

COMPREHENSIVE PLANNING PROGRAM TEMPE ARIZONA

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TEMPE ARIZONA

REPORT NUMBER TWO
HOUSING AND
RESIDENTIAL ENVIRONMENT

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THE
COMPREHENSIVE PLANNING PROGRAM
TEMPE, ARIZONA

Prepared Under Contract with the
Division of Economic and Business Research
University of Arizona

by

TEMPE PLANNING DEPARTMENT
and
VAN CLEVE ASSOCIATES, CONSULTING PLANNERS

REPORT NUMBER TWO
HOUSING AND
RESIDENTIAL ENVIRONMENT

The preparation of this report was financially aided through a Federal grant from the Urban Renewal Administration of the Housing and Home Finance Agency under the Urban Planning Assistance Program authorized by Section 701 of the Housing Act of 1954, as amended.

FEBRUARY 1966

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SUMMARY OF FINDINGS

The major findings of this report on Tempe's housing and residential environment are summarized as follow:

Composition and Occupancy of Housing

1. Construction of multi-family housing units in the 5-or-more-unit structure category has accounted for nearly 34% of all housing starts since 1960. Single-family dwellings totaled 51% of the 1960-65 housing starts, while in 1960 they accounted for 82% of Tempe's total housing inventory.
2. Since 1960 an occupancy rate of about 90% has been maintained, a drop from the 93.2% recorded by the 1960 Census of Housing.
3. 29% of all multi-family units are wholly-occupied by ASU students and another 21% are occupied by households including at least one ASU student.

Housing and Neighborhood Conditions

1. In 1963 residential land uses accounted for nearly 53% of the developed land in Tempe, an exceptionally high ratio.
2. Two-thirds of Tempe's housing units are less than 10 years old. The median value has risen consistently to reach the level of \$14,201, slightly higher than the metropolitan area median.
3. 11% of the city's housing units were in deteriorating condition in 1960, while 4% were considered dilapidated.
4. Several of Tempe's residential areas are seriously sub-standard and require organized rehabilitation and redevelopment action.
5. Several residential areas evidence a need for organized programs emphasizing rehabilitation and conservation to arrest deterioration and restore economic stability.
6. Most of the city's residential areas evidence a need for improvement of zoning and subdivision regulations, enactment of a housing code and a fire code, and improved enforcement of existing and proposed ordinances.

Housing Trends

1. The 82% ratio of single-family dwellings in 1960 will decline to about 76% by 1985, in response to the growing popularity of apartment living and changing composition and characteristics of households.
2. Housing units in multi-family structures will continue to increase in numbers and are expected to comprise 20% of the total housing supply by 1985.

Future Housing and Residential Land Needs

1. 41,000 housing units will be required to house the 1985 population. All but 10,000 of these units must be constructed during the next twenty years.
2. Construction of 31,000 housing units and supporting land uses by 1985 will consume approximately 8,110 acres, or 12.7 square miles, of undeveloped or redeveloped land.

INTRODUCTION

The strength of an urban society largely depends upon the quality of living it affords. Desirable residential environment is critical to the long-term social and economic welfare of the entire urban community as well as that of its individual citizens. Its creation and preservation is both a private and public responsibility.

Reduced to barest essentials, a family requires housing, schools, healthful surroundings, and stable finances. More specifically, people require places to work, shop and play, streets to travel on, fire and police protection, potable water and sanitary waste disposal, electricity and fuel. All of these conditions affect the quality of living in any given community.

When people migrate from farms and small towns to larger cities and metropolitan areas, they live closer together and associate with more people than before. And as population density increases, all human relations become more complex. The urban resident is less self-sufficient and independent than his country cousin. He is also more needful and demanding of conveniences and services which are not as essential to rural and small town life.

The grouping together of people in an urban society thus creates special problems and needs which can ultimately be solved or satisfied only through group action. Some of this action is the responsibility of the City in its role of tax collector, administrator, planner and policeman. Other group action, less formal and less organized by nature, is brought about by groups of people who think alike agreeing to act alike, as in neighborhood associations, parent - teacher organizations, chambers of commerce, and the like.

In a rapidly growing city, it is normal and desirable to satisfy first the needs for those public facilities which are basic requirements of urban life. Schools, streets, water supply and sewage disposal represent primary needs which must be satisfied the very day the new resident arrives.

Parks, playgrounds, community buildings, street tree plantings and similar recreational, cultural and aesthetic improvements have often been considered "deferrable", and their construction typically lags far behind the occupancy of new dwellings. However, as public investment in such facilities increases and supply approaches demand in established areas of the city, it is logical to expect that these "deferrable" necessities of urban life will also be provided as an integral part of new area development.

All of these elements, and more, make up the total urban environment, and all will be considered in the course of Tempe's comprehensive planning program. This study deals with those physical and social factors which will affect the future quality of Tempe's residential environment, and more specifically, with housing conditions as they relate to the individual neighborhood and the community.

Residential buildings and sites constitute the largest single use of land in the urban community. They typically occupy about 40% of the developed land in large cities and over half the developed area of small cities where lots are larger and housing density is lower.^{1/} Tempe appears destined to more than triple its population during the next twenty years. Over 30,000 new dwelling units will be required to house the non-student segment of this population. If the present ratio of residential to other land uses remains fairly constant, housing development will require conversion of some 8,110 acres of land from other uses.

The concepts, principles and standards which guide the development of this vast acreage will determine Tempe's potential as a desirable place to live. The wisdom, integrity and consistency of standards enforced by the city, together with the cooperative effort, ingenuity and ability of homebuilders and developers, will ultimately determine the quality of its future living environment.

^{1/} Harland Bartholomew, Land Uses in American Cities, 1955, and The Rand Corporation, Recent Land Use Trends in 48 Large American Cities, 1963.

PART I
COMPOSITION OF HOUSING

Types of Housing

Urban dwellers occupy several different types of housing structures, each existing as a unit in a special setting. Single-family dwellings, each on its own plot of ground, house the majority of the population. Single residences are typically owner-occupied and are usually considered economically infeasible as rental units. Two-family dwellings, or duplexes, comprise two attached dwelling units on a single lot. While duplexes are usually designed with units side-by-side, the conversion of two-story single residences into duplexes may locate one above another. Duplexes are not usually considered an economical investment except when the owner occupies one unit and personally maintains the other.

Multi-family structures, each composed of three or more dwelling units, may be situated one structure to a lot or several to a parcel. The general term apartment applies to any dwelling unit in a multi-family structure. Apartments arranged side-by-side are called town houses (historically, "rowhouses"), and constitute a major proportion of multi-family housing in many older, larger cities. The individual town house may be one, two or three stories high, and each is an independent unit with its own utilities and entrances, and frequently its own front and back yards.

Single-story dwelling units arranged one above another in multi-story structures were once called flats. Flats may or may not overlap one another and usually do not have independent utilities or private access; however, first floor units may have direct private access at ground level and second floor units may have private access from public balconies.

Historically, flats are components of structures exceeding two stories in height, wherein the intensity of land use is directly proportional to the height of the structure. However, multi-family structures may contain both town houses and flats, with flats situated either above town house units or in separate wings. Both town houses and

flats are rental units by tradition, with an entire structure or complex of structures under unified ownership and management.

The ancient principle of condominium ownership (joint sovereignty) has recently gained popularity in real estate development and sales. Condominium ownership, wherein parts of a structure and its site are owned by separate individuals, is strictly a real estate ownership arrangement. An individual may own part of the structure, with or without the land occupied by that part, and hold other parts of the structure, land or improvements jointly with others. The intention of selling property in condominium does not in itself affect its design, site planning or construction.

Thus, community planners are primarily concerned with the siting of multi-family structures and their relationship to adjacent on-site or off-site structures, and only secondarily with the actual arrangement of parts of structures. However, when town houses are built on property having a depth similar to that of single residence lots, they may be sold and owned by individual units which comprise a slice of the structure and the land it occupies, without involving any joint ownership property. In such cases, public access to both the front and rear of each unit is a basic site planning requirement.

For several years it has been anticipated that mobile homes will ultimately account for at least 10% of total housing units on a nationwide basis. The popularity of mobile homes as dwelling units has increased steadily in Arizona and other states having mild climates and many seasonal residents. The mobile home may be situated on a rental site in a mobile home park, or on an individually-owned lot in a mobile home subdivision, both of which are specially designed and developed for such occupancy.

Some communities contain another type of housing, broadly categorized as group quarters. This is an institutional type of housing predominantly occupied by single persons, and includes dormitories, fraternities, rest homes, hospitals and correctional or penal institutions.

Composition of Tempe Housing

Figure 1 shows the composition of housing units by type as enumerated in the City

of Tempe and comparable entities in 1960. It is evident that single-family residences normally account for approximately 82% of total housing units.

Figure 1
COMPOSITION OF HOUSING BY TYPE, 1960
 City of Tempe & Selected Entities

Entity	Total Hsg. Units	Percent of Total				
		Single Family	Two Family	3 & 4 Family	5+ Family	Mobile Homes
Arizona	415,834	83.6	3.5	3.0	4.3	5.6
Maricopa Co.	191,076	82.3	3.2	3.6	5.1	5.2
TEMPE	7,116	82.0	3.4	2.6	4.5	7.5
Mesa	11,422	81.0	4.3	3.5	5.7	5.5
Phoenix	178,392	82.8	3.3	3.8	5.5	4.5

Source: U.S. Census of Housing, 1960.

Since 1960 the percentage of total housing units represented by single residences has decreased appreciably as the housing industry intensified activities in the multi-family field. In 1964, the construction of housing units situated in multi-family structures comprising 5 or more units actually exceeded that of single-family units. Figure 2 shows the composition of housing constructed during the 1960-65 period in Tempe. Many factors contribute to the recent emphasis on construction of multi-family housing, i.e., growing university enrollment, increasing ratio and number of married students, improved design and quality of apartment development, and introduction of the condominium principle.

