Analysis of the

TULSA, OKLAHOMA HOUSING MARKET

as of May 1, 1967

A Report by the
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
FEDERAL HOUSING ADMINISTRATION
WASHINGTON, D. C. 20411

December 1967

ANALYSIS OF THE

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Field Market Analysis Service
Federal Housing Administration
Department of Housing and Urban Development

Foreword

As a public service to assist local housing activities through clearer understanding of local housing market conditions, FHA initiated publication of its comprehensive housing market analyses early in 1965. While each report is designed specifically for FHA use in administering its mortgage insurance operations, it is expected that the factual information and the findings and conclusions of these reports will be generally useful also to builders, mortgagees, and others concerned with local housing problems and to others having an interest in local economic conditions and trends.

Since market analysis is not an exact science, the judgmental factor is important in the development of findings and conclusions. There will be differences of opinion, of course, in the interpretation of available factual information in determining the absorptive capacity of the market and the requirements for maintenance of a reasonable balance in demand-supply relationships.

The factual framework for each analysis is developed as thoroughly as possible on the basis of information available from both local and national sources. Unless specifically identified by source reference, all estimates and judgments in the analysis are those of the authoring analyst and the FHA Market Analysis and Research Section.

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ANALYSIS OF THE TULSA, OKLAHOMA, HOUSING MARKET AS OF MAY 1, 1967

Summary and Conclusions

1. For a long time direct employment in mining was the mainstay of the Tulsa economy. During more recent years Tulsa has developed into an aerospace, electronics, and research center.

2. Except for 1961, when lowered employment in the Tulsa HMA reflected a national economic recession, average annual nonagricultural wage and salary employment has increased each year since 1960, to 160,400 in 1966. The increase during the 1964-1966 period, spurred by the military build-up in southeast Asia and by continuing progress in the national space program, was especially marked. Average annual wage and salary employment in 1965 was up by 8,400 (5.9 percent) over 1964, and the average during 1966 was 9,300 (6.2 percent) above 1965. Based on the trend in nonmanufacturing employment during recent years, on known plans for plant expansion, and on information provided by some of the largest employers in the area, a gain of about 11,000 (5,500 annually) appears to be a reasonable expectation during the two-year forecast period of this report.

3. Except for a small rise in 1963, unemployment has been declining since 1961, when 6.0 percent of the work force was jobless. The unemployment rate declined to an average of 3.4 percent in 1966, and to 3.3 percent during the twelve-month period ending May 1,1967.

4. The 1967 median annual income of all families in the Tulsa HMA is estimated at $6,600, after the deduction of federal income tax and the median after-tax income of renter households (excluding one-person renter households) at $4,975. By 1969, the median after-tax income of all families will increase to $6,900, and renter households will have a median after-tax income of $5,200.

5. As of May 1, 1967, the population of the Tulsa HMA was about 488,800 persons, reflecting an increase of some 69,850 since April 1960, around 9,850 annually. About 316,900 persons resided in Tulsa, 65 percent of the HMA total. The population of the Tulsa HMA is expected to increase by 10,600 annually during the next two years.

6. As of May 1, 1967, there were about 157,900 households (occupied housing units) in the Tulsa HMA, reflecting an increment of about 24,350 (3,450 annually) since April 1960. It is expected that the number of households will increase by about 3,600 annually during the May 1967-May 1969 period.

7. There were 170,500 housing units in the Tulsa HMA as of May 1, 1967, reflecting a net gain of about 24,650 since the 1960 Census. The annual number of housing construction starts increased every year during the 1961-1965 period, from about 2,250 in 1961 to 5,800 in 1965. The number of housing starts during 1966 declined to about 4,700. Since April 1960, an estimated 2,500 housing units have been demolished in the Tulsa HMA, mostly as a result of clearance for highway rights-of-way and urban renewal. During the two-year forecast period, about 1,250 units will be demolished as a result of governmental action.

8. As of May 1, 1967, there were 7,100 vacant housing units available for rent or for sale, or an over-all available vacancy rate of 4.3 percent. About 1,500 vacancies were available for sale only, or a homeowner vacancy rate of 1.4 percent, and 5,600 units were available for rent, or a renter vacancy rate of 9.9 percent. Both the homeowner and renter vacancy rates have decreased since the 1960 Census, from 2.1 percent and 11.7 percent, respectively.

9. There will be an annual requirement for about 3,150 units of privately-financed housing in the HMA during the May 1967-May 1969 period, including about 2,375 units of single-family housing and 775 units of multifamily housing. However, current vacancies and new units under construction should be adequate for most of the anticipated multifamily requirement during the first year of the forecast period. At the lower rents achievable with below-market-interest-rate financing or assistance in land acquisition and cost, additional 400 multifamily units, exclusive of public low-rent housing and rent-supplement accommodations, may be absorbed annually.

10. Demand for new single-family housing during the next two years is expected to approximate the price range distribution indicated on page 26. The forecast requirement for multifamily housing is distributed by unit size and rent range on page 27.

ANALYSIS OF THE TULSA, OKLAHOMA, HOUSING MARKET AS OF MAY 1, 1967

Housing Market Area

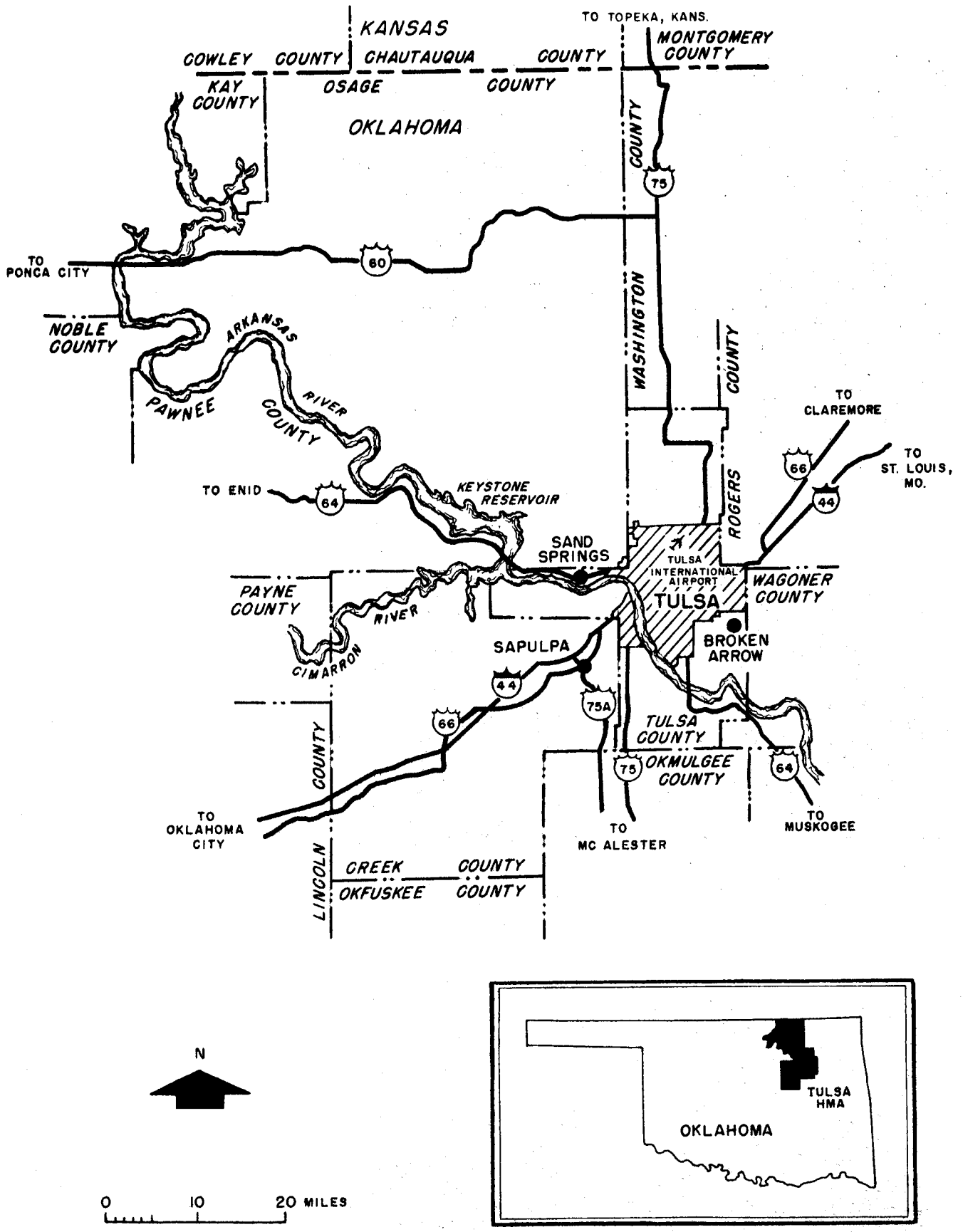
For the purposes of this report the Tulsa, Oklahoma, Housing Market Area (HMA) is defined as being coextensive with the Tulsa Standard Metropolitan Statistical Area, which the U.S. Bureau of the Budget defines as Tulsa, Creek, and Osage Counties (see map on following page). Located in northeastern Oklahoma, the Tulsa HMA had a 1960 population of almost 419,000 persons. 1/ The HMA is quite large, extending from the Kansas state line into central Oklahoma, and includes a great many small cities and towns. The social and economic ties between Creek and Osage Counties and the central city are not strong; the two counties barely meet the criteria for inclusion in the Tulsa SMSA, and account for only around one-sixth of the HMA residents. Most of the recent growth has occurred in and near Tulsa City. This analysis will include estimates for Tulsa and the near-by communities of Broken Arrow, Sand Springs, and Sapulpa, as well as for the HMA total.

