

PART OF THE COMPREHENSIVE PLAN  
DES MOINES CITY PLAN AND ZONING COMMISSION  
PLAN REPORT NUMBER SIX APRIL, 1962

PRELIMINARY 1980  
LAND USE PLAN

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CITY OF DES MOINES, IOWA  
CITY PLAN AND ZONING COMMISSION

June, 1962

Honorable Mayor and City Council  
City of Des Moines, Iowa

Gentlemen:

The City Plan and Zoning Commission is pleased to submit the Preliminary 1980 Land Use Plan, the sixth of a series of publications preliminary to the Comprehensive Plan for Des Moines. Previous Comprehensive Plan elements designed to give direction and guidance to land use development of the community through the year 1980 are the Physical Data, Population, Public Improvements, Economy, Major Streets, and Community Facilities Reports.

This plan describing present and future land uses within the City of Des Moines can be used to assist the formulation of continuing policies and programs of service to the community. The plan is to be used in conjunction with the previous Major Streets and Community Facilities reports when making plans for specific projects affecting the configuration of land use development within this City.

Acknowledgment is extended to the Committee of 100, Greater Des Moines Chamber of Commerce, for their plan of the western portion of the central business district and to the East Des Moines Civic Development Association for its plan of the area east of the Des Moines River. Historical information was derived from Howard Joseph Nelsons' "The Livelihood Structure of Des Moines, Iowa".

Respectfully submitted,

CITY PLAN AND ZONING COMMISSION

*James W. Callison*  
James W. Callison, Chairman

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## INTRODUCTION

The basic objectives of land use planning are to examine the City's past growth, to determine the bases upon which the existing land use patterns developed, and to propose patterns of future land use development in proper relationship to one another. A study of land use provides an insight to the relationship between the various land uses within the community from which workable solutions evolve in the form of the Comprehensive Plan. The Comprehensive Plan, intended to be a general guide for the direction of future urban growth, is a set of the goals for the planning and legislative branches of the City Government to use in achieving the most efficient use of its land.

Land use planning is a twofold process based upon an inventory of existing land uses, economic environmental conditions, and other factors relating to the uses applied to urban land. The first phase involves the collection of data. The second phase collates, synthesizes, and interprets the information gathered in the first phase. This survey of the community locating the various existing land uses is then used to develop the Comprehensive Plan. The Existing Generalized Land Use map on page 16 is a graphic representation of the data gathered in the land use survey.

Des Moines' geographical location has been and will continue to be an asset. It is most influential as a regional agricultural distribution center, state governmental center, and Midwest regional insurance center. Des Moines, the largest city in Iowa, is located midway between the Mississippi and Missouri Rivers, at the confluence of the Raccoon and Des Moines Rivers. This location, which is slightly southwest of the state geographical center, is the approximate geographical center of the Corn Belt.

The location of Des Moines, as a point of departure to the western lands, has retained its historical importance as a regional center serving an area of approximately 30,000 square miles. Des Moines is located 350 miles west of Chicago, 250 miles south of Minneapolis, 135 miles east of Omaha-Council Bluffs, and 350 miles northwest of St. Louis.

# TOPOGRAPHY AND LIMITING FEATURES



RAILROADS



AREAS SUBJECT  
TO FLOODING



BLUFFS AND  
SLOPES OVER 15 %

ELEVATION IN FEET

—850— CONTOUR LINE

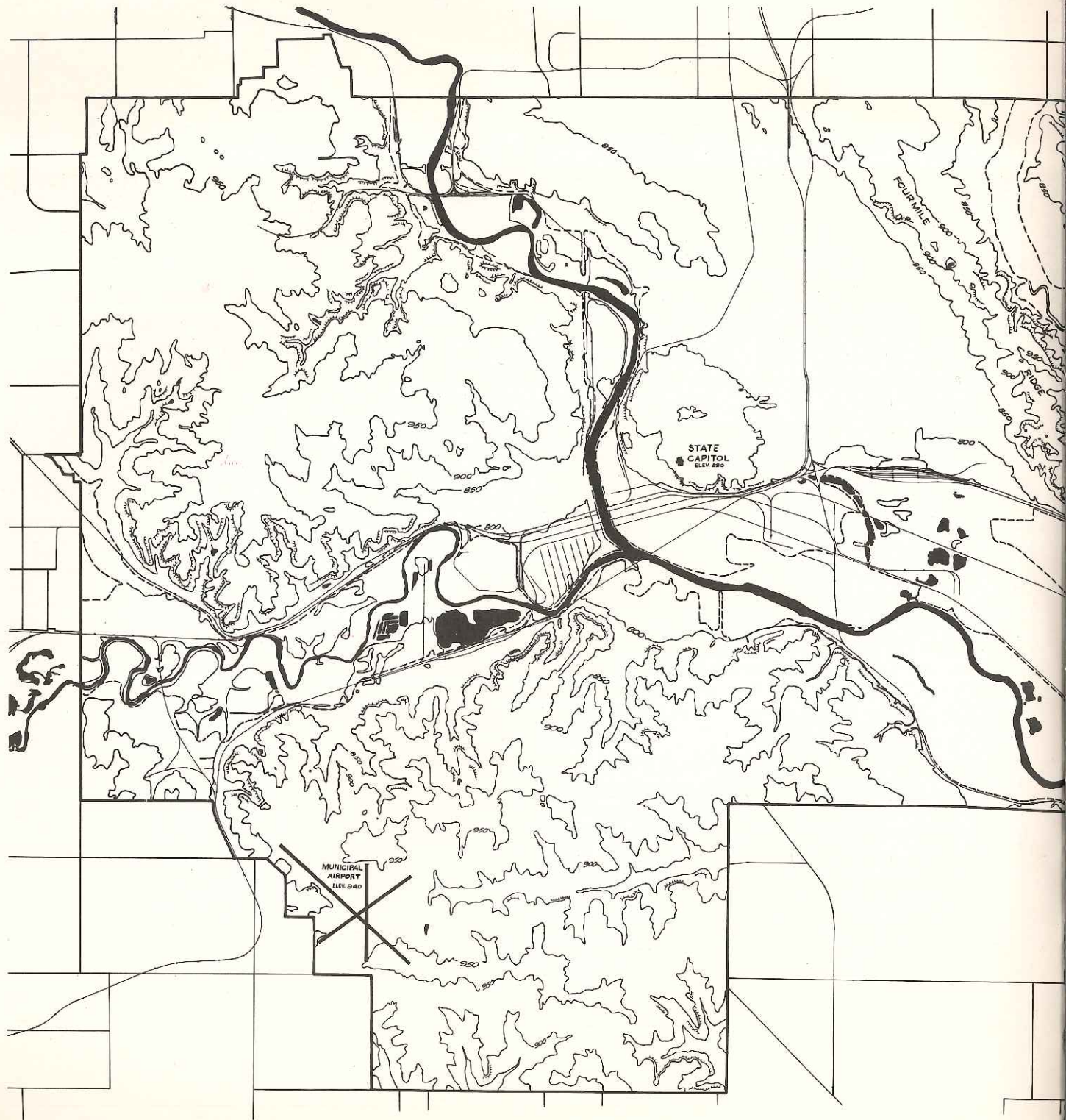
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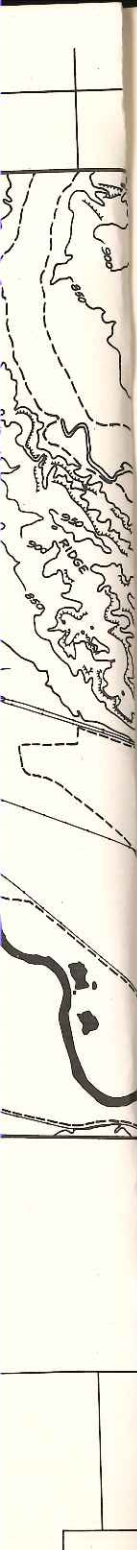


JANUARY, 1960

0 1 2 MILES

DES MOINES PLANNING COMMISSION





Des Moines is located on a glacial plateau approximately 900 feet above sea level, on gently sloping land rising from two rivers. The Des Moines River from the north and the Raccoon River from the west dissect the City into three parts. The bluffs and ravines, created by a glacial movement which passed over central Iowa, have created many natural barriers to growth and traffic movement. The less desirable rough land has been relegated to parks, cemeteries, and the State Fairgrounds, leaving the gently sloping uplands for other types of urban development.

Topography and subsurface structure were important in the development of the extractive coal and gravel industries. The uppermost layers of solid rock, a stratification known as the Pennsylvania System, formed a predominantly shale and limestone complex. Extensive coal mining of this system was one of the City's most important industries for fifty years. The vast quantities of sand, sandstone, gravel, and clay deposited by two later ice sheets in the river valleys led to the creation of new extractive industries. Areas of unusually rough topography held good quality shale for brick and tile manufacturing. Sandstone and shale were used for road construction and the manufacture of cement. The last glacial mass left most of the northern half of the Midwest covered by loess, a yellowish dust which settled over the glacial deposits of sand and gravel. Fine grained, free of rock formation, and several feet in thickness, loess is an excellent agricultural base for livestock feeding and grain production.