It is anticipated that during the next several years multi-family construction will continue to exceed its former share of total residential construction; however, recently-established ratios will gradually decline as the backlog of demand for rental units in Tempe is satisfied. Ultimately, multi-family housing units are expected to account for about 15% of Tempe's total housing supply. Points supporting this rationale are as follow:

Figure 2
RECENT HOUSING CONSTRUCTION, BY TYPE
 City of Tempe

Year	Total Hsg. Units Permitted	Single-Fam.		Two-Fam.		3 & 4 Family		5+ Family	
		No.	%	No.	%	No.	%	No.	%
1960*	721	493	68.5	60	8.3	27	3.7	141	19.6
1961	1053	777	73.7	38	3.6	138	13.1	100	9.5
1962	1659	773	46.6	63	3.8	188	11.3	635	38.1
1963	1629	712	43.6	74	4.5	275	16.9	568	33.9
1964	1335	507	38.0	42	3.1	120	9.0	666	49.8
1965	788	450	57.2	10	1.2	18	2.3	310	39.3
Totals	7185	3712	51.6	287	4.0	766	10.7	2420	33.7

*April through December.

Source: Building permits issued by City of Tempe, 1960-65.

1. Low ratios of multi-family housing are common to cities under 25,000 population, and particularly to suburban cities in metropolitan areas wherein the most dense housing is normally concentrated within the central city.
2. A strong national trend toward apartment living during recent years has progressed to the point that apartments accounted for nearly 35% of all U.S. housing starts in the first quarter of 1963.^{1/} To some extent, recent emphasis on apartment construction has been inspired and promoted by the building industry, supported by the rural-to-urban population movement and the unprecedented mobility rate.
3. An increasing ratio of university-oriented persons will occupy multi-family units.^{2/}

^{1/} U.S. Department of Commerce, "Construction Reports", April & May, 1963.

^{2/} According to a census of multi-family dwellings conducted in October 1965 in Tempe, 50% of the 3,379 apartment units were occupied by households in which one or more members attended ASU (over half of these units were wholly occupied by students).

4. Rising raw land costs, increased commuting time and heavier traffic volumes will encourage higher residential density and increase the attractiveness of apartment living.

The 1960 Census showed that Tempe contained 532 mobile homes, accounting for 7.5% of all housing units. According to Figure 1, this ratio was appreciably higher than that for state, county or neighboring cities. Many of these mobile homes were located in the small, older trailer parks which have existed along Apache Boulevard for many years. Many were undoubtedly occupied by university students and student families.

By 1964, Woodall's Mobile Home and Travel Trailer Park Directory listed only seven parks within the city containing a total of 309 mobile home spaces. Thus, the number of mobile homes occupied as dwelling units in the city has declined sharply as other types of housing became available, as improved zoning and regulatory measures were enforced by the City, and as outmoded trailer parks were replaced by other land uses.

PART II
HOUSING OCCUPANCY CHARACTERISTICS

Occupancy Characteristics by Type of Housing

Twenty-five years ago the American Public Health Association stated: "The continuance of the family in the community of its choice will be greatly fostered by the provision in every housing project of living units sufficiently varied in size to provide accommodations during the whole cycle of family development, from the phase of child-rearing and gradually increasing family size, on to the period when parents whose grown children have set up their own homes will normally live by themselves".^{1/}

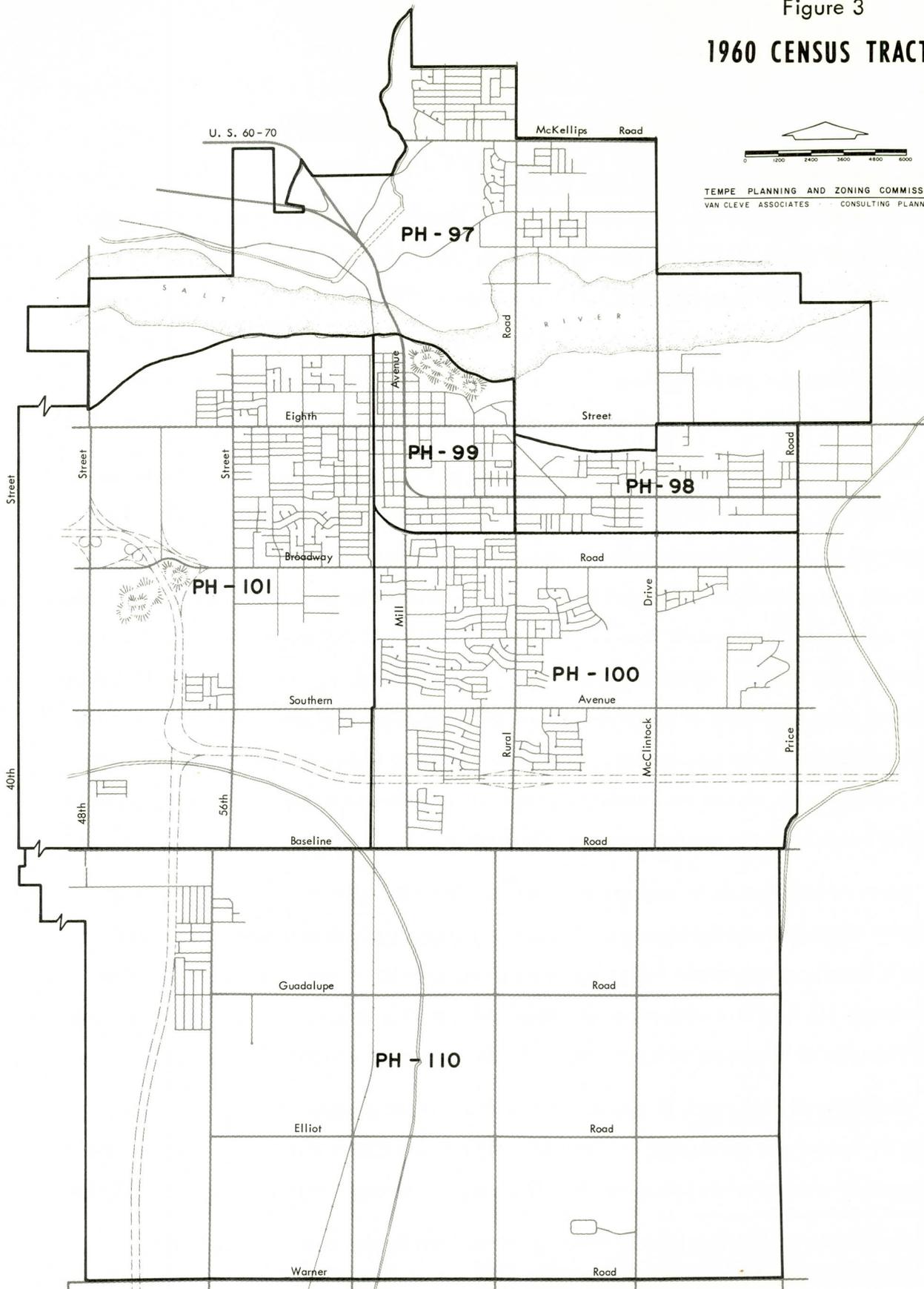
At the time of the APHA report, about 52% of the country's urban households were families with minor children, 20% were married couples without children, 8% were single adults and 20% were "other" households. Comparable statistics for the State of Arizona are unavailable, but in 1960 the U.S. Census estimated that 68.8% of Arizona's urban households comprised families with minor children. Although the ratio of urban families with children appears to have increased appreciably, the ratio of multi-family housing units increased at an even faster rate, suggesting that more and more families with children occupy apartments. Most minor children living in apartments are under six years of age, and as the number and ages of children in a family increase, a single-family home becomes more attractive and livable.

More detailed study of occupancy characteristics by type of housing unit would require extensive special surveys. However, it seems logical to assume that single-family dwellings house the following types of households in descending order of importance: (1) Families with minor children, (2) Married couples without children, and (3) Households composed of one or more single related or unrelated individuals.

Multi-Family Housing: A special census of all multi-family housing units in the City of Tempe was conducted in October 1965 by Van Cleve Associates to determine occupancy characteristics accurately. This census was broken down geographically by

^{1/} Committee on the Hygiene of Housing, American Public Health Association, Basic Principles of Healthful Housing, 1939.

Figure 3
1960 CENSUS TRACTS



The preparation of this plan was financially aided through a Federal grant from the Urban Renewal Administration of the Housing and Home Finance Agency under the Urban Planning Assistance Program authorized by Section 701 of the Housing Act of 1954, as amended.

census tracts as shown in Figures 3 and 4. It revealed the presence of 3,379 dwelling units situated in 249 multi-family structures. The average number of dwelling units per structure ranged from 5.5 to 124, with an overall average of 13.8 dwelling units per structure. 89.4% of the units were then occupied, and multiple dwellings housed 8,398 persons, an average of 2.8 persons per occupied dwelling unit. 1,509 units, 50% of all occupied units, housed one or more university students, who constituted 35.1% of all occupants. Figures 4, 5 and 6 show this and other data revealed by the survey.

Figure 4
MULTI-FAMILY HOUSING UNITS, 1965
 City of Tempe

Census Tract	M-F Structures		M-F Housing Units			
	No.	% of Total	Total No.	% of Total	No. Occp'd	% of Total
PH-97	1	0.4	124	3.7	123	99.9
PH-98	53	21.3	1324	39.7	1230	91.6
PH-99	42	16.9	231	6.8	219	94.8
PH-100	68	27.3	901	26.7	730	81.0
PH-101	85	34.1	781	23.1	721	92.3
Totals	249	100.0	3379	100.0	3023	89.4

Source: Multi-Family Housing Census, Van Cleve Associates, October 1965.

Figure 5
MULTI-FAMILY OCCUPANCY CHARACTERISTICS, 1965
 City of Tempe

Census Tract	No. Occp'd HU's	Population		Non-Student Households		Households with 1 or more Students								
						Wholly Occpd by Students				Not Wholly Occpd by Stud.				Total
						No.	%HU's	No. Stud.	Stud/HU	No.	%HU's	No. Stud.	Stud/HU	
PH-97	123	492	4.0	113	91.9	-0-	--	-0-	--	10	8.1	30	3.0	30
PH-98	1230	2415	1.8	506	41.1	626	50.9	1487	2.4	98	8.0	163	1.7	1650
PH-99	219	554	2.4	55	25.1	80	36.5	175	2.2	84	38.4	104	1.2	279
PH-100	730	2774	3.8	454	62.1	111	15.2	231	2.1	165	22.6	200	1.2	431
PH-101	721	2163	3.0	386	53.5	60	8.3	104	1.7	275	38.1	450	1.6	554
Totals	3023	8398		1514	50.1	877	29.0	1997	2.3	632	20.9	947	1.5	2944

Source: Multi-Family Housing Census, Van Cleve Associates, October 1965.

