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Black Population Distribution and Racial Change in Major American Cities: A Modified Sector Model of Black Neighborhood Growth

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BLACK POPULATION DISTRIBUTION AND RACIAL CHANGE IN MAJOR AMERICAN CITIES: A MODIFIED SECTOR MODEL OF BLACK NEIGHBORHOOD GROWTH

BY

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FOREWORD

FOLLOWING IN THE FOOTSTEPS OF HOYT: THE DECLINE OF CHICAGO SCHOOL METHODS

Five full decades have passed since the dominance of the Chicago School, that group of sociologists at the University of Chicago that held center stage in the field during the 1920's. Those researchers investigated an incredible range of social phenomena in the Chicago area during that period. One of the hallmarks of the Chicago sociologists was a concern with the spatial distribution of the subjects of their studies. This entailed the drawing of numerous maps. Some of them went even further and proposed simple spatial models to illustrate patterns and processes. The most celebrated of these was Ernest Burgess' concentric zone model. Homer Hoyt's sector model and the Chauncey D. Harris-Edward L. Ullman multiple-nuclei model followed within the next twenty years.

Unfortunately, the work of the Chicago school came under considerable, well grounded criticism within a vew few years of being published. The theoretical assumptions of the Chicagoans were largely discredited by such writers as Milla Alinan, and the general application of spatial models was brought into question by new empirical work. Hoyt's sector hypothesis was actually something of a rebuttal to the Burgess zonal model. Maurice Davie's study of New Haven was even more of a direct attack on Burgess.

Some efforts to treat the spatial aspects of sociology have con-

tinued, but with a caution and sophistication lacking in the earlier efforts. Amos Hawley was the most prominent of the so-called neoecologists, while Shevky and Bell introduced social area analysis. Walter Firey tried to explain certain types of uneconomical land use in valuable areas in terms of sociocultural ecology. The most recent development in the field is factorial ecology, in which Brian J. L. Berry, John D. Kasarda and others have used computers to map their data.

Even though some investigation in this field continues today, the unhappy fate of the work of the original Chicago school cannot have failed to limit interest in spatial models. It has been a very small part of the great amount of sociological research that has come out in the last several decades.

Unfortunately, it is possible to be blinded to the potential value of an idea or a model because it has been associated with a school of thought that is now considered passe. Fairly clear-cut trends may be ignored because their recognition would involve thinking in terms of model originated by authors long discredited.

This writer has been collecting census racial block data on maps for about ten years. He had long noted some tendencies of black neighborhood growth common to many cities, but for a long time did not draw specific conclusions about them. Three years ago, in a conversation about his thesis with a number of his current dissertation committee, the writer remarked about the tendency of black neighborhoods to grow outward within sectors. The professor replied if this could be documented, it might be of some interest, as there was apparently no published work on the subject. This work, which would probably never have come about had that discussion not taken place, is a test of a theoretical model using Hoyt's

sector hypothesis with a number of modifications inspired by both the heirs and the critics of the Chicago school.

VITA

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INTRODUCTION

The history of the black population of the United States in the twentieth century has been one of revolutionary change in terms of residence. A predominantly rural, southern population has become an overwhelmingly urban, national population in the space of half a century.

During World War I European immigration was cut off and southern blacks migrated to the nation's industrial cities in great numbers to fill the waiting jobs. This was the first of several major waves of black migration from the South that have helped bring about the great change.

The mere listing of the dimensions of this transformation suggests that it is one of the most significant events of a very dramatic era in the life of the United States. Nearly 90 per cent of all blacks lived in the South in 1900; the figure was not much above 50 per cent in 1970. The black population was overwhelmingly rural in 1900. Now it is overwhelmingly urban, almost totally urban in the North and over one-half urban in the South. The growth of the metropolitan, and especially of the central city, black population has been even more rapid than the general trend toward an urban, national black population. As late as 1910, no city had even 100,000 blacks; there were 25 such cities in 1970. Two of them, New York and Chicago, had more than 1,000,000 blacks in 1970. Scores of other cities had substantial, if smaller, black communities. Nearly 400 American cities had 5,000 or more black residents in 1970. Dozens of cities, including Washington, D.C., and Atlanta, had black majorities.

The incredible shifts in the distribution of the black population during this century have not been limited to the change in regional distribution and the movement to the cities. The distribution of black residents within the cities had changed significantly since 1900 as well. Osofsky (1963), Spear (1967) and Katzman (1973) have described the relatively loose patterns of segregation that existed in New York, Chicago and Detroit, respectively, around the turn of the century. Small black population clusters were interspersed among working-class whites. Although black residence was restricted to limited areas of each city, there were no extensive homogeneous black neighborhoods. Taeuber and Taeuber (1966:19) note that in some southern cities the pattern of "alley dwellings" was evident--blacks lived in small houses along the alleys behind the larger homes of their white employers. In the places where there were totally black neighborhoods, these were usually not very large.

The great black urban movement during the past six decades has completely changed these early housing patterns. Most urban blacks now live in large, overwhelmingly black neighborhoods that expand, block-by-block, into adjacent white areas. These huge, monolithic ghettos may contain hundreds of thousands of residents and cover dozens of square miles. This pattern of large black communities expanding by a process of residential succession is now a truly national phenomenon with some southern cities exhibiting it as clearly as Chicago and Milwaukee.

The above discussions of population redistribution and changing housing patterns would be merely interesting, if they were not associated directly or indirectly with a number of major social problems. The concentration of large numbers of members of a poor and highly visible minority in central cities, the expansion of their over-crowded ghettos

into adjacent white areas, and the efforts of whites to keep their neighborhoods racially exclusive have led to crime, occasional severe interracial clashes and a number of large riots within the black areas.

Spear (1967) documented the white intimidation and bombings in Chicago that were meant to keep the expanding black population out of white South Side neighborhoods, but actually culminated in the bloody 1919 race riot. Osofsky (1963) chronicled the degradation and problems that beset the "ideal" neighborhood of Harlem, when serious crowding set in during the 1920's. Frustrations born of those conditions were underlying causes of the 1935 and 1943 Harlem riots. Interracial riots occurred during World War II as they had during the previous war. The worst of these left 34 dead in Detroit in 1943.

The ghettos continued to grow during the 1940's, 1950's and 1960's. During this period Morton Grodzins (1958) observed that many of the larger central cities were rapidly becoming heavily black and increasingly poor. This early storm warning and Grodzins' prescriptions for halting racial polarization were not given the attention they deserved. The nation was finally made aware of the gravity of the situation in 1964. The Harlem riot of that year was the first of many major outbreaks during the next half-dozen years. These ghetto riots took well over 200 lives and caused tens of millions of dollars worth of damage. The one feature that was conspicuously absent was large scale interracial fighting.

The ghetto riots of the 1960's focused national attention on the problems of the black urban poor. However, an awareness of such conditions and the taking of adequate steps to rectify them are two separate matters. While a few black families have been able to enter white areas away from the ghettos since 1960 and while there has been some overall improvement

in the quality of black American life, the black poor population continues to grow in the central cities. While the frequency of disorders declined greatly after 1970, there have been some disquieting exceptions.

In July 1975 there was a brief but extremely violent outbreak on the Northwest Side of Detroit. Stores were looted, and one white motorist was dragged from his car and beaten to death. Only quick action by the black mayor and community leaders prevented a repeat of the massive 1967 disorder.

In July 1977 there was a prolonged general electrical power failure in New York City. This led to nearly 24 hours of massive looting in the black and Latin areas of Manhattan, Brooklyn and the Bronx. Although there were only five deaths, thousands were arrested, damage may have exceeded that of the 1967 Detroit riot, and New York may have experienced the most intense single day of disorder in urban American history.

During the fall of 1977, there was intensified racial tension on the South Side of Chicago in the white neighborhoods near the racial frontier of Western Avenue. No large scale riot occurred, but the inauguration of a voluntary racial busing plan for Southwest Side schools and the demonstrations by white parents kept the police busy.

The 1975 Detroit riot and the New York blackout upheaval are significant for two reasons. First, they serve as reminders that the decline in ghetto violence after 1970 is not necessarily permanent. Second, and just as unsettling, is the fact that many of the hardhit areas of Detroit, Flatbush and the Bronx's Grand Concourse were definitely not lower class areas only a few years before the riots. It is the expansion of poor minority areas that is the most important issue facing our great cities, both with respect to the well-being of the low-income residents and in terms of maintaining public order.

One further recent indication that all is not well in major American cities is the aftermath of the surprise two-foot snowfall in Baltimore in February 1979. Large-scale looting erupted in the major ghettos to the east and west of downtown Baltimore, when it became apparent that the police had been immobilized along with the rest of the motorized traffic in the city. While the damage and injuries were not of the same magnitude as the toll of the 1977 New York blackout riot, this was clearly a major disturbance. It also reaffirmed the warning implicit in the earlier upheaval of the potential for violence among the growing central city impoverished populations. Most neighborhoods in metropolitan areas take freak blizzards and power failures in their stride; the sudden removal of social restraints from low income ghettos for even a few hours can result in widespread rioting and looting.

The Chicago case underlines the fact that the expansion of major black areas by means of complete racial turnover in adjacent white neighborhoods may be detrimental to all parties involved, with the exception of demagogues and panic-peddling real estate agents. The continuing threat of violence on the South Side of Chicago is only the most visible aspect of such transitions. The disruptions in the lives of individual black and white families in racially changing neighborhoods can never be fully measured.

The exodus of many community institutions from a changing neighborhood leaves a vacuum which contributes to the already heavy burdens with which the area has to cope. In the larger analysis, the central cities and the nation as a whole are faced with the fulfillment of Grodzins' prediction: many large cities will be predominantly black, impoverished centers of mostly white, affluent metropolitan areas in the near future.

Knowledge of the regularities found in the growth of major black communities is important in regard to many of the policy questions related to housing segregation and racial transition.

CHAPTER I

URBAN SPATIAL MODELS

Concentric Zones

The earliest of the major urban spatial models and the first one that will be discussed here is the concentric zone hypothesis. In 1925 Ernest W. Burgess presented this model in The City (Park and Burgess, 1970). Burgess based this model on regularities in the land use pattern of the city of Chicago. His own words describe this five-ring concentric zone model most succinctly:

> This chart represents an ideal construction of the tendencies of any town or city to expand radially from its central business district--on the map "The Loop" (I). Encircling the downtown area there is normally an area in transition, which is being invaded by business and light manufacture (II). A third area (III) is inhabited by the workers in industries who have escaped from the area of deterioration (II) but who desire to live within easy access of their work. Beyond this zone is the 'residential area' (IV) of high-class apartment buildings or of exclusive 'restricted' districts of single family dwellings. Still farther, out beyond the city limits is the commuters' zone--suburban areas, or satellite cities--within a thirty- to sixty-minute ride of the central business district (Park and Burgess, 1970: 50).

The concentric zone model was not merely a static pattern, however. Burgess stated that each zone expanded by absorbing part of the next outer ring in the pattern. Burgess (1970:50) referred to this process as succession. Although this first classical model of city land use distribution and growth fairly well described Chicago, the city that had inspired it, the concentric zone hypothesis was to undergo considerable criticism during the 1930's.

The first major criticism of Burgess, although not codified as a specific competing hypothesis to the concentric zone model until 1939, was the work of Homer Hoyt. Hoyt analyzed vast amounts of data on urban land use in his work as an economist, real estate broker and principal Federal Housing Administration economist. The work that led to the publishing of One Hundred Years of Land Values in Chicago (1933) and The Structure and Growth of Residential Neighborhoods in American Cities (1939) convinced Hoyt that a sector model provided the correct description of certain urban patterns and growth processes. The most prominent of these patterns was the location and expansion of upper income neighborhoods. Hoyt's model will be examined in more detail later in this chapter.

The most specific, point-by-point refutation of the concentric zone model was Maurice R. Davie's 1938 article, "The Pattern of Urban Growth" (Theodorson, 1961:77-92). The article was a detailed examination of various characteristics of the city of New Haven and other localities to see if their distribution conformed to the Burgess model. The result was a very emphatic finding that the concentric model was not generally applicable. One of the most telling criticisms was Davie's notation of the inadequacy of the model in describing the distribution of juvenile delinquency in Chicago. Instead of decreasing with distance from the Loop, the rate of delinquency decreased with respect to greater distance from the industrial areas. Since much of Chicago's industry was located at some distance from Zone II, the concentration of juvenile crime around it destroyed the perfect gradient pattern expected under the Burgess hypothesis (Theodorson, 1961: 79).

Most of Davie's article consists of a description and analysis of the character of the residential areas of New Haven. After considering ethnicity,

income and various indicators of social problems, Davie (1961:89) concluded that there was no concentric zonal distribution of any of the attributes that he studied. The within-zone variations were greater than the differences between zones. In the concluding part of the study, Davie (1961:92) mentioned his analysis of zoning maps of twenty North American cities. His conclusion was a complete contradiction of the Burgess hypothesis: "There is no universal pattern, not even an 'ideal' type" (1961:92).

Not all of those who examined the Burgess model gave it totally unfavorable reviews. In Urban Society: An Ecological Approach (1971), Amos Hawley pointed out its shortcomings, but also defended some aspects. He noted the Davie criticism that while Burgess assumed that growth occurred uniformly in all directions, the reality was star-shaped expansion along transportation lines (Hawley, 1971:100). However, Hawley found that the model did have some value:

> As a formulation of growth the Burgess hypothesis was on sounder ground than as a generalized description of the spatial pattern of the urban center, though it is in the latter respect that the hypothesis has been most generally accepted. (1971: 100-101)

Nevertheless, Hawley (1971:101) felt that the changes in distribution of the phenomena under study were too gradual to resolve into successive, distinct concentric zones. He felt that such gradients could only be converted into concentric rings by arbitrary methods.

This, then, is the first model to be considered as the description of black neighborhood growth in the cities in this study. If the Burgess hypothesis is accurate in describing ghetto expansion, then a city should exhibit a process of black neighborhood expansion in all directions from a solidly-black Zone II. As the black population grew, the ghetto would envelop Zone III from within, along its entire inner border. The process

would be repeated when each new zone was reached.

Multiple Nuclei

The next spatial model to be examined, the Harris and Ullman multiple nuclei hypothesis, is actually the most recent of the three under consideration. Chauncey D. Harris and Edward L. Ullman unveiled it in an article entitled "The Nature of Cities" (The Annals of the American Academy of Political and Social Science, 1945). While the first part of the article dealt with the relationships of cities as central places to their surroundings, the remainder dealt with their internal structure. The authors' view on regularities in urban structure was made clear early in the article:

> Each city is unique in detail but resembles others in function and pattern. What is learned about one helps in studying another. Location types and internal structure are repeated so often that broad and suggestive generalizations are valid, especially if limited to cities of similar size, function and regional setting. (Harris and Ullman, 1945:7)

The article reviewed the Burgess model (1945:12-13) and the Hoyt sector hypothesis (1945:13-14), admitting the validity of both (1945:16). The importance of this article is that Harris and Ullman introduced their own spatial model, the multiple nuclei hypothesis (1945:14-16).

The Harris and Ullman model differs from the other two, as its name implies, in that the establishment and spread of various land uses may take place without reference to the location of the central business district, while the Burgess and Hoyt models assume downtown dominance. Harris and Ullman (1945:14-15) mentioned four factors that they believed led to urban growth around more than one nucleus in the city. The first was the need for special locations by certain uses. For example, a factory would need to be close to railroad tracks or other transportation facilities. The second factor was the tendency of certain businesses to cluster in a limited area

to simplify dealings between firms or for the convenience of customers. The third factor was the mutual repulsion of such different uses as luxury housing and offensive, smelly, heavy industry. The last factor was the inability of some land uses to pay the cost of establishing themselves in certain areas of a city.

The somewhat greater complexity of this model than those of Burgess and Hoyt led the authors to make the following statements:

> The number of nuclei which result from historical development and the operation of localization forces varies greatly from city to city. The larger the city, the more numerous and specialized are the nuclei. (Harris and Ullman, 1945:15)

The authors (1945:15-16) listed six general types of nuclei that were associated with major American cities. These were the downtown area, the wholesale district, the heavy industry area, the residential area, the suburb and a miscellaneous category of various minor nuclei.

The multiple nuclei model can be considered an advance over the two earlier ones, because of both its greater complexity and the less ambitious claims of its authors. The use of multiple nuclei rather than merely the central business district satisfies much of Davie's 1938 criticism of the Burgess model and certainly creates a better picture of reality. The admission by Harris and Ullman (1945) that the concentric zone and sector models also have some descriptive value further shows that they were quite aware of the phenomenon under study.

To evaluate the adequacy of the multiple nuclei model as a description of the location and growth of black neighborhoods, one should keep in mind Harris and Ullman's discussion of residential areas:

> In general, high class districts are likely to be on well-drained, high land and away from nuisances such as noise, odors, smoke, and railroad lines. Low class districts are likely to arise near factories and railroad districts wherever located in

> the city. Because of the obsolescence of structures, the old inner margins of residential districts are fertile fields for invasion by groups unable to pay high rents. Residential neighborhoods have some measure of cohesiveness. Extreme cases are the ethnically segregated groups, which cluster together although including members in many economic groups; Harlem is an example. (1945:16)

If black population distribution followed this model, one might expect a complete ringing of downtown by low income black housing, like the Burgess model, as well as large black settlements adjacent to major industrial areas. It could also imply the construction of housing specifically for black families on vacant land, if the area had some particular attraction to that segment of a city's population.

Sectors

The last major spatial model to be considered for this study is Hoyt's sector hypothesis. As stated in earlier portions of this chapter, this model followed and was to some extent a criticism of the Burgess hypothesis but preceded the multiple nuclei model. Hoyt's sector model is touched on in three works which he published over a span of nearly four decades. The first was his University of Chicago Ph.D. thesis, One Hundred Years of Land Values in Chicago (1933). The second, the fruit of his work as principal economist for the Federal Housing Administration, was The Structure and Growth of Residential Neighborhoods in American Cities (1939). The last and largest was his grand compendium of articles, According to Hoyt: 53 Years of Articles: 1916-1969 (1970).

Hoyt's model, to describe it in the simplest terms, states that certain land uses tend to expand outward within sectors, rather than around an entire ring, as stated in the Burgess concentric zone model. The Hoyt model can be seen as one involving "slices of pie" as opposed to a succession of rings around the central business district.

The inspiration for the sector model can be seen in Hoyt's Ph.D. thesis (1933), although there is little explicit reference in that work to sectors as such. The growth of the upper income areas of Chicago that Hoyt (1933:302-310) traced over many decades was largely outward in a manner suggesting sectors. The same was true of the low income areas (1933:311). More significant for the present study, Hoyt (1933:312-314) found that the concentrations of minority groups such as white ethnics and blacks expanded outward in the same manner.

By 1939, Hoyt had resolved the tendencies he had found in writing One Hundred Years of Land Values in Chicago (1933) into the sector model. This was presented in The Structure and Growth of Residential Neighborhoods in American Cities (1939). Hoyt's position in the F.H.A. gave him access to data on scores of cities, which he used to create an impressive picture of housing patterns and trends in American cities since the mid-nineteenth century.

Hoyt (1939) opened his discussion of spatial types with a fairly kind reference to the Burgess model, which he would help to discredit: "The above concentric circle theory of land uses offers an ideal pattern that helps to bring order out of chaos and is not to be unduly criticized because the pattern is never exactly realized in any actual city" (Hoyt, 1939:17). After a brief review of various land uses in many cities that suggested considerable variation from the ideal Burgess pattern, Hoyt stated: "Thus the concentric circle theory of land use, while convenient as a starting hypothesis for a pattern of land uses, is subject to modification" (Hoyt, 1939:23).

Hoyt proceeded in subsequent chapters to spell out the modifications that he felt were necessary to describe American cities accurately. He

described the wedge or sector shape of the upper income areas of cities as diverse as Indianapolis, Dallas and Worcester (Hoyt, 1939:74). Commenting on maps of rental areas of nineteen cities, Hoyt stated: "Examination of those rental area maps shows wide variation in size, shape and location of the rental areas in the different cities. Nevertheless, certain tendencies of city structure are clearly portrayed" (Hoyt, 1939:75). The main tendencies that he found were that high rent areas generally took the form of sectors with an upward trend in rent with increasing distance from the center of the city, while low rent areas formed sectors in which there was usually no discernible rise in rent with increasing distance from downtown (Hoyt, 1939:75-76). Based on his analysis of data from 142 cities, Hoyt (193:76) decided that sectors clearly described rental areas much better than the Burgess model did. He reiterated this view years later in <u>According to Hoyt</u> (1970:291-292).

There are two statements of particular interest in Hoyt's 1939 work. The first is Hoyt's characterization of the direction of growth of upper income housing zones: "High rent or high grade residential neighborhoods must almost necessarily move outward toward the periphery of the city. The wealthy seldom reverse their steps and move backward into the obsolete houses they are giving up" (Hoyt, 1939:116). The other comment is contained in Chapter V (1939:58-71), which is an excellent, early discussion of the spatial distribution of blacks in American cities. "A more significant problem facing American cities, however, is the segregation of sectors populated by different races" (Hoyt, 1939:62). These two statements jointly describe what black neighborhood growth should be like, if the sector model is an accurate description. The black neigborhoods of a city should expand <u>outward</u>, and the growth should be <u>within</u> the sector drawn from the

center of the city and enclosing each ghetto.

The major criticism of the sector model, Harris and Ullman's multiple nuclei hypothesis, has already been discussed in the preceding section of this chapter. While their introduction of multiple nuclei was more damaging to the Burgess hypothesis, it should be remembered that Hoyt also relied principally on the central business district as the one point of reference, even though his analysis of the activity around that center was more astute than Burgess'. One criticism that this writer, and probably many others before him, could add is that Hoyt, as well as the authors of the other two models, did not offer a quantitative measure of the conformity of the growth of a particular land use to his model. The three models under consideration for use in this study were formulated on the basis of judgments the authors made after looking at the distribution of data on maps. There is a danger in such a methodology of making arbitrary judgments in favor of a model that the data do not really justify. There is a need for an objective, quantitative measure for the analysis of the conformity of black neighborhood growth to any of these models.

Criticisms and Further Developments

Theodorson (Studies in Human Ecology, 1961) identified three distinct offshoots of the Chicago School that arose because of the strong criticisms of the 1930's and 1940's. They are the neo-orthodox school, sociocultural ecology and social area analysis. The first offered minor theoretical differences with the Chicago School, the second had an entirely different theoretical emphasis, and the third presented a new methodology. The largest part of this discussion will be devoted to sociocultural ecology because of its importance as a modification of the model that will be presented in Chapter III and tested on the cities of this study.

The neo-ecologists are important largely because of their partial break with the discredited Chicago School view of a distinction between the social and subsocial aspects of human interaction. Amos H. Hawley fully accepted the 1938 Alihan criticisms of the Chicago ecologists and said that there was no way such a distinction could be made. James A. Quinn, on the other hand, still kept the distinction, but stated that the subsocial or biotic level of interaction could not be divorced from the cultural context (Theodorson, 1961:129). There has been a considerable amount of work published by members of the neo-ecological school during the past three decades, but little of it is of immediate concern in this study because of a lack of new spatial models suitable for application to black neighborhood growth within a city. While there has been much work in the metropolitan context, the Hawley (1971) review of the Burgess model quoted in the first part of this chapter indicates the dearth of new, simple spatial models that could be tested as descriptions of the process of black neighborhood growth.

The sociocultural ecologists proposed that cultural rather than economic factors were most important in determining land use in some cases (Theodorson, 161:132). The most prominent, as well as the most important in the context of the present study, was Walter Firey. His article "Sentiment and Symbolism as Ecological Variables" (American Sociological Review, April 1945:140-148) discussed various aspects of land use in Boston that were contrary to more traditional ecological views on the most economical use of land. Firey (1945:143) noted the continued upper class character of the Beacon Hill area when it might have been expected to deteriorate. Its symbolic attachments to the past kept wealthier Bostonians in Beacon Hill and inspired them to lobby against commercial or large apartment building encroachments. Firey (1945:145) also showed that Boston Common and old colonial cemeteries still

occupied downtown land that had immense economic value because of their symbolic importance. The state capital and old churches survived for the same reason (1945:146).

The last part of Firey's article is of the greatest importance with respect to this study. He showed how the crowded North End was seen as an attractive area to live in by its Italian residents, especially those born in Italy (1945:147-148).

The significance of the last-mentioned example of sociocultural ecology to the present study is that such an area in the path of expected black movements might remain mostly white and thus distort the predicted growth. Therefore, whatever spatial model is adopted should be modified by the knowledge that white ethnic areas or other residential areas of great symbolic importance to their occupants might not become predominantly black, even though they lie in the path of black growth according to the model. Since such distortions could have a great effect in some cases, it would be advisable to identify them in every city analyzed to test the conformity of its black neighborhood growth to any given model.

The third major ecological school to develop during the 1940's was social area analysis. Eshref Shevky and Wendell Bell, the principal developers of this methodology, described it a few years later in a book (Social Area Analysis, 1955). This type of analysis involves the ranking of census tracts according to the level of three measures thought to be important in such research. The first measure is called social rank, and a census tract would be rated on it by an index utilizing occupation, education and other data. The second measure is called urbanization, and its index involves family function and structure. The last is called segregation, and it involves the level of foreign-born and black population within a given census tract (1955:17-18).

The authors summarized the value of social area analysis by saying that among other things it is simple, theoretically based and precise (Shevky and Bell, 1955:59). Theodorson (1961:132) also reported that it allowed areas of interest in a city to be pinpointed easily by researchers.

A recent refinement of the principle of social area analysis is called factorial ecology. Contemporary Urban Ecology (Berry and Kasarda, 1977) describes the application of factor analysis to spatial distributions of characteristics. This methodology shows promise of considerable future value in analyzing both American and foreign cities.

The concentric zone, sector and multiple nuclei models will be examined in Chapter III to find which of the three hypotheses most accurately describes the process of black neighborhood expansion in American cities. In Chapter II, three competing hypotheses that attempt to explain the reasons for black residential segregation will be presented. The most suitable theory of housing segregation and the most appropriate spatial model will be utilized in Chapter III to formulate a theoretical model. This model will then be tested on a sample of cities with large black populations.

CHAPTER II

THEORIES OF HOUSING SEGREGATION

Residential segregation by race and black neighborhood expansion are facts of life in contemporary urban America. It may very well be that one of the spatial models discussed in the previous chapter fits the process quite accurately. While that would greatly simplify the problem of description, the reasons for a specific type of black neighborhood growth would still have to be addressed. If a sociological model is going to be constructed, it must proceed from a theoretical base. It must be a theoretically informed model in order to be profitably applied to America's varied cities or to have any predictive value.

Three major hypotheses have been proposed to explain the phenomenon of black residential segregation in the twentieth century. The natural area hypothesis was developed by the Chicago School during the 1920's. It suggests that identifiable groups such as racial minorities tend to gravitate to specific neighborhoods. The clustering of similar people in the same area is a natural result of the process of competition and the attraction of like elements. A second hypothesis states that blacks are segregated mainly because their income is significantly lower than that of the general population. The third major hypothesis states that segregation is the result of discrimination against blacks. The most valid of these three hypotheses will be used as the theoretical base for the spatial model to be tested in this study.

Natural Areas

The first of the three competing theoretical views to be considered for use in this study is the natural area hypothesis. According to this model, identifiable groups tend to gather together in an area through a natural process of accumulation. The concept of willful discriminatory action keeping groups out of certain neighborhoods or confining them to other neighborhoods is not alluded to in this hypothesis.

The natural area hypothesis was quite ably explained in a 1926 article written by Harvey W. Zorbaugh ("The Natural Areas of the City" in Theodorson, 1961:45-49). He described how the geography of a city determined the boundaries of natural areas:

> Railroad and industrial belts, parks and boulevard systems, rivers and rises of land acting as barriers to movements of populations tend to fix the boundaries of these natural areas, while their centers are usually intersections of two or more business streets. (1961: 46)

The process of population distribution that created natural areas involved competition for land (1961:47). At the same time, Zorbaugh acknowledged a more conscious aspect of the process:

> From the mobile competing stream of the city's population each natural area of the city tends to collect the particular individuals predestined to it. These individuals in turn, give to the area a peculiar character. And as a result of this segregation, the natural areas of the city tend to become distinct cultural areas as well--a 'black belt' or a Harlem, or a Little Italy, a Chinatown. . . . Natural areas and natural cultural groups tend to coincide. (1961:47)

The natural area hypothesis came under attack during the mid-1940's in a pair of articles by Paul Hatt ("Spatial Patterns in a Polyethnic Area," American Sociological Review, 1945:352-356, "The Concept of Natual Area," American Sociological Review 1946). Hatt (1945:354-355) found a relatively chaotic distribution of six mincrities in the central area of Seattle. The

black and Japanese populations of the district were not concentrated in their own single respective niches, as the natural area hypothesis would suggest. Many of the blocks in the study area had quite heterogeneous populations. There were further indications that the term "natural area" did not fit the district under study. There were several gradations of mean rent in central Seattle, and some of the ethnic groups were distributed across these belts. Generally, rent increased with distance from downtown (Theodorson, 1961:106). The fact that the Japanese, who had a low rate of social disorganization, lived principally in the part of the study area characterized by high rates of social problems further refuted the value of the natural area hypothesis in describing central Seattle (Theodorson, 1961:107).

Hatt came to the conclusion that "the natural areas of 'classical' ecology do not exist in this district" (Theodorson, 1961:107). He accused the Chicago School of "the reification of concepts so abundant in Human Ecology" (Theodorson, 1961:107). Hatt concluded by advocating a more limited and flexible use of the concept: "No obeisance need be made to the natural areas of a city, but only those natural areas logically determined by the data and the problem need be constructed, used and defended" (Theodorson, 1961:108).

The confusion caused by the use of the term "natural area" has been noted again by Gerald D. Suttles (1972:7-8). Among other misleading nuances, he felt that the concept implied some type of solidarity that was less evident in modern neighborhoods. In Chapter III, dealing with the choice of a theoretical base for this study, the present writer will add additional criticism of the natural areas hypothesis with respect to the residential segregation of blacks.

Economic Segregation

The second hypothesis of black residential segregation to be considered for this study is economic segregation. While the natural areas hypothesis implies that ghettos just "happen," the economic segregation hypothesis states that they are the result of the greater poverty of the black population. This would mean that the concentration of blacks in certain neighborhoods and their virtual absence from others is a result of the inability of black families to afford housing away from the ghettos.

A major advocate of this view was Charles S. Johnson, who elaborated on it in his book, Patterns of Negro Segregation (1943). Johnson (1943: 10) noted that black areas were mainly near the center of a city in zones of deteriorated housing. Johnson (1943:10) did not embrace the economic segregation model to the exclusion of all other views; he mentioned that overt racial discrimination played a role as well.

The black housing pattern in cities, especially in the North, at the time that Johnson wrote, would tend to support his view to some extent. The principal black areas in Chicago, Newark, Detroit, Boston and other cities were near the centers of their respective cities and certainly contained more than their share of deteriorated housing. In the theory section of Chapter III, this writer will go into the criticisms of this hypothesis found in the literature, as well as the changes in black housing patterns that cast further doubt on the validity of the economic segregation argument.

Racial Discrimination

The preceding discussions of the natural areas and economic segregation hypotheses show that there is relatively little literature on those two models of segregation. This is definitely not true in the case of the last model to be considered, the discrimination hypothesis. There have been numerous books

and journal articles during the past three decades that deal with the issue of black residential segregation in the context of the discrimination hypothesis.

An early work that sets the tone for this review is Gunnar Myrdal's book, An American Dilemma: The Negro Problem and Modern Democracy (1944). Although not dealing with housing discrimination in detail, this book brought out the monumental contradiction between America's democratic ideals and the widespread anti-black discrimination that existed. Another book from the same period, already cited in connection with economic segregation, should be mentioned again in this literature review on the discrimination hypothesis. Charles S. Johnson (1943:10) noted that discrimination was at least partly the cause of the confinement of blacks to ghettos in the less affluent zones of cities.

One of the earliest books specifically on discrimination in housing was Charles Abrams' Forbidden Neighbors (1955). It documented the widespread discrimination, intimidation and frequent violence used to restrict minorities, and especially blacks, to segregated housing. The book demonstrated that these abuses took place in most parts of the United States. Two years later, Otis and Beverly Duncan (1957) published their case study of the process of racial change in Chicago. This book was notable for its attempt to resolve the process of racial and residential succession into a series of stages. In the same year, Eleanor P. Wolf (1957:7-20) published the first of several articles dealing with the process of change and its perception by the white residents of the affected areas.

In 1958 a small monograph was published that was, in this writer's view, one of the major milestones in the study of racial residential

segregation. The Metropolitan Area as a Racial Problem (Grodzins, 1958) not only added a new concept to the study of racial change but also contained a strikingly accurate prediction about the future racial composition of American cities. Grodzins (1958:6) introduced the idea of the "tipping point" to the literature on racial change. This was an hypothesized percentage of black occupancy in a neighborhood above which whites move out rapidly. Of greater long term importance was the prediction that many central cities would become predominantly black and quite poor (1958:1). The rapidity with which this has actually come about would probably have amazed even Morton Grodzins, who made the prediction less than a quarter-century ago.

In 1960, the University of California published a series of six excellent books on various aspects of residential segregation. Property Values and Race: Studies in Seven Cities (Laurenti, 1960) examined house prices during racial transition in neighborhoods in San Francisco, Oakland, Philadelphia and other cities and largely refuted the widespread belief that black entry lowered property values. Studies in Housing and Minority Groups (Glazer and McEntire /eds./, 1960) contained case studies from various cities on discrimination against blacks and other minorites, how their housing needs were met and their residential distribution in the cities under study. Another volume in the California series was Rapkin and Grigsby's The Demand for Housing in Racially Mixed Areas: A Study of the Nature of Neighborhood Change (1960).

During the 1960's Eleanor Wolf published two more articles on the nature of the process of racial change. "The Tipping-Point in Racially Changing Neighborhoods" (1963: 217-222) suggested that the tipping point may be less a specific proportion of black population in a neighborhood than

the point at which whites perceive that sometime in the future blacks will predominate in the area. The other article, "The Baxter Area: A New Trend in Neighborhood Change?" (1965:344-353) was an examination of racial change in a Detroit neighborhood.

Negroes in Cities (Taeuber and Taeuber, 1966) was another major landmark in the study of housing segregation. It advanced the measure of residential segregation through the use of the index of dissimilarity to analyze racial block data to present the level of segregation as a numerical value. This quantitative measure of segregation was an improvement over earlier segregation indexes, to say nothing of subjective judgments based merely on the inspection of maps.

The Report of the National Advisory Commission on Civil Disorders (1968) was a hurriedly written attempt to document the causes of the ghetto riots which had reached a peak intensity in 1967. For all its shortcomings, this report presented in simple terms the evidence of discrimination, segregation and ghetto growth that was contained in the literature reviewed above. In the same year, John F. Kain (1968:175-197) demonstrated that the restriction of blacks to segregated residential areas had a real negative effect on their access to employment in two metropolitan areas.

Kantrowitz (1969:685-695) studied the distribution of ethnic groups in New York City and its suburbs and concluded that the clustering of white ethnics in their respective neighborhoods was in large measure responsible for the continued residential isolation of blacks. Rose Helper (1969) produced an excellent study of discriminatory sales practices on the South Side of Chicago that included tracing the history of the discriminatory ideology in the profession's code of ethnics.

Harvey L. Molotch studied the South Shore area of Chicago in Managed

Integration: Dilemmas of Doing Good in the City (1972). This was a detailed portrait of the losing struggle to maintain the multiracial character of the area after black entry started. Leo F. Schnore conducted a more general study of black population distribution using census data, entitled Class and Race in Cities and Suburbs (1972).

The emerging trend of rapid black growth in certain suburbs began to receive some attention during the 1970's. Two articles, "The Changing Distribution of Negroes Within Metropolitan Areas: The Emergence of Black Suburbs" (Farley, 1970:512-529) and "The Potential for Residential Integration in Cities and Suburbs: Implications for the Busing Controversy" (Hermalin and Farley, 1973:595-610) were followed by two excellent case studies. Zehner and Chapin (1974) studied the expansion of the Washington black zone into suburban Prince Georges County, Maryland, while Sutker and Sutker (1974) examined the same phenomenon in University City and other northwestern suburbs of St. Louis.

Van Valey, Roof and Wilcox (1977:826-844) examined the general level of segregation in American cities and concluded that no great decline in segregation had taken place during the 1960's. William J. Wilson (1978:56-62) studied the general social condition of black in "The Declining Significance of Race" and concluded that the reforms of recent decades had left residential segregation the most important remaining area of discrimination. The continuing importance of residential segregation as an American problem is underlined by the fact that an entire issue of the Annals of the Academy of Political and Social Sciences was devoted to it in January 1979.

The great volume of material in the above literature review varies considerably in focus and methodology, yet all of these works have one thing in common. The authors all concluded to one degree or another that discrimi-

nation was the reason that the black population of American cities was segregated. This widespread agreement constitutes an extremely strong support for the validity of the discrimination thesis of racial residential segregation. It should also be noted at this point that there are several fine historical studies of late nineteenth and early twentieth century race relations in several cities. Osofsky (1963) examined New York, Spear (1967) looked at Chicago, and Katzman (1973) studied Detroit. One of the common threads tying these three studies of the small late-nineteenth century black communities in these three large cities together is housing discrimination against blacks. These data from the era in which the ghettos were just beginning to develop constitute further evidence in favor of the discrimination hypothesis.

In Chapter III, a choice will be made among three hypotheses with regard to which one is most suitable for use in this study. The chosen segregation theory will be used in conjunction with whatever spatial model from Chapter I is found to describe the growth of black neighborhoods best to formulate a theoretical model. This theoretical model of ghetto expansion will then be tested on a sample of cities with large black populations.

CHAPTER III

THE PROPOSED MODEL

Spatial Models

To determine which of the three spatial models best represented the pattern of black housing and the process of ghetto growth, this researcher examined the racial block maps of the 25 cities with the largest black populations at the time of the 1970 census. These maps show the pattern of blocks containing greater than 50 per cent black occupied housing units. Maps of each city for 1940, 1950, 1960 and 1970 were prepared, making it easy to trace the expansion of black neighborhoods during the three decades in question. This writer also sought descriptions of black neighborhood expansion in the literature to test empirically the spatial models under study. When the process of evaluation was over it was quite clear that the Hoyt sector model was most accurate in describing the distribution of black housing in those cities.

The Burgess model implies a solidly black inner ring of housing surrounding the central business district and outward ghetto expansion distributed evenly toward all points of the compass. The reality in the racial patterns of these 25 cities is that such a distribution does not exist. In all of these cities there are non-black neighborhoods near the central business district. In the case in which the main black zone comes the closest to surrounding the central business district, Birmingham, other black neighborhoods exist at some distance from downtown. Instead of a black ring surrounded by white, the visual effect is more like that of a checkerboard.

There is some mention of alleged zonal tendencies in black population distribution. E. Franklin Frazier (Theodorson, 1961:165-174) studied Harlem and found an apparent within-ghetto replication of concentric zones. This can be attributed to the unique history of that particular ghetto. Its original black population settled near the center of that high-density apartment zone and spread in all directions (Osofsky, 1963: three maps following x). Most other major ghettos initially developed next to the central business district, rather than miles away, as was the case with Harlem. Grodzins (1958:6) referred to the Burgess model and the centrality of the black population in most cities. However, the last census data available at that writing was from 1950. The Taeubers (1966: 63-64) found that the centralization index scores for the black populations of various cities have declined somewhat since 1940. If black population growth followed the Burgess model, the degree of centralization of blacks in comparison to whites should not go down during any given decade. This writer's inspection of the racial block maps also strongly supports the view that the urban black populations are no longer as centralized as they were in 1940. In Atlanta, Washington, St. Louis and other cities, the black zones have expanded all the way to the city limits during the thirty years ending with the 1970 census.

The lack of support in the literature on black housing and especially the absence of a ring pattern in any city examined by this writer led him to conclude that the Burgess concentric zone model is not a useful tool to describe black housing patterns or black neighborhood expansion.

The multiple nuclei model is inadequate because much of the evidence cited above against the concentric zone model applies. The maps show that the expected total ring of black housing around downtown is

absent in all of the major cities examined. Although Spear (1967:146) mentioned the establishment of the small Millgate black community next to a steel mill in southeastern Chicago, there is little evidence of major ghettos springing up near major industrial zones distant from the central business district of any of the cities in this study. In some southern cities, black housing was built on some vacant city land. Although this would tend to support the multiple nuclei hypothesis, it is limited to one region. Also, since 1960 this type of black housing growth has been largely supplanted by racial residential succession in the cities in question. Because of this evidence and a lack of specific claims in the literature in favor of the multiple neclei hypothesis, it must also be considered a poor choice as a spatial model to describe black population distribution and neighborhood growth.

The last spatial model to be tested is the Hoyt sector hypothesis. Inspection of the 1940, 1950, 1960 and 1970 racial block maps of the 25 cities revealed a strong, clear tendency toward outward expansion within sectors by the black zones of many of the cities. Even in the cities that experienced little ghetto growth, the general trend was for expansion away from the direction of the central business district. The type of lateral expansion that would fill the concentric zone or zones containing a ghetto was absent. Such expansion of black areas was not on a large scale.

The failings of the other two models make more sense now in the light of the strong tendencies toward sector growth. There were no complete inner rings of black slums and no huge ghettos next to outlying factories because black growth was usually focused in outward sector expansion from near-downtown ghettos, taking up only part of Burgess' Zone II. The

rapid within-sector ghetto growth of the 1950's and 1960's was the cause of the decline in the centralization of the city black populations in comparison to that of the whites. Large white populations remained in the inner portions of cities, often quite close to downtown, but outside of the sectors of black growth.

Although the most spectacular evidence of sector growth has materialized since he wrote, Hoyt (1939:62) recognized that black neighborhood expansion, as well as that of the other land uses he focused his attention on, took the form of sector growth. More recent students of housing segregation may have accepted the idea without stating it specifically in their work. Sutker and Sutker (1974:108) implied such a view by stating that University City was in the path of the expansion of the St. Louis ghetto. A sector, using downtown St. Louis as its center and enclosing the black zone of the city, would include suburban University City in its probable path of expension, if the Hoyt hypothesis applied to black neighborhood growth.

Given the strong evidence from the block maps that sector expansion is quite widespread and given the negative or inconclusive evidence for the other two models, it is clear that the Hoyt hypothesis should be utilized in this study.

Theories of Housing Segregation

The natural area hypothesis, the economic segregation hypothesis and the discrimination hypothesis were presented for consideration as the theoretical base for this study. The available evidence makes the choice among these three theoretical viewpoints even clearer than the choice among the three competing spatial models was.

The natural areas hypothesis was the first one presented. In the

discussion, Hatt's (1945, 1946) demonstration of the inapplicability of that concept to central Seattle was examined. Even more devastating, and appropriate to this study, evidence is available that shows that the concept of "natural area" was inadequate to describe black segregation even before the members of the Chicago School had clearly formulated the idea. It is also of more than passing interest that this evidence came from, of all places, Chicago. Between 1917 and 1921 there were 58 bombings in Chicago that were related to attempts by blacks to find housing outside of the ghettos (Spear, 1967:211). The rising tensions stemming from these and lesser assaults and discrimination culminated in the bloody 1919 race riot. Thirty-eight Chicagoans died, and more than 500 were injured (Spear, 1967:216). These are not the sort of facts on which to base a hypothesis that racial districts simply "happen." The natural area model is clearly not adequate to use in this study.

The economic segregation hypothesis seems more plausible, especially considering the conditions that prevailed when Johnson (1943) wrote. The small ghettos in non-southern cities were located in the decrepit inner areas, and the number of blacks in those cities who could afford significantly better housing was probably not large. However, the expansion of the ghettos into better neighborhoods and the improved economic circumstances of many black families since then have called the economic segregation hypothesis into question. The Taeubers (1966:85) computed expected indexes of segregation for a number of cities, based on economic status and assuming no racial discrimination. The expected scores were fairly low in 1940 and declined to near insignificance by 1960. Nevertheless, actual segregation of blacks remained very high, effectively refuting the economic segregation hypothesis. More recent

data show that the median family income for blacks in some major cities is not too much lower than the median for all families in the city in question. In Detroit, the black median was 86 per cent of the city family median income, according to 1970 census data (U. S. Bureau of the Census, 1972:131). Hermalin and Farley (1973:601) found that income differences could not account for the small size of many black suburban populations in 1970. To state the facts bluntly, a great many blacks can afford to live in many white areas, yet segregation persists. The economic segregation hypothesis clearly does not explain the high-levels of segregation recorded in recent censuses and will therefore be dropped from consideration as the theoretical base for this study.

The last theoretical view that was examined is the discrimination hypothesis. Unlike the other two models, the discrimination hypothesis is supported by a considerable volume of literature, as the review in Chapter II demonstrated. Different authors have documented the instances of overt violence against blacks who tried to move into white neighborhoods (Abrams, 1955), analyzed the discrimination by real estate agents and the evolution of their discriminatory ideology (Helper, 1969), and studied the process of residential succession and how it is perceived by white residents (Wolf, 1957, 1963, 1965). This great volume of material on these and other aspects of housing segregation and the lack of convincing contrary evidence make it clear that the discrimination hypothesis is the only one suitable as the theoretical guide for this study.

Firey Modification

In the discussion of the evolution of human ecology since the time of the Chicago School, one of the major branches was sociocultural ecology. Walter Firey's (1945) study of Boston was examined in detail, and special

note was taken of one of his examples. The tendency of the North End Italians, especially the immigrants, to remain in their familiar but unpretentious neighborhood (1945:147-148) was considered potentially significant for a study testing a spatial model as a description of black neighborhood growth. There is not very much published data on the resistance of ethnic areas to black neighborhood expansion. However, Burgess (Lieberson, 1963:121) noticed differences in the stability of various types of ethnic neighborhoods in the face of impending black entry. Turning to the popular literature, Theodore H. White (1963:110) noted in an article on the growth of the black populations of larger cities that different types of ethnic neighborhoods were known to vary in terms of response to integration. Some changed quietly, while others were likely to react with violence.

This writer studied Detroit in his M.A. thesis (1977) and found that there were rather striking differences in stability among the city's white neighborhoods. Using 1950 census tract data, he identified the areas in which the foreign-born whites were largely of one nationality. These tracts were then reexamined, using 1970 census data, to see if they had become predominantly black. No particular spatial model of racial change was assumed in this work; if a neighborhood remained overwhelmingly white even though it was in close proximity to a black zone, it was considered quite stable. The result was that Polish areas were almost impervious to racial change, except when almost surrounded by black neighborhoods, and Hungarian areas were about as stable. Non-ethnic neighborhoods formed no barrier to ghetto expansion, and Russian (i.e., Jewish) neighborhoods were particularly prone to undergo change as the black zone reached their borders (Kenny, 1977:56-57).

This writer has drawn the conclusion that the few references in the literature and his own analysis of Detroit make it evident that Firey's (1945) hypothesis is quite valid with reference to some types of ethnic communities in the context of black ghetto expansion. These ethnic areas must be identified, and the effect of their presence on sector expansion of black neighborhoods must be considered a major modification of the Hoyt model as applied to racial change. The presence of some white ethnic areas within sectors of probable black growth in cities could have a significant distorting effect on otherwise typical sector-type ghetto expansion. The distortion might merely be the absence of blacks from the ethnic areas in question, or it could mean that ghetto expansion is actually shunted aside into more receptive white areas near, but not within, the sectors involved.

Other Modifications

While the presence of ethnic neighborhoods or other sociocultural areas constitutes one major modification of the sector hypothesis, it is not the only one that is needed in the present context. The application of the sector model to black neighborhood growth calls for additional modifications that derive from demography, distribution and logic, rather than prior theoretical considerations.

One additional modification to be considered is the presence of wide, nonresidential belts across the path of probable sector expansion. A river, a large park or a vast railroad yard would probably serve to deflect ghetto expansion from white areas beyond the particular impediment in question.

The other three modifications deal with the rate of black population increase and the pattern of black occupancy. The first of these is an

extremely low rate of black increase. If there is little or no significant increase in the number of black residents in a city between censuses, there is not likely to be any notable outward physical expansion of the ghetto. In terms of conformity to the model, even a small lateral or other nonconforming type of ghetto growth would be significant in terms of lowering the proportion of the decade's black population increase that fell within the sector or sectors.

On the other hand, a very high rate of black increase, say a doubling or tripling of the black population in ten years, could also produce much nonconforming ghetto expansion. This would be particularly true if the sector or sectors at the start of the decade were quite narrow. A sudden inundation of many new black residents would probably cause the ghetto to widen as well as grow outward, thus spilling over the lines that denote the angle of the sector. Sudden black growth of great magnitude could also cause formerly insignificant black enclaves to become large in a very short time, further distorting the city's ghetto growth away from the idealized sector pattern.

The last major modification is related to the pattern of black neighborhood distribution. If a city's black population is distributed among numerous, small enclaves, sector growth is less likely than if there are fewer, larger ghettos. Dispersing all of the black increase during a decade evenly among a dozen very small ghettos may result in little apparent sector growth; concentration of a similar increase in one large black zone would probably produce the expected sector expansion.

By being aware of the presence of white ethnic areas within sectors of probable black expansion and the four other modifications mentioned

above, one may anticipate much of the distortion that is likely to be encountered in actual cases.

Summary of the Model

Before summarizing the modified sector model of black neighborhood growth, it is advisable to state the assumptions that it is based upon. Knowledge of these assumptions will reduce the mystery that surrounds the strong tendency toward sector expansion shown by black neighborhoods in many cities.

First, the model assumes on the basis of the discrimination hypothesis that black access to housing in white areas at any distance from the ghetto is minimal. The second assumption is that additional black housing needs are generally met by block-by-block residential succession from white to black occupancy. The third assumption is that the quality of housing in a city generally rises with distance from the central business district. This assumption is not rigid, like the concentric zone hypothesis, and recognizes that some luxury residential redevelopment has taken place near downtown areas in many cities. Nevertheless, in the case of the older, larger cities to be studied here, where the original housing still stands, its quality generally increases as one moves farther out from the central business district in any direction. The increases may be uneven, depending on which direction from downtown one moves, but the general idea is that the most likely direction to go to find better housing is away from the central business district.

This is consistent with Hoyt's (1939:116) finding that upper class areas expand outward rather than grow inward toward obsolete housing. Hoyt's (1939:159) maps of the settled areas of various cities in different years confirm the not too surprising fact that the inner areas

were built up first and the outer neighborhoods were generally settled later.

Schnore (1972:52) found that there was a tendency in non-southern cities at the time of a recent census for the black population to be distributed so that the poorest were nearest to downtown and income increased with distance from the central business district. This within-ghetto Burgess-type economic distribution means that the black middle class and the more affluent members of the black working class tend to live at the outer edge of the ghetto. This is where the zone of residential succession is, and these are the blacks most financially capable of making house purchases under those conditions.

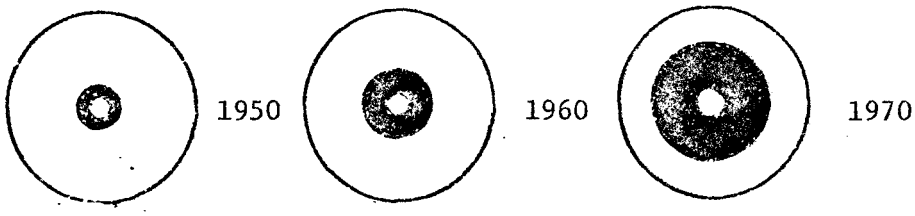
When the above information is considered in the light of the three assumptions stated just prior to it, the phenomenon of sector growth of ghettos becomes quite understandable. Black housing needs are met almost entirely by outer edge ghetto expansion. The most affluent blacks want better housing. Lateral movement into white areas will probably result in no great improvement over current housing. Outward movement will probably lead to better housing. Therefore, the bulk of the ghetto expansion in a city in which all of the above assumptions are met will take the form of sector growth.

The model can be summarized by stating that it uses the discrimination hypothesis as its theoretical base. It uses the sector growth hypothesis as the spatial model to describe black neighborhood growth. Such growth is expected on the basis of the assumptions discussed above. Distortions of sector growth are anticipated if there are sociocultural areas present within the sector or sectors of probable black expansion. Physical barriers to expansion and unusually rapid or slow black population growth

STYLIZED REPRESENTATIONS OF MODELS OF BLACK HOUSING PATTERNS

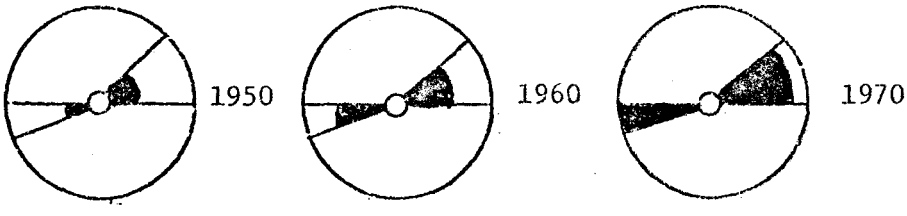
AND THE PROCESS OF BLACK NEIGHBORHOOD EXPANSION

Burgess Concentric Zone Model



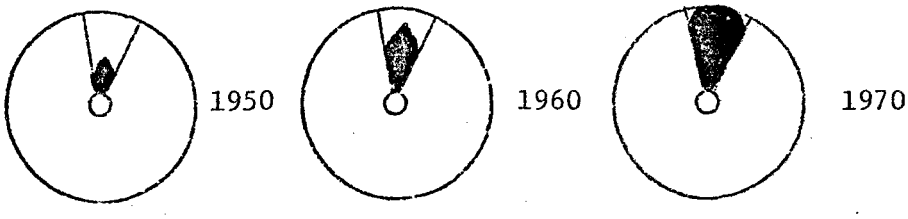
Black neighborhood growth starts near the center and expands ring by entire ring. This process is not found in contemporary major U. S. cases. The multiple nuclei model may produce a similar result coupled with isolated ghettos near outlying industry.

Hoyt Sector Model



Black neighborhoods near city center expand outward within sectors. This is a fairly accurate description of many major U.S. cases, with several major qualifications.

The Process of Sector Growth



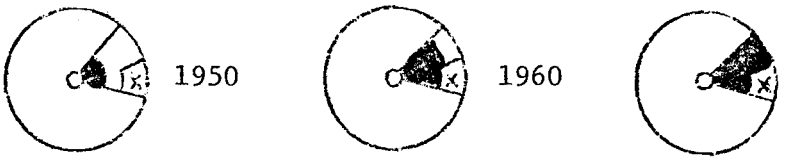
At any given point in time, the pattern may look more like the shape of a diamond or candle flame, but the forward walls keep changing, while the back walls remain the sector boundary. When the city limits are reached, the "pie slice" shape will be more evident.

Figure 1

THREE MAJOR QUALIFICATIONS TO A SECTOR MODEL

OF BLACK HOUSING PATTERNS

(1) Resistant Sociocultural Areas (example marked "X" on diagram)



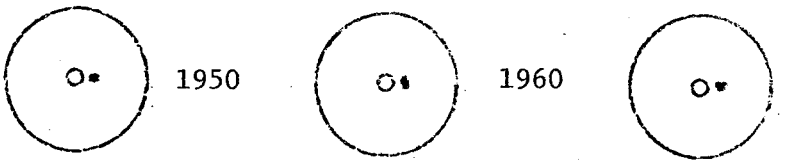
White ethnic areas, elite neighborhoods and other areas symbolically important to their occupants may resist change and thus distort an otherwise symmetrical sector patterns.

(2) Black Housing Needs Met by Processes Other Than Residential Succession

In recent decades black housing demand in some southern cities has been met by building new houses on vacant land, rather than expansion into white areas. This conforms to the multiple nuclei model.

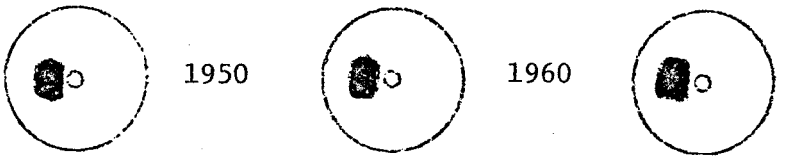
(3) Black Population Increase Too Small in Terms of Numbers and/or Per Cent to Promote Growth Within Sectors

(a)



Black population doubles every decade, but stands at only 5,000 in 1970. Sector Growth would not be evident in a large city.

(b)



A black population of 1,000,000 increases by 20,000 every decade. Since the rate of growth is only 2 per cent per decade, this fair-sized numerical increase does not produce noticeable sector growth.

Figure 2

and the dispersal of blacks in numerous small ghettos may distort or prevent sector growth of black neighborhoods. The methodology of actual measurement of sector growth will be taken up in detail in the next chapter.

CHAPTER IV

METHODOLOGY

In his analyses of trends in the distribution of various characteristics of urban housing, Homer Hoyt relied on the plotting of such data on maps to support his sector growth hypothesis. This writer also feels that maps are an important aid in the process of testing his modified sector model of the growth of black neighborhoods. Therefore, census racial block maps of the cities in the sample for 1940, 1950, 1960 and 1970 are included as evidence for this study. Such maps allow the reader to evaluate visually this writer's contention that outward growth within sectors is the best simple description of black neighborhood growth, just as Hoyt's maps of the expansion of various types of land uses over a period of years allowed him to make generalizations. While maps can be useful analytical tools, particularly if the changes under study are quite clear-cut, making judgments while viewing them is still a somewhat subjective process. One can look at sets of maps of expanding high-income districts or ghettos and pronounce a certain hypothesis supported, yet consciously or unconsciously overstate its predictive ability. Thus, some contention could be ruled correct because the maps look "pretty good."

Although this writer was led to his strong belief in the validity of the sector model in describing black neighborhood expansion by viewing racial block maps, he realized that any serious analysis requires a considerably more rigorous methodology. Stated briefly, this methodology

entails drawing sectors, each of which consists of the area within this angle drawn from the center of the city that contains the ghetto in question. To see what proportion of a city's black increase during a given decade fell within the sector or sectors in question, the black population of the census tracts within the sectors at the start and finish of each decade would be calculated. To determine what proportion of the decennial black increase fell within the designated sectors, the net increase within the sectors would be divided by the net increase within the city during the same time period. This methodology is a considerable improvement over simply "eyeballing" maps in two major respects. First, it strictly delineates the width of each sector. Instead of merely being "more or less east" or some other vague direction, a sector would consist of the area between two well defined lines, drawn outward from the center of the city, with the coordinates of the lines recorded for the use of anyone wishing to replicate the analysis with newer data after the next census. The second major improvement of this methodology is the index of sector growth conformity. While it is virtually impossible to quantify sector conformity within a city over a period of time, or compare conformity levels of two cities merely by looking at maps, the index of sector growth conformity allows the investigator to view a numerical proportion or percentage and perform both of these tasks. Any attempt to evaluate the level of adherence to the sector model during each of the last three decades in one city, let alone comparing the 25 cities in the sample to each other, would be utterly futile without a fairly reliable and objective quantitative measure.

Because of its importance to this study, the methodology of drawing sectors and calculating the amount of within-sector black growth will be

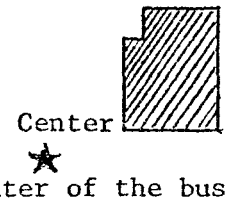
described in some detail. The first requirement is the making of racial block maps of each city in question, for all of the censuses under study. Each map contains the pattern of residential blocks in which more than one-half of all occupied housing units have black residents. The procedures for compiling these maps are contained in Appendix A.

The next important step is to designate an intersection in the central business district to be the center of the city for the purpose of drawing sectors. City sectors were chosen using the following attributes, listed here in descending order of priority, to determine what downtown street corner should be used: (1) internal transit hub, (2) center of retail business district, (3) location of the city hall, (4) center of the house numbering grid, (5) other major downtown intersections. While several cities such as New York have such huge business districts that the placement of the center may materially affect the results of a test of the sector model, most of the 25 cities in this sample have relatively small central business districts. This means that while there may be valid arguments for other intersections to be used as the center in a given city, these streetcorners are probably so close to the one actually chosen that it will not materially affect the drawing of sectors or which census tracts are contained in them.

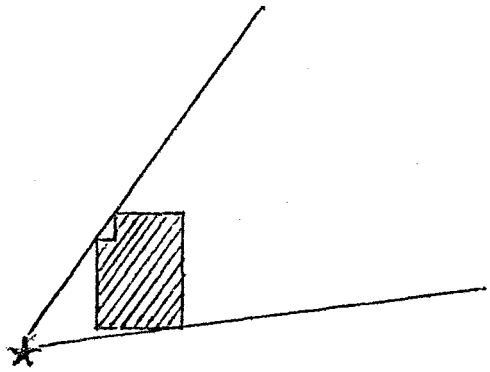
The process of drawing sectors around black neighborhoods is illustrated in the diagrams in Figure 3. After the center has been located on the racial block map, the narrowest possible sector that contains the black block pattern in question is drawn outward from the center. Since the model does not claim that all black population growth within the angle of the sector fits the hypothesis, but only that growth within the existing ghetto and its contiguous extension, an outer boundary must be chosen.

Figure 3

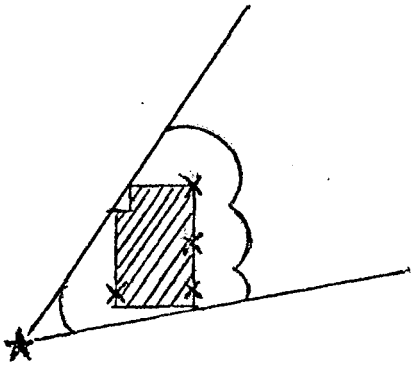
DRAWING SECTORS TO CALCULATE THE SECTOR GROWTH CONFORMITY INDEX FROM CENSUS TRACT STATISTICS



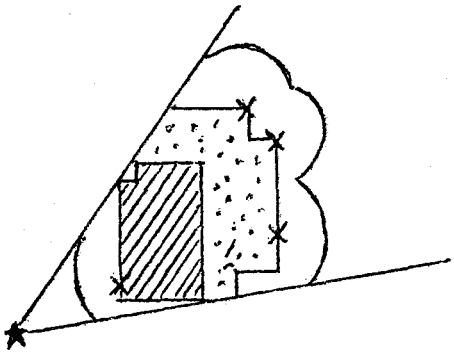
The center of the business district is determined.



The narrowest possible sector is drawn around the pattern of predominantly black blocks in question.



One-mile arcs are drawn from the innermost and outermost edges of the black block pattern. This allows the determination of what census tracts fall within the sector. The inner boundary of the sector does not change, since the model does not predict inward expansion of the black area.



If the black area expands during the next ten years, new one-mile outer arcs are needed to determine which additional census tracts are now within the sector. Comparisons of population size are made on the basis of the larger area at the later date. Thus the black population of the sector at the start of the decade must be recalculated to include any black population in the tracts subsequently added to the sector.

$$\text{Sector growth conformity index} = \frac{\text{Black increase within sectors during period in question}}{\text{Black increase in entire city during period in question.}} \times 100$$

Although any outward limit would be somewhat arbitrary, a one-mile radius from the outermost predominantly black blocks is quite reasonable. It would include virtually the entire racially changing zone between the advancing area of predominantly black blocks and the receding all-white areas in most cases. To complete the outline of the land area of the sector, a one-mile inner radius would be drawn where necessary to define the inner bounds of its territory.

To determine the black population of a sector at the time of a given census, the lines, points and arcs discussed above are drawn on a census tract map. Each tract whose land area is more than one-half within the limits of the sector is considered to be within it. The sector black population is obtained by adding the black populations of the individual tracts within it. When the sector black population of a city at the time of one census is to be compared with the sector population ten years later and the black area has expanded outward significantly between the two censuses, certain adjustments must be made before the net within-sector black population increase can be determined. If the drawing of one-mile outer arcs from the outer edge of the ghetto block pattern from the later census indicates that new census tracts have been added to the sector, these adjustments are necessary. For all intercensal comparisons in sector analysis, the land area of the sector at the time of the earlier census must be the same as the land area at the later census. In other words, the census tracts added to a sector during a decade must be identified in the census tract statistics for the earlier enumeration. Any black population in those tracts at the time of the earlier census must be added to the black population already counted within the smaller area the sector had at that time. This rule requiring absolute comparability

of land area at both times is important in some cases to keep from overstating the amount of a city's black growth that fell within sectors during a given decade. A hypothetical example will help illustrate this potential problem. A sector contained 10,000 black residents in 1950. After some expansion of land area during the 1950's, the sector contained 20,000 black residents in 1960. This would seem to indicate a net increase of 10,000 blacks. However, if the tracts added to the sector during the 1950's contained 1,000 blacks in 1950, the real net increase during the period was 9,000. While tracts added to a sector during a decade may have few or no black residents at the start of the decade, it is incorrect to blithely assume that such is the case. The absorption of small black areas by rapidly expanding major ghettos was fairly common during the 1950's and 1960's.

While black areas within sectors are expected to exhibit outward growth, the model does not predict inward growth toward the central business district. Therefore, the inner bounds established at the start of the period in question will remain unchanged throughout the time under study. This is in contrast to the outer bounds which are frequently pushed farther out with each new census; the expanded pattern of predominantly black blocks requires the drawing of new one-mile outer arcs and the probable inclusion of new census tracts not in the sector ten years before.

In the cities of this sample, the sectors drawn on the basis of the 1940 racial block maps are numbered 40-1, 40-2, 40-3 . . . depending on how many are needed. Sectors were drawn around every area of predominantly black blocks in a city which had 5,000 or more black residents in 1940. Other less populous black zones were included if they took up a significant amount of land or were important in the context of the black housing pattern in the city in 1940.

Although significant lateral spread of black neighborhood growth across the boundary out of a sector during a decade constitutes evidence of inadequacy on the part of the model, the new housing pattern can be fitted with revised widened sectors to test the subsequent growth of black zones that have shown nonconforming expansion. The appearance of new, separate black zones during a decade is also reason for drawing up revised sectors. Sets of revised sectors based on the 1950 block pattern are numbered 50-1, 50-2 . . . If a 1960 revision is in order, those sectors are numbered 60-1, 60-2 . . ., depending on how many are needed.

