecast.⁴

The United States "high" forecast assumes the birth rate will remain near 25 persons per 1,000 up to 1980, producing a total population of 252,055,000; the "low" forecast assumes the birth rate will gradually drop to 20 by 1980 producing a population of 233,140,000.

For planning purposes, the high forecast has been used in the step-down projection of population as indicated by Table 1.

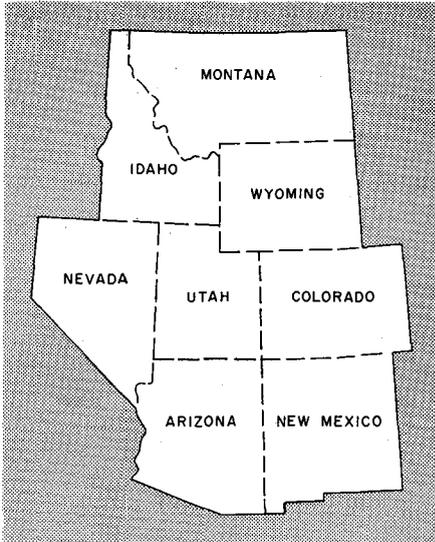
"Population Projections" as shown on Plate 2 indicates the high population for the Mountain States, Arizona and Maricopa County in relation to that for the United States. The dashed lines reflect the projected trends in each of the above mentioned areas through the year 2000.

³ Series A and D, Current Population Report, Bureau of Census, Series P-25, No. 279, February 4, 1964.

⁴ Ibid.

Mountain States

Arizona is a part of the Mountain States Census Division shown on the accompanying chart. Throughout most of its history (since 1870), the Mountain States have made population gains on the United States total. In 1870 the Division had 0.82 percent of the nation's population while by 1960 the percentage had increased to 3.83.⁵ Only during the 1920-30 period did a reversal of this upward trend occur.



MOUNTAIN STATES REGION

In recent years, the birth and net-migration rates of the Mountain States have exceeded those of the national average. It is expected that the Division will continue to gain percentage wise on the United States, reaching a percentage of 4.63 by 1980.⁶ With a 1980 United States forecast of 252,056,000 the Mountain States Division forecast then becomes 11,670,000.

Arizona

Arizona's population has increased as a percent of the Mountain States in a consistent manner, from 3.1 percent

⁵ See Table "A", Appendix

⁶ Ibid.

in 1870 to 19.1 percent in 1960.⁷ Only during the 1880-1900 period did Arizona fail to gain on the Mountain States Census Division, although the gain during the 1930-40 period was insignificant.

In recent years, the birth and net-migration rates of Arizona have exceeded those of both the Mountain States and the United States. Therefore, it is assumed that Arizona will continue to gain on the Division at least until 1980 when a percentage of 25.1 should be reached.⁸ With the Mountain States forecast for 1980 being 11,670,000 persons then the Arizona forecast becomes 2,929,000.

It must be recognized that the main problem or question posed in preparing an Arizona forecast lies in the estimate of future net-migration, which may vary considerably. Although, the birth rate is considerably important, its rate of change will be less erratic. Based upon existing trends and the birth rate decline from 28.2 in 1960 to 24.5 in 1980, accompanied by a net-migration rate decline from 34.3 in 1960 to 13.0 in 1980, Arizona's population would then reach approximately 3,300,000 by 1980. This compared to the step-down ratio method used, provides a value slightly higher which could be considered as an upper ceiling for the state's forecast.

MariCopa County

The population of MariCopa County has consistently increased as a percent of Arizona, from 14.1 percent in 1880 to 51.2 percent by 1960.⁹ Since 1910, the County has

7 See Table "B", Appendix

8 Ibid.

9 See Table "C", Appendix

made sizeable percentage gains on the state with the passing of each ten-year period.

Although the birth rate of the County has been less than that of the state, the net-migration rate has been considerably higher; therefore, in recent years the County's population has grown faster than the state as a whole. This condition is expected to continue to 1980 when the County should account for 62.5 percent of the state's population.¹⁰ Thus with a statewide forecast of 2,929,000 persons for 1980 the County forecast becomes 1,831,000.

¹⁰ See Table "C", Appendix

CHAPTER 2

COMMUNITY GROWTH

Community population and land area growth are the major indicators reviewed by this chapter. Attention is paid to incorporated cities and towns because they presently include over 80 percent of Maricopa County's population.

Wickenburg, Phoenix and Tempe are the oldest communities in the County,¹¹ although limited settlement occurred in widely scattered places such as Gila Bend and Cave Creek in the days of earliest development. Phoenix was the first city in the County to incorporate, doing so in 1881. Mesa and Tempe were incorporated a few years later, in 1890 and 1894, respectively. At the time of Arizona statehood, in 1912, there were five incorporated places in the County; as Wickenburg and Glendale incorporated in 1909 and 1910, respectively.

Since 1912 the number of incorporated cities and towns has grown to the current number of eighteen, with Surprise, Youngtown, Paradise Valley and Gila Bend being incorporated after the 1960 census.

Population Growth of Cities and Towns

The population growth for each incorporated place is shown on Table 2. Information is shown thereon from the earliest census data in 1880 to the latest estimates of 1964. Statistics for all eighteen cities and towns were utilized when available, including estimates prior to a town's incorporation.

¹ Part I of the Comprehensive Plan for Maricopa County, pages 22 and 25.

POPULATION OF CITIES AND TOWNS - 1880 TO 1964

CITY OR TOWN	1880		1890		1900		1910		1920		1930		1940		1950		1960		1964	
	POPULATION	% OF TOTAL	POPULATION	% OF TOTAL	POPULATION	% OF TOTAL	POPULATION	% OF TOTAL	POPULATION	% OF TOTAL	POPULATION	% OF TOTAL	POPULATION	% OF TOTAL	POPULATION	% OF TOTAL	POPULATION	% OF TOTAL	POPULATION	% OF TOTAL
AVONDALE													1,000 ²	0.5	2,505	0.8	6,151	0.9	6,540	0.8
BUCKEYE					200 ¹	1.0	648 ¹	1.8	726 ¹	0.8	1,077	0.7	1,305	0.7	1,305	0.6	2,286	0.3	2,518	0.3
CHANDLER									1,600 ²	1.8	1,378	0.9	1,239	0.7	3,799	1.1	9,531	1.4	11,425	1.3
EL MIRAGE														500 ²	0.2	1,723	0.3	2,820	0.3	
GILA BEND							199 ¹	0.6	745 ¹	0.8	1,275 ¹	0.8	750 ²	0.4	1,000 ²	0.3	1,813	0.3	2,500	0.3
GILBERT									865	1.0	791	0.5	837	0.4	1,114	0.3	1,833	0.3	2,280	0.3
GLENDALE							1,000 ¹	2.9	2,737	3.1	3,665	2.4	4,855	2.6	8,179	2.5	15,696	2.4	28,000	3.3
GOODYEAR											1,135 ¹	0.8	1,000 ²	0.5	1,254	0.4	1,654	0.2	2,200	0.3
MESA	151 ¹	2.7	500 ²	4.6	722	3.5	1,692	4.9	3,036	3.4	3,711	2.5	7,224	3.9	16,790	5.1	33,772	5.1	44,000	5.1
PARADISE VALLEY																	2,091	0.3	8,000	0.9
PEORIA							300 ¹	0.9	2,371 ¹	2.6	1,748 ¹	1.2	1,500 ²	0.8	2,000 ²	0.6	2,593	0.4	3,500	0.4
PHOENIX	1,708 ¹	30.0	3,152	28.7	5,544	27.1	11,134	32.3	29,053	32.4	48,118	31.9	65,414	35.1	106,818	32.2	439,170	66.2	513,667	59.6
SCOTTSDALE									1,047 ¹	1.2	2,761 ¹	1.8	2,000 ²	1.1	2,032	0.6	10,026	1.5	43,670	5.1
SURPRISE														500 ²	0.2	1,574	0.2	1,850	0.2	
TEMPE	135 ¹	2.4	500 ²	4.6	885	4.3	1,473	4.3	1,963	2.2	2,495	1.7	2,906	1.6	7,684	2.3	24,897	3.8	43,000	5.0
TOLLESON									500 ²	0.6	910	0.6	1,731	0.9	3,042	0.9	3,886	0.6	4,120	0.5
WICKENBURG	104 ¹	1.8	200 ²	1.8	500 ²	2.4	570	1.7	527	0.6	734	0.5	995	0.5	1,736	0.5	2,445	0.4	2,700	0.3
YOUNGTOWN																	1,559	0.2	1,890	0.2
SUB-TOTALS																				
INCORPORATED POP.	2,098	36.9	4,352	39.6	7,851	38.4	17,016	49.3	45,170	50.4	69,798	46.2	92,756	49.8	160,885	48.5	562,700	84.8	724,680	84.2
UNINCORPORATED	3,591	63.1	6,634	60.4	12,606	61.6	17,472	50.7	44,406	49.6	81,172	53.8	93,437	50.2	170,885	51.5	100,910	15.2	136,320	15.8
TOTAL POPULATION	5,689	100.0	10,986	100.0	20,457	100.0	34,488	100.0	89,576	100.0	150,970	100.0	186,193	100.0	331,770	100.0	663,510	100.0	861,000	100.0

¹ Precinct population or other census enumeration.

² Estimate by County Planning Department for purposes of this report.

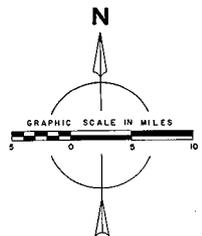
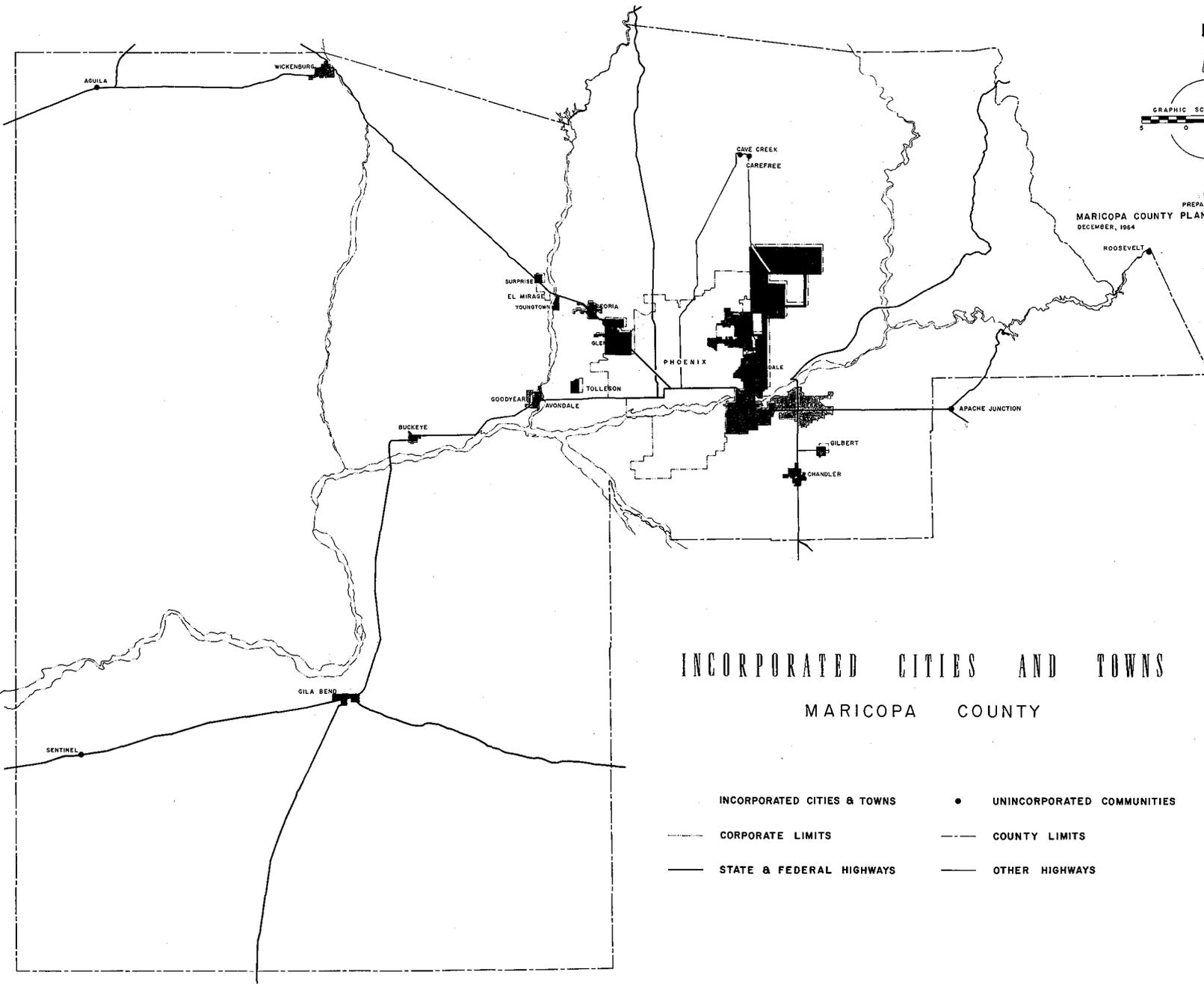
³ Population and Land Use, Part of a Comprehensive Plan for Chandler, Arizona, page 23.

⁴ Maricopa County Planning and Zoning Department, Est. for April 24, 1964.

TABLE 2

For further indication of community growth within the County, Table 2 also reveals each incorporated community as a percent of the county population. In most cases the percentages have remained relatively static during the earlier years. Phoenix's percentage of the county total remained rather steady from 1880 through 1950. Then in 1950 with an emphasis upon annexation, the City of Phoenix increased from 32.2 percent in 1950 to 66.2 percent in 1960. Chandler, Scottsdale and Tempe experienced small percentage increases in recent years. Mesa gained from 1930 to 1950 - and then leveled off at 5.1 percent for the remaining years. The percentage for Glendale has remained about the same while most of the smaller communities such as Buckeye, Gila Bend, Gilbert, Peoria, Tolleson and Wickenburg have had relative declines in terms of percentage of total county population.

From the first census, Phoenix has been the largest town in the County, growing from 1,708 in 1880 to a city of 513,667 in 1964. Mesa, the second largest city of the County, grew from 151 in 1880 to 44,000 in 1964; and Tempe from 135 to 43,000 for the same time period. Generally, these cities had steady growth from 1880 to 1940, with rapid growth since. Scottsdale had a late start - and then grew rapidly from 1,047 in 1930 to 43,670 in 1964. In contrast, Wickenburg, one of the oldest communities in the County, has grown very slowly, from 104 in 1880 to 2,445 in 1960, thus indicating that many factors other than age determine the growth development of a community.



PREPARED BY
 MARICOPA COUNTY PLANNING AND ZONING DEPT.
 DECEMBER, 1964
 G.L.B.

INCORPORATED CITIES AND TOWNS MARICOPA COUNTY

- | | |
|-------------------------------|------------------------------|
| — INCORPORATED CITIES & TOWNS | • UNINCORPORATED COMMUNITIES |
| — CORPORATE LIMITS | --- COUNTY LIMITS |
| — STATE & FEDERAL HIGHWAYS | — OTHER HIGHWAYS |

Land Area Growth of Cities and Towns

The area of incorporated cities and towns of Maricopa County comprises only a small portion of the County's total land area. In 1964 the area of all incorporated places totaled 367.65 square miles accounting for only 4.0 percent of the County's 9,226 square miles.

Phoenix is the largest city in the County as graphically shown on Plate 3. The city contained 0.5 of a square mile at the time of its incorporation in 1881, then grew slowly to 9.6 square miles by 1940. Numerous annexations increased the city area to 17.1 square miles by 1950 and to 52.6 square miles by 1958. Annexation of the South Phoenix, Maryvale and Sunnyslope communities raised the incorporated area to 187.4 square miles at the time of the 1960 census. Since then, Phoenix has expanded into the Paradise Valley and Deer Valley areas to include 222.6 square miles in 1964.