Tulsa has excellent transportation facilities. The most important highway in the HMA is Interstate 44, which in Oklahoma generally parallels U.S. 66. St. Louis, Missouri, is about 400 miles northeast of Tulsa on I-44, and Oklahoma City is about 100 miles southwest. Several important U.S. highways also serve the HMA. Four railroad systems and 40 motor carriers serve Tulsa. The Tulsa International Airport is a major junction point for five airlines, which schedule over 50 flights daily through the facility. The Arkansas-Verdigris River navigation system may be the key element in the transportation complex available to serve Tulsa in the future. Scheduled for completion in 1970, the system will make the Tulsa HMA some 500 river miles from the Mississippi River for barge traffic. The nearest port will be located at Catoosa, about five miles east of the Tulsa city limits.

According to data from the 1960 Census, there was a net in-commutation to the Tulsa HMA from elsewhere of about 4,400 workers. The number of in-commuters, at 8,275, was more than double the number of out-commuters (3,875).

1/ Inasmuch as the rural farm population of the Tulsa HMA constituted only 2.5 percent of the total population in 1960, all demographic and housing data used in this analysis refer to the total of farm and nonfarm data.

TULSA, OKLAHOMA, HOUSING MARKET AREA



Economy of the Area

Character and Recent History

The booming years of oil production which began around 1905 earned the nickname "Oil Capital of the World" for Tulsa. While the name is applied still, present-day Tulsa is more a center for oil industry administration than petroleum production. Over 800 oil companies maintain offices in Tulsa, including the home or regional offices of large companies such as Sunray DX, Pan American, Sinclair, and Skelly, as well as a multiplicity of smaller producers, marketers, suppliers, etc.

During World War II Tulsa became an important air-frame production center. Many of the facilities originally constructed for aircraft manufacture are now being utilized in the development of Tulsa as a space, electronics, and research center. Douglas Aircraft has been located in Tulsa since 1942. The firm produced airplanes during World War II and again during the Korean War. Douglas is now mostly a manufacturing and modification center for military aircraft and missiles. North American Aviation, the prime contractor for the Apollo Project (manned space exploration), located in Tulsa in 1962 and is now an important employer. Many smaller firms producing electronic equipment are in Tulsa to provide the necessary supporting subcontracting services required by the Apollo and other space-missile programs. Some of these firms, such as Avco Incorporated, Dorsett Electronics, and others, are relatively recent arrivals in the Tulsa area. American Airlines operates a large modern aircraft maintenance and overhaul facility in Tulsa.

Employment

Current Estimate. According to the Oklahoma Employment Security Commission, nonagricultural wage and salary employment averaged 163,200 during the twelve-month period ending May 1, 1967, up some 9,400 over the corresponding period ending May 1, 1966. Employment of an average of 23,500 additional persons as domestics, self-employed, and unpaid family workers brought the nonagricultural job total to 186,700 for the recent 12-month period. Agricultural jobs averaged 5,400.

Past Trend. Except for 1961, when lowered employment in the Tulsa HMA reflected a national economic recession, average annual nonagricultural wage and salary employment has increased each year since 1960. The increase during the 1964-1966 period, spurred by the military build-up in southeast Asia and by continuing progress on the national space program, was especially marked. Average annual wage and salary employment in 1965 was up by 8,400 (5.9 percent) over 1964, and the 160,400 job average in 1966 was 9,300 (6.2 percent) above 1965.

Average Annual Nonagricultural Wage and Salary Employment
Tulsa, Oklahoma, HMA, 1960-1967

Year	Nonag. wage and salary employment			Change in total from preceding date
	Manufacturing	Nonmanufacturing	Total	
1960	28,700	105,600	134,300	-
1961	27,000	104,200	131,200	-3,100
1962	28,000	106,100	134,100	2,900
1963	28,500	107,800	136,300	2,200
1964	32,200	110,500	142,700	6,400
1965	34,900	116,200	151,100	8,400
1966	39,100	121,300	160,400	9,300
12 months ending May 1				
1966	36,100	117,700	153,800	-
1967a/	39,900	123,300	163,200	9,400

a/ Preliminary.

Source: Oklahoma Employment Security Commission.

The table above is a summary of trends in nonagricultural wage and salary employment during the 1960-1967 period. The table indicates that from 1963 through 1966 average annual wage and salary employment increased at an increasing rate. There appears to have been a slow-down in the rate of growth, however. Preliminary estimates from the Oklahoma Employment Security Commission indicate that wage and salary employment during April 1967, at 164,100, is 6,300 jobs above April 1966; April 1966 was 8,900 jobs above April 1965.

Employment by Industry. Employment in manufacturing industries accounted for only just over one-fifth of all wage and salary jobs in 1960. Gains in manufacturing have been responsible for almost 40 percent of the net increase in wage and salary employment during the 1960-1966 period, increasing the relative importance of this sector to one-fourth of all wage and salary jobs. One of the largest manufacturing firms in the Tulsa area (North American Aviation) was established in Tulsa during the 1960-1966 period, adding many jobs. The entire aerospace manufacturing complex located on and near the municipal airport grew substantially during the period.

The largest increases in employment in the manufacturing industries during the 1960-1966 period occurred in metal processing (up 4,400 jobs) and machinery (up 2,500 jobs). In the series shown in table II the stone, clay, and glass industry is included in "all other manufacturing" prior to 1963, and excluded from 1963 onward. If the industry had not been excluded, the "all other manufacturing" category would have gained by about 4,000 workers during the 1960-1966 period. Employment at North American Aviation is in this category in table II. In net, employment in the volatile transportation equipment industry was unchanged between 1960 and 1966. The level of employment fluctuated somewhat, however, from the 1961 recession low of 3,200 workers up to 4,900 in 1966.

Nonmanufacturing jobs accounted for three-fourths of all nonagricultural wage and salary employment in 1966, and remain the source of much of the basic economic support for the Tulsa HMA. Employment in nonmanufacturing industries declined from 105,600 jobs in 1960 to 104,200 in 1961, and increased every year thereafter to average 121,300 jobs during 1966.

The largest nonmanufacturing category is wholesale and retail trade, reflecting, in part, the importance of Tulsa as a distribution and trade center. Employment in trade averaged 37,000 in 1966, up 5,100 since 1960. Average 1966 wage and salary employment in service occupations, at 23,900, reflected a net increment of 5,400 since 1960. Government workers averaged 15,300 in 1966, up 3,200 since 1960. Many of the government employees work for the Corps of Engineers on the Arkansas-Verdigris River navigation system development. Public utilities employment averaged 14,500 workers in 1966. The largest employer in the area, American Airlines, is classed as a public utility for reporting purposes. Despite gains in employment by American, the 1966 average number of workers in the industry reflects a net decline of some 200 workers since 1960.

Direct employment in mining (oil and gas), the traditional mainstay of the Tulsa economy, has been declining in relative importance. Despite a net increase of some 300 workers in 1966 over the 1960 average of 13,000 workers, the proportion of mining workers dropped from 9.7 percent of the total of all wage and salary workers in 1960 to 8.3 percent in 1966.

Most direct employment in the Tulsa mining industry is of an administrative nature, relatively easy to move from one city to another. Tulsa has a long history of in- and out-migration of firms, mergers, and creation and dissolution of oil companies. The most recent peak in mining jobs in the Tulsa HMA appears to have been reached in the mid-1950's. With minor exceptions, mining employment declined until 1965, when the main administrative center of a large oil company (Pan American) was relocated to Tulsa, upping over-all mining employment.