The index of sector growth conformity is the end result of the drawing of sectors and the counting of the black population within each of them. The next step in computing the index is to subtract the black population of each sector at the time of the earlier census from that of the same sector at the time of the later census in question. The decade's within-sector black growth is the sum of the net change in the black population of each sector during the decade. Net black population losses must be included in the calculation as well as gains. When the within-sector black growth for the whole city has been determined, it is divided by the overall city black increase during the same period. The resulting figure is multiplied by 100 to give the percentage of the city's overall black increase during the decade in question that fell within the sector pattern. Although negative scores or scores in excess of 100 per cent are possible, the range of the sector growth conformity index will be defined as zero to 100 per cent because the issue is the percentage of the decennial black increase that falls within the sector or sectors of probable black growth.

An actual set of sector growth calculations is contained in

Appendix B. The 1940-1950, 1950-1960 and 1960-1970 sector growth calculations for Kansas City, Missouri are reproduced in this appendix, including the street intersections used as coordinates for drawing the sector. While there was only one sector in Kansas City and no revisions of the sector pattern were needed, this set of calculations should illustrate the process reasonably well.

One issue that may be legitimately brought up is the reason for using the racial block pattern for drawing the sectors, yet using the racial tract statistics to measure the decennial within-sector black growth. The use of patterns of predominantly black blocks to define the angle of the sector allows greater accuracy than using the map of predominantly black tracts. The method of compiling accurate block maps using the black-nonblack division is contained in Appendix A, already referred to. The necessity of using tract rather than block data to measure the within-sector black growth arises from the inadequacies of the published block data, especially for 1940, 1950 and 1960. These city block reports contain racial breakdowns along a white-nonwhite dichotomy for occupied housing units. There is no racial breakdown for persons for each block. Although this writer believes that using blocks rather than tracts would produce slightly higher sector growth scores, census tracts are small enough to approximately cover the sectors that are drawn and form an adequate measure of population change.

To indicate the generally small proportion of a city's land area that the sector or sectors take up, this study includes the land area of each city at each of the last four censuses and the land area of each set of sectors at the same time. Quite valid questions may be raised about the use of total sector land area and total city land area for this purpose.

Commercial areas, industrial land, parks and other nonresidential uses occupy large parts of most major cities. Furthermore, even within totally residential areas, streets take up a large part of each neighborhood. For example, an area of the South Bronx might have a population density of 100,000 per square mile, if all land is considered. If only the area covered by residential buildings is taken into account, the actual density would be more like 200,000 persons per square mile. While it would be desirable to use one of these more refined measures in the calculations mentioned above and the overall residential area could probably be found for each city in the example, the availability of such data for individual census tracts is a major stumbling block. This writer knows of no published figures that would allow the accurate computation of residential area for each sector. Because of the unavailability of the finer measures on a small-area basis, this study must rely on the raw total area figures that are published for the cities and can easily be estimated for the sectors. This should not produce distortion because, in the 25 cities of this sample, the ratio of residential land (buildings and yards) to total land should not vary too greatly from neighborhood to neighborhood in each city. Even where it does, the sectors, particularly those in 1970 extending far out from the center of the city, form a rough cross section of the level of residential land use in the city in question. The city of Newark is one of the few cases in the sample in which nonresidential uses take up an extremely high proportion of the city's territory. The Newark Airport and nearby salt marshes take up the southeastern one-third of the city. Thus, the sector in Newark takes up a higher proportion of the usable land than the given figures indicate. This is not a major consideration in most of the other cities in this study.

Chapter VIII deals with the stability of white ethnic areas in the face of large-scale black growth in the cities in question. A fairly stringent standard for defining census tracts as "ethnic" was established to locate those neighborhoods of interest to the study. The 1950 census tract statistics were used because they show the ethnic pattern just before the great black ghetto growth of the 1950's. The black areas of most of the sample cities were not much larger than they had been in 1940, and the 1950 statistics have the virtue of being ten years more recent.

"Ethnic tracts" were defined as those tracts that were less than 50 per cent black, had a white population at least 20 per cent foreign-born and had a majority of their foreigh-born whites of one nationality. While this means that as little as 10 per cent of a tract's population needed to be of a specific foreign birth to qualify it as ethnic, in practice this measure identifies the areas of residence of foreign-born groups and their children quite well.

In the measuring of the stability of ethnic tracts, each tract was rechecked in the 1970 census data to see if it was predominantly black. Tracts were further identified as within or outside of sectors of black growth.

In the study of European ethnic groups, a problem arises when two different ethnic or religious groups come from the same nation. There are Croatians and Serbs from Yugoslavia. There are ethnic Poles and Jews from Poland. The Soviet Union is home to Ukrainians, Jews and ethnic Russians, among others. To identify the places of residence of such groups within a city requires personal knowledge of the city not obtainable from the census tables. For example, this writer identified the ethnic Polish zones of Detroit with the assistance of a member of the

faculty of Eastern Michigan University. This same discussion identified the Jewish areas, which had a heavily Russian foreign population, as well as a scattering of Polish Jews (Fauman, interview, 1972). Rosenthal (1975) found that Jews of other eastern European nationalities tended to cluster in Russian Jewish neighborhoods in Cincinnati. Sources on local history and other published materials on specific cities allow accurate identification of those groups that the census tract data do not adequately differentiate.

The Twenty-Five City Sample

This sample consists of the 25 American cities with the largest black populations in 1970. This sample is somewhat different from the list of the 25 largest cities in terms of total population. Seven of the 25 largest cities are not among the 25 with the largest number of black residents. They are San Francisco, San Diego, San Antonio, Phoenix, Columbus, Ohio, Seattle and Denver. On the other hand, seven of the cities in the top black population sample are too small to be included among the 25 largest cities. They are Atlanta, Newark, Birmingham, Cincinnati, Oakland, Kansas City, Missouri and Richmond, Virginia. However, all of these, except Richmond, fell within the category of the 50 largest cities in terms of total population in 1970.

Since the purpose of this dissertation is to examine aspects of racial housing patterns and the process of racial transition in centers of major black population, it is obviously necessary to select cities with the largest black populations.

Despite the exclusion of some major cities, this sample is far from unrepresentative of the urban population of the United States. It includes the 10 largest American cities and represents the major regions of the

nation. There are eight each from the South and Midwest, seven from the East and two from the West.

While the sample's share of the U. S. population is declining rapidly, because of migration to the suburbs and the Sun Belt, it was still one-seventh of the total in 1970. The black population of these cities is now almost two-fifths of the entire U. S. black population. The top five black communities (New York, Chicago, Detroit, Philadelphia and Washington) alone accounted for one-fifth of the total in 1970.

Since 1940 the 25 cities have increased considerably in number of black residents, per cent black and share of the national black population. From 1940 to 1970 the combined sample black population more than trebled from 2,787,318 to 8,748,138. During the same period the sample cities had a net loss of about two million whites. These figures further underline the fact that this is probably about the best 25 city sample possible for the study of racial change.

This sample includes the cities that were the scenes of most of the major racial disturbances of the 1960's. There were major riots in New York and Philadelphia in 1964, Los Angeles in 1965 and Chicago and Cleveland in 1966. During the worst riot year of 1967 there were major upheavals in Detroit, Newark, Cincinnati and Milwaukee. The following year there were large riots in New York, Washington, Baltimore, Pittsburgh, Chicago, Cleveland and Kansas City. Although the 1970's were much quieter, there was a brief, but violent, outburst in Detroit in July, 1975. As a noted, the July 1977 New York blackout riots may have been the most costly 24 hours in U. S. riot history for a single outbreak. Only the restraint of the police prevented a large loss of life. As it was, four persons died, and the property damage may have exceeded that of the 1967 Detroit riot.

Population figures for the 25 cities are presented in the following tables. Table 1 contains the black population for each city in 1940, 1950, 1960 and 1970. Table 2 presents per cent black for each city at the time of each of the four censuses in question. Table 3 contains the total population of each of the cities for each of the four censuses. It should be noted here, and will be discussed at the end of this study, that all but three of the 25 cities have apparently sustained net losses in population since 1970. The Census Bureau 1975 estimates include some rather startling estimated population losses for some cities in this sample. Table 4 lists the numerical rankings of the 25 cities among all American cities in terms of black population size. While most of the cities did not change their ranking very much, Oakland and Milwaukee became important black population centers in a very short time. Table 5 contains the 1940-1970 black population change statistics for each city. Tables 6 and 7 give a further breakdown of this data into individual decades. Finally, Table 8 lists the intersection in each city that was designated the center of the business district for the purpose of drawing sectors of probable black neighborhood expansion. This table also lists the reasons that each intersection was chosen.

In summary, it can be said that this sample offers both a large black population and a high black population growth rate. The cities in this sample include many which have witnessed large scale racial transition since 1940, thus affording the best opportunity to test models of processes of change. These cities have also had more than their share of various social problems, not the least of which is mass violence. While these cities are older and larger than many others in the United States, it is precisely such cities as these 25 that deserve the nation's immediate attention.

TABLE 1

SIZE OF BLACK POPULATION FOR THE 25 CITIES WITH THE LARGEST BLACK POPULATIONS IN 1970

	1940	1950	1960	1970
New York	458,444	747,608	1,087,931	1,668,115
Chicago	277,731	492,265	812,637	1,102,620
Detroit	149,119	300,506	482,223	660,428
Philadelphia	250,880	376,041	529,240	653,791
Washington	187,266	280,803	411,737	537,712
Los Angeles	63,774	171,209	334,916	503,606
Baltimore	165,843	225,099	325,589	420,210
Houston	86,302	124,766	215,037	316,551
Cleveland	84,504	147,847	250,818	287,841
New Orleans	149,034	181,775	233,514	267,308
Atlanta	104,533	121,285	186,464	255,051
St. Louis	108,765	153,766	214,377	254,191
Memphis	121,498	147,141	184,320	242,513
Dallas	50,407	56,958	129,242	210,238
Newark	45,760	75,965	138,035	207,458
Indianapolis	51,142	63,867	98,049	134,320
Birmingham	108,938	130,025	135,113	126,388
Cincinnati	55,593	78,196	108,757	125,070
Oakland	8,462	47,562	83,618	124,710
Jacksonville	61,782	72,450	82,525	118,158
Kansas City	41,574	55,682	83,146	112,005
Milwaukee	8,821	21,772	62,458	105,088
Pittsburgh	62,216	82,453	100,692	104,904
Richmond	61,251	72,996	91,972	104,766
Boston	23,679	40,057	63,165	104,707

TABLE 2

PER CENT BLACK, 1940-1970, FOR THE 25 CITIES WITH THE LARGEST BLACK POPULATIONS IN 1970

	1940	1950	1960	1970
New York	6.1	9.4	14.0	21.2
Chicago	8.1	13.6	22.9	32.7
Detroit	9.2	16.2	28.9	43.7
Philadelphia	12.9	18.1	26.4	33.6
Washington	28.2	35.0	53.9	71.1
Los Angeles	4.2	8.7	13.5	17.9
Baltimore	19.3	23.7	34.7	46.4
Houston	22.4	21.0	22.9	25.7
Cleveland	9.6	16.1	28.6	38.3
New Orleans	30.2	31.8	37.2	45.0
Atlanta	34.6	36.6	38.3	51.3
St. Louis	13.3	17.9	28.6	40.9
Memphis	41.5	37.0	37.0	38.9
Dallas	17.1	13.1	19.0	24.9
Newark	10.6	17.3	34.1	54.2
Indianapolis	13.2	14.9	20.6	18.0
Birmingham	40.7	39.9	39.6	42.0
Cincinnati	12.2	15.5	21.6	27.6
Oakland	2.8	12.4	22.8	34.5
Jacksonville	35.7	35.6	41.1	22.3
Kansas City	10.4	12.2	17.5	22.1
Milwaukee	1.5	3.4	8.4	14.7
Pittsburgh	9.3	12.2	16.7	20.2
Richmond	31.7	31.7	41.8	41.9
Boston	3.1	5.0	9.1	16.3

TABLE 3

TOTAL POPULATION, 1940-1970, OF THE 25 CITIES

WITH THE LARGEST BLACK POPULATIONS, 1970

	1940	1950	1960	1970
New York	7,454,995	7,891,957	7,781,984	7,867,760
Chicago	3,396,808	3,620,962	3,550,404	3,366,957
Detroit	1,623,452	1,849,568	1,670,144	1,511,482
Philadelphia	1,931,334	2,071,605	2,002,512	1,948,609
Washington	663,091	802,178	763,956	756,510
Los Angeles	1,504,277	1,970,358	2,479,015	2,816,061
Baltimore	859,100	949,708	939,024	905,759
Houston	384,514	596,163	938,219	1,232,802
Cleveland	878,336	914,808	876,050	750,903
New Orleans	494,537	570,445	627,525	593,471
Atlanta	302,288	331,314	487,455	496,973
St. Louis	816,048	856,796	750,026	622,236
Memphis	292,942	396,000	497,524	623,530
Dallas	294,734	434,462	679,684	844,401
Newark	429,760	438,776	405,220	382,417
Indianapolis	386,972	427,173	476,258	744,624
Birmingham	267,583	326,037	340,887	300,910
Cincinnati	455,610	503,998	502,550	452,524
Oakland	302,163	384,575	367,548	361,561
Jacksonville	173,065	204,517	201.030	528,865
Kansas City	399,178	456,622	475,539	507,087
Milwaukee	587,472	637,392	741,324	717,099
Pittsburgh	671,659	676,806	604,332	520,117
Richmond	193,042	230,310	219,958	249,621
Boston	770,816	801,444	697,197	641,071

TABLE 4

NATIONAL NUMERICAL RANK OF BLACK POPULATION SIZE FOR THE 25 CITIES WITH LARGEST BLACK POPULATIONS IN 1970

	1940	1950	1960	1970
New York	1	1	1	1
Chicago	2	2	2	2
Detroit	6	4	4	3
Philadelphia	3	3	3	4
Washington	4	5	5	5
Los Angeles	14	8	6	6
Baltimore	5	6	7	7
Houston	12	13	10	8
Cleveland	13	10	8	9
New Orleans	7	7	9	10
Atlanta	11	14	12	11
St. Louis	10	9	11	12
Memphis	8	11	13	13
Dallas	20	23	16	14
Newark	24	17	14	15
Indianapolis	19	20	19	16
Birmingham	9	12	15	17
Cincinnati	18	16	17	18
Oakland	101	27	21	19
Jacksonville	16	19	23	20
Kansas City	26	24	22	21
Milwaukee	99	59	34	22
Pittsburgh	15	15	18	23
Richmond	17	18	20	24
Boston	40	35	33	25

TABLE 5

NET CHANGE AND PER CENT CHANGE IN BLACK POPULATION

FOR THE 25 CITIES, 1940-1970

City	Net Change in Black Population 1940-1970	Per Cent Change in Black Population Size 1940-1970
New York	1,209,671	263.9
Chicago	824,889	297.0
Detroit	511,309	342.9
Philadelphia	402,911	160.6
Washington	350,446	187.1
Los Angeles	439,832	689.7
Baltimore	254,367	153.4
Houston	230,249	267.3
Cleveland	203,337	240.6
New Orleans	118,274	79.3
Atlanta	150,518	143.9
St. Louis	145,426	133.7
Memphis	121,015	99.6
Dallas	159,831	317.3
Newark	161,698	353.4
Indianapolis	83,178	162.6
Birmingham	17,450	16.0
Cincinnati	69,477	125.0
Oakland	116,248	1,373.8
Jacksonville	56,376	91.2
Kansas City	70,431	169.4
Milwaukee	96,267	1,091.3
Pittsburgh	42,688	68.6
Richmond	43,515	71.0
Boston	81,028	342.2

TABLE 6

NUMERICAL CHANGE IN BLACK POPULATION BETWEEN CENSUSES

FOR THE 25 CITIES WITH THE LARGEST BLACK

POPULATIONS IN 1970

City	1940-1950	1950-1960	1960-1970
New York	289,164	340,323	580,184
Chicago	214,534	320.372	289,983
Detroit	151,387	181,717	178.205
Philadelphia	125,161	153,199	124,551
Washington	93,537	130,934	125,975
Los Angeles	107,435	163,707	168,690
Baltimore	59,256	100,490	94,621
Houston	38,464	90,271	101,514
Cleveland	63,343	102,971	37,023
New Orleans	32,741	51,739	33,794
Atlanta	16,752	65,179	68,587
St. Louis	45,001	60,611	39,814
Memphis	25,643	37,179	58,193
Dallas	6,551	72,284	80,996
Newark	30,205	62,070	69,423
Indianapolis	12,725	34,182	36,271
Birmingham	21,087	5,088	-8,725
Cincinnati	22,603	30,561	16,313
Oakland	39,100	36,056	41,092
Jacksonville	10,668	10,075	35,633
Kansas City	14,108	27,464	28,859
Milwaukee	12,951	40.686	42,630
Pittsburgh	20,237	18,239	4,212
Richmond	11,745	18,976	12,794
Boston	16,378	23,108	41,542

TABLE 7

PER CENT INCREASE BETWEEN CENSUSES OF THE BLACK POPULATION

FOR THE 25 CITIES WITH THE LARGEST BLACK POPULATIONS, 1970

City	1940-1950	1950-1960	1960-1970
New York	63.1	45.5	53.3
Chicago	77.2	65.1	35.7
Detroit	101.5	60.5	37.0
Philadelphia	49.9	40.7	23.5
Washington	49.9	46.6	30.6
Los Angeles	168.5	95.6	50.4
Baltimore	35.7	44.6	29.1
Houston	44.6	72.4	47.4
Cleveland	75.0	69.6	14.8
New Orleans	22.0	28.5	14.4
Atlanta	16.0	53.7	36.8
St. Louis	41.4	39.4	18.6
Memphis	21.1	25.3	31.6
Dallas	13.0	126.9	62.8
Newark	66.0	81.7	50.2
Indianapolis	24.9	53.5	37.0
Birmingham	19.4	3.9	- 6.5
Cincinnati	40.7	39.1	15.0
Oakland	462.1	75.8	49.1
Jacksonville	17.3	13.9	43.2
Kansas City	33.9	49.3	34.7
Milwaukee	146.8	186.9	68.3
Pittsburgh	32.5	22.1	4.2
Richmond	19.2	26.0	13.9
Boston	69.2	57.7	65.8

TABLE 8

LOCATIONS OF CENTER FOR SECTORS

City	Intersection	Reason (s)
New York	Broadway and 7th Avenue (Times Square)	T, P
Chicago	State Street and Madison Street	T,N,P,R
Detroit	Michigan Avenue and Woodward Avenue	T,N,P
Philadelphia	Broad Street and Market Street	P,C
Washington	14th Street and E Street, N.W.	C
Los Angeles	1st Street and Main Street	C
Baltimore	Baltimore Street and Charles Street	N,P
Houston	Main Street and Walker Street	R
Cleveland	Superior Avenue and Ontario Street	T,P
New Orleans	Canal Street and Royal Street	T
Atlanta	Peachtree Street, Decatur Street and Whitehall Street	N,P
St. Louis	12th Street and Market Street	T
Memphis	Poplar Avenue and Main Street	P, near C
Dallas	Houston Street and Main Street	P
Newark	Broad Street and Market Street	P
Indianapolis	Monument Circle	N,P,R
Birmingham	3rd Avenue and 20th Street	P,R
Cincinnati	5th Street and Vine Street	P,R
Oakland	14th Street and Broadway	T,P
Jacksonville	Bay Street and Main Street	P
Kansas City	12th Street and Oak Street	P
Milwaukee	Wisconsin Avenue and Plankinton Avenue	P,R
Pittsburgh	Grant Street and Forbes Avenue	P,C
Richmond	9th Street and Broad Street	P
Boston	Washington Street and Court Street	P,R

Key: T = Transportation Hub
N = Hub of House Number Grid
P = Prominent Intersection
R = Near Center of Main Retail District
C = Location of City Hall

The next two chapters are devoted to the results of the application of the modified sector model to these 25 cities. Chapter V is a general overview of the data from the entire sample, while Chapter VI contains detailed examination of each individual city.

CHAPTER V

GENERAL RESULTS

In Chapter III the sector model and the discrimination hypothesis were utilized with modifications derived from sociocultural ecology as well as simple logic to create a spatial model to describe black neighborhood expansion. In Chapter IV a relatively simple methodology was proposed to measure the level of conformity to the model in individual cities. The 25 American cities with the largest black populations in 1970 were designated as the sample for a test of the modified sector model. This chapter is an overview of the results of that test. The results are summarized in Tables 9-12.

The analysis was carried out by using racial block maps based on the 1940, 1950, 1960 and 1970 censuses and census tract reports for the same cities from those four enumerations. In several instances in which 1940 or 1950 census tract reports were not available, such statistics were improvised. This procedure is discussed in Appendix A. In each city, one or more sectors was drawn from the center of the downtown area enclosing each important black zone. These black zones were defined as areas of contiguous blocks in which more than one-half of the occupied housing units were black occupied. The changes in the black populations within the sectors between censuses were measured by using the census tract data.

The reader should especially note the differences among mean sector growth scores for the sample as a whole during the three decades under study, the differences among individual cities during the same decade and

TABLE 9

ORIGINAL 1940 SECTORS

City	Year	Land Area of City	Land Area of Sector(s)	Per Cent of City Black Growth Occurring within Sector During Previous Ten Years	Per Cent Black City Population
New York	1940	299.0	14.8	-	6.1
	1950	315.1	16.4	59.0	9.4
	1960	315.1	20.8	20.0	14.0
	1970	299.7	26.4	20.7	21.2
Chicago	1940	206.7	22.5	-	8.1
	1950	207.5	24.4	69.2	13.6
	1960	224.2	36.0	36.7	22.9
	1970	222.6	45.0	36.6	32.7
Detroit	1940	137.9	20.7	-	9.2
	1950	139.6	23.0	71.1	16.2
	1960	139.6	34.3	12.5	28.9
	1970	138.0	40.2	27.8	43.7
Philadelphia	1940	127.2	15.1	-	12.9
	1950	127.2	17.3	79.6	18.1
	1960	127.2	19.7	48.1	26.4
	1970	128.5	23.9	1.6	33.6
Washington	1940	61.4	21.5	-	28.2
	1950	61.4	23.1	77.9	35.0
	1960	61.4	28.3	60.8	53.9
	1970	61.4	39.5	48.5	71.1
Los Angeles	1940	448.3	13.4	-	4.2
	1950	450.9	13.7	57.4	8.7
	1960	454.8	21.2	40.4	13.5
	1970	463.7	23.6	33.1	17.9
Baltimore	1940	78.7	11.0	-	19.3
	1950	78.7	12.6	76.4	23.7
	1960	79.0	22.6	82.4	34.7
	1970	78.3	32.9	75.1	46.4

TABLE 9
(continued)

City	Year	Land Area of City	Land Area of Sector(s)	Per Cent of City Black Growth Occurring within Sector During Pervious Ten Years	Per Cent Black City Population
Houston	1940	72.8	20.5	-	22.4
	1950	160.0	23.2	53.0	21.4
	1960	328.1	35.4	35.9	22.9
	1970	433.9	45.9	56.7	25.7
Cleveland	1940	73.1	7.7	-	9.6
	1950	75.0	8.7	48.5	16.1
	1960	75.0	8.7	0.0	28.6
	1970	75.9	8.7	0.0	38.3
New Orleans	1940	199.4	14.7	-	30.2
	1950	199.4	15.0	52.8	31.8
	1960	198.8	15.0	40.2	37.2
	1970	197.1	17.3	9.3	45.0
Atlanta	1940	34.7	16.9	-	34.6
	1950	36.9	18.9	100.0	36.6
	1960	128.2	35.2	81.5	38.3
	1970	131.5	59.4	93.7	51.3
St. Louis	1940	61.0	15.8	-	13.3
	1950	61.0	16.8	100.0	17.9
	1960	61.0	24.1	100.0	28.6
	1970	61.2	31.4	92.6	40.9
Memphis	1940	45.6	32.7	-	41.5
	1950	104.2	40.3	100.0	37.0
	1960	128.2	41.9	98.8	37.0
	1970	217.4	42.8	90.5	38.9
Dallas	1940	40.6	11.8	-	17.1
	1950	112.0	13.3	76.2	13.1
	1960	279.9	13.3	33.2	19.0
	1970	265.6	26.3	33.1	24.9

TABLE 9
(continued)

City	Year	Land Area of City	Land Area of Sector(s)	Per Cent of City Black Growth Occurring within Sector During Previous Ten Years	Per Cent Black City Population
Newark	1940	23.6	2.0	-	10.6
	1950	23.6	2.4	65.0	17.3
	1960	23.6	4.0	60.7	34.1
	1970	23.5	4.2	80.0	54.2
Indianapolis	1940	53.6	11.6	-	13.2
	1950	55.1	11.9	62.9	14.9
	1960	71.2	12.8	50.1	20.6
	1970	379.4	16.3	6.4	18.0
Birmingham	1940	50.2	34.2	-	40.7
	1950	65.3	36.3	65.4	39.9
	1960	74.5	38.3	49.2	39.6
	1970	79.5	41.5	100.0*	42.0
Cincinnati	1940	72.4	6.5	-	12.2
	1950	75.1	6.8	84.2	15.5
	1960	77.3	6.8	0	21.6
	1970	78.1	8.0	0	27.6
Oakland	1940	52.8	0.3	-	2.8
	1950	53.0	0.3	13.0	12.4
	1960	53.0	0.3	0	22.8
	1970	53.4	0.3	0	34.5
Jacksonville	1940	30.2	20.0	-	35.7
	1950	30.2	20.0	100.0	35.6
	1960	30.2	20.0	96.0	41.1
	1970	766.0	30.4	92.7	22.3
Kansas City	1940	58.6	6.2	-	10.4
	1950	80.6	8.5	100.0	12.2
	1960	129.8	16.1	100.0	17.5
	1970	316.3	36.0	98.6	22.1

TABLE 9
(continued)

City	Year	Land Area of City	Land Area of Sector(s)	Per Cent of City Black Growth Occurring within Sector During Previous Ten Years	Per Cent Black City Population
Milwaukee	1940	43.4	2.2	-	1.5
	1950	50.0	2.2	84.0	3.4
	1960	91.1	4.6	57.6	8.4
	1970	95.5	7.8	59.8	14.7
Pittsburgh	1940	52.1	3.7	-	9.3
	1950	54.2	3.9	60.5	12.2
	1960	54.1	4.3	0	16.7
	1970	55.2	4.7	0	20.2
Richmond	1940	21.4	13.8	-	31.7
	1950	37.1	15.1	72.0	31.7
	1960	37.0	15.6	100.0	41.8
	1970	60.3	16.6	81.5	41.9
Boston	1940	46.1	1.8	-	3.1
	1950	47.8	1.8	56.2	5.0
	1960	47.8	2.1	0	9.1
	1970	46.0	3.3	2.7	16.3

TABLE 10

REVISED 1950 SECTORS

City	Year	Land Area of City	Land Area of Sector(s)	Per Cent of City Black Growth Occurring within Sector During Previous Ten Years	Per Cent Black City Population
New York	1950	315.1	25.9	-	9.4
	1960	315.1	32.5	32.4	14.0
	1970	299.7	37.7	35.3	21.2
Chicago	1950	207.5	41.8	-	13.6
	1960	224.2	53.2	83.4	22.9
	1970	222.6	67.5	67.8	32.7
Detroit	1950	139.6	27.1	-	16.2
	1960	139.6	37.6	15.8	28.9
	1970	138.0	43.5	28.6	43.7
Philadelphia	1950	127.2	20.4	-	18.1
	1960	127.2	22.7	56.7	26.4
	1970	128.5	26.7	6.5	33.6
Washington	1950	61.4	25.0	-	35.0
	1960	61.4	30.2	72.9	53.9
	1970	61.4	41.4	53.5	71.1
Los Angeles	1950	450.9	19.4	-	8.7
	1960	454.8	27.4	49.2	13.5
	1970	463.7	31.3	48.2	17.9
Baltimore	1950	78.7	14.2	-	23.7
	1960	79.0	24.2	91.0	34.7
	1970	78.3	34.5	78.5	46.4
Houston	1950	160.0	38.1	-	21.0
	1960	328.1	43.1	46.0	22.9
	1970	433.9	58.9	61.5	25.7
Cleveland	1950	75.0	11.6	-	16.1
	1960	75.0	12.2	28.2	28.6
	1970	75.9	12.9	0	38.3

TABLE 10
(continued)

City	Year	Land Area of City	Land Area of Sector(s)	Per Cent of City Black Growth Occurring within Sector During Previous Ten Years	Per Cent Black City Population
New Orleans	1950	199.4	20.9	-	31.8
	1960	198.8	20.9	78.0	37.2
	1970	197.1	23.8	26.8	45.0
Dallas	1950	112.0	14.4	-	13.1
	1960	279.9	16.7	49.5	19.0
	1970	265.6	44.0	79.5	24.9
Newark	1950	23.6	5.1	-	17.3
	1960	23.6	7.7	93.5	34.1
	1970	23.5	7.9	94.5	54.2
Indianapolis	1950	55.2	14.6	-	14.9
	1960	71.2	15.7	57.6	20.6
	1970	379.4	19.2	12.9	18.0
Birmingham	1950	65.3	38.3	-	39.9
	1960	74.5	40.3	39.7	39.6
	1970	78.1	43.5	84.2*	42.0
Cincinnati	1950	75.1	7.2	-	15.5
	1960	77.3	7.7	0.5	21.6
	1970	78.1	8.9	0	27.6
Oakland	1950	53.0	6.3	-	12.4
	1960	53.0	6.3	22.9	22.8
	1970	53.4	6.3	0	34.5
Milwaukee	1950	50.0	2.5	-	3.4
	1960	91.1	6.6	75.7	8.4
	1970	95.0	9.9	72.2	14.7

TABLE 11

REVISED 1960 SECTORS

City	Year	Land Area of City	Land Area of Sector(s)	Per Cent of City Black Growth Occurring within Sector During Previous Ten Years	Per Cent Black City Population
New York	1960	315.1	53.8	-	14.0
	1970	299.7	63.4	55.0	21.2
Chicago	1960	224.2	64.1	-	22.9
	1970	222.6	81.1	94.8	32.7
Detroit	1960	139.6	61.0	-	28.9
	1970	138.0	74.7	94.9	43.7
Philadelphia	1960	127.2	35.6	-	26.4
	1970	128.5	41.1	72.7	33.6
Washington	1960	61.4	32.8	-	53.9
	1970	61.4	42.8	54.4	71.1
Los Angeles	1960	454.8	40.6	-	13.5
	1970	463.7	44.8	86.2	17.9
Baltimore	1960	79.0	27.9	-	34.7
	1970	78.3	39.0	85.8	46.4
Houston	1960	328.1	59.2	-	22.9
	1970	433.9	72.9	80.2	25.7
Cleveland	1960	75.0	22.0	-	28.6
	1970	75.9	23.3	53.5	38.3
New Orleans	1960	198.8	29.2	-	37.2
	1970	197.1	31.1	52.3	45.0
Dallas	1960	279.9	30.8	-	19.0
	1970	265.6	58.1	91.1	24.9
Newark	1960	23.6	8.2	-	34.1
	1970	23.5	8.4	94.1	54.2

TABLE 11
(continued)

City	Year	Land Area of City	Land Area of Sector(s)	Per Cent of City Black Growth Occurring within Sector During Previous Ten Years	Per Cent Black City Population
Indianapolis	1960	71.2	16.4	-	20.6
	1970	379.4	19.9	28.9	18.0
Cincinnati	1960	77.3	16.2	-	21.6
	1970	78.1	17.0	0	27.6
Oakland	1960	53.0	12.0	-	22.8
	1970	53.4	12.5	10.5	34.5
Milwaukee	1960	91.1	7.9	-	8.4
	1970	95.0	11.2	93.1	14.7
Pittsburgh	1960	54.1	7.9	-	16.7
	1970	55.2	8.3	0	20.2
Boston	1960	47.8	4.7	-	9.1
	1970	46.0	6.0	53.8	16.3

TABLE 12

PER CENT OF BLACK POPULATION GROWTH WITHIN PREDICTED SECTORS

City	Original 1940 Sector or Sectors 1940-1950	Original 1940 Sector or Sectors 1950-1960	Original 1940 Sector or Sectors 1960-1970	Revised 1950 Sector or Sectors 1950-1960	Revised 1950 Sector or Sectors 1960-1970	Revised 1960 Sector or Sectors 1960-1970
New York	59.0	20.0	20.7	32.4	35.3	55.0
Chicago	69.2	36.7	36.6	83.4	67.8	94.8
Detroit	71.1	12.5	27.8	15.8	28.6	94.9
Philadelphia	79.6	48.1	1.6	56.7	6.5	72.7
Washington	77.9	60.8	48.5	72.9	53.5	54.4
Los Angeles	57.4	40.4	33.1	49.2	48.2	86.2
Baltimore	76.4	82.4	75.1	91.0	78.5	85.8
Houston	53.0	35.9	56.7	46.0	61.5	80.2
Cleveland	48.5	0	0	28.2	0	53.5
New Orleans	52.8	40.2	9.3	78.0	26.8	52.3
Atlanta	100.0	81.5	93.7	-	-	-
St. Louis	100.0	100.0	92.6	-	-	-

TABLE 12
(continued)

City	Original 1940 Sector or Sectors 1940-1950	Original 1940 Sector or Sectors 1950-1960	Original 1940 Sector or Sectors 1960-1970	Revised 1950 Sector or Sectors 1950-1960	Revised 1950 Sector or Sectors 1960-1970	Revised 1960 Sector or Sectors 1960-1970
Memphis	100.0	98.8	90.5	0	0	0
Dallas	76.2	33.2	33.1	49.5	79.5	91.1
Newark	65.0	60.7	80.0	93.5	94.5	94.1
Indianapolis	62.9	50.1	6.4	57.6	12.9	28.9
Birmingham	65.4	49.2	100.0*	39.7	84.5*	0
Cincinnati	84.2	0	0	0.5	0	0
Oakland	13.0	0	0	22.9	0	10.5
Jacksonville	100.0	96.0	92.7	-	-	-
Kansas City	100.0	100.0	98.6	-	-	-
Milwaukee	84.0	57.6	59.8	75.7	72.2	93.1
Pittsburgh	60.5	0	0	-	-	0
Richmond	72.0	100.0	81.5	-	-	-
Boston	56.2	0	2.7	-	-	53.8

TABLE 12
(continued)

City	Original 1940 Sector or Sectors 1940-1950	Original 1940 Sector or Sectors 1950-1960	Original 1940 Sector or Sectors 1960-1970	Revised 1950 Sector or Sectors 1950-1960	Revised 1950 Sector or Sectors 1960-1970	Revised 1960 Sector or Sectors 1960-1970
Mean Score	67.3	39.9	36.4	53.6	45.5	71.8
N =	25	25	24	17	16	18
Mean Score Latest Sector Revisions				56.5	48.8	73.6
N =				25	24	24

*Index score derived from two negative scores. See text for interpretation.

the differences in the scores of the original and the revised sector schemes for a given city during the same decade in cases in which the drawing of a revised sector scheme was needed.

The sector growth conformity scores for the 25 cities in the sample are presented in Table 12. The first three columns present the results obtained by using the original 1940 sector or sectors for each city for the 1940's, 1950's, and 1960's, respectively. The next two columns contain the scores derived from using the revised 1950 sector schemes that were required in 17 of the cases because of lateral or other nonconforming black neighborhood growth. The last column contains the scores for the period 1960-1970 obtained by using a second widening or revision of sectors based on continued nonconforming growth revealed by the 1960 racial block map. This was necessary in 18 cases.

Inspection of the first column in Table 12 reveals a generally high level of black population growth within the predicted sectors in the cities of the sample between 1940 and 1950. The mean score for the entire sample was 67.3 per cent of the decade's black growth falling inside of the sectors. The scores ranged from a low of 13.0 in Oakland to 100.0 per cent in five cities. Only one other city besides Oakland had a score below 50, and the median for the sample was 71.1. The city-by-city discussion of sector growth in Chapter VI includes local conditions anticipated in the model that may significantly lower the score in a given city. These include violations of basic assumptions in the model and physical or social barriers to outward sector growth. For example, Chapter VI includes those factors that appear to have been largely responsible for the low scores in Oakland and Cleveland during the 1940's and subsequent decades in the discussions of those two cities.

The high scores for the 1940-1950 period reflect the special conditions during and after World War II. The extremely tight housing market affected blacks, the victims of universal discrimination, even more than the general population. The large black increases in most of the cities in this sample were mainly in and near the black zones that existed in 1940. With crowding rather than ghetto expansion the order of the day, there was little lateral or other non-sector black neighborhood growth. Although physical expansion of most ghettos was slight during the 1940's, most of that decade's black growth in the 25 cities fell within the sectors drawn on the basis of the 1940 racial block maps. Furthermore, many of the cases that produced low scores between 1940 and 1950 also contained conditions which the model predicted would tend to distort or otherwise lessen sector growth.

The sectors defined using the 1940 racial block maps produced considerably poorer results between 1950 and 1960 in the sample as a whole. Rapid black growth imposed on very narrow sectors, resistant ethnic areas in the path of ghetto expansion, and other factors listed in the model helped produce lower levels of sector conformity in most of the cities in the sample. The mean score for the entire sample dropped to 39.9 per cent for the decade of the 1950's. Scores ranged from 0.0 in five cities to 100.0 per cent in three. The median score was 48.1 per cent of the black increase falling within the sectors. The 1950's were a major period of black population growth in the cities of the sample. Twenty-one of the 25 cities had larger numerical black increases between 1950 and 1960 than during the previous decade. The 1950's were the period when the swollen, compact ghettos of the war years received so many new black residents that they expanded into adjacent, less crowded white areas on a large

scale. The superimposing of such rapid black growth on narrow 1940 sectors was a major factor in the overall decline in sector growth as a percentage of overall black increase in these cities during the 1950's.

For this reason the percentage of black growth that fell inside the 1940 sectors between 1960 and 1970 was also quite low. However, the mean sample score of 36.4 per cent was not much lower than the score from the previous decade. The scores for the individual cities for the 1960's ranged from zero to 98.6 per cent, with a median of 33.1. The 100.0 per cent index figure for Birmingham cannot be interpreted in the same manner as the others because it was derived from the division of a negative value by another negative number. The interpretation of the entire 1960-1970 black population loss in Birmingham falling within the sectors is taken up in the detailed discussion of that city in Chapter VI.

Widened sets of sectors were drawn up for 17 of the sample cities based on the 1950 racial block maps because of lateral ghetto spread, the development of new, separate black zones and other trends that did not conform to the original 1940 sectors. However, these 1950 revised sectors were really not that much wider than the 1940 sectors, and their scores were not very high because of the large amount of nonconforming black neighborhood growth that took place during the 1950's. The mean 1950-1960 sector conformity score for the 17 cities with 1950 revised sectors was 53.6. The mean score for all 25 cities, using the revised sectors in the 17 in which they were needed, was 56.5 per cent. For the decade of the 1960's, the cities with 1950 revised sectors had a mean score of 45.5. The mean score for these and the eight cities that did not need 1950 revised sectors was 48.8. Birmingham was deleted from the 1960-1970 calculations because of the above-mentioned problem of intepreting a score

computed from two negative quantities.

The use of 1950 revised sectors where needed raised the mean sector growth scores for the 1950's and the 1960's. In the 1950-1960 period, using original 1940 sectors yielded a mean score of 39.9. Inserting the wider 1950 sectors where needed raised the mean for the decade to 56.5. Similarly, the mean score for 1940 sectors was 36.4 between 1960 and 1970. Use of the 1950 revised sectors where necessary raised the mean to 48.8 per cent sector conformity during that period.

Because of the changes in black housing patterns in many of the sample cities during the 1950's, 1960 revised sectors were drawn for 18 of them. The results, using these new sectors for the 1960-1970 period, were highly satisfactory. Unlike the 1950's when widespread lateral growth, formation of new ghettos and other nonsector black growth were common, the 1960's was a time when most of the black increase consisted of outward movement within the sectors defined by the black housing pattern at the start of the decade. The 18 cities for which 1960 revised sectors were drawn had a mean sector conformity score of 71.8 per cent of their 1960-1970 black growth. The 1960-1970 mean score for the sample was a whole--18 cities with 1960 revised sectors and the others that did not need 1960 sector revision--was 73.6 per cent of all of the decade's black increase falling within the sectors. Once again, this is the mean score for 24 cities, with Birmingham left out because of the interpretation problem concerning its 1960-1970 score.

The 1960-1970 mean sample score of 73.6 per cent of the decade's black growth occurring within the sectors predicted by the model is impressive in its own right. When the impediments to sector growth anticipated in the model are also considered, this score seems even more notable.

The presence of resistant white ethnic areas, physical barriers to sector growth and other factors listed as modifications of the model lowered 1960-1970 conformity scores in a number of cities. Without these hindrances, the 1960 revised sectors and the earlier sectors that needed no modifications would have accounted for more than 73.6 per cent of the overall sample's net black increase.

Tables 9, 10, and 11 contain additional information on the 1940, revised 1950, and revised 1960 sectors, respectively. The most important statistics on these tables are the city land areas and sector land areas. These tables show how small the sectors are, in most cases, in comparison with the overall land area of the city in question at the time of a particular census. There are not many cases in which the land covered by sectors is more than one-half of the total city land area. Even in many cases where sector growth is low, it is often so that far more black growth has fallen within the sectors than would have been expected on the basis of their small size. These three tables form the principal argument that most of the black growth in the sample cities has not occurred randomly and that the intercensal sector growth conformity scores are significant. The nearly perfect sector growth in Kansas City took place within an area that never exceeded one-sixth of the city's incorporated territory.

While a detailed examination of the results of the application of the sector model to all of the cities in the sample would necessarily take up scores of pages, there are valid reasons for making the effort. These 25 cities represent the major regions of the nation and vary considerably in total population size and per cent black. Many of the cities required the drawing of revised sectors in 1950 and 1960. The low sector scores in some cases suggest that a search for some of the conditions

anticipated in the model as causes of nonconforming ghetto growth be undertaken. The presence of stable white ethnic areas in the path of black neighborhood expansions is an important impediment to such growth, according to the model. These neighborhoods, to be discussed in detail in Chapter VIII, will be noted in the cities in which they distort the normal outward expansion of black zones. The presence of one or another of the impediments to black sector expansion contained in the model in a city with a low sector conformity score for a given decade would be further evidence in support of the model.

CHAPTER VI

ANALYSIS OF INDIVIDUAL CASES

This chapter should be read in conjunction with the examination of maps 1 through 108. These 108 maps cover the 25 cities for each census from 1940 through 1970. Because of the size of the city and the complexity of the racial housing pattern, New York was divided into three parts. The first four New York maps cover the Bronx and Manhattan from 1940 to 1970. The next four cover Brooklyn and the last four are maps of Queens. The black population of Staten Island was too small to be of significance for this study, therefore no maps of that borough were included.

The dark, solid shading on each map represents the patterns of blocks in the city in question in which a majority of the housing units were black occupied. This information was drawn from the census city block reports and census tract statistics. More specific methodology can be found in Appendix A. Although footnoting of census sources has been left out to enhance the readability of the discussion, each tract and block report used is listed in the bibliography.

The dotted shading pattern on some of the maps represents portions of the 1970 land area of the city that had not been annexed by the time of the census in question. For example, the 1940 Houston map has a very large spotted area surrounding the comparatively small 1940 corporate limits. Some cities had portions of territory that extended quite far from the center of the city and have no significant black population. To keep the scale of the maps large enough, such areas that extend beyond the borders

permissable for maps on the pages have been deleted. Examples include O'Hare Airport in Chicago and the outlying portion of the huge, post-1960 annexations by Indianapolis and Jacksonville. Major deletions are indicated by dotted lines along the border of the map rather than the solid lines that form the corporate boundaries lying entirely within it. Appendix C lists the scale of each set of maps. Arrows indicate north on maps that could not be conventionally aligned because of the shape of the city.

Finally, the sets of maps are in descending order of 1970 city black population numerical size.

New York City

Throughout the time span under consideration in this study, New York City contained the largest black population of any city in the United States. Besides being the largest black population center, New York was also notable for having one of the more complex black housing patterns in urban America. By 1960 the city had four major ghettos, each in a different borough, as well as lesser black concentrations in other localities.

Because of the emergence of major new black areas after 1940 and lateral spread of existing ghettos, the sector pattern chosen for analysis on the basis of the 1940 racial block map proved inadequate in predicting much of the subsequent black neighborhood growth. A revised set of sectors had to be drawn up based on the 1950 map, and a second revision was needed after 1960. The original sector scheme contained three zones of probable black expansion. The 1950 revision widened these three somewhat and added two others because of the growth of new black neighborhoods in other parts of the city. The second revision, based on the 1960 pattern of predominantly black blocks, contained seven sectors. Times Square was chosen as

the center of the city for the purpose of drawing lines to define the widths of the various sectors.

In 1940, New York had 458,444 black residents who comprised 6.1 per cent of the city's total population. About 298,000 blacks lived in the borough of Manhattan, around 107,000 in Brooklyn, 25,000 in Queens, and 23,000 in the Bronx. Sector 40-1 comprised central Harlem, the most populous black area in the city at the time. Sector 40-2 was located in southeastern Queens, and sector 40-3 comprised the Brooklyn ghetto and its environs. This black zone was in the Bedford-Stuyvesant area, but most of the blocks in that district were still predominantly white in 1940. At this time the South Bronx population was too scattered to warrant defining a sector of probable black expansion in that area. There were very few predominantly black blocks there in 1940.

In 1950 the New York black population was 747,608 and was 9.4 per cent of the city total. Analysis of tract data revealed that 59.0 per cent of the 1940-1950 black population increase occurred within the three sectors. In 1950 these sectors combined only covered about 5 per cent of the land area of New York City. The territorial increase of the predominantly black zones in the city was not very great in the 1940's, a result of the wartime housing shortage. This was the case during the 1940's in most of the 25 cities in this sample. The three areas covered by the sectors defined in 1940 increased in population and underwent some lateral expansion, indicating the possible need to draw revised, wider sectors based on the changed pattern. The borough populations were approximately as follows: Manhattan, 384,000; Brooklyn, 208,000; the Bronx, 97,000; Queens, 51,000; and Staten Island, 5,000. The quadrupling of the Bronx black population and the doubling of that in Queens created two new black

areas not covered in the original sector scheme drawn up in 1940, but worthy of study. The first was in the South Bronx below Crotona Park, and the second was in the East Elmhurst district of northern Queens.

Because of the above mentioned changes in the black housing pattern that appeared in 1950 and failed to conform to the sector model, a revised sector pattern was set up to be tested with the 1960 data along with, of course, the original 1940 scheme of the three narrower sectors. The three original sectors in Harlem, South Jamaica and Brooklyn were slightly widened as dictated by the lateral spread of predominantly black blocks and designated sectors 50-1, 50-2 and 50-3, respectively, for the revised pattern. A sector numbered 50-4 was drawn for the South Bronx and another called 50-5 for the East Elmhurst black district.

During the 1950's the black population increased by an even larger number than during the previous decade. New York's black population was 1,087,931 in 1960 and was 14.0 per cent of the city total. Existing black areas expanded according to the sector predictions, but some of them also experienced lateral growth and some new black population centers appeared. Analysis showed that the 1940 sector pattern was only able to account for 20.0 per cent of the decade's black increase. The wider and more numerous 1950 revised sectors still only contained 32.4 per cent of the city's 1950-1960 net black increase. An examination of the 1960 black housing pattern shows why these results were obtained and why a second revision of the sectors of probable black neighborhood growth was advisable.

Neither the Harlem nor South Bronx sectors underwent any lateral expansion during the 1950's. In fact, the Harlem sector's black population declined somewhat. The Brooklyn sector had considerable sector growth and some lateral growth. Both Queens ghettos had much sector growth and

significant lateral spread. The black populations of the four principal boroughs were as follows in 1960: Manhattan, 397,000; Brooklyn, 371,000; The Bronx, 163,000; and Queens, 145,000. The needed 1960 sector revision was made by widening the South Jamaica, Bedford-Stuyvesant and East Elmhurst sectors and renumbering them 60-2, 60-3 and 60-5, respectively. The Manhattan and South Bronx sectors did not need to be widened. One new sector was drawn in the North Bronx and designated 60-6. Another new sector was drawn around the predominantly black Red Hook housing project in Brooklyn and named 60-7.

Between 1960 and 1970 New York had the largest black increase of any American city in any decade. The 580,000 new black residents raised the citywide 1970 black population to 1,668,115 or 21.2 per cent of the total. The Bedford-Stuyvesant and South Jamaica black areas expanded greatly during the 1960's. Sector growth was quite evident here and in other parts of the city, but lateral spread and other nonconforming distributions were also in evidence. The original, highly inadequate set of 1940 sectors was only able to account for 20.7 per cent of the 1960-1970 black increase. The somewhat wider and more numerous 1950 revised sectors contained 35.3 per cent of the decennial increase. The 1960 revised set of seven sectors was able to account for 55.0 per cent of the black growth during the 1960's. While this is not an extremely high figure, the tracts in the 1960 revised sectors covered only about one-fifth of the city's land area in 1970. The black populations of the four main boroughs in 1970 were: Manhattan, 380,000; Brooklyn, 655,000; the Bronx, 357,000; and Queens, 258,000. Manhattan had a small net loss, and Brooklyn surged into first place in terms of black population during the 1960's. Although the black population of the Bronx more than doubled during the 1960's, it did not

contribute as much to a high sector growth figure as might have been expected. The Bronx is unique among the boroughs of New York City in that the Latin population is actually slightly larger than the black population, and the two groups are less segregated than in the other three main boroughs. Ethnic change in the Bronx has frequently taken place with majority-group whites being replaced by a stable mixture in which Latins are a slight majority and the remainder of the population is black. Since the methodology of charting the expansion of sectors in this study calls for observing the outward growth of areas of predominantly black blocks, the diffuse distribution of blacks in the western half of the Bronx obscures a large amount of change. The pattern of predominantly black blocks in the South Bronx remained almost identical between 1960 and 1970, obscuring the fact that a combined black-Hispanic ghetto had spread north of Crotona Park and that significant population turnover had taken place.

Sociocultural areas were not a major obstacle to black growth in New York. The only large-scale white ethnic zone in the path of a major ghetto was the Brownsville Russian Jewish community. As expected on the basis of this writer's earlier analysis of ethnic neighborhoods in Detroit, this area proved no obstacle to the rapidly-growing main Brooklyn ghetto. Among natural physical barriers to black expansion only the Harlem River needs to be mentioned. Without this barricade, the Harlem ghetto would probably have expanded into the Highbridge and Grand Concourse areas of the Bronx. With the river as an impediment, the Harlem black population declined during the 1950's and 1960's. The Bronx neighborhood across the river remained mostly white until the black and Hispanic ghetto in the South Bronx expanded westward to absorb it during the 1960's and 1970's.

New York is unique among American cities in its great size, the high

population density of many of its neighborhoods and in many other of its characteristics. Unlike many other cities, no single New York ghetto contains a majority of the black population. New York is also unique in that it has a huge Hispanic population that in some parts of the city is quite thoroughly interspersed with the black community. The 1940 and 1950 revised sectors proved to have little value in predicting the areas in which most of the black increase occurred between 1950 and 1970. The 1960 revised set of seven sectors contained 55 per cent of the net black increase in the city between 1960 and 1970. In spite of the fact that the residential intermingling of the black and Latin populations may distort the process of sector growth somewhat, this writer believes that the 1960 revised sectors will probably still be useful in predicting where much of the black increase in the city between 1970 and 1980 will be found.

Chicago

The geography and racial housing pattern of Chicago are considerably less complex than those in New York. The city of Chicago is crisscrossed by a highly regular grid pattern of streets, and the Chicago River is the only really important natural barrier within the city. Although there are a number of distinct black areas in Chicago, the overwhelming majority of the city's blacks have always lived in the large South Side ghetto. More recently, a second large black zone has developed from the merger of three separate black areas on the West Side.

In 1940, Chicago had 277,731 black residents. They comprised 8.1 per cent of the city's total population. The major feature of black geography in the city was the South Side ghetto, which stretched from south of the Loop to below 63rd Street, between Wentworth and Cottage Grove Avenues. More than four-fifths of the city black population lived here. The 1940

sector pattern contained five distinct areas. Sector 40-1 was a black area stretching along Lake Street for two miles on the near West Side; 40-2 was a smaller black district on the near North Side. The great South Side ghetto was designated 40-3. A black neighborhood in the Morgan Park area was placed in a sector numbered 40-4. Sector 40-5 covered a narrow strip south of Roosevelt Road on the near West Side. The intersection of State and Madison was designated the center of the city for the purpose of drawing sectors.

During the 1940's the black population of Chicago rose to 492,265 or 13.6 per cent of the overall city population. Because of the acute housing shortage during the 1940's and the pervasive discrimination in the Chicago area, most of this large black increase took place within the area of the 1940 ghettos. It requires a careful examination of the 1940 and 1950 racial block maps to see the small increases in size that the Chicago black districts underwent during the 1940's. Analysis of the census tracts within the sectors defined in 1940 shows that 69.2 per cent of the 1940-1950 net black increase in the city occurred in the five sectors. Since there was some lateral growth around most of the five principal black zones and some new black centers had developed during the 1940's, a revised set of sectors was drawn up based on the 1950 pattern of predominantly black blocks. All of the original five sectors had to be widened slightly, and four new ones were added. Sector 50-6 was in the Lilydale area, a separate black center than had developed at 95th Street and State. Sector 50-7 was the Altgeld Gardens housing project near the southern edge of the city. Sector 50-8 was drawn around a black pocket in the Englewood area north of Ogden Park. The last sector, 50-9, was in the North Lawndale area of the West Side.

The 1950's witnessed the largest numerical increase in black population ever to occur in the city of Chicago. The black population was 812,637 in 1960, or 22.9 per cent of the total population. Only 36.7 per cent of the decennial net increase fell within the original 1940 sectors, but the revised 1950 sectors accounted for 83.4 per cent of that growth. With the exception of some lateral spread, Chicago's black areas comprised a very good example of expansion outward within sectors, during the 1950's. The immediate period after the Second World War was one of confinement in small, crowded ghettos; now the black population expanded outward and occupied much more land and better, lower density neighborhoods. The principal South Side black zone expanded southward and merged with the previously separate Lilydale community. This huge ghetto was more than ten miles long and up to four miles wide at one point. It contained more than 500,000 black residents. The North Lawndale, Lake Street and Roosevelt Road ghettos had almost merged by 1960 and jointly contained more than 200,000 black residents. Even the small, near North ghetto had expanded outward slightly. There was no change in the area of the sectors covering Morgan Park and Altgeld Gardens.

Despite the good performance of the revised 1950 sector scheme in 1960, it was necessary to draw up a second revision based on the lateral spread of some black zones during the 1960's. The principal South Side sector had to be widened because of its lateral spread and merger with the smaller Englewood sector. The Englewood and Lilydale areas were deleted as separate sectors because they were absorbed by the main sector. Most of the other sectors were widened slightly, with the exception of the Morgan Park and Altgeld Gardens sectors, which were left unaltered from the 1950 revised pattern and merely redesignated 60-5 and 60-7, respectively. One entirely new sector, 60-10, was drawn around the LeClaire Courts housing project noth of 47th Street and west of Circero Avenue.

During the 1960's the black population of Chicago grew almost as much as it did during the previous ten years, and the land area of the ghettos continued to expand rapidly. Blacks comprised 32.7 per cent of the total population in 1970, and 1,102,620 of them were counted in that year's census. The narrow, original 1940 sectors contained 36.6 per cent of the decennial black increase. The wider and more numerous 1950 revised sectors accounted for 67.8 of the 1960-1970 black growth. The further revised 1960 sectors contained 94.8 per cent of the increase in the city black population. This very high figure shows that during the period between 1960 and 1970 an extremely high percentage of the city's net black increase occurred within the sectors in which it was predicted, and a comparison of the 1960 and 1970 racial block maps confirms the pronounced outward spread, marred by almost no lateral or other nonconforming growth. Although the 1960 revised sectors covered more than 80 square miles in 1970, this was still less than two-fifths of Chicago's land area. The dimensions of the two largest black zones were impressive in 1970. The South Side ghetto extended from south of the Loop to the city limits at 119th Street and was more than five miles wide at one point. This huge black community had more than 700,000 residents--a major city in its own right. The West Side black zone was small only in comparison with the great South Side district. The West Side black area stretched from west of the Loop to Laramie Avenue, only one-half mile from the west city limits. The West Side sectors had more than 225,000 black residents in 1970. The small North Side, Altgeld Gardens and LeClaire Courts sectors grew somewhat during the 1960's. The Morgan Park ghetto merged with the main South Side black zone, which had absorbed the remaining white neighborhoods separating them during the 1960's.

In summary, Chicago is a much more pronounced case of sector growth

than New York. On the racial block maps for 1940, 1950, 1960 and 1970 the tendency of black neighborhoods to expand outward within sectors is graphically evident. At the more rigorous level of drawing sectors and counting people in census tracts, there were problems with lateral growth of some black areas in the 1940's, and especially in the 1950's. However, the revised set of sectors drawn on the basis of the 1960 pattern of predominantly black blocks gave very good results using the 1970 census tract data. Based on his observation of Chicago neighborhoods during the 1970's, this writer feels that most of the net black increase in Chicago during the 1970's will fall within the revised 1960 sectors.

Natural barriers to sector growth were not important in Chicago, and there were very few of the type of white ethnic tract that is highly resistant to change in the sectors of probable black growth. There was one South Side neighborhood in the path of the advancing ghetto that remained mostly white while the surrounding areas changed. Hyde Park is that type of special neighborhood that seems to fit Firey's conception of a sociocultural area. With the University of Chicago as an anchor and with the cooperation of the city government, Hyde Park has continued to attract a predominantly white, middle class population. While it has a large black minority, Hyde Park has not changed totally like areas to the south and west of it. While it is not important in terms of distorting the sector growth of the South Side black zone, Hyde Park does stand out an a unique neighborhood highly esteemed by its residents, like Firey's example of Beacon Hill in Boston.

Detroit

Detroit is quite similar to Chicago in many respects, although the process of racial change is taking place at a more rapid rate in the Michigan city. In 1940 Detroit had 149,119 black residents who made up 9.2

per cent of the total population. The main black area was a narrow belt stretching between the river and Grand Boulevard, east of Woodward Avenue. This ghetto contained over one-half of the city black population in 1940. This ghetto and the Oakland Avenue black area just to the north jointly accounted for more than two-thirds of the total city black population. There were several lesser black concentrations in different parts of the city on both sides of Woodward. Five black areas were important enough in 1940 to have sectors drawn for them. Sector 40-1 was drawn around a West Side black enclave southwest of Grand River Avenue and below Tireman Road. The main ghetto was designated 40-2 and the Oakland Avenue area 40-3. An isolated black area along Wyoming Avenue south of Eight Mile Road was numbered 40-4, and a northeastern neighborhood just north of the suburb of Hamtramck was defined as sector 40-5. The intersection of Woodward and Michigan Avenues was chosen as the center of downtown Detroit for the purpose of drawing sectors.

The black population of Detroit doubled between 1940 and 1950. There were 300,506 black Detroiters in 1950, and they comprised 16.2 per cent of the city total. As was the case in Chicago during the same period, the pattern of predominantly black blocks in Detroit was not greatly changed between 1940 and 1950. The ghettos grew slightly at their edges, but most of the large 1940's increase was absorbed by crowding the newcomers into existing black neighborhoods. The sectors of probable black expansion absorbed 71.1 per cent of the decade's black increase. Because of the tight housing market and overall racial discrimination, there was little change in the black housing patterns of Detroit or the other cities in the sample during the 1940's. Most of the increase in a city's black population during the decade was restricted to the sector or sectors drawn on the basis

of the 1940 black housing pattern.

Because there was a slight amount of lateral expansion in most of the Detroit black zones covered by sectors, it was necessary to draw up a revised set of 1950 sectors that would be tested on subsequent census data along with the 1940 sectors. Three of the five sectors were slightly widened, while the Oakland Avenue and Eight Mile Road sectors were left unchanged and merely redesignated 50-3 and 50-4, respectively.

During the 1950's, the black population of Detroit received even a larger numerical increase than it had in the previous decade, and the land area occupied by black neighborhoods increased dramatically. The black population was 482,223 in 1960 and comprised a substantial 28.9 per cent of the city's total population. Both the 1940 sectors and the set of 1950 sectors were totally inadequate in terms of predicting where the black growth during the 1950's would be. The former only contained 12.5 per cent of the decennial increase, while the revised sectors accounted for 15.8 per cent. The reason for this poor showing was the huge black increase west of Woodward Avenue. In 1960, over one-half of the city black population lived there, a dramatic shift from the long-term primacy of the East Side black areas. In 1960 Detroit's central residential areas comprised one large ghetto. The need for a second revision of the sectors of black expansion was extremely evident. Sectors 50-1, 50-2 and 50-3 were merged into a huge new sector called 60-2 and covering the wide angle roughly between West Michigan Avenue and East Jefferson Avenue. The other two sectors were slightly widened, and a new one, sector 60-6, was added. This sector covered the small black area in the southwesternmost part of the city, a product of the expansion of the black neighborhood covering parts of two suburbs, Ecorse and River Rouge.

During the 1960's the Detroit black community grew considerably both in numbers and in terms of the land area it occupied. The black population was 660,428 in 1970, and blacks were 43.7 per cent of the total population. Many square miles of neighborhoods became predominantly black, especially west of Woodward Avenue. As the previous decade's sector analysis results implied, the 1940 and 1950 sector schemes were not very effective for predicting the 1960's black growth locations. The score for the 1940 sectors was 27.8 per cent and that for the 1950 revised sectors was 28.6 per cent. However, the 1960 revised sectors yielded a score of 94.9--as high as the score for the Chicago 1960 revised sectors during the same period. The land area of the 1960 revised sectors in Detroit is admittedly quite high--61 square miles in 1960 and 75 square miles in 1970--but even the latter figure is just slightly over one-half of the city's total area.

The reasons for the massive shift in black growth from east of Woodward to areas west of that major street during the 1950's deserve some mention. Natural physical barriers were not important during the period under study, but sociocultural areas appear to have been. Polish neighborhoods in Detroit and the heavily Polish suburb of Hamtramck stood in the path of the outward growth of the main ghetto during the 1950's. Blocked by these resistant areas, most black neighborhood growth shifted to more receptive neighborhood west of Woodward. These were non-ethnic or Jewish areas, while the most exclusionary areas of the city were the East and West Side Polish enclaves. The blocking of major expansion of the main black area by the presence of the East Side Polish zone during the 1950's caused both the dramatic shift of black growth to the West Side and the low sector growth scores for the original 1940 sectors and the revised 1950 sectors. This is one of the best examples in this study of resistant sociocultural areas

distorting what would probably have otherwise been a fairly coherent process of black neighborhood expansion within a sector. A smaller but still interesting sociocultural area is Indian Village, on the East Side along Iroquois and Seminole, south of Mack. This island of old, upper class housing remained mostly white when the surrounding, less affluent neighborhoods became overwhelmingly black during the 1960's.

Philadelphia

Philadelphia had 250,880 black residents in 1940. They comprised 12.9 per cent of the city's population in that year, and most of them lived near the central part of the city. Four sectors were drawn, based on the 1940 pattern of predominantly black blocks. Sector 40-1 was in West Philadelphia, 40-2 was in North Philadelphia west of Broad Street, 40-3 was in North Philadelphia east of Broad Street, and sector 40-4 was south of the central business district. City Hall was chosen as the center of the city for the purpose of measuring sector growth.

In the ten years following the 1940 census, the black population of Philadelphia rose to 376,041. Blacks were 18.1 per cent of the city population in 1950. Because of the wartime crowding, Philadelphia's ghettos increased very little in land area between 1940 and 1950. There was some lateral spread of black neighborhoods, particularly in West Philadelphia, but 79.6 per cent of the net black increase during the 1940's fell within the four sectors drawn on the basis of the 1940 racial block map. There was enough nonconforming black neighborhood growth to warrant the drawing of a set of 1950 revised sectors. The West Philadelphia sector was widened somewhat, and the two North Philadelphia sectors were also widened slightly. No increase in width was needed for the South Philadelphia sector.

In 1960 the black population of Philadelphia was 529,240. Blacks

were 26.4 per cent of the city's population, and their neighborhoods began to expand significantly. The West Philadelphia black community experienced considerable lateral growth, and the two North Philadelphia ghettos merged. This meant that North Philadelphia contained a black zone which held nearly one-half of the city's huge black population. While the South Philadelphia black community actually had a small population loss during the 1950's, a new center or black population was developing at the same time near the northern city limits. The middle class Germantown area's black enclaves grew significantly during the 1950's and had thousands of black residents in 1960. Another black enclave in West Philadelphia along Woodland Avenue had also increased in size during the 1950's. The net result of these developments was that the sector scores for the 1940 and 1950 revised sector schemes were depressed somewhat by all of the nonconforming black neighborhood growth. The score for the original 1940 sectors was 48.1, and the 1950 revised sectors accounted for 56.7 per cent of the city's black growth during the 1950's.

Because of the inadequacy of the two sets of sectors discussed above. it was necessary to draw revised 1960 sectors using the racial block maps from the census of that year. The West Philadelphia sector was widened and redesignated 60-1. The huge North Philadephia ghetto was covered by a new sector, 60-2, replacing the two sectors in that part of the city used in the earlier schemes. The South Philadelphia sector needed no revision, but two narrow new sectors, 60-5 and 60-6, were drawn to cover the growing black enclaves in Germantown. A narrow sector was also drawn around the Woodland Avenue black area west of the Schuylkill River and numbered 60-7.