Currently, Scottsdale is the second largest city in the County by area. Its growth has been more recent and faster than that of Phoenix. Scottsdale was incorporated in June 1951 with an area of 0.62 square miles. Several annexations of suburban residential areas raised the area to 4.1 square miles at the time of the 1960 census. Since then, the city has expanded rapidly to the north, as well as annexing additional suburban areas east and south, thereby raising its incorporated areas to 63.03 square miles in 1964.

Other communities of the County are listed on Table 3, with their date of incorporation and land areas for 1930, 1940, 1950, 1960 and 1964.

LAND AREA GROWTH
INCORPORATED PLACES — MARICOPA COUNTY

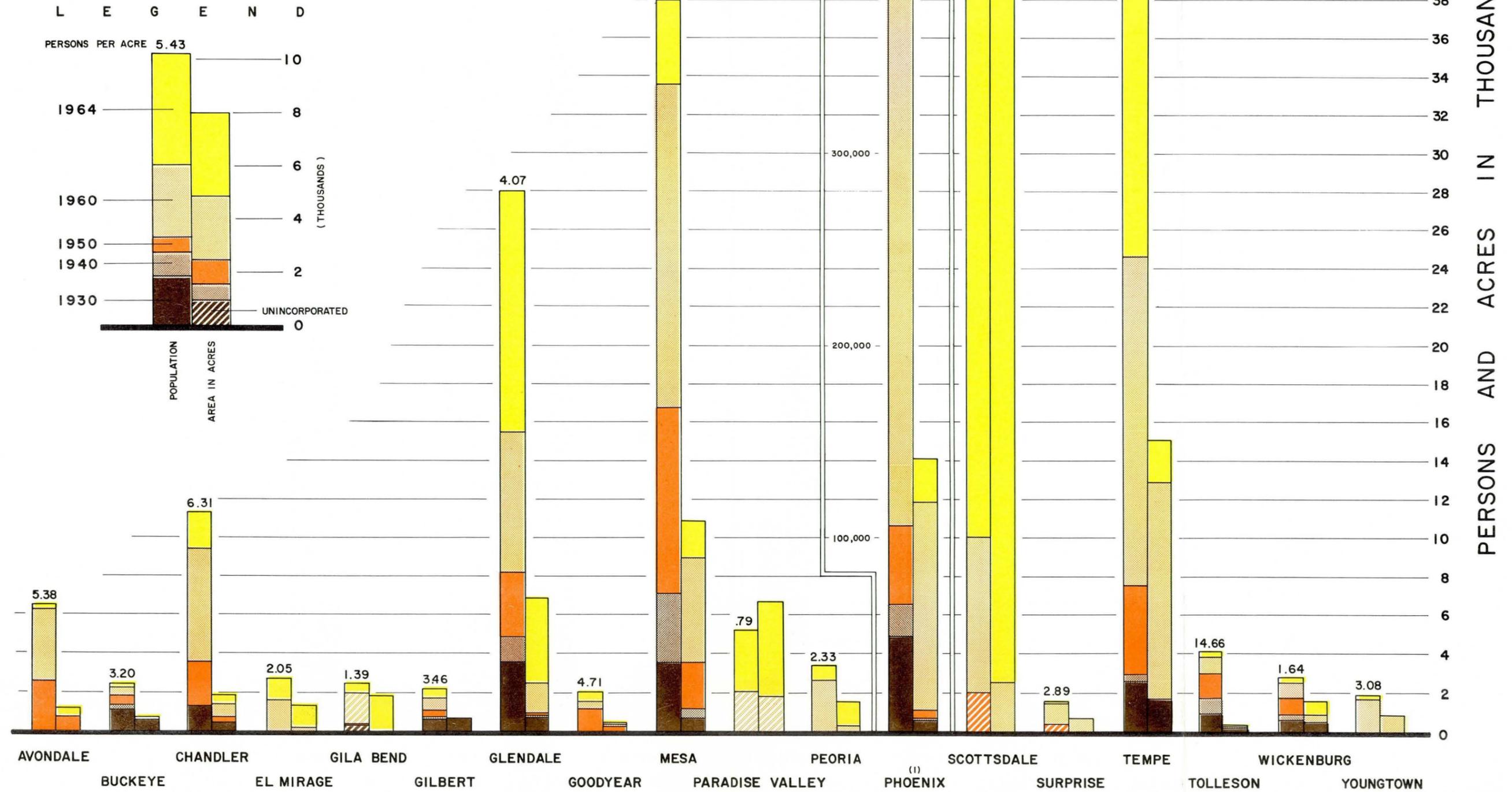
CITY OR TOWN	DATE OF INCORPORATION	1930 SQ. MI.	1940 SQ. MI.	1950 SQ. MI.	1960 SQ. MI.	1964 SQ. MI.
AVONDALE	MAR. 1946			0.504	1.220	1.900
BUCKEYE	MAY 1929	0.875	0.875	0.875	0.910	1.250
CHANDLER	FEB. 1920	0.518	0.518	0.816	2.150	2.850
EL MIRAGE	JUNE 1951				0.240	2.150
GILA BEND	JULY 1962					2.820
GILBERT	JUNE 1920	0.975	0.975	0.975	1.030	1.030
GLENDALE	MAY 1910	1.000	1.048	1.186	3.800	10.759
GOODYEAR	NOV. 1946			0.324	0.390	0.730
MESA	JULY 1888	1.000	1.739	5.720	14.030	17.100
PARADISE VALLEY	MAY 1961					10.400
PEORIA	JUNE 1954				1.020	2.350
PHOENIX	MAR. 1885	6.400	9.600	17.100	187.400	222.600
SCOTTSDALE	JUNE 1951				3.800	63.030
SURPRISE	DEC. 1960				1.000	1.000
TEMPE	NOV. 1894	2.500	2.500	2.500	20.200	23.750
TOLLESON	MAR. 1929	0.283	0.283	0.443	0.430	0.447
WICKENBURG	MAY 1909	1.000	1.000	1.000	1.370	2.569
YOUNGTOWN	DEC. 1960				0.959	0.959
Total CITIES AND TOWNS		14.551	18.538	31.443	239.949	367.654

TABLE 3

In earlier years, all cities and towns within the County were separated from each other. However, new growth and annexations particularly within the Phoenix Urban Area have expanded their limits until many boundaries coincide. Consequently, a metropolitan area has been created with all its ensuing metropolitan problems and with each community losing a certain amount of its identity and individuality.

PLATE 4 

POPULATION & LAND AREA GROWTH 1930 - 1964



(1) FOOTNOTE: BAR SCALE FOR PHOENIX REDUCED TO ONE TENTH.

Population and land area growth from 1930 and 1964 is illustrated by means of bar charts on Plate 4. Because of its size, it was necessary to reduce the scale of Phoenix ten times as compared to the remaining cities and towns which are shown at a constant scale.

For each city the bar on the left side represents the total population in thousands of persons, while the bar on the right side represents the incorporated area in thousands of acres. The various colors designate the different census periods. For example, the dark brown color provides the population base for 1930. The lighter brown color shows the growth from 1930 to 1940, the orange color shows growth from 1940 to 1950, and so on to the yellow color for 1960-64. The crosshatched pattern indicates the population and land area for a community before its incorporation.

By showing the population and area growth together graphically, it can be seen if area growth is keeping pace with population growth or vice versa. For example, if a city has annexed a great deal of vacant land the area bar will exceed that of the population growth for the same time period. This situation occurred for Scottsdale during the 1960-64 period. On the other hand, if a city has sufficient land area, population growth can occur without the necessity of annexing adjoining land as indicated by Gilbert. Over an extended period of time, Mesa area growth and population growth have shown a more consistent relationship.

The population bar of most cities on Plate 4 has proven to exceed the area bar, usually by a considerable extent. Due to the scale on the chart, this feature is a desirable one and indicates a favorable density of population for economical service of city facilities. The number at the end of the bar,

for each city, indicates the density or ratio of persons per acre for 1964.

This density or relationship of persons per land area plays an important part in the manner in which services and facilities can be developed; however, there is no easy way to determine if a community is properly balanced. A comparison of density ratios clearly indicates the general direction of development for a community and some of its ensuing problems. An individual study for each community is needed and the finer points of such study should extend into the costs of utility extensions, street and highway systems, and community services.

Frequently planners have used as a rule of thumb, a figure of ten persons per gross acre as a minimum density level for the economical provision of adequate and economic governmental services, although individual subdivisions will have higher densities (i.e. 20 persons or more per gross acre).¹²

The densities vary from one city to the next because of physical limitations. Certainly this is true of cities across the state or nation. For example, some cities are limited in area for expansion because of terrain features, while other cities have unlimited space for expansion. Ordinarily, cities with physical expansion limitations have a higher density than those without such limitations. Geology and topography can also play an important part as development cannot always occur in certain places because of surface and subsurface conditions.

Land costs, availability of land, tax policies and practices regarding provision or extension of governmental facilities

¹² Population Growth of the Phoenix Urban Area, City of Phoenix and Maricopa County, 1959.

and services, annexation laws and practices and zoning influence the amount and direction of growth in urban areas.

A primary planning objective is to determine the amount and distribution of future as well as present population that can be reasonably expected, the land area necessary for all urban purposes, and the location, scope and extent of public facilities that will be needed such as schools, parks, streets and highways.

Generally, the cities of the Southwest are newer than those in other parts of the country and, accordingly, their density patterns are lower than those found in older cities elsewhere. A gradual increase in the density will eventually take place, particularly in areas where land has been bypassed, as it becomes increasingly costly and difficult to extend a satisfactory and economical level of urban services into outlying areas. These trends are presently manifesting themselves in many cities as evidenced by urban redevelopment of older areas, row or town house development, high rise apartments and the like.

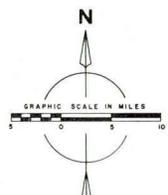
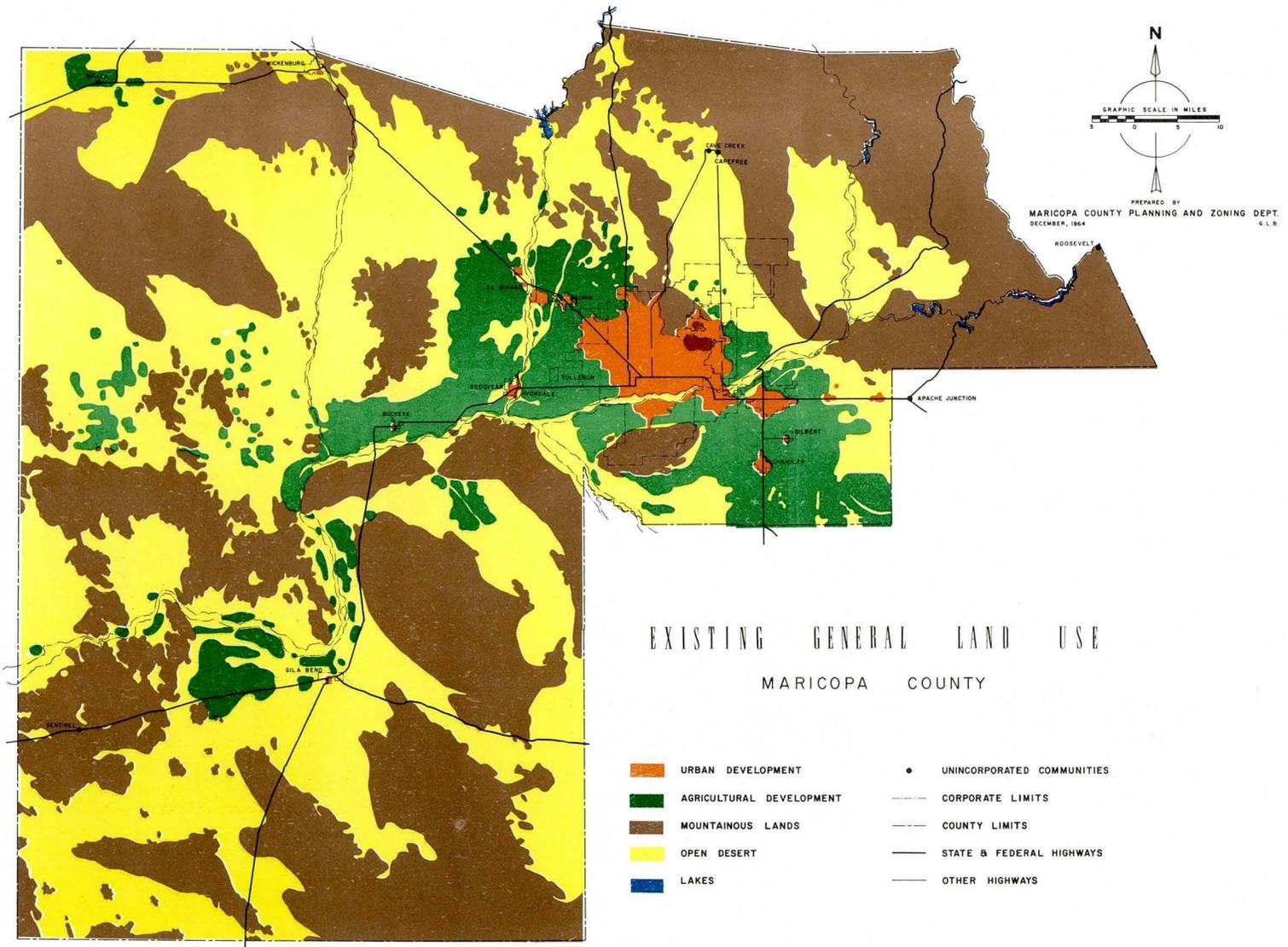
CHAPTER 3

EXISTING LAND USE

Present land-use patterns influence and largely determine future land-use patterns. Also there is a close and predictable relationship between the amount of land used for various urban purposes and the amount needed for future urban purposes for a given number of persons.

In 1958 the City of Phoenix and Maricopa County Planning Department formed a Joint Task Force and conducted a land-use survey of the Phoenix Urban Area. Subsequently, the Maricopa County Planning Department has made detailed land-use surveys and studies of Gilbert, Gila Bend, Buckeye, Scottsdale, Paradise Valley, and other areas of the County. These older surveys plus recent aerial photographs have sufficed in producing the generalized land-use map discussed in this chapter but the passage of time has created a need for a new extensive land-use survey and analysis.

The Valley Area Transportation Study established under the administration of the Arizona State Highway Department is currently completing an extensive land-use survey of the metropolitan area. This information is being collected and tabulated on punch cards so that it can be analyzed through data processing equipment. This information includes the central urban area of some 1,200 square miles as compared to 9,226 square miles in the County.



PREPARED BY
MARICOPA COUNTY PLANNING AND ZONING DEPT.
DECEMBER, 1964
G. L. B.

PLATE 5

This chapter attempts to portray from existing information a current general picture of present land use. As previously mentioned, it is not intended as a quantitative analysis of land use or land use needs.

General Land-Use Pattern, Maricopa County

The general land-use pattern of Maricopa County is shown on Plate 5, which provides a general indication of the kind, scope, and arrangement of major divisions of land use, such as urban, agriculture, mountainous terrain, and open desert. A brief discussion is as follows:

Major urban development is concentrated in the east-central portion, otherwise known as the Phoenix Urban Area. Nearly 90 percent of the County's population lives within this area which extends from Mesa in the southeast to the Youngtown-Sun City area in the northwest. The area shown here covers roughly 120 square miles. The other major urban areas are widely scattered, of various size and, because of map scale, appear as small dots on the map. Although not shown on this map, considerable vacant land exists within the urban areas.

Areas occupied by agricultural uses are shown in green color on Plate 5. Existing agricultural lands cover about 860 square miles or approximately 10 percent of the County territory. Agricultural development surrounds the Phoenix Urban Area except on the north and northeast side.

Agricultural development has been possible because of irrigation. Surface water collected from the Salt and Verde Rivers watersheds is used on certain level lands favored by topographical situation. Ground-water sources for agricul-

▶ PLATE 5

tural use vary widely throughout the County. A hydrological report for the County, which is currently being prepared, will help to determine the extent and quality of groundwater resources for future agricultural and urban uses.

Agriculture has played an important part in the development of Maricopa County and it is second only to manufacturing as the major source of income for the County. Future expansion of agriculture is limited by soil conditions, terrain, and the availability of adequate water. A reduction of agricultural land has occurred in several places because of urban expansion and other conditions. Existing agricultural areas should be afforded maximum zoning protection against encroachment by urban uses in order to preserve this important segment of the County's economic base. New urban development should be discouraged from scattering within agricultural areas and this will require continuous effort and vigilance on the part of landowners and various public agencies.