Figure 6
MISCELLANEOUS MULTI-FAMILY HOUSING DATA, 1965
 City of Tempe

Census Tract	Family Occupied Housing Units					Hsg. Units Wholly Occpd by Students			
	Avg. No. Rms/HU	Avg. No. BR's/HU	Avg. No. Pers/HU	Avg. No. Stud/HU	Avg. No. Cars/HU	Avg. No. Rms/HU	Avg. No. BR's/HU	Avg. No. Stud/HU	Avg. No. Cars/HU
PH-97	4.0	2.0	4.0	0.1	1.0	- - - -	- - - -	none	- - - -
PH-98	3.2	1.8	1.6	0.8	1.3	2.0	1.7	2.47	2.0
PH-99	4.0	2.0	2.6	0.6	1.1	2.2	1.4	2.25	2.2
PH-100	2.4	1.1	1.2	0.4	1.2	2.4	1.4	2.41	2.4
PH-101	3.0	1.3	1.3	0.5	1.3	2.1	0.8	2.10	2.1
Average	3.3	1.6	2.9	0.5	1.2	2.2	1.3	2.4	2.2

Source: Multi-Family Housing Census, Van Cleve Associates, October 1965.

Sample surveys of family-occupied apartment units (those not wholly occupied by students) indicated the presence of 112 children under age 21. 54% of these households contained minor children distributed among the several census tracts as shown in Figure 7. 48% of these children were three years old or younger, 78% were six years old or younger, and 94% were 12 years old or younger.

Figure 7
MULTI-FAMILY UNITS OCCUPIED BY CHILDREN, 1965
 City of Tempe

Census Tract	Percentage of Total Housing Units Occupied by Children
PH-97	83
PH-98	37
PH-99	43
PH-100	47
PH-101	68

Source: VCA, Multi-Family Housing Census,
 October 1965.

Occupancy Rates

Occupancy rate is difficult to determine with accuracy in any urban area which experiences any appreciable seasonal visitation. Until the late 1950's a large proportion of the multiple housing units in the Phoenix Metropolitan Area were operated primarily for accommodation of transients and seasonal residents, and were designed more for that type of patronage than for permanent residence on a year round basis. Although the design and operation of more recent apartment buildings has emphasized year round occupancy, seasonal vacancies still frustrate the accurate determination of occupancy rates on a citywide or areawide basis. This inability, coupled with the general enthusiasm and speculation attendant to rapid growth, has contributed to a periodic overbuilding of rental properties, which further complicates the pinpointing of true occupancy rates. In Tempe, where 29% of all multiple housing units are presently wholly-occupied by students, accurate occupancy rates are even more difficult to establish.

The 1960 Census of Housing revealed that 93% of the city's housing units were then occupied. 64% of the occupied units were owner-occupied and the remaining rented. Figure 8 shows that the 1960 occupancy rate in Tempe was higher than recorded in the state, county or cities of Mesa and Phoenix.

A 1964 consumer analysis for the Tempe area^{1/} counted a total of 13,500 housing units in October of that year. Recognizing the lack of perfect statistical parallel between these two studies, it still appears that home ownership had increased appreciably while the occupancy rate was dropping slightly. The 90% occupancy demonstrated by the October 1965 census is within the range tolerated by lending institutions in determining economic feasibility of apartment construction.

Figure 8
HOUSING OCCUPANCY RATES, 1960
City of Tempe & Selected Entities

Entity	Total Hsg. Units	Occupied Hsg. Units	Occupancy Rate	Persons/ Occ. HU
Arizona	415,834	366,630	88.2	3.0
Maricopa Co.	211,865	191,076	90.2	3.0
TEMPE	7,116	6,551	93.2	3.1
Mesa	11,422	9,586	83.9	3.1
Phoenix	143,076	132,083	92.3	2.9

Source: U.S. Census of Housing, 1960.

Tenure of Occupancy

Of the 4,193 occupied housing units enumerated by the 1960 Census, only 2.3% had been occupied for more than 20 years by their (then) occupants. By contrast, the occupants of 57.2% of all housing units had moved into their present residence between 1957 and March 1960. This latter ratio was considerably higher than that for the state and county, indicating a high rate of in-migration and rapid growth in the City of Tempe. Figure 9 shows the tenure of occupancy for the City of Tempe as recorded in

^{1/} Arizona Republic and Phoenix Gazette, "Inside Phoenix", 1965.

the 1960 Census. Figure 10 shows the tenure of occupancy established by the multi-family housing census conducted in October 1965.

Figure 9
TENURE OF OCCUPANCY, 1960
 City of Tempe

Year Moved In	Owner		Renter		Total	
	No.	%	No.	%	No.	%
Before 1940	129	3.8	25	1.0	154	2.3
1940-1953	944	22.5	192	8.1	1136	17.3
1954-1957	1185	28.3	333	14.1	1518	23.2
1958-Mar.1960	1935	46.2	1808	76.8	3743	57.2
Totals	4193	100.0	2358	100.0	6551	100.0

Source: U.S. Census of Housing, 1960.

Figure 10
TENURE OF OCCUPANCY, MULTI-FAMILY HOUSING, 1965
 City of Tempe

Census Tract	Family Occupied Units		Units Wholly Occpd by Stud.	
	Range of Months	Average No. Months Occpd	Range of Months	Average No. Months Occpd
PH-97	1-6	2.0	----	---
PH-98	1-24	6.3	1-12	2.2
PH-99	1-18	9.0	1-12	5.0
PH-100	1-72 ^{1/}	7.8	1-18	5.2
PH-101	1-48 ^{2/}	11.7	1-12	3.0

1/ Excludes one resident of 19 years.

2/ Excludes one resident of 14 years.

Source: Multi-Family Housing Census, Van Cleve Associates, October 1965.

PART III
HOUSING AS A LAND USE

Density and Distribution

Population density is expressed in terms of persons per acre or persons per square mile, while housing density is commonly expressed in number of dwelling units per net residential acre.* Maximum housing density ratios are established to assure adequate open space, light and air for all dwelling units, and are a normal part of zoning ordinances enforced specifically for regulation and administration of urban development. Population density standards are established to prevent the overcrowding of schools, parks and playgrounds and other community facilities as well as to prevent traffic congestion. They are mainly useful in urban design, population projection and general land use planning.

Housing density varies widely in the Tempe Planning Area, ranging from over 40 dwelling units per net residential acre in university fraternity housing, to less than 4 units per acre in much of the outlying area. In most recent subdivisions, the density varies from 4 to 8 units per net acre, while some older parts of the city have densities up to 20 units per acre. Apartment units along Terrace Road and Orange Avenue vary from 30 to 60 units per net acre. Figure 11 shows the variations in the 1963 housing density as recorded by the Valley Area Traffic and Transportation Study.

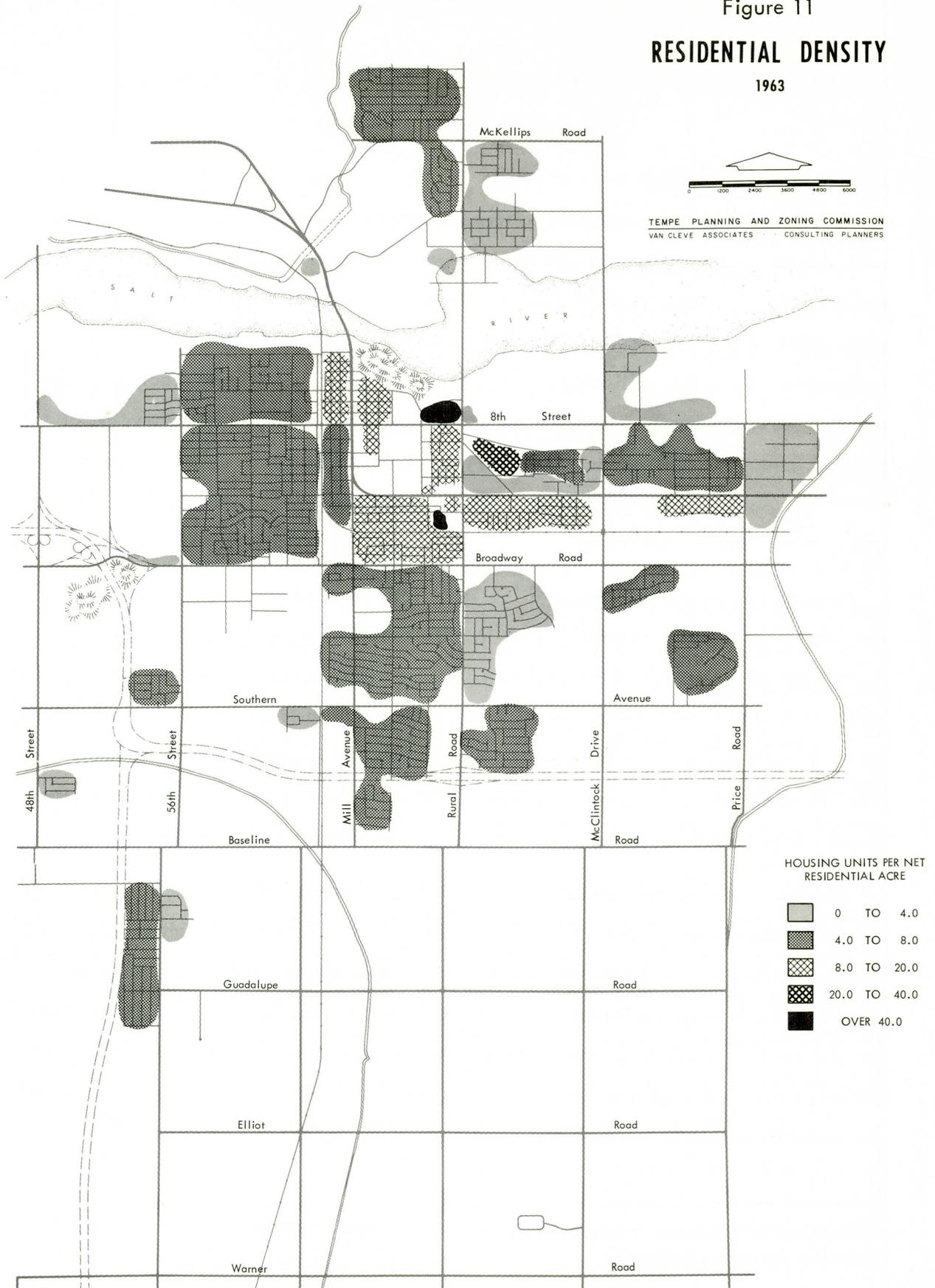
Whether densities are judged to be low or high depends upon the location and type of community serving as the basis of judgment. What is considered high density in one community may be considered medium or even low in others. High-rise apartment structures in densely settled areas of large cities may house as many as 8,000 persons per net acre, while 3 persons per acre may be typical in areas where lots average an acre in size. Although standards and regulations for control of development and land use require considerable detail and definity in terms of lot size (an expression of

* Net residential acre: actual area of the lot or parcel remaining after dedication of public streets and alleys.