The gently sloping terrain hampered urban expansion slightly. Some of the residential areas were built on steep bluffs overlooking the two river valleys. In the late 1850's the site east of the Des Moines River was selected for the State Capitol, partially because of the plateau which was the highest point within the City.

Topography may have had some influence in the development of Des Moines' early industries. Railroads entering the City followed the gentle grades and natural corridors of the two river valleys; rail oriented industries located adjacent to these rail lines. More important factors determining the types and locations of industrial uses were a rapidly expanding trade area, the availability of water needed for manufacturing, and an expanding supply of labor.

Topography will become less important in the location of industry. Flood control measures, dams, and levees ease the threat of flooding to land which would otherwise be suitable for industrial development. Topography is an important factor with respect to grading, earth moving, and municipal utility connections. In other industrial areas, proximity to rail lines and proposed highway systems will take precedence over topographic considerations.

## HISTORY

The first pioneers arrived in Iowa after 1821 when the United States Government signed treaties with the Sac and Fox Indians to protect the Indian population and to prevent premature settlement by the whites. Fort Desmoines, established in 1843 by Captain James Allen of the First Dragoons, was situated on high ground adjacent to the junction of the Des Moines and Raccoon Rivers. Military housing was erected adjacent and perpendicular to the two rivers in the vicinity of the present Elm and Second Streets. Here the fort could effectively forestall the warlike Sioux from attacking the peaceful Sac and Fox tribes and prohibit white settlers from entering the Indian territories. This location was also chosen because of the availability of natural resources and the potential transportation capabilities of the Des Moines River.

Fort Desmoines grew rapidly, but not as an important military post. Trader-merchants dealt with the various Indian tribes and the immigrants passing through the City. Many families remained in the Des Moines valley, creating a trade area with an 80 mile radius having a total population of 7,500. By 1865 this trade area had grown to 25,000 persons within the four adjacent counties. As the trade area grew, the town's commercial area expanded to include more than 190 wholesale and retail outlets by 1866. Banking, finance, insurance, and wholesaling assumed dominant roles within the commercial pattern. By 1866 the railroad industry had all but replaced river transportation, principally because of the uncertainty of navigable waterways on the Des Moines River. Bulk raw materials, inexpensively shipped by water to manufacturing plants, became relatively expensive commodities when transferred to rail transportation, thus reducing the importance of the City as a manufacturing center.

As early as 1855, Fort Desmoines became an important governmental center, first as a United States District Land Office, then as the county seat of Polk County, and finally as the capital of the State of Iowa in October of 1856. At this time Fort Desmoines and East Des Moines became one incorporated entity--the City of Des Moines. Following the incorporation of the two communities, the City grew steadily as a regional trade center. By 1890 the business district had centralized its present location, and the population reached 20,000. This made Des Moines the largest city in the state--an honor it still holds.

The growth of Des Moines has been steady with population increasing an average of 13.6 per cent per decade for the past thirty years. Des Moines grew rapidly between 1900 and 1930 with the greatest population increase occurring between 1910 and 1920.

As shown in the table below, population growth in Polk County has been the reverse of that experienced by the City. Population in Polk County decreased from 1900 to 1930 because more employment opportunities and higher wages were available in the City. Since 1930 the rate of growth within Polk County has increased due to improved transportation, availability of municipal services, and decentralization of industry.

Since 1900 the City population has increased 236 per cent while the County increase has been 180 per cent. Since 1930 Polk County has experienced a population growth of 89 per cent, while the City's growth has been 47 per cent.<sup>a</sup> This indicates the present trend toward suburban living. Both the City and County figures indicate that local growth is occurring at approximately the same rate as that evidenced by other metropolitan areas within the state and at a more rapid rate than the average for the State of Iowa. The high degree of mechanization associated with farm production has reduced the agricultural employment requirements as well as the rural population.

Year	CITY OF DES MOINES			POLK COUNTY (excluding Des Moines)		
	Population	Increase	Per Cent Increase	Population	Increase	Per Cent Increase
1900	62,139	12,046	34.0	20,485	3,271	19.0
1910	86,368	24,299	39.0	24,070	3,585	17.2
1920	126,468	40,100	46.4	27,561	3,491	14.5
1930	142,559	16,091	12.7	30,278	2,717	9.8
1940	159,819	17,260	12.1	36,016	5,738	18.9
1950	177,965	18,146	11.3	48,045	12,029	33.4
1960	208,982	31,017	17.4 <sup>b</sup>	57,333	9,288	19.3

a) Annexations of 1950-1960 are included in the City figure only.

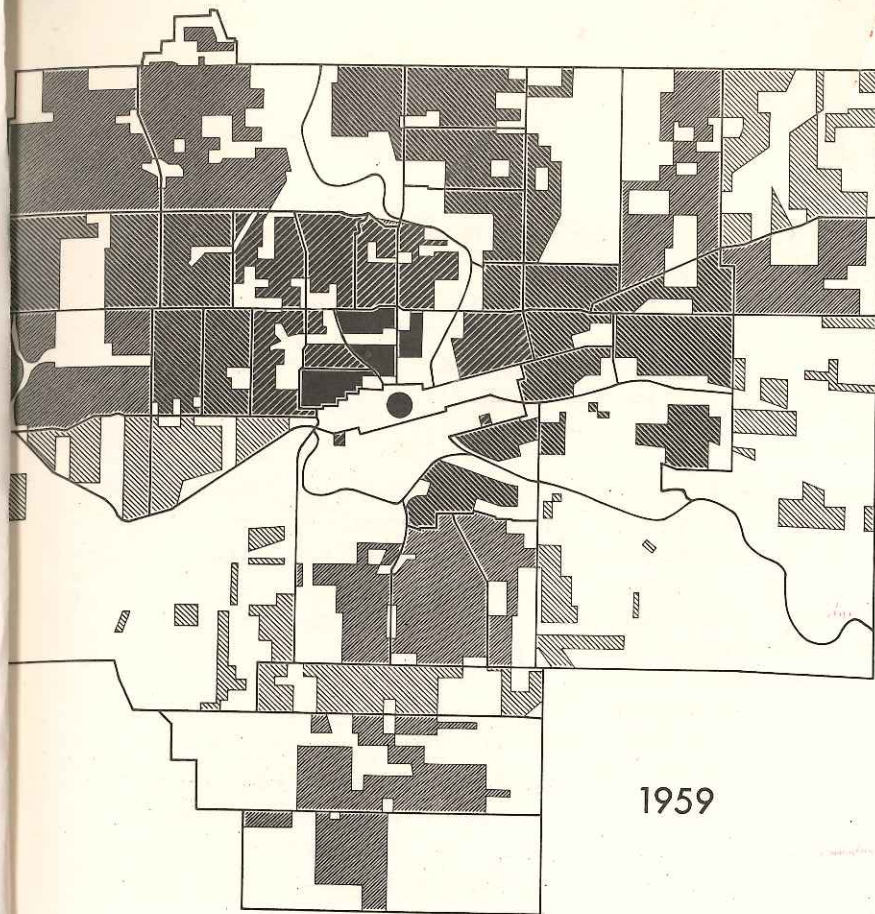
b) Includes annexation of Bloomfield Township, Janet's Woods, and Debra Heights, 1956-1960.

Polk County is expected to grow more rapidly than Des Moines, as characterized by the national trend of suburban growth. The City is expected to increase its population by 21 per cent in the next 20 years. The 1980 estimated population of 251,000 represents

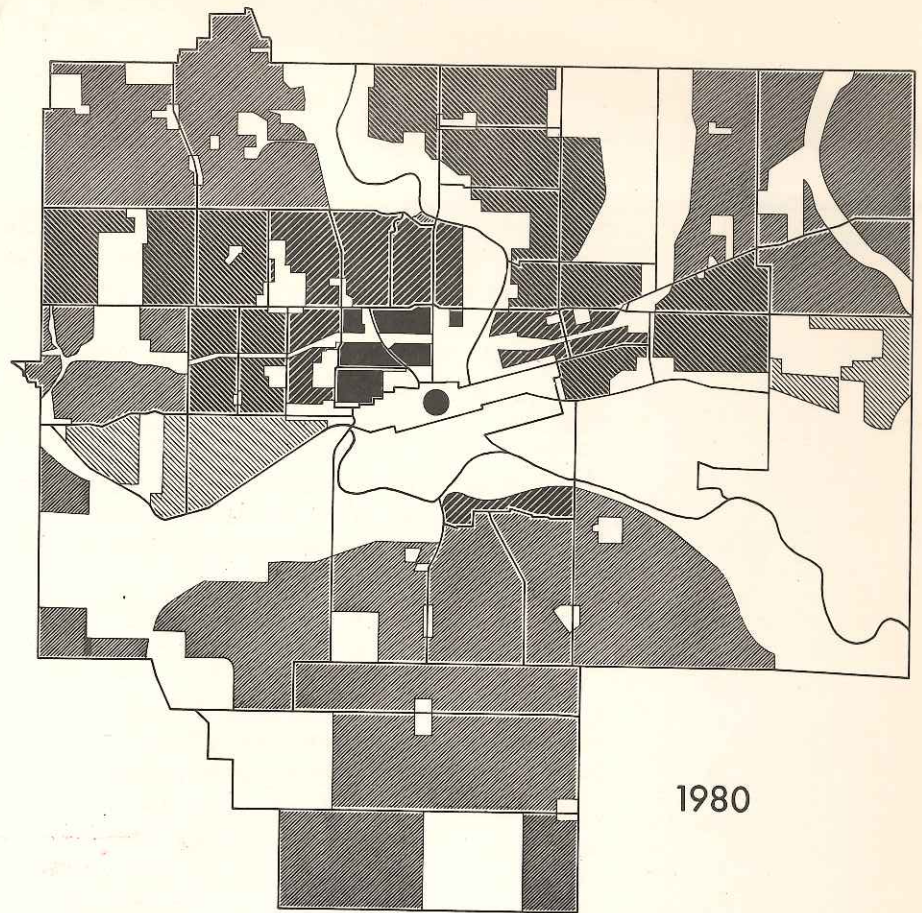
an increase of 42,000 persons. This estimate assumes an average retention of 67 per cent of the natural increase of the future population. Influx of a portion of the rural population and of persons from other states will be encouraged by an estimated employment increase of 21,700 jobs.