Open desert lands are shown in a light brown on Plate 5. Various and extensive portions of the County, outside urban and agricultural areas, are desert or semi-desert because of low annual rainfall. Most areas under 2,000 feet elevation receive less than 10 inches of rainfall a year, and vegetation is generally limited to desert plants.

Various mountain ranges and other rough terrain are indicated in brown color on Plate 5. Most of these mountains are less than 1,000 feet except for mountain ranges in the northeast portions of the County that have longer and higher elevations that vary from 2,000 to 7,000 feet above sea level. The lower lying mountains in and around

the Phoenix Urban Area are picturesque and merit protection against encroachment by urban development.

Certain portions of the mountain and desert areas shown on Plate 5 should be reserved for open space. About 45 percent of the County, or 4,200 square miles, is unsuitable for urban or agricultural development because of adverse topography, geology and soil conditions. Insufficient water resources render an additional 2,400 square miles, or 37 percent of the County, as unsuitable for urban or agricultural development.

Portions of the desert and mountainous areas that are not suitable for urban development, nor within the areas needed for future urban expansion should be set aside as natural open-space reserves. Specific scenic areas should be used for open parks and recreational uses similar to Phoenix's South Mountain Park and the 86,000 acres acquired by the County for a regional park system. Besides providing recreational facilities, such areas help to preserve for posterity the open character of the County, prevent the destruction of natural vegetation, and tend to reduce the dust and air pollution problem.

General Land Use for Central Portion - Maricopa County

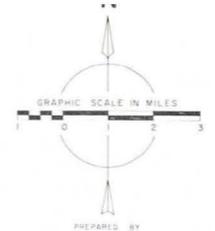
To more affectively analyze the portion of the County which has had the majority of the past development and is showing the greatest quantity of activity at the present time, the central portion of Maricopa County is shown at a larger scale on Plate 6. Also a portion of Pinal County near Apache Junction which has extensive urban development has been included in the study area.

The central portion encompassed by Plate 6 measures about 54 miles east and west and 35 miles north and south and contains approximately 1,890 square miles or 20 percent of the total county area.

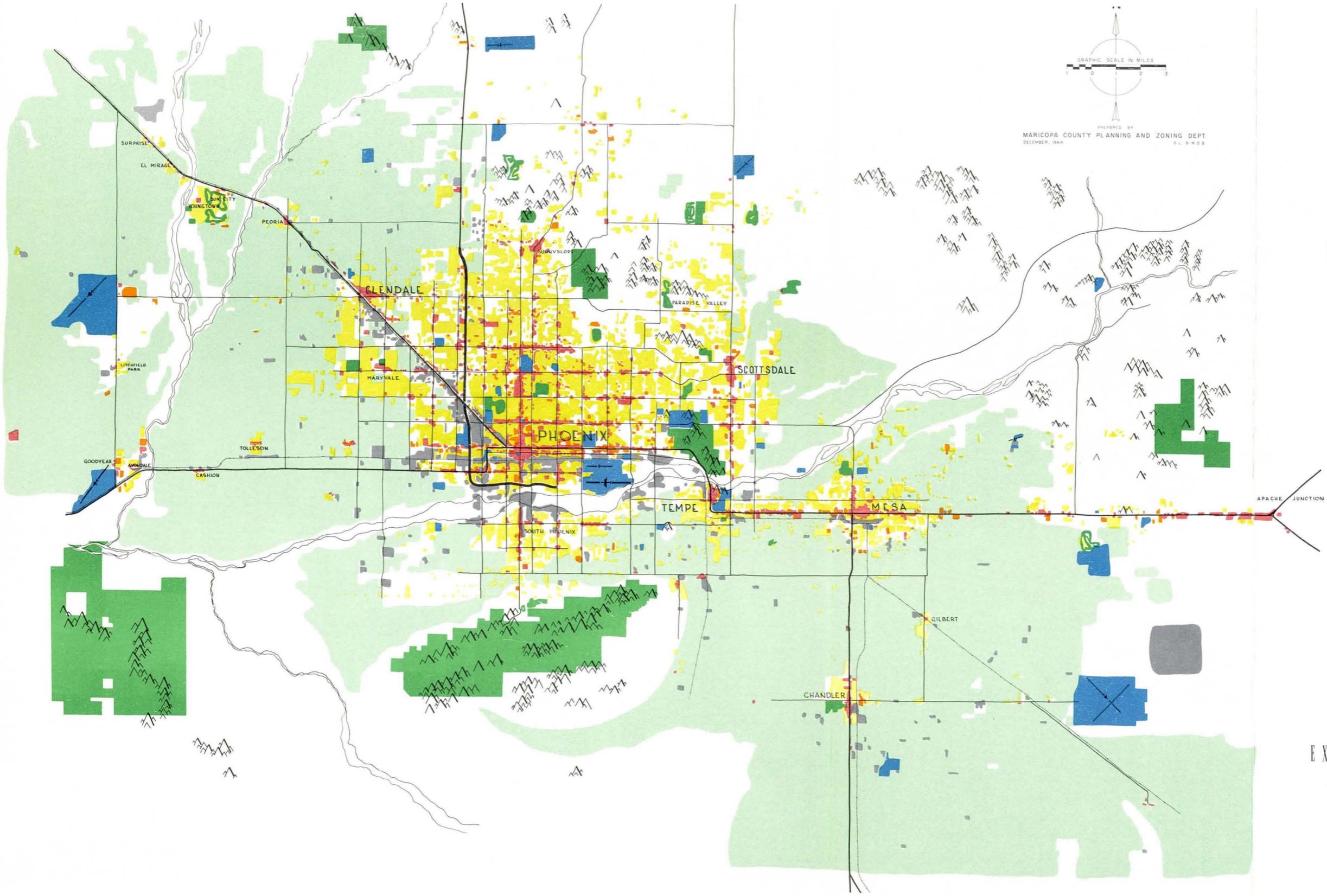
Of this central area, approximately 433 square miles or 23 percent is used for agriculture, while approximately 121 square miles or 6.4 percent is used for urban purposes. Approximately 235 square miles or 12 percent of the area is mountainous while the remaining 58.6 percent is generally level open desert lands.

The lack of a cohesive land-use pattern is revealed by this map. Major residential areas are interspersed with vacant lands of varying sizes. Commercial development shows a pronounced scatterization.

PLATE 6 



PREPARED BY
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 DECEMBER, 1964
 G.L. 9-108



- LOW
- HIGH
-
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- P
- MAJOR
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EXISTING
 CENTRAL P

Agricultural Land Use - Central Portion

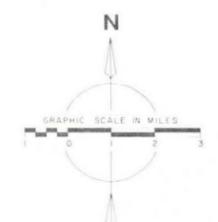
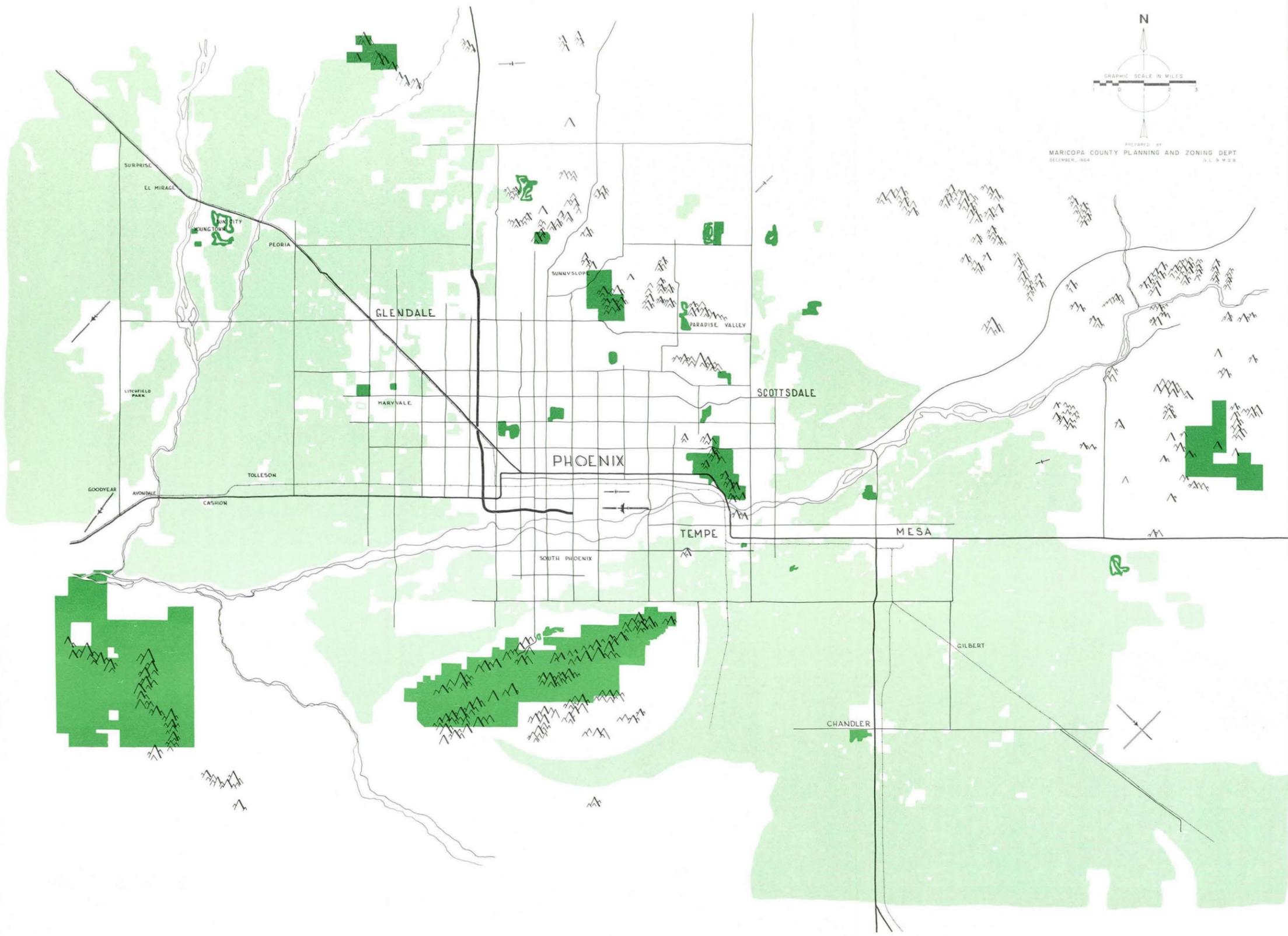
The largest land-use category within the County and the central portion is that of agriculture. The limits of agriculture are generally confined to the areas served by either the Salt River Project, other smaller irrigation districts, private water companies or individual farmers supplying their own water needs.

The 433 square miles devoted to agriculture in the central area represent about 23 percent of the total area shown on Plate 7.

A reduction of agricultural land has occurred in several places because of urban expansion and other conditions. New urban development should be discouraged from scattering within agricultural areas and existing agricultural areas should be afforded maximum zoning protection against encroachment by urban uses.

Agriculture in the central portion of Maricopa County is almost equally divided between the southeast and the west to northwest sides of the Phoenix Urban Area.

PLATE 7 



PREPARED BY
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 DECEMBER, 1964
 S.L. & W.S.B.

- LOW DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- PUBLIC & SEMI-PUBLIC
- MAJOR PARKS & GOLF COURSES
- AGRICULTURE
- RAILROADS
- MAJOR STREETS
- STATE & FEDERAL HIGHWAYS
- MAJOR EXPRESSWAYS

EXISTING GENERAL LAND USE
 CENTRAL PORTION MARICOPA COUNTY

Residential Land Use - Central Portion

Second to agriculture, the next largest single use of developed land is for residential purposes. In 1958, residential use represented 22.1 percent of the land area contained within the Phoenix urban fringe, as recorded by report, "Land Use of the Phoenix Urban Area." ¹³

Factors which influence the direction and extent of residential growth within the urban areas include topography, canals, railroads, expressways and the availability of an adequate water supply.

As shown on the land use map, residential areas are concentrated in the central Phoenix area, with the older established neighborhoods relatively compact and well separated by major arterials or commercial and industrial uses. Newer outlying residential developments have frequently by-passed large vacant tracts of land, some of which have subsequently been utilized. Single-family residential densities in these new suburban areas vary from a relatively high density, to medium density to a widely scattered density, such as found in Paradise Valley. Rather compact residential areas have grown-up around the older Phoenix, Glendale, Tempe and Mesa central business districts.

Many residential developments are located in outlying areas. Some are old established cities and towns like Chandler and Gilbert. Some are new communities such as Sun City and Youngtown.

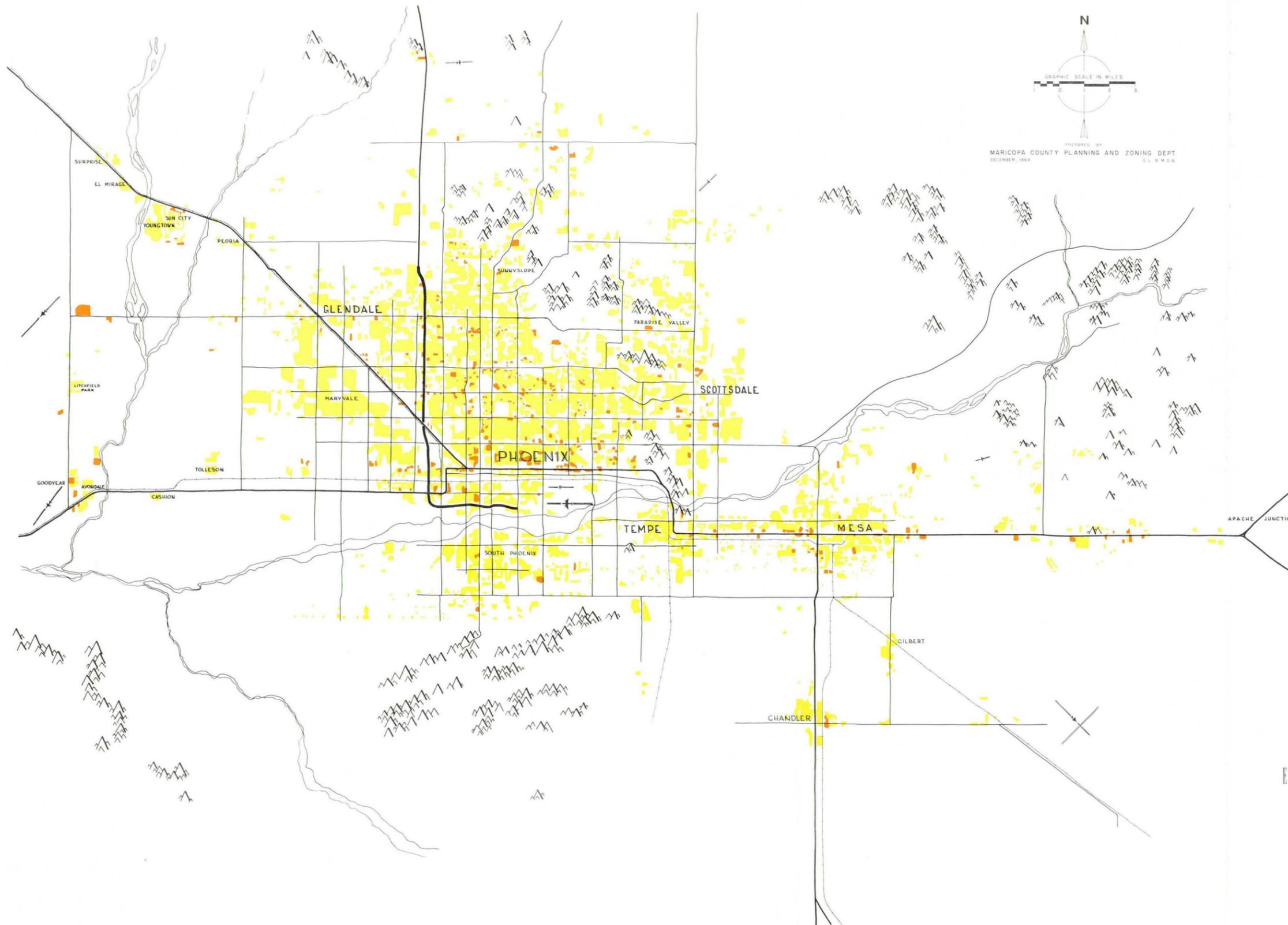
¹³ Prepared by the City of Phoenix and Maricopa County Advance Planning Task Force, May 1959.