Figure 11

RESIDENTIAL DENSITY

1963



The preparation of this plan was financially aided through a Federal grant from the Urban Renewal Administration of the Housing and Home Finance Agency under the Urban Planning Assistance Program authorized by Section 701 of the Housing Act of 1954, as amended.

density), it suffices for most planning purposes to be concerned only with relative density.

The general distribution of residential land use in Tempe is shown in Figure 12.

Land Use Ratios

Residential development is the principal user of urban land. Harland Bartholomew, in his study of over 80 American cities, found that in free-standing cities under 50,000 population residential uses occupied about 40% of developed land. The percentage was typically higher in satellite cities and lower in larger cities.^{1/} In a study of 48 large cities, the Rand Corporation found that residential development occupied an average of 39% of developed land.^{2/}

In 1963, residential uses occupied 52.7% of Tempe's developed land. This high ratio is fairly typical of urban areas in Arizona, where single-family lots are larger and overall residential densities lower than in cities in older parts of the country. Also, as a suburban city, Tempe houses many people who are employed elsewhere in the metropolitan area.

As Tempe's population increases and the local economy diversifies, industry, commerce and public uses will occupy larger percentages of developed land, and the ratio of residential use will gradually decline to an estimated 45% by 1985.

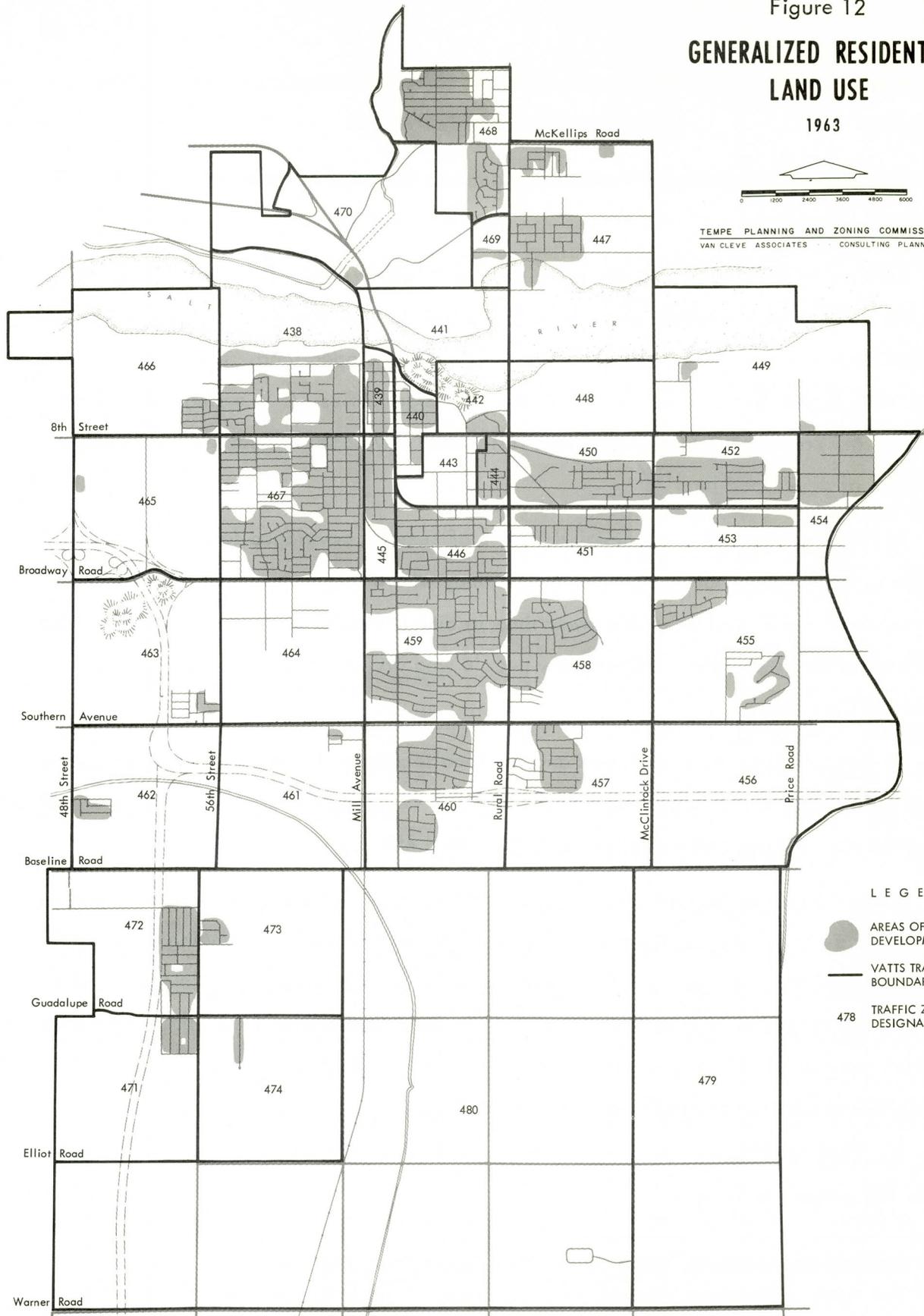
A more direct ratio, measured in residential acres per 100 persons, is also helpful in estimating future land use needs. Bartholomew found that 28 free-standing cities under 50,000 population averaged 3.94 residential acres per 100 persons, while smaller satellite cities ranged as high as 6.77 acres.^{1/} The Rand Corporation found that in 48 large cities residential development totaled 2.16 acres per 100 persons, with cities under 250,000 population averaging 3.19 acres per 100.

The 1963 VATTs land use survey disclosed a ratio of 7.3 acres of residential land per 100 persons in Tempe.

1/ Harland Bartholomew, Land Uses in American Cities, 1955.

2/ The Rand Corporation, Recent Land Use Trends in 48 Large American Cities, 1963.

Figure 12
**GENERALIZED RESIDENTIAL
 LAND USE**
 1963



- LEGEND
-  AREAS OF RESIDENTIAL DEVELOPMENT
 -  VATT'S TRAFFIC ZONE BOUNDARY
 - 478 TRAFFIC ZONE DESIGNATOR

The preparation of this plan was financially aided through a Federal grant from the Urban Renewal Administration of the Housing and Home Finance Agency under the Urban Planning Assistance Program authorized by Section 701 of the Housing Act of 1954, as amended.

PART IV
RESIDENTIAL ENVIRONMENT

People, being gregarious, tend to associate with and live near others having similar interests, language, racial or ethnic origins, education, religious beliefs, or economic status. The resulting residential groupings are called neighborhoods. A neighborhood is thus a sociological phenomenon represented by a geographic entity within an urban area.

A very small town may be the simplest form of a neighborhood. A small city is normally composed of several neighborhoods, and as it grows, groups of neighborhoods become recognized as distinct communities within the city. When several cities develop within close proximity and with common basic origins and motivations, a metropolitan area or region is formed. Thus, the neighborhood is considered the smallest planning unit in any urban area, regardless of size.

The Residential Neighborhood Concept

Neighborhoods vary widely in character, dependent upon the special types of interests responsible for bringing residents together. They vary widely in geographic size, their limits being determined by the structural form of the city and the location of physical barriers which separate them. They may also vary considerably in residential density, type and value of housing, and family income levels.

The ideal neighborhood encompasses a geographic area housing the number of families necessary to support an optimum-size elementary school. The school, combined with a neighborhood playground, is conveniently located near the center of the area and provides a natural focal point for the social, cultural and recreational activities of neighborhood families. Commercial and industrial uses are excluded from the interior of the neighborhood and it is not transected by high-volume traffic originating outside its boundaries.

A resident identifies himself with his neighborhood as the result of sharing its facilities, advantages and problems. Neighborliness is encouraged by group participation in

activities of common interest and focalized by the location of school, park, playground, churches and similar supporting facilities within its boundaries.

The establishment of sound neighborhoods usually results in a desirable degree of social and economic homogeneity. It facilitates effective planning of school and recreation systems and facilities, shopping locations and transportation facilities. It helps maintain stable property values and a sound tax base. General consistency of design and sound construction standards deter obsolescence and deterioration. The neighborly association of people is essential to the social well-being of the urban family and the entire community.

On the other hand, there are certain pitfalls which must be avoided in the process of neighborhood planning and development. Older neighborhoods founded more or less exclusively on racial, religious or ethnic association are coming to be recognized as ghettos, which, though they may offer the comfort of common background, restrict the resident's social experience and limit his social growth. Similarly, some very basic governmental problems are arising from excessive concentration of elderly persons. Basic philosophical differences associated with aging may be expressed by an unwillingness to invest in long-term property improvements and in the rejection of bond issues for schools, playgrounds and other facilities which are seldom or never used by this age group.

Thus, the planner's problem is to find the ways and means of achieving the positive values from neighborhood planning and development, while at the same time avoiding its inherent deficiencies. This objective may not be as paradoxical as it appears on the surface.

The Neighborhood as Part of a Community within the City

In the present era of high-speed mobility and broadening social horizons, many family activities extend beyond the boundaries of the neighborhood. Consequently, each neighborhood must be closely related to adjoining neighborhoods, combining to form a larger geographic area, usually called a community or section. While the ideal neighborhood normally coincides with the service area of an elementary school, a

community encompasses the service area of a junior or senior high school, and may include four to eight neighborhoods.