The population Density map on page 13 is expressed in persons per net residential acre in 1959 and for 1980. Although these density categories vary slightly from the low, medium, and high population density patterns shown in the Diagrammatic Land Use Plan on page 27, they follow the same general pattern of the higher densities being nearest the center of the City and the lower densities being near the periphery. The residential densities shown on this map illustrate the anticipated direction of expansion by 1980. Most obvious is the growth expected in the areas south of the rivers.

Revitalization of the residential areas adjacent to the central business district through urban renewal will help maintain the downtown commercial areas and lessen the pressure for providing mass parking areas for privately owned automobiles. Public transit can better serve the high density areas surrounding the downtown commercial district and public services can be economically provided. Medium range population density patterns should be encouraged to develop around the primary shopping areas.



1959



1980

# DENSITY

CENSUS TRACTS

PERSONS PER NET  
RESIDENTIAL ACRE

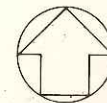
40 OR MORE

25 - 39

15 - 24

10 - 14

LESS THAN 10



FEBRUARY, 1962



DES MOINES CITY PLAN  
AND ZONING COMMISSION

## TRANSPORTATION

Des Moines is well served by railroad, highway, and air connections. At one time the Des Moines River served as the only large volume supply line for commerce and industry west of the Mississippi River. The Des Moines River was intermittently used by shallow draft steamboats until 1862 when navigability became undependable and overland routes reached the City. The uncertainty of a navigable waterway, by which raw materials could be brought in inexpensively, determined to a great degree the City's destiny as a regional wholesale trade and distribution center rather than one of heavy manufacturing.

Land grants available in 1856 for railroad construction prompted the Des Moines Valley Railroad to enter the City after the Civil War. The first transcontinental railroad put Des Moines on a route connecting Chicago and San Francisco. Extensive railroad construction in the twenty years following the Civil War connected Des Moines with much of Iowa. By 1885 fourteen separate railroads entered the City. Nine railroads serve Des Moines now, with only one giving first class passenger service.

The Des Moines Municipal Airport is located  $4\frac{1}{2}$  miles southwest of the downtown area. The northwest-southeast runway, constructed in 1947 and extended in 1952, is well oriented with respect to all types of aircraft. Its air coverage of 90 per cent represents almost total ability of operation regardless of wind direction. Air passengers enplaning at the Des Moines airport are expected to increase from 164,000 persons in 1960 to 263,000 persons in 1970. The volume of air cargo, excluding air mail, increased approximately fifty per cent for the period 1955 to 1960. Cargo volume is expected to increase by 1,440 per cent, to 3,500 tons, by 1970.

Under present operating conditions and runway facilities, additional air traffic anticipated by 1970 will create a level of activity well above practicable capacity for the single runway; thus a dual runway is proposed. When additional runway facilities are constructed, air-oriented industrial development will be desirable, and the increasing labor supply from rural areas can be trained for highly skilled labor.








Since the initiation of jet transportation, noise created by acceleration and deceleration has been a problem in the area surrounding the municipal airport. Land adjacent to the airport should be reserved for uses other than residential. Air-oriented industry and specialized commercial uses involving as few employees as possible should provide one solution to the noise nuisance factor.

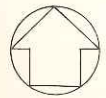
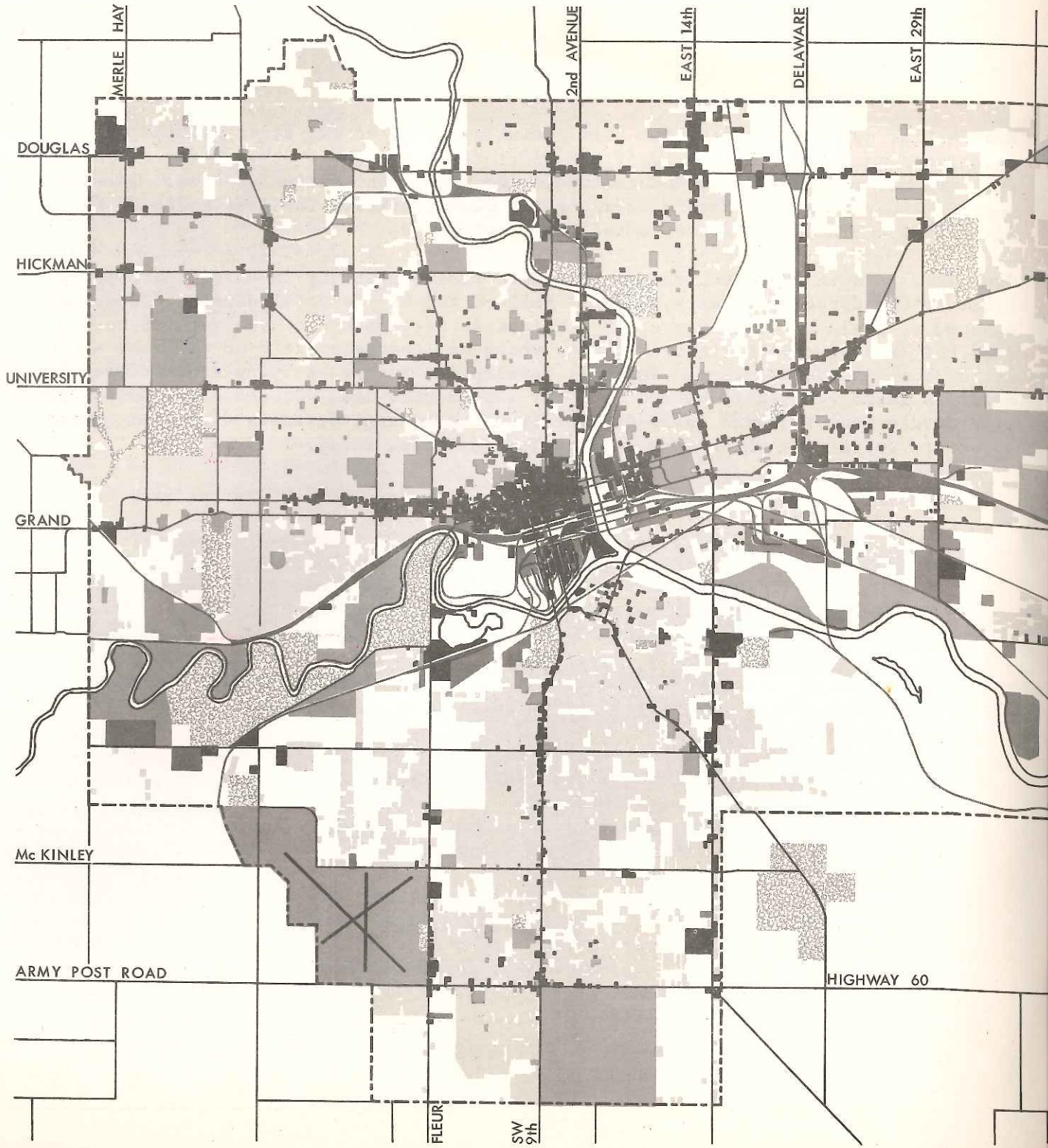
Residential development has been fairly contiguous. The two rivers divide the City into three sections, the northwest, the northeast, and the south. Residential development is more heavily concentrated in the northwest section of town. In recent years the northeast has been developing its vacant areas. The area south of the Des Moines and Raccoon Rivers is the least developed.

EXISTING  
RESIDENTIAL  
LAND USE

Oversized lots in some sections of town have caused problems in extending utility lines to the Corporate Limits. Nearly half of the City's total developed areas is devoted to residential land use. Des Moines is fortunate that she did not suffer from the excessive subdivision activity which was characteristic of the land speculation boom in the twenties. Instead, development in the outlying areas tended to occur as farms were split up and sold for residential use. Street car lines encouraged development in areas quite distant from the central business district. Areas of severe topography which were avoided remain vacant today.

# EXISTING GENERALIZED LAND USE

-  RESIDENTIAL
-  COMMERCIAL
-  INDUSTRIAL
-  PARKS
-  OTHER PUBLIC
-  RAILROADS
-  OPEN



JULY, 1959



DES MOINES PLANNING COMMISSION

EXISTING  
COMMERCIAL  
LAND USE

The analysis of present and future commercial land use needs includes the nature of shopping, mode of transportation, frequency of trips, time, and amount of money. The Existing Commercial Land Use map on page 18 illustrates the concentration of commercial uses at the core of the City and the lineal dispersion of other uses following major thoroughfares and concentrating at major street intersections. Des Moines is presently more than adequately supplied with land commercially used.