Plate 8 indicates residential development in 2 separate categories, low density residential and high density residential. As indicated on Plate 8 the majority of existing residential development is of low density, which includes all single-family dwelling areas, duplexes and small apartment areas where the density remains less than 20 persons per acre. The high density distribution reflects apartment areas and mobile-home developments where the density is assumed to exceed 20 persons per acre. Hotels and motels are not shown on Plate 8 as these uses are classified as commercial uses and are included on following maps.

At the time of the 1958 Joint Task Force Report only 1.6 percent of the developed land within the urban area was devoted to high density residential use. Harland Bartholomew in a study of 53 cities found that as the city's population increases its percent of developed land for high density residential use also increases. While apartment and town house construction is currently undergoing a rapid expansion to fill the deficiency that was created over the past several years, it is not anticipated that high density construction will exceed 5 percent of the developed urban area.

The following sections discuss general residential subdivision development and building trends:

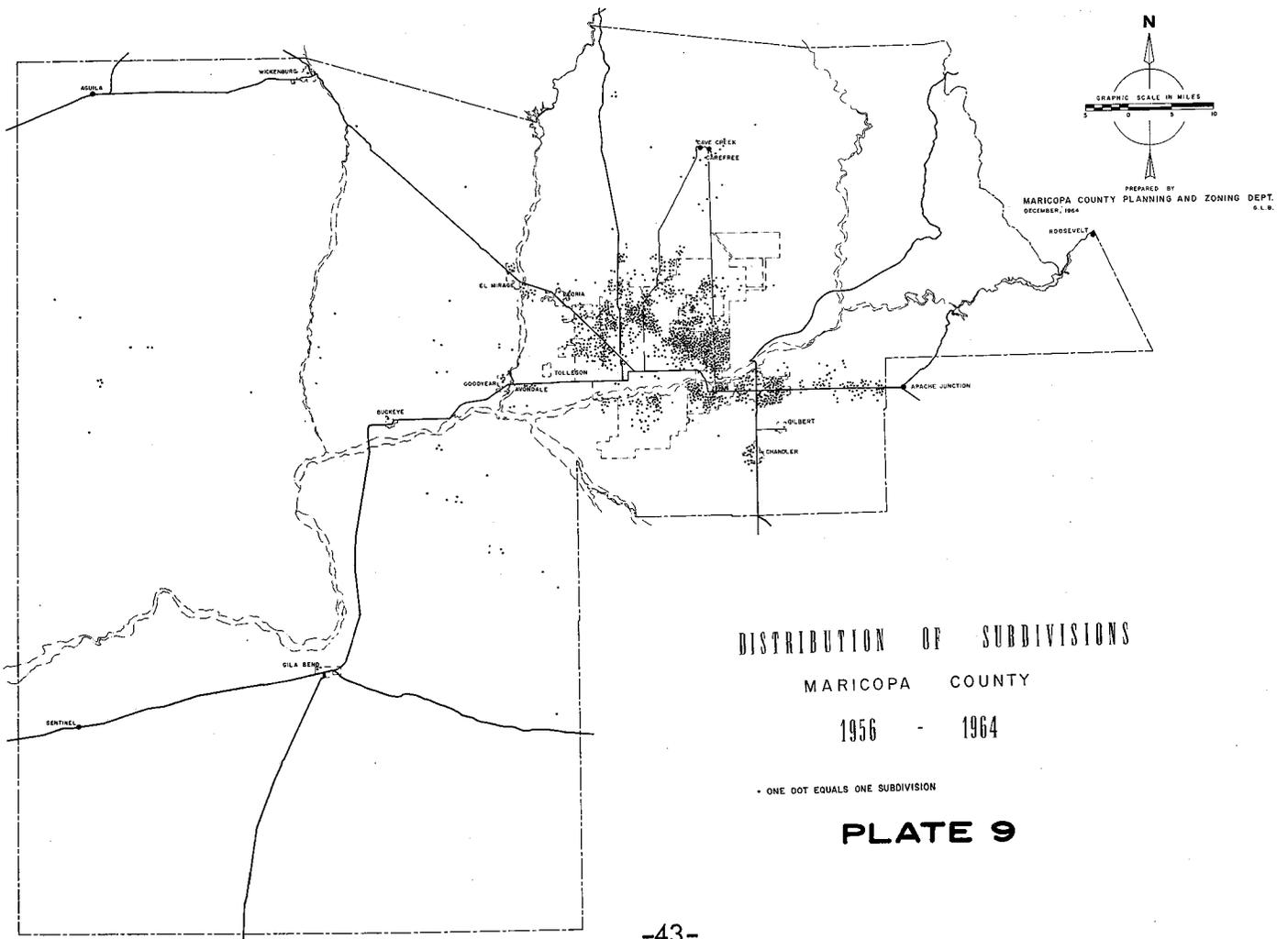
PLATE 8 



- LOW DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- PUBLIC & SEMI-PUBLIC
- MAJOR PARKS & GOLF COURSES
- AGRICULTURE
- RAILROADS
- MAJOR STREETS
- STATE & FEDERAL HIGHWAYS
- MAJOR EXPRESSWAYS

EXISTING GENERAL LAND USE
CENTRAL PORTION MARICOPA COUNTY

Subdivision Development - Maricopa County: The location of residential subdivisions recorded within the County between 1956 and 1964 is shown on Plate 9. Each new subdivision shown thereon is represented by a dot, regardless of size of the subdivision concerned. This illustrates the relative distribution and extent of subdivision activity between 1956 and 1964. Most of this new development has taken place in northeast Phoenix, Scottsdale, Sunnyslope, the Deer Valley area, and northwest Phoenix. Other areas of considerable activity include the west and south sides of Tempe and the east side of Mesa. Subdivision activity in South Phoenix, Paradise Valley and the Apache Junction has been minimal. Subdivision activity has been widely scattered throughout the Cave Creek, Harquahala and Rainbow Valley areas.



Subdivision Development - Central Portion: Plate 10, "Subdivision Development" gives an indication of the magnitude of the land area subdivided from 1956 to 1964 throughout the central portion of Maricopa County. Large scale subdivision activity occurred in Sun City, Maryvale, certain portions of northwest Phoenix, Scottsdale, Tempe, Mesa and Apache Junction areas.

The over-all picture of subdivision development is one of leapfrogging and scatterization. It is obvious that to extend utilities through large vacant land areas to serve scattered development is costly. Also, this situation makes it difficult to provide well situated school and park sites. Consequently, some residential areas may never become fully developed or mature as part of any community. Table 4 summarizes the number of plats recorded from 1959 to 1964, and lists the total number of lots included therein.

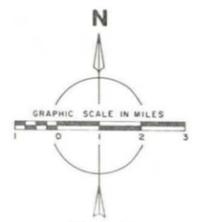
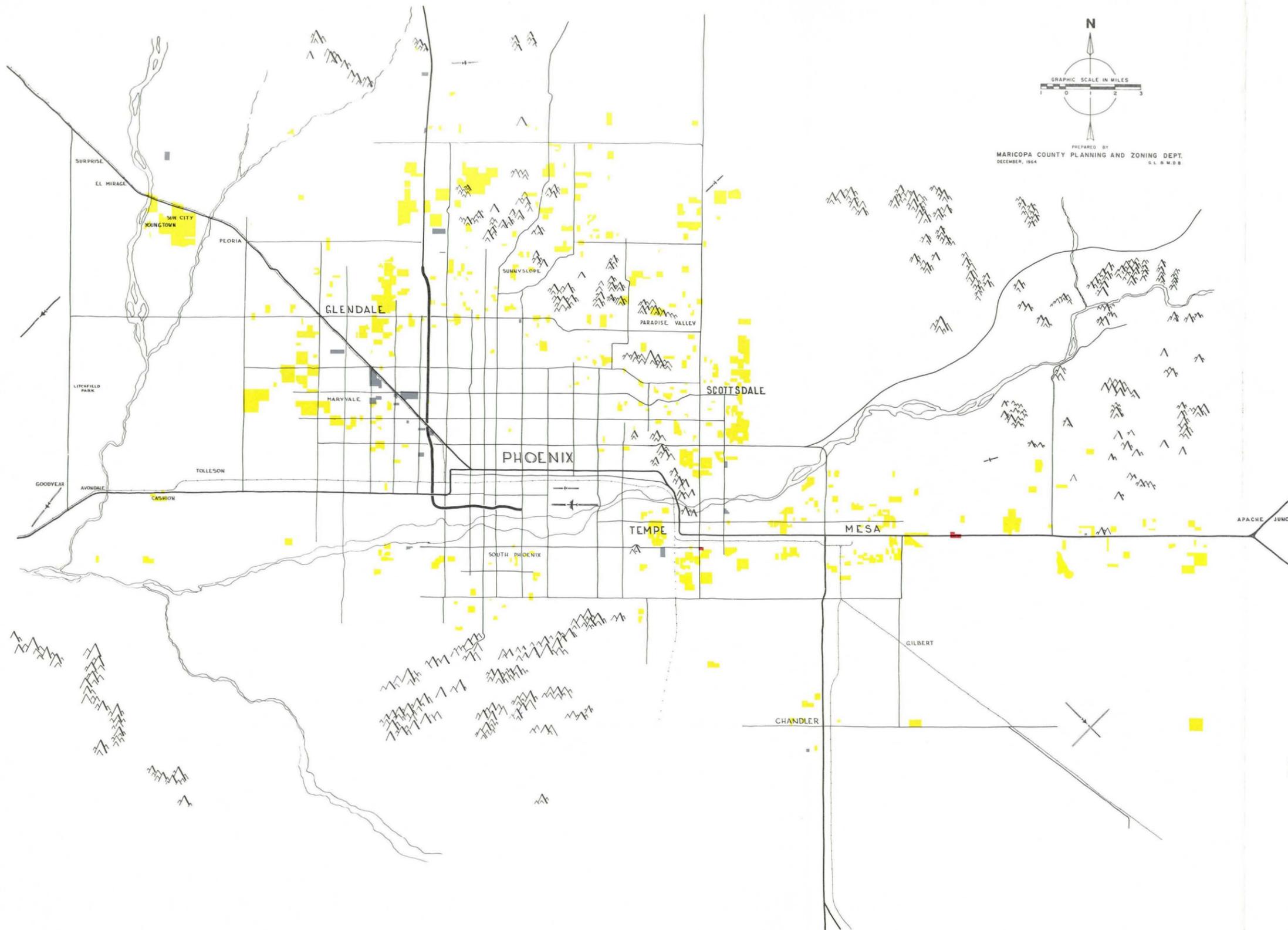
TABLE 4
RECORDED SUBDIVISIONS
January 1, 1959 to June 30, 1964

	Number of Plats	Number of Lots	Average Number of Lots Per Plat		
			Total County	Incorporated Area	Unincorporated Area
1959	276	17,977	65.1	50.0	75.3
1960	226	17,478	77.3	61.6	92.8
1961	187	14,720	78.7	66.6	94.0
1962 ⁽¹⁾	143	10,157	71.0	59.2	94.5
1963 ⁽¹⁾	71	3,486	49.1	47.1	56.4
TOTAL	903	63,818	70.7		

(1) January 1 to June 30, 1964

Source of Information: Maricopa County Recorder's Book of Maps, all divisions of land into 5 or more parcels.

PLATE 10 



PREPARED BY
 MARICOPA COUNTY PLANNING AND ZONING DEPT.
 DECEMBER, 1964
 G. L. B. M. D. B.

- RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- RAILROADS
- MAJOR STREETS
- STATE & FEDERAL HIGHWAYS
- MAJOR EXPRESSWAYS

SUBDIVISION DEVELOPMENT
 1956 - 1964
 CENTRAL PORTION MARICOPA COUNTY

For the period shown, 903 recorded plats represent 28.5 square miles of land. For a single year, 1959 was the greatest period of activity of total number of plats recorded and total number of lots platted. Since then there has been a decline in subdividing.

Plats recorded in cities and towns have consistently been smaller in area as well as in number of lots per plat as compared to the unincorporated area, see Table 4. This is to be expected as the larger vacant land holdings are within the unincorporated areas.

TABLE 5
AVERAGE LOT SIZE
Unincorporated Area of Maricopa County

Range in Lot Sizes	Percentage of Lots			
	1960	1961	1962	1963
Less than 6,000 sq. ft.	5.3	6.5	5.5	14.1
Between 6-10,000 sq. ft.	80.4	53.5	36.0	70.6
Between 10-70,000 sq. ft.	7.7	29.0	48.5	13.5
Greater than 70,000 sq. ft.	6.6	11.0	10.0	1.8
TOTAL	100.0	100.0	100.0	100.0

Table 5 summarizes the lot sizes for plats recorded in the unincorporated portions of Maricopa County from 1960 to 1963. The proportion of lots under 6,000 square feet remained virtually unchanged until 1963 and had been rather insignificant, averaging less than 7 percent of all lots recorded. The creation of cluster and condominium types of development increased this percentage in 1963. The percentage of lots 6,000 to 10,000 square feet declined from 80 percent in 1960 to 49 percent in 1962 and then increased sharply to 70 percent in 1963. Lots between 10

to 70,000 square feet increased annually to 1963 and then dropped sharply in 1963. The range of lots platted above 70,000 square feet has changed little over the past four years.

A significant trend toward apartment building within the unincorporated area of the County has materialized in the last two or three years. Data summarized from building permits shown on Table 6 reveal that apartment units have increased from 3.8 percent of new housing units in 1960 to approximately 30 percent in 1963. How long this trend will continue is a matter of conjecture. Information is not available regarding the total amount of units available or currently under construction, their occupancy factors or the demand for various types of multiple housing facilities.