The over-all importance of the oil industry to the Tulsa economy cannot be measured by the number of workers directly employed by the oil companies since other industries in the HMA provide goods and services to the industry. For example, most employment in metal fabrication is for oil tank and related production, and many machinery manufacturers produce oil field equipment. Both of these employment classifications have contributed substantially to the growth in manufacturing employment since 1960.

Principal Employers 1/

The American Airlines maintenance center, situated near the Tulsa International Airport, is the largest employer in the Tulsa HMA as of May 1967. In addition to maintaining its own aircraft, American Airlines services the airplanes of several other companies on a contractual basis. Located in Tulsa in 1946, the facility has had a history of almost continuous growth. Since 1961, an average of about 130 employees has been added to the work force annually. As of March 31, 1967, employment totalled about 4,750. The monthly payroll of the maintenance facility amounts to $3.5 million.

As of April 1967, the Douglas Aircraft Company Tulsa Division had around 4,200 employees, making the company the second largest employer in Tulsa. While the present number of employees at Douglas is large, it does not reflect the full influence of the company on the local economy. Established in 1942, the Douglas plant manufactured bombers during World War II and employed over 20,000 workers. Activity at the plant was discontinued after the war, but the facility was reactivated during the Korean War. By 1953 employment had exceeded 11,000 and remained above that level through 1956. Although the plant never closed following the Korean War, employment at Douglas declined to under 2,000 during 1961 and remained near that figure until 1965. The number of workers at the plant has been increasing in recent years, and the April 1967 work force is somewhat above the 2,000 level of two years ago.

1/ Employment figures in this section were obtained directly from the companies involved.

Over the years, the Tulsa Division of Douglas has had many functions, from building bombers to the manufacture of space and defense missiles. Presently, the plant is a modification and repair center for military aircraft, and components of commercial transport airplanes (the DC-8 and DC-9) are manufactured and assembled there. The plant retains the capability to perform many manufacturing functions. As of May 1, 1967, the McDonnell-Douglas Company came into existence with the merger of Douglas and the McDonnell Aircraft Corporation (headquartered in St. Louis, Missouri). There is a possibility that the newly-formed company will expand the utilization of the Tulsa Division facility.

The third largest employer in the Tulsa HMA is the Space and Information Systems Division of North American Aviation, Incorporated. The company was located in Tulsa in 1962. Employment at the plant increased steadily until 1965, when the work force reached 4,000, and employment remained near that level until 1967. As of April 1967, employment at North American was down to 3,550. The production of the plant has been limited to aerospace systems (the Apollo Project). A diversification into the manufacture of components for commercial aircraft is planned. Included will be the production of fuselage components for the new Boeing 747 super transport, scheduled to fly in 1970. A substantial addition to the work force of North American may result from the diversification.

Unemployment

As shown in the following table, except for a small rise in 1963, unemployment has been declining since 1961, when 6.0 percent of the work force was jobless. The unemployment rate declined to an average of 3.4 percent in 1966, and to 3.3 percent during the twelve-month period ending May 1, 1967. Continuing reductions in unemployment reflect the tightening in the labor market which many companies reported. Several employers indicated that is is increasingly difficult to fill job vacancies.

Work Force and Unemployment
Tulsa, Oklahoma, HMA, 1960-1967
(averages in thousands)

Component	Annual							12 months[a/]	
	1960	1961	1962	1963	1964	1965	1966	1966	1967
Work force	171.3	170.3	171.3	174.1	178.9	187.1	195.9	189.7	198.6
Unemployed	8.2	10.2	8.5	9.2	7.7	7.3	6.6	7.1	6.5
Percent	4.8%	6.0%	5.0%	5.3%	4.3%	3.9%	3.4%	3.7%	3.3%

a/ Average of the twelve consecutive months ending May 1 of the year indicated.

Source: Oklahoma Employment Security Commission.

Future Employment Prospects

Forecasts of employment in an area impacted by the volatile aerospace and petroleum industries are hazardous. With respect to the former, the loss or acquisition of a single government contract or the decision of an aircraft manufacturer to re-align its national production facilities could change completely what seems to be a reasonable expectation of employment growth. Also a factor, as in all employment forecasts for local areas, are future trends in the national economy and the course of the present military effort in southeast Asia.

The economy of the Tulsa area has been expanding on the crest of national economic growth of near boom proportions during the past two years. Given the known plans for expansion at existing firms, the prevalent forecasts of national economic growth at a level somewhat below the maximum attainable, and barring further unforeseeable developments, the rate of employment expansion should be somewhat lower during the next two years than during the recent past. Based on the trend of nonmanufacturing employment in the Tulsa HMA, on information provided by some of the larger employers in the area, and on known plans of manufacturing expansion (especially the diversification into commercial aircraft component manufacture at North American Aviation), a gain of around 11,000 nonagricultural wage and salary jobs (5,500 annually) appears to be a reasonable expectation for the two-year forecast period to May 1969. This annual gain is substantially below the rate of increase during the 1964-1966 period of exceptionally rapid growth (an average of 8,850 wage and salary jobs added annually). However, the forecast is above the average gain of the over-all 1960-1966 period (4,350 annually) and is believed to be compatible with the character and long-term history of the Tulsa area.

Note that the above forecast is of job potential and not workers. In the recent past, Tulsa has been able to attract enough in-migrants to assure a sufficient work force to fill available new positions, but whether this will continue to be so remains to be seen; more intensive recruitment from the local population may or may not provide sufficient additional workers for the Tulsa economy to reach its full growth potential.

The eventual economic impact of the Arkansas-Verdigris River navigation system on the future of Tulsa is not clear at this time. Substantial economic growth during the 1970's and beyond may result from the availability of barge transportation in the Tulsa area, which is the farthest inland port on the system. Although not scheduled for completion until 1970, the system will have some economic influence on the Tulsa area prior to the expiration of the forecast period of this report (May 1, 1969). The future availability of low-cost water transportation reportedly has been partially responsible for the decision of several firms to locate at Tulsa. Also, work on the project during construction in the Tulsa vicinity will provide jobs for area residents.

Income

Average Weekly Wages. Wages in manufacturing industries are somewhat higher in the Tulsa HMA than in Oklahoma or in the nation as a whole. The higher wages in Tulsa reflect, in part, the importance of the aerospace plants and petroleum refineries, both relatively high wage industries. The table below is a summary of trends in weekly manufacturing earnings and hours during the 1960-1966 period.

Average Gross Weekly Hours and Earnings
Of Manufacturing Production Workers
1960-1966

	Tulsa HMA		Oklahoma		United States	
Year	Earnings	Hours	Earnings	Hours	Earnings	Hours
1960	$ 93	40.4	$ 85	40.7	$ 90	39.7
1961	92	40.6	88	40.9	92	39.8
1962	95	40.7	90	41.2	97	40.4
1963	98	40.6	94	41.3	100	40.5
1964	105	41.4	98	41.8	103	40.7
1965	111	42.1	101	42.0	108	41.2
1966	117	42.4	105	41.7	112	41.3

Source: U.S. Bureau of Labor Statistics.

Employees in manufacturing industries in the Tulsa HMA and in the State of Oklahoma as a whole have averaged a larger number of hours worked weekly than all manufacturing production workers in the U.S. Until 1965, when the work week surpassed 42 hours in the Tulsa HMA, the work week in the Tulsa area was slightly below the average for all Oklahoma. The more rapid increase in hours worked in Tulsa than elsewhere is a reflection, in part, of the especially rapid rates of economic expansion in the area during recent years which, coupled with a tightening in the labor market, has forced more intensive utilization of the HMA work force.

Family Income. The 1967 median after-tax income of all families in the Tulsa HMA is estimated at $6,600, and the median after-tax income of all renter households (excluding one-person renter households) at $4,975. By 1969, all family income will increase to a median of about $6,900, and all renter households of two persons or more will have a median after-tax income of about $5,200. Percentage distributions by income are contained in table III. About 24 percent of all families and 37 percent of all two- or more-person renter households have annual after-tax incomes of less than $4,000. Approximately 21 percent of all families and nine percent of all renter households enjoy after-tax incomes of $10,000 or more.