The community center provides a greater variety and volume of retail and service commercial facilities. It normally includes financial services, medical facilities, office space, dining places, and recreation establishments, and often includes such service branches of community facilities as library, fire or police station, health center, and administrative and utility offices.

The neighborhood should be integrally related to and connected with the community center through a pattern of residential collector streets and arterials which provide for easy access and a smooth flow of local traffic without permitting excessive high-speed or high-volume traffic within the neighborhoods.

Character of Tempe's Neighborhood Development

The quality of residential environment varies considerably in the Tempe Planning Area. Many new residential areas have reasonably convenient schools, parks and playgrounds, permanent street improvements, and a general freedom from land use conflicts. In these areas, the pride of ownership and stability of property values are evident even to the casual observer. There are other areas which evidence the careless maintenance, shoddy improvements, and mixture of land uses which spell unstable and uninspired living environment.

With the exception of a few newly developed residential areas, neighborhoods throughout the planning area lack definition and are only partially developed. Some schools and playgrounds are poorly located for maximum convenience and use. To some extent, these conditions stem from insufficient cooperation and coordination between school and City authorities in site selection and other policies regarding enrollment levels and service areas of individual schools.

Until subsequent studies of community facilities, traffic and transportation facilities, commercial and industrial district have been completed, it will not be feasible to delineate residential neighborhoods within the city.

PART V
HOUSING CONDITIONS

Structural Conditions

Structural condition is the primary determinant of housing quality. Basic factors contributing to structural condition are age of structure, quality of materials and workmanship in original construction, and the quality and consistency of maintenance.

The structural condition of housing in Tempe varies widely. The 1960 Census of Housing used three basic categories for classifying housing units according to structural condition:

SOUND - housing which has no defects, or only slight defects which can be corrected with normal maintenance procedures (cracked windows, missing paint, etc.)

DETERIORATING - housing which requires repairs in excess of normal maintenance to permit continued use as adequate and safe shelter, defects being of a type leading to serious structural damage and unsafe living conditions if not corrected (small holes, missing bricks, rotted window frames, sagging roof, etc.)

DILAPIDATED - housing which endangers the health, safety or well-being of occupants, having one or more defects sufficiently critical to require extensive repair, reconstruction or removal of structure (large segments of walls or roof missing, extensive cracking of foundation, substantial rotting of structural members, etc.)

Figure 13 shows the condition of housing in 1960 for the state, county, City of Tempe, and other cities in the Phoenix Metropolitan Area. In general, the condition of Tempe's housing was better than that of the state or county and considerably better than that of the City of Glendale. On the other hand, it was somewhat poorer than that of the cities of Mesa and Phoenix and much poorer than that of the City of Scottsdale.

Figure 13
CONDITION OF HOUSING, 1960
 City of Tempe & Selected Entities

Entity	Total Hsg. Units	Sound		Deteriorating		Dilapidated	
		No.	%	No.	%	No.	%
Arizona	415,790	332,385	79.9	53,257	12.8	30,148	7.3
Maricopa Co.	211,857	179,770	84.8	21,547	10.2	10,540	5.0
TEMPE	7,116	6,069	85.2	785	11.0	262	3.7
Glendale	4,602	3,689	80.2	639	13.9	274	5.9
Scottsdale	3,747	3,695	98.6	40	1.1	12	0.3
Mesa	11,422	9,840	86.2	896	7.8	686	6.0
Phoenix	143,072	124,953	87.3	13,716	9.6	4,403	3.1

Source: U. S. Census of Housing, 1960.

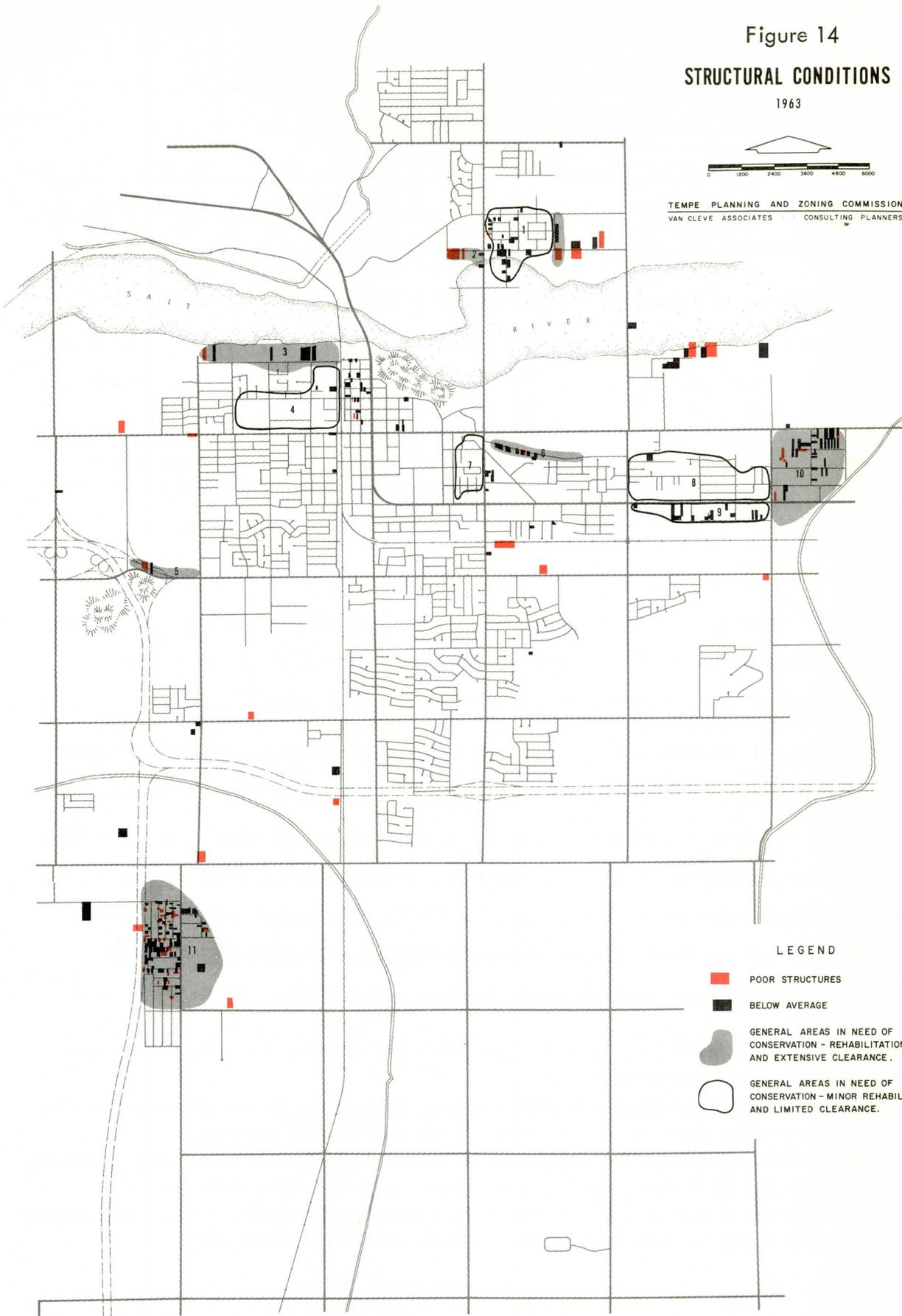
Since 1960, the construction of new housing, particularly that of multi-family structures in older areas of the city, has involved removal of many of the deteriorating and dilapidated units enumerated by the 1960 Census. Hence, the overall ratio of sound residential structures has risen substantially during the past five years.

The structural condition survey conducted in 1963 by VATTS revealed that several parts of the Tempe Planning Area contained structures considered to be in "below average"^{1/} or "poor"^{2/} condition. Field check of these general areas in January 1966 by Van Cleve Associates revealed that deterioration and poor structural quality was considerably more extensive than recorded by VATTS. Comparison of survey results indicates that deterioration has either accelerated appreciably since 1963, or the VATTS survey techniques, criteria and/or judgments were faulty.

Figure 14 indicates the lots on which the "average" condition of all buildings was

-
- 1/ Below average: A building in need of repairs, new roofing, or new paint work; holes or cracks in foundation or walls; cracked, broken or missing windowpanes.
 - 2/ Poor: A building in hopeless disrepair; one whose original construction was temporary or one that has been deteriorating for many years. It may have holes and cracks in walls; missing, broken or patched windows; rotted or patched sidewalls or roof; sagging roof, walls or porch; heavily cracked, chipped or missing foundation.

Figure 14
STRUCTURAL CONDITIONS
 1963



The preparation of this plan was financially aided through a Federal grant from the Urban Renewal Administration of the Housing and Home Finance Agency under the Urban Planning Assistance Program authorized by Section 701 of the Housing Act of 1954, as amended.

considered "below average" or "poor" according to the 1963 VATTS survey. Figure 14 also shows those general areas which presently evidence a need for conservation, rehabilitation or renewal actions, or a combination thereof, as disclosed by the January 1966 field check. The eleven areas showing need of conservation, rehabilitation or renewal actions are fully discussed in Part VI of this report.

Figure 15 shows that in 1964 the typical quality of residential environment in Tempe's mobile home parks was relatively low. Parks rating less than three stars (71% of existing parks and 61% of existing spaces) are likely to lack most of the amenities of desirable residential environment. Even those rating three stars are not generally attractive to owners of late-model mobile homes and are not competitive in a rental market where better parks are available. Only 30% of available spaces were in four-star parks and there were no parks having sufficient quality to rate five stars.

Figure 15
QUALITY RATING OF MOBILE HOME PARKS, 1964
 City of Tempe

One-Star		Two-Star		Three-Star		Four-Star		Totals	
Parks	Spaces	Parks	Spaces	Parks	Spaces	Parks	Spaces	Parks	Spaces
1	16	4	172	1	28	1	93	7	309

Source: Woodall's Mobile Home and Travel Trailer Directory, 1964.