Philadelphia had 653,791 black residents in 1970, and they comprised 33.6 per cent of the city total. Black neighborhood growth was most evident

in Germantown and on the southern edge of the main West Philadelphia black zone. There was also some outward expansion at the northern end of the populous North Philadephia ghetto. The original 1940 sectors yielded a score of only 1.6 per cent of the black increase during the 1960's occuring within their boundaries. Only 6.5 per cent of the 1960-1970 black increase fell within the revised 1950 sectors. The 1960 revised sectors produced a much higher score, however. These six sectors jointly accounted for 72. 7 per cent of the decade's black increase. Most of the increase not in these sectors was in parts of Germantown not covered by sectors 60-5 and 60-6 and in West Philadelphia between sectors 60-1 and 60-7. The West Philadelphia and Woodland Avenue ghettos merged, filling the area between and not covered by their two sectors with many black residents.

There were some instances of sector growth being deflected by natural barriers and sociocultural areas in Philadelphia at various times. Cobbs Creek Park separates West Philadelphia from the suburbs and was probably responsible for the lateral spread of that ghetto in the 1950's and especially the 1960's. The black zone was expanding westward, but the park prevented further outward movement and racial change accelerated in the neighborhoods south of the ghetto. Highly stable and resistant sociocultural areas may have been even more important in distorting sector growth in Philadelphia than natural barriers were. A West Philadelphia Italian enclave appears to have served as a northern extension of the Cobbs Creek Park Barrier to West Philadelphia ghetto outward expansion. A much larger cluster of heavily Italian census tracts borders the South Philadelphia black community on its south edge. Since 1940 the South Philadelphia black zone's outward expansion has been practically nil. In fact, the black population has been declining slightly every census, after its peak

in 1950. That such a stable boundary could be maintained for at least thirty years in a city with a rapidly growing black population is a strong piece of evidence in support of Firey's concept of durable sociocultural areas.

Washington, D.C.

Washington, D.C. had 187,266 black residents in 1940. They comprised 28.2 per cent of the city population, and most of them lived in a number of neighborhoods near the central part of the city or in two black enclaves east of the Anacostia River. For this analysis, seven sectors were drawn up, using the 1940 racial block map. Sector 40-3 covered the large ghetto north of the central business district, which contained more than one-half of all the city's black residents. Sector 40-5 defined a sizable black area south of downtown, while 40-6 was east of the Anacostia River in Deanewood and sector 40-7 covered another ghetto farther south on the same side of the river. The District Building, or city hall, was used as the center of downtown Washington to create a reference point for drawing the sectors.

By 1950, the black population of Washington had risen to 280,803, or 35.0 per cent of the total population. As was the case with the four cities studied previously, the pattern of black housing changed only slightly between 1940 and 1950. When the 1940 sectors were analyzed using the 1950 tract data, the result was a finding that 77.9 per cent of the decennial black increase was inside the sectors. Because of some lateral spread of black areas, a set of 1950 revised sectors was drawn up for future reference. Three of the existing sectors were widened slightly, and an eighth, 50-8, was added southeast of the Capitol Building.

In 1960, Washington not only had a larger black population than it did ten years before; it had a black majority. The 411,737 black residents were

53.9 per cent of the city's total population. The large black area north of downtown grew outward, and its northern edge was near the north city limits. Most of the black enclaves present in 1950 east of the central business district grew and merged into one large black zone. Substantial black growth also took place in the two black communities east of the Anacostia River. By 1960, a majority of the residential areas in the city east of Rock Creek Park were predominantly black. The original 1940 sectors accounted for 60.8 per cent of the decade's black growth, while 72.9 per cent was contained in the revised 1950 sectors. The changes in the black housing pattern required the drawing up of new revised sectors, drawn in accordance with the 1960 racial block map. Sectors 50-1 and 50-2, representing small, near northwest black enclaves that were declining in population by 1960 were deleted. The large sector 50-3 was slightly altered, and three sectors south and east of downtown were merged to form sector 60-4. The two sectors east of the Anacostia River were left unaltered.

Between 1960 and 1970 black growth in Washington continued unabated. The black population was 537,712 in 1970 and represented 71.1 per cent of the total. All but a very few of the residential areas east of Rock Creek Park were predominantly black. Washington was the most heavily black major city in the United States, with ghettos stretching to the northeast and southeast city limits and racial change spreading into adjacent Prince Georges County, Maryland.

The analysis of the various sets of sectors revealed somewhat unimpressive results. The 1940 sectors contained 48.5 per cent of the black growth during the 1960's. However, the sectors covered nearly two-thirds of the city's land area in 1970. The 1950 revised sectors yielded a score of 53.5 per cent of the black growth within the sectors during the decade, but the

land area of these sectors was two-thirds of the city total. The 1960 revised sector score was 54.4, not much better, and its sectors covered more than two-thirds of the city's territory. The principal reason for the mediocre sector growth scores in 1970 was the lateral growth of the black zones east of the Anacostia River. Both the Deanewood and far southeast black communities already extended to the city limits in 1940. Their populations continued to increase until sheer force of numbers produced the lateral spread of these two ghettos during the 1960's that turned the entire portion of the city east of the Anacostia River into one large black area. Since that large population increase fell outside of the two sectors, it considerably lowered the citywide proportion of the net black increase during the decade that fell within sectors.

There were no major white ethnic areas in Washington that impeded growth of black areas, as was the case in Detroit and Philadelphia. Natural physical barriers were also unimportant, although the Anacostia River prevented the black zones southeast of the Capital from expanding as the major ghetto north of downtown did.

While Washington between 1940 and 1970 does not serve as the best example of sector growth of black neighborhoods, the continuing expansion of black areas into Prince Georges County in suburban Maryland shows that the process is going on, on a metropolitan basis. Racial change spilling over into the suburbs will be treated more fully in the next chapter.

Los Angeles

The Los Angeles black population was quite small in 1940, comprising only 4.2 per cent of the total population. There were only 63,774 black residents in the city at that time, and they occupied a very small part of the huge territory of Los Angeles. The principal black district, which

extended from south of the central business district down to Slauson Avenue, contained more than two-thirds of all Los Angeles blacks. A second important black neighborhood was located west of the University of Southern California along Jefferson Boulevard. The last major center of black population in 1940 was in Watts, a part of Los Angeles that lies south of 92nd Street and east of Central Avenue. Watts is surrounded on three side by unincorporated suburban territory and is only connected to the rest of Los Angeles on its west edge.

The Los Angeles City Hall was chosen as the central reference point for drawing sectors. The West Side black area was designated sector 40-1, the main ghetto 40-2 and Watts 40-3.

Massive wartime black migration nearly tripled the Los Angeles black population between 1940 and 1950. At the end of the 1940's, the city had 171,209 black residents, and they comprised 8.7 per cent of the population at the time of the 1950 census. The huge black increase caused all three of the 1940 black communities to swell in area, although the change in the ghetto block pattern looks insignificant when plotted on a map showing the entire, vast city. Both the West Side and central ghettos increased in land area, largely through lateral spread, although sector growth was also evident. The latter area still had no predominantly black blocks south of Slauson Avenue. The Watts black zone now filled almost the entire enclave and spread across Central Avenue into the main part of the city. The index of sector growth for the Los Angeles black population was 57.4 for the period from 1940 to 1950. The lateral spread of the three main black zones was principally responsible, although the growth of very small black populations in such far-flung neighborhoods as Pacoima, Venice, Wilmington and San Pedro contributed to lowering the score. Because the black block

pattern widened somewhat during the 1940's, a new set of sectors was plotted, using the 1950 racial block map. The new wider sectors for the West Side, main black zone and Watts were designated 50-1, 50-2 and 50-3, respectively.

The period between 1950 and 1960 witnessed enormous growth of the black population in Los Angeles. The black population was 334,916 in 1960, nearly twice what it was ten years before. Los Angeles was 13.5 per cent black, and the increase in the land area occupied by black residents reflected the magnitude of the racial change. While formerly there had been three separate ghettos in Los Angeles, their merger had created a huge new black zone stretching far to the south and west of the central business district. Almost all of that part of the city east of the Harbor Freeway and south of downtown was predominantly black, and the westernmost portion of the ghetto touched the city limits at Adams Boulevard. The black and racially changing areas now covered several dozen square miles south and west of downtown. The small black settlement at Pacoima in the San Fernando Valley swelled to about 9,000 residents between 1950 and 1960, although the black enclaves in Venice and the harbor neighborhoods did not expand very much.

As might be expected, this widespread change in the black housing pattern during the 1950's had a depressing effect on the sector growth conformity scores for both the 1940 set of sectors and the revised 1950 scheme. The 1940 sectors yielded a score of 40.4 per cent of the decade's black growth within the sectors, while the 1950 revised sectors produced a score of 49.2. It should be noted that both sets of sectors covered only about 5 per cent of the land area of Los Angeles. In the redrawing of sectors for the 1960 revision, a single wide sector, numbered 60-2, was drawn around the large central ghetto. This sector included all of the

territory in earlier sectors drawn when there were three smaller ghettos there, as well as a number of additional census tracts. Only one other sector was needed for the 1960 revision. Sector 60-4 covered the isolated Pacoima black district in the northern part of the San Fernando Valley.

The black population of Los Angeles continued to grow rapidly during the 1960's. The 503,066 black Los Angeles residents were 17.9 per cent of the city's total population in 1970. The principal development in the growth of the city's black areas was the continuing expansion of the main black zone to the southwest. The whole south central part of the city was predominantly black in 1970. Racial change had spread across the city limits to southwest suburban Inglewood and unincorporated areas to the north and south of that suburb. Within Los Angeles the predominantly black zone had expanded as far south as 135th Street in the "shoestring" of narrow city territory connecting the harbor neighborhoods to the main part of Los Angeles. Far to the north, the Pacoima ghetto in the San Fernando Valley increased somewhat in population, but did not expand its area very much.

When the 1970 census tract statistics were analyzed using the original 1940 sectors, the result was a score of 33.1 per cent conformity to the sector model. The 1950 revised sectors yielded a score of 48.2. However, the 1960 sector scheme produced a much higher 86.2. Most of the nonconformity to the 1960 sectors appears to be the result of some lateral growth along the northwestern edge of the main ghetto that produced predominantly black blocks as far north as Olympic Boulevard by 1970. Even though the 1960 sectors covered 44.8 square miles in 1970, that figure was less than one-tenth of the total land area of Los Angeles. The great south central ghetto is roughly comparable in land area to Chicago's huge South Side black community, and the immense black zone that covers most of the central

area of Detroit. When the area of the main Los Angeles ghetto is combined with that of adjacent predominantly black suburban areas, it is clearly the most extensive predominantly black residential zone in the nation. In 1970 this vast multi-city ghetto included most of Compton, part of Inglewood and about a half-dozen distinct unincorporated areas, not to mention more than 40 square miles of predominantly black neighborhoods within the city limits of Los Angeles.

The growth of the black neighborhoods in Los Angeles between 1940 and 1970 was not distorted by major physical barriers to expansion or by cohesive and resistant ethnic areas in the path of the expanding ghetto. In general, Los Angeles can be said to have conformed fairly well to the sector growth model after 1960. The poor results of the earlier sector schemes can be attributed to the fact that relatively narrow sectors were subjected to very large increases each decade. Los Angeles' black population nearly tripled during the 1940's and virtually doubled in the next ten years. Had there been smaller increases, the three sectors might have retained their shape. In actuality, the central area of the city was inundated with new black residents between 1940 and 1960, and the sector boundaries based on the 1940 and 1950 block patterns simply could not contain the growth. However, once the three ghettos had merged, the new, much wider 1960 central area sector could be used to much better effect. Most black growth in Los Angeles, as well as spillover into the suburbs, conformed to the 1960 revised central area sector, and the 1980 census will probably show a continuation of that trend. Most of the black population increase between 1970 and 1980 will probably be in the inner south and southwest suburbs rather than Los Angeles itself. All of the actual measurement of sector growth in this study is restricted to the central

city itself, although the issue of black ghetto expension into the suburbs is taken up in the next chapter.

Baltimore

Baltimore had 165,843 black residents in 1940. They comprised 19.3 per cent of the total population and resided mainly in two ghettos near the central business district. More than 100,000 of the blacks lived in the ghetto which was west of downtown and south of Druid Hill Park. The other major black district occupied an area just to the east of the central business district, and like its West Side counterpart, had a relatively small land area. Besides the two main black zones, there were lesser enclaves near the harbor and far to the north, at Cold Spring Lane and the Alameda. The intersection of Charles and Baltimore Streets was chosen as the center of downtown Baltimore for the purpose of drawing sectors. The sector fitted around the West Side black area was designated 40-1. Sector 40-2 covered the East Side ghetto. Sector 40-3 was drawn around the small black enclave on Cold Spring Lane, and Sector 40-4 embraced the harbor area black community southwest of downtown.

The black population of Baltimore was 225,099 in 1950, and the black proportion of the population was 23.7 per cent at that time. The physical expansion of black neighborhood boundaries was even less pronounced in Baltimore in the 1940's than in most of the cities discussed so far. The only major difference that a casual comparison of the 1940 and 1950 Baltimore racial block maps reveals is the presence of a large new black housing project at the south edge of the city in 1950. The sector conformity index revealed that 76.4 per cent of the black increase during the 1940's occurred within the four original 1940 sectors. Lateral spread of the black neighborhoods was nil, and the new black housing project at

the south end of the city accounted for roughly half of the nonconforming black growth during the period under consideration. A revision of the sector pattern was drawn up on the basis of the 1950 racial block map, slightly widening sectors 40-1 and 40-3 and adding a new sector, 50-5, to cover the black housing project built at the south edge of the city during the 1940's.

Between 1950 and 1960 the Baltimore black population increased by 100,000. The black population was 325,589, and the black share of the total population was 34.7 per cent. The two major ghettos, like those in most of the cities already discussed, expanded greatly during the 1950's, in contrast to the minimal growth during the previous decade. The West Side ghetto, containing more than one-half of the city's black residents, moved westward into the neighborhoods between Gwynn's Falls Park and Druid Hill Park. Its East Side counterpart, containing nearly 80,000 blacks, now bordered Clifton Park and had also expanded to the east. The Cold Spring Lane black enclave now had more than 3,000 residents, but the harbor area black community sustained a net loss in population. The black housing project on the south edge of the city doubled in population to more than 13,000 residents. The original 1940 sectors were able to account for a respectable 82.4 per cent of the 1950-1960 black increase, and the 1950 revised sectors yielded a score of 91.0. Because of some lateral growth in two black areas during the 1950's, a 1960 set of revised sectors was drawn up. The East Side sector 50-2 was widened slightly as was sector 50-3 on Cold Spring Lane. No other changes from the 1950 revised sector scheme were needed.

The 1960's witnessed continued black population growth and ghetto expansion in Baltimore. The black population stood at 420,210, and the

black share of the population was 46.4 per cent of the total. The West Side ghetto's expansion into the northwestern part of the city, which was just beginning in 1960, had continued at a rapid pace during the 1960's. In one place the black zone extended to the west city limits, and the ghetto as a whole contained more than three-fifths of the city's immense black population. The East Side black zone expanded into neighborhoods west of Clifton Park during the 1960's, and its population rose past 100,000. The Cold Spring Lane black community grew to 10,000 residents by 1970, but the harbor area black neighborhood declined to fewer than 2,000 resident at the same time. Sector growth conformity scores for the 1960's were high for both revised sets of sectors and the original scheme as well. The 1940 sectors have a score of 75.1 per cent sector growth, while the 1950 revised sectors produced a score of 78.5. The result for the 1960 revised sectors was 85.8. The 1960 revised sectors covered one-half of Baltimore's land area in 1970.

Baltimore is one of the most consistent examples of sector growth examined so far in this study. Even the original 1940 sectors produced scores no lower than 75 per cent sector growth conformity throughout the entire three decades under consideration. A part of the reason is that there were no major physical barriers to sector growth or resistant white ethnic neighborhoods in the path of ghetto expansion to distort regular expansion within sectors. Two more important reasons, however, are the relative width of the original 1940 sectors and the decennial black increase, which while large, never really inundated the existing black area in the manner that Los Angeles', San Francisco's and Oakland's did in the 1940's. The Los Angeles black population nearly tripled, Oakland's more than quintupled, and that in San Francisco jumped an amazing eight-

fold between 1940 and 1950. Under such unstable conditions, outward black growth within the narrow sectors containing the original ghettos in those cities was largely overshadowed by lateral black neighborhood spread and other nonconforming developments. In Baltimore, on the other hand, there was already a well developed group of populous black neighborhoods in 1940, and the rate of decennial black increase never even reached 50 per cent of the city black total at the start of the period in question, let alone the tripling and quintupling that occurred in West Coast cities in the 1940's. This steady, relatively moderate black population growth rate within fairly wide sectors meant that racial change in Baltimore conformed to the sector model quite well throughout the period from 1940 to 1970.

Houston

The city of Houston contained 86,302 black residents in 1940. They were 22.4 per cent of the city's total population at the time. Almost one-third of the black residents lived in a ghetto northeast of the central business district, while a like number lived in another black neighborhood immediately south of downtown. There were several other smaller black neighborhoods in other parts of the city as well as isolated, very small clusters of predominantly black blocks unconnected to any particular ghetto. The intersection of Main and Walker Streets was designated the center of the city for the purpose of drawing sectors. Four black neighborhoods were included in the 1940 sector scheme. Sector 40-1 covered a black area just west of downtown that had about 12,000 residents. Sector 40-2 was drawn around a black area in the northernmost part of the city. The big northeastern black community was designated sector 40-3 and the south side ghetto was numbered 40-4.

Houston is the first city in this sample in which the matter of annexation is important. All of the cities examined so far had the same, or nearly the same, boundaries in 1970 as they did in 1940. Houston annexed large amounts of land throughout the period under study. In 1940 the city covered about 73 square miles; by 1950 it included 160. The annexed territory included relatively few blacks and there were no published 1940 suburban census tract statistics from which the change in black population in the annexed areas during the 1940's could be computed. Therefore, the difference between the 1950 city black population and the 1940 city black population was used as the net decennial change in black population, although the actual figure would be slightly diminished by the number of blacks in the areas of future annexation in 1940.

In 1950, Houston's black population was 124,766. The black percentage dropped to 21.0 because of the previously mentioned large-scale annexations of white residential areas. The racial pattern of the black neighborhoods was not much different than it was in 1940, with the exception of the presence of two new black enclaves in the newly annexed territory. The Clifton Park neighborhood was located at the east city limits and had about 3,000 black residents. The Kashmere Gardens district to the northeast held nearly 5,000 more. Because of the presence of these two areas and some lateral growth in the northeast ghetto, the sector growth index score was only 53.0 per cent. All of the black areas in the sectors defined in 1940 gained population, except one. The near west side ghetto covered by sector 40-1 lost more than 2,000 residents between 1940 and 1950. A 1950 revised set of sectors was drawn because of the changes in the black residential pattern between 1940 and 1950. In the revision, sector 40-3 was widened slightly, and sectors were drawn around the Clifton

Park and Kashmere Gardens black areas. The latter two sectors were numbered 50-5 and 50-6, respectively.

Between 1950 and 1960, large scale annexation once again doubled Houston's land area. It now stood at 328 square miles, and the annexations included significant black neighborhoods. Houston was now 22.9 per cent black, and the citywide black population was 215,037. This was an apparent increase of 90,000 between 1950 and 1960, but when the 1950 black populations of the annexed areas are included in the calculations, the actual net decennial growth was about 82,000. There were major changes in the housing pattern of the black population during the 1950's. The northeast ghetto expanded outward and merged with the Kashmere Gardens black community. The other black districts grew in terms of population except the declining west side enclave, which was down to 8,000 residents. The south side black area was still the second ranking ghetto, with more than 40,000 residents. Directly south of it, in annexed territory, was a new black neighborhood, apparently built specifically as such during the 1950's. It had 23,000 residents in 1960. In the far northeastern part of the city, another ghetto in newly-annexed territory had 6,000 black occupants. Because of these separate developments outside the previously plotted sectors, the sector scores for the 1950's for both sets were quite low. The original 1940 sectors contained only 35.9 per cent of the decade's black growth, while the 1950 revised sectors held 46.0 per cent of the increase.

Because of the further changes in the black housing pattern in Houston in the 1950's, a new set of 1960 revised sectors was drawn up. The principal features were the widening of sectors 50-3 and 50-4, the merger of sector 50-6 into sector 50-3, and the creation of sectors 60-7 and 60-8 to cover the new far south and far northeast sectors, respectively.

The 1960's witnessed more annexations that brought Houston's land area up to 433.9 square miles. The black population of this huge added territory was considerably smaller than had been the case during the 1950's. The 1970 black population of Houston was 316,551. Blacks were 25.7 per cent of the total population. The story of black neighborhood growth in the city during the 1960's is mainly that of the expansion of two large ghettos, each with over 100,000 black residents, in the manner described by the sector growth hypothesis. In 1970 the northeast-Kashmere Gardens black zone extended all the way from the center of Houston to the northeast city limits. The main south black zone and the far south ghetto merged during the 1960's, and now stretched from the south end of downtown to the south city limits. With the exception of the declining near west ghetto, the lesser black districts generally increased at least slightly in population. Sector growth conformity scores were better for the 1960's than for the previous decade. The original 1940 sectors had a 1960-1970 sector conformity score of 56.7. The 1950 revised sectors gave a result of 61.5 per cent during the same period. Both sets of sectors produced much better results for the 1960's than for the 1950's, even though neither took into consideration the separate new ghettos in land annexed during the 1950's. The 1960 revised sectors had a conformity score of 80.2 per cent of the 1960-1970 city black growth within the sectors. Lateral growth of the far south ghetto and other lesser, nonconforming black increases kept the score from being higher. The 1960 revised sectors covered only about one-tenth of the city's land area in 1970.

Houston's black neighborhood growth was unaffected by the presence of major physical barriers to expansion or unyielding white ethnic neighborhoods. One apparent factor in lowering the amount of conformity to the sector model was the construction of new black housing on vacant land, as apparently took

place in Houston during the 1950's. It diverted much of the black population growth that would otherwise have gone into residential succession, which would most likely have taken the form of outward growth within sectors. During the 1960's, black neighborhood growth in Houston conformed more to the national than to the southern model of small stable ghettos and the construction of new housing on vacant land to meet increasing black needs. Racial residential succession became the rule, and two huge ghettos grew outward in the manner described in the sector model. The same change from the southern to the national pattern of black neighborhood growth during the 1960's will be observed again in other southern cities in this sample.

Cleveland

The city of Cleveland has quite an unusual shape, with portions of its territory extending deep into the suburbs more than ten miles from downtown, while suburbs adjoining the city at other points are within five miles of the central business district. This information is of more than casual interest, because it has considerable bearing both on Cleveland's poor conformity to the sector growth hypothesis and the major black spillover into the inner suburbs after 1960.

In 1940, Cleveland had 84,504 black residents, and its black population comprised 9.6 per cent of the overall city population. While there was a small black neighborhood on the far West Side, almost 90 per cent of the city's blacks were located in a single ghetto on the East Side. This black zone extended from near downtown to near the city's border with suburban Cleveland Heights and was mainly confined between Carnegie and Woodland Avenues, two major east-west streets. Most Cleveland blacks not living in this ghetto were scattered in other East Side areas that were predominantly white. Glenville and the far southeast side were two of the more important

ones. For the purpose of drawing sectors, the intersection of Superior and Ontario Streets was chosen as the center of the city. One sector, 40-1, was drawn to enclose the East Side ghetto.

Between 1940 and 1950, the Cleveland black population increased greatly in terms of numbers, but the land area that was predominantly black was not too much greater in 1950 than it had been ten years before. However, there was enough black growth in neighborhoods outside of the sector to greatly reduce the sector growth conformity score for the period from 1940 to 1950. The center of the Glenville neighborhood, northeast of the ghetto, became predominantly black during the 1940's and had more than 20,000 black residents in 1950. There were also several clusters of predominantly black blocks in the southeast part of the city, one of which had more than 7,000 black residents. The 1940 sector produced a result of 48.5 per cent conformity to sector growth for the decade 1940-1950. Even though the black population of the main ghetto increased by more than 30,000, the above mentioned nonconforming black growth caused the low sector conformity score. Because of this low score, a revised 1950 set of sectors was drawn for use in subsequent censuses. The main ghetto sector was slightly widened, and a new sector was drawn for the Glenville black area, as well as the largest black enclave on the far southeast edge of the city. The Glenville sector was numbered 50-2, and the southeast sector was designated 50-3.

Between 1950 and 1960, the Cleveland black population grew by more than 100,000, and the ghettos expanded greatly in area. Cleveland had 250,818 black residents in 1960. They comprised 28.6 per cent of a now declining total population. The entire Glenville community was predominantly black in 1960, as was the Hough district, north of the original main ghetto and forming a link between it and Glenville. The southeastern black zone now

covered much of the territory in Cleveland lying just west of suburban Shaker Heights. Because these changes involved so much lateral growth and the original main ghetto actually lost some of its population during the 1950's, sector scores were extremely low. Zero per cent of the net black increase in Cleveland during the 1950's occurred within the original 1940 sector. Only 28.2 per cent of the black growth in the 1950's fell within the 1950 revised sectors. It was clear that a second revision was needed, using the 1960 black housing pattern as a reference for drawing the sectors. The 1960 revised sector scheme consolidated the Glenville, Hough, and original East Side black areas into one wide sector numbered 60-1. The expanded southeastern black area was given a widened sector labeled 60-3.

The 1970 black population of Cleveland was 287,841, not substantially higher than the 1960 figure. Largely because of the continued rapid decline in Cleveland's total population, blacks were 38.3 per cent of the residents of the city in 1970. The racial housing pattern in Cleveland looked similar to that of 1960, with the exception of significant black growth just east of Glenville and the expansion of the far southeast black zone into the remaining white neighborhoods in that part of the city. Most of that southeastern black neighborhood growth was lateral spread outside of the sector.

Given a small 1960-1970 increase of 37,000, the lateral spread of the southeast black zone outside of its sector had to have a major effect of lowering the citywide sector growth index. The 1940 and 1950 sector schemes were totally useless, both accounting for zero per cent of the black population growth during the 1960's. The lateral nonconforming growth and the continuing depopulation of the original main ghetto had the effect of lowering the score for the 1960 revised sectors to 53.5. The 1960 sectors covered about one-third of the city's land area in 1970.

While even the revised 1960 sectors produced unimpressive results, it should be noted that much of the black neighborhood growth in metropolitan Cleveland during the 1960's took place in the inner suburbs as an extension of the expansion of Cleveland's ghettos and quite clearly according to the sector model. The low 37,000 increase in Cleveland's black population was a result of large-scale black migration to East Cleveland, Shaker Heights and Warrenville Heights. The issue of racial change in the inner suburbs will be considered at greater length in the next chapter.

Part of the reason for the poor results from the test of the sector model in Cleveland was the presence of highly resistant white ethnic areas in the path of the main ghetto. The famous Murray Hill Italian area and Hungarian neighborhoods to the south of it formed a barrier to eastward black expansion for years, with Murray Hill remaining unchanged as recently as 1970. During the years this ethnic neighborhood obstacle remain intact, Cleveland's rapidly expanding black community took over more receptive white neighborhoods such as Hough and Glenville. The inability of blacks to settle in suburban Shaker Heights prior to the 1960's was probably a major impetus to the lateral growth of the southeast Cleveland black zone. Without the presence of racially restrictive white ethnic areas in Cleveland and suburbs where the same policy was applied, the central city's black zone might have expanded according to the sector model during the 1950's and 1960's. What actually happened was that the presence of these exclusionary areas shunted outward black growth to the right and to the left--to the southeast and Glenville areas, respectively. Along with Detroit and South Philadelphia, this is probably one of the best examples of resistant socio-cultural areas deflecting and distorting what would probably otherwise have been a clear-cut instance of sector growth by a black neighborhood.

New Orleans

While northern cities of the same size usually have only one or two major ghettos, New Orleans conforms to the more typically southern pattern of numerous lesser black neighborhoods and even smaller clusters of predominantly black blocks. In 1940, New Orleans contained 149,034 black residents. They composed 30.2 per cent of the total population. The downtown intersection of Canal and Royal Streets was chosen as the center of the city for drawing sectors. Four of the black neighborhoods were important enough to be included in the 1940 sector pattern. Sector 40-1 was drawn around the large and populous black area that lay west of the central business district. This triangular-shaped black zone contained one-half of the city's black population. Sector 40-2 was fitted around a black area just to the northwest of the French Quarter. Sector 40-2 held about 18,000 blacks in 1940. About 20,000 blacks lived in the ghetto just to the north of the French Quarter covered by sector 40-3. Sector 40-4 was located east of the Inner Harbor Navigation Canal and had about 3,000 black residents. More than one-fifth of the black population of New Orleans lived in smaller black enclaves not included in the 1940 sector pattern.

In 1950 the New Orleans black population was 181,775. This was 31.8 per cent of the total population. The only noticeable change in the racial block pattern was a substantial increase in the size of the predominantly black area east of the Inner Harbor Navigation Canal. All four sectors increased somewhat in the number of black inhabitants they held, but the doubling of the black population in the area east of the Inner Harbor Navigation Canal was the only instance of rapid growth during the 1940's. The sector conformity score for the 1940's was 52.8, indicating that much of the decennial black growth was in the smaller enclaves not important enough

to warrant inclusion in the sector pattern.

A revised set of 1950 sectors was drawn by making slight additions to some of the sectors, leaving 40-4 unchanged, and adding two new sectors. Sector 50-6 was northeast of the French Quarter and included the Desire housing project, while sector 50-5 was west of Dillard University along northern St. Bernard Avenue. The former had about 10,000 black residents in 1950, and the latter had more than 5,000.

By 1960, the New Orleans black population had reached 233,514 and constituted 37.2 per cent of the city's population. There were still no radical changes in the black housing pattern, although the ghettos represented by sectors 50-4, 50-5 and 50-6 grew considerably in terms of population. A new black neighborhood was constructed at the northern edge of the city surrounding Pontchartrain Park during the 1950's, and the black population in the Algiers quarter south of the Mississippi River grew at the same time. The 1940 sectors accounted for 40.2 per cent of the city's black increase during the 1950's, while the 1950 revised sectors produced a score of 78.0 per cent of the 1950-1960 black growth falling within its six sectors.

A second revision of the sector pattern was drawn up using the 1960 racial block map. Sectors 50-3 and 50-6 were slightly widened, and two new ones were added. Sector 60-7 was drawn for the Pontchartrain Park black community, and 60-8 was fitted to the predominantly black area in the Algiers district, across the Mississippi River from the French Quarter.

During the 1960's the total population of New Orleans began to decline, while the black population continued to grow. The city had 267,308 blacks in 1970, and they now comprised a sizable 45.0 per cent of the total population. What had been a slight growth in size of many of the black neighborhoods during the 1950's was now more evident in 1970. Most of the black areas in

the city were growing at their edges, and adjacent black zones were beginning to merge. The probable result of a prolonged continuation of this trend would be one large black zone, stretching along the left bank of the Mississippi for more than five miles. While there was a slight hint of sector growth in some of the black areas during the 1960's, it was insignificant compared to the way ghettos expanded outward in many northern and some southern cities at the same time. The census tract analysis of sector conformity showed poor results using the two earlier sets of sectors and only a fairly good score for the 1960 revised sectors. The 1940 sectors had a score of 9.3 per cent for the 1960-1970 black increase, while 26.8 per cent of the increase during the decade fell within the 1950 revised sectors. The 1960 revised sector score was 52.3 per cent of the decade's growth falling inside the sector. This was not a high score. However, the 1960 revised sectors covered less than one-sixth of the land area of New Orleans in 1970.

New Orleans' poor conformity to the sector model is largely explainable by the combination of a scattering of the black population in too many separate ghettos and two low a decennial black growth rate to propel significant sector-type expansion of the city's black zones. The decennial rate of black increase never even reached 30 per cent during any decade under study. While a very high black growth rate may overspill sector walls as in the case of Los Angeles, a very low rate of increase scattered among many small black areas can also greatly decrease conformity to the sector model. With a small decennial increase, it does not take much lateral growth, a great likelihood if there are numerous small black areas, or black increase in small enclaves not in the sector pattern to bring the sector conformity index score down to a low insignificant number.

Atlanta

Atlanta was a compact city of 34.7 square miles in 1940. Its 104,533 black inhabitants were 34.6 per cent of the total population. The city had five major black zones in 1940, four of which crowded closely around the central business district. The fifth was in the part of the city lying east of the Fulton-DeKalb County line. The downtown intersection of Peachtree, Decatur and Whitehall streets was chosen as the center of Atlanta for drawing sectors. Sector 40-1 was drawn around the populous West Side black community, home of Atlanta University and other prominent black institutions of higher education. This black neighborhood had more than 38,000 residents in 1940. Sector 40-2 covered the northeastern black zone, which contained 30,000 black Atlantans. The far eastern ghetto, containing two thousand residents, fell within the bounds of sector 40-3. The southeastern black zone had more than 13,000 residents, while the southwest black community had a similar number. The former area was covered by sector 40-4, while the latter was covered by 40-5.

Between 1940 and 1950 there was very little annexation of territory to the city of Atlanta. The black population increased to 121,285, or 36.6 per cent of the city total. The black housing pattern was almost entirely unchanged. Sector 40-1 registered an increase of more than 12,000 black residents during the 1940's, while 40-2 gained more than 3,000. Sector 40-5 gained over 2,000 new blacks, while the populations of the two remaining sectors changed only slightly. The conformity score for the 1940 sectors was an astounding 100.0 per cent. The actual black growth in the five sectors exceeded the net increase of the city black population by 1,506. This suggested a decrease in the black population of isolated enclaves that were not included in the 1940 sector pattern, as well as the possible presence of a

few blacks in 1940 in the small areas of land that were subsequently annexed. Since there was no lateral growth of the black areas during the 1940's, and the 1940 sectors yielded a perfect score of conformity, no revised 1950 sectors needed to be drawn.

Between 1950 and 1960 the incorporated area of Atlanta increased from 36.9 to 128.2 square miles. The black population was 186,464, and the black percentage of the total was 38.3. While the apparent intercensal black increase was more than 65,000, the presence of many blacks in the annexed territory in 1950 lowered the true net increase to about 48,000. The West Side black area gained 20,000 new residents and extended to the new west city limits. The southwest area gained about 10,000 black residents, and the other three increased in population by lesser amounts. While the percentage of 1950-1960 black growth that fell within the sectors was lower than in the previous decade, it was still a substantial 81.5 per cent. Once again, there was no need to revise the sector pattern because of nonconforming black growth.

The 1970 census results for Atlanta are important both because the city became more than 50 per cent black by the end of the decade and the block map showed a change in the way that black housing needs were met. In 1970 the black population of Atlanta was 255,051 or 51.3 per cent of the total. The West Side ghetto, containing close to three-fifths of the city's blacks in 1970, expanded its boundaries tremendously, while the black population in the easternmost part of the city also increased rapidly. The manner in which this great black housing demand was met indicated a major new trend in the South. The decade of the 1960's saw large scale residential succession for the first time in Atlanta. Thousands of whites left the city, and their homes were occupied by blacks as the West Side and far east ghettos expanded.

During previous decades, black housing increased mainly through more intensive use of land in existing ghettos or the construction of homes specifically for blacks on vacant land. Now, black neighborhood growth in Atlanta was substantially the same as it was in Chicago, Milwaukee or any other northern city. To bring the point home even more clearly, 93.7 per cent of the black growth in Atlanta during the 1960's was inside the sectors of probable black expansion. In 1970 the 1960 sectors covered just under one-half of the city's land area. Atlanta, Houston, Dallas and other southern cities now conform to the national model of how black housing needs are met in big cities. Large ghettos expand outward, absorbing white neighborhoods along their edges, with the process of growth conforming largely to the sector model of black neighborhood expansion.

St. Louis

St. Louis is even a more perfect example of black neighborhood sector growth than Atlanta. A single black zone expanded outward between 1940 and 1970 with almost all of its growth inside the sector. As in the case of Atlanta, the black area commenced very close to downtown, and most of the land near downtown fell within the angle of the sector.

In 1940, St. Louis was 13.3 per cent black, and the black population numbered 108,765. One large black zone covered the area immediately west of the central business district and extended in places more than half way to the west city limits. The intersection of 12th and Market Streets was designated the center, and a sector, 40-1, was drawn to cover the black zone.

Between 1940 and 1950 the black share of the St. Louis population increased to 17.9 per cent. The number of blacks in the city increased to 153,766 in 1950. The ghetto increased somewhat in area during the 1940's and had expanded as far west as Kingshighway Boulevard by 1950. Analysis of

1950 census tract statistics shows that 100.0 per cent of the black increase during the decade fell within the sector. The sector increase slightly exceeded the city increase because of the decline in size of some small black enclaves near the Mississippi River outside of the sector.

Between 1950 and 1960 the total population of St. Louis declined considerably, while the black community increased to 28.6 per cent of the total at the end of the decade. They numbered 214,377 in 1960 and occupied a considerably larger portion of the North Side than they did 10 years before. The ghetto now occupied a wide zone extending to the west city limits north of Forest Park. Once again, 100.0 per cent of the decade's black growth fell within the sector. The sector covered only two-fifths of the land area of St. Louis in 1960.

In 1970, the black population of St. Louis was 254,191, or 40.9 per cent of the greatly-shrunken 1970 total population. The black zone expanded along most of its edges during the 1960's and covered most of the residential land in the northern part of St. Louis. Almost all of the decade's black growth, 92.6 per cent, fell within the sector. The main reason for the slight amount of nonconforming growth was the increase during the 1960's of the black population of a housing project just outside of the sector and south of the downtown area.

St. Louis is one of the best examples of sector growth in the entire sample. While the angle of the sector is extremely wide, the tracts within the sector only amounted to one-half of the city's land area in 1970, and the expansion of the ghetto consisted of coherent, contiguous growth. Additional support for the sector hypothesis in this case comes from the continued expansion of the ghetto past the city limits into those inner suburbs that would be in the sector if it were traced beyond the borders of St. Louis.

Memphis

Memphis is another one of the southern cities whose land area increased through annexation throughout the three decades under study. In 1940 Memphis covered 45.6 square miles, contained 121,498 black residents and was 41.5 per cent black. The black population lived in a large number of relatively small neighborhoods. These black areas formed a chaotic pattern suggestive of a checkerboard, with most of them along the northern, western or southern edges of the city. The intersection of Poplar and Main Streets was designated the center of the business district, and the black neighborhood pattern was resolved into 8 sectors. Sector 40-1, north of downtown, held 26,000 black residents, while sector 40-8 on the south side had 58,000. All of the other sectors had much smaller populations.

Between 1940 and 1950, Memphis' land area increased to 104.2 square miles because of annexations. The black percentage dropped to 37.0 although the number of black residents rose to 147,141 in 1950. Because of the 1940 black population of the annexed land, the actual increase in the black population of Memphis during the 1940's was under 21,000, rather than the larger amount that would result from subtracting the city's 1940 black total from the 1950 black population. Sector 40-8 gained over 9,000 black residents during the 1940's, while the other black areas had much smaller population changes. The pattern of black occupancy changed very little during the 1940's; the 1940 and 1950 racial block maps are nearly undistinguishable. The analysis of the growth of the black population within the eight sectors reveals that 100.0 per cent of the black increase during the 1940's fell within those sectors. The increase within the sectors slightly exceeded the citywide increase because of the decline of some small, non-sector black areas.

By the time of the 1960 census, the land area of Memphis had increased to 128.2 square miles because of further annexations. The black population was 184,320 at this time, and it comprised 37.0 per cent of the total population, the exact percentage that it had ten years before. Sector 40-8 gained more than 10,000 new black residents, and sector 40-7 just to the east grew by more than 11,000. The other sectors had smaller gains, except 40-1, which had a small decrease during the 1950's. The racial block pattern remained remarkably stable, with most of the small amount of black neighborhood expansion occurring around the edges of the south side ghetto. This black zone, covered by sector 40-8, had 78,000 black residents in 1960. The sector growth conformity score for the 1950-1960 decade was 98.8 per cent. There were no changes in the racial block map requiring any revised sectors.

The land area of the city of Memphis grew to 217.4 square miles in 1970 because of massive annexation during the previous decade. The black population was 242,513, or 38.9 per cent of the total population in 1970. Because of a sizable black population in the annexed land, the actual 1960-1970 decennial black increase was about 40,000. The 1960's were a period of continued black growth within the sectors defined in 1940, but there were two distinct changes from earlier times. Northern-style residential succession was in progress around both the northern and the southern sectors in Memphis. The black areas were absorbing adjacent, white residential districts. Because of this ghetto expansion the black neighborhoods that were close to each other were merging. The four black communities represented by sectors 40-1, 40-2, 40-3, and 40-4 had merged into a larger north side ghetto by 1970. The combined black population of these four sectors in 1970 was roughly 67,000. Sectors 40-6, 40-7 and 40-8 merged to form an even larger ghetto during the same period. This zone held roughly 105,000 black inhabitants in 1970. This

process of merging black neighborhoods did not depress the sector growth score for the 1960's very much. The index of sector growth conformity was 90.5 per cent. Most of the black growth outside of the sectors during the 1960's was probably in black neighborhoods in recently annexed areas that could not have been included in the sector scheme. In 1970 the sectors covered about one-fifth of the land area of Memphis.

Memphis is another major example of a southern city whose racial patterns have become more like those of northern cities in recent decades. The growth of large ghettos through block-by-block white to black transition is the hallmark of Chicago, Boston and other northern cities, but it is becoming familiar in Memphis, Dallas and other southern cities as well.

Dallas

At the time of the 1940 census, Dallas covered only 40.6 square miles. Blacks numbered 50,407 and comprised 17.1 per cent of the total population. The black population was scattered in a number of small enclaves in different parts of the city. The downtown intersection of Houston and Main Streets was chosen as the center for drawing sectors. Six sectors were drawn from the black neighborhood pattern. One was north of downtown, four to the east and southeast, and one to the south, across the Trinity River. The northern sector, 40-1, had about 17,000 black residents, while each of the others had from 3,000 to 7,000.

Annexations during the 1940's raised the land area of Dallas to 112.0 square miles in 1950. The 1950 black population of Dallas was 56,958, although the annexation of extensive white areas during the 1940's lowered the black share of the total population to 13.1 per cent of the total in 1950. The six sectors drawn up in 1940 contained 76.2 per cent of the decade's small black increase. Most of the growth occurred in sectors 40-3,

40-4 and 40-5, southeast of downtown. The black housing pattern in Dallas was practically unchanged between 1940 and 1950. A 1950 revision of the sector pattern required only the widening of sector 40-4 and the sector south of the Trinity River, 40-6.

The 1950's brought tremendous change to the city of Dallas. The 1960 land area was 279.9 square miles. There were 129,242 black residents in 1960, and they made up 19.0 per cent of the population of the growing city. Because some black populations were annexed during the 1950's, the net city black increase during the decade was closer to 55,000 than the larger figure obtained by merely subtracting the city's 1950 black population from the 1960 figure. There were major changes evident in the 1960 racial block map of Dallas. The small black enclaves southeast of the business district now formed one large ghetto with 67,000 black residents. There was also a new black zone in annexed land west of downtown and south of the Trinity River. These changes did little to boost conformity to the sector growth model. The 1950-1960 score for the 1940 sectors was 33.2, while the 1950 revised sectors yielded a score of 49.5 per cent conformity to the model. It was clear that a second sector revision was needed. Sector 50-1 was left unchanged, but sectors 50-2, 50-3, 50-4 and 50-5 were consolidated in a single new sector, 60-2. This was necessary because of the merger of the small black areas into one large ghetto southeast of downtown. Sector 50-6 was left unchanged, and two new sectors, 60-7 and 60-8, were added. Sector 60-7 was west of downtown and south of the Trinity River, while 60-8 covered the black enclave near Love Field, the Dallas airport.

The 1960's passed without major annexations of land, but the total and black populations of Dallas both increased greatly. There were 210,238 blacks in the city in 1970, and they made up 24.9 per cent of the total

population. The changes in the black residential pattern were as notable as those during the 1950's. The small black area covered by sector 60-6, south of the Trinity River and the central business district, suddenly underwent a rapid expansion during the 1960's. Growing exactly according to the sector hypothesis, this black area expanded all the way to the south city limits by 1970. In 1970 it contained about 70,000 black residents. Within a span of only ten years, this black area had grown from a minor part of the pattern to the most populous and largest black community in the city. The other major ghetto, southeast of downtown, only grew by about a 1,000 new arrivals, to a population of 68,000 blacks in 1970. The near north ghetto lost nearly 5,000 black residents, while the areas covered by sectors 60-7 and 60-8 registered increases of several thousand each. The various sector patterns had varying degrees of success in predicting sector growth during the 1960's. The 1940 sectors covered only 33.1 per cent of the black increase, while the 1950 revised sectors gave a reading of 79.5. The newer 1960 revised sectors contained 91.1 per cent of the decade's black growth. In 1970, the 1960 revised sectors covered less than one-fourth of the city's land area.

Dallas is one more example of how the processes of black neighborhood growth in the larger southern cities are becoming the same as those in the rest of the country. The sudden, massive growth of the small black zone south of the Trinity River into a major ghetto during the 1960's has no antecedents in the history of southern urban life. It is more closely related to the rapid transition that took place on the West Side of Detroit during the 1950's. The Dallas of 1970, with two-thirds of its black population in two huge ghettos, scarcely seems to be related to the Dallas of 1940, with its half dozen small black communities.

Newark

The 45,760 black residents of Newark made up only 10.6 per cent of the city's population in 1940. Most Newark blacks lived in a limited area west of the central business district. Broad and Market Streets was the intersection chosen as the reference point for drawing the sector, which covered a wide angle west of downtown.

The black population of Newark increased to 75,965 in 1950. This was 17.3 per cent of the total population of the city. The black increase was concentrated in the central area of the city, and the black zone was not substantially larger in 1950 than it had been ten years before. The 1940 sector contained 65.0 per cent of the decade's black growth. Lateral growth of the black zone meant that a somewhat wider 1950 revised sector needed to be drawn.

The 1950's brought a large black population increase to Newark, and the ghetto expanded its boundaries greatly. There were 138,035 blacks in the city, and they made up 34.1 per cent of the total population. Much of the western and southwestern residential portion of the city was now predominantly black. The 1940 sector contained 60.7 per cent of the black growth of the 1950's. The 1950 revised sector accounted for 93.5 per cent of the increase during that period. Ghetto expansion in Newark was clearly following the sector model of growth. Because of some slight lateral expansion of the ghetto south of downtown Newark, a slightly widened 1960 revised sector was drawn up.

The 1960's saw continued black population growth and unabated ghetto expansion in Newark. The black population stood at 207,458 and comprised 54.2 per cent of the total population in 1970. The ghetto continued to expand outward during the 1960's and had reached the west and southwest city limits by 1970. The black spillover into the adjacent suburbs will be discussed in

the next chapter. Eighty per cent of the new black growth lay within the 1940 sector, while the wider 1950 revised sector was able to account for 94.5 per cent of the 1960-1970 black growth. The 1960 revised sector score, 94.1 per cent, was fractionally lower than the score for the slightly narrower 1950 revised sector. This unique result occurred because the tracts included because of the second revision had a small black population decline during the 1960's. This was one of only two instances in the sample of 25 cities in which a widened, revised sector scheme failed to produce a better sector conformity score than the sector pattern it had superseded.

Newark was one of the three cities in the sample that had a black majority in 1970. It was the only one of those three that did not already have a high proportion of blacks in its population in 1940. The rapid racial change that took place in Newark during the thirty years in question produced a very clear example of black neighborhood expansion according to the sector model. The 1940, 1950, 1960 and 1970 racial block maps of Newark form a very graphic picture of the process of sector growth by a black ghetto.

Indianapolis

Indianapolis had 51,142 black residents in 1940. They comprised 13.2 per cent of the city's population, and most of them lived in three separate ghettos. Sectors were drawn to cover these black areas, using Monument Circle for the center of the city. Sector 40-1 covered a small black area along 10th Street west of the White River. The enclave contained nearly 1,000 black residents in 1940. The most populous black area occupied the northwest part of the central area of the city and was covered by sector 40-2. It contained 28,000 blacks in 1940. The third black zone, covered by sector 40-3, was in the northeastern part of Indianapolis and had nearly 10,000 black residents.

The city of Indianapolis had 63,867 black residents in 1950. They were

14.9 per cent of the population at the time. The ghettos expanded only slightly during the 1940's, and no radically different housing patterns were discernable from the 1950 racial block map. Sector 40-1 gained nearly 1,000 new black residents, and the other two sectors gained more than 3,000 each. The analysis of sector growth during the 1940's showed that 62.9 per cent of the decade's increase fell inside of the sectors. Because of some lateral expansion around sectors 40-1 and 40-3, a set of revised 1950 sectors widening both of them was prepared for testing the data from subsequent censuses.

The Indianapolis black population grew more rapidly during the 1950's than it had in the 1940's. The 1960 black total was 98,049, and the black percentage was 20.6 in that year. The two larger ghettos expanded outward during the decade, with the main northwest ghetto extending north of 43rd Street and the northeast black zone reaching 37th Street by 1960. The northwest black community gained more than 12,000 new residents during the 1950's, while its northeast counterpart gained 4,000 and the small western black zone registered a small increase. Sector growth within the 1940 sector pattern accounted for 50.1 per cent of the 1950-1960 black growth. The revised 1950 sectors accounted for 57.6 per cent of that decade's increase. Continued lateral growth of the two main ghettos during the 1950's called for the drawing up of revised 1960 sectors. The slightly widened northwest sector was renumbered 60-2, while the widened northeast sector was given the designation 60-3.

The Indianapolis black population grew by a slightly larger number in the 1960's than it had in the previous decade and stood at 134,320 in 1970. During the 1960's, Indianapolis annexed nearly all of the rest of Marion County, raising its land area from 71.2 square miles in 1960 to 379.4 square

miles ten years later. The annexation of this huge white suburban population explains why the black percentage fell from 20.6 to 18.0 between 1960 and 1970. Without the huge annexation, the city would probably have been between 25 and 30 per cent black in 1970.

The major ghettos increased in land area during the 1960's, especially the northeastern black zone. The northeastern black district extended as far east as Arlington Avenue in 1970. The lateral expansion of the western side of this ghetto toward Meridian Avenue was another major trend in black neighborhood growth during the 1960's. It had a major depressing effect on the conformity scores for the original 1940 sectors and both sets of revised sectors. The score for the 1940 sectors was a miniscule 6.4 per cent, while the wider 1950 revised sectors accounted for 12.9 per cent of the 1960-1970 black increase. The further revised 1960 sectors only accounted for 28.9 per cent of the intercensal growth.

The reasons for the poor showing of the three sector schemes are the decline in black population by more than 7,000 persons during the 1960's in the northwest sector and the lateral growth of the northeast black zone that meant that most of the city's net black increase fell between, not within, the sectors. Black increases of roughly 4,000 in sector 60-1 and 14,000 in 60-3 were largely offset by the loss within sector 60-2 and thousands of new black residents settling in the areas of the northeast ghetto that were west of and outside of the sector boundary drawn for the 1960 revised sector pattern. The effect of the westward lateral growth of the northeast black zone was to create a virtual merger between it and the northwest ghetto by 1970. This merger creates a new huge north black zone that would be described in sector terms as lying within the angle bounded by west Washington Street and the northeastern diagonal artery of Massachusetts Avenue.

It is slightly ironic that while the lateral spread of various black neighborhoods has kept Indianapolis sector growth scores low, the racial block maps from the 1940, 1950, 1960 and 1970 censuses show a very graphic outward black neighborhood growth as hypothesized in the model. Using the fairly rigid standards for conformity to sector growth results in low scores for Indianapolis, particularly for the period 1960-1970. Utilizing Homer Hoyt's less rigorous criteria, on the other hand, would result in a considerably more favorable judgment of the success of the model in this case. Black growth clearly took place mostly in the northern and northeastern parts of the city, and the movement was generally outward. No large black areas formed in isolation from the existing ghettos, and the south and southeastern areas, the "white" sectors, remained almost entirely white. While not keeping within the lines drawn to test sector growth, black neighborhood expansion in Indianapolis probably conforms to the model better than the change in residence of the wealthy did during the 1930's in the cities Hoyt studied.

Birmingham

Birmingham had 108,938 black residents in 1940, and they comprised 40.7 per cent of the city's population at that time. The black housing pattern of the city in 1940 was as chaotic as that of New Orleans. Birmingham had numerous small black enclaves in most parts of the city, although there was a large black zone in the central part of the city. In preparation for analyzing sector growth, this typical southern black residential pattern was resolved into five sectors, using the intersection of 3rd Avenue North and 20th Street as the center of the business district. Sector 40-1 covered a black area containing more than 13,000 residents in the western part of the city. Sector 40-2, in the northwest corner of Birmingham, had about 3,000

black occupants. Sector 40-3 covered the main black zone which nearly surrounded the central business district and occupied most of the central area of the city. Sector 40-3 had 67,000 black residents. Sector 40-4 was east of downtown and had 5,000 black residents, while sector 40-5 was southeast of the business district and had nearly 10,000 black residents.

Birmingham had 130,025 black inhabitants in 1950, and they made up 39.9 per cent of the city population. Because of annexation, Birmingham's land area increased from 50.2 square miles to 65.3 square miles during the 1940's. Because of 1940 black populations in the annexed areas that could not be measured for a lack of 1940 suburban census tract data, both the 1940-1950 decennial increase in the city black population and the 1940-1950 black increase in the sectors are certainly somewhat smaller than the figures that had to be used in the calculation of the decade's sector growth. Since both errors are in the same direction, the proportion of the 1940-1950 black growth falling within the sectors is probably not too far from the unobtainable exact figure.

The actual sector conformity score for Birmingham for the 1940's was 65.4 per cent. All five sectors gained black residents, but the main black zone had the largest increase, more than 9,000. The racial housing pattern was almost unchanged from 1940. Some lateral growth within sector 40-3 made a 1950 revised set of sectors advisable. The only change in the revised sector pattern was the slight widening of sector 40-3 at its northeast edge. Birmingham's land area grew to 74.5 square miles in 1960, but the black population of the land added during the 1950's was insignificant. The 1960 black population was 135,113, and blacks were 39.6 per cent of the total city population. The main black zone grew by about 8,000 new occupants, but the other four sectors declined slightly in black population. The 1940

sector contained 49.2 per cent of the decade's black increase. The 1950 revised sectors accounted for only 39.7 per cent of the city's 1950-1960 black growth. This was one of only two instances in this sample in which revised sectors failed to produce better results than the earlier set of sectors they superseded. The overall racial pattern of Birmingham housing was about the same in 1960 as it had been in 1950. There was little evidence of white to black transition in the city's neighborhoods during the 1950's.

In 1970, Birmingham was 42.0 per cent black. The black percentage was slightly higher than in 1960, despite the fact that the black population had dropped to 126,388 in 1970. The white population declined at a slightly higher rate during the 1960's to leave the black percentage of the total population higher in 1970 than ten years before. The 1960's also brought a limited amount of northern-style neighborhood transition. Limited white areas just north of downtown and in the southwest part of the city became predominantly black between 1960 and 1970. In all other respects, the city housing pattern remained almost unchanged.

The 1960-1970 decline in the black population of Birmingham is the only case of a negative decennial black population change in any city in this sample. The sector conformity score for the 1940 sectors for this decade was 100.0 per cent, and the reading for the 1950 revised sectors was 84.5. These two figures present a mild methodological problem because they were computed by dividing the 1960-1970 sector black population decline by the citywide 1960-1970 black population decline. While the result was a positive value in each case, the interpretation of these figures is not as simple as evaluating the many results from other cities in which both the numerator and the denominator in the equation are positive values. If the sectors are

the foci of black population growth according to the hypothesis, then a black population decline within sectors, when the city black population declines, should not be as steep as the overall decline. In other words, if the model applies in the city at the time in question, sector black populations should not suffer as steep losses as non-sector black populations during decades when the citywide black population sustains a net loss.

In the case of the 1940 sectors, 100.0 per cent of the 1960-1970 city black population loss fell within the sectors. In fact, the within-sector decline actually exceeded the overall city black decline by nearly 1,000 persons. This meant that the lesser black areas outside of the sector pattern actually had a slight gain in black residents, while Birmingham's overall black population declined. The data fail to support the sector growth hypothesis.

The 1950 revised sectors contained 84.5 per cent of the 1960-1970 Birmingham black population loss. It is advisable to see whether the sector share of the loss represents a steeper population decline than the non-sector black population sustained during the same period. There were 116,977 blacks in the five sectors in 1960. They comprised 86.6 per cent of the city black population. Thus, the revised sectors suffered a somewhat less steep black population loss during the 1960's than the city overall. The difference is much too small to claim that the evidence supports the sector model, however.

Birmingham presents the same obstacles to sector growth that were encountered in New Orleans. Slight decennial black growth or none at all combined with a multiplicity of black neighborhoods to limit or prevent sector growth during the three decades under study. Both the analysis of the numbers and inspection of the racial block maps confirm that Birmingham

is a poor case on which to base arguments in favor of the sector hypothesis as the most useful model for describing black neighborhood growth.

Cincinnati

Cincinnati had 55,593 black residents in 1940, and they comprised 12.2 per cent of the total population. Most of the black population lived in a ghetto just west of the central business district, although there was a smaller black zone northeast of downtown. Sectors were fitted around each of these black areas, using the downtown intersection of 5th and Vine Streets as the central reference point. Sector 40-1 covered the major West End ghetto, which contained 37,000 blacks, or two-thirds of the city total. Sector 40-2 covered the Walnut Hills black area, which was northeast of the central business district and contained more than 9,000 black residents. There were no other significant black population concentrations in 1940.

In 1950, the black population of Cincinnati was 78,196 or 15.5 per cent of the total population. Both black zones expanded their land area slightly, but the 1950 racial block map was almost unchanged from that of ten years before. The West End black population grew to more than 54,000, while the Walnut Hills black community numbered nearly 12,000 persons in 1960. The analysis of the 1950 census tract data revealed that 84.2 per cent of the black increase in Cincinnati during the 1940's fell within the sectors. It was necessary to draw up a set of 1950 revised sectors because of some lateral growth by the Walnut Hills black area.

The 1960 census revealed a large black population increase in Cincinnati during the 1950's and a major shift in the center of black neighborhood growth. The black population of the city was 108,757, or 21.6 per cent of the 1960 total population. Paradoxically, the principal black neighborhood, the West End, lost more than 14,000 residents during the 1950's, leaving a

total of about 39,000 blacks in that area in 1960. At the same time, the Walnut Hills black zone expanded in all directions, entering the Avondale community to the northwest and the Evanston area to the northeast. The black population of this greatly expanded ghetto was 47,000 in 1960, or more blacks than now lived in the West End. The population loss in the West End and the large scale lateral ghetto expansion around Walnut Hills had the strongest possible negative effect on the sector growth scores for the decade of the 1950's, both for the 1940 and the revised 1950 sectors. The 1940 sectors contained zero per cent of the Cincinnati black increase between 1950 and 1960. The revised 1950 sectors accounted for one-half of 1.0 per cent of the 1950-1960 city black increase. Because of the great changes in the Cincinnati black housing pattern, a set of new 1960 revised sectors was drawn up. The West End sector was widened slightly, the northeast sector was widened considerably, and a new sector, 60-3, was drawn around a new black enclave of 6,000 persons in the northwestern part of the city. There had been black population increase in other outlying parts of Cincinnati, but none was important enough by itself to merit placement in the revised sector scheme.

During the 1960's, the black population increase in Cincinnati was quite a bit smaller than the gain during the previous decade. The black population in 1970 was 125,070, or 27.6 per cent of the city total population. The West End lost 22,000 black residents during the 1960's, leaving it with only 18,000 in 1970. The northeast ghetto expanded outward as well as back toward downtown and had a black population increase within sector 60-2 of almost 10,000. The northwest black area, covered by sector 60-3, had an increase of nearly 2,000 residents. There were also black increases in other outlying ghettos during the 1960's. The combined

effect of continuing major West End black population loss, nonconforming black growth around but outside of the sector of the northeast ghetto and black increases in outlying areas not included in the set of sectors, could be expected to produce low sector growth scores for the 1960-1970 decade. In fact, the 1940 sectors, 1950 revised sectors and 1960 revised sectors all contained zero per cent of the city's 1960-1970 black increase.

The city of Cincinnati contains one of the best examples of physical barriers preventing sector growth by a major black ghetto. The West End black population grew between 1940 and 1950, but the next two decades witnessed a rapid depopulation of what was once the undisputed black center of the city. The reason the West End black zone could not physically expand any farther was the presence of railroad yards and other features that prevented it from increasing its area. Thus, the large black increase in Cincinnati during the 1950's took place in and around the northeast ghetto, creating the spectacular increase in the size of that black zone that was evident from the 1960 racial block map. The West End, with its limited area, simply could not have absorbed the large black increase that occurred in Cincinnati between 1950 and 1960. The West End lost population during the 1950's, which happened in a number of the older, more crowded ghettos in American cities during that period. Redevelopment during the 1960's caused even larger population losses in the West End than in the previous decade. By 1970, what had once been the most populous ghetto in Cincinnati, home of two-thirds of the city's blacks, was only a shadow of its former self.

Oakland

The case of Oakland is unusual enough that it will be examined in detail in the chapter covering the comparison of it to Milwaukee. Oakland

shows the poorest overall conformity to the sector model of any city in the sample--but for reasons that are entirely consistent with the assumptions of the sector hypothesis. Oakland had 8,462 black residents in 1940, and they comprised only 2.8 per cent of the total population. Most of them lived in West Oakland, where the blacks were scattered throughout the area on predominantly white blocks. There was a cluster of predominantly black blocks west of downtown in West Oakland, but that area only contained one-fifth of the city's black population. For sector analysis, the intersection of 14th Street and Broadway was designated the center, and a narrow sector was drawn encompassing the predominantly black blocks of West Oakland.

The decade of the 1940's saw a huge black population increase in Oakland which, like other major western industrial cities, received a large influx of southern blacks seeking jobs in the defense plants during the Second World War. There were 47,562 blacks in Oakland in 1950, a 462.1 per cent increase over the small 1940 total. Blacks were 12.4 per cent of the city's population in 1950, and now they dominated the formerly integrated areas west and northwest of downtown. West Oakland was now a predominantly black area as far north as 39th Street. There was a small black community developing at the opposite end of the city at the same time. East Oakland had scattered predominantly black blocks between east 14th Street and the Bay. The narrow 1940 sector contained only 13.0 per cent of Oakland's large 1940-1950 black increase. A much widened 1950 revised sector, 50-1, was drawn to cover the enlarged West Oakland ghetto.

Black population growth continued at a rapid pace in Oakland during the 1950's. The city's 83,618 blacks were 22.8 per cent of the total population in 1960. The West Oakland ghetto now extended up to the city's border with Berkeley, and two significant black populations had sprung up

in East Oakland during the 1950's. The inadequate 1940 sector accounted for zero per cent of the 1950-1960 black increase, while the wider 1950 revised sector contained 22.9 per cent of the increase. A second revision of the sector pattern was undertaken based on the 1960 block map. The West Oakland sector was widened again and redesignated 60-1. The black zone around east 14th Street and 77th Avenue in East Oakland was covered by sector 60-2, while the predominantly black residential area south of sector 60-2 along San Leandro Creek was covered by sector 60-3. In 1960, sector 60-1 had 53,000 black residents, 60-2 held nearly 7,000, and sector 60-3 had nearly 8,000.

Black growth in Oakland continued during the 1960's, and the city had 124,710 black residents in 1970. Blacks comprised a substantial 34.5 per cent of the total population in that year. The West Oakland ghetto increased very little in land area, but East Oakland's black zone expanded greatly in area. Much of this growth took place north of east 14th Street, outside the boundaries of sector 60-2. A new center of black growth was developing in Middle Oakland around the intersection of 24th Street and 23rd Avenue. This was separate from and roughly halfway between the large West and East Oakland black zones.

The 1940 and 1950 revised sectors accounted for zero per cent of Oakland's 1960-1970 black increase. The 1960 revised sectors contained only 10.5 per cent of the decade's black increase. The poor showing for the 1960 sectors was largely due to the decline of about 10,000 blacks in sector 60-1, which offset most of the combined gain of 15,000 that took place in the two East Oakland sectors. It was also due to the large lateral growth of the East Oakland black zone and other nonconforming black growth, such as the new Middle Oakland black area.

One of the assumptions about the sample of 25 cities being examined here is that generally the farther one travels out from the central business district, the better the quality of the housing becomes. This assumption is not as rigid as that of Burgess, and it recognizes Hoyt's and Davie's criticisms, but it is still quite defensible in the case of most of the 25 cities in this sample. Oakland is the major exception. Better housing in Oakland is not found by going out from downtown; it is encountered by moving uphill from San Francisco Bay. Thus, expansion of black areas in Oakland toward better housing is not out from downtown within sectors, but rather uphill and away from the Bay. This means that ghetto expansion in Oakland tends to cross sector boundaries rather than flow outward within sectors. All of this will be discussed more thoroughly in the comparison study involving Oakland and Milwaukee, which is one of the better examples of sector growth in the sample.

Jacksonville

Jacksonville had 61,782 black residents in 1940, and they made up 35.7 per cent of the city's population. The downtown intersection chosen as the center for drawing sectors was the corner of Bay and Main Streets. Three sectors were drawn to measure the conformity of black growth to the sector model. Sector 40-1 covered a neighborhood west of downtown with about 7,000 black residents. Sector 40-2 was northwest of downtown and covered the main ghetto, which had nearly 33,000 blacks. Sector 40-3 covered a smaller black community of about 13,000 northeast of downtown Jacksonville.

Between 1940 and 1950 the black housing pattern in Jacksonville remained very stable. The main ghetto expanded slightly to the northwest and gained thousands of new residents, while the two lesser ghettos had smaller population changes. The 1950 city black population was 72,450, and

the black percentage of the total population was 35.6. One hundred per cent of the black growth during the 1940's fell within the sectors. The sectors covered about two-thirds of Jacksonville's land area.

In 1960, the black population of Jacksonville was 82,525 and comprised 41.1 per cent of the total population. The 1960 racial block map was virtually undistinguishable from the 1950 map. The main ghetto had a black increase of 10,000, while the other black zones had very small declines during the 1950's. The sectors contained 96.0 per cent of the decade's black growth. Once again, no revised sectors needed to be drawn.