Demographic Factors

Population

Current Estimate. As of May 1, 1967, the population of the Tulsa HMA was about 488,800 persons, reflecting an increase of some 69,850 since April 1960, or around 9,850 (2.2 percent[1/]) annually. About 316,900 persons resided in Tulsa, or 65 percent of the total HMA population. Some 9,475 persons resided in Broken Arrow, 8,525 in Sand Springs, and 15,400 in Sapulpa (see table IV).

Past Trend. While the relative rate of population increase since 1960 is substantial, it is somewhat below that of the 1950-1960 decade, when the gain averaged 2.5 percent (9,100 persons) yearly. The definitional inclusion of Creek and Osage Counties in the Tulsa HMA has tempered the rates of population growth somewhat. The population of Tulsa County alone increased by an average of 3.1 percent annually during the 1950's, and by an estimated 2.6 percent yearly during the April 1960-May 1967 period. During the 1950's Creek and Osage Counties lost residents, as did almost every county in Oklahoma that was mostly rural. The population decline in these counties appears to have been arrested, however, and the May 1967 number of inhabitants in these counties was above the 1960 Census level.

The following table summarizes trends in the Tulsa HMA population since 1950, including a projection to May 1969.

Changes in Population
Tulsa, Oklahoma, HMA
April 1950-May 1969

Date	Number of persons	Average annual change from preceding date	
		Number[a/]	Percent
April 1950	327,900	-	-
April 1960	418,974	9,100	2.5
May 1967	488,800	9,850	2.2
May 1969	510,000	10,600	2.2

a/ Rounded.

Sources: 1950 and 1960 Censuses of Population.
1967 and 1969 estimated by Housing Market Analyst.

1/ All average annual percentage changes, as used in this section of the analysis, are derived through the use of a formula designed to calculate the rate of change on a compound basis.

Most socio-economic growth in the Tulsa HMA is located in and near Tulsa, and the proportion of the total population that resides in the city has been increasing because of annexation. Tulsa accounted for 56 percent of all HMA residents in 1950, 62 percent in 1960, and 65 percent as of May 1967. Tulsa has annexed land as it has been developed for homes at the fringe of the city. A very large annexation in 1966 added about 28,000 persons to the population of the city and tripled its geographic size (to 175 square miles). A great deal of undeveloped land east and south of the city was included in the annexation. These have been the directions of development of Tulsa, as reflected by the rapid rate of population gain in Broken Arrow, southeast of Tulsa.

Estimated Future Population. Based on anticipated increases in employment opportunities and changes in work force participation and migration patterns, the population of the Tulsa HMA is expected to increase by 21,200, or 10,600 (2.2 percent) annually, during the two-year forecast period of this analysis.

Net Natural Increase and Migration. Between April 1950 and April 1960 the net natural increase (excess of resident births over resident deaths) of the Tulsa HMA population amounted to an average of about 6,000 annually. Since the population increased by an annual average of about 9,100 during the decade, net in-migration amounted to 3,100 persons a year. Reflecting a decline in birth rates along with relatively constant death rates, net natural increase has declined to an average of about 4,800 annually since 1960. Since 1960, spurred by larger increases in employment opportunity than during the 1950-1960 decade, average in-migration has increased to 5,050 annually, more than the average annual increment attributable to net natural increase (see table below). Most of the net in-migration during the April 1960-May 1967 period took place during 1964 and afterward, years of especially rapid economic expansion.

Components of Population Changes
Tulsa, Oklahoma, HMA
April 1950-May 1967

Source of increase	Average annual changes[a/] April 1950-April 1960	April 1960-May 1967
Net natural increase	6,000	4,800
In-migration	3,100	5,050
Net increase	9,100	9,850

a/ Rounded.

Sources: U.S. Bureau of the Census, State of Oklahoma Department of Health, and estimates by Housing Market Analyst.

Households. As of May 1967, there were about 157,950 households (occupied housing units) in the Tulsa HMA, reflecting average annual increments of about 3,450 (2.4 percent) since April 1960. About 103,800 (66 percent) of the households were in Tulsa.

Past Trend. During the 1950-1960 decade, the number of households increased by an average of 3,250 (2.8 percent) annually. Part of the intercensal gain was a definitional increment attributable to the census change in concept from "dwelling unit" in 1950 to "housing unit" in 1960. The following table summarizes household trends since 1950, including a projection to May 1969.

Changes in the Number of Households
Tulsa, Oklahoma, HMA
April 1950-May 1969

Date	Number of households	Average annual change from preceding date	
		Number[a/]	Percent
April 1950	100,980	-	-
April 1960	133,544	3,250	2.8
May 1967	157,900	3,450	2.4
May 1969	165,100	3,600	2.3

a/ Rounded

Sources: 1950 and 1960 Censuses of Housing.
1967 and 1969 estimated by Housing Market Analyst.

Estimated Future Households. Based on anticipated gains in population and changes in household size, it is expected that the number of households will increase by about 7,200 (3,600 annually) during the May 1967-May 1969 period to a total of 165,100.

Household Size Trends. Households averaged 3.17 persons in 1950 and 3.11 persons in 1960. Since 1960, declining birthrates, higher rates of one- and two-person household formation by young persons born during the World War II "baby boom," and other factors, have worked to continue the decline in average household size. As of May 1967, estimated household size was 3.07 persons, and is expected to decline further in the next two years.

Housing Market Factors

Housing Supply

Current Estimates. As of May 1, 1967, there were 170,500 housing units in the Tulsa HMA, reflecting a net gain of about 24,650 since the 1960 Census. This increase reflects the construction of 26,550 housing units, an increase in the number of occupied house trailers, and the removal of some 2,500 units from the housing inventory through demolition, largely as a result of clearance for highway rights-of-way and urban renewal activity within Tulsa.

Past Trend. The rate of increase in the number of housing units since 1960 (an average of 3,475 annually) has been somewhat below that of the 1950's. According to census data, an annual average of about 3,925 units were added to the inventory between 1950 and 1960. A small portion of the apparent increase during the 1950 decade was a definitional increment attributable to the census change in concept from "dwelling unit" in 1950 to "housing unit" in 1960.

Units in Structure. According to the 1960 Census, the great majority of the Tulsa HMA housing inventory was in single-family structures. There has been an increase in the number of single-family units since 1960, but the large number of units built in apartment structures during the recent years has decreased the relative importance of single-family structures, from 87.7 percent of the total housing inventory in 1960 to 85.7 percent in 1967 (see following table).

Duplexes accounted for just 2.9 percent of the housing inventory in 1960 and only 2.6 percent in 1967. Units in structures with three-or-more units increased from 13,618 in 1960 to about 19,800 in 1967, upping the share of the total housing inventory contained in larger structures from 9.3 percent to 11.6 percent.

Distribution of the Housing Inventory by Units in Structure
Tulsa, Oklahoma, HMA, 1960 and 1967

Units in Structure	April 1960 Number of units	April 1960 Percent of total	May 1967 Number of units	May 1967 Percent of total
1 unit[a/]	127,927	87.8	146,200	85.8
2 units	4,278	2.9	4,500	2.6
3 or more units	13,618	9.3	19,800	11.6
Total	145,823[b/]	100.0	170,500	100.0

a/ Includes trailers.
b/ Differs slightly from count of all housing units (145,862) because units by type of structure were enumerated on a sample basis.

Source: 1960 Census of Housing and estimates by Housing Market Analyst.

Year Built. A large proportion (44 percent) of the May 1967 Tulsa HMA housing inventory was built during the years of rapid economic growth since 1950 (see table below). The median-aged unit is less than twenty years old; less than 30 percent of the inventory consists of units built before 1930.

Distribution of the Housing Inventory by Year Built
Tulsa, Oklahoma, HMA, May 1967

Year built[a/]	Housing Units Number	Housing Units Percent
April 1960-April 1967	26,500	15.5
1965-March 1960	24,300	14.3
1950-1954	24,400	14.3
1940-1949	24,900	14.6
1930-1939	21,400	12.6
1929 and earlier	49,000	28.7
Total	170,500	100.0

a/ The basic data reflect an unknown degree of error in "year built" occasioned by inaccuracies of response to enumerators' questions as well as errors caused by sampling.

Source: 1960 Census of Housing adjusted by Housing Market Analyst to reflect changes in the inventory since 1960.

Condition. The 1960 Census enumerated 7,600 dilapidated housing units in the Tulsa HMA, and 13,700 other units which lacked one or more plumbing facilities. The total number of such substandard units (21,300) equalled about 15 percent of the 1960 housing inventory. About eight percent of the owner-occupied units were substandard, compared to 22 percent of the units occupied by renters. It is judged that some improvement in the housing inventory has taken place since 1960, resulting from the large number of new units added (all assumed to be acceptable) and from demolition or rehabilitation of inadequate units, although a few structures have become dilapidated during the interim. As of May 1, 1967, about twelve percent of the inventory was substandard.