Commercial uses include business, retail, wholesaling, and warehousing activities. Commercial areas include regional, convenience, and downtown shopping areas which are competitive; their trade areas overlap and they provide similar services and products. Existing commercial areas are: (1) concentrated at the center of the City in the central business district (CBD), (2) scattered throughout the City, following residential development and encouraged by strip zoning along major thoroughfares, and (3) assembled at shopping centers in the outlying residential areas.

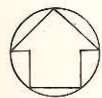
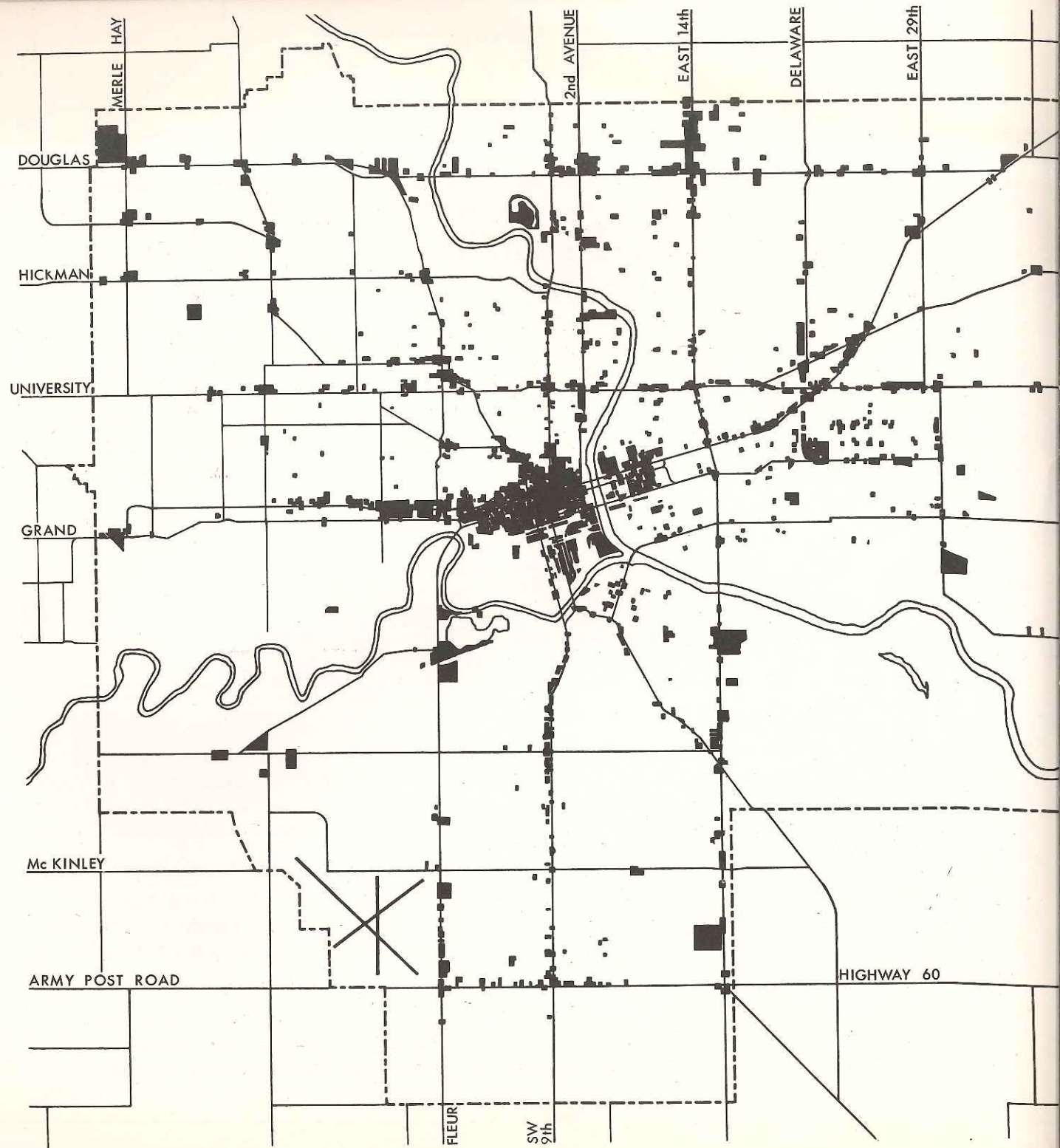
The share of retail business held by the CBD has been declining as outlying commercial centers have increased and provided more products and services formerly found in the CBD. However, the CBD still provides comparison shopping facilities for major items such as clothing, furniture, cars, and major appliances. The outlying centers cannot duplicate the large inventory of various items carried by the downtown stores. The CBD contains regional retail stores and offices which attract customers from all over Iowa. The Federal, State, County, and City government offices are centered in the CBD. Transportation routes and public transit routes focus at this core.

There has been a trend for commercial establishments to move away from the center of the City to areas where parking is available and where traffic congestion is less. Retail establishments have moved to outlying shopping centers, auto sales have moved to the peripheral highways, and insurance offices have moved west on Grand and Ingersoll Avenues.

Several of the major stores in the CBD have either relocated or have established branch stores at the Merle Hay Plaza and Park Fair Centers. These shopping centers are located in outlying areas on large tracts of land adjacent to major thoroughfares and have ample parking facilities.

Convenience or neighborhood centers provide daily necessities such as groceries, drugs, and some clothing, and offer shoe repair, cleaning, and laundry services. Familiar examples are the Beaverdale, Uptown, and Highland Park shopping areas.

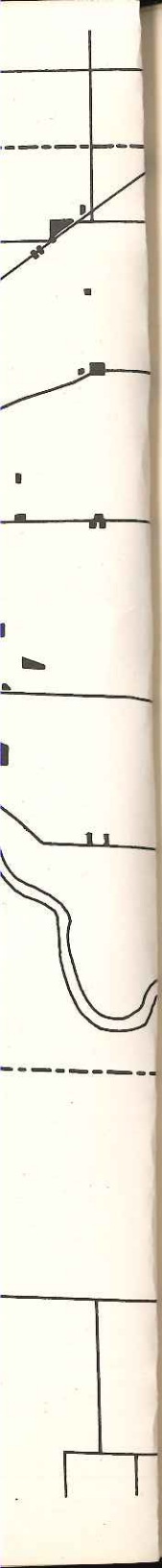
# EXISTING COMMERCIAL LAND USE



JULY, 1959

0 1 2 MILES

DES MOINES PLANNING COMMISSION



Rapidly growing auto-oriented commercial areas extend lineally along highways. Trailer, farm equipment, used car and truck, fruit and vegetable sales; motels and service stations; outdoor theaters and other drive-in services attract customers from a large trade area. But these services do not compete directly with other commercial areas within the City because of their nature. Highway strip commercial zones extending into otherwise undeveloped land can prevent adjacent land from being developed in an attractive manner.

Wholesale areas stock products manufactured within the City ready for distribution to various parts of the region or nation, and store products from other areas for distribution to local retail outlets. There are also warehouses and storage facilities for the retail stores. The wholesaling and warehousing function is primarily located immediately adjacent to the east and west central business districts, and along the north and east main lines of the Rock Island and Great Western Railroads.

EXISTING  
INDUSTRIAL  
LAND USE

Des Moines is a trade, service, industrial, government, and insurance center for the entire state. The original leading industries were service activities, manufacturing, retailing, and wholesaling. After the Civil War, manufacture of construction materials and insurance underwriting became important. Manufacturing has since concentrated on non-durable, rather than durable, goods.