TABLE 6
RESIDENTIAL BUILDING PERMITS⁽¹⁾
Unincorporated Area of Maricopa County

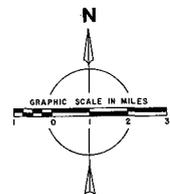
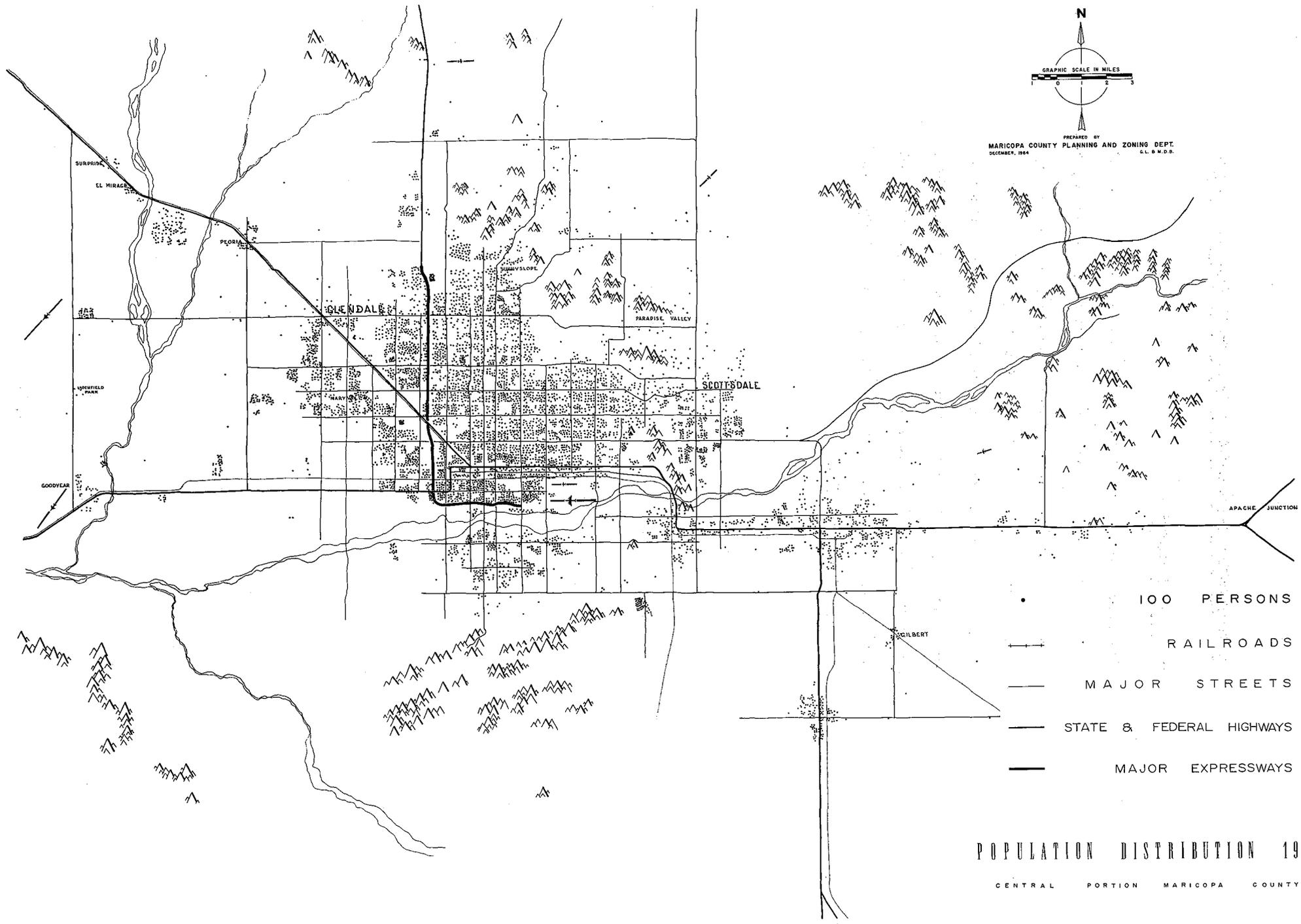
Calendar Year	Single Family Residence	Two Family Units	Three Family Units	Four Family Units	Five or More Family Units	Total Residential Units
1960	6,387	26	3	64	185	6,665
1961	5,287	18	15	60	290	5,670
1962	1,877	32	3	108	119	2,139
1963	1,447	30	18	292	315	2,102
Total, 1960-63	14,998	106	39	524	909	16,576
Percent Distribution of Total Residential Permits:						
1960	95.8	0.4	0.0	1.0	2.8	100.0
1961	93.2	0.3	0.3	1.1	5.1	100.0
1962	87.8	1.5	0.1	5.0	5.6	100.0
1963	68.8	1.4	0.9	13.9	15.0	100.0
Total, 1960-63	90.5	0.6	0.2	3.2	5.5	100.0

(1) Maricopa County Planning and Zoning Department records.

General Urban Trends in Central Portion of Maricopa County

Residential Trends

Maricopa County has consistently grown faster than the State of Arizona, with most of its population growth occurring in urban places within the central portion of the County. In 1910 the County population represented 16.9 percent of the state's population; and by 1960 the County population represented 51.0 percent of the state's population; 34.4 percent of the County's population lived in urban places in 1910; and 86.5 percent of the County's population lived in urban places by 1960.



PREPARED BY
 MARICOPA COUNTY PLANNING AND ZONING DEPT.
 DECEMBER, 1964
 G.L. & M.D.B.

- 100 PERSONS
- RAILROADS
- MAJOR STREETS
- STATE & FEDERAL HIGHWAYS
- MAJOR EXPRESSWAYS

POPULATION DISTRIBUTION 1963

CENTRAL PORTION MARICOPA COUNTY

In April of 1964, it was estimated that 716,960 persons lived inside the 15 incorporated cities and towns within the central portion of Maricopa County. Approximately 20,000 more persons lived in the urban environments adjacent to or near these central cities. The 1963¹⁴ population distribution is shown on Plate 11; one dot represents 100 persons living within the general area of urbanization. The greatest concentration of dots is in Phoenix proper. Population clusters appear as semi-detached communities for Scottsdale and Glendale, while considerable separation shows for South Phoenix, Tempe and Mesa. As to the total population picture, development is very sparse and scattered in the Paradise Valley area, but rather concentrated for communities such as Chandler, Sun City, Peoria and Avondale. In general, population density is higher in the central portion of Phoenix and tends to become smaller as the distance increases from the central portion. However, this pattern is not entirely uniform, and certain suburban areas show fairly intense development in specific areas.

▶ PLATE 11

¹⁴ From aerial photos obtained in 1963 by the County Planning and Zoning Department.

Types of Commercial Developments

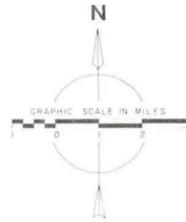
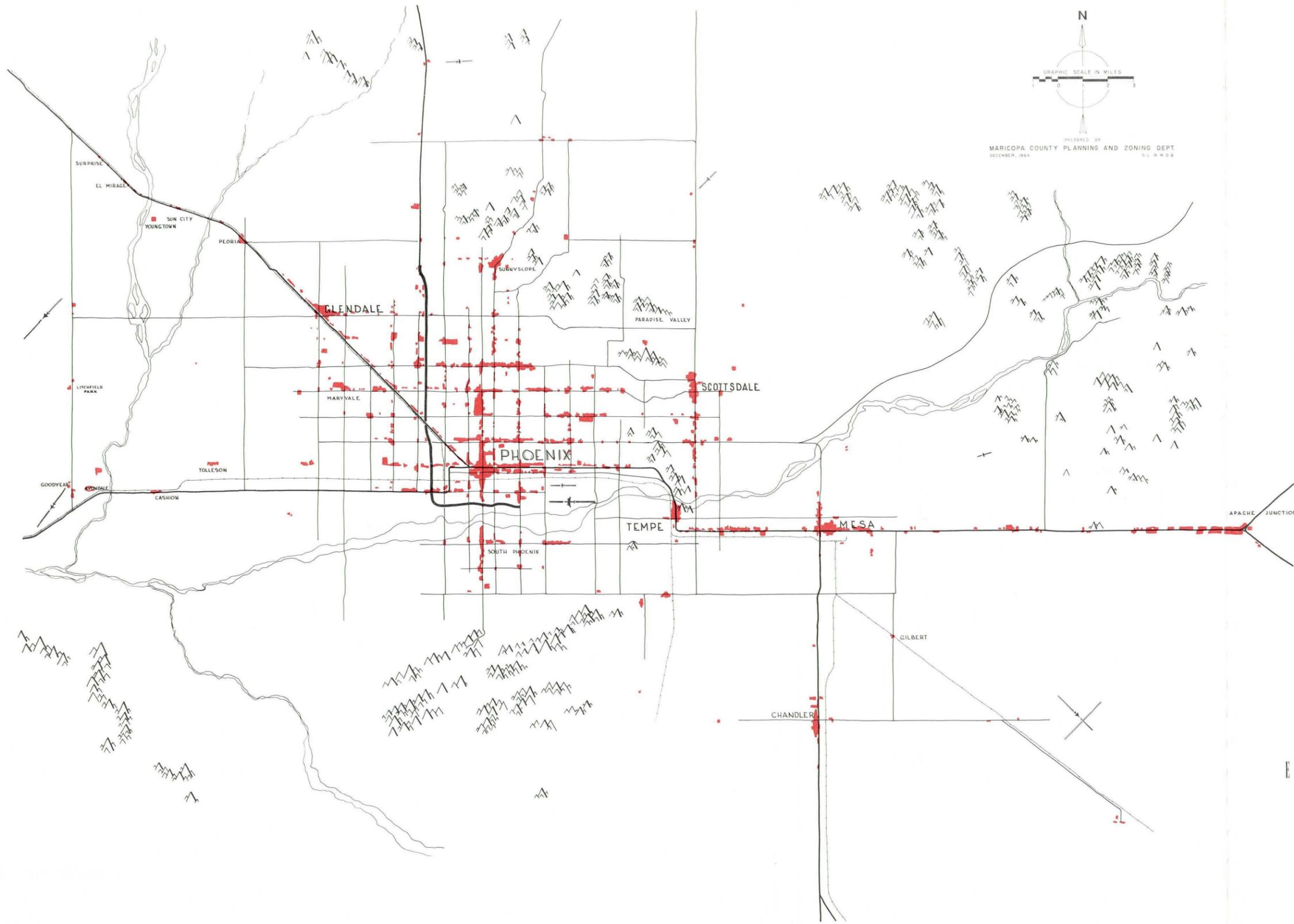
Commercial development as shown on Plate 12 generally falls into one of three categories: (1) central business district, (2) highway or strip commercial and (3) shopping center. These are briefly discussed as follows:

The central business district is the focal point of the business sector of community life. It generally expresses the city's personality, at least in part, and by it the city is often judged and evaluated by visitors and others. The central business district normally contains major department stores, stores of various other retail types, speciality stores, office buildings, banks, theaters, hotels and restaurants. Adjoining or within the core, semi-public and public buildings such as governmental, educational and cultural centers are often located.

Major central business districts within the central portion are those of Phoenix, Glendale, Tempe, Mesa, Scottsdale, Sunnyslope and Chandler.

Highway and major street commercial strip developments are very much in evidence throughout the whole Phoenix Urban Area. Strip commercial areas normally contain all types of commercial uses with the emphasis on motels, restaurants, car lots, mobile home sales and etc. Major purpose of strip commercial establishment is the ease of access to every business establishment. In fact, the strip areas as shown on Plate 12 tend to overshadow the central business districts with almost all major arterials partially developed with commerce. This situation is generally the result of over zoning for commercial use along major streets

PLATE 12 



PREPARED BY
 MARICOPA COUNTY PLANNING AND ZONING DEPT.
 DECEMBER, 1964
 S. L. H. W. S. B.

- LOW DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- PUBLIC & SEMI-PUBLIC
- MAJOR PARKS & GOLF COURSES
- AGRICULTURE
- RAILROADS
- MAJOR STREETS
- STATE & FEDERAL HIGHWAYS
- MAJOR EXPRESSWAYS

EXISTING GENERAL LAND USE

CENTRAL PORTION MARICOPA COUNTY

and highways. As this type of development intensifies it often becomes impractical as a traffic artery and undesirable as a shopping street.

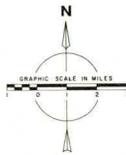
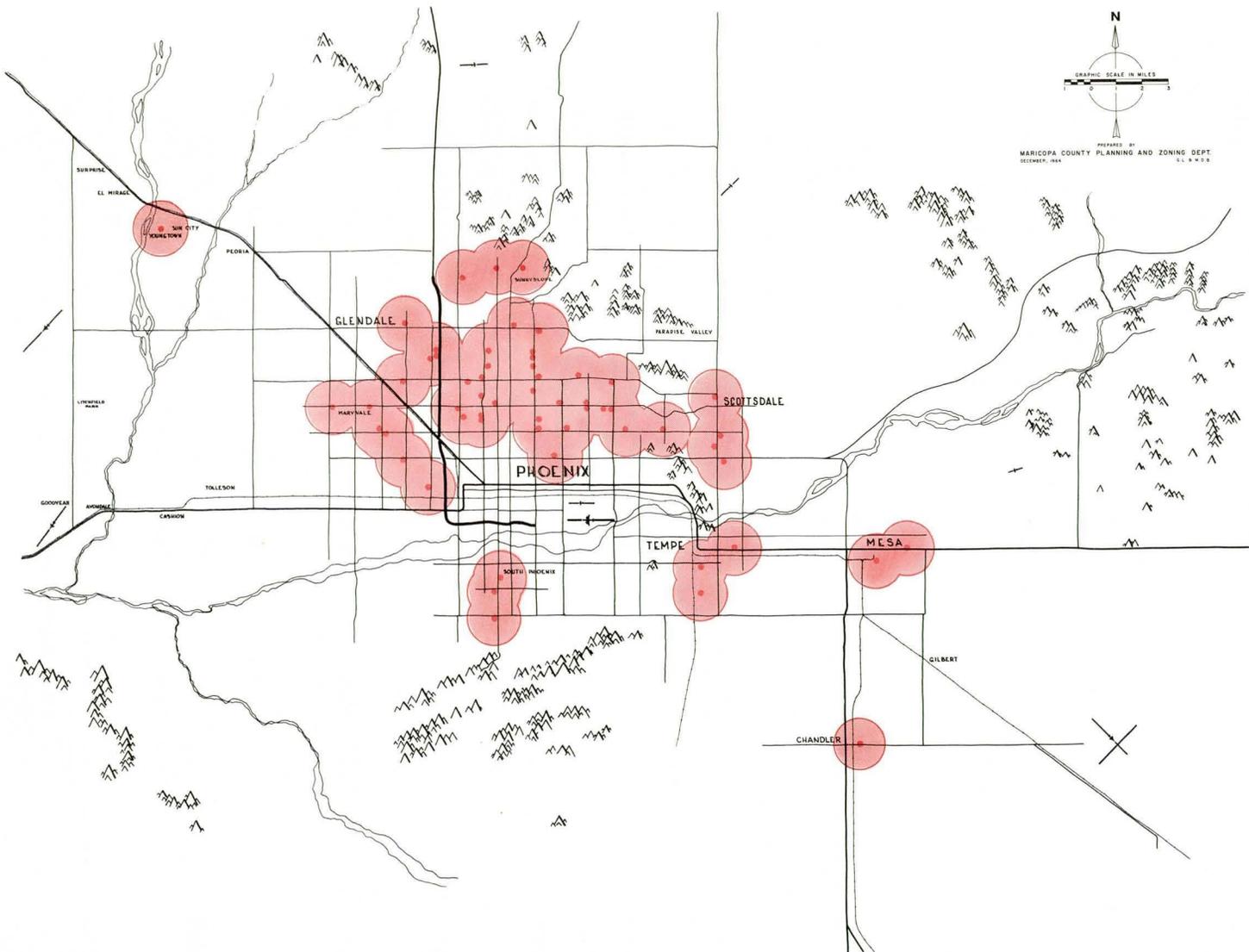
A shopping center is defined as "a group of commercial establishments, planned, developed, owned, and managed as a unit, with off-street parking provided on the property and related in location, size, and type of shops to the trade area that the unit serves - generally in an outlying or suburban territory."¹⁵

Various shopping centers as portrayed and classified herein follow the general requirements as set forth by Urban Land Institute's Technical Bulletin No. 30 in regards to gross

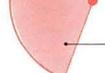
TABLE 7
TABLE OF INDICATORS FOR TYPES AND SIZE OF SHOPPING CENTERS
(Throughout the United States)

<u>Type of Center</u>	<u>Neighborhood</u>	<u>Community</u>	<u>Regional</u>
Average Gross Floor Area	40,000 sq. ft.	150,000 sq. ft.	400,000 sq. ft.
Ranges in GFA	30,000 - 75,000 sq. ft.	100,000 - 300,000 sq. ft.	400,000 to over 1,000,000 sq. ft.
Average Minimum Site Area	4 acres	10 acres	40 acres
Minimum Support	1,000 families 7,000 - 20,000 people	5,000 families 20,000 - 100,000 people	70,000 - 300,000 families 250,000 - 1,000,000 people
Leading Tenant	Supermarket or Drug Store	Variety or Junior Dept. Store	One or two Department Stores

¹⁵ Urban Land Institute, Technical Bulletin No. 30, February 1957.



PREPARED BY
 MARICOPA COUNTY PLANNING AND ZONING DEPT.
 DECEMBER, 1964
 G. L. & W. B.

-  SERVICE RADIUS
1 MILE
-  CENTER LOCATION
-  TRADE AREA
-  RAILROADS
-  MAJOR STREETS
-  STATE & FEDERAL HIGHWAYS
-  MAJOR EXPRESSWAYS

NEIGHBORHOOD SHOPPING CENTERS
 CENTRAL PORTION MARICOPA COUNTY

area, retail floor area, parking ratios, types of services offered and retail establishments.