Residential Building Activity

Trends. Building permit systems cover incorporated areas of the Tulsa HMA and reflect only a portion of total construction activity. Changes in geographic coverage caused by municipal annexations make year-to-year activity in building permits a poor measure of trends in construction volume. The estimates of single-family housing unit starts which are prepared by the Public Service Company of Oklahoma, the local electric utility, appear to be the best basic source of information on trends in house construction in the Tulsa HMA. Since the construction of units in multifamily structures is generally restricted to urban areas, in which building permits are required, building permit authorizations of apartment units are a valid measure of multifamily construction (see table VI).

Total private housing construction starts are estimated to have amounted to about 2,865 units in 1960. Starts decreased to 2,240 in 1961, and then increased every year thereafter until 1965, when construction began on some 5,790 units. Even though the number of housing starts during 1966 declined to 4,700 units, the volume for the year was the second-highest of the 1960's. The following table is a summary of estimated private housing starts in the Tulsa HMA since 1960.

Estimated Number of Private Housing Unit Construction Starts
Tulsa, Oklahoma, HMA, 1960-1967

Year	Units started by type of structure: Single-family	Two units	Three or more units	Total
1960	2,525	20	320	2,865
1961	2,025	25	190	2,240
1962	2,425	20	660	3,105
1963	2,475	70	1,380	3,925
1964	2,975	70	1,225	4,270
1965	3,850	140	1,800	5,790
1966	3,050	250	1,400	4,700
First three months				
1966	1,025	100	615	1,740
1967	340	45	240	625

Sources: U.S. Bureau of the Census, C-40 Construction Reports; Public Service Company of Oklahoma; local building officials and records; and estimates by Housing Market Analyst.

According to the data on which the above table is based, total housing starts during the first three months of 1967 (625 units) is equal to just over one-third the number of starts during the corresponding period in 1966. The basic data for single-family units are from electrical connections and relate to houses which have reached a stage of construction somewhat beyond the initial preparatory work. The actual number of new residences for which foundations were poured during the first three months of 1967 is believed to be considerably above the figure shown in the table; single-family authorizations in permit-issuing places of the HMA amounted to over 510 units during the period (see table VI).

Construction was started on about 2,525 single-family units in 1960. The number of house starts declined to 2,025 in 1961, but increased to 2,425 in 1962 and every year thereafter until 1965, when construction was started on 3,850 single-family units. Single-family starts declined to about 3,050 in 1966. It is likely that the number of house construction starts would have been somewhat higher during 1966 had credit terms not tightened during the year.

In contrast to the 1950 decade, during which there was a net decrease in the number of housing units in multifamily structures, apartment construction activity in the Tulsa HMA developed into substantial proportions in the mid-1960's. Only about 340 units in multifamily structures (includes units in duplex and all

larger structures) were started during 1960; the number of starts declined to just 215 in 1961, and then the rate of apartment construction began to increase. Excepting 1964, multifamily unit construction starts gained each successive year until the 1965 peak of 1,940 units was reached. About 1,650 multifamily units were started in 1966.

Units Under Construction. Based on a postal vacancy survey conducted during April 1967, building permit data, and on information obtained locally, there are estimated to be a total of about 1,150 units of housing under construction in the Tulsa HMA, including 450 units in multifamily structures. All of the multifamily units and about 500 of the 700 single-family units being built in the Tulsa HMA are in Tulsa. Most of the remaining single-family units under construction are near the city, or are located in or close to the near-by communities of Broken Arrow, Sand Springs, and Sapulpa.

Demolition. About 2,500 housing units have been removed from the inventory since the 1960 Census through demolitions. These demolitions have resulted primarily from clearance for highway rights-of-way, urban renewal activities, and city building code enforcement, in addition to private activity and losses from natural causes (fires, etc.).

The construction of the Crosstown Expressway (Interstate Route 244) has necessitated the removal of many housing units for rights-of-way clearance. Since 1960, the State Highway Department has sold some 2,025 units to be removed from rights-of-way. The majority of these units were single-family houses, most of which were moved intact to a new location, often to rural areas of the HMA. About 870 units were demolished, principally because they were in structures too large to move or because of low value or state of repair. In addition to these, clearance of rights-of-way for roads constructed by the city and county governments has resulted in the demolition of around 230 units, for a total of about 1,100 demolitions from road building activity in the Tulsa HMA. During the two-year forecast period of this analysis another 100 units may be moved from the housing inventory for right-of-way clearance.

As of May 1, 1967, only about 270 units had been demolished in the Tulsa HMA as a result of urban renewal activity. According to plans, however, during the May 1967-May 1969 forecast period, 1,150 units may be removed. In anticipation of demolition, over 400 of these units have been vacated.

Tenure of Occupancy

As shown in Table V, the proportion of the occupied housing inventory that was owner occupied increased from 59.1 percent in 1950 to 67.4 percent in 1960. The number of owner-occupied units grew by some 30,300 during the decade, while renter-occupied units increased by only 2,250. The net change in the owner-occupancy ratio since 1960 has been almost negligible; as of May 1967 an estimated 67.6 percent of all occupied housing units were occupied by owners. The deceleration in the trend toward owner-occupancy reflects an increased interest in and construction of multifamily housing in the past few years. It is likely that the owner-occupied proportion of the housing inventory actually peaked several years ago, before the increases in apartment development took place. Many of the in-migrants who have been attracted to the Tulsa HMA by the substantial increases in employment of recent years became occupants of rental units.

Vacancy

Last Census. As of April 1960, there were about 12,300 vacant housing units in the Tulsa HMA. Of these, 7,675 were nondilapidated units available for rent or sale, or an over-all available vacancy ratio of 5.4 percent. As shown in table V, 1,900 units were for sale only, or a high homeowner available vacancy ratio of 2.1 percent, and almost 5,775 units were for rent, indicating a renter vacancy rate of 11.7 percent. Of available vacancies, 100 (five percent) of the sales vacancies and over 1,800 (31 percent) of the rental vacancies lacked one or more plumbing facilities. When these substandard units are eliminated from consideration, the rates for acceptable sales and rental vacancies drop to 2.0 percent and 8.4 percent, respectively.

Postal Vacancy Surveys. The results of a postal vacancy survey conducted during April 1967 are summarized in table VII. The survey covered almost 143,600 possible deliveries (excluding trailers), equal to around 82 percent of the housing supply. About 5,500 vacancies in residences and apartments were enumerated in the survey, or an over-all vacancy rate of 3.8 percent. Vacancies in residences numbered 3,200 or 2.5 percent of the total residences reported.

Included in the vacant residences were 475 units reported as "new" (never occupied). Vacancies in apartments numbered 2,300 or 17.5 percent of the total apartment units enumerated. Included in the vacant apartments were 340 "new" units. The over-all vacancy rate as reported by the Tulsa Post Office (which accounted for some 81 percent of all the units covered by the survey) was somewhat higher than the aggregate of all the other post offices--4.0 percent compared to 3.1 percent. The higher over-all rate in Tulsa is accounted for by the much higher rate of apartment vacancy reported there--18.1 percent compared to 12.7 percent; the residential vacancy rate was lower in Tulsa (2.4 percent) than in the other cities and towns (2.6 percent).

In addition to the April 1967 survey summarized in table VII, postal vacancy surveys were conducted for FHA market analyses of the Tulsa area during November of 1963 and 1964. The 1963 survey reported a high over-all vacancy rate (4.9 percent); the 1964 survey indicated a reduction in the over-all rate, to 3.8 percent. A comparison of the findings of the May 1967 survey with the November 1964 report indicates that while the over-all rate of vacancy is unchanged, apartment vacancies are up from 13.9 percent in 1964 to 17.5 percent in 1967, and the vacancy rate in residences is down from 2.8 percent in 1964 to 2.5 percent in 1967. These changes reflect the large number of apartment units completed since the 1964 survey, which increased the apartment vacancy rate, and the lowered rate of house construction during 1966 which caused absorption of vacant sales units.