It should be pointed out before discussing the 1970 population figures that Jacksonville annexed the rest of Duval County during the 1960's, raising the city's land area from 30.2 to an incredible 766.0 square miles. Without this huge annexation, Jacksonville's population would have dropped to about 164,000 and the black community would have declined less sharply to 77,000, or 47 per cent of the total population. The actual 1970 total population was over 500,000, and the black population was 118,158. The annexation of the large suburban white population lowered the black percentage to 22.3 in 1970. The black housing pattern within the old Jacksonville city limits was still almost unchanged except for the continued expansion of the main ghetto to the northwest. It was now linked to a black zone in the annexed area to the northwest, which had expanded greatly since 1960. The net 1960-1970 black increase in this huge ghetto was more than 17,000--more than the 1960-1970 net black growth within the city's enlarged boundaries. Sector 40-1 lost about 700 black residents during the 1960's, and sector 40-3 lost nearly 5,000. The overall effects of these changes was that 92.7 per cent of the net black increase in Jacksonville during the 1960's fell within the sectors.

Kansas City, Missouri

While Jacksonville was one of the best examples of black growth falling within sectors in the South, Kansas City, Missouri had the highest sector growth scores in the entire sample. In 1940, Kansas City had 41,574 black residents who made up 10.4 per cent of the total population. Most of the black population lived in a compact ghetto southeast of the central business district. A sector was fitted around this black zone, using the intersection of 12th Street and Oak as the center of downtown Kansas City.

In 1950, there were 55,682 blacks in Kansas City, and they made up 12.2 per cent of a total population swollen by annexations of suburban white areas north of the Missouri River and elsewhere at the edge of the old city limits. The land area of the ghetto increased hardly at all during the 1940's. One hundred per cent of the 1940-1950 increase fell within the sector. The actual increase within the sector was greater than that in the city as a whole because of the decline of old near-downtown black areas outside of the sector and the shifting of some of their residents to the main ghetto.

The black population of Kansas City grew rapidly during the 1960s, and the black zone expanded considerably to the south and southeast. It extended below 45th Street by 1960. The city's black population was 83,146 in 1960 and made up 17.5 per cent of the city total. Once again, 100.0 per cent of the decade's black increase fell within the sector. The ghetto's growth was further swelled by the continuing decline of the old, non-sector black settlements previously discussed.

The ghetto's growth during the 1960's brought it to the edge of Swope Park in the southern part of Kansas City. The 1970 black population was 112,005, and the black percentage was 22.1. The black percentage would have

been higher except for the annexation of vast white suburban areas that raised Kansas City's total land area to 316.3 square miles in 1970. If the 1940 city limits had still been in effect, Kansas City would have been about one-third black in 1970. The sector conformity score for the 1960-1970 city black increase was 98.6 per cent. At no time in this study did the Kansas City sector cover more than 15 per cent of the city's land area.

Kansas City contained the ideal conditions for black neighborhood sector growth. Physical barriers and resistant sociocultural areas were absent from the path of ghetto expansion. The sector drawn in 1940 was reasonably wide, and the rate of black growth was high enough to promote black neighborhood expansion, but not so high that it overwhelmed the existing sector pattern. The existence of only one black zone in the city prevented the type of nonconforming black growth that lowered sector scores in southern, and some northern, cities where much of the black increase was scattered in small enclaves not covered by sectors. Kansas City is the only case in the sample in which the various impediments to sector growth were virtually absent during the period under study, and the conformity scores and block maps are strong evidence that black neighborhood growth followed the model almost perfectly.

Milwaukee

Milwaukee is another midwestern city that is a very good example of sector growth. In fact, Milwaukee will be used as the conforming case in the comparison study with Oakland, the most important nonconforming city in the sample. Milwaukee had only 8,821 black residents in 1940, and they made up only 1.5 per cent of the city black population. They lived in a small area north of Highland Avenue between 3rd Street and 12th Street. A sector was drawn around this black area, using the downtown intersection

of Wisconsin Avenue and Plankinton Street at the center.

Between 1940 and 1950, blacks increased to 3.4 per cent of the total population. There were 21,772 black residents in the city, but the ghetto's land area increased only slightly. The sector contained 84.0 per cent of the decade's black increase. Because of some lateral expansion of the ghetto, a slightly wider 1950 revised sector was drawn for future reference.

The black population of Milwaukee nearly tripled during the 1950's, and the ghetto expanded to cover most of the North Side east of 20th Street, south of Concordia and west of Holton. The original 1940 sector covered 57.6 per cent of the 1950-1960 black increase in the city. The 1950 revised sector accounted for 75.7 per cent of the decade's black growth. The near-tripling of the black population resulted in more lateral growth spilling outside of the angle of the sector. Because of this, an even wider 1960 revised sector was drawn.

The 1970 black population of Milwaukee was 105,088, and blacks were 14.7 per cent of the total population. The ghetto now extended west of 27th Street and north of Capitol Drive. The relatively narrow 1940 sector was still able to account for 59.8 per cent of the 1960-1970 city black increase. The 1950 revised sector contained 72.2 per cent of the decade's black increase, and the wider 1960 revised sector accounted for an impressive 93.1 per cent of the black increase during the 1960's.

One of the reasons Milwaukee is such a good example of sector growth is that despite the doubling of the black population during the 1940's and the virtual tripling of it during the 1950's, most of the black increase from 1940 to 1970 fell within the narrow, original 1940 sector. The continued movement of the ghetto outward from the center of the city in the face of such disruptively large black increases is as notable in its own

way as Kansas City's near perfect sector conformity is. Rapid black growth greatly disrupted sector conformity in Los Angeles and Oakland, yet Milwaukee's ghetto only underwent limited lateral growth. It should also be noted that the 1960 revised sector in Milwaukee did not even cover one-eighth of the city's land area in 1970. The narrow 1940 original sector covered less than 10 per cent of the city's land area. The focusing of such a high proportion of a city's black growth in a limited, predicted area provides strong support for the sector hypothesis.

Pittsburgh

Pittsburgh had 62,216 black residents in 1940, and the black population was 9.3 per cent of the city total population. Over one-half of the blacks lived in the Hill district, a large ghetto east of downtown. The remaining blacks were scattered southern-style in small concentrations in East Liberty, Homewood, Beltzhoover and other outlying neighborhoods. Using the intersection of Grant Street and Forbes Avenue as the center of downtown, a sector was fitted to the Hill ghetto. None of the other black enclaves were populous enough in 1940 to be included in the sector pattern.

The 1950 black population of Pittsburgh was 82,453, and the city was 12.2 per cent black. The Hill ghetto gained 12,000 new black residents during the 1940's, and the small black areas in the other parts of the city registered minor gains. The 1940 and 1950 racial block maps appeared almost identical. There was no major increase in the number of predominantly black blocks in any part of Pittsburgh. The 1940 sector contained 60.6 per cent of Pittsburgh's 1940-1950 black increase. No revision of the sector pattern was needed because of any lateral or other major nonconforming black growth.

In 1960, Pittsburgh's black population was 100,692, and blacks made up

16.7 per cent of the population of the city. The 1960 racial block map revealed the emergence of a new black zone adjoining the east city limits. This new ghetto, Homewood-Brushton, had 31,000 black residents. There were small black population gains in other outlying areas. Another major development during the 1950's was a net loss of nearly 7,000 blacks in the Hill district. Because of this decline, the 1940 sector contained zero per cent of the 1950-1960 city black increase. A 1960 sector revision was drawn up, adding a new sector covering Homewood-Brushton and designated 60-2.

The black population of Pittsburgh only increased by about 4,000 during the 1960's. In 1970, it stood at 104,904, but blacks made up 20.2 per cent of the city's shrinking population. Outlying black enclaves continued their gradual increase in population during the 1960's, and Homewood-Brushton gained nearly 5,000 black residents. However, the Hill district lost more than 9,000 black residents during the same period. Because of the decline of the Hill area population, both the original 1940 sector and the revised 1960 sectors contained zero per cent of the small 1960-1970 city black increase.

Pittsburgh, like the southern cities its housing pattern somewhat resembles, is another example of how a small decennial black increase scattered among small black enclaves can prevent significant sector growth.

Richmond

Richmond is one southern city in which black neighborhood growth consisted of outward expansion within sectors by means of white-to-black residential succession, throughout the period from 1940 to 1970. The 1940 black population of Richmond was 61,251, or 31.7 per cent of the total population. The black population pattern consisted of a ghetto west of downtown containing 8,000 blacks, a large ghetto north and east of the

business district containing 42,000 black residents, and a third ghetto on the south side of the James River with 4,000 more blacks. The intersection of 9th and Broad Streets was designated the center, and three sectors were drawn. Sector 40-1 was west of downtown, 40-2 covered the main ghetto, and 40-3 was south of the James River.

The black population of Richmond was 72,996 in 1950 and comprised 31.7 per cent of the total population. Annexation of predominantly white areas during the 1940's kept the black share of the population the same as it had been in 1940. Minor outward expansion of the black zones occurred during the 1940's, and all of them gained population. Sector 40-1 gained nearly 3,000 black residents, 40-2 gained 5,000, and 40-3 had an increase of more than 500. The sectors contained 72.0 per cent of the city's black growth during the 1940's. There was no lateral growth around any of the black areas that would have required drawing up a revised 1950 set of sectors.

The 1960 black population of Richmond was 91,972. There were no land annexations during the 1950's, and the black share of the population rose to 41.8 per cent in 1960. The western and main black area continued to expand into white areas in their outward growth during the 1950's. Sector 40-1 gained more than 3,000 black residents, 40-2 grew by more than 13,000, and 40-3 gained more than 2,000 black inhabitants between 1950 and 1960. The black increase within the sectors actually exceeded the city's black increase during the 1950's by a few hundred persons. The sectors accounted for 100.0 per cent of the 1950-1960 black increase plus a small black population shift from areas outside of the sector pattern.

In 1970, Richmond had 104,766 black residents, and they comprised 41.9 per cent of the total population. The reason the black percentage of the city population stayed about the same during the 1960's was that Richmond

annexed suburban land containing tens of thousands of whites and few blacks. If the 1960 boundaries had not been expanded, Richmond would have had 103,377 blacks in 1970, and they would have made up 51.1 per cent of the total population.

The three black areas continued their gradual outward expansion, with the greatest racial change evident at the north end of the main ghetto. The west sector gained several hundred new black residents during the 1960's, while the main ghetto gained nearly 6,000. The black zone south of the James River gained more than 3,000 new residents. The black growth within the sectors during the 1960's comprised 81.5 per cent of the net city black increase during the decade.

Richmond had some characteristics that were more common among northern cities than their southern counterparts. The city only had three significant black areas, and they were located close to the central business district. This prevented the dispersal of each decade's black growth among numerous insignificant, non-sector black settlements and also assured that much of the ghetto expansion would be away from the central business district, since the ghettos were too close to downtown for any significant inward growth to be possible. Comparing the Richmond results with those from New Orleans and Birmingham suggests how much more favorable the conditions in the Virginia city were for sustained sector growth.

Boston

The predominantly black zone in Boston covered a small area of the Roxbury district in 1940. There were only 23,679 black residents in the city in 1940, and they made up 3.1 per cent of the city's total population. The intersection of Washington and Court Streets was chosen as the center of downtown, and a sector was fitted around the Roxbury black zone to the southwest.

In 1950, the black population of Boston was 40,057. Blacks were now 5.0 per cent of the total population, but the predominantly black zone in Roxbury did not increase significantly in area. The sector contained 56.2 per cent of the 1940-1950 black increase.

During the 1950's both the black population and the land area that it occupied increased considerably. The 1960 black population was 63,165, and the black share of the total population was 9.1 per cent. The racially mixed area north of Franklin Park became predominantly black during the 1950's. However, it was not within the narrow 1940 sector, which actually lost black residents between 1950 and 1960. Thus zero per cent of the city's net black increase fell within the sector. While no sector revision was required because of racial changes during the 1940's, one was definitely in order because of the nonconforming ghetto growth of the 1950's. A second sector, 60-2, was drawn to encompass the black zone north of Franklin Park.

The 1960's brought the largest numerical increase in black population in Boston's history. The 1970 black population was 104,707. Because of the decline in the city's total population after 1950, blacks were 16.3 per cent of the 1970 Boston total. The size of the ghetto increased considerably during the 1960's, with a major expansion into the Dorchester area east and south of Franklin Park. The original 1940 sector contained 2.7 per cent of the 1960-1970 black increase. The revised pair of 1960 sectors accounted for 53.8 per cent of the decade's growth.

Boston is a clear case of the presence of a physical barrier, Franklin Park in this instance, deflecting what would otherwise be quite straightforward sector growth of a black area. The outward expansion of the black area north of the park was shunted off to the left, that is, into Dorchester. Once past the park, post-1960 ghetto growth appeared to be

moving directly outward, as stated in the sector model. It is quite probable that had there been no major park in the way, the expansion of the black zone in Boston, at least in the 1960's, would have conformed very well to the sector model.

This lengthy examination of the black neighborhood growth of the cities in the sample is useful for several reasons. The first is that it has discovered the presence of anticipated impediments to sector expansion in many cases in which the process was indeed distorted or blocked. Ethnic neighborhoods blocked ghetto expansion on the East Side of Detroit, in South Philadelphia and on the East Side of Cleveland, to name only the most prominent examples. The Harlem River in New York and Franklin Park in Boston blocked outward black neighborhood growth. Unusually rapid black population growth caused Los Angeles' black growth to spill out of the narrow 1940 sectors, while the near-cessation of black population increase in Pittsburgh during the 1960's ended sector expansion in that city. When the effects of the various expected impediments are considered, the modified sector model appears to predict the areas of probable ghetto expansion even better than the conformity index scores suggest.

Another result of the analysis of these cities is the finding that southern cities have become more like non-southern cities since 1960 in terms of their racial housing patterns. White-to-black residential succession has taken the place of building new black housing on vacant land as the principal means of meeting the need for new black housing in the cities of this sample. Residential succession has taken place on a massive scale since 1960 in Houston, Atlanta and Dallas.

Another new trend that is implied in the analysis of a number of the cities of this sample is the massive spill over of black population into

inner suburbs as central city ghettos reach the city limits. The discussions and the racial block maps of Los Angeles, Atlanta, St. Louis and other cities show that major black zones had expanded to the city limits by 1970. Would racial change continue in the suburbs as it has within the city? A positive answer would constitute further support for the sector growth hypothesis; it would mean that the model applies to entire metropolitan areas and is not restricted within the boundaries of central cities. Chapter VII will examine nine of the central cities in this sample whose major black communities have expanded to the city limits. The racial composition of the adjacent suburbs since 1940 will also be examined. The extent to which central city black zones spill over into the adjacent suburbs will become a matter of interest as more growing central city black communities reach the city limits during the 1980's.

CHAPTER VII

SECTOR GROWTH INTO SUBURBS

Black populations in the suburban portions of the larger metropolitan areas have tended to be relatively small (Grodzins, 1958: 3) and quite segregated (Taeuber and Taeuber, 1966: 58-59). Although the emergence of black suburbs has received some attention (Farley, 1970; Hermalin and Farley, 1973; Sutker and Sutker, 1974; Zehner and Chapin, 1974), this writer has not seen a comprehensive review of the specific developments in the metropolitan areas across the country in which central city ghettos have begun to expand into the inner suburbs. There have been three common types of black settlements in the suburbs. The first type is the ghetto in an older industrial suburb that is not really much different from the central city. Camden, New Jersey and Pontiac, Michigan are two examples. The second type of common black suburban location is the mainly residential suburb in which a small, long-established black community has gradually expanded until it has achieved a significant size. Freeport, New York, Mount Vernon, New York and Englewood, New Jersey are three instances of this phenomenon. The third major type of suburban black concentration is the community that was built from the ground up specifically for black occupancy or underwent near-total racial turnover early in its history. Kinloch, Missouri and Robbins, Illinois, both more than 98 per cent black, are the two most notable cases.

The three general types mentioned above have, until recently, been the homes of nearly the entire suburban black population in any given American

metropolitan area. Since 1940, and especially since 1960, a fourth type of major black suburban community has emerged: the suburb which formerly had very few black residents or none at all suddenly begins to undergo massive racial transition. This occurs when an expanding black community in an adjacent municipality, usually the central city, reaches the boundary of the suburb in question and continues its expansion into that suburb. The expansion of a major ghetto across the city limits into a formerly all-white suburb can create a rapid shift in the racial composition of that suburb in a very few years. A suburb may have a black majority within one or two decades after the start of significant black entry. The onset of this process on a large scale in a number of major metropolitan areas during the 1960's is a significant new development in urban racial housing patterns and a very good opportunity to test the sector growth hypothesis proposed in this paper. At the time of the 1970 census, ghetto expansion into the suburbs was evident around nine of the 25 cities involved in this study. The nine cities were Detroit, Washington, Los Angeles, Cleveland, Atlanta, St. Louis, Newark, Pittsburgh and Richmond. Table 13 lists these cities and provides black population data for adjacent jurisdictions affected by this process. Most of these entities are municipalities or unincorporated urban places. However, several are entire suburban counties of suburban portions of counties containing central cities. Most of the racial transition along the borders of the nine large cities began during the 1960's, although it commenced before 1950 in some places.

The first city in Table 13 is Detroit, which completely surrounds suburban Highland Park. Since 1940 the black Detroit neighborhood lying east of Woodward Avenue has expanded outward to Highland Park's southeastern border, and the suburb's racial composition has changed strikingly, especially since 1950. Since 1950 a similar process has taken place in

TABLE 13

SECTOR GROWTH OF BLACK NEIGHBORHOODS EXTENDING INTO ADJACENT SUBURBS

City	Suburb or Suburban County	1940	1950	1960	1970
Detroit	Highland Park, Michigan	1,292 (2.5)	3,877 (8.4)	7,947 (20.9)	19,609 (55.3)
Washington	Prince Georges Co.,Maryland	16,224 (18.1)	22,652 (11.7)	31,011 (8.7)	91,808 (13.9)
	Seat Pleasant, Maryland			403 (7.5)	5,530 (76.6)
	Silver Spring, Maryland			780 (1.2)	3,475 (4.5)
	Hillcrest Heights, Maryland			60 (0.4)	3,357 (14.0)
	Takoma Park, Maryland			437 (2.6)	2,297 (12.4)
	Mount Rainier, Maryland			19 (0.2)	326 (4.0)
Los Angeles	Compton, California	0 (0.0)	2,180 (4.5)	28,265 (39.4)	55,781 (71.0)
	Inglewood, California			29 (0.0)	10,066 (11.2)
	Hawthorne, California			3 (0.0)	1,727 (3.2)
	Gardena, California			8 (0.0)	1,475 (3.6)
Cleveland	Cuyahoga Co., Ohio, Excluding Cleveland		3,340 (0.7)	4,492 (0.6)	40,578 (4.2)
	East Cleveland, Ohio		82 (0.2)	804 (2.1)	23,196 (58.6)
	Shaker Heights, Ohio			357 (1.0)	5,250 (14.5)
	Warrensville Heights, Ohio			20 (0.2)	4,007 (21.1)
	Cleveland Heights, Ohio			251 (0.4)	1,508 (2.5)
Atlanta	De Kalb County, Georgia Excluding Atlanta			15,302 (7.1)	26,863 (7.3)
	Decatur, Georgia			3,111 (14.1)	8,650 (39.4)
	Candler-Glenwood Census Division of De Kalb County, Georgia			112 (0.4)	6,230 (16.1)

TABLE 13

(continued)

City	Suburb or Suburban County	1940	1950	1960	1970
St. Louis	St. Louis County, Missouri		16,819 (4.1)	19,007 (2.7)	45,495 (4.8)
	University City, Missouri			88 (0.2)	9,281 (20.0)
	Wellston, Missouri		567 (6.0)	673 (8.4)	4,848 (68.8)
	Pinelawn, Missouri			3 (0.1)	1,665 (28.8)
	Northwoods, Missouri			0 (0.0)	1,400 (30.4)
	Pagedale, Missouri			111 (2.2)	1,276 (22.9)
	Hillsdale, Missouri			0 (0.0)	647 (24.9)
	Velda Village Hills, Missouri			0) 0.0)	524 (45.3)
	Vinita Park, Missouri			1 (0.0)	448 (12.2)
	Arbor Terrace, Missouri			0 (0.0)	302 (12.2)
	Jennings, Missouri			4 (0.0)	100 (0.5)
Newark	Irvington, New Jersey			79 (0.1)	2,345 (3.9)
	Hillside, New Jersey			35 (0.2)	419 (1.9)
Pittsburgh	Wilkinsburg, Pennsylvania		502 (1.6)	726 (2.4)	5,315 (19.8)
Richmond	Henrico County, Virginia		5,679 (9.9)	5,989 (5.1)	10,106 (6.5)
	Fairfield Census Division of Henrico County, Virginia			1,157 (3.7)	4,958 (17.0)

that part of Highland Park lying west of Woodward. Although some of the racial change in Highland Park has consisted of movement from the west, most of it has been an extension of the Detroit ghetto outward from the center of the big city in the manner predicted by the sector growth model.

Washington has the highest per cent black of any of the 25 central cities in the sample. By 1970, all of the outer Washington neighborhoods east of Rock Creek Park were either predominantly black or undergoing racial change. This meant that black Washington neighborhoods abutted the Maryland suburbs along the District of Columbia's entire northeast and southeast borders. While the easternmost neighborhood in Washington, Deanewood, was mostly black in 1940, major expansion into Prince Georges County did not occur until the 1960's, when that Maryland county's black population virtually tripled. U.S. Census Bureau 1975 state population estimates by race suggest that the process is continuing unabated. The District of Columbia black population was estimated to have declined slightly, while Maryland's increased more rapidly than it had in the 1960's. While the 1975 estimate was for the state as a whole, it is a reasonable assumption that a large part of the 1970-1975 black increase occurred in the Maryland suburbs of Washington.

Because of its peculiar geography and the rapid growth of its black population, Los Angeles has become the most prominent example of a central city whose ghetto has expanded into the adjacent suburbs on a large scale. The list of Los Angeles suburbs in Table 13 tells only part of the story of black suburban spillover. There are also a number of unincorporated areas that have become heavily black since 1940. In 1970, suburban areas adjacent to Los Angeles ghetto neighborhoods contained more than 150,000 black residents. This was about three-fifths of the total suburban portion

of the Los Angeles County black population. Since most of the 503,000 black residents of the city of Los Angeles lived in the huge ghetto that expanded into the suburbs in question, the combined city-inner suburban black zone was one of the most populous and definitely the largest in area in the nation in 1970.

Cleveland, like Los Angeles, is a peculiarly shaped city, with portions of its territory stretching far from the center of the city in some directions and suburbs within five miles of downtown in other directions.

Prior to 1960, Cleveland's Glenville and southeast black areas reached the city's borders with East Cleveland and Shaker Heights, respectively. The slight increase in the tiny suburban Cuyahoga County black population during the 1950's occurred mainly in East Cleveland, where the black population rose from 82 to 804 during the decade. The suburban black population rose to more than 40,000 during the 1960's, with East Cleveland receiving over one-half of that increase. Shaker Heights and Warrensville Heights received thousands of black residents as Cleveland's southeastern black zone expanded across their borders. Transition also began in Cleveland Heights. These four suburbs jointly accounted for about 90 per cent of the suburban black increase during the 1960's.

Atlanta is the most advanced case of ghetto spillover into the suburbs in the Deep South. In 1970 it was just beginning in the western part of the city, but the main focus was around the eastern portion of the city, which is in De Kalb rather than Fulton County. What had been a small black area of east Atlanta in 1960 expanded during the following decade to cover most of that part of the city, adjacent unincorporated areas of De Kalb County and the southwestern part of the city of Decatur. It can be seen from Table 13 that Decatur and the Candler-Glenwood census

subdivision of De Kalb County jointly had a black increase during the 1960's that was slightly greater than that of the suburban portion of the county as a whole. In other words, the suburban De Kalb County black population outside of Decatur and Candler-Glenwood actually declined by about 100 persons during the 1960's.

The St. Louis ghetto had just reached the western city limits by 1960, but had not yet begun to expand into the suburbs to any extent. By 1970 the St. Louis black zone bordered the west and northwest suburbs in a long arc from University City to Jennings. In some places on the St. Louis side of the border, the neighborhoods were still predominantly white, but racial change was underway. During the 1960's the black population of St. Louis County, which is totally separate from the city of the same name, more than doubled. Most of this growth took place in the suburbs next to the St. Louis ghetto. University City received the largest share, followed by Wellston. The cluster of small suburbs between University City and Jennings was also changing. At the northernmost end of the zone of suburban black spillover, a number of blocks in Jennings had black residents. Most of these were immediately adjacent to the racially changing part of the city of St. Louis that lies north of the Mark Twain Expressway.

Even though Newark was over one-half black in 1970, black expansion into the suburbs had not proceeded very far by that time. Irvington to the west and Hillside to the southwest were both less that 5 per cent black, even though the adjoining areas of Newark were mostly black at the time.

Wilkinsburg, Pennsylvania lies partially within the sector defined by the expanse of Pittsburgh's Homewood-Brushton ghetto in 1960. Since then the suburb's small black population has been augmented by a large spillover from the Pittsburgh black area. In 1970 Wilkinsburg was about 20 per cent black.

To the north of Richmond is suburban Henrico County, Virginia. The suburban county's black population grew very slowly during the 1950's, and it was not until the black areas of Richmond expanded into the county during the 1960's that the process accelerated. Census small area data for 1960 and 1970 show that the Fairfield census division received more than 90 per cent of the county increase of 4,111. The Fairfield area adjoins Richmond on the northeast, and block data for 1970 show that the heavily black portion of the suburban county was the part bordering the Richmond ghetto.

Black spillover into the suburbs should be studied for at least two reasons: it provides a test for the sector growth hypothesis and it may help to explain the recent smaller increases in some central city black populations that had grown rather rapidly in previous decades.

When the revised 1960 sectors are used as the points of reference, the instances of black suburban spillover around these nine central cities form a coherent pattern. Every suburban entity listed in Table 13 is at least partially within the territory that would be part of a central city black sector if it extended beyond the city limits. In fact, most of these suburbs are squarely within the zones of expanded central city sectors. In these nine metropolitan areas, as well as nearly all American cases, the sudden onset of racial change in a totally white suburb is usually the result of the outward expansion of a nearby central city ghetto. A few suburbs have become heavily black when adjacent suburban black communities expanded across municipal boundaries. Maywood, Illinois is a Chicago suburb whose black population has doubled every decade since 1950 and now forms a major part of the city's population. The black area has expanded into Bellwood and Broadview, two adjacent, formerly all-white, suburbs.

Except when they are within the sectors of expanding ghettos or adjacent to growing suburban black populations, all-white suburbs possess a very high degree of racial stability. The type of change that occurred in East Cleveland, Ohio or University City, Missouri during the 1960's does not occur in isolation. All-white suburbs surrounded by similar suburbs or next to white central city neighborhoods do not become 30, 40 or 50 per cent black within ten years. That process takes place through spillover from adjacent, heavily-black residential areas, usually central city ghettos that have reached the city limits.

Massive racial transition in formerly all-white suburbs is a phenomenon that takes place with some frequency within the areas in which black growth would be expected if the sector model were applied to the entire metropolitan area in each case, rather than just the central city. The virtual absence of this sudden transition in totally white suburbs outside of such sectors is further support for the sector hypothesis.

Black spillover into the inner suburbs is also useful in explaining another phenomenon of racial change in metropolitan areas: the reduced growth of the black population in some central cities after 1960. Cleveland is probably the best example. The city black population increased by 103,000 persons during the 1950's, but only grew by 37,000 between 1960 and 1970. The reason for this sharp decline in the city's black numerical increase is massive spillover into the suburbs previously mentioned. During the 1950's suburban Cuyahoga County's black population grew by roughly 1,000. The growth during the following ten years was 36,000--virtually as great as the central city's increase. Ghetto expansion into the suburbs also helps to explain why St. Louis, Pittsburgh and Richmond had smaller black increases in the 1960's than in the 1950's. The Census Bureau estimates that

Washington, D.C. suffered a net loss of black population between 1970 and 1975. The reason for the loss is that nearly all of the neighborhoods in Washington's black sectors and other areas of the city open to blacks have changed racially and there are no more major neighborhoods in the city available to them. In other words, the city's racially changing areas, the sites of future black growth, are across the boundary in the Maryland suburbs. The rapid black growth in Prince Georges County since 1960 is not a matter of the end of housing discrimination; the Maryland county contains the leading edge of the Washington ghetto.

The large scale movement of blacks into the suburbs has political and social ramifications for the cities and the suburbs involved. First and most obvious, the massive spillover of black families into the suburbs is opening suburbia to them, albeit on a segregated basis. The black majorities that soon emerge in such inner suburbs create the opportunity for black political aspirants to become mayors, city council members and school board members. On the other hand, there is evidence that in two cases the spread of the central city ghetto into the nearby suburbs has considerably delayed that time when blacks would become a majority in the central city. Between 1970 and 1975 the total population of Cleveland declined from 750,000 to 638,000 and that of St. Louis from 622,000 to 524,000. Had the growth of the major black neighborhoods been restricted to the two central cities during the 1960's and 1970's, both would have been more than 50 per cent black by 1975. Thus, the growth of black population and political opportunities in the inner suburbs may retard the same processes in the central city.

In Chapter VIII attention will be refocused on the central cities. The role of white ethnic neighborhoods as impediments to the sector growth of black neighborhoods will be examined.

CHAPTER VIII

ETHNIC AREAS

The presence of sociocultural areas, especially white ethnic neighborhoods, is one factor that can distort otherwise clear-cut sector growth of black neighborhoods, according to one of the major modifications of the model. In Chapter VI a number of instances were noted in which black neighborhood growth came to a halt when it reached the border of an ethnic neighborhood. Because these ethnic areas did not become predominantly black, the expansion of the black zones in question either skirted the impediment or came to a nearly complete stop. In the latter instance the city's black growth usually shifted to another ghetto.

This chapter will examine a number of aspects of the presence of ethnic neighborhoods in the cities under study here. The first part of this chapter containes a survey of the census tracts that fit this study's definition of ethnic tracts in 1950. The next part of this chapter is an overview of the racial changes that took place among the 551 ethnic tracts that were identified and the stability of tracts associated with different nationalities. The third part of this chapter is a city-by-city examination of the location of individual ethnic tracts and the extent of racial change among them. The last part of the chapter is an effort to find the reasons for the notable racial stability of most ethnic tracts in close proximity to expanding ghettos and the contrasting tendency of Jewish areas to undergo very rapid transition in these circumstances.

Distribution of Ethnic Tracts
by City and Group

The distribution of ethnic tracts, as defined for this study, in 1950 is contained in Table 14. Their distribution within the 25 city sample is highly uneven, and three of the 17 nationalities found in the ethnic tracts predominate in the foreign-born white populations of more than 80 per cent of those tracts.

Table 14 contains ethnic tract data for 24 cities. 1940 tract data had to be used for Newark because of the absence of published 1950 statistics. The relative stability of ethnic areas between 1940 and 1950 in other cities this writer has studied leads him to believe that the earlier ethnic data still give an accurate reading of the location of the neighborhoods of interest in Newark. No tract data can be found for Jacksonville for 1940 or 1950, although the small number of foreign-born whites in the city in both years makes it highly unlikely that any tract in the city meets the rather rigorous criteria set for identification as an ethnic tract.

The distribution of the 551 ethnic tracts among the 24 cities in 1950 was strongly skewed toward the larger cities and those on the East Coast. Newark, New York and Boston all had between 10 and 30 per cent ethnic tracts, with Newark having 26 out of a total of 98 tracts in the city. Among the other cities in the sample, only Chicago, Detroit, Philadelphia and Cleveland had as many as 5 per cent of their tracts fall into this study's category of ethnic. Eleven of the cities had none at all, including all of those in the Deep South. This sample of ethnic tracts consists mainly of tracts from the city of New York. Because of its huge population, New York held 2,448 of 6,706 tracts in the 24-city

TABLE 14

1950 CENSUS TRACTS*

City	Total Tracts in 1950	Total Ethnic Tracts	Itemized by Ethnic Group
New York	2,448	343	250 Italy, 56 U.S.S.R., 14 Germany, 9 Poland, 4 Ireland, 4 Norway, 2 Great Britain, 1 Lithuania, 1 Netherlands, 1 Czechoslovakia, 1 Hungary
Chicago	935	70	20 Italy, 19 Poland, 14 Czechoslovakia, 10 Lithuania, 2 Greece, 2 Mexico, 1 Sweden, 1 U.S.S.R., 1 Yugoslavia
Detroit	369	30	26 Poland, 3 Italy, 1 Hungary
Philadelphia	404	24	11 U.S.S.R., 9 Italy, 3 Poland, 1 Germany
Washington	96	0	. . .
Los Angeles	363	14	13 Mexico, 1 U.S.S.R.
Baltimore	168	4	3 U.S.S.R., 1 Italy
Houston	68	0	. . .
Cleveland	206	13	4 Italy, 4 Yugoslavia, 4 Hungary 1 Czechoslovakia
New Orleans	142	0	. . .
Atlanta	75	0	. . .
St. Louis	128	2	2 Italy
Memphis	90	0	. . .
Dallas	96	0	. . .

TABLE 14
(continued)

City	Total Tracts in 1950	Total Ethnic Tracts	Itemized by Ethnic Group
Newark	98	26	22 Italy, 2 U.S.S.R., 1 Poland, 1 Spain and Portugal
Indianapolis	110		. . .
Birmingham	58		. . .
Cincinnati	110		. . .
Oakland	72	1	1 Italy
Jacksonville	N.A.	N.A.	N.A.
Kansas City	99		. . .
Milwaukee	160	1	1 Italy
Pittsburgh	194	2	2 Italy
Richmond	61		. . .
Boston	156	21	10 Italy, 9 U.S.S.R., 1 Ireland, 1 Other races (Orientals)
24 Cities	6,706	551	325 Italy, 83 U.S.S.R., 58 Poland, 16 Czechoslovakia, 15 Germany, 15 Mexico, 11 Lithuania, 6 Hungary, 5 Ireland, 5 Yugoslavia, 4 Norway, 2 Great Britain, 2 Greece, 1 Netherlands, 1 Sweden, 1 Other Races, 1 Spain and Portugal

sample, or more than one-third of all the tracts. In terms of ethnic tracts, New York's dominance is even more striking: 343 out of 551 ethnic tracts in the sample were in New York. The fact that three-fifths of the sample's ethnic tracts are in one city must be taken into account in any analysis of this data.

The representation of the 17 nationalities in the ethnic tract sample was even less balanced than the distribution of the tracts themselves among the 24 cities. Of 551 ethnic tracts, 325 were defined as Italian, 83 as Russian and 58 as Polish. The only 2 cities in which a majority of the ethnic tracts were not defined as belonging to one or a combination of these three groups were Los Angeles and Cleveland. In the former case, 13 of 14 ethnic tracts were Mexican, and in the latter eight out of thirteen were Hungarian or Yugoslav.

The distribution of the ethnic tracts by nationality and city largely conforms to popular notions about which regions of the United States various groups preferred to settle in. Italian and Russian, i.e., Jewish, tracts were the overwhelming majority of all ethnic tracts in eastern cities. For example, 250 out of 343 New York ethnic tracts were Italian. In Newark the figure was 22 out of 26. Russian tracts were even more heavily concentrated in the East. Only two of 83 U.S.S.R. tracts were outside of the Boston-to-Baltimore corridor--one in Chicago, and the other in Los Angeles. Eastern European groups were more prominent in the Midwestern cities. Twenty-six of the 30 ethnic tracts in Detroit were Polish. Polish, Czech and Lithuanian tracts jointly formed a majority in Chicago. Of 13 ethnic tracts in Cleveland, 4 were Yugoslav, 4 were Hungarian, and one was Czech.

This enumeration of ethnic tracts in the 24 cities in the sample is in strong agreement with Lieberson (1963) and others who note the greater

concentration of the immigrants from southern and eastern Europe in ethnic areas than those people who came from northern and western European nations. In a sample of 551 ethnic tracts, only 28, or about 5 per cent, represented the nations of the "old" immigration: 15 German, 5 Irish, 4 Norwegian, 2 British, 1 Dutch and 1 Swedish.

Stability of Ethnic Tracts, 1950-70

The results of the survey of ethnic tracts as defined in 1950 are in strong agreement with Walter Firey's analysis of sociocultural areas and this writer's earlier analysis of Detroit ethnic areas between 1950 and 1970. They are presented graphically in Tables 15 and 16. The examination of the 551 ethnic tracts in the present study shows a remarkable degree of racial stability between 1950 and 1970 among ethnic tracts lying outside the sectors of predicted black growth, as well as in over half of those within the sectors of probable black expansion. A more detailed examination of the tract data by principal ethnic group supports the same conclusions this writer reached after viewing the Detroit tract data: most of the strongly ethnic areas of a city are unlikely to change rapidly from white to black, even when lying near a rapidly growing black community, with the exception of neighborhoods occupied by one specific ethnic group which constitutes a special case.

A general overview of which ethnic tracts became more than 50 per cent black between 1950 and 1970 and which of these tracts lay within sectors of black growth yields the following interesting statistics: 100 out of 551 ethnic tracts became more than 50 per cent black during the 20-year period in question. 218 of the tracts lay within the most inclusive sectors of black expansion. This means that if a city needed wider, revised sectors drawn in 1950 or 1960, these were used. Tracts lying

TABLE 15

1950-1970 RACIAL CHANGE IN ETHNIC TRACTS: TRACTS 50 PER CENT BLACK IN 1970 BY CITY

New York

Key

Un Unchanged
Ch Changed
T Total
In In Sector
Out Not in Sector

Italy

	Un	Ch	T
In	41	19	60
Out	190	0	190
T	231	19	250

U.S.S.R

	Un	Ch	T
In	20	26	46
Out	10	0	10
T	30	26	56

Germany

	Un	Ch	T
In	1	0	1
Out	13	0	13
T	14	0	14

Poland

	Un	Ch	T
In	1	0	1
Out	8	0	8
T	9	0	9

Ireland

	Un	Ch	T
In	0	0	0
Out	4	0	4
T	4	0	4

Norway

	Un	Ch	T
In	0	0	0
Out	4	0	4
T	4	0	4

Great Britain

	Un	Ch	T
In	0	0	0
Out	2	0	2
T	2	0	2

Lithuania

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

Netherlands

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

TABLE 15
(continued)

Czechoslovakia

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

Hungary

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

All Non-U.S.S.R.

	Un	Ch	T
In	43	19	62
Out	225	0	225
T	268	19	287

All Ethnic Tracts

	Un	Ch	T
In	63	45	108
Out	235	0	235
T	298	45	343

Bronx Borough, New York

Italy

	Un	Ch	T
In	15	8	28
Out	37	0	37
T	52	8	60

Germany

	Un	Ch	T
In	0	0	0
Out	3	0	3
T	3	0	3

Great Britain

	Un	Ch	T
In	0	0	0
Out	2	0	2
T	2	0	2

Ireland

	Un	Ch	T
In	0	0	0
Out	2	0	2
T	2	0	2

Hungary

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

All Ethnic Tracts

	Un	Ch	T
In	15	8	23
Out	45	0	45
T	60	8	68

TABLE 15
(continued)

Brooklyn Borough, New York

Italy

	Un	CH	T
In	26	7	33
Out	100	0	100
T	126	7	133

U.S.S.R.

	Un	Ch	T
In	20	26	46
Out	10	0	10
T	30	26	56

Poland

	Un	Ch	T
In	1	0	1
Out	7	0	7
T	8	0	8

Norway

	Un	Ch	T
In	0	0	0
Out	4	0	4
T	4	0	4

Lithuania

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

All Ethnic Tracts

	Un	Ch	T
In	47	33	80
Out	122	0	122
T	169	33	202

Manhattan Borough, New York

Italy

	Un	Ch	T
In	0	0	0
Out	14	0	14
T	14	0	14

Ireland

	Un	Ch	T
In	0	0	0
Out	2	0	2
T	2	0	2

Germany

	Un	Ch	T
In	1	0	1
Out	0	0	0
T	1	0	1

Czechoslovakia

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

Netherlands

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

All Ethnic Tracts

	Un	Ch	T
In	1	0	1
Out	18	0	18
T	19	0	19

TABLE 15
(continued)

Queens Borough, New York

Italy

	Un	Ch	T
In	0	4	4
Out	33	0	33
T	33	4	37

Germany

	Un	Ch	T
In	0	0	0
Out	10	0	10
T	10	0	10

Poland

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

All Ethnic Tracts

	Un	Ch	T
In	0	4	4
Out	44	0	44
T	44	4	48

Richmond Burough, New York

Italy

	Un	Ch	T
In	0	0	0
Out	6	0	6
T	6	0	6

TABLE 15
(continued)

Chicago

Italy

	Un	Ch	T
In	11	6	17
Out	3	0	3
T	14	6	20

Poland

	Un	Ch	T
In	0	0	0
Out	18	1	19
T	18	1	19

Czechoslovakia

	Un	Ch	T
In	3	0	3
Out	11	0	11
T	14	0	14

Lithuania

	Un	Ch	T
In	4	0	4
Out	6	0	6
T	10	0	10

Greece

	Un	Ch	T
In	2	0	2
Out	0	0	0
T	2	0	2

Mexico

	Un	Ch	T
In	0	0	0
Out	1	1	2
T	1	1	2

Sweden

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

U.S.S.R.

	Un	Ch	T
In	0	1	1
Out	0	0	0
T	0	1	1

Yugoslavia

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

All Ethnic Tracts

	Un	Ch	T
In	20	7	27
Out	41	2	43
T	61	9	70

TABLE 15
(continued)

Detroit

Poland

	Un	Ch	T
In	15	5	20
Out	6	0	6
T	21	5	26

Italy

	Un	Ch	T
In	0	3	3
Out	0	0	0
T	0	3	3

Hungary

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

All Ethnic Tracts

	Un	Ch	T
In	15	8	23
Out	7	0	7
T	22	8	30

Philadelphia

U.S.S.R.

	Un	Ch	T
In	3	7	10
Out	1	0	1
T	4	7	11

Italy

	Un	Ch	T
In	8	0	8
Out	1	0	1
T	9	0	9

Poland

	Un	Ch	T
In	0	0	0
Out	3	0	3
T	3	0	3

Germany

	Un	Ch	T
In	0	1	1
Out	0	0	0
T	0	1	1

All Non-U.S.S.R

	Un	Ch	T
In	8	1	9
Out	4	0	4
T	12	1	13

All Ethnic Tracts

	Un	Ch	T
In	11	8	19
Out	5	0	5
T	16	8	24

TABLE 15
(continued)

Los Angeles

	Mexico				U.S.S.R.				All Ethnic Tracts		
	Un	Ch	T		Un	Ch	T		Un	Ch	T
In	3	0	3	In	0	0	0	In	3	0	3
Out	10	0	10	Out	1	0	1	Out	11	0	11
T	13	0	13	T	1	0	1	T	14	0	13

Baltimore

	U.S.S.R.				Italy				All Ethnic Tracts		
	Un	Ch	T		Un	Ch	T		Un	Ch	T
In	0	3	3	In	0	0	0	In	0	3	3
Out	0	0	0	Out	0	1	1	Out	0	1	1
T	0	3	3	T	0	1	1	T	0	4	4

Cleveland

	Italy				Yugoslavia				Hungary		
	Un	Ch	T		Un	Ch	T		Un	Ch	T
In	3	0	3	In	3	0	3	In	1	3	4
Out	1	0	1	Out	1	0	1	Out	0	0	0
T	4	0	4	T	$	0	4	T	1	3	4

TABLE 15
(continued)

Cleveland (continued)

Czechoslovakia

	Un	Ch	T
In	0	0	0
Out	0	1	1
T	0	1	1

All Ethnic Tracts

	Un	Ch	T
In	7	3	10
Out	2	1	3
T	9	4	13

St. Louis

Italy

	Un	Ch	T
In	0	0	0
Out	2	0	2
T	2	0	2

Oakland

Italy

	Un	Ch	T
In	0	1	1
Out	0	0	0
T	0	1	1

Milwaukee

Italy

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

Pittsburgh

Italy

	Un	Ch	T
In	1	1	2
Out	0	0	0
T	1	1	2

TABLE 15
(continued)

Newark

Italy

	Un	Ch	T
In	2	10	12
Out	10	0	10
T	12	10	22

U.S.S.R.

	Un	Ch	T
In	0	2	2
Out	0	0	0
T	0	0	0

Poland

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

Spain and Portugal

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

All Ethnic Tracts

	Un	Ch	T
In	2	12	14
Out	12	0	12
T	14	12	26

Boston

Italy

	Un	Ch	T
In	0	0	0
Out	10	0	10
T	10	0	10

U.S.S.R.

	Un	Ch	T
In	0	8	8
Out	1	0	1
T	1	8	9

Ireland

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

Other Races

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

All Non-U.S.S.R.

	Un	Ch	T
In	0	0	0
Out	12	0	12
T	12	0	12

All Ethnic Tracts

	Un	Ch	T
In	0	8	8
Out	13	0	13
T	13	8	21

TABLE 16

1950-1970 RACIAL CHANGE IN ETHNIC TRACTS: TRACTS FIFTY PER CENT BLACK IN 1970

All Cities

Key

Un Unchanged
Ch Changed
T Total
In In Sector
Out Not in Sector

Italy (12 Cities)

	Un	Ch	T
In	66	40	106
Out	218	1	219
T	284	41	325

U.S.S.R. (7 Cities)

	Un	Ch	T
In	23	47	70
Out	13	0	13
T	36	47	83

Poland (5 Cities)

	Un	Ch	T
In	16	5	21
Out	36	1	37
T	52	6	58

Czechoslovakia (3 Cities)

	Un	Ch	T
In	3	0	3
Out	13	1	13
T	15	1	16

Germany (2 Cities)

	Un	Ch	T
In	1	1	2
Out	13	0	13
T	14	1	15

Mexico (2 Cities)

	Un	Ch	T
In	3	0	3
Out	11	1	12
T	14	1	15

Lithuania (2 Cities)

	Un	Ch	T
In	4	0	4
Out	7	0	7
T	11	0	11

Hungary (3 Cities)

	Un	Ch	T
In	1	3	4
Out	2	0	2
T	3	3	6

Ireland (2 Cities)

	Un	Ch	T
In	0	0	0
Out	5	0	5
T	5	0	5

TABLE 16
(continued)

Yugoslovia
(2 Cities)

	Un	Ch	T
In	3	0	3
Out	2	0	2
T	5	0	5

Norway
(1 City)

	Un	Ch	T
In	0	0	0
Out	4	0	4
T	4	0	4

Great Britain
(1 City)

	Un	Ch	T
In	0	0	0
Out	2	0	2
T	2	0	2

Greece
(1 City)

	Un	Ch	T
In	2	0	2
Out	0	0	0
T	2	0	2

Netherlands
(1 City)

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

Sweden
(1 City)

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

Other Races
(1 City)

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

Spain & Portugal
(1 City)

	Un	Ch	T
In	0	0	0
Out	1	0	1
T	1	0	1

All Non-U.S.S.R.
(13 Cities)

	Un	Ch	T
In	99	49	148
Out	316	4	320
T	415	53	468

All Ethnic Tracts
(13 Cities)

	Un	Ch	T
In	122	96	218
Out	329	4	333
T	451	100	551

within the angle of the sector, but more than a mile from the leading edge of the expanding, predominantly black area, were considered not to be within the sector for the purpose of this analysis. Of the 218 tracts lying within the sectors, 122 had remained stable, and 96 had become more than 50 per cent black. This is quite a notable record of stability, since all of these tracts lay within a mile of predominantly black areas in cities with large, rapidly growing black populations. The 333 ethnic tracts that lay outside of the sectors of probable black expansion had a phenomenal record of racial stability. Only four of these tracts became more than 50 per cent black between 1950 and 1970. In none of these four cases was it an instance of a totally-white tract at some distance from the ghetto suddenly becoming mostly black. Two tracts, one in Chicago and one in Baltimore, consisted largely of public housing, which shifted from mostly white in 1950 to more than 50 per cent black in 1970. The third case was a southeast Chicago tract near a steel mill in which an old, isolated black settlement gradually grew until most of the tract population was black. The last case was a southeastern Cleveland tract on the periphery of a large black area. Besides expanding outward as predicted by the sector model, the black area also experienced lateral growth, absorbing the ethnic tract in question.

That more than 80 per cent of all ethnic tracts and over one-half of those in close proximity to expanding ghettos should remain mostly white during the period 1950-1970 is strong support for Firey's hypothesis of stability within such sociocultural areas. The 13-city subsample which contains all of the 551 ethnic tracts includes many cities with huge, rapidly growing black populations. The proportion black in most of these places has been significantly higher at every new census. In view of the overall trend of rapid residential succession from white to black in the

major American cities, the durability of white ethnic tracts is quite striking.

In his 1977 study of racial change in Detroit, this writer found that the racial stability of white ethnic areas was not the same for all nationalities. In the Detroit case, Polish tracts and Russian, that is, Jewish, tracts were polar opposites in terms of racial stability. The former remained almost totally white, except when they were in the direct path of major black neighborhood expansion. Even then, transition was considerably slower than in the case of non-ethnic areas. The Russian areas, on the other hand, were highly transitory. During the 60-odd years since World War I, four distinct Jewish areas in Detroit have become predominantly black. Each instance of succession occurred farther from the downtown portion of Detroit than the last, and when the last Jewish neighborhood on the Northwest side had changed, most of the metropolitan area's Jews lived in the northwest suburbs.

Three nationalities account for 466 out of 551 ethnic tracts in the present sample, with no other group having more than 16 tracts. The three principal nationalities were Italian, Russian and Polish, with 325, 83 and 58 tracts, respectively. The contrast found in Detroit between Russian and Polish tracts held up strongly in the present sample. Only 41 of 325 Italian tracts had changed racially between 1950 and 1970. Forty of 106 Italian tracts within sectors of black growth had changed. The record of stability among Polish tracts was even better. Six out of 58 Polish tracts had black majorities in 1970. Five of 21 Polish tracts within black sectors had changed during the 20 years in question. The record of the Russian or Jewish tracts is one of considerably less stability than the other two groups. Forty-seven of 83 Russian tracts in

the present sample became more than 50 per cent black between 1950 and 1970. Within sectors of black growth, 47 of 70 Russian tracts changed. The contrast with the other two groups is quite evident. Fewer than 40 per cent of the Italian tracts within sectors changed. Fewer than 20 per cent of the Polish tracts within sectors of black growth changed. However, more than two-thirds of the Russian tracts had become mostly black by 1970. While it was noted earlier that the 551-tract sample of ethnic tracts came mostly from New York City, there were Italian tracts in 12 cities, Polish tracts in five, and Russian tracts in seven. In fact, rather than exaggerating the instability of Russian ethnic tracts, the preponderance of New York data somewhat masks the trend in the other cities. Only three of 24 Russian tracts outside of New York City were still more than 50 per cent white in 1970.

The number of ethnic tracts belonging to each of the other 14 groups in this sample is too small for meaningful analysis. However, their stability was quite high. A general comparison of Russian and non-Russian ethnic tracts confirms the vast difference in stability suggested by this writer's earlier Detroit work. Only 53 of 468 non-Russian tracts changed during the 20-year period in question. Forty-nine of 148 non-Russian tracts within sectors of black growth changed during this time. This means that fewer than one-eighth of all non-Russian tracts in the sample changed racially, compared to more than one-half of the Russian tracts. Within sectors of black growth, one-third of the non-Russian ethnic tracts and about two-thirds of the Russian tracts became more than 50 per cent black between 1950 and 1970. An attempt will be made later in this chapter to find some of the reasons for the vast difference in stability between the Russian tracts and the other ethnic tracts. First, a city-by-city dis-

cussion of the location of ethnic tracts and the changes in racial composition between 1950 and 1970 will be presented.

City-by-City Discussion of Location and Stability of Ethnic Tracts

Because it contains three-fifths of all the ethnic tracts in the sample, New York City should be examined closely borough by borough to locate the ethnic tracts and determine how stable these tracts were in different parts of the city.

In 1950, the Bronx contained 449 census tracts, of which 68 qualified as ethnic. Sixty of the ethnic tracts were Italian, and the remainder were divided among four other groups. The two principal Italian areas were the Williamsbridge district of the north Bronx and the Belmont neighborhood south of Fordham University. Between 1950 and 1970, only eight Bronx ethnic tracts became more than 50 per cent black. All of these were Italian tracts in the Williamsbridge area, and all of them fell within the 1960 revised sector covering Williamsbridge.

The Bronx illustrates two problems which, in New York City at least, confront anyone using the exact methodology that this study does. First, a number of heavily ethnic tracts could not be included in the sample because members of the group in question came from two or more different countries. A number of heavily Jewish tracts in the Grand Concourse could not be placed in the sample, despite a high percentage of foreign-born whites. These tracts had large numbers of Russian- and Polish-born individuals, but since neither of these two groups was a majority of the foreign-born whites by itself in 1950, the tracts could not be included, even though the two nationalities jointly formed a majority of foreign-born whites and even though both groups were almost totally Jewish. The other problem is peculiar to New York alone of the 25 sample cities and

is especially noticeable in the Bronx. While the Hispanic populations of most large cities, such as Los Angeles and Chicago, live in neighborhoods that are separate from the black districts, this is decidedly less so in New York and especially in the Bronx. The very rapid demographic changes in the Bronx since 1960 are somewhat obscured by the methodology used in this study. In many parts of the Bronx the European ethnic populations have been completely replaced by a stable mix consisting of a Hispanic majority, with the large remainder being entirely black. Thus, some ethnic tracts in the large area south of Fordham Road and west of the Bronx River were enumerated as not having black majorities and, therefore, presumably being stable. Between 1960 and 1970 the combined black and Latin percentage in the Bronx rose from 25 to 50. However, a look at a map of predominantly black blocks in 1970 reveals only a slight increase in the number of such blocks. The truth is that many neighborhoods populated entirely by majority group whites in 1950 contained 60 per cent Latin and 40 per cent black populations or some similar ratio twenty years later.

The second major problem can be summarized by stating that the New York data should be examined with some knowledge of Hispanic housing patterns in hand to avoid assuming neighborhood stability that may not in fact exist. In the other cities of this sample one may usually assume that the ethnic tracts that did not become predominantly black between 1950 and 1970 contain mostly majority group whites. In Chicago, one Polish area has become largely Puerto Rican and a Czech neighborhood is now heavily Mexican. Otherwise, majority-group whites populated the "stable" tracts in this 551 ethnic tract sample. No claim is made that the predominant white ethnic group in 1970 was the same as in 1950 in every case, although

Detroit, Milwaukee and San Francisco data suggest that this was largely the case.

Manhattan is the second borough that will be examined in the discussion of the location and stability of New York ethnic tracts. Manhattan has traditionally been one of the most heterogeneous parts of urban America. A number of Lower East Side tracts were excluded from the sample for the same reasons that the previously mentioned Bronx tracts were kept out. Only 19 of Manhattan's 284 tracts qualified to be placed in the sample. Fourteen of these tracts were identified as Italian, and the other five were split among four other nationalities. The Italian tracts were clustered in two locations. Ten of these tracts were in lower Manhattan in the general vicinity of Greenwich Village, and the other four were in East Harlem, east of Third Avenue. None of the 1950 ethnic tracts became predominantly black during the next two decades. This is not surprising, since the Harlem black area has not expanded very much since 1940. Since 1940 the Hispanic population of Manhattan has grown considerably. In 1970 the Italian population in East Harlem was in the process of being replaced by Puerto Rican and black residents. The Hispanics were the larger element of the two groups which jointly formed a majority in all East Harlem tracts in 1970.

In 1950 Brooklyn was not only the most populous borough in the city, but also the most heavily ethnic, if the ethnic tract map is any indication. Of the 895 census tracts in the borough, 202 were defined as ethnic. One hundred thirty-three of the ethnic tracts were Italian, 56 were Russian and eight were Polish. Of the 45 New York City ethnic tracts that became predominantly black between 1950 and 1970, 33 were in Brooklyn. Twenty-six of the unstable Brooklyn tracts were Russian, and the other seven were Italian. All of these unstable Brooklyn tracts fell within the

1960 revised sector of probable black neighborhood expansion.

The 133 Italian tracts were spread fairly evenly among about a dozen clusters. The two largest were in the southwestern part of the borough, at some distance from the center of the black community. The other clusters of Italian tracts were in South Brooklyn, Park Slope, Williamsburg, Bushwick, Canarsie, East New York and the eastern edge of Bedford-Stuyvesant. Four of the seven unstable Italian tracts were in the last area named, and two of the others were elsewhere in Bedford-Stuyvesant. The only other Italian tract that had become predominantly black by 1970 was located in East New York.

Ten of the Russian ethnic tracts were located in the southernmost part of Brooklyn. Six of these were in the Coney Island area, and four were in the Brighton Beach neighborhood. The real center of Russian concentration, however, was much nearer to the geographic center of the borough. Brownsville was the heart of a Russian zone that also included part of Flatbush to the west, Crown Heights to the north and East New York to the east. Unlike the two small oceanfront Russian areas which were not located in a sector of probable black growth and remained mostly white, the Brownsville Russian zone sat squarely in the principal sector of probable black growth. Much of the borough's black neighborhood growth since 1950 has occurred in the principal Russian ethnic zone. In 1970, 26 of the 46 Russian tracts had become more than 50 per cent black. Racial transition had begun in the remaining 20 tracts as well. Most of these tracts had no minority population as recently as 1960. It is probable that the 1980 census will show that all of the 1950 Russian tracts in Brownsville will be predominantly black or have a combined black and Hispanic majority. The contrast in stability between the Russian, or

Jewish, ethnic tracts in Brooklyn and the Italian tracts in the same borough is quite pronounced. Less than a quarter of the 1950 Italian tracts had black majorities twenty years later, while over half of the Russian tracts did.

Most of the tracts identified as belonging to other groups in Brooklyn lay outside of the sectors of racial change, and none of them had become predominantly black by 1970. Eight of these 13 tracts were Polish, and four were Norwegian. Five of the Polish tracts were in the Greenpoint area, the northernmost neighborhood in Brooklyn.

Only 48 of the 706 census tracts in the borough of Queens were classified as ethnic in this survey. Thirty-seven of the tracts were Italian, 10 were German, and one was Polish. All of the ethnic tracts were located in the western half of the borough, and most of them were in the northwestern portion. The Italian tracts were concentrated in two neighborhoods, Long Island City and Corona, and most of the German tracts were in Ridgewood. Only four Queens tracts in this sample became predominantly black between 1960 and 1970. These were Italian tracts that lay within the 1960 revised sector covering East Elmhurst, a neighborhood immediately to the north of Corona.

Staten Island had six ethnic tracts in 1950, all of which were Italian. None of them became predominantly black in the succeeding twenty years.

In summary, the city of New York contained 2,448 census tracts in 1950, of which 343 were classified as ethnic. There were 250 Italian tracts, 56 Russian, that is, Jewish tracts, 14 German tracts and 9 Polish tracts. The remaining 14 tracts were divided among seven nationalities. Nearly all of the ethnic tracts that lay within sectors and all of those

that became mostly black were Italian or Russian. The two nationalities differed markedly in the racial stability of their tracts between 1950 and 1970. Sixty Italian tracts lay within sectors of probable black expansion. Nineteen Italian tracts, all within sectors, became predominantly black during the twenty years in question. Forty-six Russian tracts lay within sectors of black growth. Twenty-six of the Russian tracts, all within the main Brooklyn sector of black growth, changed racially during the twenty years ending in 1970. While fewer than one-third of the Italian tracts in the path of black expansion changed, over one-half of the Russian tracts did. It also appears that the remaining Russian tracts may very well be predominantly black by 1980. These results agree strongly with this writer's findings concerning Detroit, which were presented in his M.A. thesis. He found in the case of Detroit that most ethnic neighborhoods were highly resistant to change, but that Jewish areas were extremely vulnerable to transition.

In 1950, 70 of Chicago's 935 census tracts met this study's criteria for being ethnic in character. There were 20 Italian tracts, 19 Polish tracts, 14 Czech tracts, 10 Lithuanian tracts and 7 other ethnic tracts divided among five nationalities. By 1970, only nine of these ethnic tracts had become predominantly black. Seven of the 27 tracts within sectors of black growth had changed, and two of the 43 tracts outside the areas of probable black growth had changed racially.

Most of the 20 Italian tracts were located within sectors of probable black growth on the West Side, with several others at the edge of the South Side black zone only about three miles from the Loop. Only 6 Italian tracts, all within sectors, became mostly black between 1950 and 1970. Five of these formed a row, stretching from Rockwell Street to

Central Park Avenue on the south side of Harrison Street. The other lay southwest of the intersection of Chicago Avenue and Kedzie Avenue.

Most of the 19 Polish tracts were grouped in two locations which were not within any black sectors. Twelve of them were on the near Northwest Side. The innermost of these, bounded by Racine Avenue, Chicago Avenue and the river, was the only Polish tract and one of the only two tracts outside of sectors in Chicago to become predominantly black. The slight majority of black residents in this tract in 1970 may have been the result of the construction of public housing units within its boundaries. The other major cluster of Polish tracts was on the Southwest Side along 47th Street west of Western Avenue. None of these six tracts underwent racial change between 1950 and 1970.

Ten of the Czech tracts were in South Lawndale on the West Side, and three of them fell within the 1960 revised sector of black growth for Lawndale. However, no Czech tracts here or elsewhere in the city became predominantly black. The 10 Lithuanian tracts also remained stable, although several were located at the edge of the sector of black growth on the near South Side.

Two tracts among the seven divided among five ethnic groups alluded to earlier should be mentioned. There was one Russian tract in the heavily-Jewish North Lawndale area in 1950. This tract lay within the 1960 revised black sector for North Lawndale and was totally black by 1970. The only other tract, besides the Polish one previously mentioned, that lay outside of any sector yet became predominantly black was a Mexican tract on the far Southeast Side. This tract, in an area known as Millgate, had a small black settlement which grew slowly over a period of decades until blacks had become the majority by 1970.

Most of the 70 ethnic tracts identified in Chicago remained almost impervious to black entry between 1950 and 1970. As stated in the discussion of New York, this should not be taken as evidence that the 1970 residents were of the same extraction as those who lived there in 1950, or even that most of the 1970 residents were of European descent. The near Northwest Polish area is now mostly Puerto Rican, and the South Lawndale Czech area has become predominantly Mexican since 1970.

Of the nation's half dozen largest cities, Detroit has the highest proportion of black residents and has witnessed some of the most extensive racial residential succession in the country in recent years. The city of Detroit was only 9 per cent black in 1940, but subsequent massive black growth and white departure have raised that figure to more than 60 per cent in the late 1970's. In 1950 Detroit had 369 census tracts, of which 30 were classified as ethnic in this survey. Twenty-six of these ethnic tracts were Polish, 3 were Italian and one was Hungarian.

The 26 Polish tracts were concentrated in two different areas on opposite sides of Detroit. Fourteen were located along Michigan Avenue on the West Side, and the other 12 were on the East Side arrayed around the north, east and south borders of the city of Hamtramck. This suburb, completely surrounded by Detroit, is one of the most famous Polish communities in the United States. Although over one-half of the West Side Polish tracts were inside the 1960 main revised sector of black growth, only two became predominantly black between 1950 and 1970. The two tracts that changed had some black residents in 1940 and were the closest to the ghetto, so it was not a case of massive black incursion into the West Side Polish community.

The East Side Polish tracts were also quite stable, especially

considering their location more squarely in the path of probable racial transition. Only three of the 12 tracts became predominantly black by 1970. One, just north of Hamtramck, was already nearly half-black, and the proportion of whites there in 1970 was still quite high. The other two tracts that changed were in a cluster of six, south of Hamtramck, that underwent transition very slowly, despite the nearly complete racial change in surrounding non-ethnic neighborhoods to the west, south and east.

There were three Italian tracts in Detroit in 1950, two of which were on the East Side and one on the West Side. All of these tracts lay within sectors, and all were over one-half black by 1970. The West Side tract was in the revised 1960 Downriver sector, and the two East Side tracts were on Gratiot Avenue in the principal sector of black growth.

There was one Hungarian ethnic tract in the southwestern part of the city outside of any black sector. Although this tract had a number of black residents in 1940, it was still mostly white in 1970.

This writer's master's thesis examined Detroit's ethnic patterns in more detail, using less stringent criteria to define ethnic tracts than in the present study. Although Russians did not predominate in the foreign-born populations of Detroit's Jewish areas, these neighborhoods could be identified, and their history is of more than casual interest in the present survey. While the large Polish districts in the city have remained mostly white for decades, four successive Jewish areas have become predominantly black since 1910. During the First World War the lower East Side Jewish area became mostly black. During the 1930's and 1940's the same process took place in the Oakland Avenue area just to the north. During the 1950's, the 12th Street-Russel Woods Jewish community underwent transition. During the 1960's the Northwest Side, the last

major center of Jewish population within the city limits, became mostly black. The swift march of the center of Jewish population from the lower East Side to the suburbs in five decades is quite striking and stands in great contrast to the long-term stability of Detroit's Polish areas. Detroit is the extreme case of Jewish neighborhoods' rapidly becoming black neighborhoods, but the phenomenon is present to some degree in many of the 25 cities in this sample. The difference in stability between Jewish and other ethnic neighborhoods will be taken up in the analysis following the discussions of the distribution and stability of ethnic tracts in each of the 25 sample cities.

Twenty-four of Philadelphia's 404 census tracts fit the definition of ethnic tracts used in this study. Eleven of the tracts were Russian, nine were Italian, three were Polish, and one was German. The Russian tracts in Philadelphia shared the instability of those Jewish areas in other cities. Ten of the eleven Russian tracts lay within sectors, and seven of these became predominantly black. Four of these tracts were incorporated into the West Philadelphia black zone, and the other three were absorbed into the North Philadelphia ghetto.

All of the nine Italian tracts in Philadelphia remained mostly white, even though eight of them lay within sectors. Seven of these tracts formed a cluster adjoining the South Philadelphia black zone on its southeastern border. One can get an idea of the stability of this Italian area by comparing the 1940 and 1970 racial block maps of the city. The boundaries of the South Philadelphia black community are virtually identical in most places, even though the 30 years had witnessed a huge increase in the citywide black population. One Italian tract in West Philadelphia sat squarely in the path of the large, expanding ghetto, yet it remained almost totally white in 1970. The contrast in stability between Italian

and Russian tracts noted in the discussion of New York City is even more pronounced in the case of Philadelphia.