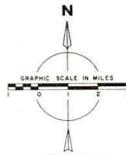
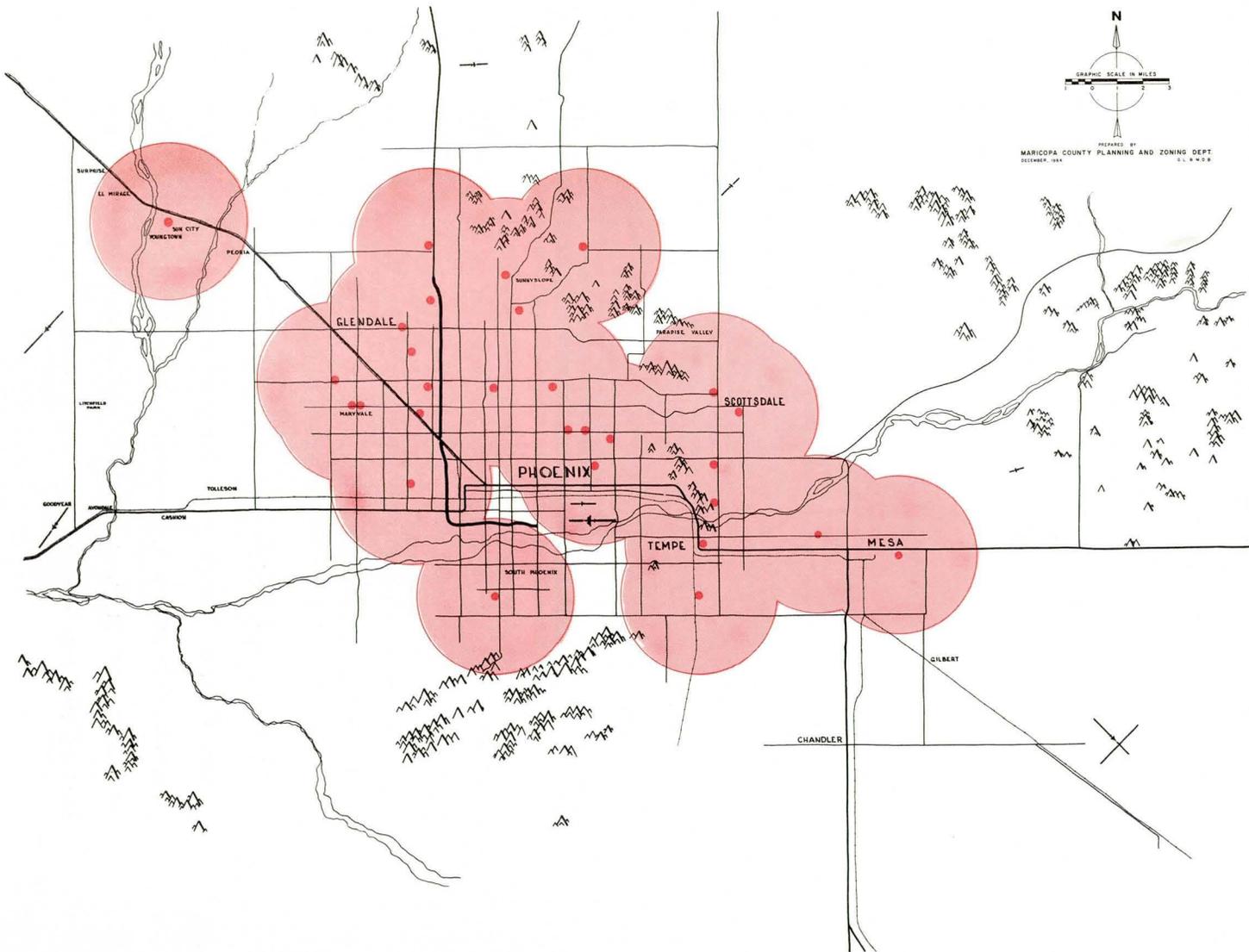
Shopping centers meet new population needs but they do not replace the central business district where there is usually greater variety and selection of goods. (An analysis of shopping center trends and their significance is dealt within the new economic analysis currently being completed by Western Management Consultants.)

Neighborhood Shopping Centers: The distribution of centers classified as Neighborhood Shopping Centers is shown on Plate 13. A service area of one-mile radius from the center location is considered to be the normal trade area for these facilities.

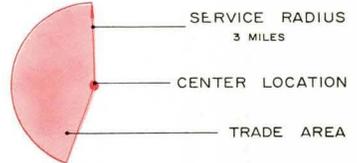
A neighborhood shopping center is defined as a facility which provides convenience goods and personal services to meet day-to-day living needs. The neighborhood shopping center is usually built around a supermarket and drug store as its principal tenants. It is normally designed to serve a trade area within six minutes driving time with a buying trade of 7,500 to 20,000 persons and usually requires from four to ten acres for its development. Neighborhood shopping centers are usually located within medium to high density residential areas and on one corner of two major intersecting streets. Frequently neighborhood centers are surrounded by higher density apartment dwellings.

Neighborhood shopping centers generally follow new residential development and are designed to provide convenience goods and services to the adjoining residential areas. The majority of existing neighborhood shopping centers are located in north Phoenix areas that have developed since

▶ **PLATE 13**



PREPARED BY
 MARICOPA COUNTY PLANNING AND ZONING DEPT.
 DECEMBER, 1964
 C. L. & W. B.



- RAILROADS
- MAJOR STREETS
- STATE & FEDERAL HIGHWAYS
- MAJOR EXPRESSWAYS

COMMUNITY SHOPPING CENTERS
 CENTRAL PORTION MARICOPA COUNTY

1945. A number of centers have been established in the outlying residential areas of the other communities.

It is significant to note that many residential areas are located closer than one mile to more than one neighborhood shopping center, which indicates overlapping trade territory.

Table 8 indicates statistics of the neighborhood shopping centers shown on Plate 13.

TABLE 8
NEIGHBORHOOD SHOPPING CENTERS - 1964
Central Portion of Maricopa County

Total Number of Centers	58
Total Number of Stores	558
Average Number of Stores Per Center	9.6
Total Gross Land Area	298 acres
Average Gross Land Area Per Center	5.1 acres
Average Gross Floor Area Per Center	37,303 sq. ft.
Percent of Land Coverage by Building	16.6
Total Number of Parking	14,697 spaces
Average Number of Parking Spaces Per Center	253 spaces

Source: Phoenix Shopping Center Survey - 1964; First National Bank of Arizona.

Community Shopping Centers: The location of centers classified as Community Shopping Centers are shown on Plate 14. A service area with a 3-mile radius from each center is shown.

▶ PLATE 14

A community shopping center provides in addition to the convenience goods and personal services found in neighborhood centers, soft line goods (wearing apparel, etc.) and

hard line goods (hardware, appliances, etc.) It adds to the shopping goods and convenience items and makes more depth of merchandise available, i.e., a variety in sizes, styles, colors and quality. The community shopping center usually includes a variety store or junior department store as its principal tenant in addition to a supermarket and drug store. It often includes a limited amount of office space for professional services. The community center is normally designed to serve a trade area within 15 to 20 minutes driving time with a buying trade of 20,000 to 100,000 persons and contains from 10 to 30 acres for its development.

Community shopping centers are usually located at the intersection of two or more major arterial streets and close to the trade center of several residential neighborhoods.

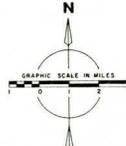
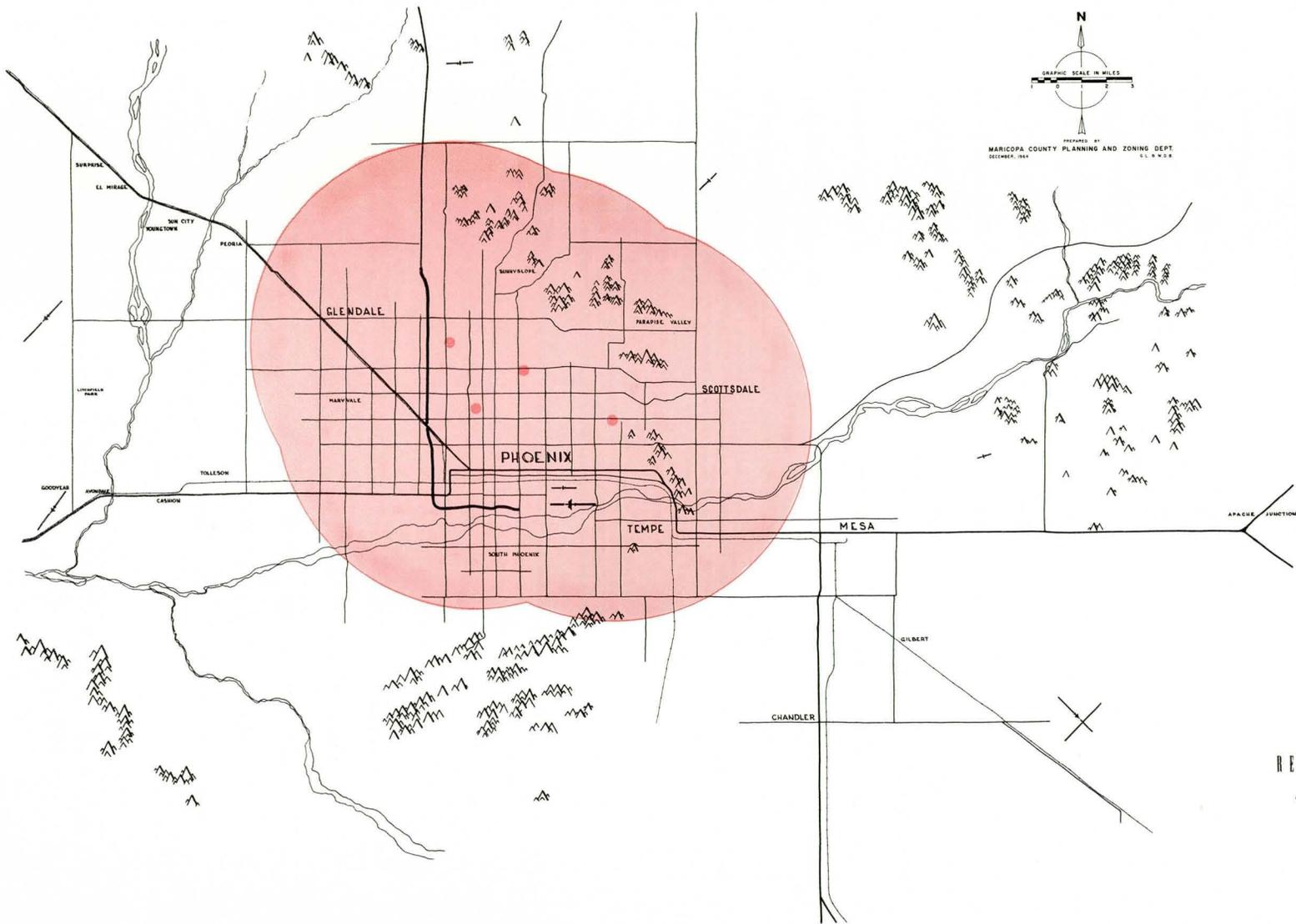
Like neighborhood shopping centers, community centers have located in the outlying suburban areas that have developed since 1945, with the greatest number being located in the north and northwest part of Phoenix. As indicated by Plate 14 a great amount of overlap of the service trade areas exists, which often creates an inadequate trade territory for individual shops within the center. It is interesting to note that in the Maryvale area a large number of community centers exist as compared to the small number of neighborhood centers. This is basically due to the fact that a number of neighborhood type of facilities have been expanded in sales area to become community centers. This condition has occurred because higher population densities exist within the trade area than are commonly found throughout the remaining urban area.

Table 9 indicates the general land-use ratios for the community shopping center studies shown on Plate 14.

TABLE 9
COMMUNITY SHOPPING CENTERS
Central Portion of Maricopa County

Total Number of Centers	29
Total Number of Stores	589
Average Number of Stores Per Center	20.3
Total Gross Land Area	605 acres
Average Gross Land Area Per Center	15.4 acres
Percent of Land Coverage by Buildings	15.4%
Average Gross Floor Area Per Center	140,492 sq. ft.
Total Number of Parking Spaces	37,887 spaces
Average Number of Parking Spaces Per Center	1,306 spaces

A comparison of Table 9 with Table 7 reveals the following significant facts: The average gross floor area of local community centers is 140,492 square feet compared with a range of 100,000 to 300,000 square feet for the nation. The average gross land area of local centers is 15.4 acres compared with an average of 10 acres for the nation.



PREPARED BY
 MARICOPA COUNTY PLANNING AND ZONING DEPT
 DECEMBER, 1964
 E. L. & W. P.

-  SERVICE RADIUS
8 MILES
-  CENTER LOCATION
-  TRADE AREA
-  RAILROADS
-  MAJOR STREETS
-  STATE & FEDERAL HIGHWAYS
-  MAJOR EXPRESSWAYS

REGIONAL SHOPPING CENTERS
 CENTRAL PORTION MARICOPA COUNTY

Regional Shopping Centers: The locations of centers classified as Regional Shopping Centers are shown on Plate 15. A service area of an 8-mile radius is shown around each center.

A regional shopping center provides a wide range of merchandise with a variety of manufactured lines in apparel, furniture and home furnishings. It also provides for all of the hard and soft line goods, and convenience items found in neighborhood and community centers. The regional shopping center attempts to provide facilities for all of the shopping needs for families living in the suburban areas, as well as to provide certain professional and business offices related to the area and the general function of the center.

The regional shopping center usually has one or two major department stores as its principal tenants. It is normally designed to serve a trade area within a 25- to 30- minute driving time with a purchasing capacity of 100,000 to 250,000 persons. Regional shopping centers require 30 to 40 acres for their development and are usually located at the intersection of two major arterial streets or near an interchange of a major expressway.

At the time of the shopping center study in 1964¹⁶ there were four established regional centers: Park Central, Christown, Thomas Mall and East Camelback Mall which includes Sears and Rhodes. All four centers are shown on Plate 15. In addition several existing community centers are developing into the regional classification - Maryvale, Fashion Square and Tower Plaza. As shown on Plate 15 all of the

▶ **PLATE 15**

¹⁶ Shopping Center Study, First National Bank of Arizona, 1964.

developed area of the Phoenix Urban Area is covered by the service area of the four regional centers, with the exception of Mesa and the extreme outlying communities. An area of service overlap is especially evident in the north-central Phoenix area, where three regional centers are located within three miles of each other.

Table 10 indicates the general land-use ratios for the regional shopping centers studied.

TABLE 10
REGIONAL SHOPPING CENTERS
Central Portion of Maricopa County

Total Number of Centers	4
Total Number of Stores	191
Average Number of Stores Per Center	47.7
Total Gross Land Area	250 acres
Average Gross Land Area Per Center	62.5 acres
Average Gross Floor Area Per Center	635,305 sq. ft.
Percent of Land Coverage by Buildings	23.3 %
Total Number of Parking Spaces	19,209
Average Number of Parking Spaces	4,802

A comparison of Table 10 with Table 7 reveals the following significant facts: The average gross floor area of local regional centers is 635,305 square feet compared with a range of 400,000 to over 1,000,000 square feet for the nation. The average gross land area of local centers is 62.5 acres compared with an average minimum site of 40 acres for the nation.

In addition to the 3 types of shopping centers discussed a new shopping facility has been introduced - commonly called a departmentalized center or discount house. These facilities provide various departments under one roof but under separate management and often contain gross floor area, retail items, convenience items and parking spaces similar to a community center. Seven of these facilities are located within the Phoenix Urban Area which contain a total gross floor area of 648,000 square feet and provide a total of 7,275 parking spaces.

Shopping Center Summary: Although the trade areas indicated for the various shopping center classifications are of necessity somewhat arbitrary, a broad picture of local conditions is portrayed. A few areas of deficiency are noticeable on Plates 13 and 14 for Neighborhood and Community Type Facilities. However, these areas are obviously served by other areas of shopping center concentration, by downtown core areas or strip development along major streets. Undoubtedly many persons drive several miles to a neighborhood or community center, thus indicating that distance is a tenuous factor as to the definition of trade areas at the present time. However, as population and automobile registration increase, traffic congestion and general mobility will become more acute, thereby making travel distance a factor of greater importance in the future.