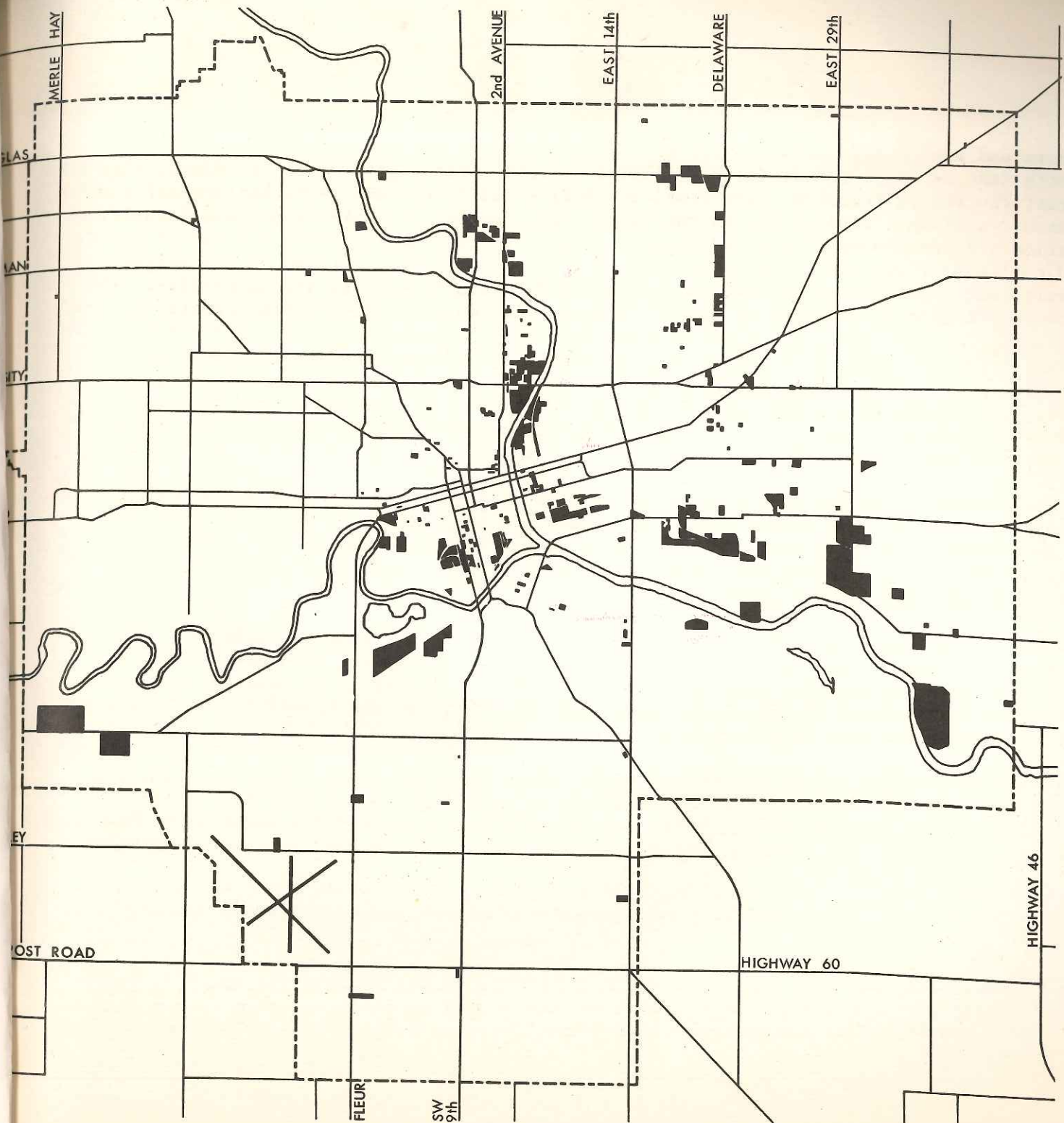
Industries may be classified as basic or service. Productive activity which brings new money into the community is basic. This is the key to a city's economic strength. Expansion in basic lines provides the stimulus for growth in service lines. The following types of industry in Des Moines are classified as basic: farm implement manufacture, rubber tire fabrication, animal processing, some printing, clothing manufacture, coal mining (now extinct), sand and gravel quarrying, insurance, and finance. Service industries common to all inhabited areas are food supply, retail, personal and automotive service, and entertainment.

Although Iowa is limited in raw materials and local resources, its soil ranks with the best in the world. Des Moines should encourage the manufacture of products which can be made from animal or plant products native to the Midwest. Extractive industries include sand and gravel quarries and extinct coal mines. River beds provide clay for the important clay product industries.

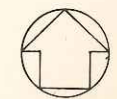
Industrial land uses include both light and heavy industries, storage yards, and utilities, but exclude transportation terminals and dumps. Industrial land uses within the City are scattered and, for the most part, unrelated. Because of an oversupply of land zoned for the purpose, the existing industries are scattered and poorly located, causing extensive need for municipal services.

Railroads throughout the City sever or border other land use areas. They constitute a rigid web that has been modified only slightly as industrial spurs have been closed or added. Existing industries follow the Des Moines River between Guthrie and Grand and the railroad lines that parallel Delaware Avenue and the Des Moines and Raccoon Rivers.

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# EXISTING INDUSTRIAL LAND USE



JULY, 1959



DES MOINES PLANNING COMMISSION

EXISTING  
PUBLIC AND  
SEMI-PUBLIC  
LAND USE

Public and semi-public uses include parks and recreation areas, riverfront development, cemeteries, schools, universities, hospitals, institutions, government buildings, airports, churches, libraries, fire stations, public utilities, and all other uses of a community nature. Because Des Moines is the seat of county, state, and federal administration a large amount of land is devoted to governmental uses. Areas devoted to public and semi-public use have been generous in area due to the spaciousness of Des Moines development. Des Moines is favored by two rivers which transverse its boundaries. The Water Works owns 1,360 acres of land within the City which is open to the public.

The Existing Vacant Land map on page 25 shows parcels of land two acres and over which have not been developed. With the exception of the land subject to flooding, this map gives a picture of the extent of development within the City. Over a third of the City, 24 square miles, is undeveloped. While some areas will remain undeveloped because of topography, others can be developed for commercial, industrial, residential, or recreational uses.

EXISTING  
VACANT  
LAND

Des Moines does have problems with the flood plains of the two rivers and several creeks which traverse the City. The topographic map on page 8 shows the extent of flooding in 1947 and 1954. Future development in the flood plains should not be permitted until flood control measures now under construction or in the planning stage have been completed and evaluated. At that time development might be considered in some areas which flood infrequently subject to carefully drawn regulations concerning type of construction and use and minimum flood elevation. Until plans for the Red Rock Dam southeast of the City and the Saylorville Dam north of the City are finalized and the dams are constructed, it should be assumed that areas subject to flooding in the past will be subject to flooding in the future. Both dams will not eliminate areas now flooded, but will make more predictable the extent of the flood plain. The Red Rock Dam will inundate permanently great areas of land presently farmed southeast of the City. It will provide extensive recreation areas for the inhabitants of southeast Iowa. Ideally all of the land bordering the rivers and creeks should be in public ownership, for park and recreation areas, and as a control against private development that could be severely affected by floods of even rare frequency.

Des Moines is favored by gently rolling land suitable for urban development. Because of the relative availability of land for development within the Corporate Limits, it is not necessary nor economically feasible to utilize marginal land. Because of the difficulty and expense of construction, land with ravines and stream valleys should be reserved by the City for parks and flood control buffers. Acquisition costs could vary considerably from areas of total residential saturation to areas where only limited development has occurred.

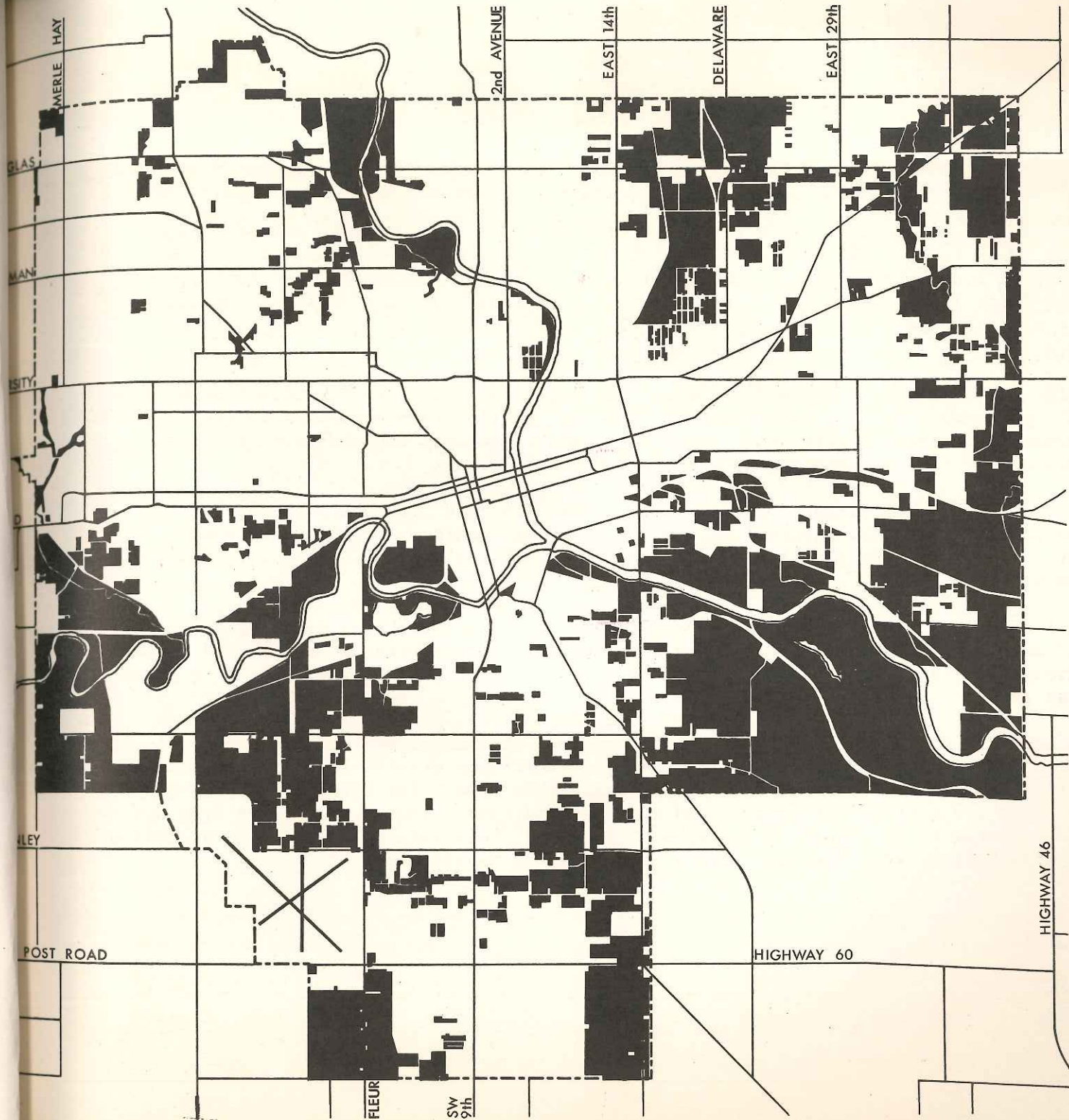
Ownership of land has an influencing factor on the development of vacant land parcels. Land owned by railroads may be available for lease only, and may be restricted to certain uses.