There were also three Polish tracts in Philadelphia, none of which were within sectors, that were unaffected by racial change. One German tract lay within the revised sector of one of the smaller black zones in the northern part of the city. It was more than one-half black in 1970.

Washington, D.C. had no tracts definable as ethnic in 1950.

In 1950, Los Angeles had 363 census tracts of which only 14 were ethnic. The city's distance from the traditional points of entry for European immigrants and its proximity to Mexico gave it a considerably different distribution of nationalities than the cities discussed thus far. Thirteen of the ethnic tracts were Mexican, and one was Russian. None of these tracts became predominantly black between 1950 and 1970, although three of the Mexican tracts were at the inner edge of the main black sector. All of the Mexican tracts were near the center of the city, with over half in the area east of downtown. That neighborhood has since become one of the principal Hispanic neighborhoods within the city limits of Los Angeles. The Russian tract was located on the ocean front in the Venice district, many miles west of the central area of the city.

Only four of the 168 census tracts in Baltimore were classifiable as ethnic for this study in 1950. There were three Russian tracts in the northwestern part of the city, the principal home of the Jewish population. There was also one Italian tract, across Jones Falls and just southeast of the central business district. The three Russian tracts were within the sector of growth for the West Side black area. By 1970 these three tracts were overwhelmingly black. The Italian tract was barely outside the East Side black sector. Nevertheless, it had a black majority in 1970, one of

only four tracts outside of sectors in the entire sample to undergo racial change. The increase in the black population in public housing between 1950 and 1970 was the reason this Baltimore tract changed.

There were no ethnic tracts in Houston, as was the case with all of the Deep South cities in the sample.

Thirteen out of 206 census tracts in Cleveland were ethnic in 1950. Four were Italian, four were Yugoslav, four were Hungarian, and one was Czech. None of the Italian tracts changed racially, even though three of them were within sectors of black growth on the East Side. Two of these tracts, bordering the city of Cleveland Heights, formed the Murray Hill neighborhood, notorious in the mid-1960's for its violent opposition to school integration. Murray Hill's racial stability, in spite of the close proximity of black neighborhoods for thirty years and racial change in surrounding areas, is one of the most clear-cut cases supporting the application of Firey's hypothesis to the study of racial residential succession.

The four Yugoslav tracts remained stable, even though three of them were within sectors of black growth. Two of these were east of East 55th Street and north of Superior Avenue--literally right across the street from the Hough ghetto to the south. The other Yugoslav tract within a sector was east of East 152nd Street and north of St. Clair Avenue. It was at the outermost edge of the black zone's expansion to the northeast.

The four Hungarian tracts were all located along or near Buckeye Road, a thoroughfare that leads through the southeastern part of Cleveland to Shaker Heights. All of these tracts were within a sector of black growth, and three of the four had become predominantly black by 1970.

The single Czech tract in Cleveland was not within any sector of black growth, but it was predominantly black in 1970, like the Italian tract in Baltimore discussed above. This was true of only four ethnic tracts in the entire sample. Lateral growth of Cleveland's southeastern black areas caused the racial change in the adjacent Czech tract.

There were no ethnic tracts in New Orleans or Atlanta.

St. Louis had two ethnic tracts in 1950, both Italian. These were in the southwestern part of the city, outside of the sector of black growth and totally unaffected by racial change between 1950 and 1970.

Neither Memphis nor Dallas contained any ethnic tracts in 1950.

Newark had the highest proportion of ethnic tracts of any city in this survey. Because no published ethnic data by tract was available for 1950, 1940 statistics were used instead. This writer's previous experiences comparing 1940 and 1950 ethnic patterns in Detroit, Milwaukee and San Francisco lead him to believe that there was little change in the pattern in Newark in the 1940's, as was true in these three instances. The growth in terms of land area of the Newark black zone between 1940 and 1950 was so slight that few of the city's white ethnic residents would have been displaced during that period. As stated above, a high proportion of the census tracts in Newark were definable as ethnic in 1940. Of the city's 98 tracts, 22 were Italian and two were Russian.

Twelve of the 22 Italian tracts were within the sector of black growth, and ten of these became predominantly black. Ten Italian tracts outside of the sector remained unchanged. Eight of the Italian tracts were clustered directly west of the central business district. A strip of a dozen Italian tracts stretched from northwest of downtown to the northwest city limits. The two southernmost tracts in this zone were inside

the sector and became predominantly black. A pair of Italian tracts east of the business district was within the revised 1960 sector, but remained predominantly white.

Newark had two Russian tracts in 1950. These became predominantly black between 1960 and 1970. These tracts were located within the sector, in the southwesternmost part of the city. The two remaining ethnic tracts identified from the 1940 statistics were in the eastern part of the city, outside of the sector. One was Polish, and the other was identified in the census data as "Spain and Portugal" and neither was affected by racial change.

Newark was one case in which nearly all white tracts clearly within the sector of black growth underwent change as the ghetto expanded. Between 1940 and 1970 the black population of Newark grew from 10 per cent to 54 per cent of the city's total population. This rapid growth absorbed nearly all white neighborhoods in its path, including usually resistant Italian areas.

There were no ethnic tracts in Indianapolis, Birmingham or Cincinnati in 1950.

Oakland had only one ethnic tract out of a total of 72 census tracts in the city in 1950. This was an Italian tract in West Oakland, bordering the city of Emeryville. Between 1950 and 1970 this tract was absorbed into the West Oakland black zone.

It can be safely assumed that there were no ethnic tracts in Jacksonville in 1950. While no census tract reports were published for the city in 1940 and 1950, the foreigh-born white population of the city was so small as to make it very unlikely that any tract in the city met the relatively stringent criteria for ethnicity used in this study.

There were no ethnic tracts in Kansas City, Missouri in 1950.

Only one census tract in Milwaukee met the standards used to define ethnic tracts for this study. It was an Italian tract consisting of that part of the central business district south of Wisconsin Avenue and east of the Milwaukee River. This tract was not within the sector of black growth and did not undergo racial change. The fact that none of the remaining 159 census tracts in Milwaukee qualified as ethnic is a testimony to the high proportion of whites in the city who had been born in the United States. This is especially notable both because the information came from the 1950 census--about 30 years ago--and that the city of Milwaukee has a pronounced ethnic character, with most of the whites being of German, Polish, Austrian or Italian extraction. To qualify as ethnic in this sample, a census tract had to have a 1950 population that was less than 50 per cent black, the white population had to be at least 20 per cent foreign-born, and more than one-half of the foreign-born whites had to be of a single nationality.

Pittsburgh, like Milwaukee, is considered an ethnic stronghold, but it too had only a small number of ethnic tracts. There were two ethnic tracts, both Italian and each at the inner end of a sector of black growth. The tract between downtown Pittsburgh and the Hill black zone did not change racially between 1950 and 1970, while the one within the Homewood-brushton sector did. The latter tract, however, already had a sizable black minority in 1950 and still held many whites 20 years later, when blacks had become a slight majority.

None of Richmond's 61 tracts were classified as ethnic in 1950 in the analysis for this study.

Twenty-one of Boston's 156 census tracts were identified as ethnic in 1950 for this study. New York and Newark were the only other cities in this sample that had more than 10 per cent of their tracts fall into this

category. Ten of the Boston ethnic tracts were Italian, nine were Russian, One was Irish, and one tract, a majority of whose residents were Orientals, was classified as ethnic on that basis.

Six of the Italian tracts were grouped in East Boston next to Logan Airport, and the other four were on the northern edge of downtown Boston. All of these tracts lay outside of the sectors of black growth, and all remained racially stable between 1960 and 1970. The same was true of the Irish tract and the Oriental tract.

Stability was definitely not the story in the case of the Russian tracts. These nine tracts formed a long strip in the Dorchester section of the city and constituted the core of the Boston Jewish community. By 1970, eight of these tracts, all within sectors, had become predominantly black. The ninth tract adjoined the others on the south. It was within the angle of one of the 1960 revised sectors, but just beyond the one-mile outer arcs from the edge of the pattern of predominantly black blocks that defined the outer boundaries of the sector. As it was, this ninth Russian tract was nearly 50 per cent black in 1970.

The consistent findings of stability among non-Russian ethnic tracts and the contrasting tendency of Russian or Jewish tracts to quickly become heavily black when in the path of racial change merit further study. This writer examined some of the possible reasons for these two divergent phenomena in his 1977 study of Detroit. With the replication of these same results in the considerably larger sample examined here, it would be useful to present the major points that were brought up in the analysis of Detroit again.

Reasons for Ethnic Area Stability and Instability

This investigation of the stability of white ethnic areas in the cities of the sample has yielded striking evidence of the durability of Polish, Italian and other similar ethnic neighborhoods and the equally notable impermanence of Jewish areas in the path of black neighborhood expansion. This writer (1977:27-68) devoted a large part of his master's thesis to a discussion of the same phenomena in Detroit and some possible reasons for neighborhood stability or instability. Although the Detroit ethnic neighborhoods were not considered in the light of Firey's (1945) sociocultural ecology, many of the factors uncovered in the Detroit study involve the attitudes of residents concerning the symbolic importance of their neighborhoods. While this issue is not central to the present study of sector growth of black areas, a discussion of it may be of some interest to those who focus their attention more specifically on ethnic communities.

There is relatively little published material concerning differences among types of ethnic neighborhoods in the acceptance of black neighbors, for understandable reasons. It is quite a touchy matter to identify certain ethnic groups as the strongest proponents of keeping their neighborhoods totally white. Contending that another ethnic group usually flees its neighborhoods in short order at the approach of the black ghetto could also be considered controversial. Nevertheless, some references can be found in both the sociological and the popular literature. Lieberson (1963:121) quoted Burgess concerning the differential susceptibility of various types of white ethnic areas to black entry in Chicago in the 1920's. White (1963:110) wrote in Life Magazine about the different types of reactions expected from different ethnic areas at the approach of the expanding black zone. Some changed quietly, while the residents of others sometimes responded with violence.

This writer (1977:29-40) began the survey of Detroit ethnic areas in his thesis with an examination of two adjacent but very different suburbs that are completely surrounded by Detroit. Hamtramck has remained overwhelmingly white, while its neighbor, Highland Park, has become predominantly black (1977:33). While Detroit and Highland Park were becoming mostly black, Hamtramck was maintaining its racial stability by overt, illicit means. Urban renewal was used to eliminate one black enclave, and a freeway was deliberately run through the principal Hamtramck black community, according to the ruling of a federal judge (Salpukas, 1971:19). Earlier, during the 1950's, the city of Hamtramck had unsuccessfully attempted to keep blacks out of its public housing, through subterfuge (Wood, 1955:238).

Some knowledge of the composition of Hamtramck's white population and that group's attachment to the community may help explain that suburb's stability, despite its being almost totally surrounded by black and racially changing neighborhoods. One fact that is central to understanding Hamtramck is that the city is overwhelmingly Polish. As recently as 1970 over two-thirds of the foreign stock was Polish (Kenny, 1977:38). The proportion of ethnic Poles may even be higher among native whites of native parentage in the suburb. This demographic fact has had considerable impact on the character of the community:

> Always Hamtramck has been a highly self-conscious community, proud of its Polish traditions, resentful of criticism, and confident in its economic advantages. Such qualities form an admirable basis for future progressive developments. Though the proportion of the Polish-born in the population will decline further in the coming years, at present there seems to be no diminution in the essential Polishness of the community, which remains a fascinating cultural island within the confines of the City of Detroit. (Wood, 1955:10)

A more recent New York Times article (Stevens, 1974:61) stated that there was still strong community feeling in Hamtramck centered in the Catholic

churches, Polish social clubs and sports teams. These two references and the exclusionary measures taken against black suggest that Hamtramck may be an even better example of a sociocultural ethnic area than the Italian North End in Boston which Firey (1945:147-148) used to illustrate his hypothesis. The presence of such neighborhoods in Detroit and in a number of other cities in the current sample means that the sociocultural ethnic area is not merely a curiosity limited within the border of Hamtramck. Therefore, it is of more than casual interest to know why this attachment to specific neighborhoods and resistance to black entry exist.

Greeley (1971:210) examined attitude survey results that showed that Poles and Italians were less receptive to the prospect of the movement of blacks onto their blocks than other ethnic groups were. Greeley (1971:69) also attributed the higher levels of racism and anti-Semitism among midwestern Poles to the fact that large numbers of them were concentrated in tightly-knit communities rather than more widely scattered as in other parts of the nation.

Greeley (1971:69) found that both Poles and Italians scored lower than other groups on a survey measure of happiness. He (1974:238) also inferred from various survey data that Poles are considerably more alienated than other nationalities. This might lead to tendencies both to cluster residentially and to rigorously exclude the people lower on the social scale--i.e., blacks.

One of the best analyses of racially stable ethnic neighborhoods is contained in an article contrasting Jews with the other white ethnic groups:

> Ethnic Americans, in particular, of whatever origin, even after long residence in America, always retained an affection for the village life of their youth, and significant numbers actually returned to the native villages which they had never ceased to regard as their true homes. Of course, the majority of ethnics

> remained in America, but on their own terms; that is, they sought to recreate the life they had known in the old country. The Italians, for instance, had always lived in close-packed villages rather than in isolated rural cottages or farmhouses, and they moved more aggressively than other immigrant groups to replicate their native patterns in the 'Little Italy's' which still exist in every large American city. (Sklare, 1972:70)

It would be difficult to find a better description of a sociocultural ethnic area. In his thesis (1977:67) this writer summarized the picture of this type of neighborhood that his investigation revealed. As stated above, the residents are quite attached to their communities. Since many children attend parochial schools, the ethnic areas are somewhat insulated from the deterioration of the public school systems in big cities. There is less support for the black civil rights movement than in other segments of the white population, and some ethnic communities have traditions of greeting new prospective black neighbors with violence. Such violence is far from inconsistent with neighborhood sympathies and tends to cause blacks not to even consider moving into such areas. The evidence presented in the last several pages, viewed in the context of the sociocultural areas hypothesis, helps to explain why certain white ethnic areas in a number of major cities have not become predominantly black even though the black populations of those cities have grown dramatically during the past several decades.

The other side of the question of ethnic neighborhood stability is the tendency of Jewish areas to undergo very rapid transition when black zones expand to their borders. This writer (1977:55-56) found that four successive Detroit Jewish areas have become black neighborhoods since 1910. Wirth (1928:230-231) and Spear (1967:223) documented different stages of the same phenomenon in Chicago. Binzen (1970:93) noted the change of a small Jewish enclave in Philadelphia's Kensington area into a black area. The surrounding blue-collar white neighborhood remained segregated, with the residents so

determined to maintain the existing order that they rioted for five nights in 1966 to keep a black family from moving in (Binzen, 1970:112). This writer (1977:60) noted cases in San Francisco and South Bend, Indiana in which blacks had succeeded Jews as residents of certain neighborhoods.

In terms of the concept of sociocultural area, the Jewish attitude appears to be the opposite of that of the other ethnics:

> There is a further factor, the most important of all, and that is the Jews' lack of commitment to their physical environs. The Jewish neighborhood per se seems to have little symbolic, or even actual, significance for its residents, and its special facilities--synagogues, schools, kosher butchers, delicatessens, etc.--are looked upon as mere conveniences. There is little feeling for the area itself, and hence no overwhelming desire to preserve it from decay. The explanation which first suggests itself for this attitude is that Jewish psychology has been conditioned, by thousands of years of living in exile, to react to situations of stress by a kind of avoidance behavior. Thus Jews did not feel that Brownsville, say, really belonged to them; when other claimed it, the Jews moved elsewhere. (Sklare, 1972:76-77)

Sklare (1972:76) noted the particularly rapid shift of the center of Jewish residence in cities with large black populations, mentioning Detroit as an example.

There are a number of possible reasons for Jewish flight in the face of impending, large-scale black movement into a neighborhood. Glazer and Moynihan (1963:161) noted the preference of Jews in New York to live in heavily Jewish areas. Mayer (1960:216) found the same to be true in Detroit. He also found that parents wanted their children to meet other Jewish children. When the public schools in the Russel Woods area began to deteriorate as racial change commenced in that Detroit neighborhood, the Jews left. They moved to a northwestern city neighborhood and two suburbs that were "clearly Jewish." Sklare (1972:73) mentioned the departure of the Jewish population from Newark as Weequahic High School declined.

Glazer and Moynihan (1963:57) stated that there was less violent reaction to black entry into neighborhoods in New York because of the Jewish aversion to such behavior. Popular perception may have the effect of steering blacks to Jewish areas instead of those ethnic districts notorious for keeping blacks out. This view may affect the Jews as well as the blacks, creating a self-fulfilling prophecy of racial change (Wolf, 1957:14).

General attitudes of tolerance and egalitarianism among Jews may have a lot to do with their behavior in regard to letting blacks in their neighborhoods. Wirth quotes a Jewish landowner in Chicago in the 1920's: "We Jews ought to be the last ones to hold a prejudice against another race, after all that we have been through" (1928:231). Greeley (1974:237) added that the Jewish immigrants from Europe generally came from more urban background than those from other countries and that many of the European Jews held radical or socialist political views.

Jewish neighborhoods, then, are almost complete opposites of their Italian and Polish counterparts. The neighborhoods are not symbolically important to the Jews. Because of their desire to live among other Jews, sensitivity to the quality of public education, support of civil rights and refusal to keep blacks out by force, many Jews in large American cities are quite likely to be affected by racial change. In terms of the exclusion of blacks, Jewish neighborhoods are not resistant sociocultural areas. Those in the path of black ghetto expansion uniformly become predominantly black. The contrast with the other types of ethnic neighborhoods could not be greater.

One final aspect of the tendency of ethnic groups to flee or resist black entry is the financial resources of the whites. This writer (1977:41) looked at the median income figures for the various parts of Detroit, Highland

Park and Hamtramck. The Jewish areas and non-ethnic zones that subsequently underwent racial change had median family incomes that were $2,000, or $3,000 or more, higher than those in stable Polish areas. Rosenthal (1975:287) also presented data suggesting that median family income is higher in Jewish areas. Sklare (1972:76) felt that the upward mobility of Jews has had a lot to do with their flight from areas they once dominated. Thus, many Jews have the financial ability to leave obsolete neighborhoods for better surroundings. Many residents of the ethnic areas that rigorously exclude blacks lack the money to exercise that option. This financial aspect of the decision to move or remain should receive considerable attention in any detailed study of ethnic neighborhood racial stability that is conducted in the future.

CHAPTER IX

COMPARISON STUDY OF POLAR TYPES: MILWAUKEE AND OAKLAND

History of the Two Cities

In Chapter VI Oakland was singled out as the case within the sample that conformed less to the sector model of black neighborhood growth than any of the other cities during the period from 1940 to 1970. In the same chapter, Milwaukee was cited as an example of ghetto growth that conformed to the sector hypothesis even though the rate of black population increase within the city was unusually high between 1940 and 1960. Table 17 presents the total and black populations for each city from the earliest available census to 1970. While Milwaukee has always been considerably larger than Oakland, the black populations of the two cities have been similar in size, especially since 1930. This makes Milwaukee the best city in the sample to be used as a comparison study of polar types with Oakland. The two cities will be examined to find the reason that black growth in Milwaukee has clearly followed the sector hypothesis, while ghetto expansion in Oakland has just as clearly failed to do so. The history of each city will be briefly reviewed, as well as the regional racial history of both the West and the Great Lakes region. The white ethnic areas of Milwaukee and Oakland will be examined in more detail than was done in Chapter VIII. Finally, the conformity of the two cities to the assumptions of the modified sector model will be considered. Much of the discussions of the regional racial history and the ethnic areas of Milwaukee in this chapter was derived from material compiled by this writer for H.U.D. Grant Project H-2565-RG (Ryu, 1980).

TABLE 17

TOTAL AND BLACK POPULATION AND PER CENT BLACK FOR OAKLAND, 1860-1970 AND MILWAUKEE, 1840-1870

Year	Total Population	Black Population	Per Cent Black	National Numerical Rank of Black Population	Total Population	Black Population	Per Cent Black	National Numerical Rank of Black Population
	Oakland				Milwaukee			
1840					1,712	22	1.3	
1850					20,061	98	.5	
1860	1,543	7	.5		45,246	106	.2	
1870	10,500	55	.5		71,440	176	.2	
1880	34,555	593	1.7		115,587	304	.3	
1890	48,682	644	1.3		204,468	449	.2	
1900	66,960	1,026	1.5		285,315	862	.3	
1910	150,174	3,055	2.0		373,857	980	.3	
1920	216,261	5,489	2.5	107	475,147	2,229	.5	
1930	284,063	7,503	2.6	96	578,249	7,501	1.3	97
1940	302,163	8,462	2.8	101	587,472	8,821	1.5	99
1950	384,575	47,562	12.4	27	637,392	21,772	3.4	59
1960	367,548	83,618	22.8	21	741,324	62,458	8.4	34
1970	361,561	124,710	34.5	19	717,099	105,088	14.7	22

Milwaukee

The history of Milwaukee, the "normal" case in this comparison study, will be examined first. The area that is now downtown Milwaukee was surveyed for the purpose of laying out the streets of a town in 1835, not long after title to the land had been given up by the Indians (Wisconsin, 1941: 243). Several rival settlements separated by the rivers were unified in 1845. German refugees from the revolutions of 1848 that swept Europe came to Milwaukee and had a major social and cultural effect on the young city (Wisconsin, 1941:244). The predominance of the Germans in the city's population and their achievements in the arts made Milwaukee famous as America's "Deutsch Athen" (Wisconsin, 1941:242).

The outbreak of the Civil War in 1861 caused much of the traffic that formerly used the Mississippi River to shift to the Great Lakes. The war also stimulated the demand for manufactured goods. Milwaukee's wartime economic boom continued into the 1870's, with Great Lakes shipping and the railroads contributing greatly to the city's prosperity (Wisconsin, 1941: 245). The total population figures for Milwaukee in Table 17 reflect these developments. Milwaukee had only 45,246 residents in 1860, yet two decades later the total was 115,587.

During the last part of the Nineteenth century Milwaukee steadily grew in terms of population and became one of the nation's great industrial cities. The value of the manufactured goods produced in Milwaukee during the year 1900 exceeded $123,000,000 (Wisconsin, 1941:246). During the next several decades the city became a center of diversified heavy industry, with the First World War adding to that growth (Wisconsin, 1941:247-248).

Milwaukee was the center of Socialist politics in the United States during the early decades of this century. Socialist and other progressive

elements in the city have left Milwaukee a legacy of clean government and efficient municipal services. By the 1930's Milwaukee had a long and enviable record as the best run, healthiest, safest and cleanest big city in the nation (Wisconsin, 1941:247).

Milwaukee had 578,249 residents in 1930, but the city's growth came to a near halt during the Depression, as was the case with most major population centers. The city gained 50,000 residents during the 1940's and more than 100,000 during the 1950's. In the latter case, much of the apparent growth was due to the annexation of a large amount of land northwest of the city. There were 741,324 Milwaukee residents in 1960, and despite subsequent annexations of land, that figure would be the city's peak census year population. In 1970 the total was 717,099. The decline has apparently accelerated since 1970. The Census Bureau estimated that Milwaukee had a population of only 665,796 in 1975.

The post-1960 population losses dramatized the fact that the social changes sweeping other American cities had finally caught up with Milwaukee. The best large city in America began to undergo a shift in its racial composition, suffered an increase in its traditionally low crime rate, and witnessed dissention among its people that more than once broke out into mass violence. The following discussion of the growth of Milwaukee's black population will examine some of these changes in greater detail.

The census statistics for Milwaukee presented in Table 17 show that the black community was a very insignificant part of the total population for many decades. Blacks numbered fewer than 1,000 until after 1910. In the twentieth century, blacks did not exceed 1.0 per cent of the total population until 1930. Chicago, Detroit and Cleveland all absorbed many southern black migrants between 1910 and 1920. Milwaukee's black popula-

tion more than doubled during the same period, but the increase from 980 to 2,229 was quite small compared to that of the other midwestern cities. Each of them had had a significant black population in 1910, while Milwaukee's was very small and constituted only one-half of 1.0 per cent of the city's total population. During the prosperous 1920's the Milwaukee black population more than tripled, to number 7,501 in 1930. The Depression affected black as well as total population growth in Milwaukee and other cities. The 1940 black population was 8,821.

Starting with the 1940 census, racial data by city blocks was published for Milwaukee and other major cities. In 1940 almost all of the city's blacks were confined in a small near-north ghetto roughly bounded by 3rd Street, Kilbourn Street, 12th Street and North Avenue. This high degree of segregation would be maintained during subsequent decades. The Taeubers (1966:40) found that Milwaukee had very high segregation scores on their index of dissimilarity. Out of a possible maximum score of 100 per cent segregation, Milwaukee had scores of 92.9 in 1940, 91.6 in 1950 and 88.1 in 1960.

The black population of Milwaukee more than doubled during the 1940's. The wartime migration from the South helped to raise the black population of the city to 21,772 in 1950, which was still only 3.4 per cent of the total population. Most of this growth was confined to the area that was predominantly black in 1940 and the blocks just to the north, between North Avenue and Center Street. The lack of physical expansion of the ghetto during the 1940's paralleled that in most of the other major American cities at the time. Because of the housing shortage, black needs were met by crowding the new migrants into existing black neighborhoods. The pattern of predominantly black blocks in Milwaukee grew scarcely at all during the

1940's, although the area just north of it, below Center Street, had many more integrated blocks in 1950 than ten years before.

The decade of the 1950's was a landmark period of change in Milwaukee. The black population nearly tripled, and the ghetto burst out of its former bounds, covering a large part of the near north area by 1960. In 1960 blacks were a noticeable 8.4 per cent of the city's population and numbered 62,458. The predominantly black zone now extended as far west as 20th Street, as far north as Concordia Avenue and as far east as Buffum Street. There were integrated blocks as far west as 25th Street and as far north as Capitol Drive. Although there was a small, separate black population west of 27th Street and south of Wisconsin Avenue as well as two tiny black enclaves in the far northwestern part of the city, virtually all of the black growth during the 1950's took place through the expansion of the ghetto. Most of the neighborhoods in Milwaukee were still totally white. The rapid growth of the black population, its restriction to one ghetto and the social changes sweeping the nation combined to upset the usual calm in Milwaukee during the 1960's.

Milwaukee remained calm during the ghetto riots of 1964, 1965 and 1966, but the peace was suddenly shattered in July, 1967 one week after the outbreak of the huge Detroit riot. Four persons died, about 100 were injured, and more than 600 were arrested. The rioting was quelled within two days by the prompt arrival of the National Guard and the imposition of a severe, round-the-clock curfew on the entire city. Property damage was considerably less than that which other cities had experienced that summer. Milwaukee's riot was considered by some to have been inspired by the dozens of outbreaks all over the nation during the summer of 1967 (U.S. News and World Report, 1967:27). Tension continued for weeks after the riot as the

N.A.A.C.P. Youth Council, led by Father James Groppi, staged open housing demonstrations. These marches into the all-white South Side resulted in tumultuous responses by the residents. The whites pelted the marchers with firecrackers and debris and voiced their feelings about open housing in no uncertain terms (Time, 1967:25).

Since 1967, race relations in Milwaukee have been quieter, if not better. There have been no major ghetto riots since that year, and the furor over the open housing marches subsided. Racial transition has continued at a rapid rate in the city. In 1970 Milwaukee had 105,088 black residents, and they comprised 14.7 per cent of the city's population. The ghetto now extended north of Congress Street and west of 27th Street. While blacks were still rare in most neighborhoods outside of the ghetto, there was evidence that integration was beginning the northwestern part of the city. There had been fewer than 1000 black residents in this area in 1960, and they were confined within two small pockets. This portion of Milwaukee had 2,771 black residents in 1970, and they were scattered among many blocks and in all of the 31 census tracts. According to the 1970 tract numbering system, the tracts in this zone are 1-21, 25-33 and 40. The black residents comprised 2.3 per cent of the 120,207 persons enumerated in these tracts in 1970. This phenomenon appears to be a case of genuine, stable integration. The haphazard distribution of the black families throughout the area and the considerable distance of most of its tracts from the edge of the ghetto make it quite unlikely that this is merely the first stage of the process of change from all-white to mostly black. While this is a heartening development in what had been a rigidly segregated city, few blacks lived in most of the other white areas in 1970. There was almost a total absence of blacks on the South Side.

The Census Bureau's 1975 state population estimate by race for Wisconsin indicated a net black increase of about 15,000. It is quite likely that at least two-thirds of that increase occurred in Milwaukee. This suggests that the decennial increase during the 1970's may be only about half as large as that during the previous two decades. Nevertheless, this growth, in conjunction with the decline of Milwaukee's total population, means that the city may be 20 per cent black in 1980.

The reason that Milwaukee was chosen for comparison with Oakland is that it has conformed very well to the sector growth hypothesis of black neighborhood expansion. The original 1940 sector accounted for 84.0 per cent of the black growth during the 1940's, 57.6 per cent during the 1950's and 59.8 per cent of the increase during the 1960's. The slightly wider revised 1950 sector contained 75.7 per cent of the black growth that took place between 1950 and 1960 and accounted for 72.2 per cent of the 1960-1970 black increase. The somewhat wider 1960 revised sector accounted for 93.1 per cent of the 1960-1970 black growth in Milwaukee. This high level of conformity to the model, even by the narrow 1940 sector, is notable because of the very rapid black population increase since 1940. A more than ten-fold increase in three decades could have been expected to spill over the boundaries of the sector much more than it actually did. Despite the distortions the sudden black growth caused, black neighborhood expansion clearly conformed to the sector growth hypothesis throughout the period under study in Milwaukee.

Oakland

Oakland, California was incorporated in 1852, only three years after the Gold Rush (San Francisco: The Bay and Its Cities, 1947:381). However, as Table 17 shows, the city's population did not grow by a large number

during the 1850's and 1860's. Oakland was an inconsequential little town compared to San Francisco, the metropolis across the Bay to the west. There was one event during this period that would have a profound effect on Oakland's growth. The transcontinental railroad was completed in 1869, and Oakland was chosen as its western terminus. Rail passengers continued on to San Francisco by crossing the Bay on ferries (San Francisco: The Bay and Its Cities, 1947:381). This helped to spur a large population increase during the 1870's which brought the total population to 34,555 in 1880. During the next two decades Oakland grew slowly, but steadily, reaching a population of 66,960 in 1900. However, within six years another major event would bring unexpected growth to the residential and industrial suburb on the east side of the Bay.

On the morning of April 18, 1906 the San Francisco region was shaken by an extremely severe earthquake. The damage in San Francisco included the disabling of the city's water system. About 50 fires broke out in San Francisco at the time of the earthquake, and some of them spread over large areas. When the fires had died out three days later, nearly all of downtown San Francisco was in ruins, and over one-half of the people in the city had lost their homes (Bronson, 1959:34). Since the cities of the East Bay had not received major damage in the catastrophe, nearly 50,000 San Franciscans who had been burned out fled to Oakland and the surrounding area within a week after the earthquake (San Francisco: The Bay and Its Cities, 1947:382). Bronson (1959:137) stated that the 1907 Oakland city directory was twice as thick as the 1906 edition, and Oakland's population was estimated to be 125,000 in 1907 (San Francisco: The Bay and Its Cities, 1941:382). The 1910 census recorded Oakland's population as 150,174. The city's 1900-1910 population increase actually exceeded that of San Francisco,

even though the larger city had been almost completely rebuilt by 1910. Apparently Oakland attracted more than a few of the San Francisco refugees as permanent residents. It is understandable that many of them would hesitate to return to the more congested and potentially more vulnerable to fire city of San Francisco, when Oakland offered more spacious and apparently safer residential districts.

One decade after the great earthquake, Oakland's growth was further stimulated by the American entry into World War I. Shipbuilding was one of the major war industries in the Bay Area in general and in Oakland in particular (San Francisco: The Bay and Its Cities, 1947:382). The city passed the 200,000 mark in population by 1920 and reached 302,163 at the time of the 1940 census. Oakland was now one of the West Coast's major ports and transportation hubs (San Francisco: The Bay and Its Cities, 1947:383).

A second wartime industrial boom occurred during the early 1940's. Its social effects would be far greater than those during World War I because of the background of many of the new arrivals in the period between 1940 and 1950. In 1950 the total population of Oakland was 384,575, which exceeded the 1940 figure by more than 80,000. After 1950, however, Oakland's population began to decline. It was 367,658 in 1960 and 361,561 in 1970. The special census of 1977 revealed a total population of only 333,055, which is consistent with the supposed rapid losses of population in many older central cities since 1970.

A look at the black population figures for Oakland in Table 17 suggests that the three most important stimuli to total population growth in the city's history--the completion of the transcontinental railroad in 1869, the earthquake and fire in San Francisco in 1906, and the United States entry into World War II--may also have been the most important factors in rapid

black population increases at the same time. The black community in West Oakland, the city's oldest black zone, can be traced back to the settlement of Pullman porters and other black railroad employees near their place of work after the transcontinental railroad was finished (San Francisco: The Bay and Its Cities, 1947:379). Benet (1963:244) reported that two unions for black railroad workers were still located on Seventh Street in West Oakland. Between 1870, the year after the railroad had spanned the nation, and 1880 the black population of Oakland rose from 55 to 593. Much of that increase is probably attributable to the arrival of the black railroad workers.

By 1900, the black population of Oakland was 1,026, not even double the figure of 20 years before. However, the number of blacks in the city virtually tripled between 1900 and 1910. The 3,055 black residents enumerated in the 1910 census made up 2 per cent of the city's population. It appears that the 1906 disaster may have been directly or indirectly responsible for this. In 1900 San Francisco had 1,654 black residents, and in 1910 there were 1,642. Racial data for 1900 for San Francisco by state assembly district show that 20 per cent of the blacks lived in the legislative district containing Chinatown. It is probable that most of the other blacks lived in other working class areas near downtown San Francisco. Since all of these neighborhoods were obliterated in the 1906 fires, most of the San Francisco black community was probably made homeless. Thus, the disaster may have shifted what would have been an increase in San Francisco's black population to Oakland. The disaster probably had the effect of drawing some black workers to the Bay Area from other parts of the country. The gigantic task of rebuilding San Francisco meant many job opportunities, and Oakland would have been the logical place for workers to live, especially during the early stages of reconstruction.

Whatever the reason, Oakland had become the principal black population center in the Bay Area and second only to Los Angeles among western cities in the number of blacks. The city has held both distinctions at every subsequent census. The black population of Oakland reached 5,489 in 1920 and 7,503 in 1930.

In 1940 there were 8,462 blacks in Oakland, and they comprised 2.8 per cent of the city's total population. Because the 1940 census included block statistics for the first time, it is possible to see the black housing pattern in Oakland in that year. The principal black settlement was in West Oakland, with more than a score of predominantly black blocks in the vicinity of 7th and Peralta Streets. There was also a smaller predominantly black enclave at 35th and Market Streets. Besides these blocks with black majorities, about half of the remaining blocks in the large zone west of Telegraph Avenue had some black residents. There were also a number of integrated blocks near 22nd Street and 21st Avenue and in East Oakland below 14th Street. According to the Taeubers (1966:40), Oakland had a segregation index score of 78.4 in 1940. The level of segregation would not change greatly during the next two decades. The 1950 score was 81.2 and the 1960 segregation index was 73.1. These were not as high as the Milwaukee scores for the same censuses, but still indicated that Oakland was quite segregated.

While the segregation index scores changed little after 1940, the size of the black community and the area that it occupied did. The third major boost to the growth of both the total and black populations was the American entry into the Second World War. Thousands of southern blacks poured into the Bay Area to work in the shipyards and defense plants. The black population of San Francisco grew by the thousands in a very few years. The same thing happened in Berkeley and in the small city of Richmond, which had few

blacks in 1940. Oakland, however, received the largest number of new black residents between 1940 and 1950. The 1950 census revealed that Oakland had 47,562 black residents and that they now made up 12.4 per cent of the total population. Most of this increase fell within West Oakland, which was now predominantly black from First Street to 39th Street. East Oakland below 14th Street now had more than a dozen predominantly black blocks, and most of the remainder were integrated.

Black population growth continued in the 1950's in Oakland, although the numerical increase was smaller than it was in the previous decade. There were 83,618 blacks in the city in 1960, and they made up a rather substantial 22.8 per cent of the total population. West Oakland was predominantly black from First Street all the way up to the Berkeley city limits, while the East Oakland black zone expanded. Two nearby subdivisions at the southernmost edge of the city were now predominantly black. The black population of the neighborhoods southeast of Lake Merritt also increased. There were ten predominantly black blocks there, and most of the others were integrated.

During the mid-1960's, the social tensions which had been building up in American cities flared up seriously only once in Oakland. In October, 1966, not long after a major riot in San Francisco, violence erupted in West Oakland. The disorders lasted two days and included looting, assaults on individual whites and an invasion of Castlemont High School (Newsweek, 1966:42). Although Oakland later became famous as the original home of the Black Panther Party and other militants, mass violence of the magnitude of the 1966 riot did not recur in the 1960's and 1970's.

By 1970, blacks made up 34.5 per cent of the total population. The census recorded 124,710 black residents in the city that year. While the

West Oakland ghetto did not expand much, the East Oakland black community now covered a large area on both sides of 14th Street. A third predominantly black zone was developing in what had been integrated areas southeast of Lake Merritt in 1960. In 1970 some blacks lived in nearly every neighborhood in Oakland. Integrated, predominantly white blocks now clearly outnumbered all-white blocks. This pattern of citywide integration is suggestive of both the stable integration in a number of San Francisco areas (Ryu, 1980: 134-136) and the general white abandonment found on the far West Side of Detroit (Kenny, 1977:2). The lower levels of segregation in the West support the former view, especially in neighborhoods far from the predominantly black zone, while the large size and rapid growth of Oakland's black population are arguments in favor of the latter view, especially in East Oakland.

The most recent racial breakdown of Oakland's population is contained in the 1977 special census of the city. Blacks numbered 148,811 and comprised 44.7 per cent of the city's shrinking population. The increased black share of the total population has had an effect on local politics and in other aspects of the city's life. In May, 1977 Lionel J. Wilson beat a white candidate in the mayoral runoff election and became the first black mayor in the city's history (New York Times, 1977:4). Two years later blacks were in charge of the public schools, the port commission and the Oakland Symphony Orchestra. Despite continuing poverty, the militancy of the Black Panthers had subsided. The black population reportedly had a higher proportion of middle class members than any major city except Atlanta (Turner, 1979:9).

The above account of the history of the city of Oakland suggests that it is not typical of major American cities in a number of respects. It was chosen for this comparison with Milwaukee because of its unusual lack of conformity to the sector growth hypothesis. The original 1940 sector accounted

for 13.0 per cent of the 1940-1950 black growth in Oakland and none of it during the next two decades. The wider 1950 revised sector accounted for 22.9 per cent of the city's 1950-1960 black increase and zero per cent of the 1960-1970 growth. The three 1960 revised sectors contained 10.5 per cent of the 1960-1970 black increase. Between 1970 and the 1977 special census, all of the black population increase fell outside of those three sectors.

Oakland will now be examined with respect to the assumptions of the modified sector model, particularly those of segregation and the increase in the quality of housing with distance from the central business district. The regional racial history and the presence of white ethnic areas have some bearing on the former assumption.

Regional Racial History

The Taeubers (1966:37) noted that the cities of the West tended to have lower segregation index scores than those in the Midwest. Although western cities were clearly segregated, there was a noticeable difference between their scores and those of their midwestern counterparts. This writer is of the opinion that there have been distinct differences in the history and racial composition of these two regions that help explain the higher level of segregation in the Midwest.

The Midwest is considerably closer to the South, the home until recent years of most of the American black population, than California is. The Midwest also has always had many more black residents than California, and midwestern urban black populations became large at an earlier date than those in California. In 1920, California had 38,763 black residents, while the four states that border Lake Michigan--Illinois, Indiana, Michigan and Wisconsin--jointly contained well over 300,000. In 1920, Los Angeles had 15,579 black residents, Oakland had 5,489 and San Francisco contained 2,414.

In the same year Chicago had 109,458 blacks, St. Louis had 69,854, and Detroit contained 40,838. Fifty years later the Midwest was still quite far ahead in the number of black residents. In 1970 California had 1,400,143 black residents, while the four states surrounding Lake Michigan had a combined black population of nearly three million. The entire West census region only had 1,694,625 blacks in 1970, compared to 4,571,550 in the North Central census region.

The Midwest has had much more racial violence involving blacks than the West, especially the San Francisco Bay region. The midwestern violence also started much earlier. There were bloody race riots in East St. Louis in 1917, Chicago in 1919 and Detroit in 1943. Many of the worst ghetto riots were in the Midwest during the 1960's. There were major riots in Chicago and Cleveland in 1966, Detroit and Milwaukee in 1967, and in Chicago and Kansas City in 1968. The worst riot in the West was in Los Angeles in 1965, not in the Bay Area. The San Francisco riot of 1966 was the most severe in the Bay Area and was rather mild compared with many of the midwestern disorders.

The more civil black-white relations in the San Francisco area may derive in part from the fact that, until after 1940, blacks were not numerous, and they had always been exceeded in numbers by other minorities. The Hispanics and Orientals were the main targets of white abuse. Blacks were too few to seem threatening while Mexico was just to the south and populous China had a surplus of industrious people who might threaten the jobs of whites. The Chinese threat was quashed by the enactment of the Chinese Exclusion Act in 1882 (San Francisco: The Bay and Its Cities: 1947:224), after years of political agitation, discrimination and anti-Chinese violence. The Japanese were the next victims of white prejudice, particularly when they moved to

San Francisco's Western addition area after most of them lost their near-downtown homes in the great 1906 fire (Abrams, 1955:37). After 1910, California politics was specifically anti-Japanese in nature. Such otherwise reasonable men as Senator James D. Phelan and Benjamin Ide Wheeler supported this movement (Abrams, 1955:39).

On the other hand, educated blacks received respectful treatment from whites in the Bay area during this period. James Weldon Johnson visited San Francisco in 1905, the year before the earthquake and fire, and described his reception in this manner:

> I encountered no bar against me in hotels, restaurants, theatres or other places of public accommodation and entertainment. We hired a furnished apartment in the business area, and took our meals wherever it was most convenient. I moved about with a sense of confidence and security, and entirely from under the cloud of doubt and apprehension that constantly hangs over an intelligent Negro in every Southern city and in a great many cities of the North. (Abrams, 1955:21-22)

The evidence cited in this comparison of the Midwest and California, particularly the Bay Area, helps to explain the lower levels of segregation in western cities. Since the modified sector model states that a highly discriminatory housing market is necessary for the sector expansion of black neighborhoods, any significant diffusion of black population throughout a city as opposed to block-by-block change would tend to lower a city's conformity to the model. Oakland's sector growth conformity scores are so low, however, that other reasons must be sought for that phenomenon.

White Ethnic Areas in the Two Cities

Milwaukee and Oakland are quite different in terms of the ethnic backgrounds of their white populations, as well as the distribution of these groups within each city. In Chapter VIII the discussion of ethnic areas in the sample as a whole, the definition of an ethnic tract was so restrictive

that only one such tract could be found in Milwaukee and Oakland. For this comparison of the two cities. any tract with 100 or more foreign-born whites in 1950 that had a majority of those whites of one nationality would be considered an ethnic tract. While the looser definition means that one may not make as strong an assumption that the tract in question is truly ethnic in character, it does permit the pinpointing of the locations of more of the foreign-born whites.

Milwaukee has always been strongly ethnic in character, and these groups have tended to cluster in neighborhoods quite identifiable by ethnic background. In 1880, 35 per cent of Milwaukee's population consisted of foreign-born Germans, and Germans were more than two-thirds of all of the foreign-born. As late as 1930, 18.9 per cent of the city's population had been born outside of the United States (Wisconsin: A Guide to the Badget State, 1941: 242). By 1950, the foreign-born whites were only one-tenth of the city's population, making it difficult to identify ethnic areas using the criteria employed in Chapter VIII. By using the looser standards presented in the previous paragraph, it is possible to reveal a pattern of ethnic neighborhoods that covers much of the city.

Germans were the largest foreign-born group in Milwaukee in 1950 and made up more than a quarter of the foreign-born whites. They predominated in that category in ten North Side tracts and were found in substantial numbers in most Milwaukee tracts. Given the earlier heavy migration of Germans in the Nineteenth century, that group probably predominates among the white population the way Anglo-Saxon stock does in less cosmopolitan cities.

Poles were the second largest element among Milwaukee's foreign-born whites, accounting for about one-sixth of the total in 1950. They were even more concentrated than the Germans. They predominated among the foreign-born

in three census tracts east of Holton Street on the North Side and in a large zone of 16 tracts on the South Side.

The third largest foreign group in 1950 was Austrians. They were, not surprisingly, distributed throughout the city in the same manner as the Germans. The fourth and fifth largest groups, the Russians and Italians, were also largely concentrated in specific areas.

There is little doubt that the balkanization of Milwaukee into ethnic enclaves has contributed greatly to the high level of segregation there. It is hardly coincidental that the Polish area on the South Side is devoid of blacks or that the smaller Polish enclave east of Holton Street on the North Side remained almost totally white in 1970, while all areas to the immediate west became predominantly black. The strict exclusion of blacks from most parts of the city restricted their quest for additional good housing to the outer periphery of the ghetto, producing sector expansion to the north and northwest.

Oakland, like Milwaukee, had a population that included 10 per cent foreign-born whites in 1950. However, the similarities end right there. The five largest foreign groups in Oakland in that year were, in descending order, British, Canadians, Germans, Mexicans and Swedes. There were only two tracts in the entire city in which one group made up over one-half of the foreign-born whites. One tract in West Oakland had a predominantly Italian foreign-born white population, while Mexicans were the majority among foreign-born whites in a tract on the West Oakland waterfront that was over one-half black. Oakland, much farther from the traditional East Coast gate of entry for European immigrants, simply does not have the type of distinct ethnic neighborhoods that Milwaukee has. Oakland does have a Chinatown, but it is small and could not have had much of an effect on the course of black neighborhood expansion.

The lack of cohesive, exclusionary ethnic neighborhoods may help explain the dispersal of numerous black families throughout most of Oakland since 1960. To a lesser extent, this breakdown of segregation may also be partly responsible for Oakland's very poor conformity to the sector growth model.

Conformity to Model Assumptions

The very poor sector conformity scores for Oakland throughout the period under study suggest that the city somehow violates one of the assumptions of the model. One physical barrier that immediately comes to mind after viewing a map is the West Oakland Harbor. Outward movement by the West Oakland ghetto was confined by the Bay and the harbor facilities. Since 1960 most of the black growth has been in other parts of the city. No such problem of the blocking of ghetto expansion by physical barriers was encountered in Milwaukee between 1940 and 1970.

Another factor that caused most of Oakland's black growth between 1940 and 1950 to fall outside the narrow sector was the massive 462.1 per cent increase in the black population during the decade. However, the rate of black increase during the next two decades was low enough that this should not have been an issue in the case of the 1950 revised sector or the 1960 revised sectors. The sector growth scores were still very low, nonetheless.

Another major assumption in the model is that the quality of housing tends to increase with distance from the central business district. Therefore, the most affluent blacks tend to look to the outer edge of the ghetto for improved housing. The result is ghetto expansion according to the sector model. It is fairly evident that Milwaukee fits the assumption quite well. In the older central neighborhoods one sees numerous peak-roofed "cuckoo clock" houses, while more distant parts of the city have more brick

or stone single-family homes. While it would be difficult to draw neat concentric rings of housing quality, the idea of an increase in the quality of the housing with greater distance from downtown generally holds up.

This writer has spent some time in Oakland as well as Milwaukee and can state on that basis that the two cities differ in conformity to the model's housing quality-distance from downtown assumption as well as many of the other points already discussed. Rather than in a circle around downtown, Oakland's older and lower-quality housing tends to stretch along the waterfront for most of the length of the city, interspersed with industry. Housing quality tends to improve as one goes uphill. The best housing stretches along the eastern part of Oakland, hundreds of feet up in the hills. Further confirmation of this observation comes from Shevky and Bell's (1955:64-65 and foldout map) social area analysis of the Bay Area, including Oakland. They found that the poorer areas were along the waterfront, better neighborhoods were inland, and that the wealthiest areas were even father inland at the higher elevations.

Thus, Oakland's housing improves as one moves up from the Bay, not out from downtown. The expansion of the city's black neighborhoods is now much less puzzling. Oakland's black communities all sprange up in the flatlands by the Bay. As they grew, expansion tended to be inland and uphill, toward better housing. This is especially evident in the case of the East Oakland black community.

The reason for most of the nonconformity to the sector model is now clear. The sectors were all drawn from downtown Oakland. In East Oakland, especially, the path of growth predicted by the hypothesis--outward--was at right angles to the actual main direction of ghetto expansion--uphill. While the other factors mentioned previously may have lessened the likelihood

that Oakland would conform to the sector growth model, the city's unusual topography insured that the results would be very low scores.

Summary and Conclusions

Milwaukee and Oakland are both relatively young, as major American cities go. Both are also heavily industrialized. Both had very small black populations until the 1940's, at which time major migration from the South brought thousands of additional blacks to both cities. Each had more than 100,000 black residents in 1970, and black population growth has continued in both cities since that year, although at a lower rate.

Milwaukee is part of a region that has always had more black residents than the West did. The Midwest has also had more racial violence in the Twentieth century than the West has. The black population of the West was quite small prior to 1940, and was exceeded in numbers by Hispanics and Orientals. White animosity was generally focused on the latter two groups, so that western blacks were not subjected to as intense discrimination and segregation as those in the South or Midwest. This may be reflected in the lower levels of segregation found in Western cities in recent decades.

Milwaukee is composed in large measure of white ethnic neighborhoods. These cohesive areas have been highly resistant to integration, with the result that the Milwaukee ghetto has expanded rapidly, because almost all black housing demand has been restricted to its periphery. This ghetto growth has taken the form of sector expansion because the most desirable housing at the edge of the black zone is at that part of the ghetto border farthest from downtown.

Oakland has no major white ethnic areas. The white neighborhoods have gradually become integrated since 1960, and some of this appears to be stable residential integration, not the early stages of complete transformation.

The principal reason for the failure of black neighborhood expansion in Oakland to follow the sector model is that the city's housing pattern violates one of the major assumptions of the model. Rather than increasing with distance from the downtown area, housing quality in Oakland improves with distance from the shoreline of the waterfront. The land rises with distance from the harbor, with the easternmost residential areas hundreds of feet up in the hills. The best housing is found at the highest elevations. Black neighborhood growth has been uphill from the original black communities in the flatlands toward better residential areas farther inland. The sectors were drawn from downtown, but ghetto expansion consisted of movement uphill, without particular reference to the central business district. Ghetto growth more frequently crossed sector boundaries in the movement toward the hills than flowed within the angle of a sector as the hypothesis predicts. Because of its unusual topography that violates the model's assumption about housing quality, Oakland could be considered "the exception that proves the rule."

CHAPTER X

SUMMARY OF RESULTS AND CONCLUSIONS

In Chapter I, three simple spatial models were presented for consideration, while three competing theories of housing segregation were examined in Chapter II. The model chosen for this study, described in depth in Chapter III, utilized the sector growth hypothesis because inspection of the racial block maps indicated that it was much more satisfactory for describing black neighborhood growth than the concentric zone or multiple nuclei theories. A literature review to choose among the three competing theories of housing segregation yielded little support and considerable evidence against both the natural area and economic segregation models. On the other hand, the discrimination model was so widely and strongly supported in the sociological literature that it was the obvious choice as the theoretical base for this model.

Bearing in mind the criticisms that Burgess and other members of the Chicago School underwent because of overly broad generalizations, this writer included a number of important modifications in his sector growth model of black neighborhood expansion in major American cities. The assumption of the quality of housing increasing with distance from the center of a city, an important factor in explaining why sector growth occurs, was not as rigid nor uniform within concentric zones as might be inferred from looking at the Burgess model. A more explicit modification of the sector model was the inclusion of Walter Firey's (1945) sociocultural ecological hypothesis in the model. This meant that sector growth could be distorted

by the presence of resistant white areas in the path of outward black growth, particularly by white ethnic neighborhoods.

The other modifications were of the "common sense" sort. Physical barriers such as parks and other nonresidential land would deflect the sector growth of a black neighborhood. A very low rate of black population expansion in a city would tend to lessen conformity to the sector model. On the other hand, an extremely high black population increase such as a doubling or tripling within a decade could swamp an existing sector pattern with new arrivals and result in much nonconforming growth.

Of course, it should be realized that, based on the discrimination hypothesis, the model assumes that new black housing opportunities are limited largely to the periphery of existing black areas. Finally, this modified sector model assumes that most new black housing needs are met through the occupation of existing housing units that previously held white residents.

With the review of the sector model complete, attention may be turned to the results of the analysis of the 25 cities in the sample. Sectors were drawn for each city, and the within-sector growth was calculated for each case for each decade between 1940 and 1970. Where lateral or other nonconforming black growth was evident in a city between 1940 and 1950, a widened or otherwise revised set of sectors was drawn up to test the conformity of future black growth to the new sectors between 1950 and 1970. This was necessary in 17 of the 25 cities in the sample. The 1960 census revealed further widening of black areas or other significant examples of nonconformity in 18 of the cities. A second set of newly-revised sectors was drawn up on the basis of the 1960 racial block map in each of these cases.

Using the original 1940 sectors, the mean score for the sample was 67.3 per cent for the period between 1940 and 1950. The range of individual scores was from 13.0 to 100.0 with a median score of 71.1 per cent. The scores for the next decade dropped considerably, with a 1950-1960 sample mean of only 39.9 per cent. Individual index scores ranged from zero to 100.0, and the median was 48.1 per cent. The 1960-1970 performance of the original 1940 sectors was slightly poorer than that during the previous decade. Only 24 cities were included in the calculations because a net loss of black population in Birmingham during the decade produced a score that could not be interpreted in the same manner as the rest. The mean sample score was 36.4 per cent, and the range of city scores was zero to 98.6 per cent. The median score for the sample was 33.1 per cent.

Since there was some nonconforming black neighborhood growth in some of the sample cities during the 1940's, revised 1950 sector schemes were drawn up for 17 of the cities on the basis of the racial block maps obtained from the census of that year. The 1950-1960 mean sector growth score for this subsample was 53.6, and the mean for the entire sample, if the revised sectors were used, was 56.5 per cent. The mean score for these revised sectors for the period between 1960 and 1970 was 45.5 per cent. The subsample was 16 cities because of the above-mentioned methodological problem with Birmingham. The 1960-1970 average for the overall sample, using revised sector scores for these 16 cities and original sector scores for the other eight, was 48.8 per cent of the decade's black growth falling within the sectors.

The widespread nonconforming black neighborhood growth during the 1950's required the drawing of 1960 revised sectors in 18 cases. This further revision of the sector patterns of these cities proved highly

successful in predicting the 1960-1970 black growth. The mean 1960-1970 sector growth score for this subsample was 71.8, and the mean score for the 24 cities, using the latest revised sector scheme in each city that needed it, was 73.6 per cent.

Each of the three decades under study had its special characteristics in terms of black neighborhood growth. The 1940's witnessed minimal expansion of the black zones in most cities because of the wartime housing shortage. Black growth was crammed into the 1940 ghettos, with the result that more than two-thirds of the decade's black growth fell within the sectors. The 1950-1960 period was one of large scale black neighborhood expansion. The old ghettos could no longer hold the growing black population, and the result was much residential succession. Sector conformity scores dropped, but mostly for reasons anticipated in the modified sector model. Impervious white ethnic areas in the path of expansion, physical barriers that had the same effect, and the superimposition of extremely large black increases on narrow sectors in some cities all distorted sector growth and lowered index scores. If the 1940-1950 black neighborhood physical expansion could be characterized as slight and predictable and that of the next decade as considerable but less predictable, then the 1960-1970 growth could be called both considerable and predictable. The changes in the black neighborhoods, measured with reference to the 1960 revised sectors, during the decade of the 1960's followed the sector model more closely than those during the two previous decades. Many square miles of new black neighborhoods grew up within the sectors as outward expansion of existing ghettos. More precisely, nearly three-fourths of the black population increase fell within the limits of the strictly defined sectors. It appears that, unlike the 1940 sectors and the 1950 revised sectors, the 1960

revised sectors will be quite useful for predicting 1970-1980 black growth. This utility might even extend into the next decade, unless there should be an unexpected general breakdown in the pattern of housing segregation in this country.

While the sector model would be worthy of some attention based simply on the scores presented above and in Chapter V, the presence of the distorting factors contained in the model in many of the nonconforming cases increases its credibility. The large Polish area on the East Side of Detroit, the Italian neighborhoods of South Philadelphia, and the Italian Murray Hill district in Cleveland are only the most prominent of the white ethnic enclaves that delayed or shunted off to the side the expansion of quite large black neighborhoods. Physical barriers had the same effect. The Harlem River prevented Manhattan's principal ghetto from expanding into the Bronx, with the effect that Harlem lost population after 1950. Franklin Park in Boston prevented the post-1960 black growth from continuing directly outward from downtown; the ghetto moved around the park into Dorchester and then continued its outward movement. Other examples of factors depressing sector growth abound. The rapid growth of the Los Angeles black community between 1940 and 1960 overwhelmed the narrow 1940 sectors so that much of the growth fell near, but outside of them. The growth of new, separate black areas on previously vacant land in Houston during the 1950's detracted from sector growth in that city.

The most notable case of nonconformity to the sector model and the "exception that proves the rule" was Oakland. In Chapter IX the city was examined in detail and compared to Milwaukee, one of the better examples of sector growth. Most the cities in the sample fit the model's assumption that quality of housing generally improves with distance from the center of

the city. While there might not be a Burgess-type perfect system of concentric rings, one could generally move outward from downtown in any direction and note a gradual increase in housing quality. This was definitely not the case in Oakland. The reference point was not the center of downtown, but rather the shoreline of San Francisco Bay. To find better housing one moved "uphill" away from the Bay, rather than outward from the central business district. Black expansion moved away from the flatlands towards the hills, which meant that the growth took place largely across sector boundaries, rather than within them. This was the cause of the low scores for Oakland in the sector growth index.

A final argument for the validity and significance of the modified sector model is the small land area most of the sectors took up, in comparison to the total land area of the city at the time. A look at Tables 9, 10, and 11 reveals that even the sectors that produced unimpressive results frequently accounted for more black growth in a decade than their small land areas would have led one to expect.

Chapter VII dealt with the expansion of central city black ghettos into the suburbs. This phenomenon is a further strong support for the sector model, because all of the racially changing suburbs around the nine central cities from this sample that were studied were at least partly within the angle of one of the central city sectors of probable black expansion. The process of massive black growth into the inner suburbs has probably increased greatly since 1970 and will probably become even more important during the 1980's. So far, this important trend has received surprisingly little attention in the sociological and popular literature.

Chapter VIII dealt with the location and stability of white ethnic tracts in the sample cities. This was of some importance because such

neighborhoods fall within the category of sociocultural areas--a major modification of the sector model. Ethnic census tracts were located from the 1950 census tract reports, and their racial stability was rechecked using 1970 data. Despite the massive racial changes since 1950, most ethnic tracts were still predominantly white whether within or outside of sectors. The major exception was that Russian (Jewish) tracts were highly vulnerable to racial change. About two-thirds of the Russian tracts within sectors became mostly black, while only one-third of non-Russian tracts did. The sector model was given strong support by the finding that only four of the 333 ethnic tracts not in sectors became predominantly black.

Reasons were sought for the differences between the Jewish and non-Jewish areas in terms of racial stability. Among the possible answers were the greater economic mobility of Jews, allowing them to move on to better areas, and their disinclination to use violence to discourage black entry into their neighborhoods. A major question concerning the continued stability of ethnic neighborhoods in general is the age of the residents and the possibility of future generations leaving for better housing. Racial transition would be one possible result.

The principal conclusion that can be drawn from this study is that the modified sector model works. While many cities produced low sector growth scores after 1950 using the original 1940 sectors and most of them needed 1950 and 1960 revisions, the deficiencies were largely anticipated in the model. The ethnic zones, physical barriers and unusual fluctuations in the decennial black increase in some cities that distorted sector growth were all expected to do that. Black population growth since 1960 has conformed to the sector model much better than it did during the 1950's. It appears that the 1970-1980 black growth in most of the cities of this sample will

probably fall mainly within the sectors drawn on the basis of the 1960 black housing pattern, or the sectors drawn earlier in cases where a 1960 revision was not needed. These sectors may very well be adequate for predicting the 1980-1990 black growth, if there is no major decline in the level of residential segregation in American cities by then.

During the mid-1970's this writer occasionally drove around the South Side of Chicago to compare the extent of the black zone with that recorded on the 1970 racial block map. By 1976 most of the Roseland and West Pullman areas had undergone racial change, as was true of the area immediately of Ashland Avenue between 59th Street and 87th Street. Although no thought had yet been given to the modified sector model at that time, it is now apparent to this writer that he was witnessing post-1970 confirmation of his hypothesis.

Chapter XI will examine the policy implications of this relatively successful test of the modified sector hypothesis. Beyond that, it will go into the ramifications of the massive racial transition that has occurred in these and other cities since 1940. Although this study was intended only as a test of the sector model, the magnitude of the changes revealed by the data used demands an examination of what this racial transformation means for America's urban areas in the future.

CHAPTER XI

POLICY IMPLICATIONS

The policy implications of this study may be divided into two major categories: the implications drawn from the test of the modified sector itself and those arising from the magnitude of the racial transition in these and other American cities since 1940. It could be said that the sector model addresses itself to the tactical aspects of large scale racial change in American cities, while the growing per cent black and black population size within the cities are increasingly less subtle hints about the need for strategic planning to alleviate the crisis Grodzins foresaw in the 1950's.

Stated quite simply, the sector model allows one to predict with some confidence the areas of a city that are most likely to become predominantly black during the next one or two decades. If a city has only one major black zone, this prediction can be made with more assurance than would be the case if there were several ghettos. The model does not claim to be able to predict what percentage of a given decade's black growth will fall within a specific sector in a city that has two or more sectors. However, the white neighborhoods in the path of the expected sector growth as a group have a considerably greater likelihood of becoming predominantly black than white neighborhoods lying outside of the sectors.

Armed with the knowledge from the sector model of where the greatest probability of racial change is, governmental authorities and other agencies that deal with problems attending residential succession can make earlier

and more thorough plans. A close watch could be made for signs of panic peddling and other real estate sales abuses associated with racial turnover in neighborhoods. Law enforcement officials could be more alert to the activities of neighborhood or outside groups that could promote violence at the time of the onset of change. Public school administrators would have a better idea of the schools that would be affected by the process. White-to-black racial change frequently means not only a larger number of school-age children, but also a higher proportion of all children attending the public schools. The sector model would allow both public and private organizations to pinpoint areas likely to be beset by the numerous social problems that accompany residential succession.

The utility of the model, as demonstrated in Chapter VII, extends across the city limits. Those suburbs likely to face racial transition in the future can easily be found by extending the sector lines outside of the central city's boundaries. Since 1960, black population growth into the suburbs has increased greatly. The 1980 census will probably show an acceleration of this trend. The process may well assume even greater importance during the 1980's, as even more central city black zones reach the borders of the inner suburbs. All of the social disorganization that effects black and white city residents when neighborhoods change may be expected to some extent as the process moves into the suburbs on a large scale.

The subject of this study is a theoretical model describing the process of black neighborhood expansion in large American cities. While the evidence has largely supported the hypothesis and the model has been shown to have some practical value, none of this should be allowed to obscure the central issue in urban America today. The massive racial changes in the 25 cities

examined here have demonstrated the truth of words written more than 20 years ago:

> Almost nothing is being done today to meet what is likely to be the nation's most pressing social problem tomorrow. The problem can be simply stated in all its bleakness: many central cities of the great metropolitan areas of the United States are fast becoming lower class, largely Negro slums. (Grodzins, 1958:1)

Anyone who examines the tables in Chapter IV can have no illusions about what has happened in these cities since 1940. The same changes are also taking place in medium-sized and small central cities as well. Chapter VII documents the racial change in some of the inner suburbs. Suburban ghettos unconnected to major central city black zones are also growing in some municipalities such as Mount Vernon, New York and Maywood, Illinois.

While the 1940-1970 statistics reveal a divisive trend in our metropolitan areas, post-1970 indicators suggest an acceleration of this process. Table 18 contains the enumerated 1970 total population for each city in this sample and the 1975 estimated total population, computed by the Census Bureau, for the same cities. While many of the cities still gained population during the 1960's, the post-1970 trend is unmistakably downward. Only Houston, Memphis and Jacksonville appear to have gained population since 1970. It is very likely that the increases in the first two cities mentioned are partly or wholly due to annexation. Their boundaries have grown continuously since 1940. The population declines among the other 22 cities are even more notable. Two cities formerly synonymous with modern urban growth, Los Angeles and Dallas, apparently registered slight population losses during the first five years since the 1970 census. More significantly, other older cities underwent decline at an unprecendentedly steep rate. The loss of more than 10 per cent of their populations by Cleveland, St. Louis

TABLE 18

TOTAL POPULATION OF THE 25 CITIES: 1970 CENSUS

AND 1975 CENSUS BUREAU ESTIMATES

City	1970	1975	Per Cent Change 1970-1975
New York	7,867,760	7,481,613	- 4.9
Chicago	3,366,957	3,099,391	- 7.9
Detroit	1,511,482	1,335,085	-11.7
Philadelphia	1,948,609	1,815,808	- 6.8
Washington	756,610	711,500	- 5.9
Los Angeles	2,816,061	2,727,399	- 3.1
Baltimore	905,759	851,698	- 6.0
Houston	1,232,802	1,326,809	7.6
Cleveland	750,903	638,793	-14.9
New Orleans	593,471	559,770	- 5.7
Atlanta	496,973	436,057	-12.3
St. Louis	622,236	524,964	-15.6
Memphis	623,530	661,319	6.1
Dallas	844,401	812,797	- 3.7
Newark	382,417	339,568	-11.2
Indianapolis	744,624	725,077	- 2.6
Birmingham	300,910	276,273	- 8.2
Cincinnati	452,524	412,564	- 8.8
Oakland	361,561	330,651	- 8.5
Jacksonville	528,865	562,283	6.3
Kansas City	507,087	472,529	- 6.8
Milwaukee	717,099	665,796	- 7.2
Pittsburgh	520,117	458,651	-11.8
Richmond	249,621	232,652	- 6.8
Boston	641,071	636,725	- 0.7

and other cities over only five years is a totally new and very alarming post-1970 development.