Age and Obsolescence

Age is a useful guide to analysis of current condition and value of housing. A structure ultimately passes beyond its economic life expectancy and, although there are exceptions to prove the rule, older housing is the most susceptible to obsolescence, deterioration, and dilapidation. Figure 16 shows the age of Tempe's housing as recorded by the 1960 Census of Housing. It is seen that a relatively small proportion of total housing units were more than 20 years old at that time and that over 40% were less than 6 years old.

Figure 16
AGE OF HOUSING, 1960
 City of Tempe

Year Constructed	Before 1940	1940-1950	1950-1955	1955-Apr.'60	Apr. 1960-Jan. 1, 1966
Number of Units	991	1664	1564	2897	7185
% of 1960 Total (7,116)	13.9	23.4	22.0	40.7	101.0

Source: U. S. Census of Housing, 1960; Building Dept., City of Tempe.

Since 1960, Tempe has more than doubled its housing supply and, in the process, many of the oldest and poorest units have been removed. It is thus probable that statistics on the age of housing in 1965, if available, would show that two-thirds of the city's housing units are not more than 10 years old.

Value

Value and median rent statistics for housing in Tempe are shown in Figures 17 and 18. Comparison of 1960 and 1965 figures show a substantial decrease in the number of units valued under \$10,000 and a similar increase in the number valued at more than \$15,000. In both years, the largest ratio of units occurred in the \$10,000 to \$15,000 range as did the median value (For the most part, these trends reflect the considerable rise in housing costs which has occurred during the past five years).

In 1960, Tempe's median gross rental rate of \$77 was the second highest in the state, exceeded only by Scottsdale's rate which reflected the large number of winter visitors and tourists normal to that city. Increased construction in the low-to-medium rental units during the past five years has not affected overall rent levels significantly. In 1965 Tempe's median rental rate was \$85 as compared with \$84 for the City of Mesa and \$78 for the Phoenix Metropolitan Area.^{1/} Figure 19 shows monthly rental rates for multi-family housing according to the size and type of unit as recorded by the October 1965 census of multi-family housing.

^{1/} Arizona Republic and Phoenix Gazette, "Inside Phoenix", 1965.

Figure 17
VALUE OF HOUSING, 1960 & 1965
 City of Tempe

Item	1960		1965			
	City of Tempe No.	%	City of Tempe No.	%	Phoenix Area No.	%
Owner-occupied Units:	3,594	100.0	9,150	100.0	162,300	100.0
Value of Units:						
Under \$5,000	231	6.5	122	1.3	4,300	2.6
\$5,000 - \$10,000	985	27.4	854	9.3	26,300	16.2
\$10,000 - \$15,000	1,573	43.7	4,392	48.0	70,200	43.2
\$15,000 - \$20,000	538	14.9	2,196	24.0	35,100	21.6
\$20,000 or more	267	7.5	1,586	17.4	26,400	16.4
Median Value	\$11,500		\$14,201		\$13,980	

Source: 1960: U.S. Census of Housing, 1960.
 1965: Arizona Republic & Phoenix Gazette, "Inside Phoenix", 1965.

Figure 18
HOUSING RENT LEVELS, 1960
 City of Tempe

Item	Less than \$20	\$20- \$40	\$40- \$60	\$60- \$80	\$80- \$100	\$100- \$120	Over \$120	Total
Number	19	186	389	566	569	227	234	2358
Percent	0.8	7.9	16.5	24.0	24.1	9.7	9.9	100.0
M e d i a n - \$77.00								

Source: U.S. Census of Housing, 1960.

Figure 19
MONTHLY RENTAL, MULTI-FAMILY HOUSING, 1965
 City of Tempe

Type of Unit	PH-97		PH-98		PH-99		PH-100		PH-101		Total	
	Range	Avg	Range	Avg	Range	Avg	Range	Avg	Range	Avg	Range	Avg
<u>Furnished Apartments</u>												
1-Room Studio			\$65-130	\$90	\$60-\$90	\$70	\$65-120	\$81	\$40-\$85	\$67	\$65-130	\$77
1-Bedroom			65-140	95	60-133	78	65-150	86	50-110	78	50-150	84
2-Bedroom			65-165	116	90-145	101	70-155	112	65-130	94	65-165	106
3-Bedroom			135-192	163	100-125	108	100-130	118	--- i.d. ---		100-192	130
<u>Unfurnished Apartments</u>												
1-Room Studio			\$45-139	\$95	\$65-\$90	\$77	-- i.d. --		-- i.d. --		\$45-139	\$86
1-Bedroom			75-139	106	70-105	86	50-130	94	50-115	74	70-139	90
2-Bedroom			70-138	114	75-95	82	75-150	110	77-125	96	70-150	101
3-Bedroom			99-160	127	120-125	122	105-180	148	-- i.d. --		99-180	132

Note: Rents were not surveyed in Census Tract PH-97.

Source: Multi-Family Housing Census, Van Cleve Associates, October 1965.

PART VI

AREAS NEEDING CONSERVATION, REHABILITATION AND RENEWAL ACTION

This section of the report comprises an area-by-area description of general structural quality and environmental conditions existing in those parts of the Tempe Planning Area evidencing a need for conservation, rehabilitation and/or renewal measures, as disclosed by the January 1966 field check. Also included are general recommendations as to the type and extent of curative actions required. Subject areas are designated by number in Figure 14.

Although some other areas in the city indicate a need for spot rehabilitation and redevelopment, structural conditions were generally such that areawide surveys were unwarranted.

Area No.1 (Weber - Princess Drive)

Land Use: Predominantly single-family with some mixture of duplexes and apartments; some interior areas developed solidly to apartments on one or more single-family lots.

Neighborhood Facilities: Street pattern adequate; elementary school within walking distance; no parks or playgrounds; shopping facilities convenient.

Street Improvements: Streets generally fully paved and curbed without sidewalks; roll curb permits parking of vehicles at random in front yards and outside curb; area between curb and property lines generally ungrassed, dusty and rutted, not maintained and commonly used for random parking.

Drainage: Some streets installed at higher elevations than abutting lots and floor levels after lots were built-up, complicating lot re-grading and ponding water in yards without outlet.

Off-Street Parking: For multi-family uses, none to little, and nowhere adequate, resulting in use of front yards for scattered parking of autos, trailers and trucks, without driveways or surfacing.

Structural Conditions: Generally recent, low-cost construction, still sound; a few old, dilapidated dwellings originally substandard and deteriorating fast.

Property Maintenance: Dwellings, fair to good; intermittent vacant lots weedy and littered; some single-family and apartment yards littered and poorly maintained.

Other Conditions: Several properties with dwellings located near rear lot lines, resulting in use of front yards for storage and activities typical of rear yards.

Street Appearance: Generally good; older streets have prevalence of front yard fences of widely variable materials, conditions, maintenance and setback, some excessive in height; occasional heavy, high shrub plantings around front yards; front fences and hedges seriously disrupt visual continuity and injure general street and property appearance.

Summary: Basically a sound neighborhood deserving conservation and rehabilitation, and requiring some clearance of dilapidated properties. Although no single deficiency could in itself be considered major, collectively the same deficiencies subject the entire neighborhood to rapid deterioration. Most deficiencies can be corrected easily and inexpensively through enforcement of existing ordinances and neighborhood cooperation in an organized conservation and rehabilitation program supported by minor public improvements.

Area No. 2 (West Princess Drive)

Land Use: Mixture of commercial, industrial and residential, with old quonset huts converted to residential use.

Neighborhood Facilities: Street access good; elementary school, 3/4 mile across Rural Road; no parks or playgrounds; shopping facilities convenient.

Street Improvements: Streets partially paved, uncurbed, without sidewalks.

Structural Conditions: Older buildings and quonset huts, substandard in quality and design, deteriorating fast.

Other Conditions: Random parking in front yards without driveways or surfacing; little improvement or maintenance of front yards.

Summary: Basically unsuitable for residential use or development; existing residential uses discourage improvement of area for business and industry.

Area No. 3 (First Street)

Land Use: Predominantly residential with large vacant areas, one apartment complex and several industries; some junk yards and trash heaps.

Neighborhood Facilities: Street pattern adequate; elementary school, 1-1/4 mile south across major arterial; park and playground (undeveloped), 1/2 mile south.

Street Improvements: First Street partially but sporadically improved; no curb or sidewalk.

Structural Conditions: Mixture of new and old, sound and obsolete; many older structures were originally substandard and are deteriorating fast.

Property Maintenance: Poor to fair; some residence yards and most vacant lots littered and trashy.

Summary: Area requires early determination of future land use, followed by clean-up, public improvements and redevelopment of incompatible uses and dilapidated properties.

Area No. 4 (West 2nd to 8th Street)

Land Use: Extensive mixture of commercial, industrial and single- and multi-family residential with extensive vacant land.

Neighborhood Facilities: Street pattern disrupted by undeveloped acreages; parks and playgrounds centrally located but largely undeveloped; elementary school within walking distance, but south of 8th Street; shopping facilities convenient.

Structural Conditions: Mixed old and new construction; a few dilapidated dwellings and several obsolete buildings deteriorating fast.

Property Maintenance: Generally good; large vacant parcels often weedy.

General Street Appearance: Good.

Summary: Basically a sound, developing area deserving attention to conservation, some rehabilitation, and some redevelopment of obsolete and deteriorating properties. Most deficiencies can be corrected easily and inexpensively through neighborhood cooperation and enforcement of existing ordinances. General area development plan should be prepared and followed to assure integration of vacant lands when they develop.

Area No. 5 (West Broadway)

Land Use: Predominantly single-family intermixed with repair shop, junk yard and service station fronting on Broadway Road.

Neighborhood Facilities: None.

Structural Conditions: Majority of residences are obsolete and deteriorating.

Property Maintenance: Poor to fair.

Street Appearance: Rundown and blighted; junk yard and scrap piles create serious eyesore.

Summary: Area should be cleared and redeveloped concurrently with interstate highway improvements. This will be a major entrance to Tempe from Interstate 10.

Area No. 6 (Old 8th Street)

Land Use: Predominantly single-family with some mixture of apartments and commercial uses.

Neighborhood Facilities: None, except elementary school within 1/2 mile, but across Rural Road.

Street Improvements: 8th Street old, narrow and in need of major repair; heavy truck traffic; lack of curb creates unimproved, rutty, cluttered road shoulders extending into yard spaces.