It is important to note that the postal vacancy survey data are not entirely comparable with the data published by the Bureau of the Census because of differences in definition, area delineations, and methods of enumeration. The census reports units and vacancies by tenure, whereas the postal vacancy survey reports units and vacancies by type of structure. Consideration of this conceptual difference is especially important in areas such as Tulsa, where most rental housing has been supplied from the single-family inventory. The Post Office Department defines a "residence" as a unit representing one stop for one delivery of mail (one mailbox). These are principally single-family homes, but include row houses, and some duplexes and structures with additional units created by conversion. An "apartment" is a unit on a stop where more than one delivery of mail is possible. Postal surveys omit vacancies in limited areas serviced by post office boxes and tend to omit units in subdivisions under construction. Although the postal vacancy survey has obvious limitations, when used in conjunction with other vacancy indicators the survey serves a valuable function in the derivation of estimates of local market conditions.

Summary of Postal Vacancy Survey Findings
Tulsa, Oklahoma, HMA
1963, 1964, and 1967

	November 1963	November 1964	May 1967
Total units surveyed	120,512	127,892	143,589
Vacant	5,859	4,886	5,501
Percent vacant	4.9%	3.8%	3.8%
Vacant residences	3,662	3,244	3,207
Percent vacant	3.4%	2.8%	2.5%
Vacant apartments	2,197	1,642	2,294
Percent vacant	17.7%	13.9%	17.5%

Sources: Postal vacancy surveys conducted by area postmasters in cooperation with the FHA.

Current Estimate. On the basis of postal vacancy survey results and information from local sources, it is judged that as of May 1, 1967, there were 7,100 vacant housing units available for rent or for sale, or an over-all available vacancy rate of 4.3 percent. About 1,500 of these available vacancies were available for sale only for a homeowner vacancy rate of 1.4 percent. The remaining 5,600 units were available for rent, or a rental vacancy rate of 9.9 percent. Both the homeowner and renter vacancy rates represent reductions from the rates reported in the 1960 Census (2.1 percent and 11.7 percent, respectively).

An estimated 1,400 of the vacant units available for rent are substandard in that they lack one or more plumbing facilities. If these units are removed from consideration, the available rental vacancy rate is reduced to 7.6 percent. Many available substandard units are located in Tulsa, some of which are in urban renewal project areas and are scheduled for eventual removal from the housing inventory. Only about 70 of the vacant units available for sale lack plumbing facilities.

After adjusting the rental vacancy ratios by removing from consideration all substandard units, the number of available rental vacancies remains somewhat higher than is necessary for adequate mobility and freedom of choice in an area with the growth characteristics of Tulsa.

Sales Market

General Market Conditions. The market for new sales housing in the Tulsa HMA is firm, but has been relatively inactive by the standards of the past. A substantial part of the new sales housing in the Tulsa HMA is built speculatively. Because of the "tight" money situation which developed during 1966, many operative builders were unable to obtain interim financing, and construction volume was reduced. The rate of both speculative and contract construction was depressed by the high interest rates. Local sources report that, judging from the number of inquiries, interest in the purchase of new single-family units remains high. The tight money situation has caused a number of used vacant available sales units to be absorbed; some potential new home buyers have entered the market for existing housing. Partial abatement in the tight money situation was evidenced during early 1967 and the market for new sales housing appears to be picking up. The number of single-family housing units under construction as of May 1, 1967 was substantially above the average of 1966.

Rental Market

General Market Conditions. The base of the rental market (renter households) of the Tulsa HMA has been growing more rapidly in recent years than previously; the quickened pace of economic development has resulted in a higher rate of in-migration of workers, including many renters. Increasing occupancy of rental housing is reflected in the housing surveys compiled by the Tulsa Real Estate Board during May of 1962, 1964, and 1966. Each consecutive survey enumerated more units in structures containing three-or-more units, reflecting additions to the multifamily unit inventory of the Tulsa HMA, and each indicated lower levels of vacancy. The 1962 survey counted 7,761 apartment units, of which many (1,409, or 18.2 percent) were vacant; the 1964 survey covered 10,407 apartment units, of which 1,650 (15.9 percent) were vacant; and the 1966 survey enumerated 12,307 units in structures containing three-or-more units, of which 1,591 (12.9 percent) were unoccupied. Although the surveys revealed decreasing rates of apartment vacancy, the rate reported in the most recent enumeration was quite high. Apartment vacancy rates shown by the consecutive surveys declined despite the inclusion in each of them of the large number of substandard apartment units located in Tulsa. The number of these units, in which the rate of vacancy is chronically high, remained almost constant in each survey, while the units of better quality (and somewhat higher occupancy) increased, decreasing the over-all vacancy rate.

From a comparison of the April 1967 postal vacancy survey with the results of earlier ones, and from local observation, the accelerated rate of apartment construction during the mid-1960's appears to have recently out-paced the rates of increase in the number of renter households. The number of rental vacancies as of May 1967 was at a level somewhat above the previous year. Rental vacancies, excluding substandard units, are up to a level somewhat above that required for a balanced market with adequate mobility and freedom of choice. Competition for tenants is quite high among the newer apartment projects, and concessions are offered by many. Vacancies have increased in many of the projects which were constructed during the early 1960's, at the beginning of the apartment-building boom.

Mortgage Market

Reflecting the national condition, a serious shortage of mortgage funds developed during 1966 in the Tulsa HMA, with accompanying high interest rates. Interim financing for speculative construction became almost totally unavailable during the summer months. Some operative builders who had been dependent on credit to finance their operations were forced to cease business. As of May 1967, interim financing was again available on a limited basis, but interest rates remained high.

Urban Renewal

There are five urban renewal projects in Tulsa, including two in execution, one in the planning stage, and two in pre-planning.

The Seminole Hills (Okla. R-3) project consists of 91 acres in northern Tulsa. Boundaries of the area are Reading Street on the south, Peoria Avenue on the west, Virginia Street on the north, and the alley behind Utica Avenue on the east. The project is now in execution, nearing completion. Some 220 housing units were demolished in the project area. The area was not entirely cleared, however, and many houses have been rehabilitated. Use of the area, which was primarily residential, is not to be materially changed.

A unique feature of the Seminole Hills Project is a demonstration project in which 100 new single-family homes were built for occupancy and eventual purchase by moderate-income families. The three-bedroom units may be purchased or leased with an option to buy. The purchase price of the houses is $9,300. Rent on the renter-occupied units is calculated at 20 percent of the income of the occupants. A federal grant provides funds for administering the program. As of May 1, 1967, five of the houses had been sold; all but two of the remainder were occupied by renters.

The Downtown Northwest (Okla. R-7) project entered the execution stage late in 1965. The 309-acre project area is bounded by the Frisco Railroad tracks on the west and north, Detroit and Denver Avenues and Seventh Street on the east, and an irregular line between 12th and 13th Streets on the south. Former use of the land was mostly commercial and residential; re-use will be similar. Of approximately 1,400 housing units to be demolished in the project area, about fifty have been removed as of May 1, 1967. Around two-thirds of the remaining units to be demolished will be removed within the two-year forecast period of this analysis. Over 400 of the units scheduled for removal have been vacated by their former occupants in anticipation of demolition. Most of the housing to be demolished was occupied by renters.

The Westbank Area I (Okla. R-25) project area is the 162 acres in West Tulsa bounded by 21st Street on the north, Jackson Avenue on the east, 25th Street on the south, and the Red Fork Expressway right-of-way on the west. Use of the area is about three-fourths residential and one-fourth commercial and public. Re-use will be similar to the present utilization, and will include a new 25-acre park. Execution of the project will include the removal of some 600 units through demolition. A number of the demolitions will take place within the two-year forecast period of this analysis. The units are approximately evenly distributed between owner and renter occupancy.

The two urban renewal projects in pre-planning are Westbank Area II (Okla. R-36), a 120-acre project adjacent to Westbank Area I, and Greenwood, a 370-acre project in north Tulsa. Neither of these projects will result in housing unit demolitions within the next two years.

Public Housing

There is no public housing in the Tulsa HMA and none is programmed.

Demand for Housing

Quantitative Demand

The estimated absorption rate for privately-financed housing is based on the expected increase in number of households during the next two years (3,600 annually), on the replacement requirements for units demolished, and on adjustments to create a balanced market for housing in the HMA. On the basis of these considerations, the absorption rate of privately-financed housing during the two-year forecast period will approximate 3,150 annually, including 2,375 units of single-family housing and 775 units in multifamily structures. At the lower rents achievable with below-market-interest-rate financing or assistance in land acquisition and cost, an additional 400 multifamily units may be absorbed annually, exclusive of public low-rent housing and rent-supplement accommodations.