Industrial sites are best placed upon land which has less than five per cent slope. Commercial use is also desirable on flat land. As Federal Housing Administration loan requirements and City street grading requirements limit development to twelve per cent

slope, land considered buildable will have a maximum twelve per cent slope. Residences on large tracts of land can be attractively and advantageously placed on rolling topography. Such dwellings can be spaced to allow separate water supply and sewage disposal facilities. The owners should be expected to provide their own transportation to distant commercial areas.

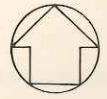
The availability and extension of water, sewer, gas, and electricity is a consideration in the development of vacant land. Topography plays an important role in carrying sewer lines to the sewage disposal plant. Pumping stations must be used in conjunction with gravity sewers where proper grades cannot be maintained. The amount of water available to an area is dependent upon the size of the mains and storage facilities servicing this area. The provision of electricity is usually not a problem.

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# EXISTING VACANT LAND

■ PARCELS TWO  
ACRES AND OVER NOT  
USED FOR ANY URBAN  
USE, JULY, 1959



JULY, 1959



DES MOINES PLANNING COMMISSION

DIAGRAMMATIC  
LAND USE  
1980

The Diagrammatic Land Use Plan on page 27 shows proposed general land uses for 1980. This location map shows relationships between the various land uses and recommends a pattern for future uses.

The proposed residential areas are shown with densities expressed in persons per net acre: 0-20 for low, 21-40 for medium, and 41 and over for high. These population densities roughly correspond with dwelling unit type (single-family, two-family, and multi-family) and dwelling unit density. It is assumed that each occupied dwelling unit will average 3.4 persons by 1980. The higher residential densities will continue to be close to the center of the City.

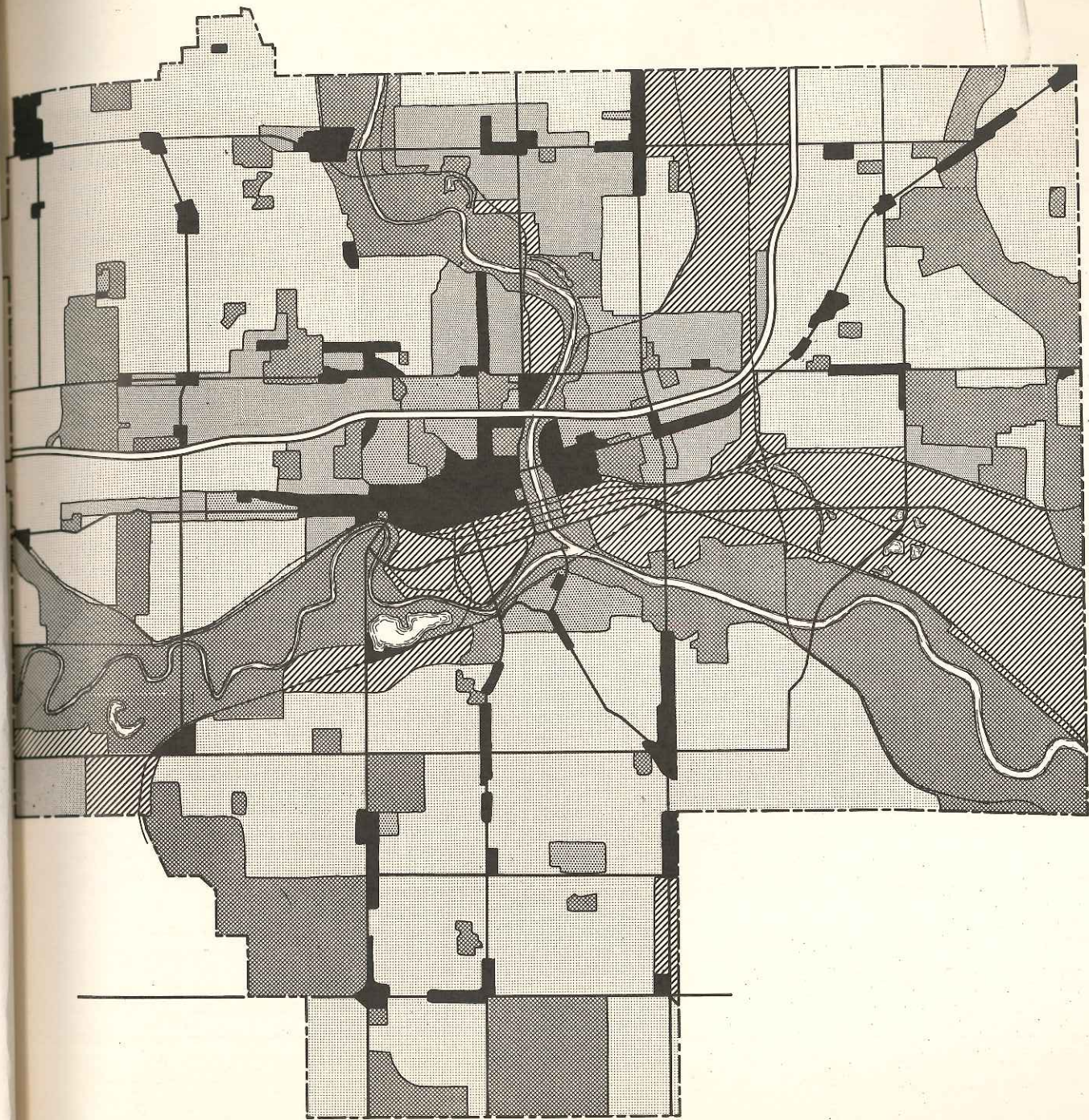
Public and semi-public areas include parks, cemeteries, schools, riverfront development, government areas, public grounds, and semi-public areas exceeding twenty acres. Neighborhood parks, playgrounds, playfields, and elementary schools have not been shown unless they are contiguous with larger public areas.

The commercial designation includes retail establishments, offices, highway-serving commercial businesses, wholesaling, and neighborhood centers strategically spaced to serve the residential population. In general, commercial areas less than five acres have not been shown.

The industrial areas are contiguous and follow existing industrial development and land zoned for industrial use. These areas parallel the rivers and are served by the various railroads entering the City. The proposed industrial highway will strengthen these areas.

The Land Use Comparison table on page 28 compares the amount of land used presently with that needed by 1980. The 1980 needs are based upon present land use/population ratios in Des Moines and other cities of comparable size. The total area shown for each land use exceeds the recommended area because land vacant twenty years from now will continue to be dispersed throughout the City. This vacant land permits selection and will help to keep down the cost of land and its development.

# DIAGRAMMATIC LAND USE PLAN 1980



## RESIDENTIAL



LOW DENSITY



MEDIUM DENSITY



HIGH DENSITY



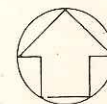
COMMERCIAL



INDUSTRIAL



PUBLIC &  
SEMI - PUBLIC



APRIL, 1962

0

1

MILES

DES MOINES CITY PLAN  
AND ZONING COMMISSION

LAND USE COMPARISON

Land Uses	Comparison of Land Use Acres/1000 Population						
	1959 Net Acres	1980 Land Use Plan Net Acres	1980 Land Use Requirement Net Acres	7 Cities <sup>a</sup> Land Use	1959 Des Moines Land Use	1980 Land Use Plan	1980 Land Use Requirements
Low Density	12,380	15,278	14,589	28.6	59.2	61.2	57.9
Medium Density	419	2,171	490	2.9	2.0	4.79	1.95
High Density	<u>698</u>	<u>876</u>	<u>820</u>	<u>1.8</u>	<u>3.3</u>	<u>7.35</u>	<u>3.27</u>
Total Residential	13,497	18,325	15,899	33.3	64.5	73.3	63.1
Commercial	1,205	1,472	1,205	2.3	6.06	8.0	4.72
Industrial & Railroad	1,719	4,553	3,680	9.0	8.88	14.5	8.49
Public & Semi-Public	5,859	6,060	5,880	13.6	24.58	27.2	23.3
Streets	<u>5,094</u>	<u>8,095</u>	<u>6,962</u>	<u>22.1</u>	<u>26.0</u>	<u>29.5</u>	<u>27.7</u>
Total Developed	27,374	38,505	33,626	80.3	130.0	152.5	127.33
Agricultural & Vacant	12,938	1,881	6,760				
Water	<u>800</u>	<u>800</u>	<u>800</u>				
TOTAL	41,112	41,186	41,186				

a Average of 7 cities 100,000 to 250,000 population from "Land Uses in American Cities", Harland Bartholomew, 1955

Residential areas shown in the Diagrammatic Land Use Plan on page 27 have low, medium, and high population densities. Low density includes 0 to 20 persons per net residential acre, medium 21 to 40, and high more than 40. These density figures assume an average 3.4 persons in each occupied housing unit, and that the housing unit density will follow existing zoning requirements. Twenty per cent of the gross acreage is allowed for streets. Net acreage represents 80 per cent of the gross acreage. Included in the residential figures are the areas required for commercial and institutional land uses common to neighborhood development.