Structural Conditions: Majority of homes are deteriorated and badly in need of major repair. Several structures vacant, dilapidated and hazardous.

Property Maintenance: Poor.

Street Appearance: Poor; many front yard fences in wide variety of materials and conditions; weedy and trashy front yards.

Other Conditions: The vacant Arden Farm Dairy plant deteriorating fast due to lack of use and maintenance — constitutes a target for vandalism and delinquency.

Summary: Area requires extensive clearance and redevelopment.

Area No. 7 (University)

Land Use: Predominantly single-family intermixed with duplexes and apartments; some single residences undergoing conversion to house university students.

Neighborhood Facilities: General street pattern poor; elementary school within walking distance but access extremely poor; no parks or playgrounds; shopping facilities convenient.

Street Improvements: Fair to good; sidewalks lacking in some areas; street elevation generally higher than adjoining lots and floor levels, creating undesirable appearance and drainage problems.

Off-Street Parking: Inadequate; high ratio of students creates excessive street parking; use of streets for overflow university parking creates congestion and injures residential character and livability.

Structural Conditions: Fair to good, with a few residences in rundown condition and fast becoming obsolete.

Property Maintenance: Fair to good; a few older homes and those facing on university parking lots evidence poor maintenance.

Summary: Since this is prime expansion area for the university, properties to be redeveloped for university use should be identified as soon as possible and a general development plan prepared for remainder of the area, if any.

Area No. 8 (Flora Thew)

Land Use: Predominantly single-family with some mixture of duplexes, apartments and vacant parcels.

Neighborhood Facilities: Street pattern satisfactory where complete; elementary school within walking distance; no parks or playgrounds; shopping facilities convenient.

Street Improvements: Fair to good, with some dead-end and partially improved streets; several areas need sidewalks; roll curb permits random front yard parking.

Off-Street Parking: Inadequate; most apartments have no off-street parking; excessive curb parking prevails; general practice of parking in unimproved front yard areas.

Structural Conditions: Fair to good, with several obsolete and deteriorating residences and a few that are completely out of character with adjacent homes and the area.

Property Maintenance: Dwellings, fair to good, with general lack of pride and maintenance in some areas; yards, fair with several rear and side yards containing

accumulations of junk and trash; vacant lots, weedy and littered; very poor maintenance on residential lots facing commercial property.

Street Appearance: Fair; excessive front yard parking and widely varying front yard fences disrupt visual continuity and injures general street and property appearance; accumulation of trash, auto bodies and parts on some lots seriously injures adjoining lots and general street appearance.

Other Conditions: Commercial area along Apache Boulevard contains a wide mixture of land uses and an excessive number of outdoor displays and billboards.

Summary: Basically a sound neighborhood deserving conservation and rehabilitation, and requiring minor clearance of dilapidated structures. Although no single deficiency could in itself be considered major, collectively the same deficiencies subject the entire neighborhood to rapid deterioration. Most deficiencies could be corrected easily and inexpensively through an organized action program and enforcement of existing ordinances.

Area No. 9 (Apache Boulevard)

Land Use: A complete mixture of a wide variety of uses.

Neighborhood Facilities: None.

Structural Conditions: Obsolete and dilapidated to good.

Property Maintenance: Poor to fair.

Other Conditions: Excessive numbers of billboards, advertising signs and outdoor displays; many auto, mobile home and travel trailer sales lots.

Street Appearance: Ugly and visually distressing.

Summary: As a principal gateway to the city, this area is an eyesore; badly in need of clearance, redesign and redevelopment.

Area No. 10 (Victory Acres)

Land Use: Predominantly low-income residential, owner-built, Mexican-American occupied.

Neighborhood Facilities: Street pattern adequate; elementary school within walking distance; no parks or playgrounds; shopping facilities poor and distant.

Street Improvements: Streets generally fully paved and curbed with some partially or totally unimproved; roll curb without sidewalk increases front yard parking and promotes poor maintenance to curb line.

Off-Street Parking: None.

Structural Conditions: Very few residences of adequate size and quality; large number of rundown and dilapidated houses, shacks, lean-tos and trailers; no sanitary sewerage, reliance on outhouses and septic tanks.

Property Maintenance: Dwellings originally substandard in quality; very low level of maintenance; large accumulations of junk and trash on some lots; few lots have grass or other vegetation.

Other Conditions: Lots excessively deep, creating large areas of idle, waste land; random location of houses on lots.

Street Appearance: Generally poor to disheartening.

Summary: An area requiring extensive clearance and rehabilitation to create tolerable living environment and reduce delinquency of all kinds.

Area No. 11 (Guadalupe)

Land Use: Predominantly a free-standing, single-family residential community housing Yaqui-Mexican-Americans.

Neighborhood Facilities: Street patterns adequate; elementary school within walking distance; no parks or playgrounds; shopping facilities limited.

Street Improvements: Majority of streets are unpaved, rarely maintained and without curb or sidewalk; streets serve as drainage channels, with resultant irregularities and wash-outs.

Structural Conditions: Fair to extremely poor and hazardous; most dwellings are owner-built of a wide variety of second-hand materials; some dwellings have no electricity, running water or adequate heating facilities; no sanitary sewer, many outhouses.

Property Maintenance: Fair to very poor; very little exterior building maintenance or yard upkeep; litter, junk and old building materials piled at random around dwellings.

Street Appearance: Very poor.

Summary: The area is in need of total replanning and redevelopment with some preservation of churches and other structures of special interest.

PART VII

HOUSING AND RESIDENTIAL DEVELOPMENT TRENDS AND NEEDS

Tempe's 1985 population has been projected as 157,485 persons. This multiplication of the present population will force a vast expansion of public facilities and services required to create and maintain a desirable residential environment.

During the next twenty years, advances in residential construction technology, mechanical equipment and design concepts, will present an unprecedented challenge to the city's administrators, businessmen and developers. In addition, rising family incomes, increasing leisure time, improving utility services, rising tax rates and bases, and a myriad of other factors, will influence the character of new housing developments. Yet another important factor influencing Tempe's future housing will be the readiness of its citizenry to demand and support the rehabilitation and renewal of substandard and blighted residential areas.

Sources of Future Housing Demand

Future housing demand will develop from several sources: (1) new residents, (2) still-rising university enrollment, (3) new families formed through marriage, (4) families with rising incomes seeking larger and more elaborate quarters, (5) families of decreasing size and individuals seeking smaller, more efficient quarters, (6) families seeking escape from blighted and undesirable neighborhoods, (7) families whose homes are rapidly becoming obsolete and expensive to maintain, and (8) expansion of federal assistance programs for elimination of blight, rent subsidies, and increased social security.

Trends in Household Size and Composition

Future residential development must provide families of widely varying size and composition the kind of housing best suited to their special needs and means. While the single-family conventional dwelling will continue to dominate the housing market, the City should encourage construction of other types of housing based on careful analysis of the size, composition and economic status of its families. Available dwelling units of the kind that each family prefers will prove an important factor in

reduction of out-migration and attraction of new residents.

Land use planning and the forecasting of housing needs depend heavily upon household characteristics and trends. In 1960, Tempe's 6,551 households were composed as shown in Figures 20 and 21.

Figure 20
HOUSEHOLD COMPOSITION, 1960
City of Tempe

Item	Census Tract					Total*	
	PH-97	PH-98	PH-99	PH-100	PH-101	No.	%
No. of Occpd. Hshlds.	1,095	1,626	1,547	796	1,628	6,692	100
Population in Hshlds.	4,559	5,377	4,023	2,913	6,089	22,961	100
Married Couples	912	1,290	920	682	1,372	5,176	79
w/own household	898	1,261	900	678	1,350	5,087	78
w/own children							
under 6	501	489	237	295	587	2,109	32
under 18	649	803	431	503	1,032	3,418	52
Husband under 45	612	787	471	424	919	3,213	49
w/own children							
under 18	539	628	304	359	785	2,615	40
Primary Individuals	99	238	474	70	164	1,045	16

* Census Tract total includes a slightly larger area than that incorporated at the time of the 1960 Census.

Source: U. S. Census of Housing, 1960.

Tempe will continue to have a relatively young population long after the university reaches peak enrollment. Present ratios of married couples and married couples with children will probably remain fairly constant until the population passes the 100,000 level, after which the ratio of married couples (primary families) to total households will increase slightly. Due to the university's influence, Tempe's population will remain considerably younger than that of neighboring communities and will contain a somewhat higher ratio of young children (under six years) than recorded in 1960.

Figure 21
SIZE OF HOUSEHOLDS, 1960
 City of Tempe

Item	Census Tract					Total*	
	PH-97	PH-98	PH-99	PH-100	PH-101	No.	%
All Occupied Units	1,095	1,626	1,547	796	1,628	6,692	100.0
1-Person Hshlds.	86	209	364	50	140	849	12.7
2-Person Hshlds.	215	456	559	191	338	1,759	26.3
3-Person Hshlds.	185	327	283	136	287	1,218	18.2
4-Person Hshlds.	203	254	175	200	372	1,204	18.0
5-Person Hshlds.	139	188	86	107	247	767	11.4
6+-Person Hshlds.	267	192	80	112	244	895	13.4
Median No. Persons per Hshld.	3.8	3.0	2.2	3.6	3.6		

* Census Tract total includes a slightly larger area than that incorporated at the time of the 1960 Census.

Source: U. S. Census of Housing, 1960.

Overall household size is expected to increase slightly to approximately 3.5 by 1985. Two-person families are likely to maintain 1960 levels. One-, three- and four-person households are expected to increase slightly, while the ratio of households with five or more persons will decrease substantially. An increasing ratio of married university students will tend to offset the lesser population gain commencing when the university reaches peak enrollment.

Residential Development Trends

The housing market is increasingly competitive and prospective occupants are more and more selective in their choice of housing by type, quality and price. Housing preferences appear to be changing rapidly and it is problematical where these changes may lead in Tempe. It seems clear, however, that higher land and construction costs, greater commuting time and other factors will tend to reduce the ratio of single-family units. Families persuaded from single residence to apartment living will make increased demand for garden-type town house units in relatively small complexes of buildings having few units per building and arranged to provide ample open space, recreation

facilities and off-street parking. At the same time, increased numbers of elderly persons, working couples, students and other single persons, will create greater demand for centrally-located, higher-density apartment complexes, with emphasis on efficiency and one-bedroom units.