To satisfy the estimated annual requirement for 775 market-interest-rate-financed multifamily units, as of May 1, 1967, there were 900 vacancies of standard quality, including 475 new units, and, in addition, 450 units under construction. Under these circumstances, and in view of the highly competitive market reported, it does not appear appropriate to encourage the construction of additional multifamily housing during the first year of the forecast period. In the second year of the forecast period, if vacancies decrease and if economic growth attains forecast levels, new multifamily construction at the rate of about 775 units a year would be appropriate.

The geographic distribution of housing requirement, during the two-year forecast period will be similar to the construction patterns of recent years. Most single-family units will be built in the south and east suburban areas of Tulsa. The recent completion of the Broken Arrow Expressway has opened a corridor for development southeastward between Tulsa and Broken Arrow. The absorption of multifamily units will be mostly in garden-type structures located in residential areas, as local preferences have directed in recent years.

Qualitative Demand

Single-Family Housing. Based on current family incomes, on typical ratios of income to purchase price, and on recent market experience, the annual demand for 2,375 single-family units is expected to be distributed by price as shown in the following table.

Estimated Annual Demand for New Single-Family Housing
Tulsa, Oklahoma, HMA
May 1967-May 1969

Sales price	Single-family units	
	Number	Percent
Under $12,500	460	19
$12,500 - 14,999	410	17
15,000 - 17,499	270	11
17,500 - 19,999	280	12
20,000 - 24,999	350	15
25,000 - 29,999	235	10
30,000 - 34,999	165	7
35,000 and over	205	9
Total	2,375	100

Multifamily Housing. In view of the recent increase in vacancies in rental projects and in resultant weakening of the rental market in Tulsa, as discussed in a preceding section of this analysis, some restraint appears to be advisable with respect to the construction of new multifamily projects. Little, if any, apartment construction appears justified in the first year of the forecast period. The trend in rental vacancies should be observed carefully, ensuring that the rental market is not further weakened by too high a rate of apartment construction. If observation reveals that the number of jobs in the area is changing at a rate substantially different from that forecast in this report, some adjustment in the number of units of demand during the second year may be necessary.

The monthly rents or charges at which privately owned net additions to the multifamily housing inventory might be absorbed in the second year of the forecast period are indicated for various size units in the following table. These net additions may be accomplished by either new construction or rehabilitation at the specified rental. Part of the forecast demand for multifamily housing may be satisfied through the construction of units in multifamily structures for sale to owner occupants (condominiums or cooperatives).

Estimated Demand for New Private Multifamily Housing
Tulsa, Oklahoma, HMA
May 1968 - May 1969

Monthly gross rent[a/]	Units by size of structure			
	Efficiency	One bedroom	Two bedrooms	3 or more bedrooms
$ 95 - $109	20	-	-	-
100 - 119	15	95	-	-
120 - 129	10	65	-	-
130 - 139	10	55	50	-
140 - 149	5	50	55	-
150 - 159	-	45	60	30
160 - 179	-	35	60	30
180 and over	-	25	30	30
Total	60	370	255	90

a/ Gross rent is shelter rent plus the cost of utilities; it is also the rental equivalent for multifamily units marketed as condominiums or cooperatives.

An additional demand in the second year of the forecast period for 400 units at rents achievable only with below-market-interest-rate financing or other public benefits is distributed by units size as follows: 15 efficiency units, 160 one-bedroom units, 170 two-bedroom units, and 55 units with three or more bedrooms. The location factor is of especial importance in the provision of new units at the lower-rent levels. Families in this user group are not as mobile as those in other economic segments; they are less able or willing to break with established social, church, and neighborhood relationships, and proximity to place of work frequently is a governing consideration in the place of residence preferred by families in this group. Thus, the utilization of lower-priced land for new rental housing in outlying locations to achieve lower rents may be self-defeating unless the existence of a demand potential is clearly evident.

Table I

Civilian Work Force Components
Tulsa, Oklahoma, Housing Market Area, 1960-1967
(Annual averages in thousands)

Work force components	1960	1961	1962	1963	1964	1965	1966	12 months ending May 1 [a] 1966	1967 [b]
Civilian work force	171.3	170.3	171.3	174.1	178.9	187.1	195.9	189.7	198.6
Unemployment	8.2	10.2	8.5	9.2	7.7	7.3	6.6	7.1	6.5
Percent of work force	4.8%	6.0%	5.0%	5.3%	4.3%	3.9%	3.4%	3.7%	3.3%
Total employment	163.0	160.0	162.8	164.9	171.2	179.7	189.3	182.5	192.1
Agricultural employment	6.2	5.9	5.9	5.6	5.6	5.5	5.5	5.5	5.4
Nonagricultural	156.8	154.1	156.9	159.3	165.6	174.2	183.8	177.0	186.7
Wage and salary	134.3	131.2	134.1	136.3	142.7	151.1	160.4	153.8	163.2
All other [c]	22.5	22.9	22.8	23.0	22.9	23.1	23.4	23.2	23.5
Workers involved in labor-management disputes	.1	.1	0	0	0	.1	0	.1	0

[a] Rounded; may not add to totals.
[b] Preliminary.
[c] Includes domestics, self-employed persons, and unpaid family workers.

Source: Oklahoma State Employment Service.

Table II

Nonagricultural Wage and Salary Employment by Industry
Tulsa, Oklahoma, Housing Market Area, 1960-1966
(Annual averages in thousands)

Industrial component	1960	1961	1962	1963	1964	1965	1966
Wage and salary employment	134.3	131.2	134.1	136.3	142.7	151.1	160.4
Manufacturing	23.7	27.0	23.0	23.5	32.2	34.9	39.1
Petroleum products	2.1	2.1	2.0	2.0	2.0	1.9	1.8
Stone, clay, and glass	a/	a/	a/	2.1	2.1	2.1	2.2
Metal processing	6.0	6.2	6.2	6.7	7.6	8.9	10.4
Machinery	5.1	5.3	5.6	5.5	5.8	6.4	7.4
Transportation equipment	4.9	3.2	3.7	3.4	3.6	3.5	4.9
All other manufacturing	10.6	10.2	10.5	8.8	11.1	12.1	12.4
Nonmanufacturing	105.6	104.2	106.1	107.8	110.5	116.2	121.3
Mining	13.0	12.8	12.9	12.7	12.7	13.4	13.3
Construction	8.5	7.7	8.0	8.3	8.3	9.1	9.5
Public utilities	14.7	13.6	14.0	13.7	13.8	14.0	14.5
Trade	31.9	31.3	31.5	31.9	33.1	35.2	37.0
Finance, ins., and real est.	6.9	7.2	7.1	7.2	7.2	7.4	7.8
Services	18.5	19.1	19.6	20.3	21.6	22.7	23.9
Government	12.1	12.5	13.0	13.7	13.8	14.4	15.3

a/ Included in "all other manufacturing".

Source: Oklahoma State Employment Service.

Table III

Estimated Percentage Distribution of All Families and Renter Households By Income and Tenure After Deduction of Federal Income Tax Tulsa, Oklahoma, Housing Market Area, 1967 and 1969

Annual after-tax incomes	Percentage distributions			
	1967		1969	
	All families	Renter households a/	All families	Renter households a/
Under $2,000	9	16	8	15
$2,000 - 2,999	7	9	7	9
3,000 - 3,999	8	12	8	11
4,000 - 4,999	9	13	8	12
5,000 - 5,999	11	13	10	13
6,000 - 6,999	10	11	10	11
7,000 - 7,999	10	8	10	9
8,000 - 8,999	9	5	9	6
9,000 - 9,999	6	4	7	4
10,000 - 12,499	10	5	11	6
12,500 - 14,999	4	2	4	2
15,000 and over	7	2	8	2
Total	100	100	100	100
Median income	$6,600	$4,975	$6,900	$5,200

a/ Excludes one-person renter households.

Source: Estimated by Housing Market Analyst.

Table IV

Population and Household Trends
Tulsa, Oklahoma, Housing Market Area
April 1950-May 1967

Area	April 1950	April 1960	May 1967	Average annual changes 1950-1960 Number	1950-1960 Percent[a]	1960-1967 Number[b]	1960-1967 Percent[a]
HMA total population	327,900	418,974	488,800	9,107	2.5	9,850	2.2
Tulsa	182,740	261,685	316,900	7,894	3.6	7,800	2.7
Broken Arrow	3,262	5,928	9,475	267	6.0	500	6.7
Sand Springs	6,994	7,754	8,525	76	1.0	110	1.4
Sapulpa	13,031	14,282	15,400	125	.9	160	1.1
Remainder of HMA	121,873	129,325	138,500	745	.6	1,300	1.1
HMA total households	100,980	133,544	157,900	3,256	2.8	3,450	2.4
Tulsa	58,680	85,993	103,800	2,731	3.9	2,525	2.7
Broken Arrow	1,042	1,816	2,900	77	5.6	150	6.7
Sand Springs	2,185	2,550	2,800	37	1.6	35	1.3
Sapulpa	4,119	4,727	5,100	61	1.4	55	1.1
Remainder of HMA	34,954	38,458	43,300	350	.9	680	1.7

a/ Percentages derived through the use of a formula designed to calculate the rate of change on a compound basis.

b/ Rounded; may not add to totals.