It appears that in locating new facilities little attention has been paid to the trade territory of existing centers and the effect thereon which has resulted in a duplication of service in certain areas. The economic effect of this apparent duplication of service cannot be accurately evaluated at

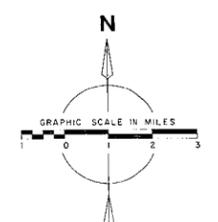
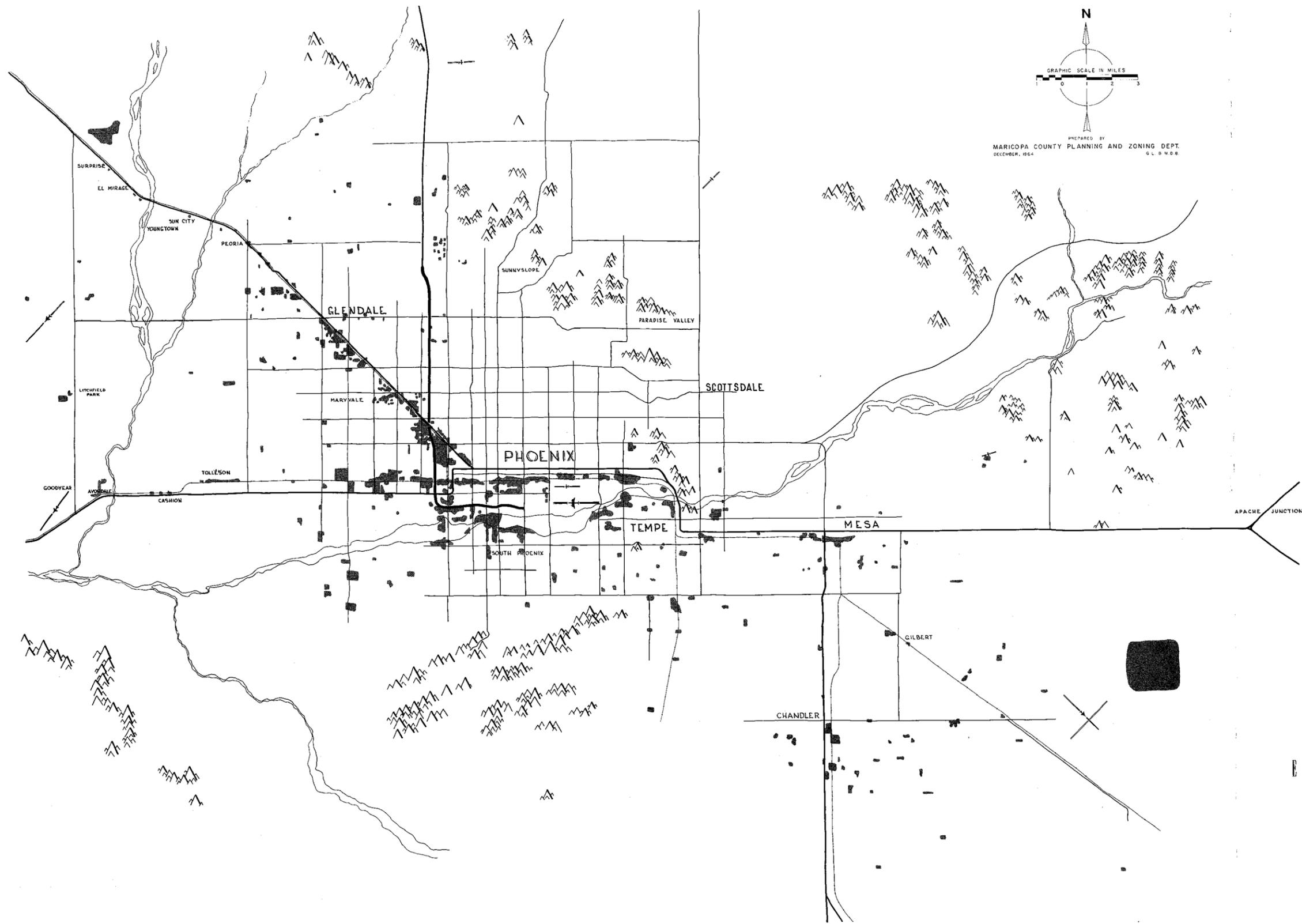
this time because of the absence of information and the short period of time that many of these commercial developments have been in existence.

Some cities and communities are approaching this problem by requiring that there be a minimum distance between shopping center facilities and by requiring a detailed market analysis of proposed new centers before they are approved. However, there are no commonly accepted criteria or judgment as to what constitutes a sufficient number of shopping establishments for any given community. Economists, entrepreneurs, and planners are all striving for the answer to this fundamental problem that confronts communities.

Industrial Land Use

The location of industrial lands is shown on Plate 16. The greatest concentrations of industrial facilities are located along Grand Avenue and between Washington Street and the Southern Pacific Railroad where railroad service is available. Other concentrations have developed near the Sky Harbor Airport and south of the Maricopa Freeway west of Central Avenue. Manufacturing locations are scattered in South Phoenix (near Broadway Road and the Salt River) and are widely scattered through north central Phoenix, particularly in the Deer Valley area, which has moderately good access to the Black Canyon Highway (Interstate 17) and the Deer Valley Airport. Several small manufacturing and fabrication facilities are located near or within the downtown areas of Glendale, Scottsdale, Tempe and Mesa. However, they do not appear on Plate 16 because of their size and distribution.

PLATE 16 ►



PREPARED BY
 MARICOPA COUNTY PLANNING AND ZONING DEPT.
 DECEMBER, 1964
 G. L. S. M. D. R.

- LOW DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- PUBLIC & SEMI-PUBLIC
- MAJOR PARKS & GOLF COURSES
- AGRICULTURE
- RAILROADS
- MAJOR STREETS
- STATE & FEDERAL HIGHWAYS
- MAJOR EXPRESSWAYS

EXISTING GENERAL LAND USE

CENTRAL PORTION MARICOPA COUNTY

A considerable number of industrial areas appear within the agricultural areas. These areas are basically agricultural industrial uses and are primarily cotton gins or cattle feed lots.

In April of 1963, it was estimated that manufacturing employment in Maricopa County totaled 40,100 persons. Of this number 36,500 (or 91 percent) were employed in the Phoenix-Glendale area, and another 2,000 (or 5 percent) were employed in the Tempe-Mesa-Chandler area.¹⁷

About 45 percent of all employees engaged in manufacturing are in aircraft and electronic industries and 55 percent are somewhat evenly distributed among such categories as food products, primary metals, printing and publishing, and others.¹⁸

¹⁷ See pages 26, 32, and 53 of Arizona, Basic Economic Data, 1963.

¹⁸ For state totals of June 1963, see page 16, Arizona Statistical Review, Valley National Bank.

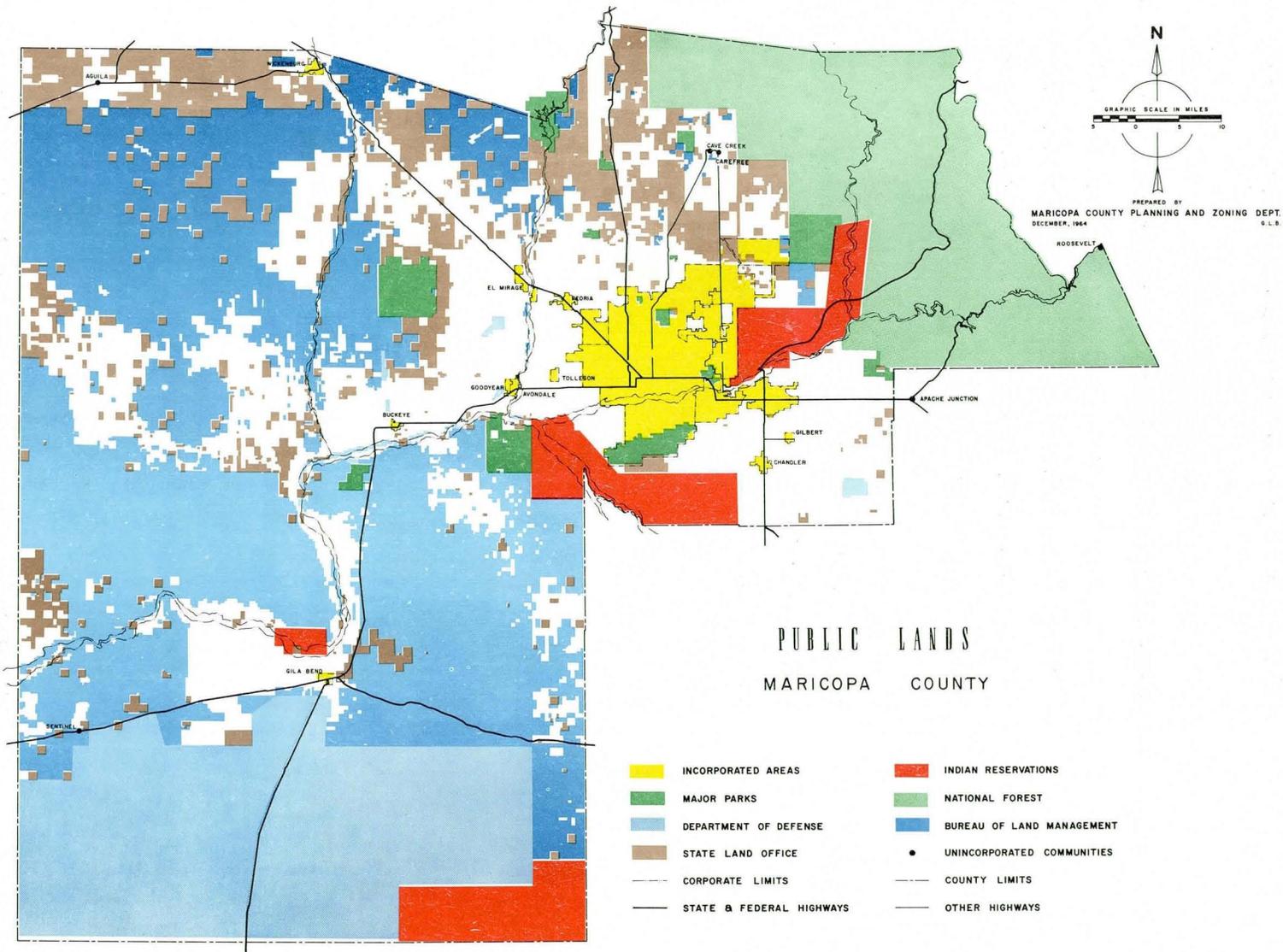


PLATE 17

Major Open Land Uses

Plate 17 shows the general location of regional parks, national forest land, Indian reservations, military land, state land, and federal land. The public lands shown account for 70.5 percent of the County or 6,511 square miles.

The majority of public lands as shown on Plate 17 remain open and undeveloped. Some urban and agricultural development has taken place on the Indian reservations. However, considerable interest has been expressed by entrepreneurs to open up the Indian reservations for wide-scale development and various studies have been undertaken under the auspices of the United States Department of Interior and Bureau of Indian Affairs to determine the possibility and potential for industrial and other development on Indian Reservations in Maricopa County.

In addition, portions of the Tonto National Forest have been leased for private development and the State Land Office and the Bureau of Land Management are constantly being approached for the release of state and federal lands for urban development.

The majority of state and federal lands should continue to remain in governmental control until the tide of land speculation subsides and until the general public is willing to recognize the need for agricultural reserves, greenbelts and open land conservation policies which will provide permanent open space, preserve the desert vegetation, prevent erosion, and protect the wildlife for recreational purposes.

Military bases within the County are: Williams Air Force Base, 9 miles east of Chandler; Luke Air Force Base, 10

← PLATE 17

miles west of Glendale; and the Litchfield Naval Air Facility adjacent to Avondale-Goodyear. The latter facility is planned to be phased out and disposed of as a military base.

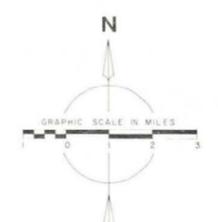
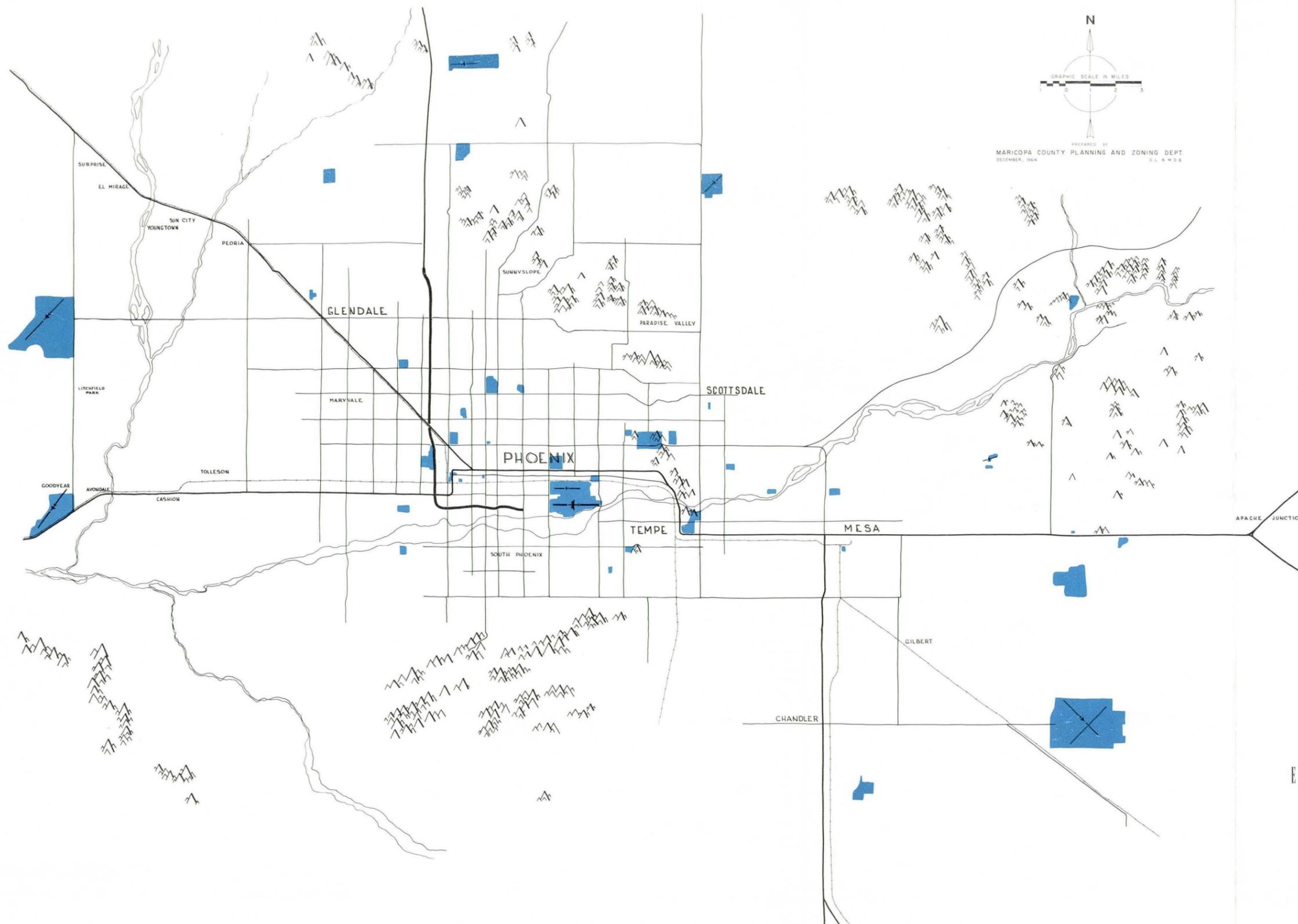
Public and Semi-Public Land Use - Central Portion

Public and semi-public uses within urban areas include streets and alleys, parks and playgrounds, governmental functions, schools and other public institutions. Semi-public uses include charitable organizations, churches, private schools, golf clubs, hospitals, cemeteries, and so forth.

The 1958 Task Force Report¹⁹ found that approximately 11.5 percent of the total developed land within the Phoenix Urban Area was devoted to semi-public uses. It is pointed out in "Land Uses in American Cities"²⁰ that in 33 major cities the average land devoted to public and semi-public use is 11 percent, which is similar to that found by the task force study.

¹⁹ Land Use of the Phoenix Urban Area, City of Phoenix and Maricopa County, Arizona Advanced Planning Task Force, May 1959.