There are a number of common threads joining the cities with staggering population losses together. They are generally quite old. Nearly all available residential land has been utilized. They cannot annex significant new amounts of land because it is already part of surrounding suburban municipalities or the residents are strongly in opposition to such a move. The last and potentially most divisive common characteristic of these shrinking cities is that they have large and often rapidly growing black populations. Even without the fast growth that characterized the big city black communities in past decades, the rapid decline in total population since 1970 makes it certain that the black proportion will continue to rise in major American cities.

Using the 1975 total population estimates, the Census Bureau's 1975 state population estimates by race and a knowledge of which of these 25 cities' black growth is being diminished by spillover into the inner suburbs, one may get a rough idea of the 1980 racial composition of the cities in in this sample. It is quite possible that the 1980 census will reveal black majorities in Detroit, Washington, Baltimore, Cleveland, New Orleans, Atlanta, St. Louis, Newark, Birmingham, Oakland and Richmond. It should be remembered that of these eleven cities, only Washington, Atlanta and Newark had black majorities in 1970. There are other cities in the sample in which the combined black and Hispanic populations may comprise the majority in 1980. These cities are New York, Chicago, Philadelphia, Los Angeles and Houston. If these estimates are correct, majority-group whites would predominate in only nine of the 25 cities studied in 1980.

Even if one were to dismiss the above estimates as sensationalized or

pure speculation, there are a number of post-1970 hard indicators of continued racial transition in American cities. The 1977 special census of Oakland, in which the city was found to be nearly 45 per cent black, has already been discussed in Chapter IX. On April 4, 1978 the Bureau conducted a special census of Richmond and surrounding counties in Virginia. Richmond's total population had declined to 219,883 while the black population rose slightly to 109,130. This meant that the city was 49.5 per cent black in 1978--despite the annexation of the large white zone south of the James River during the 1960's that prevented Richmond's black population from becoming the majority in the city in 1970. An ironic footnote contained in the special census tract report is that the white zone annexed during the 1960's was one of the principal areas undergoing racial change in 1978.

The special census of Camden, New Jersey on September 14, 1976 should demonstrate that the trends described above are not restricted to the largest cities. Camden's total population declined from 102,551 in 1970 to 90,292 at the time of the special census. At the same time, the black population rose from 40,132 in 1970 to 43,654 in 1976. The Hispanic population doubled in the six years to about 14,000 in 1976.

One emerging trend in residential succession in several cities with rapidly growing minority populations that are approaching or have reached majority status is the breakdown of block-by-block residential succession and its replacement by general white flight from larger areas. This writer examined this phenomenon in Detroit in his master's thesis (1977:2) and noted it in Gary and parts of New York City (1977:85-6). Detroit is unique in the severity of its social problems, but the time is not far when general white abandonment of large areas of other cities could begin.

It is fairly easy to make a case for the value of reversing the decades-

long pattern of racial segregation in American cities. At the highest level is the principle that every human being has the right to live anywhere that he or she can afford to. It is a matter of social justice that workers should be able to live within a reasonable distance from their places of employment, rather than being confined in distant ghettos many frustrating and expensive miles of commuting away. The literature shows that the process of expansion of segregated black ghettos into white areas creates hardships for members of both races. The policy of allowing large numbers of poor people to pile up in the ghettos of American central cities is hardly in the long-term self-interest of the nation's white population. Besides the "ordinary" social problems generated under these conditions, there is the continuing possibility of mass violence. While a full decade has passed since the peak of the ghetto riots of the 1960's, more recent outbreaks can hardly bolster confidence in the continuation of urban calm. This writer examined a 1975 disorder in Detroit (Kenny, 1977:79-82) and found that only quick, intelligent action by the mayor, police and neighborhood leaders prevented a huge riot that could have been worse than that of 1967. The expansion of the ghetto in the eight years since the 1967 riot made it possible that any future general disorder might be even more widespread. The threat of massive disorder in an American city became a reality in July, 1977 when the lights went out in New York City. Twenty-four hours of looting and hundreds of fires affected large areas of the ghettos in Brooklyn, the Bronx and Manhattan. There were five deaths and over 4,000 arrests in what was possibly the most massive short-term disturbance in American history. Less than two years later, in February, 1979, Baltimore received two feet of snow in a short time, and looting became general in the city's major black areas. There were no deaths and fire damage was slight, but the looting was

as thorough as it had been in parts of New York in 1977 (Baltimore Sun, February 25, 1979). These three clear warnings within the past five years should lead Americans of all races and backgrounds to seek a means of defusing this dangerous situation with a sense of urgency that has been lacking until now. If this resolve is found, the crucial question then becomes one of what procedures to take to stop and then reverse the process of concentrating the minority poor in central city ghettos.

Grodzins suggested opening all big-city neighborhoods to blacks (1958: 16). Had he written twenty years later with a knowledge of the present racial composition of Detroit and other cities, he would have realized that it would merely have resulted in the final white abandonment of some heavily-black cities. The idea does have merit for cities with only 10 or 20 per cent black populations. Grodzins specifically called for controlled migration of blacks into white areas to keep the black percentage below the "tipping point" (1958:17). This would be a good way to maintain stability in white areas in the path of the advancing ghetto. He advocated returning whites to the central cities (1958:18), which is occurring at a slow rate through near-downtown luxury high rise redevelopment and "gentrification," the rehabiliation of sturdy old inner city houses by new middle class owners. This writer knows of no case in which these two processes have even begun to affect the shift in a city's racial composition caused by large-scale white departure from other neighborhoods.

The one suggestion made by Grodzins that appears to be generally applicable is the movement of black families to the suburbs (1958:20). In his thesis (1977:89) this writer contended that a combination of metropolitan-scale scattered-site public and subsidized housing and strict enforcement of antidiscrimination laws in the sale of housing could bring ghetto expansion

to a virtual halt in most American cities. Scattering the growth of the black population throughout the suburbs and in the central city neighborhoods away from the ghettos would take away most of the pressure that causes the outward expansion of segregated black zones. Integrated areas at the edge of the ghetto would retain their racially mixed character, and whites living in the central city would be freed from the fear of the uncontrolled ghetto expansion and the complete recial turnover that has been the rule for most of this century.

While the problem is acute and effective solutions are available, it would be prudent at this point to interject the political realities in this country that make any such course of action unlikely. There is a strong tradition of local autonomy in the United States. This is even true in the largest metropolitan areas, although many governmental functions might be carried out more efficiently on a metropolitan basis or at least within larger subdivisions. Many suburban rings around major central cities are divided into scores of relatively small municipalities. Since the courts have been reluctant to impose cross-district busing to integrate public school systems, it is even less likely that they would impose some sort of metropolitan public housing authority to lessen residential segregation or the relative absence of blacks from the suburbs. Because of their accelerating declines in total population, the troubled older central cities now have less political weight in state legislatures and Congress than at any time in the last several decades. Another problem is that the type of "benign" quota that could be used to preserve the multiracial character of an integrated neighborhood would be a technical violation of the civil rights laws. The continued high level of segregation, in spite of the fact that many black families could afford housing in many white neighborhoods, suggests that the

majority of American whites are still quite comfortable with present conditions. This writer has observed political activity in this country in recent years, and he has noticed that a vigorous policy of promoting racial integration in housing has not been one of the staple promises offered to the voting public.

In concluding this discussion of policy implications, this writer would like to present a case that demonstrates that the above proposals are not utopian. In his work on a study under Jai P. Ryu (Ryu, HUD Report, 1980), this writer examined the racial changes in the city of San Francisco between 1940 and 1970. Between 1940 and 1960, the city's black growth was typical of large western cities of that period. A small 1940 black community was greatly augmented by war workers who caused existing ghettos to swell and settled in new ones. Between 1950 and 1960, these ghettos expanded in a normal, totally unremarkable manner. It is the black population growth since 1960 that is instructive for policymakers. The San Francisco black population rose during the 1960's from about 74,000 to 96,000, or from 10 per cent of the total population in 1960 to 13 per cent in 1970. Fully one-half of the net increase of 22,000 blacks was outside of the five established black zones. This scattering of thousands of black residents throughout San Francisco had a marked effect upon the expansion of the city's ghettos. The pattern of predominantly black blocks grew only slightly between 1960 and 1970. The scattering of so much of the city's black increase away from the ghettos had a stabilizing effect on racially mixed neighborhoods at the edges of the ghettos. Conventional wisdom would have Haight-Ashbury and other 1960 integrated areas predominantly black in 1970. While the proportion of black residents rose, these fringe areas remained predominantly white.

If this result can occur in a natural, unplanned situation, it takes

little imagination to envision the same principle being applied deliberately on a metropolitan basis with similar success. Beginning with scattered-site housing in the suburbs and outer-city white areas, such a program could create a climate in every metropolitan area in which integrated suburbs are a reality, massive racial transition is a thing of the past, and interracial neighborhoods are considered normal by most people. It would require sensitive, intelligent management to prepare the receiving neighborhoods and the new residents for the changes, as well as some feeling for the timing of the various stages of the program. Knowledge of such phenomena as the sector growth of black neighborhoods and awareness of the presence of particularly resistant white neighborhoods could help those charged with administering the program. Whatever problems might be associated with a plan to integrate all of America's metropolitan areas, they would be minor compared with the problems that are likely in the even of inaction.

AFTERWORD

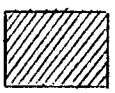
During the first six months of 1980, while this writer's study was being completed, several events took place that further underlined his concerns about the state of American race relations in general and the equilibrium of the nation's cities in particular. In January there was a riot in the small Oklahoma city of Idabel that left two persons dead. In April there was a serious disturbance in the mostly black northeastern part of Wichita, Kansas. On May 17 the nation was shocked by a massive outbreak of violence in Miami. This riot, which was triggered by the acquittal of five Dade County police officers charged with murdering a black man, claimed 18 lives. The riot was the bloodies since 1967 and was the most overly racial large disturbance since the 1943 Detroit race riot. The murderous assaults on whites and subsequent mutilations witnessed in Miami exceeded the racial animosity exhibited in any of the riots from 1964 to 1979. Since 1964 there have been only three ghetto riots in which the number of fatalities was greater than that in Miami: the 1965 Los Angeles eruption and the 1967 Newark and Detroit riots. In terms of annual riot deaths, 1980 is the fourth worst year since 1964--and only half of the year has passed. The 21 deaths are surpassed by only the 88 in 1967, the 70 in 1968 and the 35 in 1965. One can only hope that a sense of urgency will arise again within government and the general public concerning America's racial situation without another full-scale spasm of violence such as occurred in 1967 and 1968. The most evident change since the publication of the Kerner Commission report is that the major ghettos are significantly larger.

MAPS

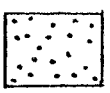
RACIAL BLOCK MAPS, 1940-1970*

Solid dark shading indicates blocks in which a majority of occupied housing units are black-occupied. Cross checking 1940-1960 block data with tract data prevents "other races" areas, i.e., Chinatown, from being erroneously included in the pattern of black neighborhoods.

Diagonal shading denotes major parks, cemeteries and similar open spaces.



Dotted areas on 1940, 1950 or 1960 maps denote portions of the 1970 land area of the city that had not yet been annexed at the time of the census in question.



Approximate location of central business district.

★

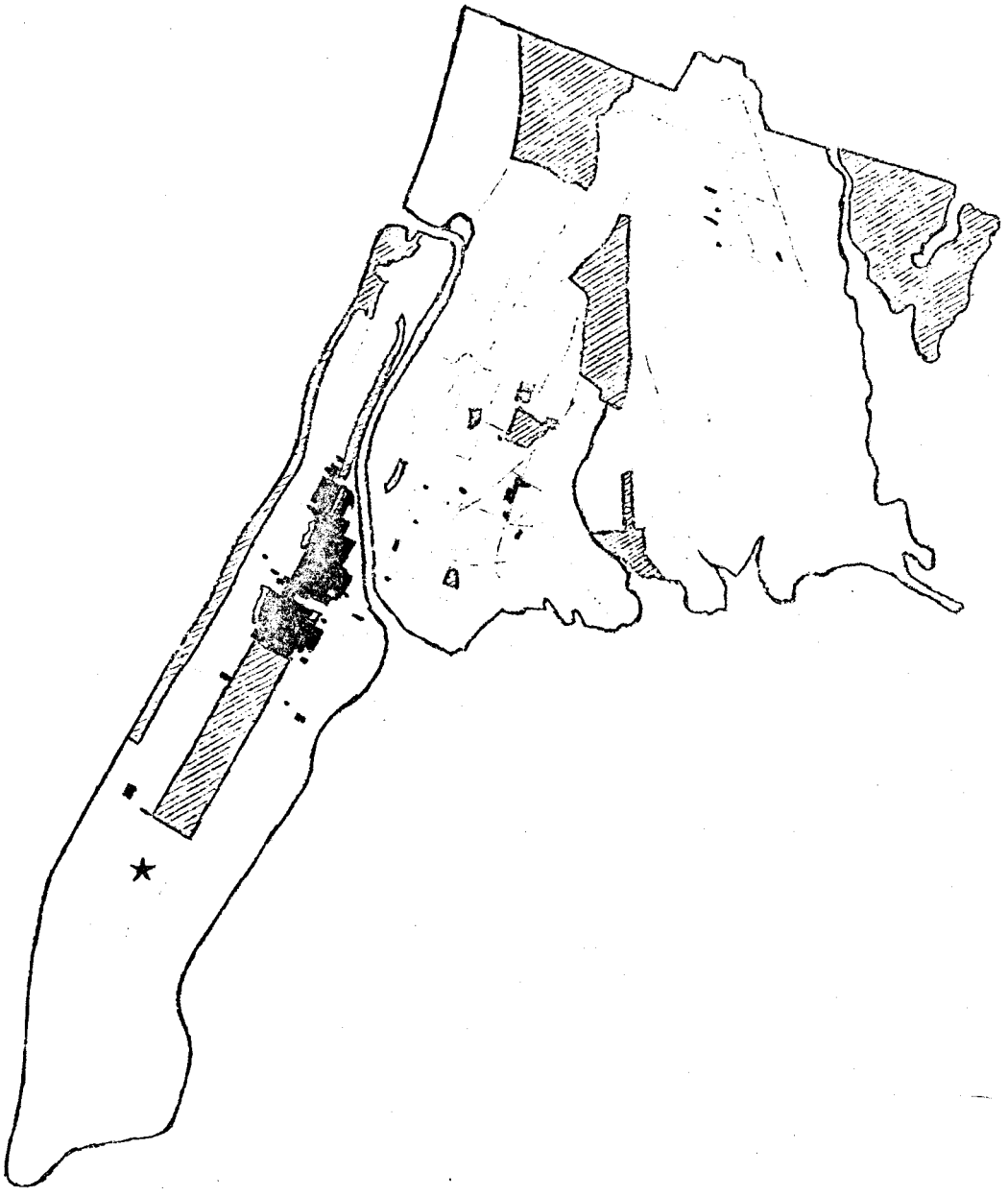
City limits.

Heavy dotted line indicates that the land area of the city extends beyond the borders of the map.

Arterial streets.

Railroads.

MAP 1



NEW YORK CITY, MANHATTAN AND THE BRONX, 1940

MAP 2

NEW YORK CITY, MANHATTAN AND THE BRONX, 1950

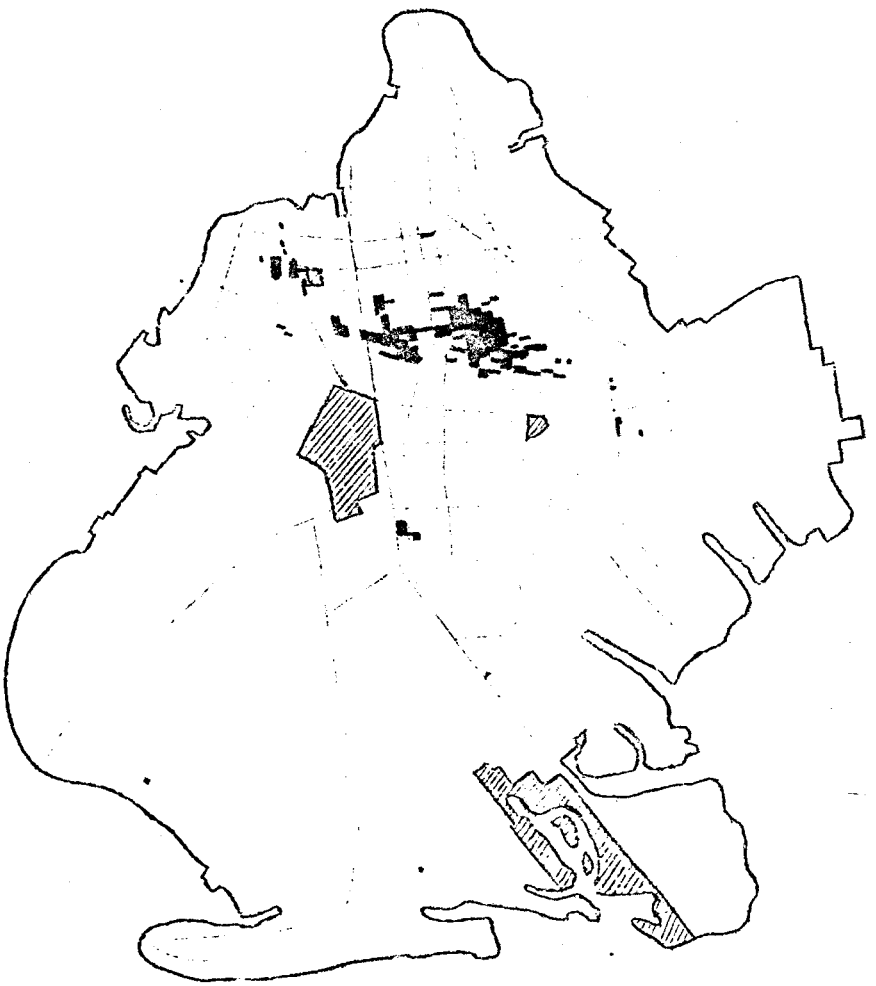
MAP 3

NEW YORK CITY, MANHATTAN AND THE BRONX, 1960

MAP 4

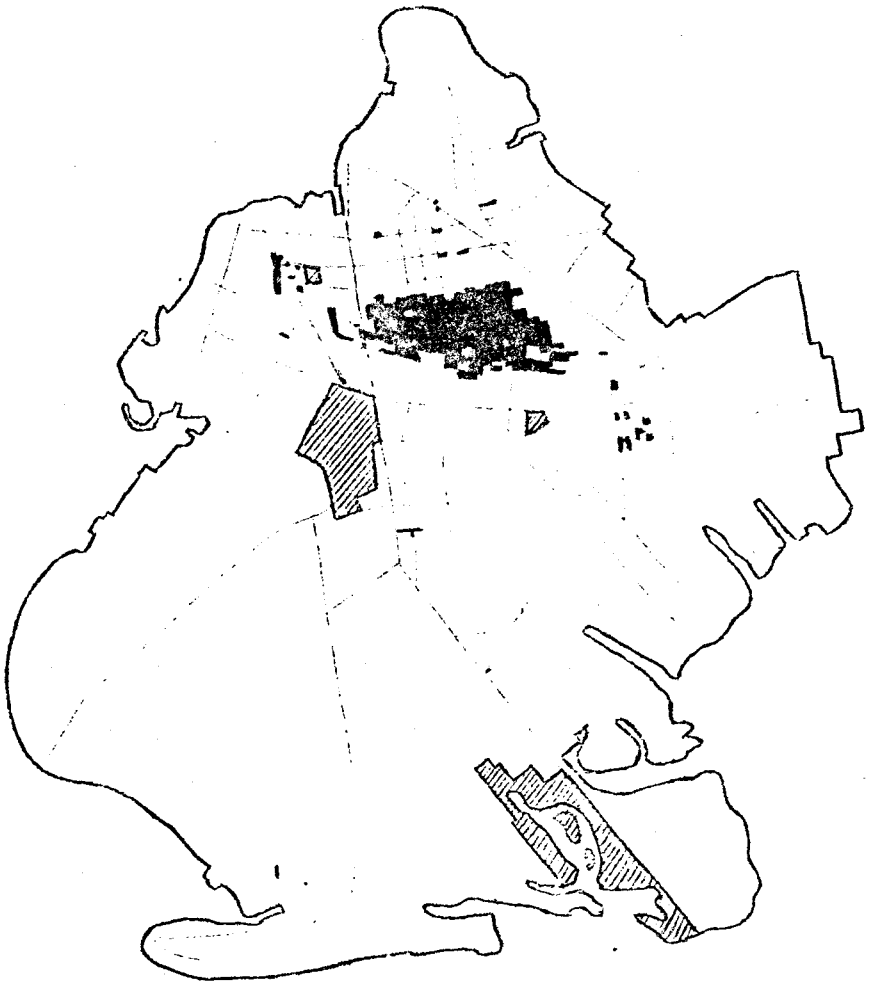
NEW YORK CITY, MANHATTAN AND THE BRONX, 1960