By 1980 an additional 2,343 net acres will be needed for residential development. This increase represents 13,718 housing units, of which 10,500 will be single-family homes. Low density housing will require 2,209 net acres, medium density 71 net acres, and high density 122 net acres.

As shown in the table below, vacant land available within the City for residential development totals 4,833 gross acres. Of these, 4,476 gross acres are considered desirable for residential development. Land subject to flooding or exceeding twelve per cent grade is considered impractical for residential subdivision development. Twelve per cent is considered the maximum grade by both the Federal Housing Administration and by the City for paving purposes. Individual lot development in these areas is not expected to greatly affect the 1980 residential land use requirements.

VACANT LAND AVAILABLE FOR RESIDENTIAL DEVELOPMENT

	Total gross acres	Buildable gross acres	Unbuildable <sup>d</sup> gross acres	Per Cent of total buildable land
Northwest <sup>a</sup>	492	292	200	7
Northeast <sup>b</sup>	849	722	127	16
South <sup>c</sup>	3,492	3,462	30	77
Total City	4,833	4,476	347	100

a North of Raccoon River and west of Des Moines River

b North of Raccoon River and east of Des Moines River

c South of Raccoon River and Des Moines River

d 12 per cent grade or more

The majority of vacant land suitable for residential development occurs in areas adjacent to the Corporate Limits or south of the rivers in the recently annexed area known as Bloomfield Township. Except for limited conversions of older single-family homes into multiple-family apartments, eighty per cent of the total anticipated increase of 42,000 persons will reside in these areas.

Drake University will need additional housing. The area surrounding Drake has shown signs of changing from predominantly single-family to two-family and multiple-family homes. The size and characteristics of these homes are such that a medium density is proposed.

The area south of Grand Avenue, west of Fleur Drive, north of Water Works Park, and east of Greenwood-Ashworth Park contains 92 acres of residentially desirable vacant land. To retain the residential quality developed in this area and to make optimum use of the rolling topography, lots 10 to 20,000 square feet should continue to be developed. This low density will accommodate approximately 900 additional persons.

Existing residential areas north and east of the Des Moines River have been filling in their vacant areas at a rate less than that of the northwest section. Areas north of University and east of East 14th Street are expected to retain single-family dwellings and low densities. A medium density area is proposed west of the northern industrial district, bounded on the southeast by the freeway and on the west by East 14th Street. The existing housing pattern, the proximity of industrial employment, and the proposed primary thoroughfare system serving the area are conducive to concentrated residential development.

Within the area bounded by University Avenue on the north, East 30th Street on the west, Chicago, Rock Island and Pacific Railroad on the south, and the Corporate Limits on the east, are 161 acres of vacant land, of which 92 acres are suitable for residential development.

The area south of the rivers will absorb the greatest population increase by 1980 as it contains 77 per cent of the total vacant land suitable for residential development within the City. The proposed medium and high density areas shown on the Diagrammatic Land Use Plan comprise 15 per cent of the total residential vacant land south of the rivers. Proposed high population areas are the existing Wakonda Village and the area lying immediately south of the confluence of the Des Moines and Raccoon Rivers. Because

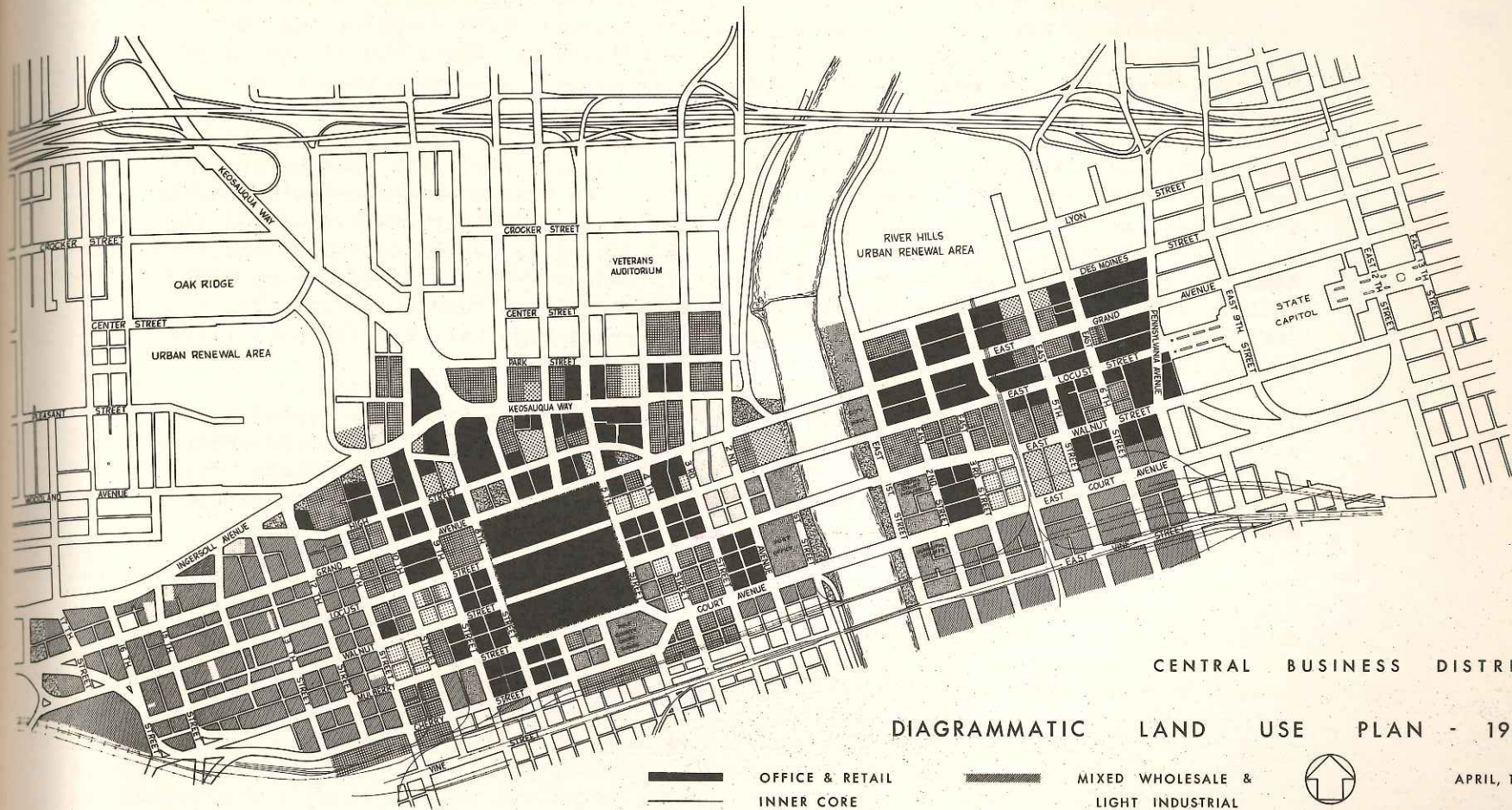
PROPOSED  
COMMERCIAL  
LAND USE

Des Moines should have a strong central business district (CBD) as a focus for the entire metropolitan area. CBD activities which can be best engaged on foot should be developed with the greatest degree of concentration possible within the core area, consistent with the efficiency and compatibility of retail and office functions. This core area should also be well serviced by public transportation.

The Des Moines River splits the CBD into two competing areas. The original settlement west of the river now claims the major share of the CBD's function. The east side is presently almost completely divorced from the west side. The CBD has shifted, relative to the whole urbanized area, away from its original central position. By its very nature, the CBD is centrally located and will remain so. The physical center may shift when future expansion or rebuilding occurs on one side or another. As there is more area within Des Moines' CBD than in the CBDs of other cities of comparable size, no physical expansion of the area is contemplated.










The map of the CBD on page 33 incorporates the recommendations of two plans. The plan prepared by Harland Bartholomew and Associates for the Committee of 100 of the Greater Des Moines Chamber of Commerce is shown for the area west of the Des Moines River. For the area east of the river, the plan recommended to serve the future needs of the East Des Moines Civic Development Association is shown. A core of the major retail and office establishments on the west side will be formed by closing the interior streets of nine blocks to all traffic except for busses, taxis, and emergency vehicles. Proposed changes will add to the over-all appearance, beauty, function and convenience of the downtown area. The traffic circulation pattern will be changed to circumvent this core. Major street improvements include the 8th and 9th Street viaducts and the Ingersoll Avenue and High Street extensions. It is presently impractical to increase the width of the streets. Although many of the older buildings in both areas have been demolished to provide more parking, traffic capacities have not increased, with the result that the CBD is now supersaturated with traffic during rush periods.