²⁰ Land Uses in American Cities, Harland Bartholomew.



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 DECEMBER, 1964
 G.L. 8-W-8

- LOW DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- PUBLIC & SEMI-PUBLIC
- MAJOR PARKS & GOLF COURSES
- AGRICULTURE
- RAILROADS
- MAJOR STREETS
- STATE & FEDERAL HIGHWAYS
- MAJOR EXPRESSWAYS

EXISTING GENERAL LAND USE
 CENTRAL PORTION MARICOPA COUNTY

Transportation - Central Portion

The transportation network throughout the urban environs allows the other urban uses to function. How efficiently these other uses function is dependent on the quality of the transportation system. The transportation land-use category is devoted to the land required to move people and goods throughout the central portion.

Major Streets, Highways, Freeways, and Expressways: Motor vehicle traffic within the older parts of the central portion has had to adjust to street and highway patterns which were originally designed for earlier modes of transportation. In the ten year period for 1952 to 1962 motor vehicle registration in the state has increased 125 percent from 357,701 to 808,289 vehicles respectively with Maricopa County receiving approximately one half of the state total.

In 1960, Wilbur Smith and Associates, Traffic Engineering Consultants, presented a Long-Range Major Street and Highway Plan for the Phoenix Urban Area and Maricopa County based upon the future land-use plan prepared by the City of Phoenix and Maricopa County Advance Planning Task Force.

This plan was adopted by Maricopa County and various cities and towns affected. Subsequently, a continuing study of traffic movement has been undertaken by the Valley Area Transportation Study under the auspices of the State Highway Department.

Railroads: In the early years of development the railroads were the prime source of long distance transportation for freight and passenger movement. However, today the automobile, bus, truck and airplane have reduced the railroad's importance as a major transportation carrier. Maricopa

County is served by the Southern Pacific and Santa Fe Railroad Lines. These lines supply rail connections to other major railroad lines to provide adequate rail service to all areas of the nation. Fifteen of the 18 incorporated cities and towns within the County are served by one or both of these railroad facilities.

Airport Facilities

As of October 8, 1964, there were 193 airports in Arizona on record with the Federal Aviation Agency and of this number 50 are on the National Airport Plan with 9 being located in Maricopa County. As of January 1, 1963, there were 1449 active aircraft registered in Arizona, and of this number 760 were registered in Maricopa County.

Airports in Maricopa County that are included in the National Airport Plan are as follows:

TABLE 11

<u>Airport Type</u> (1)	<u>Community</u>	<u>Airport</u>	<u>Longest Runway</u>
GA	Buckeye	Municipal	3,830 feet
GA	Chandler (2)	Municipal	2,600 feet
GA	Gila Bend (2)	Private	4,000 feet
GA	Litchfield Park	Private	3,700 feet
GA	Mesa	Falcon Field	4,300 feet
AC	Sky Harbor	Municipal	10,300 feet
GA	Phoenix	Proposed New Airport	5,700 feet
GA	Scottsdale	Proposed New Airport	4,000 feet
GA	Wickenburg	Municipal	3,600 feet

(1) GA - General Aviation Airport, or one which is planned for use by segments of civil aviation other than the scheduled airlines.

AC - Air Carrier Airport, or one which is served or proposed for service on a regular schedule by an airline certified by the Civil Aeronautics Board.

(2) To be replaced with new municipal general aviation airport with 2,600 feet runway.

As of October 27, 1964, in addition to the aforementioned airports included in the National Airport Plan, there are 38 other airports and heliports in Maricopa County not listed in the National Airport Plan according to information from the Federal Aviation Agency District Airport Office.

There are four military air installations within the central portion: two on the west side of Phoenix, Luke Air Force Base and Litchfield Naval Air Facility of which the latter is in the process of being phased out. A small air facility exists at the Papago Army Air Force Armory which is for extremely small aircraft and limited uses. This facility conflicts with the space requirements and flight pattern of the Sky Harbor Airport.²¹ The remaining air facility is Williams Air Force Base southeast of Mesa. Air facilities within the central portion of the County comprise 11,013 acres with 7,270 being used for military purposes.

²¹ A Plan for Satellite Airports, City of Phoenix Planning Department, April 1963, page 7.

SUMMARY

In summary, for purposes of physical planning it is assumed that the county population will grow at a higher rate than that of the state and the nation and that as the state and county grow, population characteristics such as birth rate, death rate, sex ratios, non-white percentage and median age will gradually change to resemble those of the nation as a whole. It is further assumed that migration will be the predominant source for the County's total growth and that this growth will approximate 1,800,000 by 1980 and 2,500,000 by the year 2000.

It is also assumed that the general growth for each community will continue along the same general patterns of the past. In general, overall densities of each community will tend to increase. New growth will generally absorb much vacant land that was bypassed during periods of rapid growth and expansion. The present trend toward planned developments will undoubtedly continue in one form or another.

More emphasis will undoubtedly be placed upon the provision of school and park sites to meet present and future needs.

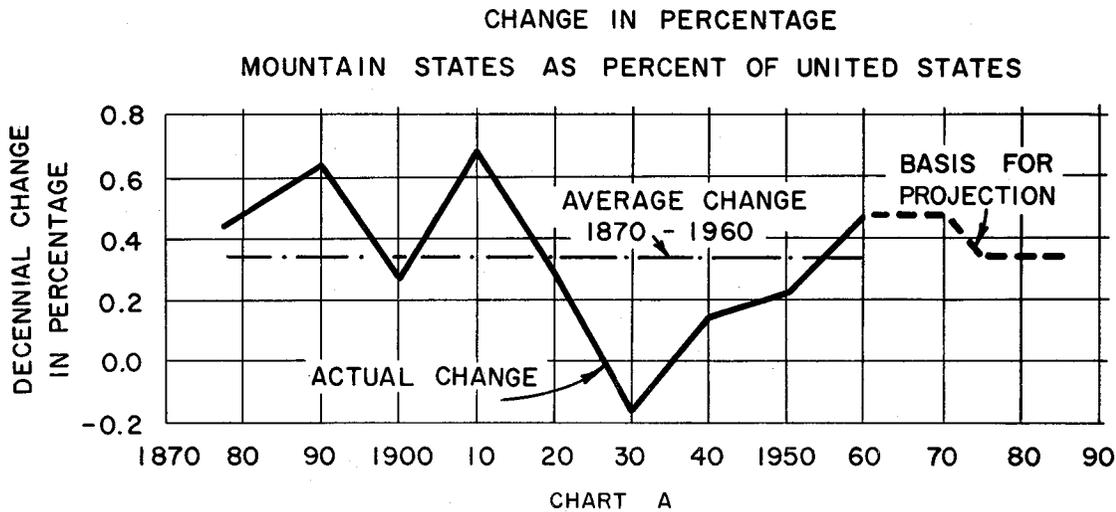
This report is the second of a series of reports that will comprise a Comprehensive Land-Use Plan for Maricopa County. The findings of this report have been correlated with the findings of Part I. This report together with other reports now being prepared will provide the basis for the preparation of a future land-use plan which will be dealt with in Part III of this series.

APPENDIX

TABLE A
MOUNTAIN STATES - POPULATION FORECAST

PAST TRENDS:

Census Year	United States Population	Mountain States Population	Mountain States as Percent of United States		
			Percentage	Change in Percentage (2)	Decennial Change in Percentage
1870	38,558,371	315,385	0.82	-	-
1880	50,189,209	653,119	1.30	0.48	0.48
1890	62,979,766	1,213,935	1.93	0.63	0.63
1900	76,212,168	1,674,657	2.20	0.27	0.27
1910	92,228,496	2,633,517	2.86	0.66	0.66
1920	106,021,537	3,336,101	3.15	0.29	0.29
1930	123,202,624	3,701,789	3.00	-0.15	-0.15
1940	132,164,569	4,150,003	3.14	0.14	0.14
1950 ⁽¹⁾	151,325,798	5,074,998	3.35	0.21	0.21
1960 ⁽¹⁾	179,323,175	6,855,060	3.82	0.47	0.47
July 1 Estimate:					
1960	180,676,000 ⁽³⁾	6,920,000	3.83	0.01	0.47
1964	192,166,000 ⁽³⁾	7,725,000	4.02	0.19	0.47



PROJECTION:

Year (July 1)	United States Forecast (3)	Mountain States as Percent of United States			Mountain States Forecast
		Assumed Decennial Change in Pct. (Basis for Projection)	Change in Pct. (2)	Projected Percentage	
1965	195,129,000	0.47	0.05 ⁽⁴⁾	4.07	7,942,000
1970	211,430,000	0.47	0.23	4.30	9,091,000
1975	230,415,000	0.33	0.17	4.47	10,300,000
1980	252,056,000	0.33	0.16	4.63	11,670,000
1985	275,622,000	0.33	0.17	4.80	13,230,000

(1) April 1, 1960; U.S. Census of Population Date.

(2) Increase over previous date.

(3) Series A, "high projection", Current Population Report, Series P-25, No. 279 Feb. 4, 1964

(4) Change from July 1, 1964, to July 1, 1965; based on a decennial change of 0.47

TABLE B
ARIZONA - POPULATION FORECAST

PAST TRENDS:

Census Year	Mountain States Population	Arizona Population	Arizona as Percent of Mountain States		
			Percentage	Change in Percentage (2)	Decennial Change in Percentage
1870	315,385	9,658	3.1	-	-
1880	653,119	40,440	6.2	3.1	3.1
1890	1,213,935	88,243	7.3	1.1	1.1
1900	1,674,657	122,931	7.3	0.0	0.0
1910	2,633,517	204,354	7.8	0.5	0.5
1920	3,336,101	334,162	10.0	2.2	2.2
1930	3,701,789	435,573	11.8	1.8	1.8
1940	4,150,003	499,261	12.0	0.2	0.2
1950	5,074,998	749,587	14.8	2.8	2.8
1960 ⁽¹⁾	6,855,060	1,302,161	19.0	4.2	4.2
July 1 Estimate:					
1960	6,920,000 ⁽³⁾	1,322,000	19.1	0.1	4.2
1964	7,725,000 ⁽³⁾	1,607,000	20.8	1.7	4.2

CHANGE IN PERCENTAGE
ARIZONA AS PERCENT OF MOUNTAIN STATES

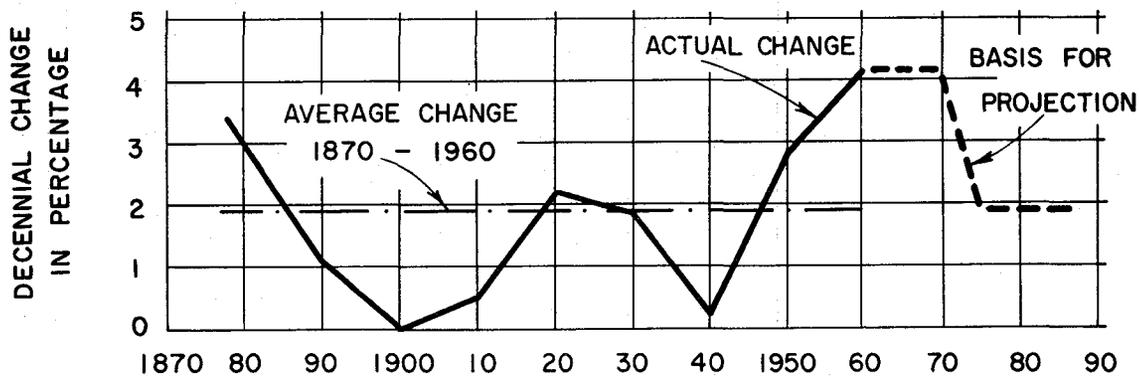


CHART B

PROJECTION:

Year (July 1)	Mountain States Forecast ⁽³⁾	Arizona as Percent of Mountain States		Arizona Forecast
		Assumed Decennial Change in Change in Pct. (Basis for Projection)	Projected Percentage	
1965	7,942,000	4.2	21.2	1,684,000
1970	9,091,000	4.2	23.3	2,118,000
1975	10,300,000	1.8	24.2	2,493,000
1980	11,670,000	1.8	25.1	2,929,000
1985	13,230,000	1.8	26.0	3,440,000

(1) April 1, 1960; U.S. Census of Population Date.
 (2) Increase over previous date.
 (3) Estimates and Forecast are from Table A of this report.
 (4) Change from July 1, 1964 to July 1, 1965, based on a decennial change of 4.2

TABLE C
MARICOPA COUNTY - POPULATION FORECAST

PAST TRENDS

Census Year	Arizona Population	Maricopa County Population	Maricopa County as Percent of Arizona		
			Percentage	Change in Percentage ⁽²⁾	Decennial Change in Percentage
1870	9,658	-	-	-	-
1880	40,440	5,689	14.1	-	-
1890	88,243	10,986	12.4	-1.7	-1.7
1900	122,931	20,457	16.6	4.2	4.2
1910	204,354	34,488	16.9	0.3	0.3
1920	334,162	89,576	26.8	9.9	9.9
1930	435,573	150,970	34.7	7.9	7.9
1940	499,261	186,193	37.3	2.6	2.6
1950 ⁽¹⁾	749,587	331,770	44.3	7.0	7.0
1960 ⁽¹⁾	1,302,161	663,510	51.0	6.7	6.7

July 1 Estimate:

1960	1,322,000 ⁽³⁾	677,000	51.2	0.2	6.7
1964	1,607,000 ⁽³⁾	866,000	53.9	2.7	6.7

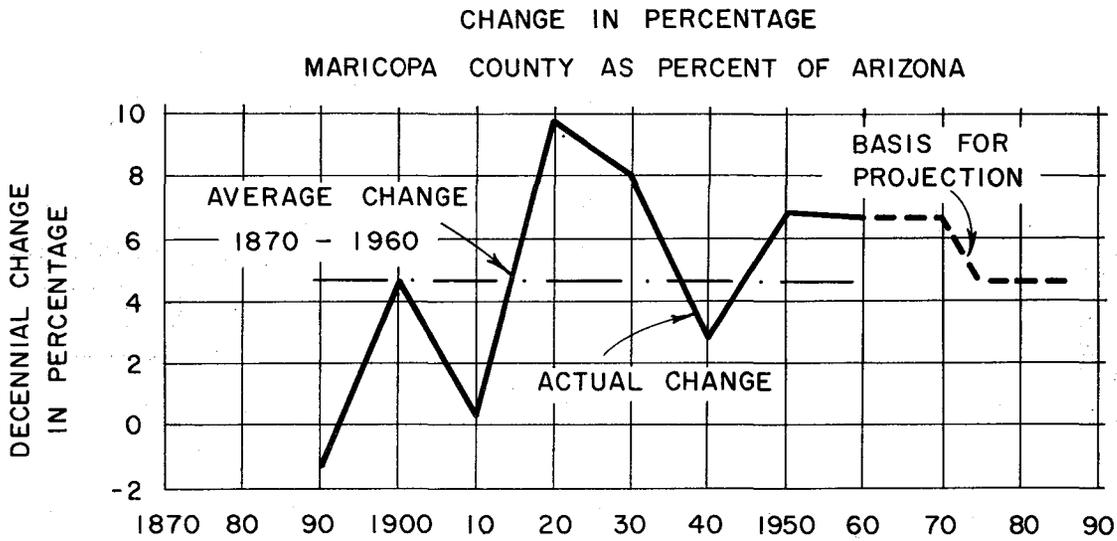


CHART C

PROJECTION:

Year (July 1)	Arizona Forecast ⁽³⁾	Maricopa County as Percent of Arizona			Maricopa County Forecast
		Assumed Decennial Change in Pct. (Basis for Projection)	Change in Pct. ⁽²⁾	Projected Percentage	
1965	1,684,000	6.7	0.7 ⁽⁴⁾	54.6	919,000
1970	2,118,000	6.7	3.3	57.9	1,226,000
1975	2,493,000	4.6	2.3	60.2	1,501,000
1980	2,929,000	4.6	2.3	62.5	1,831,000
1985	3,440,000	4.6	2.3	64.8	2,229,000

(1) April 1, 1960; U.S. Census of Population Date.

(2) Increase over previous date.

(3) Estimates and Forecast are from Table B of this report.

(4) Change from July 1, 1964, to July 1, 1965; based on a decennial change of 6.7.

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