MAP 5



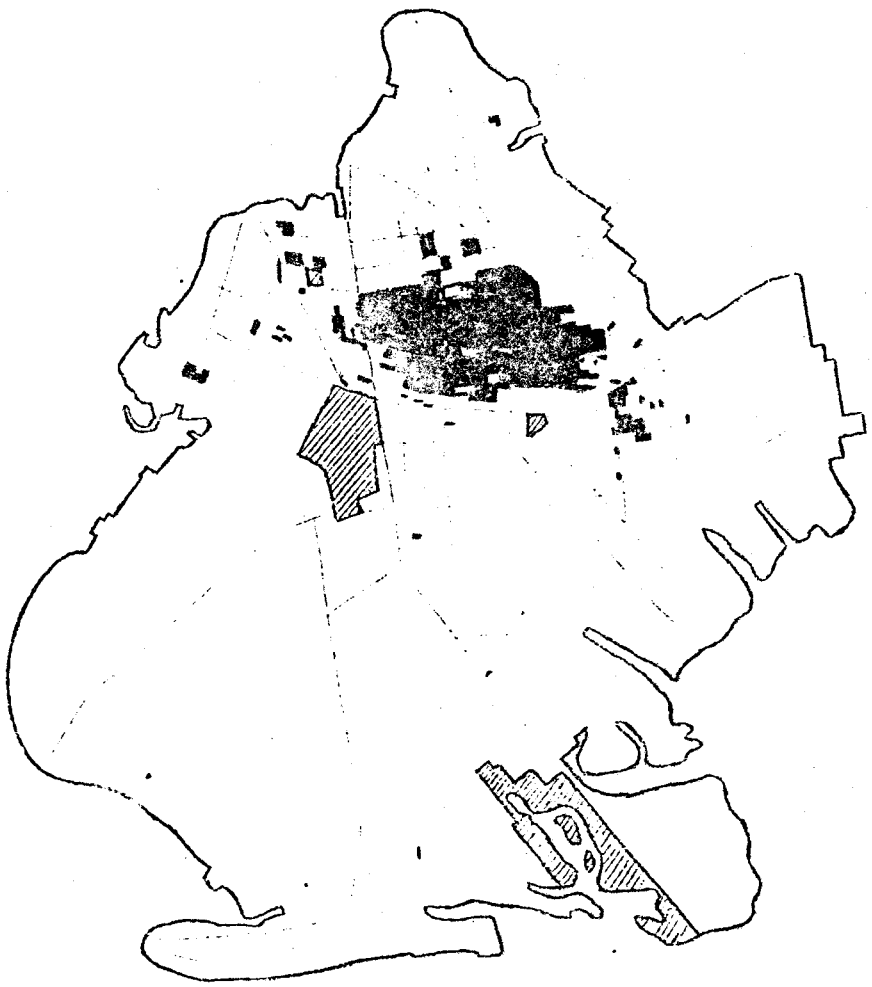
NEW YORK CITY, BROOKLYN, 1940

MAP 6



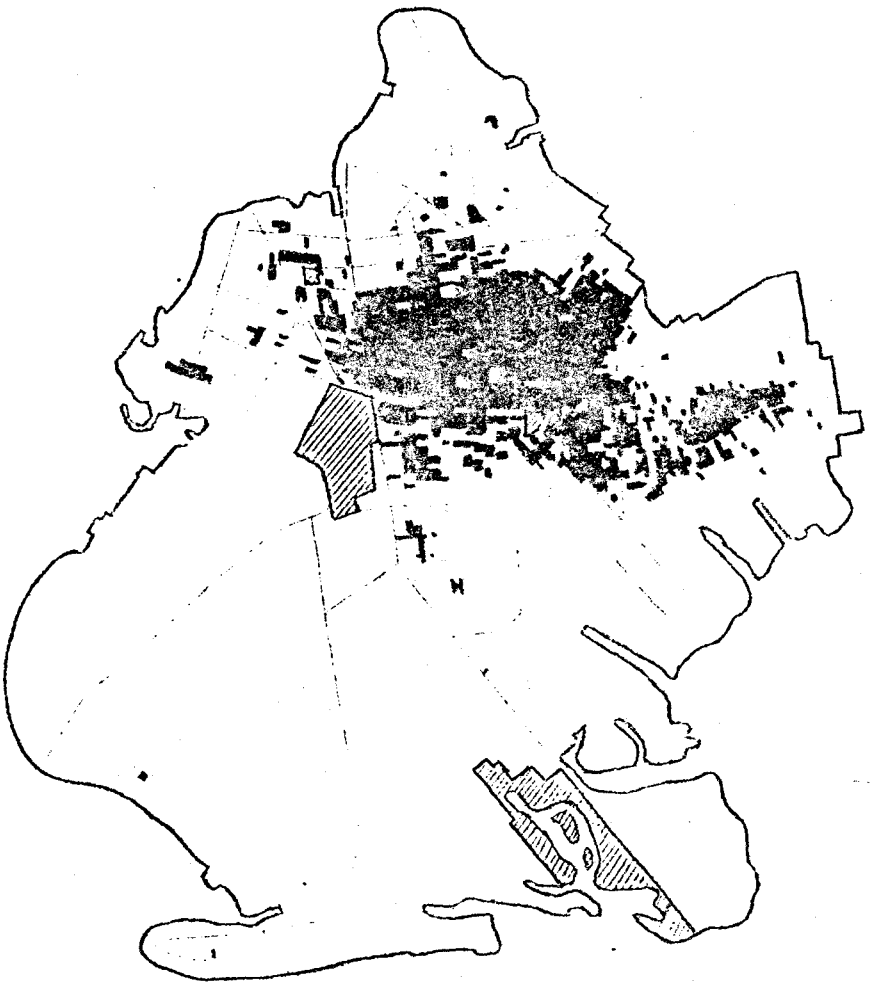
NEW YORK CITY, BROOKLYN, 1950

MAP 7



NEW YORK CITY, BROOKLYN, 1960

MAP 8

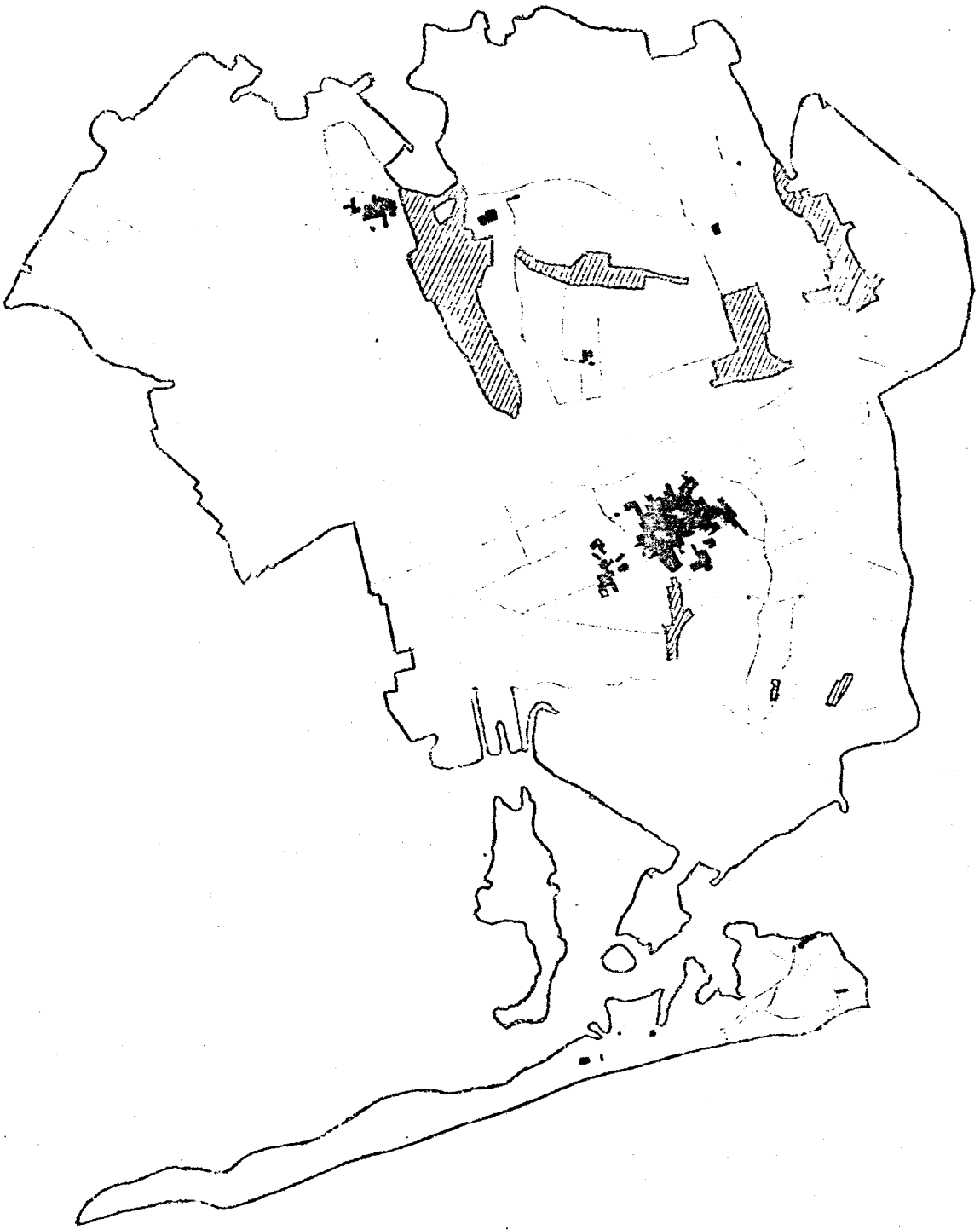


NEW YORK CITY, BROOKLYN, 1970

MAP 9

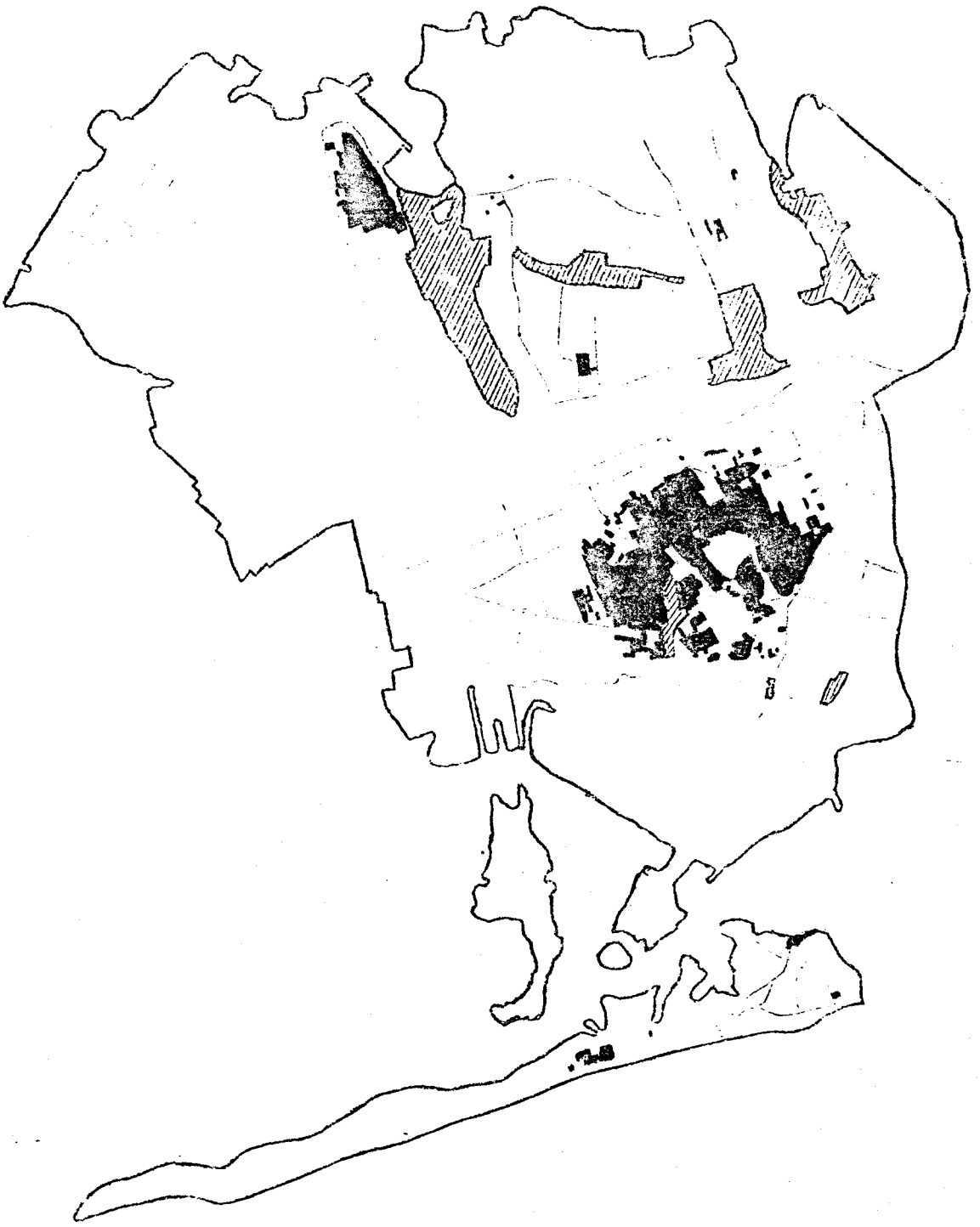
NEW YORK CITY, QUEENS, 1940

MAP 10



NEW YORK CITY, QUEENS, 1950

MAP 11

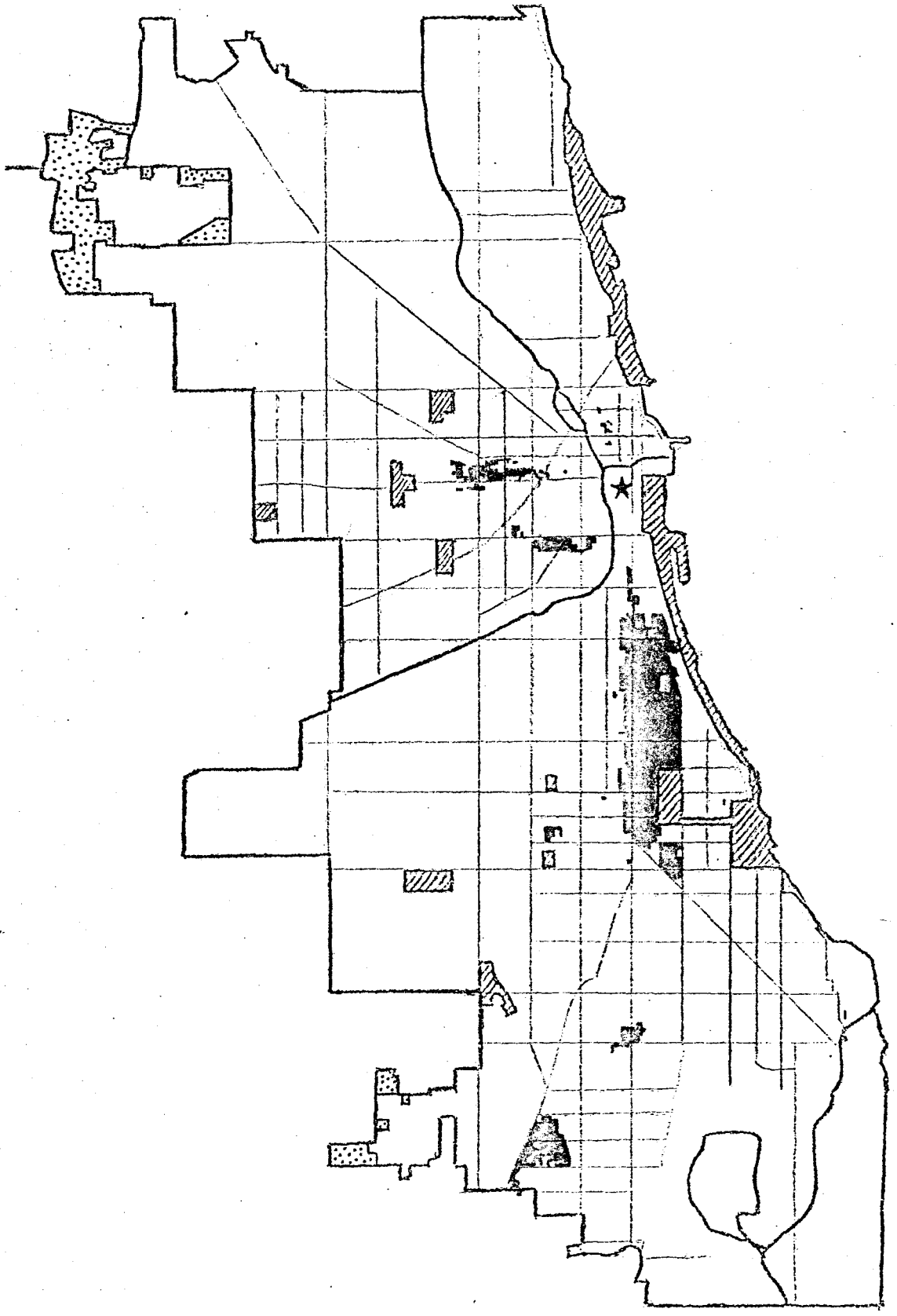


NEW YORK CITY, QUEENS, 1960

MAP 12

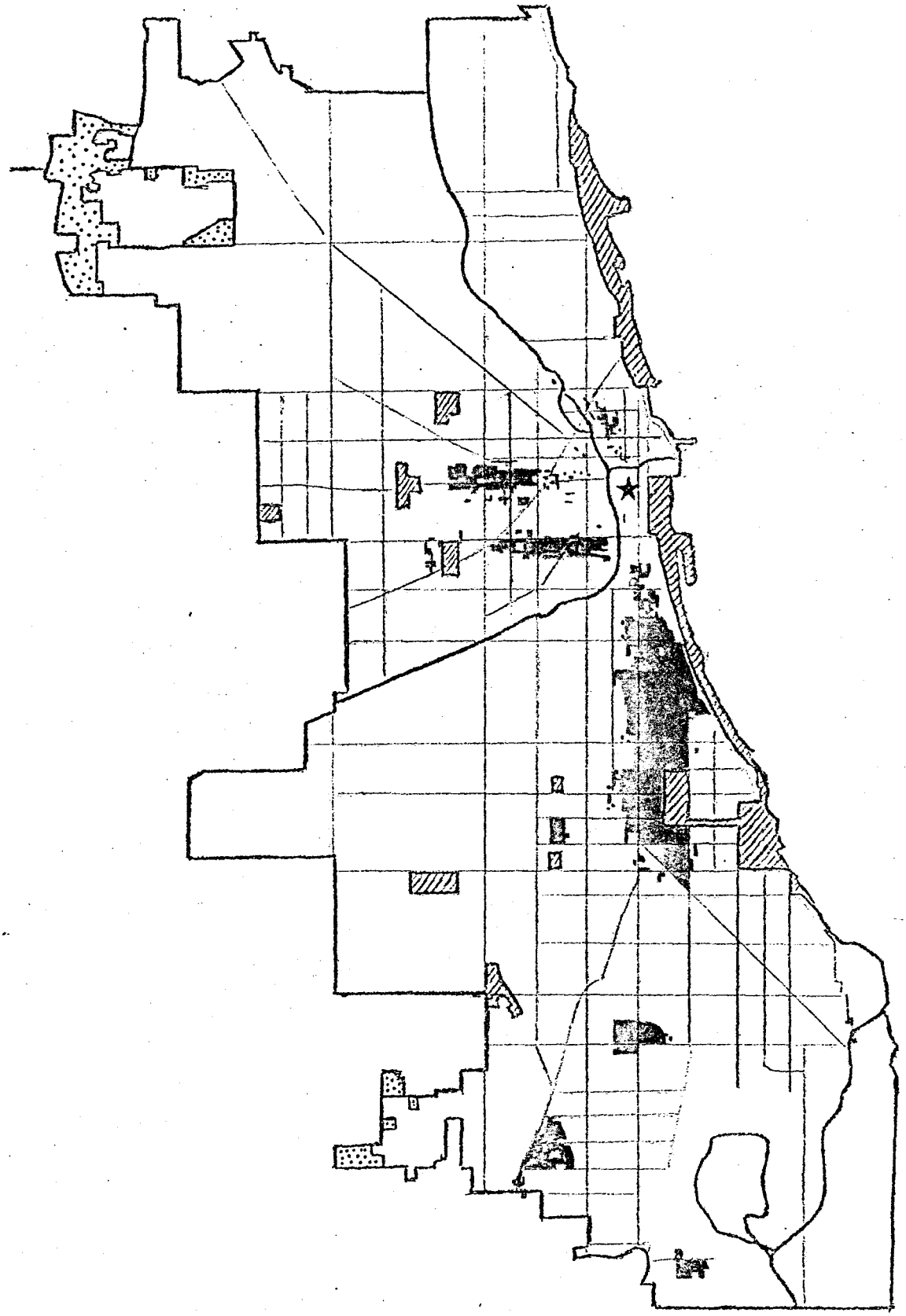
NEW YORK CITY, QUEENS, 1970

MAP 13



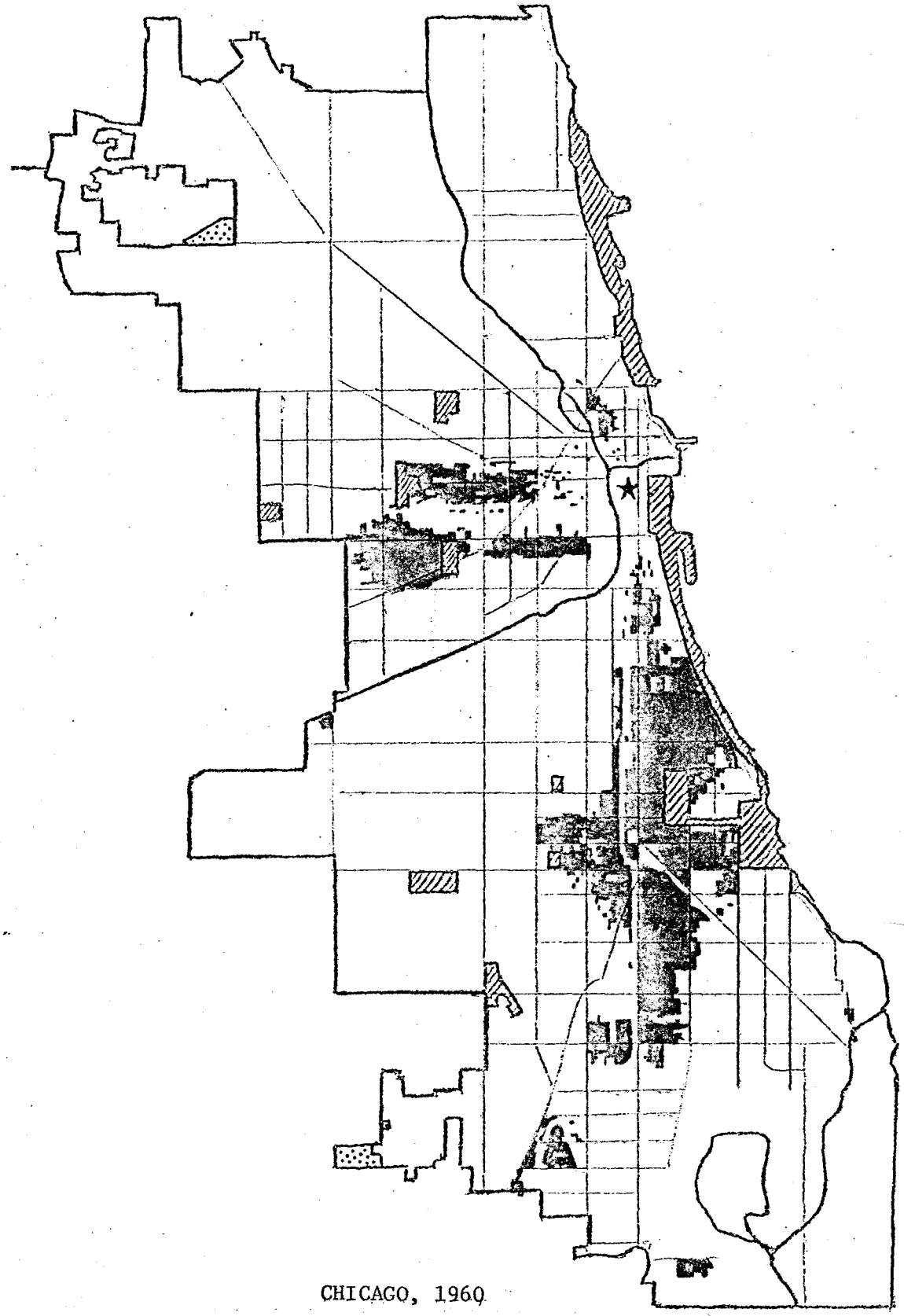
CHICAGO, 1940

MAP 14



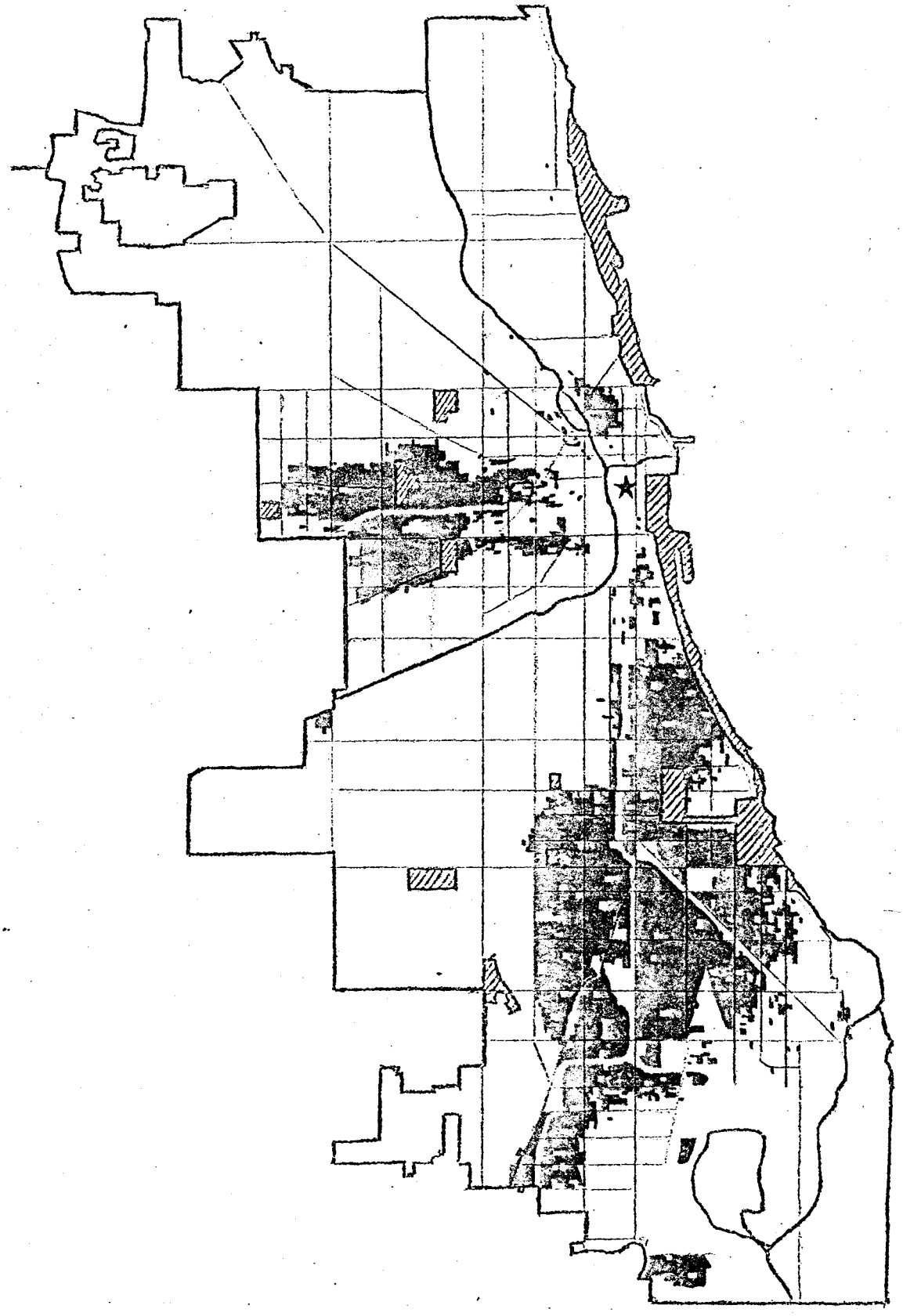
CHICAGO, 1950

MAP 15



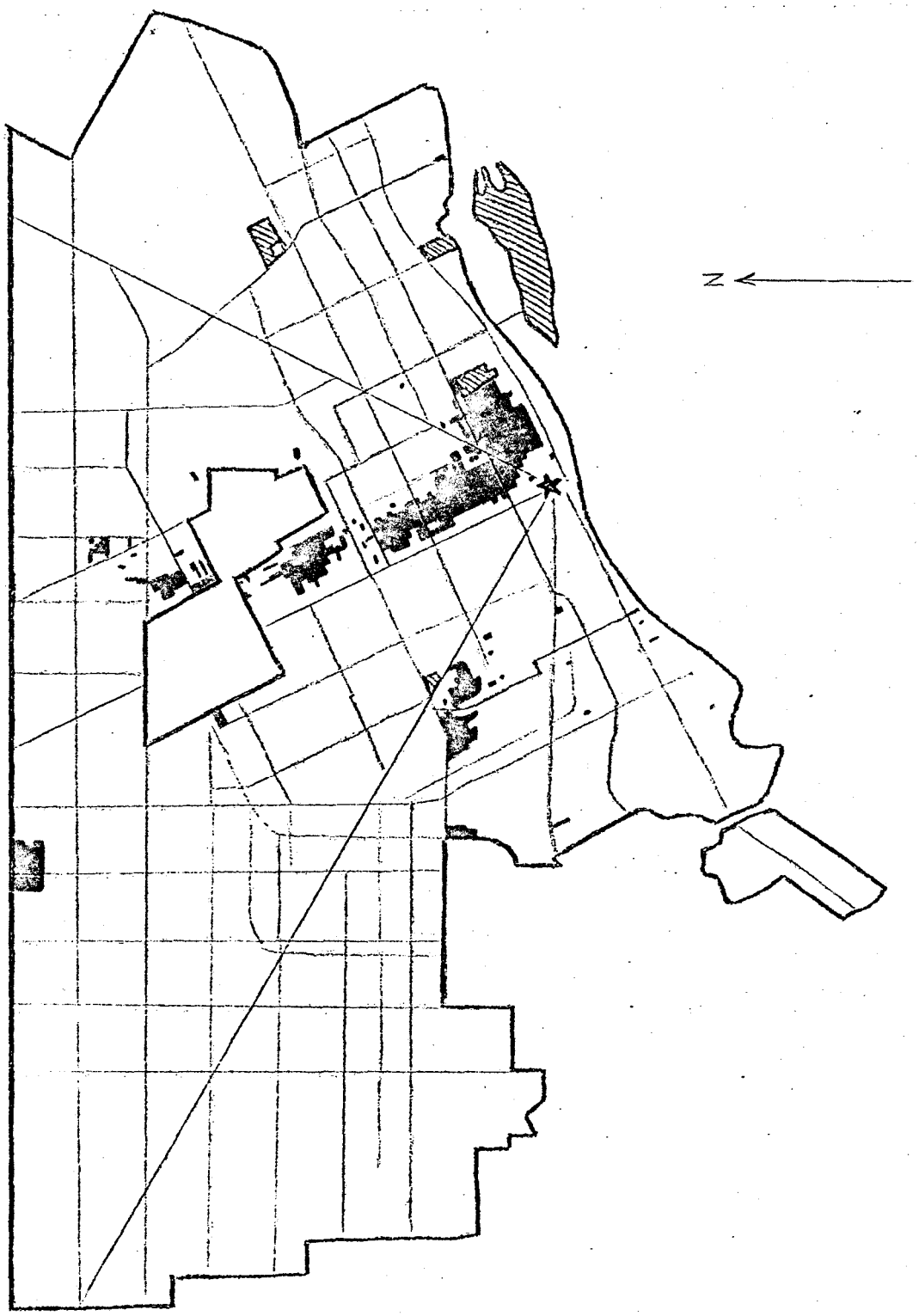
CHICAGO, 1960

MAP 16



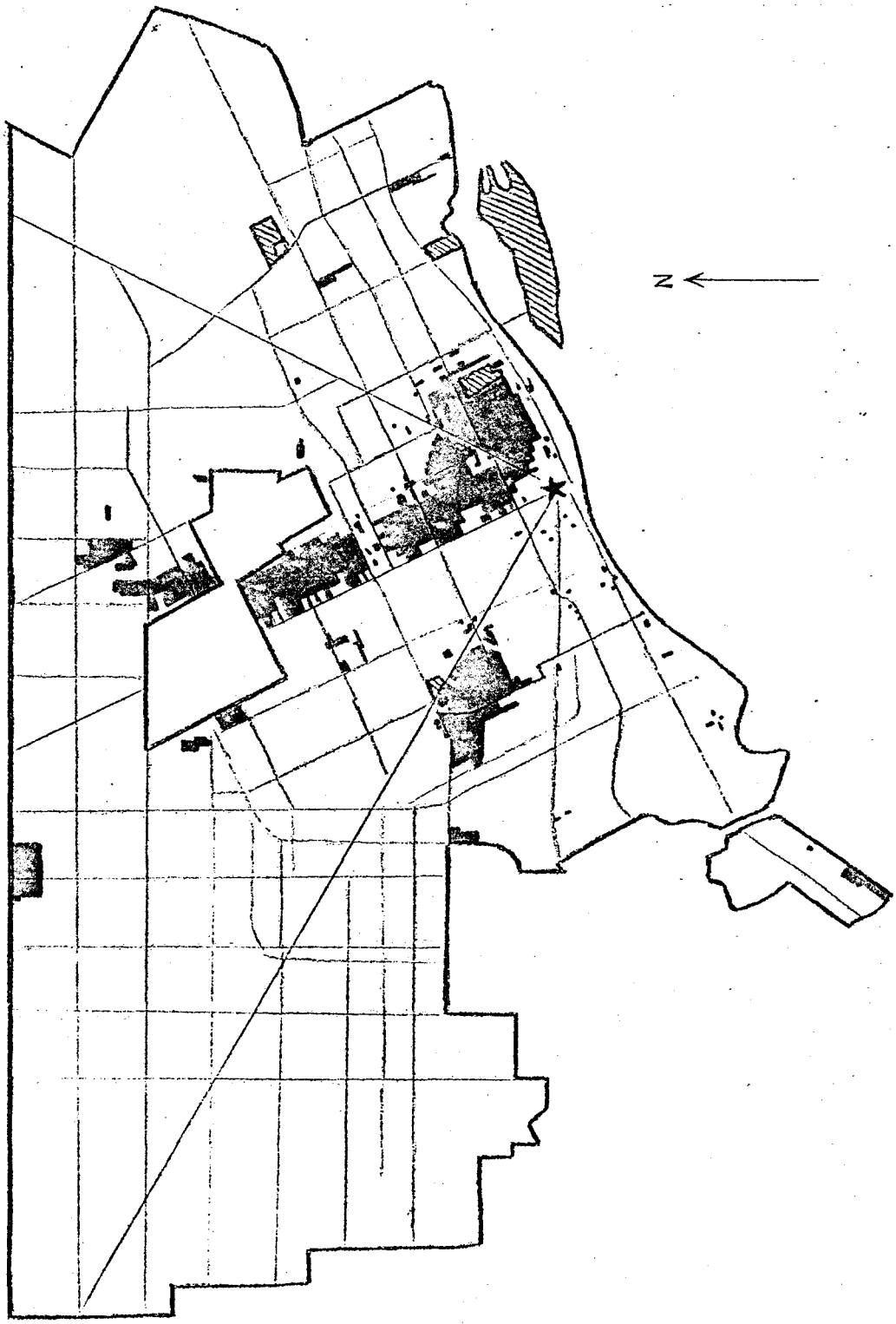
CHICAGO, 1970

MAP 17



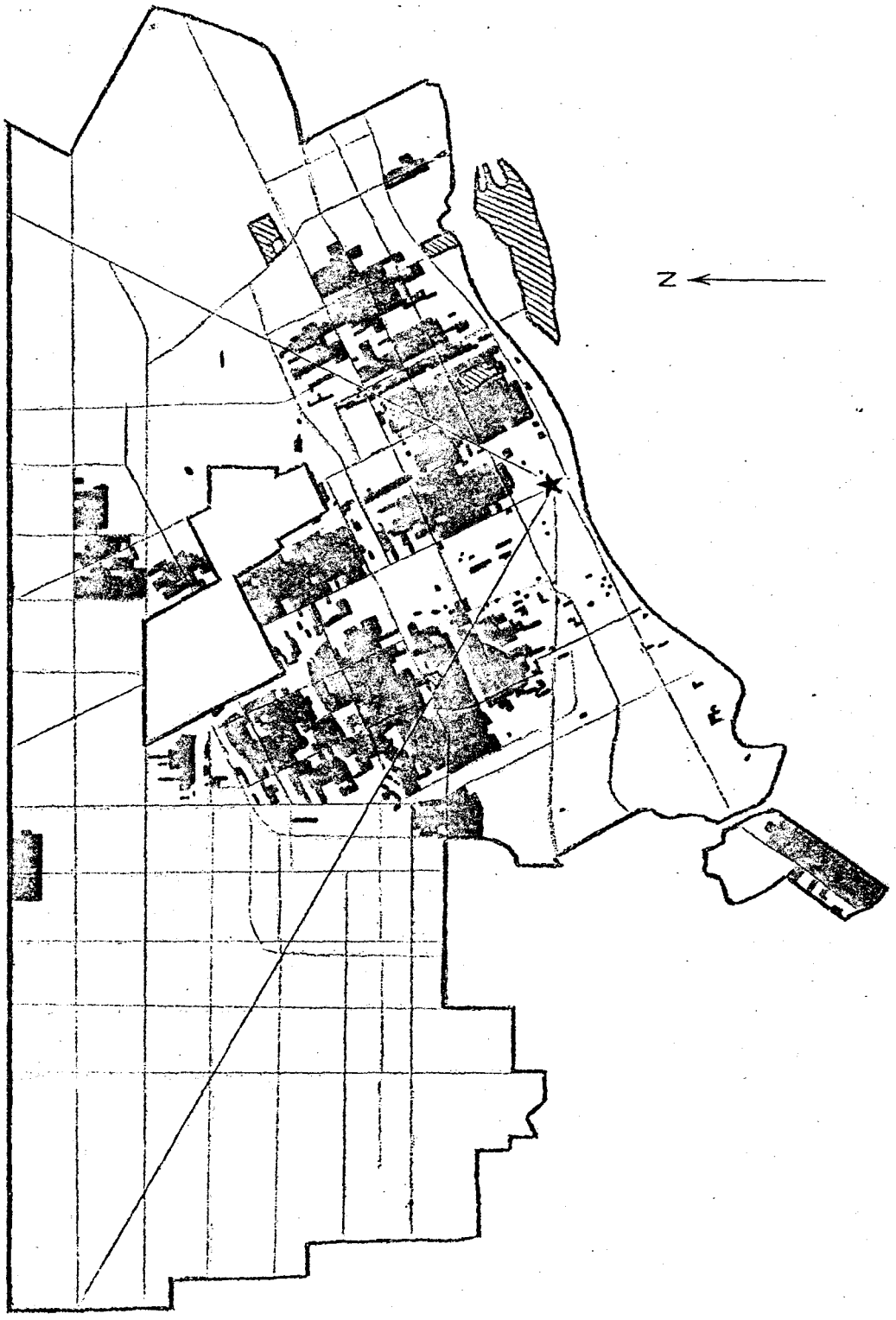
DETROIT, 1940

MAP 18



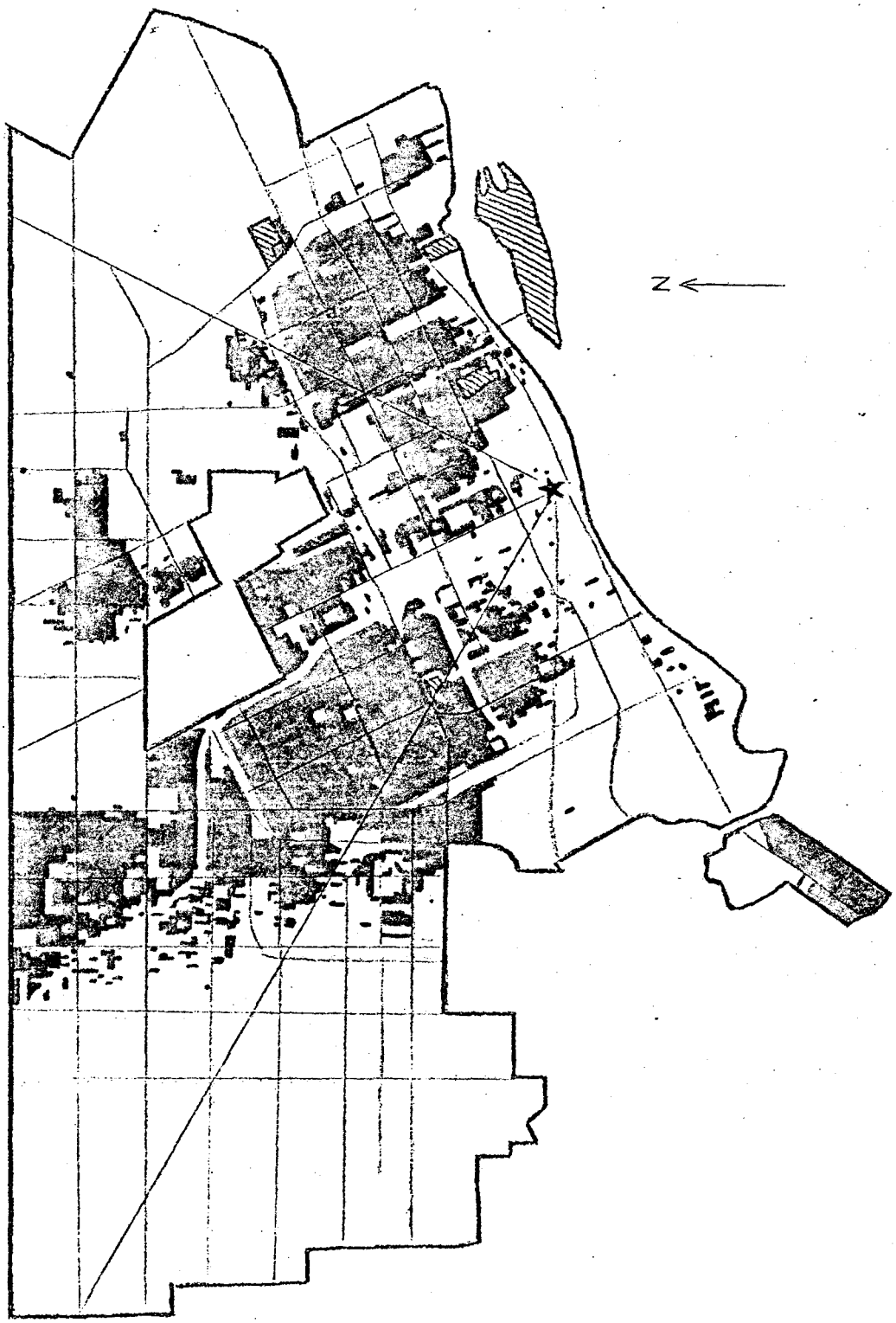
DETROIT, 1950

MAP 19



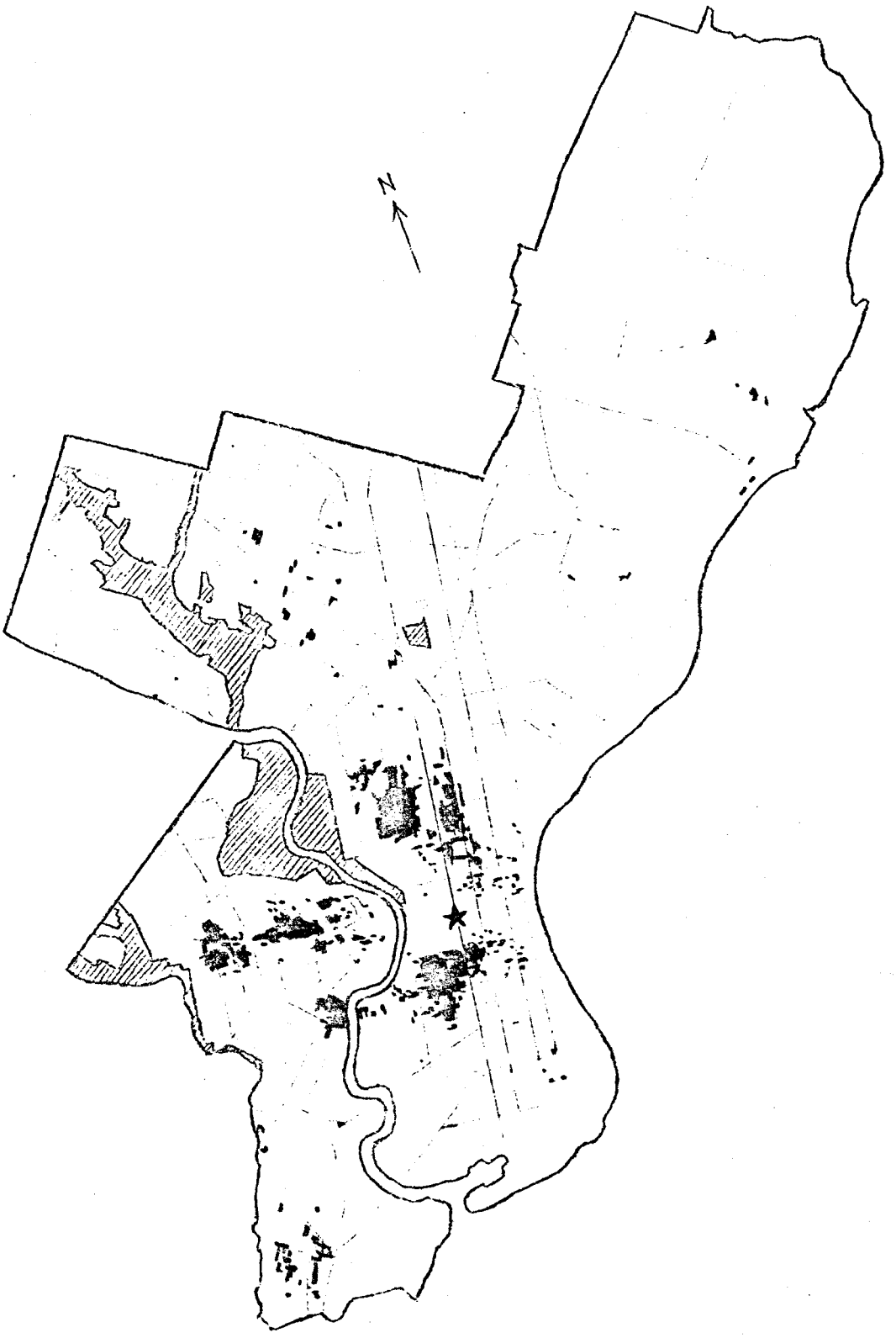
DETROIT, 1960

MAP 20



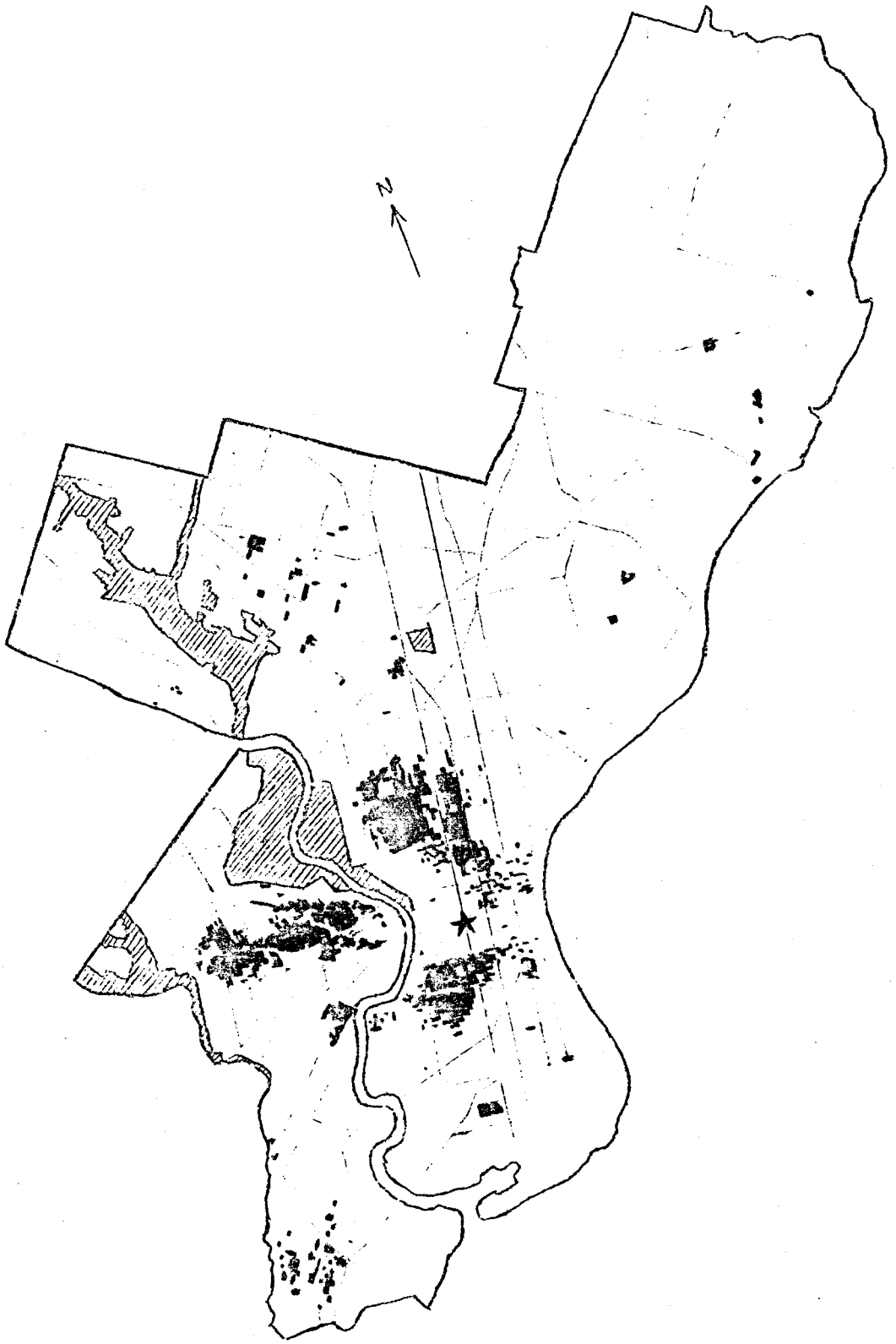
DETROIT, 1970

MAP 21



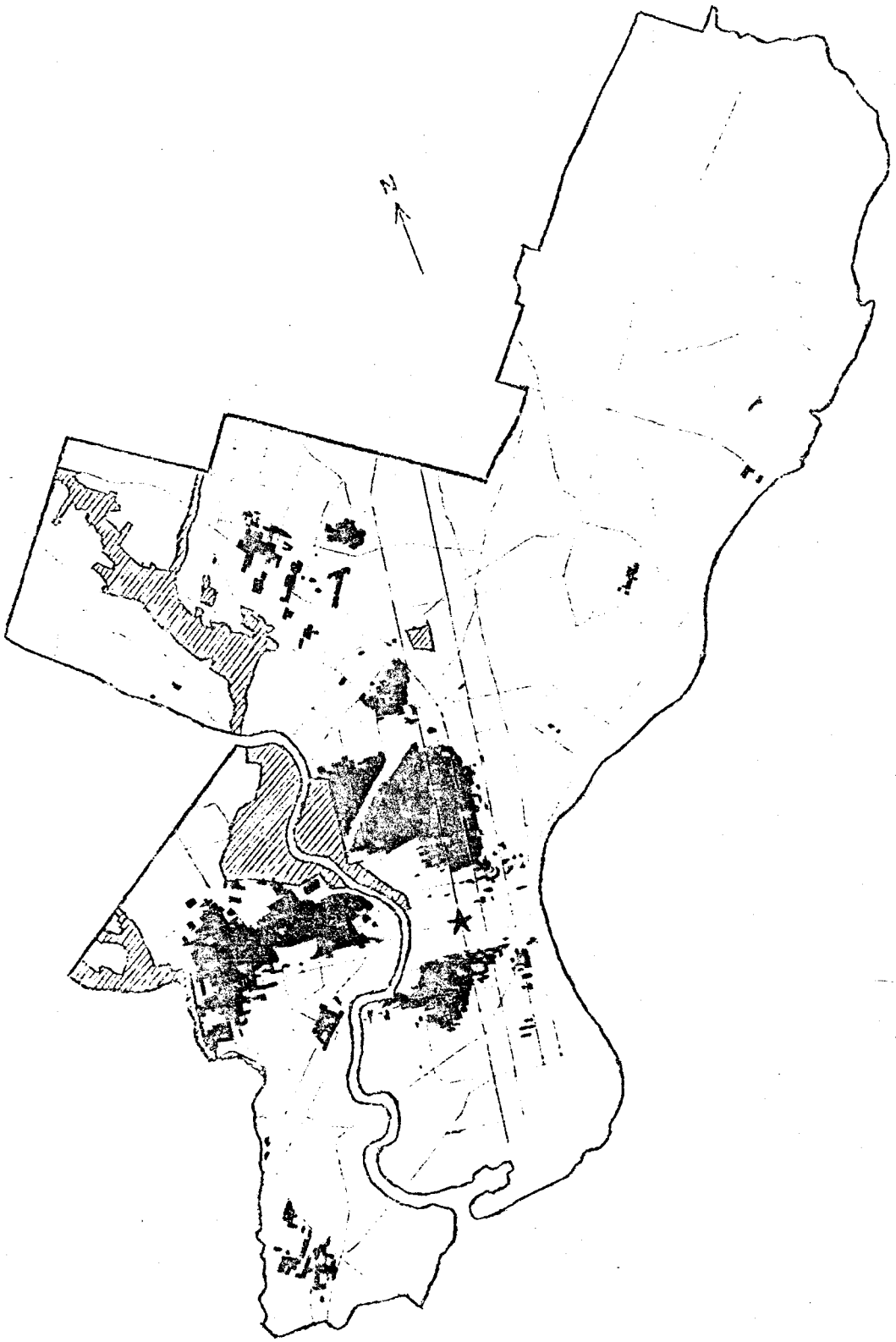
PHILADELPHIA, 1940

MAP 22



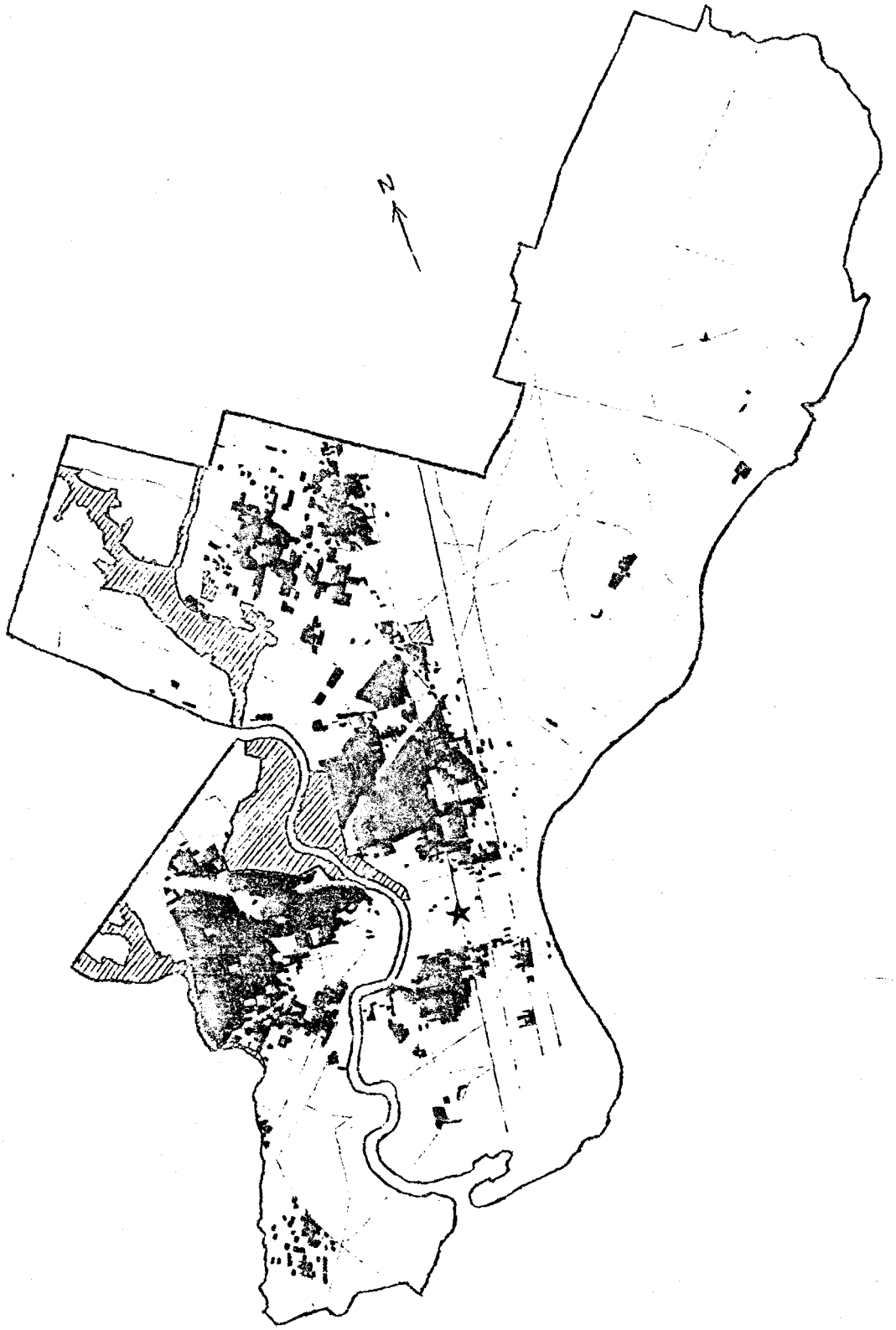
PHILADELPHIA, 1950

MAP 23



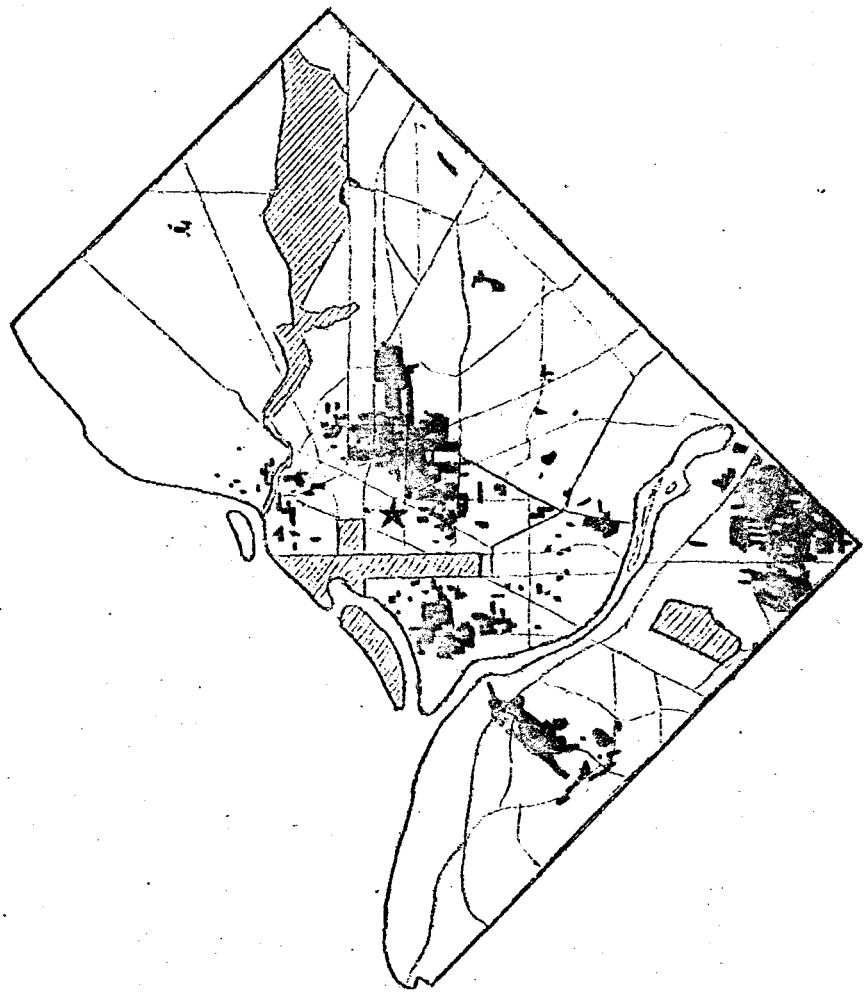
PHILADELPHIA, 1960

MAP 24



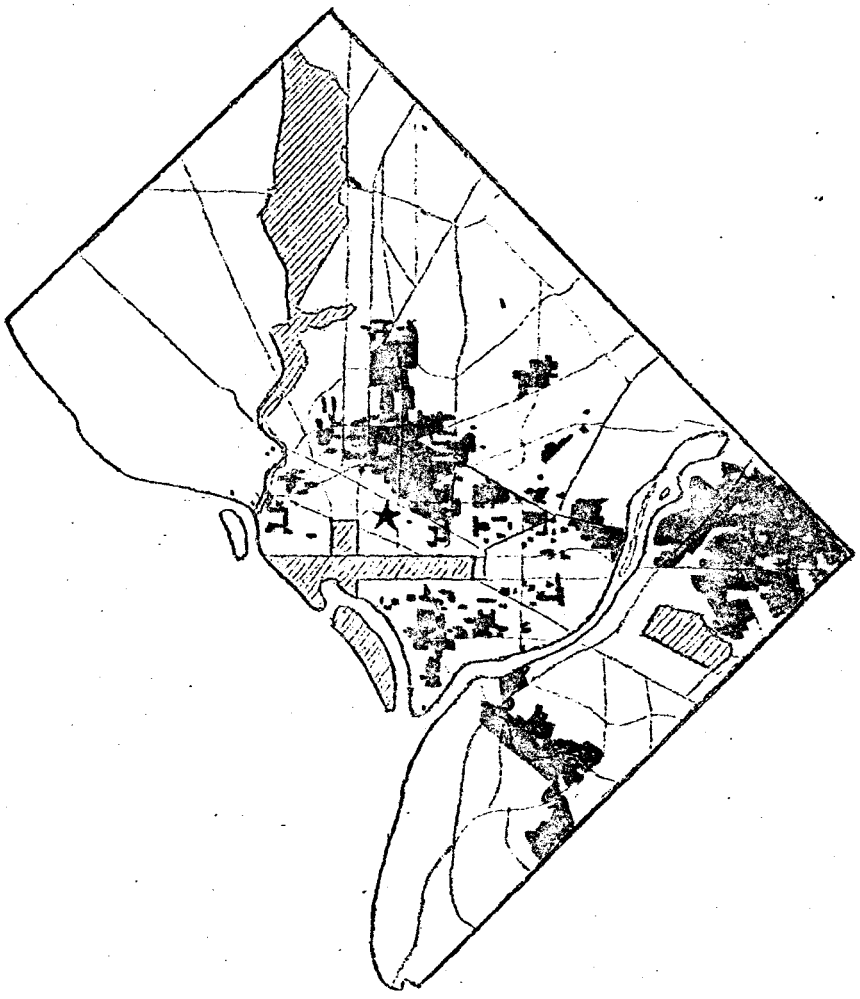
PHILADELPHIA, 1970

MAP 25



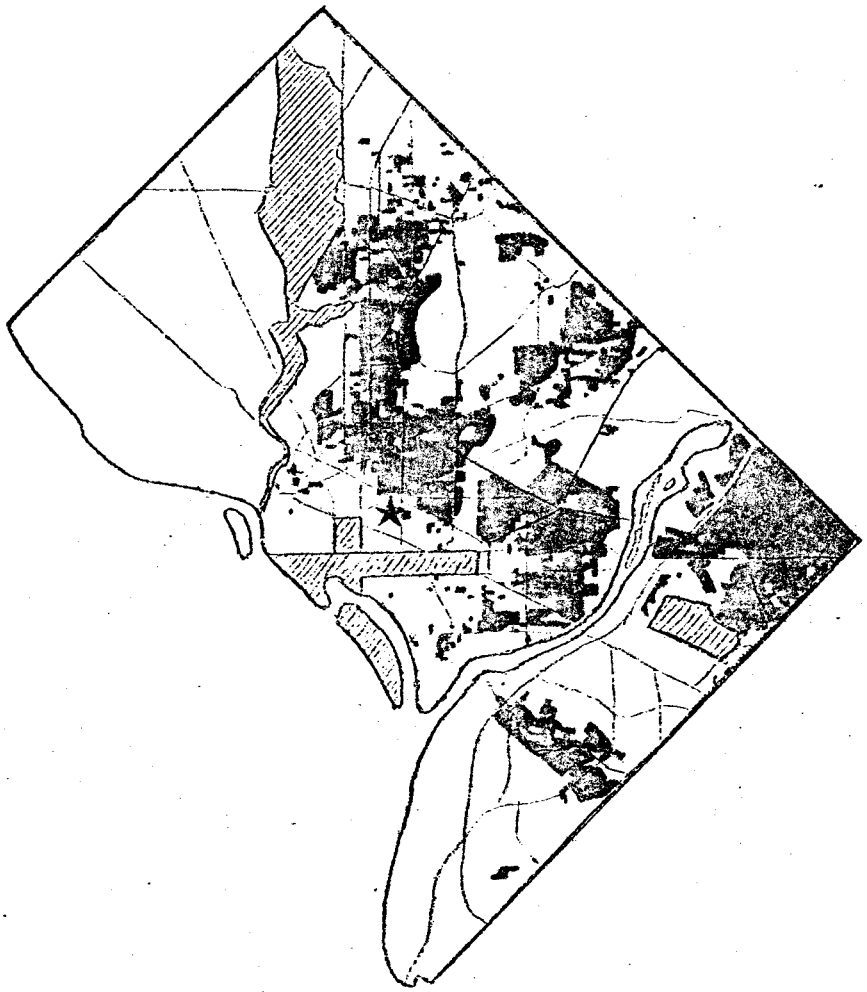
WASHINGTON, 1940

MAP 26



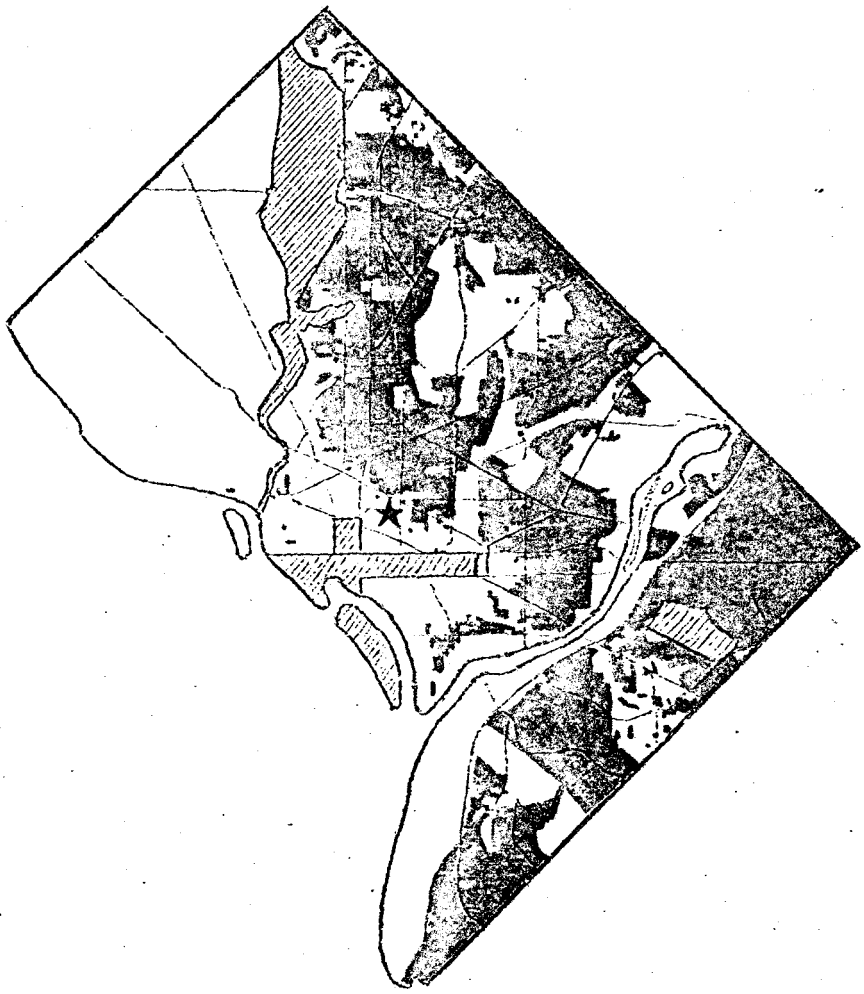
WASHINGTON, 1950

MAP 27



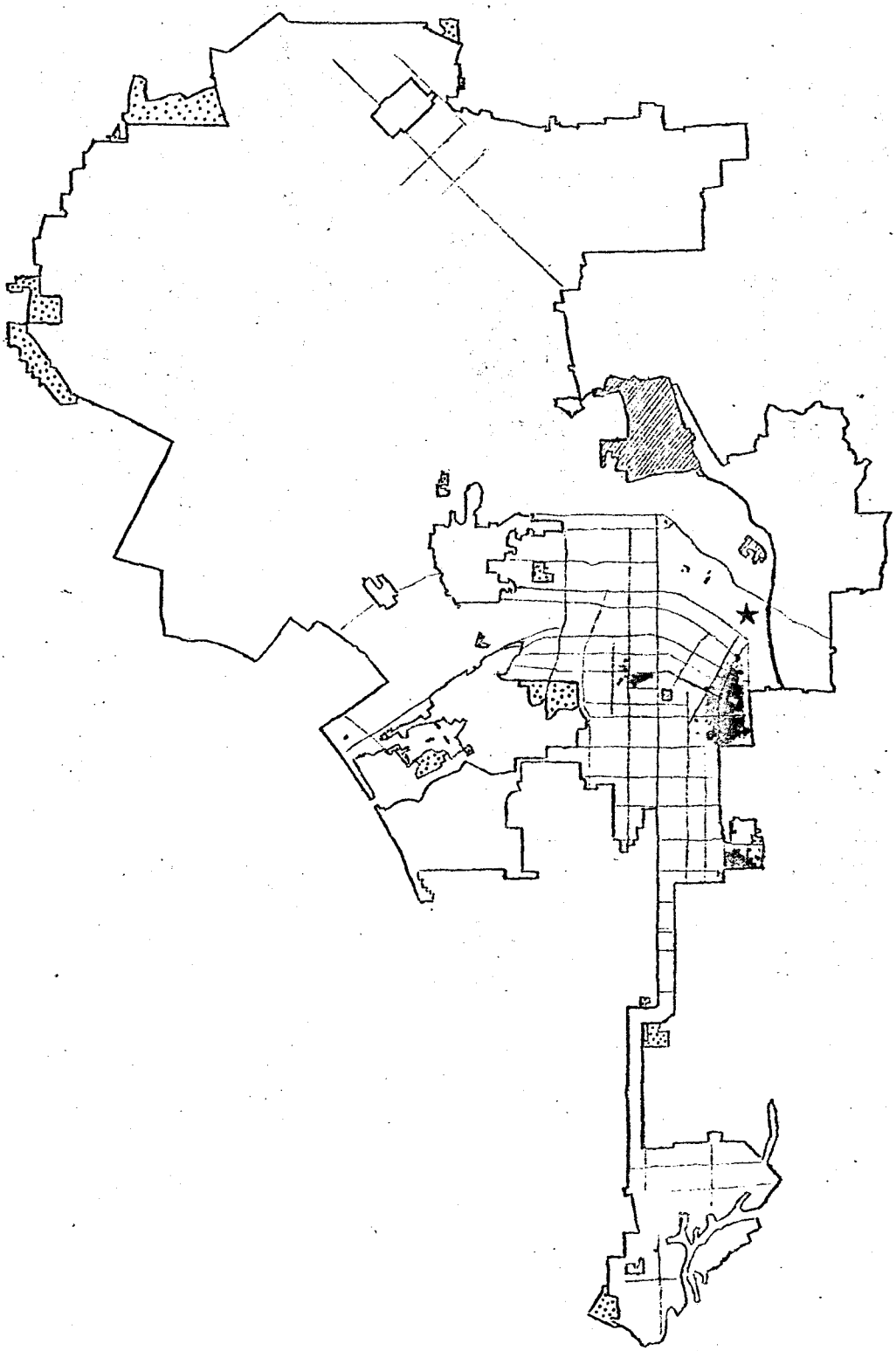
WASHINGTON, 1960

MAP 28



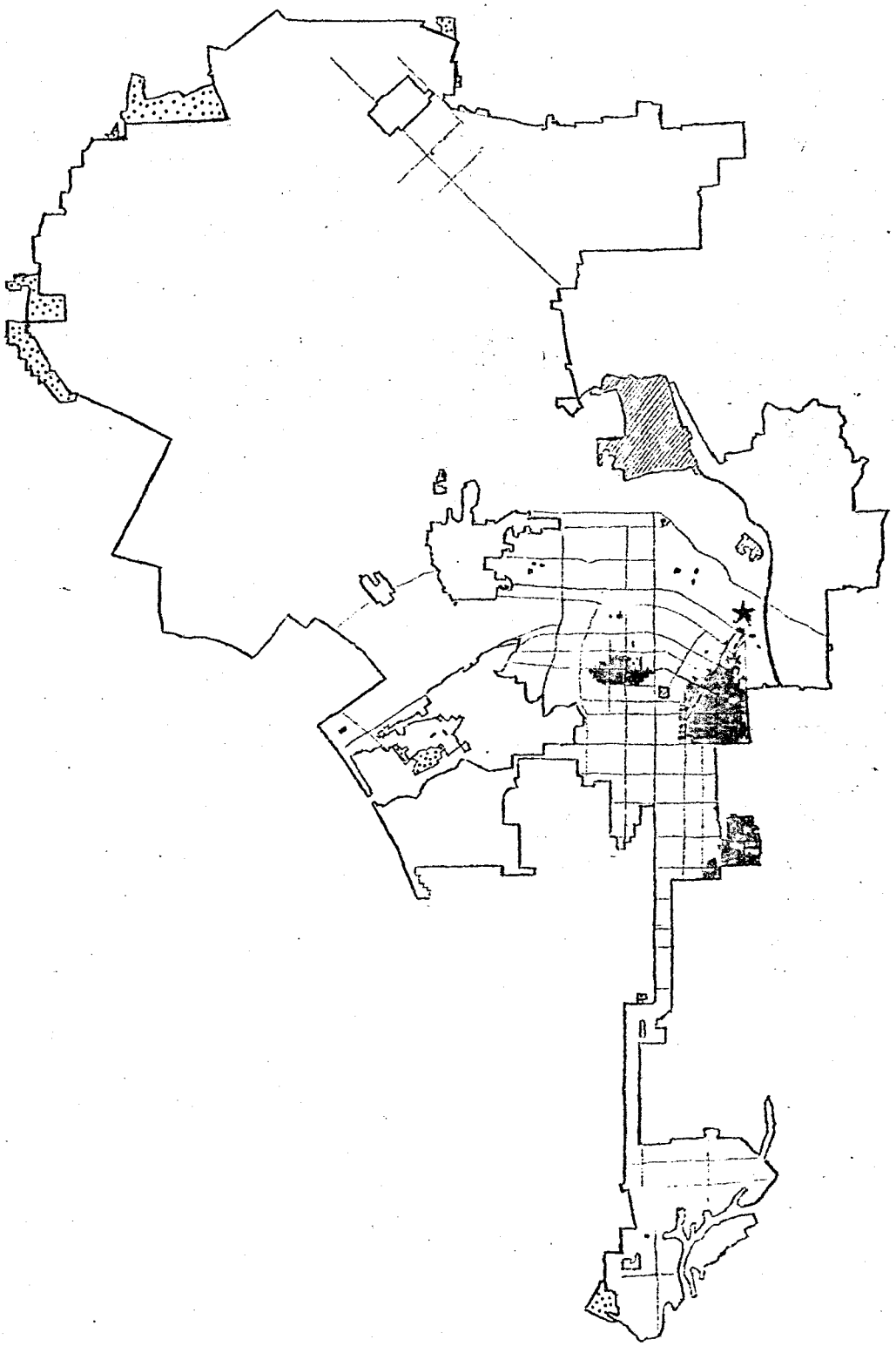
WASHINGTON, 1970

MAP 29



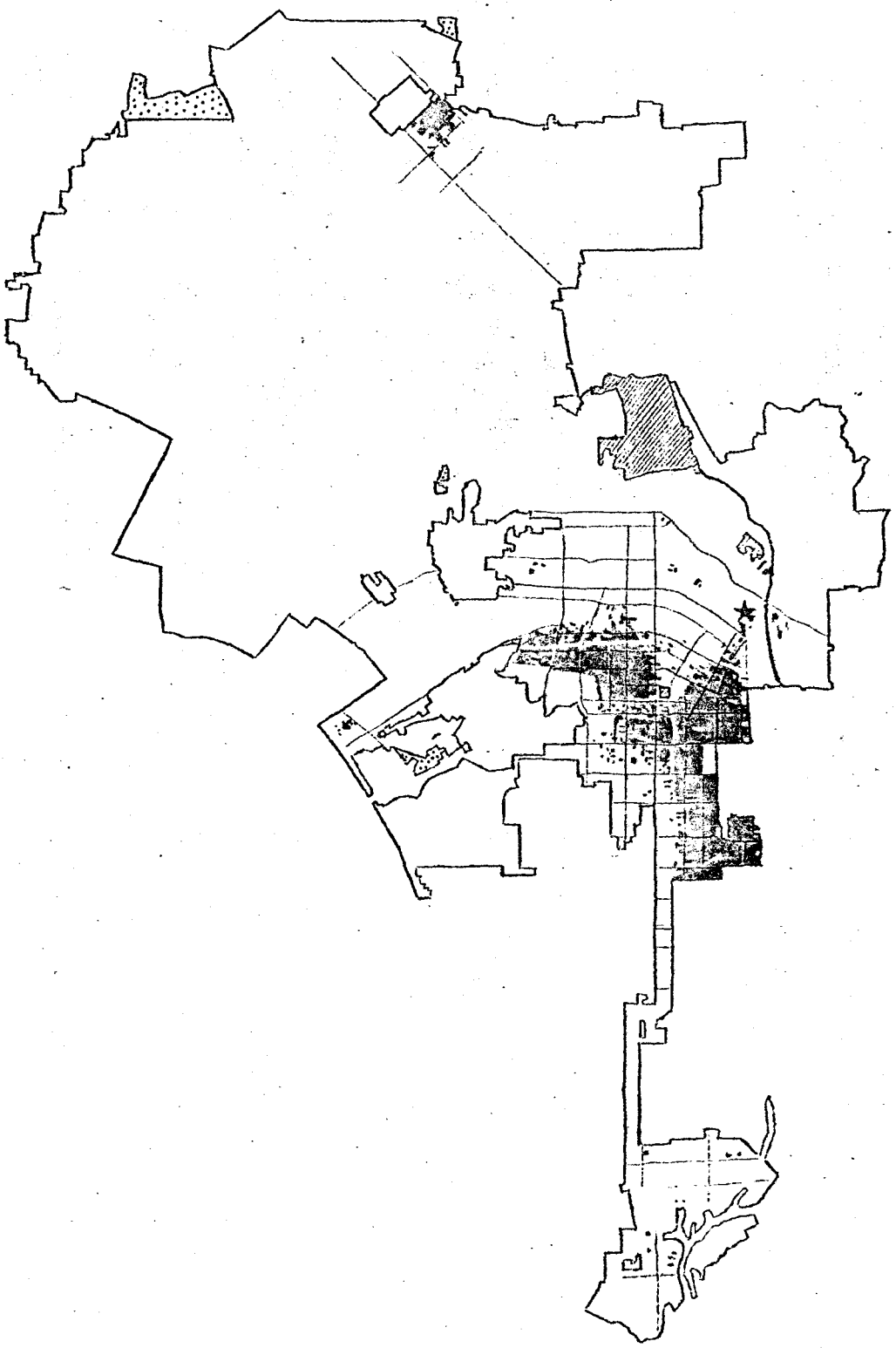
LOS ANGELES, 1940

MAP 30



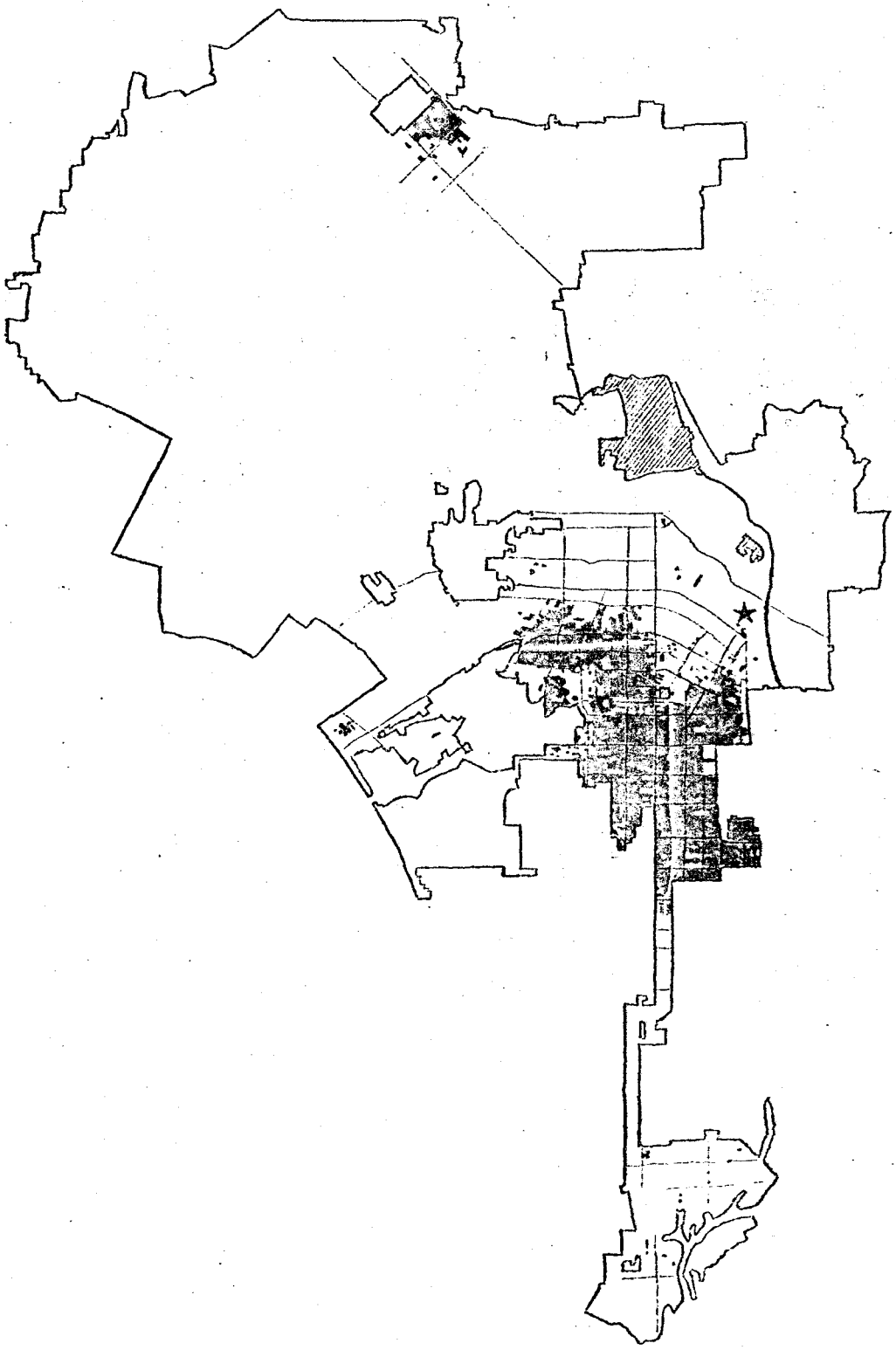
LOS ANGELES, 1950