Single-Family Residence: Although a 22% shift from single- to multi-family housing occurred during the 1960-63 period, single residences will continue to be the dominant housing type in Tempe. It is estimated that 76% of the city's 1985 housing units will be single residences.

In older sections of the city, few lot widths exceed 50 feet, and lot areas average about 4,500 square feet. During recent years, lot widths have increased steadily to accommodate the longer, ranch-style house with attached carport, and are now typically 70 to 80 feet. Homeowners have found that the 94-foot lot depth common during the 1956-61 era of Valley homebuilding provides too little rear yard space for outdoor living, and typical lot depths now average 105 to 110 feet. The resultant lot area of 7,500 to 8,000 square feet (4 to 4½ lots per gross acre) will probably be maintained through the foreseeable future.

Duplexes: In 1960 duplexes accounted for 3.4% of Tempe's housing supply, and since then 4% of new units have been duplexes. In the past, duplexes have often developed at random on vacant single-family lots in older residential areas, frequently to the detriment of neighborhood character and stability. Most recent subdivisions are deed-restricted to single residences, and there appears little prospect that the ratio of duplexes will increase.

Multi-Family Housing: Housing units in multi-family structures accounted for over 44% of all units for which building permits were issued during the past five years. This exceptional increase in local apartment construction is attributed to: (1) general scarcity of suitable apartments, (2) rapid growth of the university, (3) increasing numbers of migrants to the metropolitan area who tend to rent before they buy, (4) general national and regional trends toward apartment living, (5) improved design and greater attention to residential amenity, (6) easier construction financing, and (7) condominium sales.

Unquestionably, condominium sales have greatly increased the popularity of apartment living; however, there is no data regarding the proportion of Tempe apartments which are individually owned and occupied.

Three- and four-unit residential structures accounted for only 2.6% of the housing supply in 1960, but represented 13% of new housing units constructed in 1961 and 17% in 1963. Such units have averaged 10.7% of total housing construction during the past five years.

The increased demand for units in three- and four-unit structures is attributed to improved design, increased residential amenity, and general attractiveness to families with children. It is anticipated that this type of housing will continue to expand its share of total housing supply, reaching about 5% by 1985.

Multi-family units in structures having five or more units comprised 4.5% of the housing supply in 1960, but accounted for 33.7% of all units constructed during the past five years. The next few years will see a substantial increase in larger apartment buildings. Structures containing five or more units will account for about 15% of the total housing supply by 1985.

Most of the city's apartment units are presently one- and two-story town houses, generally of a relatively low-density type arranged around open courtyards and offering considerable residential amenity. These units probably house a great many families who are making their first step in the transition from single-family to apartment living, and who would not yet accept higher-density, higher-rise units with less open land space. When arranged and developed as "garden" apartments — that is, with ample open space for outdoor living — town houses attract many older couples and families with children. On the other hand, working couples and single persons readily accept higher-density units.

In 1960 the American Public Health Association's Committee on Hygiene of Housing stated that "no designs for residential dwellings have yet been published which provide coverage in excess of 40% which provide for adequate sunlight, air, open space and

privacy". Tempe's zoning ordinance presently permits construction of residential structures having as little as 1,000 square feet of lot area per unit and covering up to 50% of the lot area. Some of Tempe's new multi-family complexes actually exceed 40% land coverage. Experience shows that it is impossible to develop one- or two-story town house projects with a density exceeding 25 units per acre without sacrificing some of the open space, recreation facilities and off-street parking required for occupancy by families with children. Such structures, usually with two- and three-bedroom units, typically cover a maximum of 25% of the lot area.

Higher-density development composed of "flats" ranging from efficiency units to two-bedroom apartments are more attractive to single persons and adults, and land coverage may appropriately reach 45% without undue sacrifice of open space, sunlight and air.

It is clear that high-rise apartment structures, if widely spaced and properly designed, can satisfy minimum requirements for sunlight, air, privacy and open space. High-rise apartments have traditionally been considered a "central city" type of housing, suitable only where land costs were exceptionally high in high-demand locations capable of commanding high rentals commensurate with locational advantages. No area in Tempe presently meets these general locational criteria.

Thus, it appears that Tempe will experience an increasing amount of multi-family construction in the medium-density types and may ultimately find it appropriate to permit a limited amount of high-density high-rise apartment construction. It behooves planning officials to carefully study the special needs of each type of multi-family occupants and develop better guides and controls to assure that each type of housing will be properly designed and located to satisfy these special needs.

Mobile Homes: Mobile homes accounted for 7.5% of the 1960 housing supply. This percentage has decreased significantly since 1960 as the older trailer courts were replaced by other types of land use. The mobile home industry has predicted for many years that such units will ultimately account for as much as 10% of the total housing supply. Although modern mobile homes and mobile home parks offer a high degree of

residential amenity and, undeniably, are increasing in popularity as permanent housing. It appears unlikely that such units will ever again exceed a level of 5% of dwelling units in Tempe.

Projected Housing Needs

It is assumed that about 9% of the 1985 population will live in group quarters, including the 25% of total students which the university hopes to house in dormitories, fraternities and similar quarters. The remaining population will require a total of about 40,946 housing units.

Figures 22 and 23 indicate the projected housing needs of the Tempe Planning Area by 1985, based on projection of future population, household size and composition. They show the minimum number of new housing units required by type of structure, assuming a 5% vacancy factor and a loss of about 35% of those units constructed before 1960 due to age, obsolescence, dilapidation and disaster. The 31,182 new housing units to be constructed during the next 20 years require an average annual construction of 1,560 units, a volume similar to that recorded during recent years. Thus, the recent high volume of residential construction can be expected to continue until 1985, with some annual variation depending upon rate of population growth.

Required housing units broken down by household size cannot be estimated with even reasonable accuracy since a single person can occupy a two- or three-bedroom unit, while a family of five or more can live in a mobile home. However, Figure 24 presents an attempt at such an estimate ventured strictly as an aid to reviewing zoning and subdivision applications and following market demand.

Residential Land Needs

To prepare a valid land use plan, it is essential to know about how much land must be planned for residential and other uses. To estimate future residential land needs, an assumed net land area per housing unit is multiplied by the number of units of each type needed. It is also necessary, in the case of multi-family housing, to make some judgment as to the general proportion of each basic type of unit that will be developed.

Figure 22
PROJECTED HOUSING NEEDS BY TYPE OF STRUCTURE, 1985

Tempe Planning Area

Type of Structure	% of Total HU's, 1960	% of Total HU's, 1985	HU's Req'd 1985
1-Family	82.0	76.0	31,119
2-Family	3.4	2.0	819
3 & 4-Family	2.6	5.0	2,047
5+-Family	4.5	15.0	6,142
Mobile Homes	7.5	2.0	819
Totals	100.0	100.0	40,946*

* Total 1985 Population, minus Persons in Group Quarters, 1985, divided by Persons per Household, equals Total Housing Units Required to house 1985 population.
Source: 1960 Data: U.S. Census of Housing, 1960.
Projections: Van Cleve Associates

Figure 23
PROJECTED HOUSING NEEDS, 1985

Tempe Planning Area

Type of Structure	No. Occpd HU's 1985	Plus 5% Vac'y 1985	Equals Req'd Hsg. Supp. 1985	Minus No. HU's 1960	Minus No. HU's Cnstrctd 1960-65	Plus No. HU's Lost Thru Clearance*	Equals Tot. New HU's Req'd 1985
1-Family	31,119	1,556	32,675	5,836	3,712	2,042	25,169
2-Family	819	41	860	240	287	84	417
3&4-Fam.	2,047	102	2,149	185	766	65	1,263
5+-Fam.	6,142	307	6,449	323	2,420	113	3,819
Mob. Hms.	819	41	860	532	0	186	514
Totals	40,946	2,047	42,993	7,116	7,185	2,490	31,182

* Assumed 35% of units built before 1960.
Source: 1960 Data: U.S. Census of Housing, 1960.
1960-65 Data: Tempe Building Department.
1985 Projections: Van Cleve Associates

Figure 24
PROJECTED HOUSING NEEDS BY HOUSEHOLD SIZE, 1985
 Tempe Planning Area

Household Size	% of Total HU's, 1960	% of Total HU's, 1985	HU's Req'd 1985
1-Person Household	12.7	14.0	5,732
2-Person Household	26.3	25.0	10,236
3-Person Household	18.2	25.0	10,236
4-Person Household	18.0	22.0	9,008
5-Person Household	11.4	8.0	3,276
6+-Pers. Household	13.4	6.0	2,457
Totals	100.0	100.0	40,945

Source: 1960 Data: U.S. Census of Housing
 Projections: Van Cleve Associates

Figure 25 shows estimated land areas required to develop the additional housing units needed by 1985.

It cannot be estimated how much of this land will constitute redeveloped land presently in residential and other uses. Nor is it possible to anticipate how much land occupied by blighted residences will be redeveloped to residential use.

It should be noted in Figure 25 that gross acreage estimates are one-third greater than net acreage figures to allow for street rights-of-way. Schools, parks, churches and other complementary public and quasi-public uses will require an additional 15%. Thus, a total of approximately 8,110 acres, or 12.7 square miles, of land will be consumed by residential development and supporting uses by 1985.

Location of Future Housing

The location of new housing will be influenced by many such factors as land cost, major streets and traffic patterns, extension of utility services, distance to shopping and employment, location of educational, religious, and community facilities, and general density controls. All of these factors and others will be considered in the design of a comprehensive land use plan to guide future residential development.

Figure 25
PROJECTED RESIDENTIAL LAND NEEDS, 1985
 Tempe Planning Area

Type of Housing	Est. New HU's Req'd by 1985	Est. Net Land Area/ HU (s.f.)	Est. Net Acrg. Req'd by 1985	Est. Gross* Acrg. Req'd by 1985
Single-Family	25,169	8,500	4,911	6,548
Two-Family	417	4,000	38	51
Multi-Family				
Town houses (67%)	3,405	4,000	313	417
Other (33%)	1,677	2,500	96	128
Mobile Homes	514	3,500	42	56
Totals	31,182	---	5,400	7,200

* Net Acreage plus 33%.

Source: Van Cleve Associates

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