Sources: 1950 and 1960 Censuses of Population and Housing.
1967 estimated by Housing Market Analyst.

Table V

Components of the Housing Inventory
Tulsa, Oklahoma, Housing Market Area
April 1950-May 1967

Tenure and vacancy	April 1950	April 1960	May 1967	Average annual changes 1950-1960 Number	1950-1960 Percent [a]	1960-1967 Number [b]	1960-1967 Percent [a]
Total housing inventory	106,558	145,862	170,500	3,930	3.1	3,475	2.2
Occupied housing units	100,980	133,544	157,900	3,256	2.8	3,450	2.4
Owner-occupied	59,698	90,019	106,700	3,032	4.1	2,350	2.4
Percent of all occupied	59.1%	67.4%	67.6%	-	-	-	-
Renter-occupied	41,282	43,525	51,200	224	.5	1,075	2.3
Vacant housing units	5,578	12,318	12,600	674	7.9	40	.3
Available vacant	2,332	7,675	7,100	534	11.9	-80	-1.1
For sale only	954	1,904	1,500	95	6.9	-60	-3.4
Homeowner vacancy rate	1.6%	2.1%	1.4%	-	-	-	-
For rent	1,378	5,771	5,600	439	14.3	-25	- .4
Renter vacancy rate	3.2%	11.7%	9.9%	-	-	-	-
Other vacant	3,246	4,643	5,500	140	3.6	120	2.4

a/ Percentages derived through the use of a formula designed to calculate the rate of change on a compound basis.

b/ Rounded; may not add to totals.

Sources: 1950 and 1960 Censuses of Housing.
1967 estimated by Housing Market Analyst.

Table VI

Private Housing Units Authorized by Permit-Issuing Places
Tulsa, Oklahoma, Housing Market Area, 1960-1967

Area	1960	1961	1962	1963	1964	1965	1966	First 3 months 1966	First 3 months 1967
Tulsa HMA total	1,128	738	1,240	2,236	1,964	2,735	2,796[a]	892	709[a]
Single-family	793	525	561	782	675	800	1,154	177	514
Multifamily	335	213	679	1,454	1,289	1,935	1,642	715	195
Tulsa	895	557	1,001	1,952	1,556	2,374	2,523[a]	801	623[a]
Single-family	562	344	322	542	337	508	917	108	440
Multifamily	333	213	679	1,410	1,219	1,866[b]	1,606	693	183
Broken Arrow	59	80	103	135	200	211	117	41	27
Single-family	59	80	103	112	182	177	103	34	25
Multifamily	-	-	-	23	18	34	14	7	2
Sand Springs	12	8	29	22	44	NA	56	20	15
Single-family	12	8	29	22	30	NA	50	14	15
Multifamily	-	-	-	-	14	NA	6	6	-
Sapulpa	118	69	72	53	54	35	30	10	9
Single-family	116	69	72	49	54	33	24	6	9
Multifamily	2	-	-	4	-	2	6	4	-
Remainder of HMA[c]	44	24	35	74	110	115	70[d]	20[d]	35[d]
Single-family	44	24	35	57	72	82	60	15	25
Multifamily	-	-	-	17	38	33	10	5	10

a/ A large annexation to Tulsa in April 1966 caused a substantial increase in unit authorizations within the city.
b/ Excludes 41 units of college student housing.
c/ Includes Drumright, Pauhuska, Collinsville, Owasso, Skiatook, and Sperry.
d/ Estimated.

Sources: U.S. Bureau of the Census, C-40 Construction Reports; local building officials and records; and estimates by Housing Market Analyst.

Table VII

Tulsa, Oklahoma, Area Postal Vacancy Survey

April 4-19, 1967

Postal area	Total residences and apartments: Total possible deliveries	Vacant units: All	%	Used	New	Under const.	Residences: Total possible deliveries	Vacant units: All	%	Used	New	Under const.	Apartments: Total possible deliveries	Vacant units: All	%	Used	New	Under const.	House trailers: Total possible deliveries	Vacant: No.	%
The Survey Area Total	143,589	5,501	3.8	4,685	816	1,132	130,468	3,207	2.5	2,734	473	679	13,121	2,294	17.5	1,951	343	453	1,790	59	3.3
Tulsa	116,127	4,641	4.0	3,927	714	976	104,425	2,527	2.4	2,155	372	530	11,702	2,114	18.1	1,772	342	446	1,361	47	3.5
Main Office	19,176	1,335	7.0	1,110	225	257	14,266	425	3.0	424	1	4	4,910	910	18.5	686	224	253	79	4	5.1
Stations:																					
Admiral	23,734	454	1.9	317	137	221	23,198	398	1.7	271	127	139	536	56	10.4	46	10	82	1,078	42	3.9
Donaldson	7,818	290	3.7	289	1	48	6,456	128	2.0	128	-	1	1,362	162	11.9	161	1	47	-	-	-
Northside	25,902	1,071	4.1	1,035	36	45	24,452	844	3.5	809	35	33	1,450	227	15.7	226	1	12	38	-	0.0
Ranch Acres	7,759	124	1.6	124	-	3	6,986	55	0.8	55	-	3	773	69	8.9	69	-	-	-	-	-
Southeast Detached Carrier Unit	12,688	679	5.4	452	227	285	11,301	319	2.8	154	165	241	1,387	360	26.0	298	62	44	-	-	-
Southside	11,585	463	4.0	409	54	59	10,386	160	1.5	149	11	51	1,199	303	25.3	260	43	8	124	-	0.0
West Tulsa	7,465	225	3.0	191	34	58	7,380	198	2.7	165	33	58	85	27	31.8	26	1	-	42	1	2.4
Other Cities and Towns	27,462	860	3.1	758	102	156	26,043	680	2.6	579	101	149	1,419	180	12.7	179	1	7	429	12	2.8
Bristow	2,553	88	3.4	84	4	4	2,417	82	3.4	78	4	4	136	6	4.4	6	-	-	22	-	0.0
Broken Arrow	4,591	108	2.4	65	43	47	4,407	94	2.1	51	43	42	184	14	7.6	14	-	5	71	3	4.2
Collinsville	1,500	30	2.0	25	5	21	1,492	29	1.9	24	5	21	8	1	12.5	1	-	-	15	-	0.0
Drumright	1,206	91	7.5	91	-	2	1,135	69	6.1	69	-	2	71	22	31.0	22	-	-	2	-	0.0
Fairfax	942	51	5.4	51	-	3	887	46	5.2	46	-	3	55	5	9.1	5	-	-	17	-	0.0
Hominy	1,410	55	3.9	55	-	-	1,400	55	3.9	55	-	-	10	-	0.0	-	-	-	7	1	14.3
Owasso (3-31-67)	1,303	30	2.3	22	8	17	1,189	21	1.8	13	8	17	114	9	7.9	9	-	-	12	1	8.3
Pawhuska	1,550	84	5.4	82	2	-	1,395	45	3.2	43	2	-	155	39	25.2	39	-	-	15	-	0.0
Sand Springs	4,790	101	2.1	72	29	29	4,587	82	1.8	53	29	29	203	19	9.4	19	-	-	187	5	2.7
Sapulpa	5,917	157	2.7	147	10	18	5,489	92	1.7	83	9	18	428	65	15.2	64	1	-	44	2	4.5
Skiatook (3-30-67)	1,700	65	3.8	64	1	15	1,645	65	4.0	64	1	13	55	-	0.0	-	-	2	37	-	0.0

The survey covers dwelling units in residences, apartments, and house trailers, including military, institutional, public housing units, and units used only seasonally. The survey does not cover stores, offices, commercial hotels and motels, or dormitories; nor does it cover boarded-up residences or apartments that are not intended for occupancy.

The definitions of "residence" and "apartment" are those of the Post Office Department, i.e.: a residence represents one possible stop with one possible delivery on a carrier's route; an apartment represents one possible stop with more than one possible delivery.

Source: FHA postal vacancy survey conducted by collaborating postmaster(s).