Existing commercial uses removed by urban renewal, the freeway, and street widenings can be located near the commercial centers to be retained. The Diagrammatic Land Use Plan on page 27 reflects existing commercial development as well as existing patterns of retail trade areas. As Des Moines is well served by its retail and commercial centers, the existing commercial areas and the areas recently zoned for commercial use should adequately serve the City's need for the next twenty years. As the areas south of the rivers are developed, commercial centers to serve these areas will be developed.



CENTRAL BUSINESS DISTRICT

DIAGRAMMATIC LAND USE PLAN - 1980

- |   |                 |   |                                    |
|---|-----------------|---|------------------------------------|
|  | OFFICE & RETAIL |  | MIXED WHOLESALE & LIGHT INDUSTRIAL |
|  | INNER CORE      |  | PUBLIC                             |
|  | PARKING         |  | SEMI-PUBLIC                        |
|  | HOTELS          |  | PARK                               |
|  | RESIDENTIAL     |   |                                    |

APRIL, 1980

0 400 800 1200 FEET

DES MOINES CITY PLAN AND ZONING COMMISSION

Existing commercial areas cannot be ignored because of the permanence of commercial development and the relatively high price of commercial land. Existing neighborhood centers should be expanded to accommodate the increased need for additional off-street parking and shops. The past decade has seen the familiar corner grocery and drug stores replaced by the super market. Some super markets have even been forced out of business by other nearby super markets.

The dispersion of existing commercial uses illustrates clearly the obvious misuse and waste of land. Future commercial areas should be placed in proper relationship to one another. The Diagrammatic Land Use Plan denotes general areas designed to serve the surrounding population. Concentrated zoning is needed to remedy the problems caused by excessive present spot and strip zoning. Concentrated zoning will greatly assist the creation of sites suitable for safe and functional shopping centers. Commercial establishments have tended to group together, causing some individual establishments to die.

The Diagrammatic Land Use Plan shows the location of shopping centers intended to serve the residential population. Because the auto will continue to be the primary source of transportation, these centers are to be located on major arterials. The two regional centers intended to attract customers from all over Iowa are the CBD and Merle Hay Plaza.

Additional industry is needed to strengthen and broaden Des Moines' economic base which has been dependent upon retail trade, government, and insurance. The estimated 1980 predominate sources of employment will be trade, manufacturing, self-employment, service, miscellaneous non-manufacturing, and government. The other major employment groups are insurance, transportation and public utilities, construction, finance and real estate, and agriculture. Increasing farm mechanization will provide Des Moines with a good labor supply of high school graduates from the surrounding rural areas.

Planning for industry involves locating and defining land that is not only vacant and zoned for industrial use, but which is located in uninterrupted parcels large enough and of sufficient quality to sustain the new, one-story, large area plants. Industrial plants are changing from loft buildings on small sites to one-story factories on landscaped lots with room for parking and expansion. These sites should not conflict with surrounding land uses.

The over-all plan for industrial land minimizes the dissection of suitable large sites for small area uses. The plan locates the transportation facilities that are the life lines of industry. It serves as a guide to the grouping of manufacturing functions so that they are more economically served by transportation and utilities, and do not break up other consistent use areas such as residential areas or commercial development.

Factors of prime importance in the location of new industry are availability of land, sewer facilities, highway accessibility, rail service, and airport access. Also of importance are the tax rates, water facilities, location with respect to expressways, and proximity to the center of the city.

Large industrial districts adjacent to railroad classification yards offer tenants the advantages of switching service. Concentration of freight traffic is an inducement for railroads to construct spur lines into the districts. Although still strongly related to railroads, industry is becoming increasingly dependent on major highways, especially the Interstate Highway system, for major freight transportation and employee commuting. Industries are becoming increasingly prevalent on the fringes of the urban areas. Availability of a public water supply determines the location of the district and type of industrial use. Topography is not necessarily a controlling element in the development of a planned district. Tracts suitable for industrial growth by reason of location often can be economically adapted by site preparation in spite of heavy grading requirements.

Proposed industrial areas follow existing rail facilities and existing industrial establishments. Industrial areas have been selected on applicability to industrial use, the

effect industry would have on adjacent land uses, and the extent and degree of transportation and utility services required. Proposed industrial areas include both existing industry with land designated for future expansion and development, and land intended for new industrial development. Some areas which undoubtedly will remain in industrial use have not been shown either because of their relatively small size or because they have not been slated for major industrial development.

The amount of industrial land provided in the Diagrammatic Land Use Plan includes sufficient additional amounts of industrial land for choice of sites, new trends, parking, landscaping, setbacks, one-story operation, and other technological advances. Des Moines can offer many advantages to industry. Large flat sites close to the center of town are serviced by good rail and highway connections, utilities, and water.

Public and semi-public areas shown in the Diagrammatic Land Use Plan include all open public areas, government buildings, schools, parks, cemeteries, and riverfront development. Schools and parks are discussed in the Preliminary 1980 Community Facilities Plan. Playgrounds will be developed in conjunction with the schools. The majority of new parks, schools and other public areas will have to be provided in the area south of the two rivers where the greatest population increase is expected. Public areas for the northwest section of town, which is almost fully developed at the present time, are sufficient to serve the population which is expected to remain approximately the same. Schools located on small sites should have their playground facilities expanded. The northeast section of town will need more public areas to accommodate increased development. Four Mile Creek should be developed as a major source of beauty and recreation.

Land proposed for riverfront development has been approved by the River-front Improvement Commission. Acquisition of this land should not be too expensive as much of the land is subject to flooding. Other public areas financed by tax funds include libraries, fire stations, and cemeteries. Branch libraries to serve each section of town have been proposed. Additional fire stations have also been proposed. Some additional cemetery land will be needed. Additional semi-public areas will be needed by institutions, churches, and other private concerns which are public in nature.

PROPOSED  
PUBLIC AND  
SEMI-PUBLIC  
LAND USE

## EFFECTUATION OF THE PLAN

The Comprehensive Plan for Des Moines provides a flexible guide for future development. Methods of control are essential in order to achieve an orderly pattern of growth, to stabilize property values, to promote aesthetic development, and to preserve historic elements. The zoning ordinance, subdivision regulations, urban renewal, and public improvements program will be some of the tools used to effectuate the Comprehensive Plan.

Zoning enabling legislation authorizes the City to regulate urban development for the promotion of the health, safety, and general welfare of the City. Zoning should protect the desirable characteristics of the community, guide future urban development, conserve and stabilize property values, and encourage the development of sound environmental characteristics throughout the community.

A zoning ordinance has long-term effects on a city. Des Moines' first Zoning Ordinance, adopted as part of the 1926 Comprehensive Plan, has guided the development which has resulted in the City's current land use pattern. The 1926 Zoning Ordinance encouraged over-zoning for industry and commerce. Extensive strip commercial areas have produced traffic congestion, minimal parking facilities, and incompatible land uses. To stabilize property values, to develop permanent community facilities, and to preserve the community's historical identity, it is necessary to propose patterns which will reflect recognized valid established use patterns.

Subdivision regulations are used to discourage premature and scattered residential development which would require costly extension of municipal services. The adoption of subdivision regulations in 1931 gave Des Moines control of residential subdivision development within its boundaries and one mile beyond the Corporate Limits in unincorporated areas. This one mile extraterritorial control enables the City to see that streets entering the City are aligned with and of similar design to the City's streets, that lot sizes are comparable with those of adjacent existing residential areas, and that the public health, safety, and welfare are maintained for the development of sound residential neighborhoods.

Each year the City revises its six-year Public Improvements Program which gives an over-all view of the major capital expenditures of the City and the amount of money available for public improvements within the next six years. Funds for the immediate year are allocated in the Council approved budget. Estimated costs for all projects considered within the program are listed and each project is rated on a priority basis.

The Des Moines Independent Community School District has funds available for the acquisition of school property. It has been the policy to acquire land as much as possible in advance of local development to keep the total land costs down.

Historic examples of various residential architectural styles should be preserved for future generations. Preservation through public purchase is undesirable and economically impractical. Public encouragement through proper zoning control could provide support for maintaining the environmental characteristics of the area. Tax relief for individual properties could be a useful tool toward the preservation of property which is of extreme value to the general public.

River Hills and Oak Ridge were selected as urban renewal projects by the City of Des Moines because of their location, terrain, and existing housing conditions. The proposed primary land use in each project is multiple family residences, with commerce and light industry as supplementary uses. Both projects have been coordinated with the over-all plans for the City.

The River Hills Project provides for clearance and redevelopment. Of the 222 acres, 109 acres will be used for residential and commercial purposes, and 35 acres will be used for parks. The remaining acreage will be used for streets and one elementary school. All land within this project must be sold five years after date of initiation. Restrictions, other than local building and zoning ones, are enforceable for 40 years.

The Oak Ridge Project differs from River Hills in that it is a combination of clearance and rehabilitation. It is classified as a general neighborhood renewal plan. Areas designated for rehabilitation will retain their present use but will be renovated to conform with the plan. From the 535 acres in the Oak Ridge area, five projects have been created for urban development. Each of the five projects will be completed in four years with a new project starting every two years. Ten years will be required to complete the total project. Within the total area there will be two new elementary schools and 27 acres of land devoted to parks.

The Leetown Court Project is a relocation site for the displaced families of the River Hills area. Leetown Court, entirely financed by public funds, is being developed by private enterprise under contract with the City. There are 34 acres of land for a proposed development of 200 family units.