MAP 31



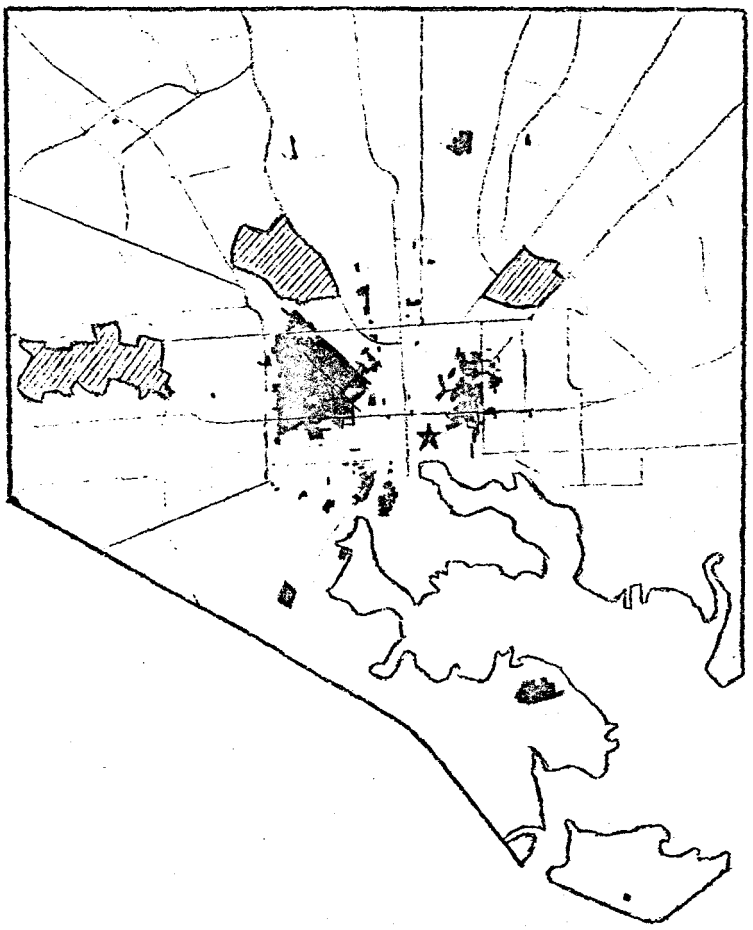
LOS ANGELES, 1960

MAP 32



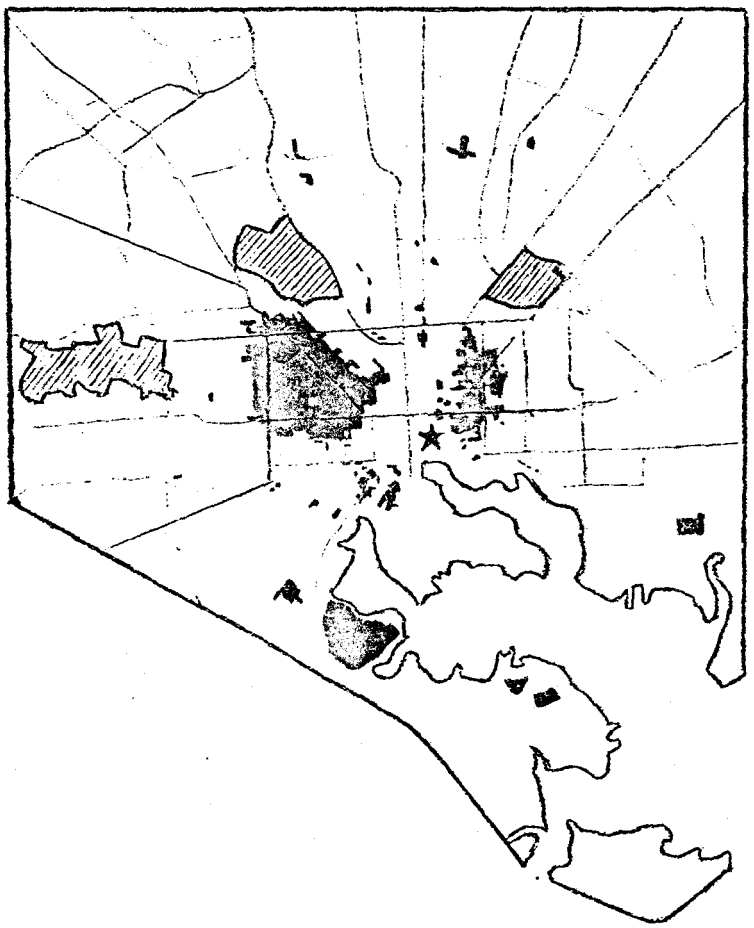
LOS ANGELES, 1970

MAP 33



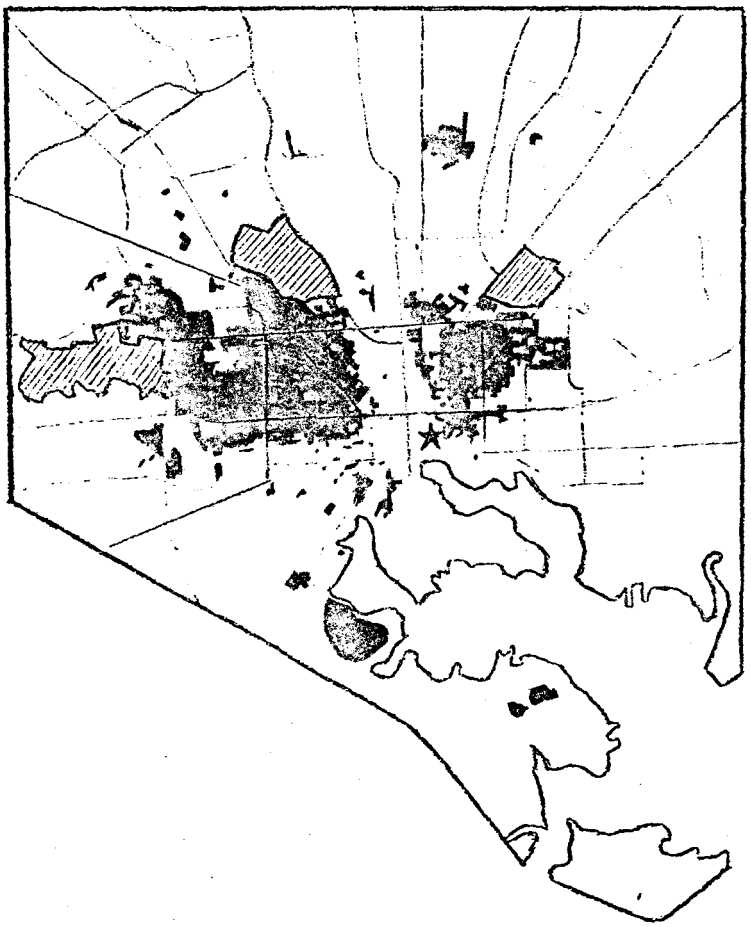
BALTIMORE, 1940

MAP 34



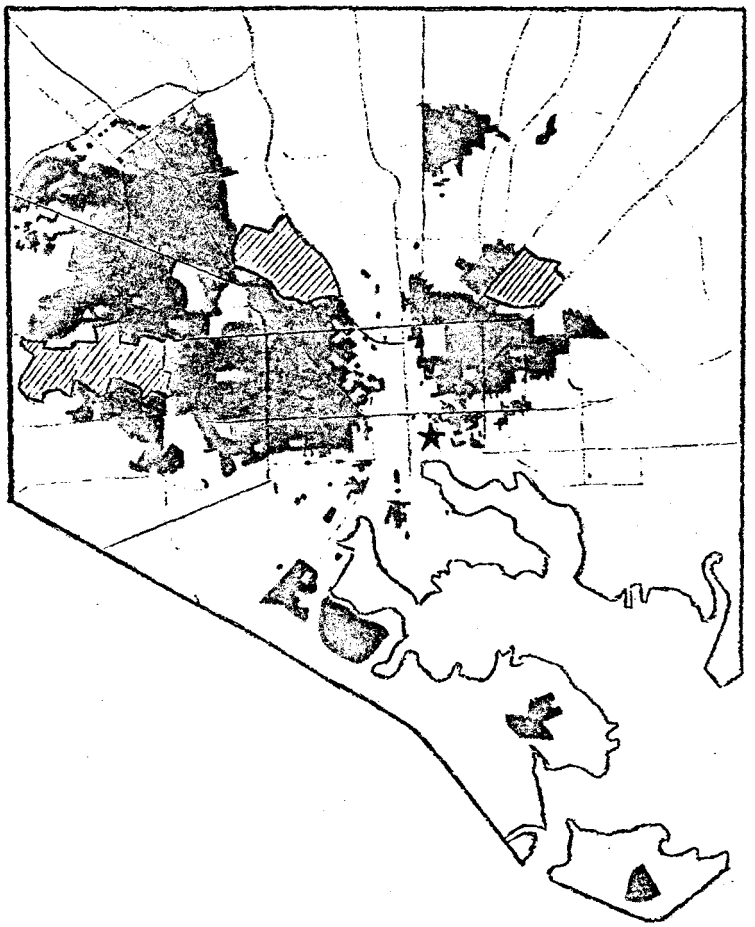
BALTIMORE, 1950

MAP 35



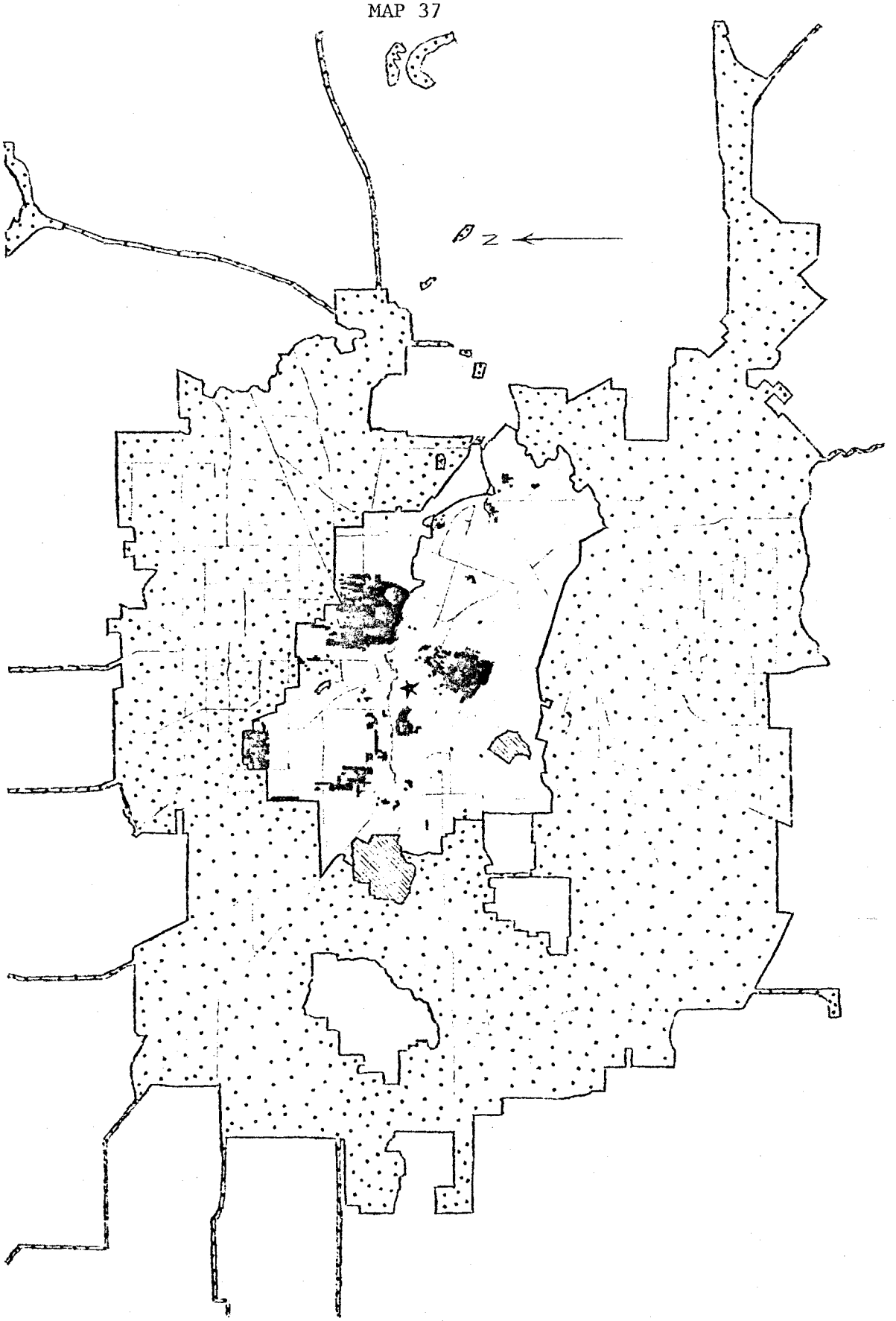
BALTIMORE, 1960

MAP 36



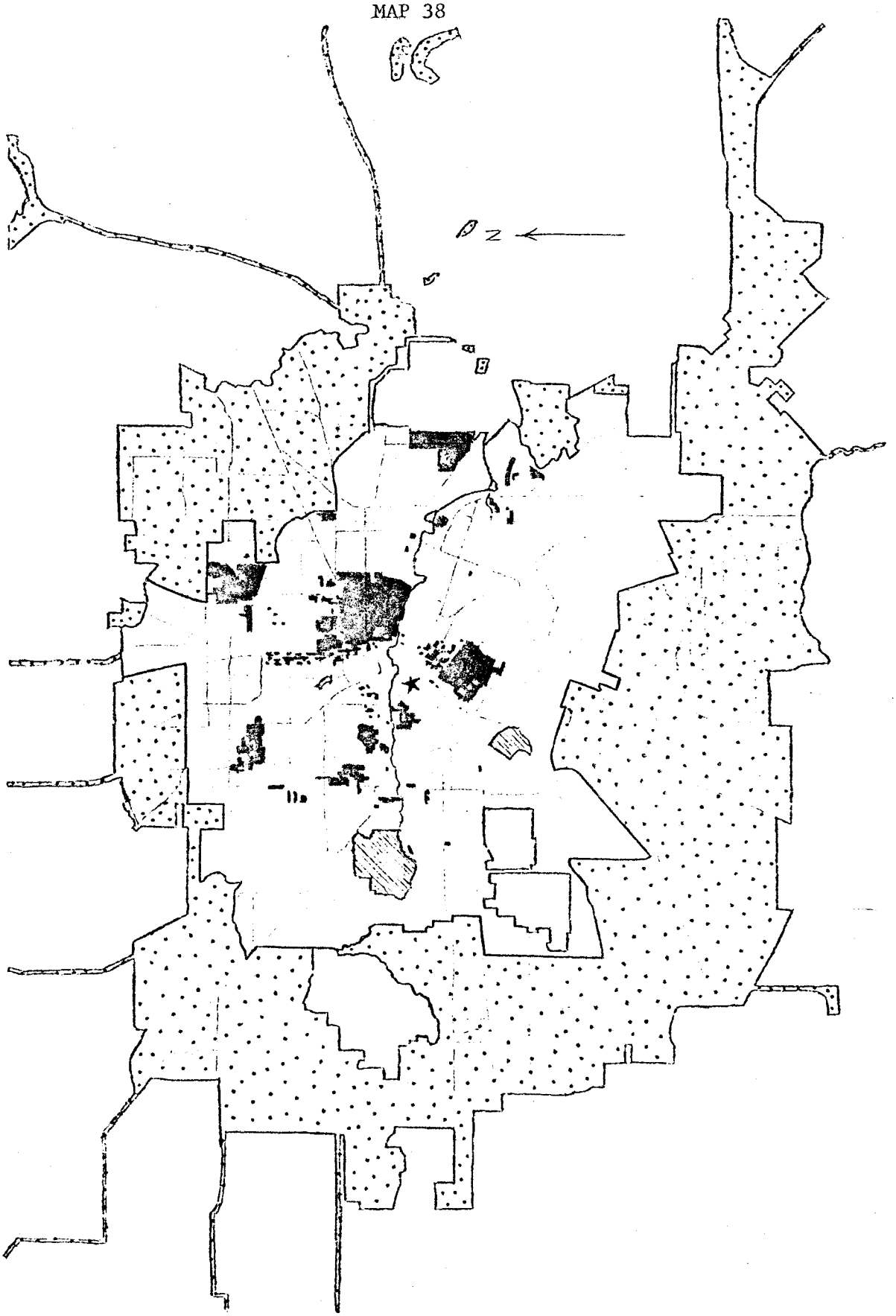
BALTIMORE, 1970

MAP 37



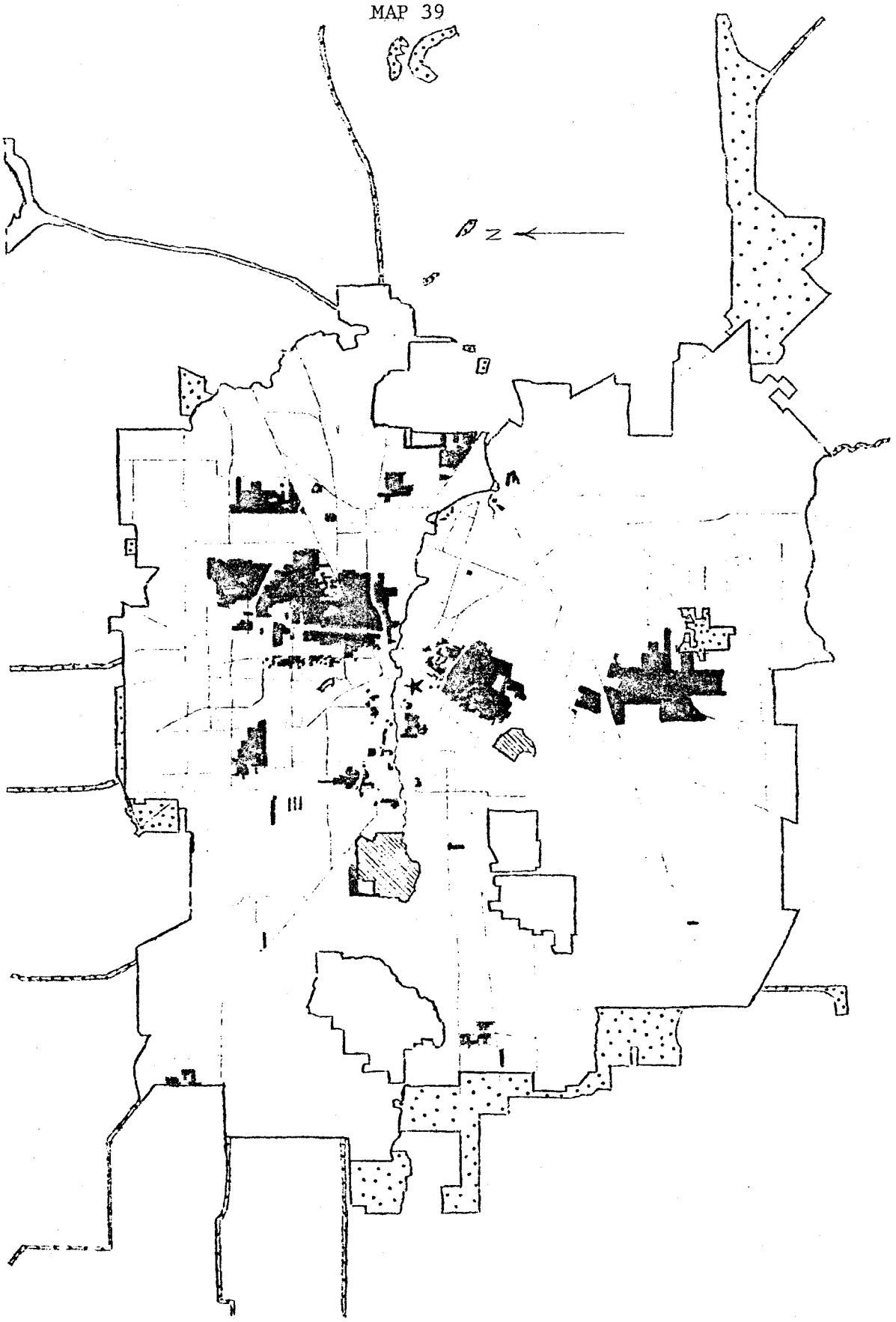
HOUSTON, 1940

MAP 38



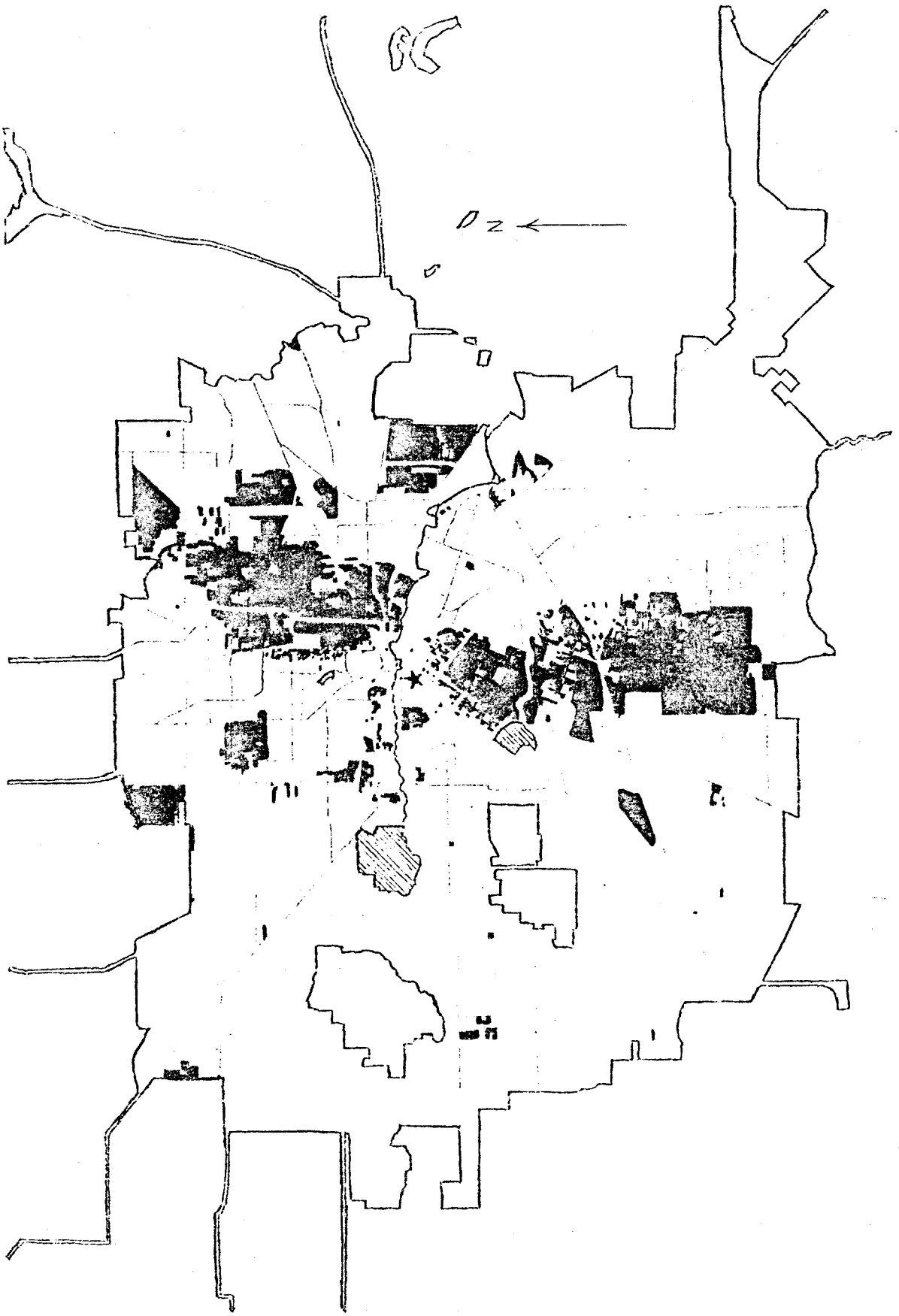
HOUSTON, 1950

MAP 39



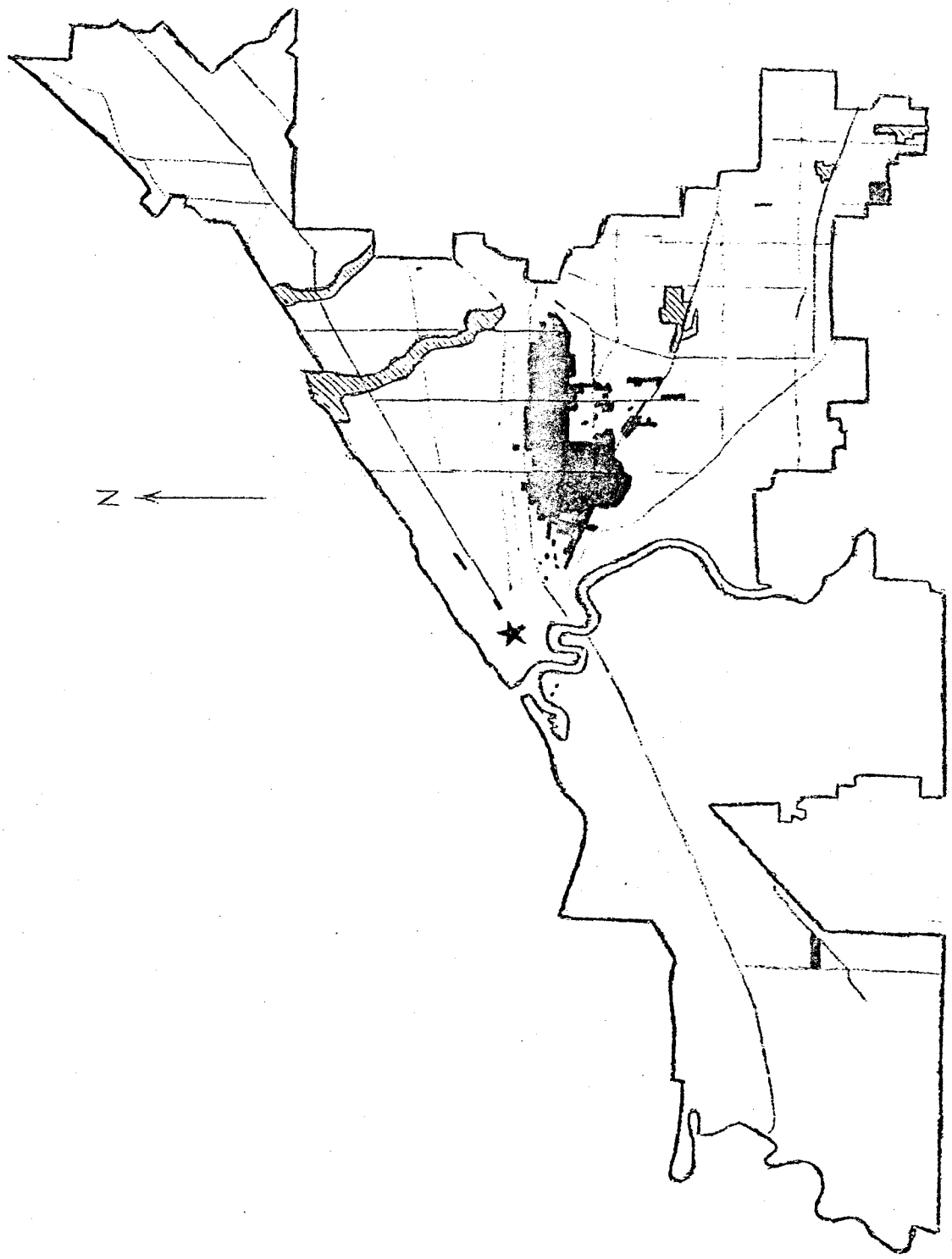
HOUSTON, 1960

MAP 40



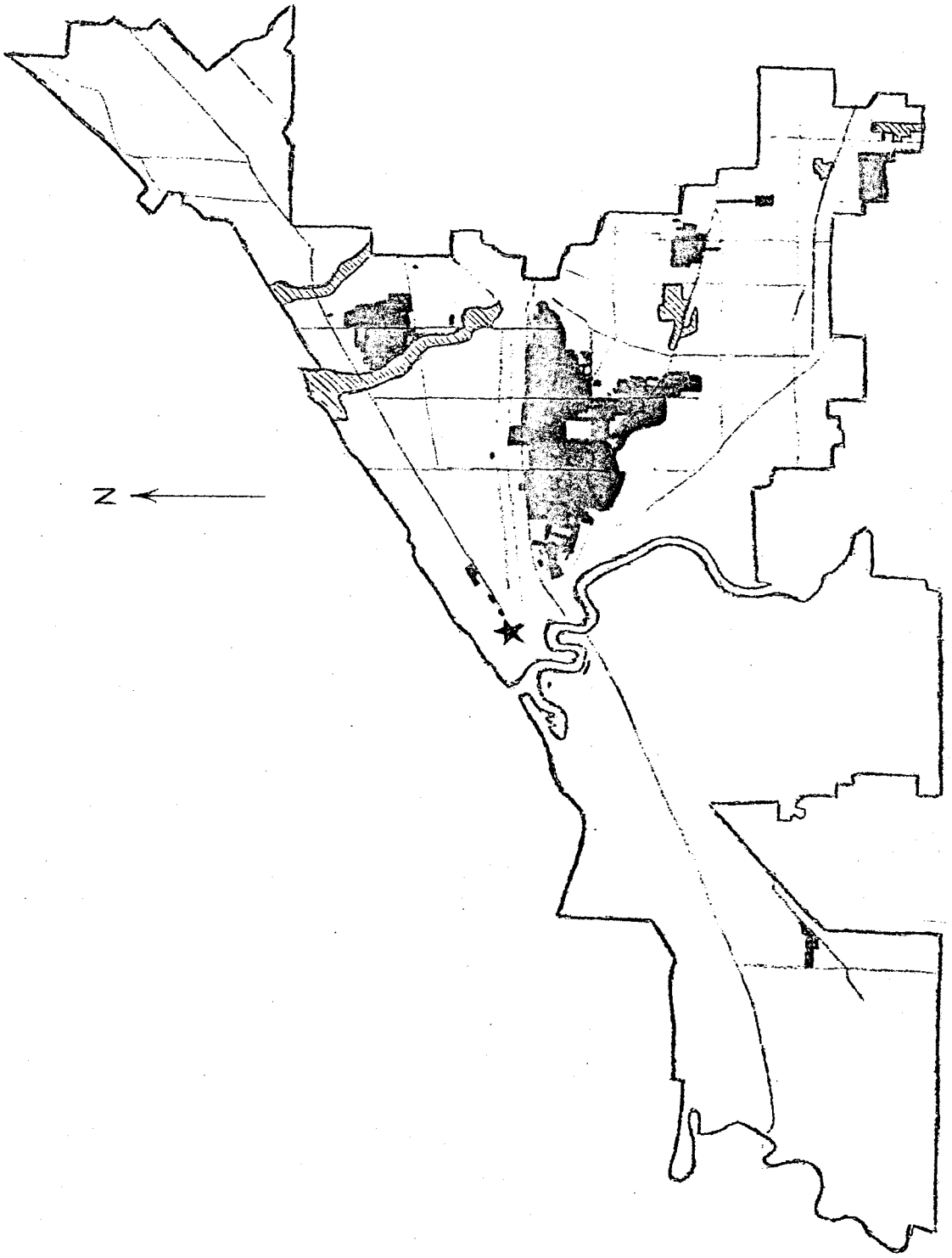
HOUSTON, 1970

MAP 41



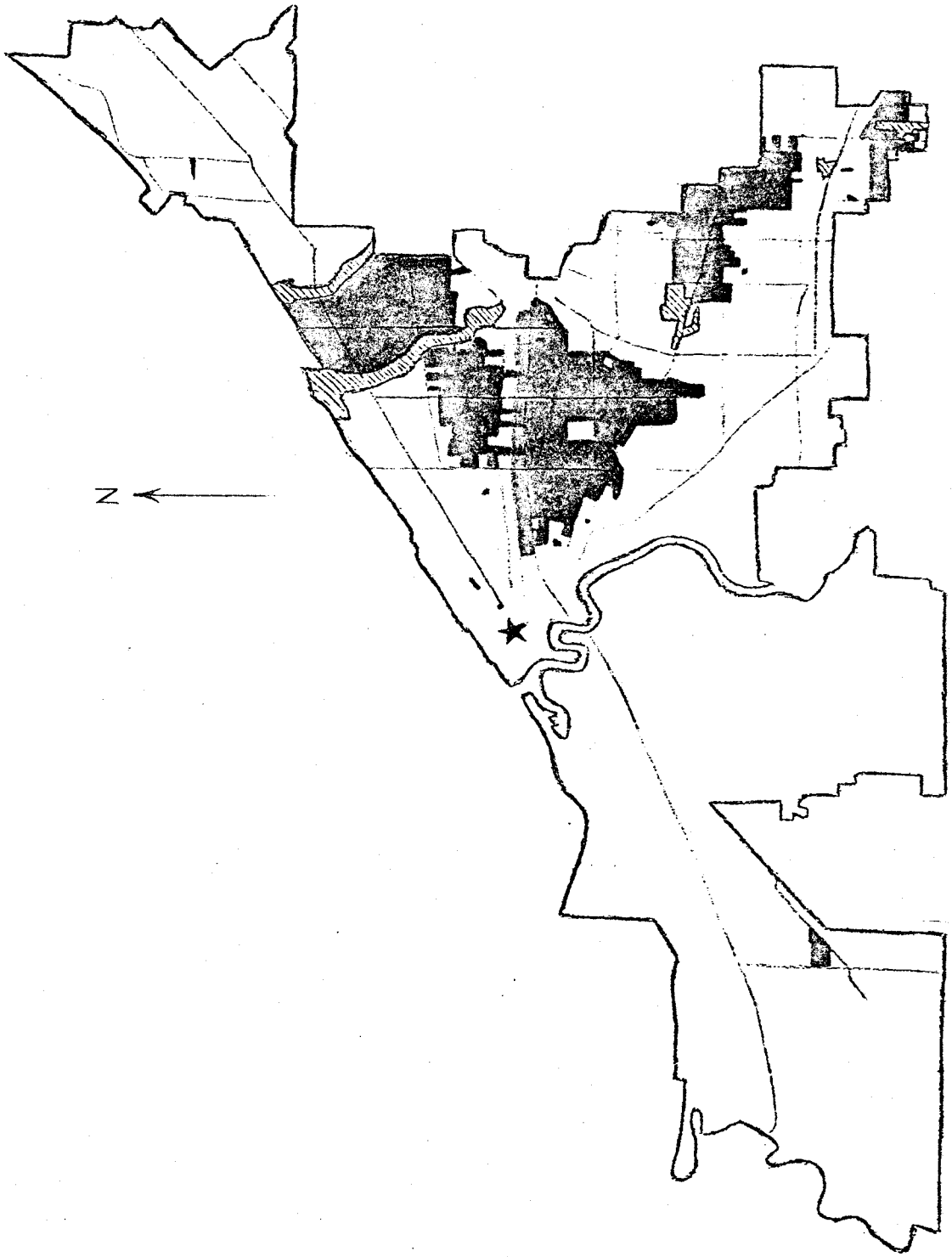
CLEVELAND, 1940

MAP 42



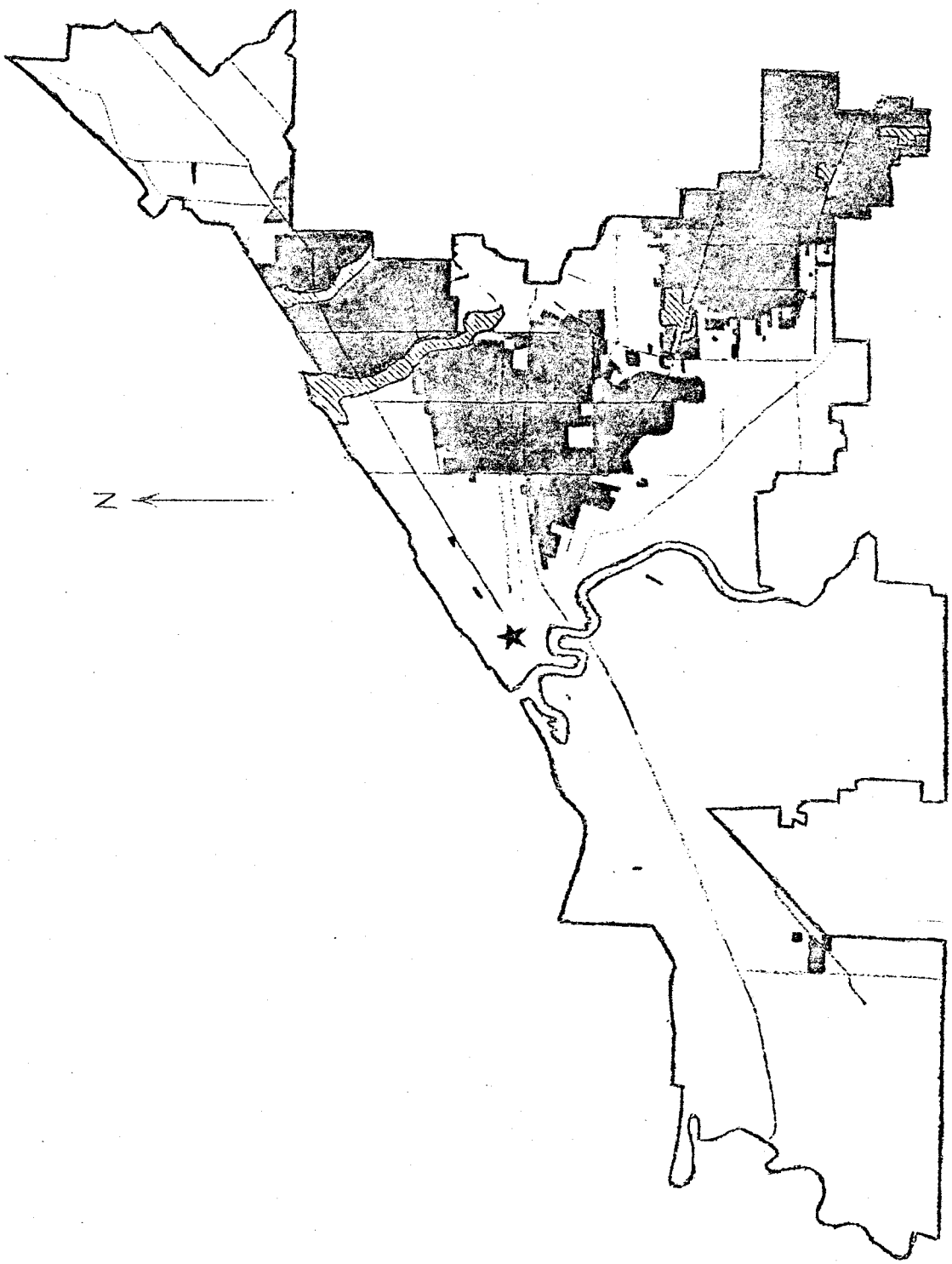
CLEVELAND, 1950

MAP 43



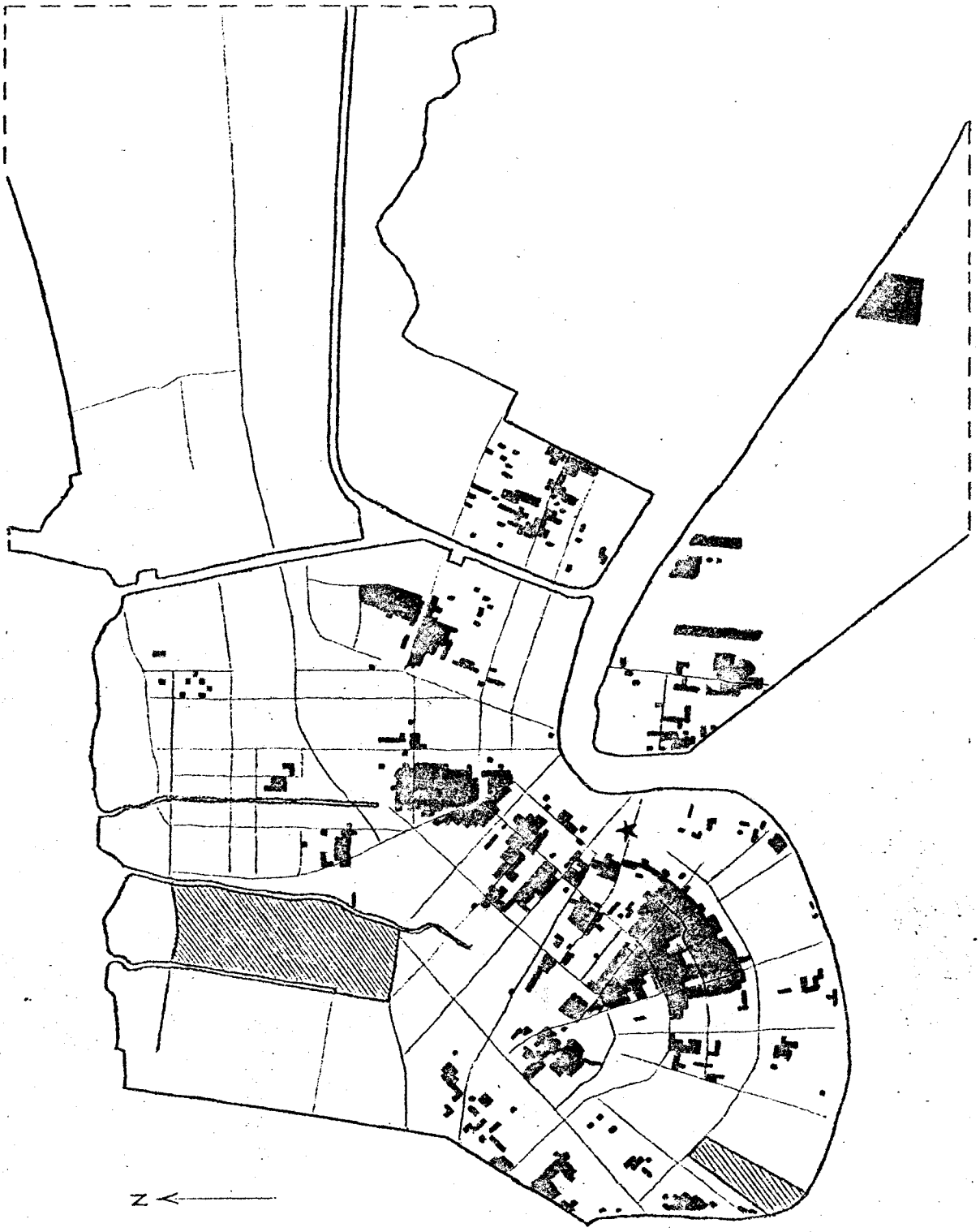
CLEVELAND, 1960

MAP 44



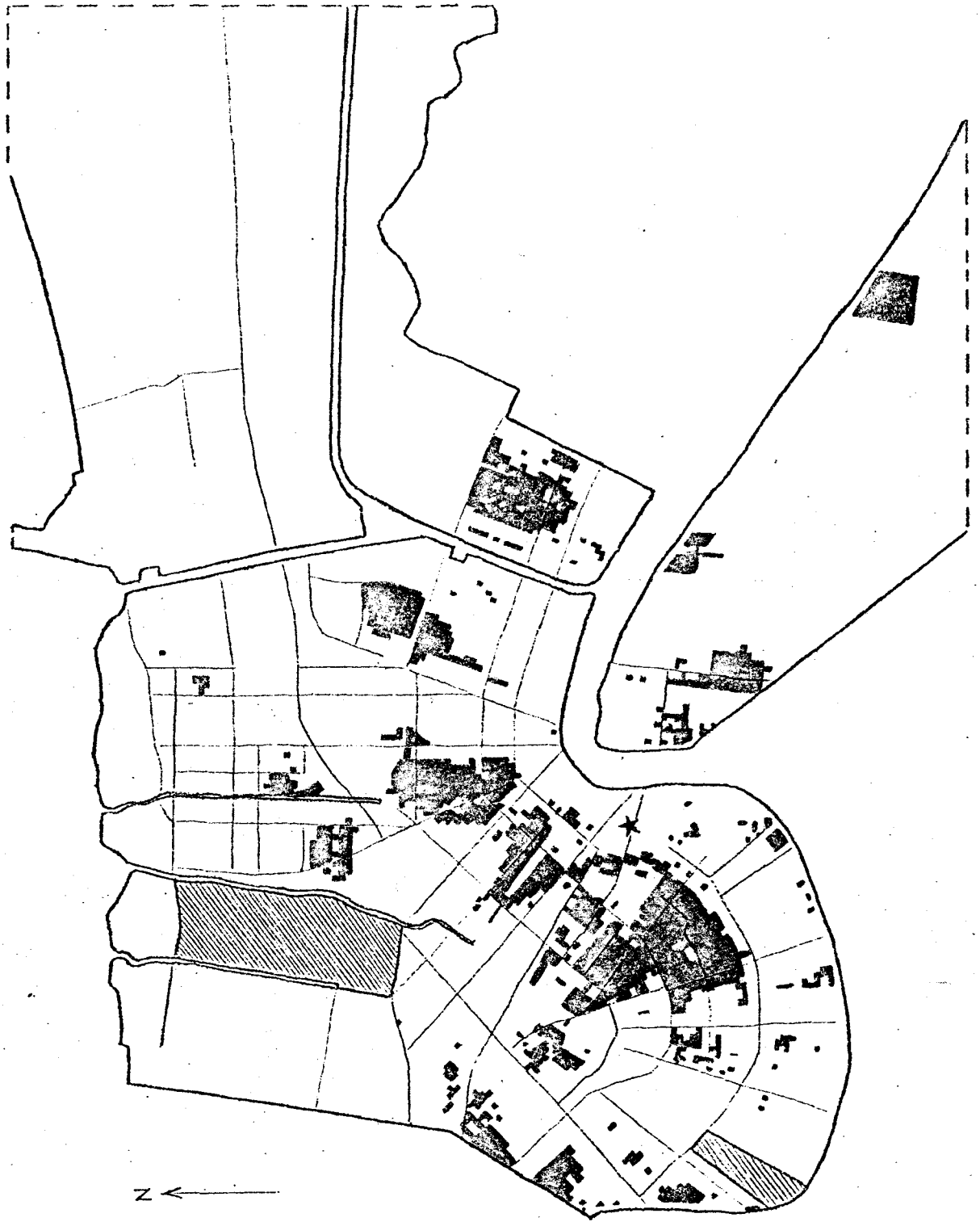
CLEVELAND, 1970

MAP 45



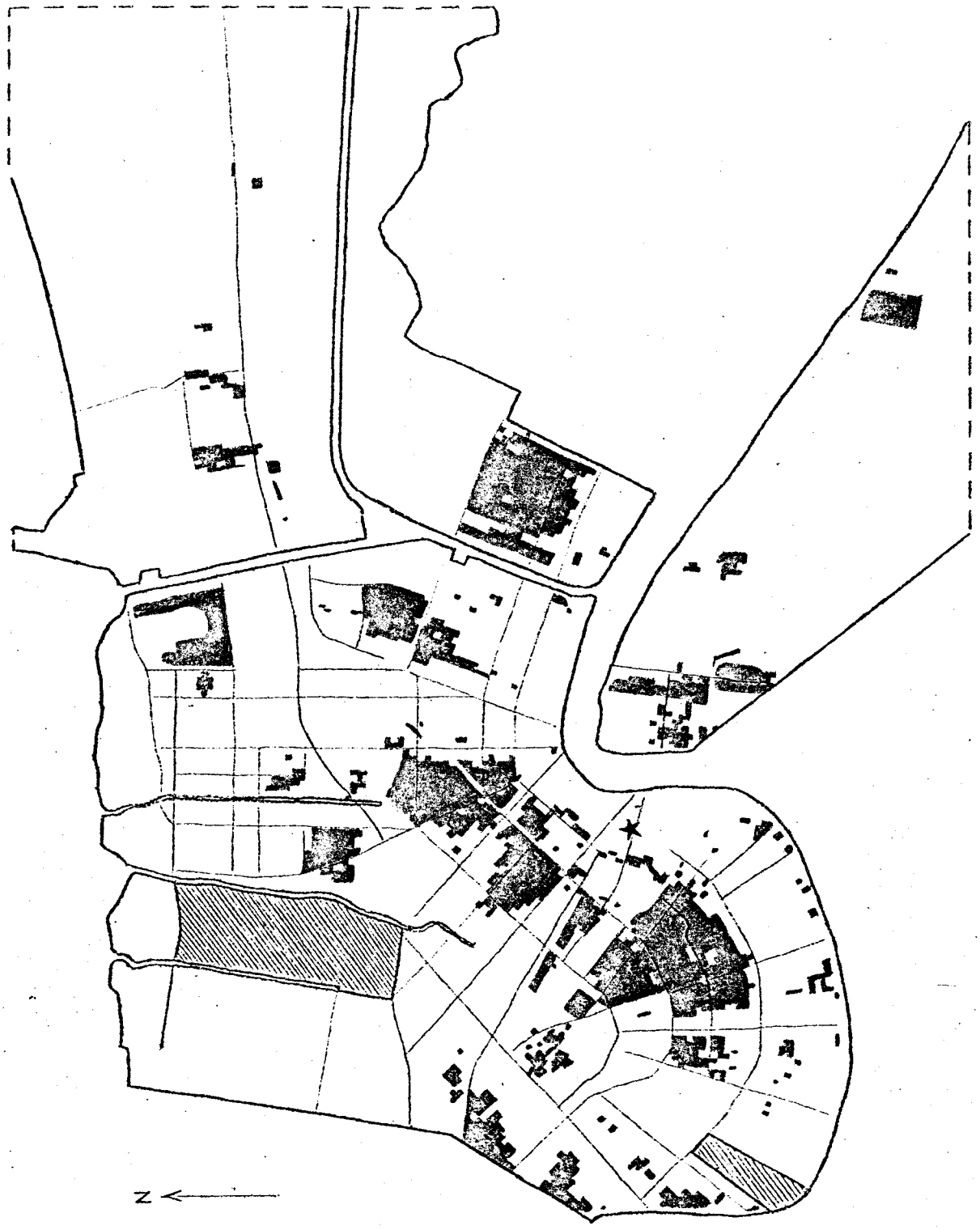
NEW ORLEANS, 1940

MAP 46



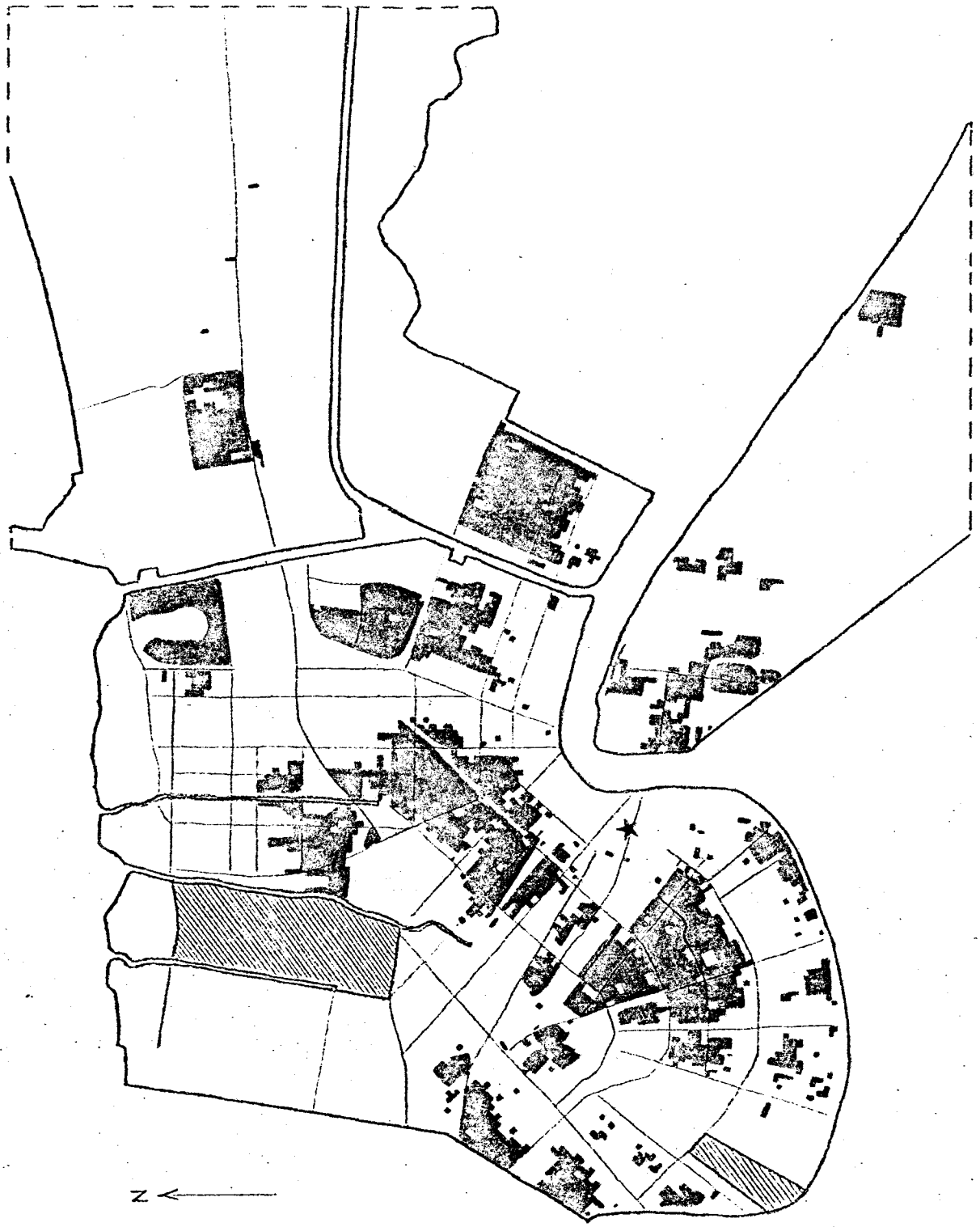
NEW ORLEANS, 1950

MAP 47



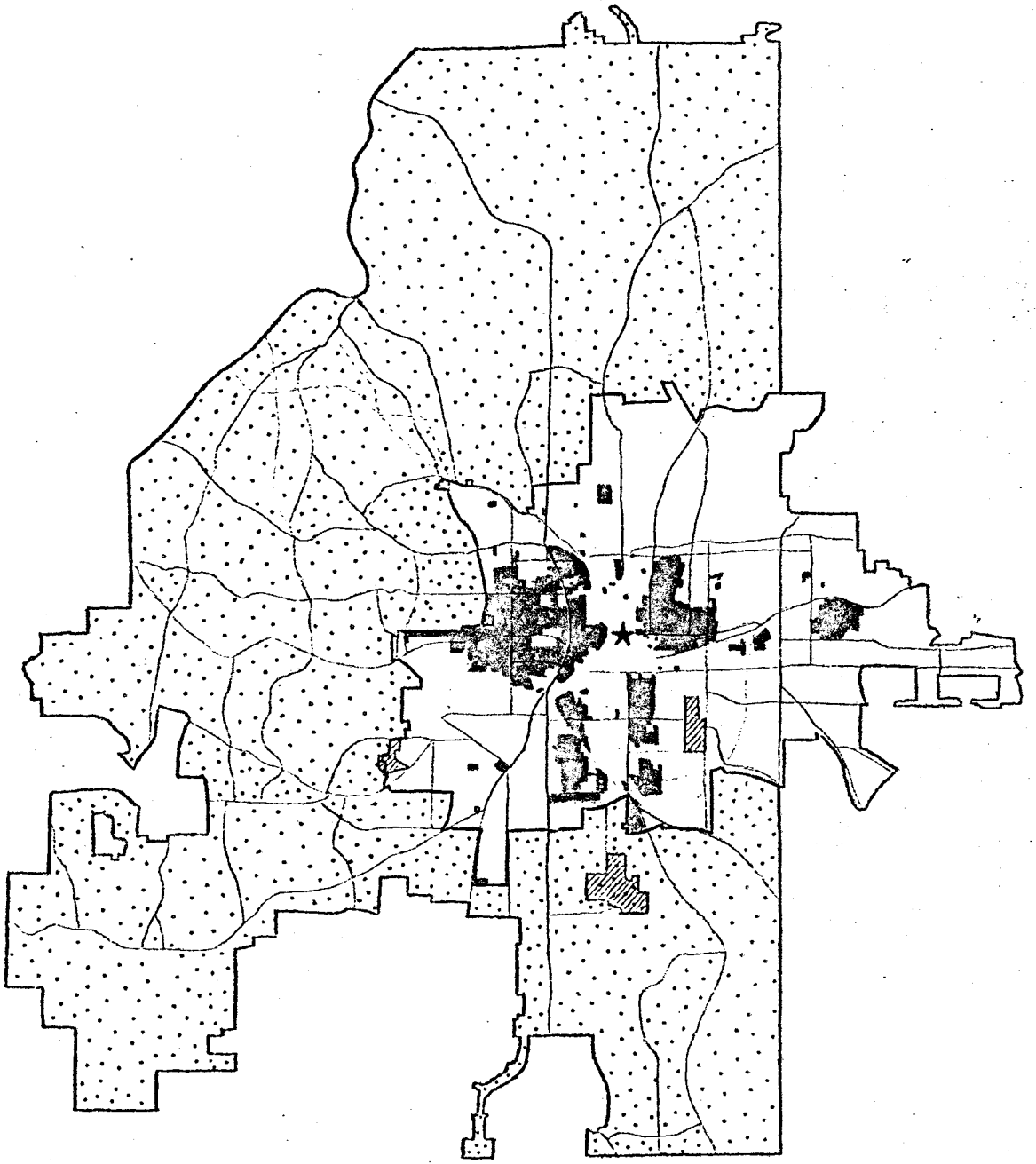
NEW ORLEANS, 1960

MAP 48



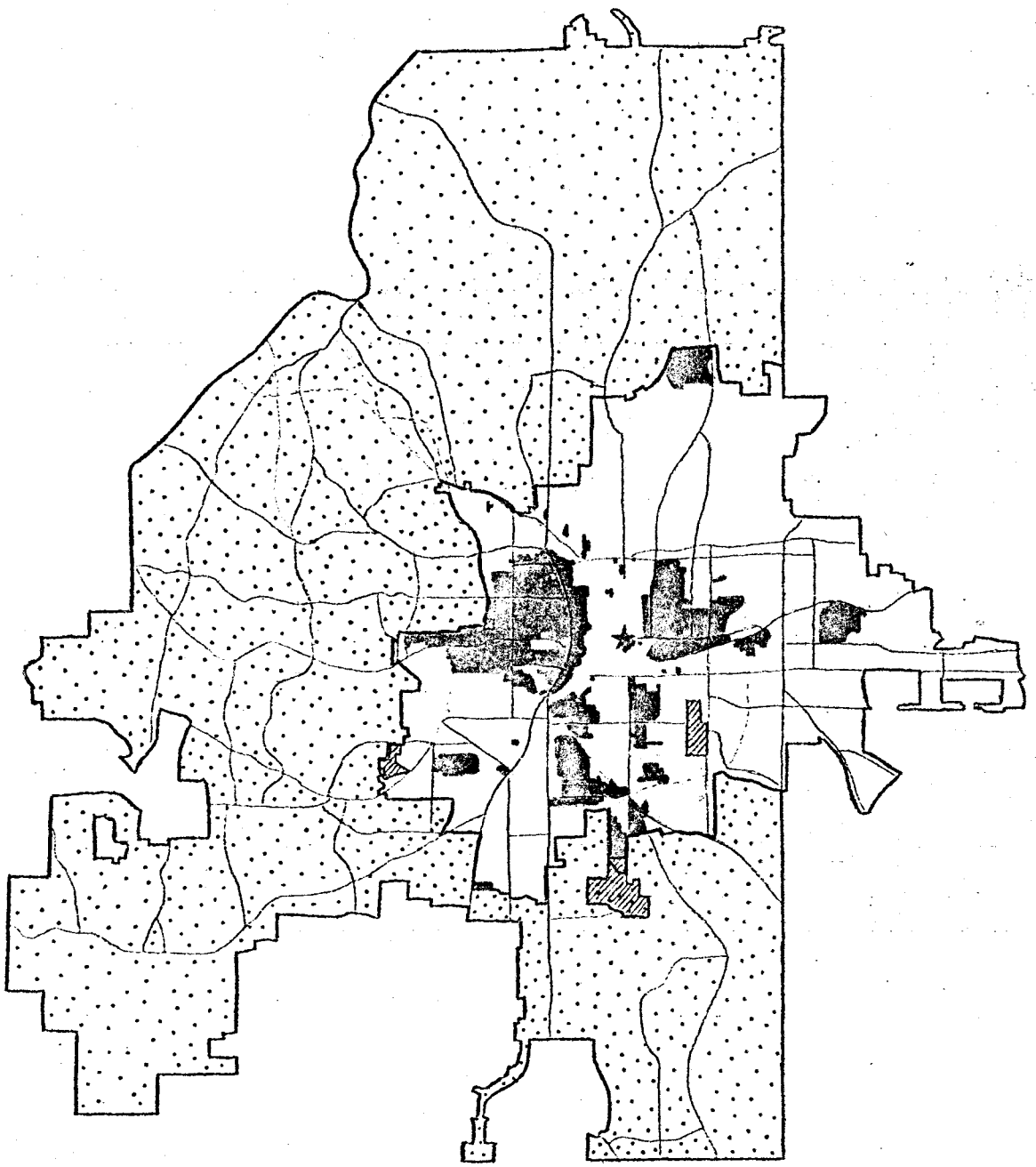
NEW ORLEANS, 1970

MAP 49



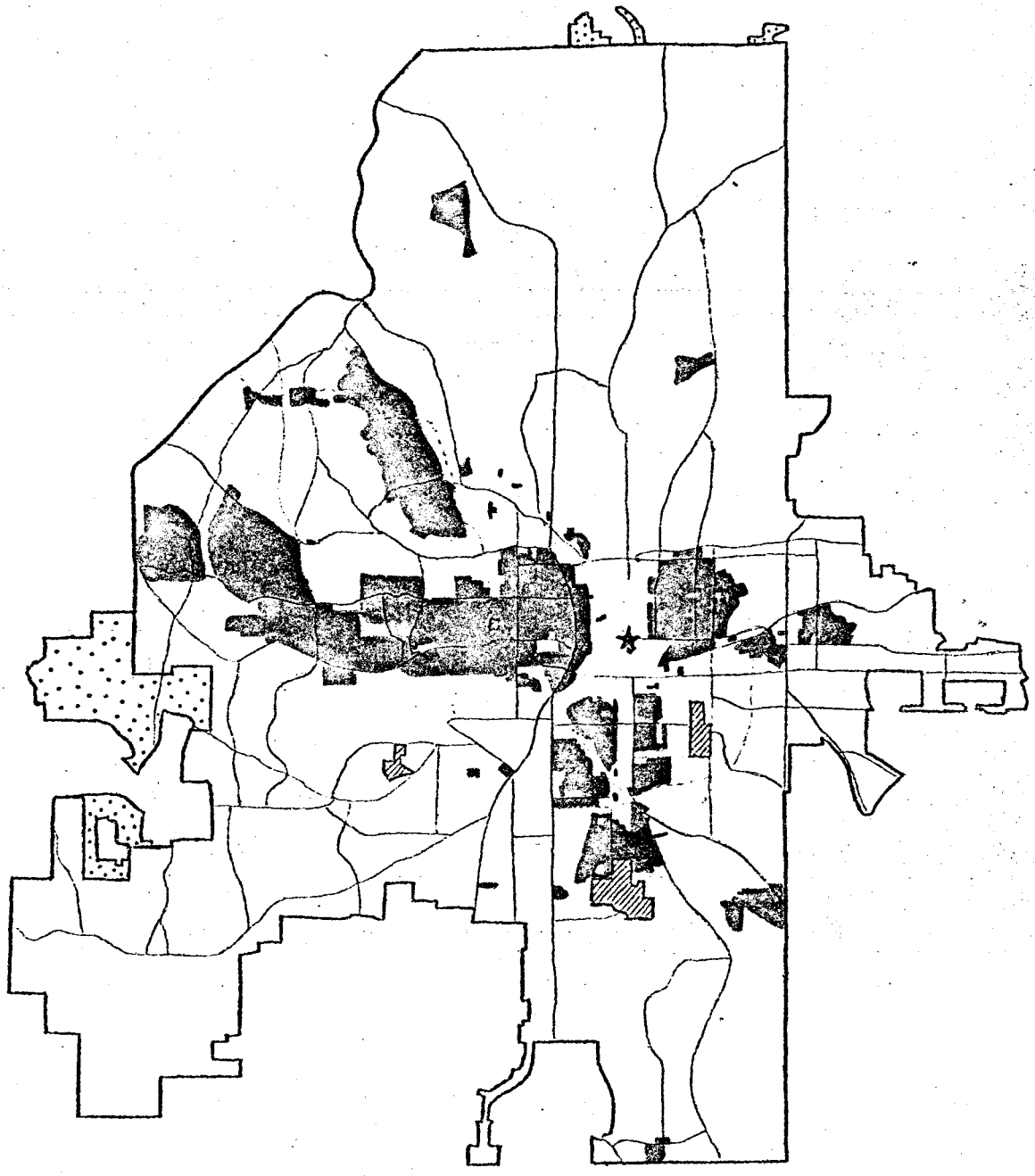
ATLANTA, 1940

MAP 50



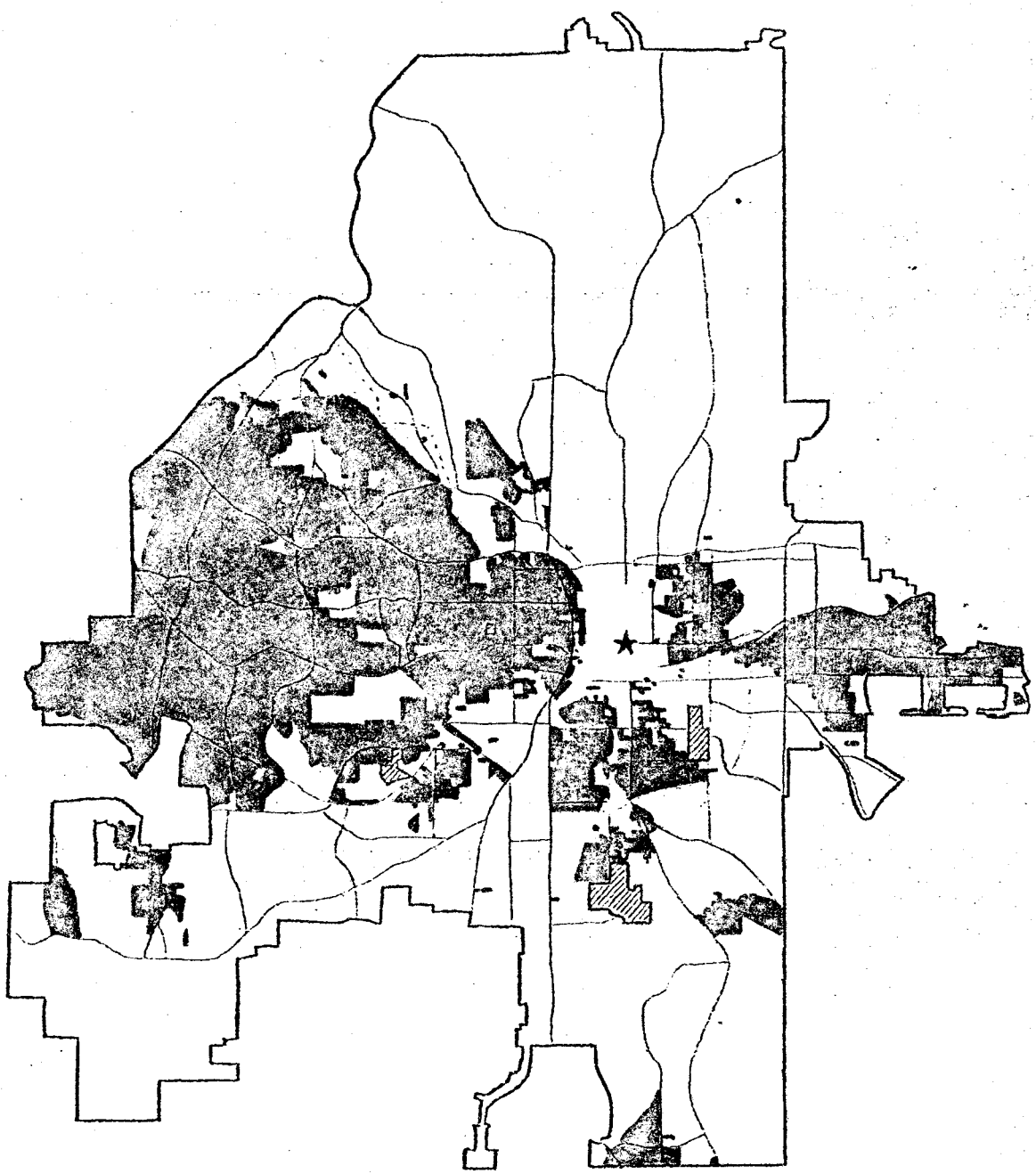
ATLANTA, 1950

MAP 51



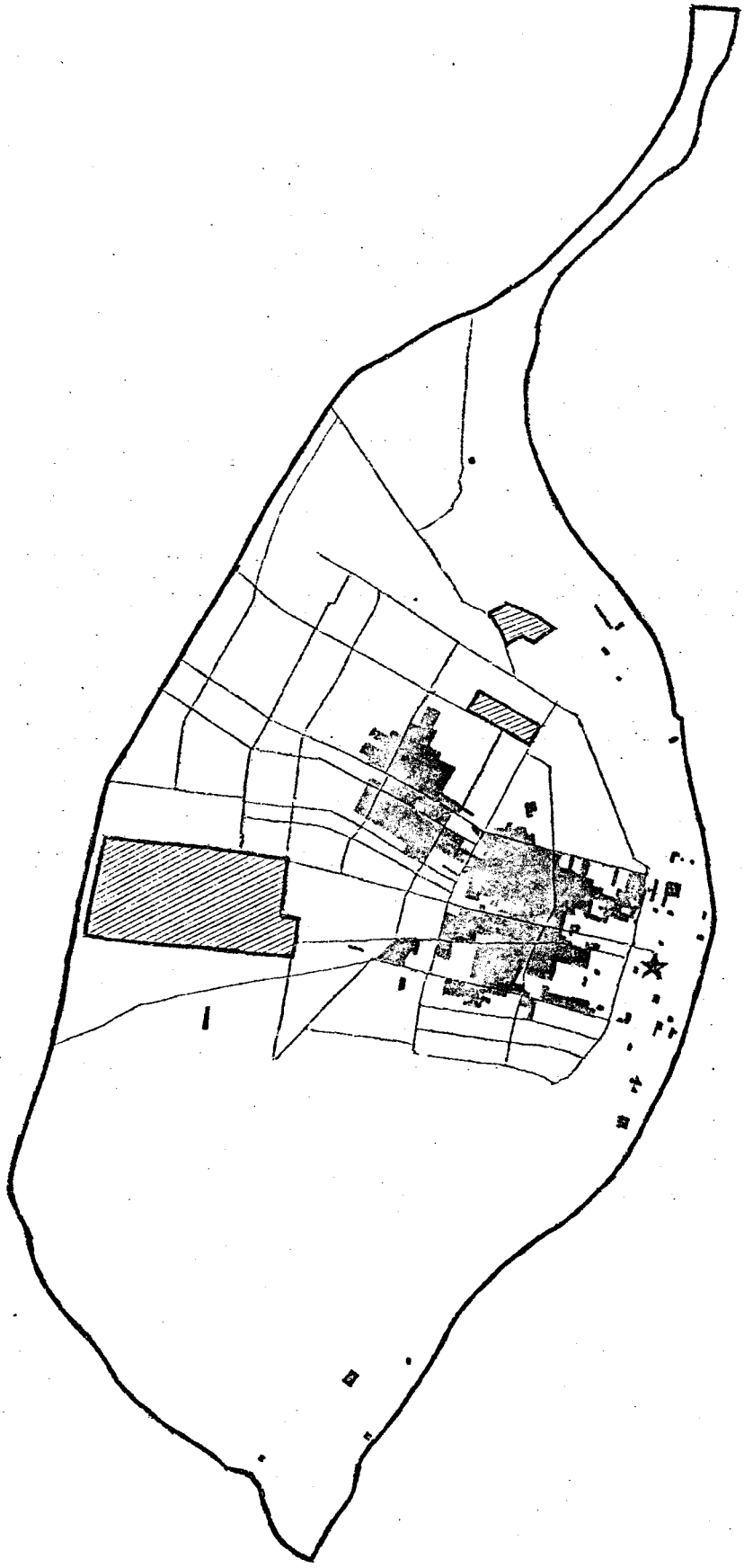
ATLANTA, 1960

MAP 52



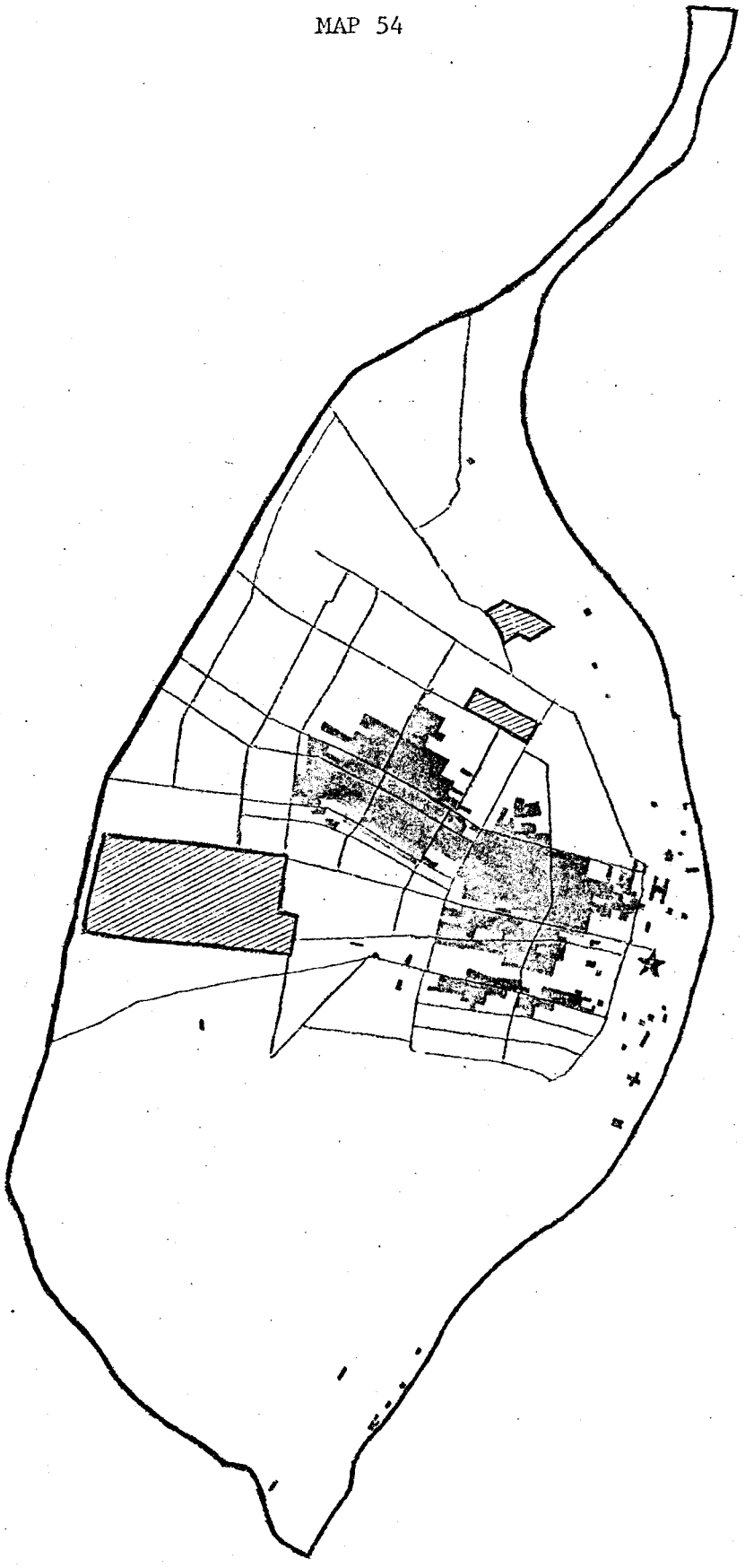
ATLANTA, 1970

MAP 53



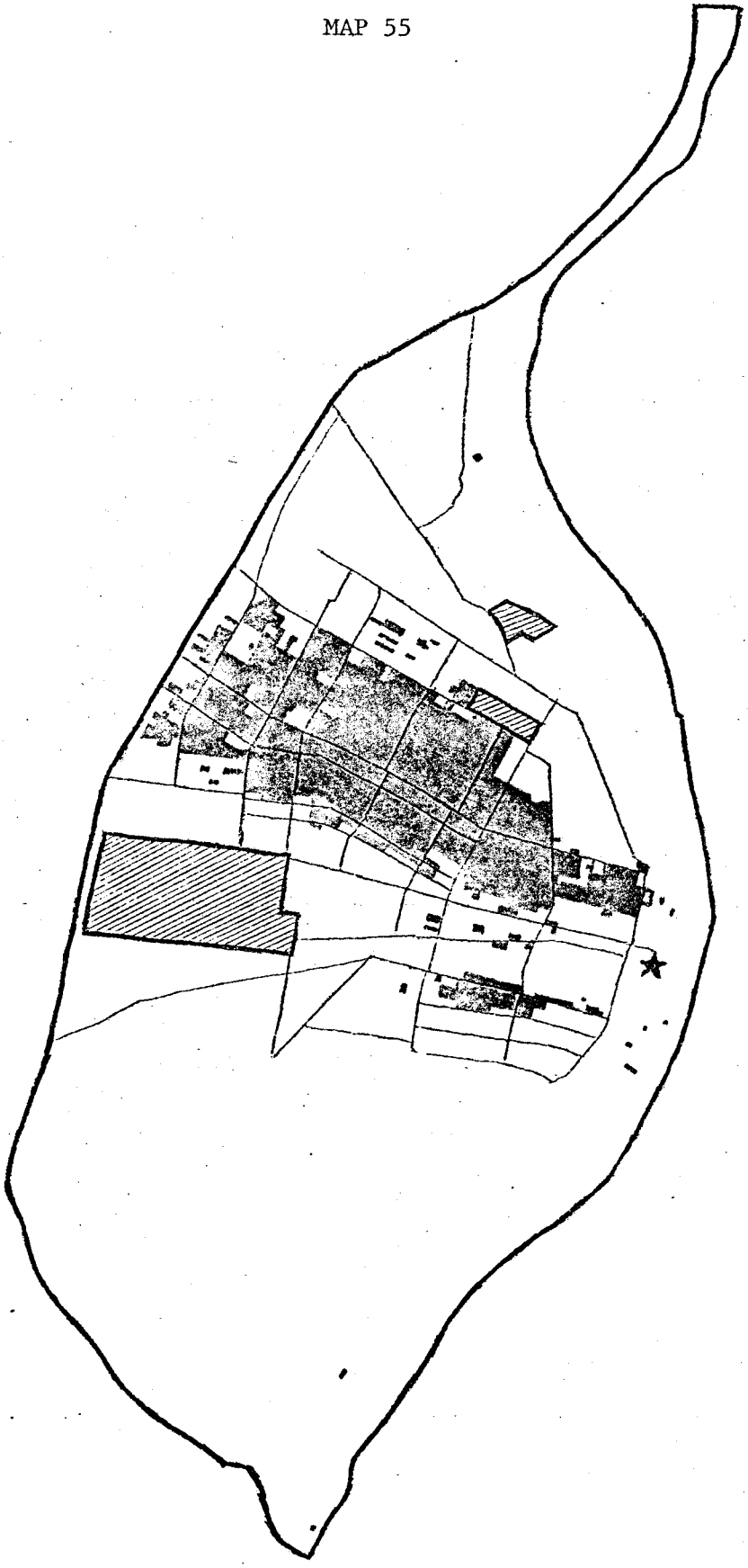
ST. LOUIS 1940

MAP 54



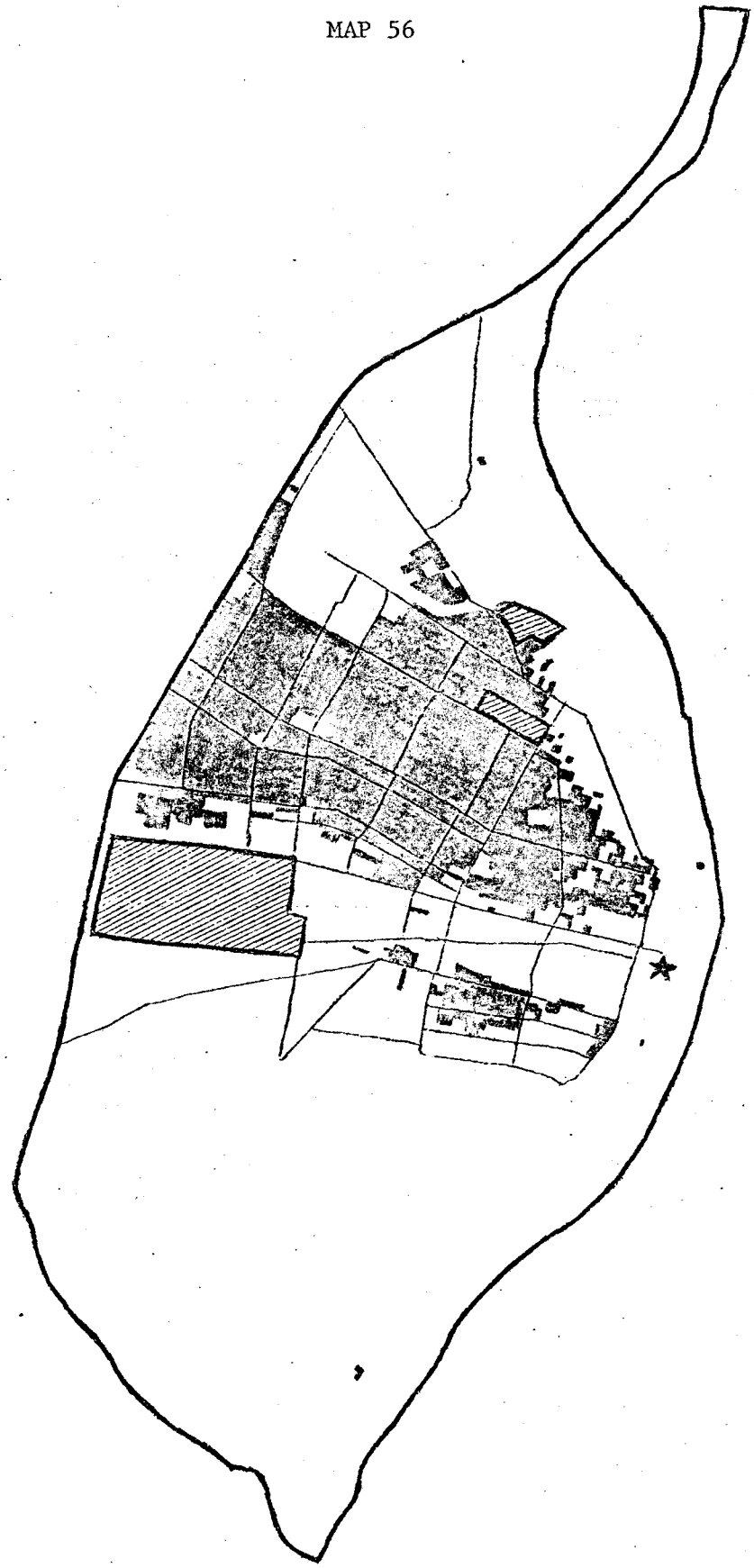
ST. LOUIS, 1950

MAP 55



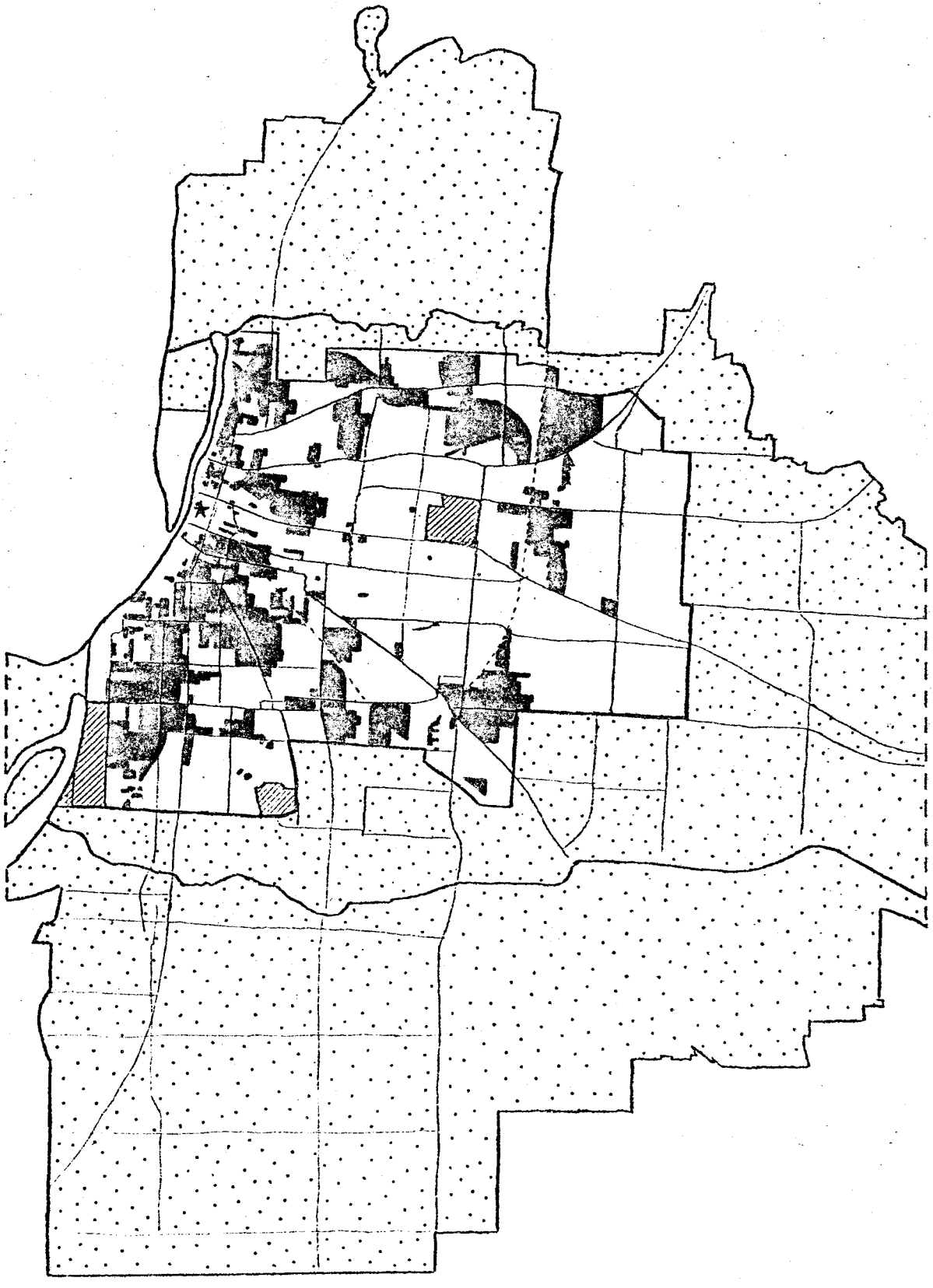
ST. LOUIS 1960

MAP 56



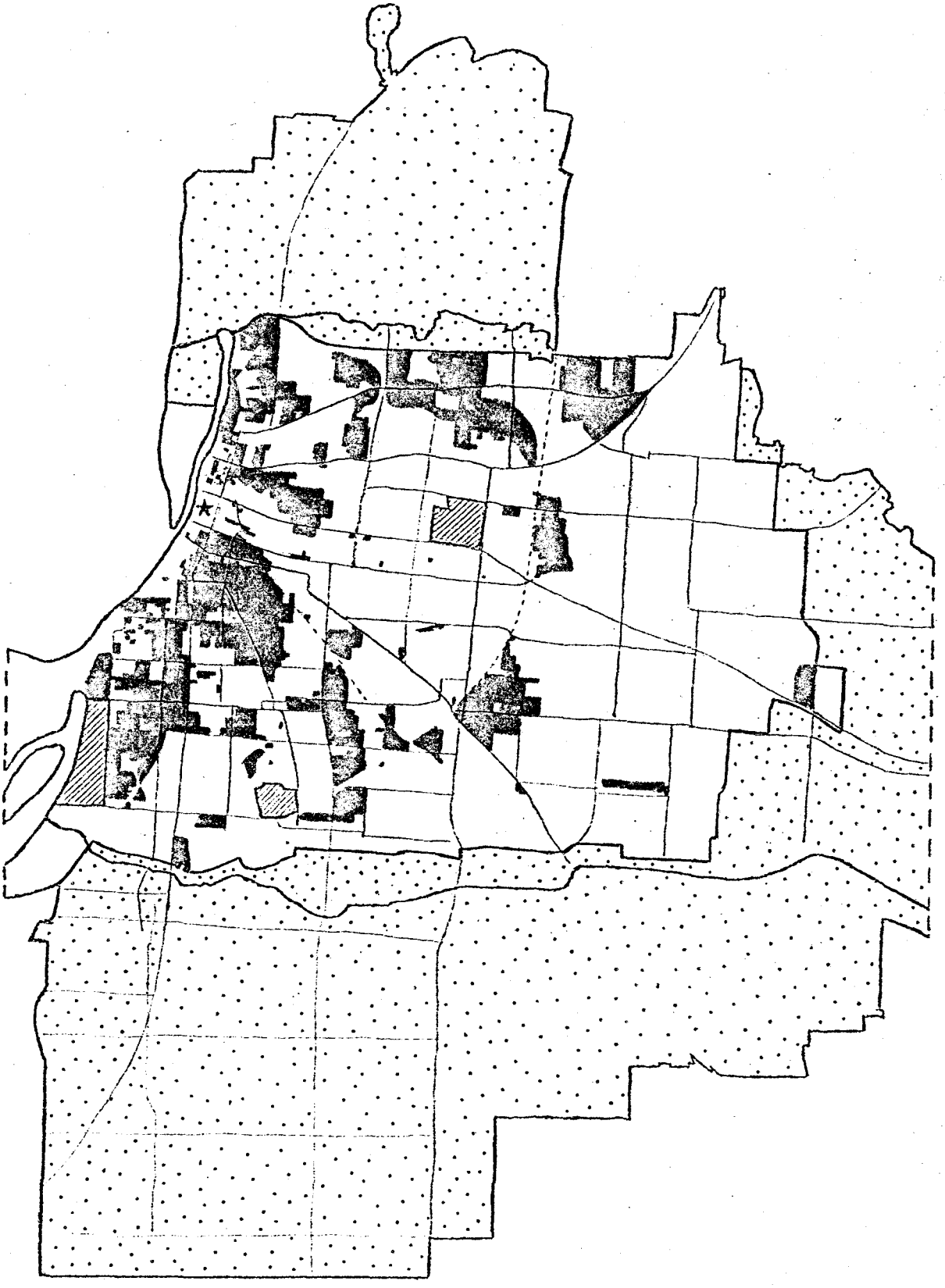
ST. LOUIS, 1970

MAP 57



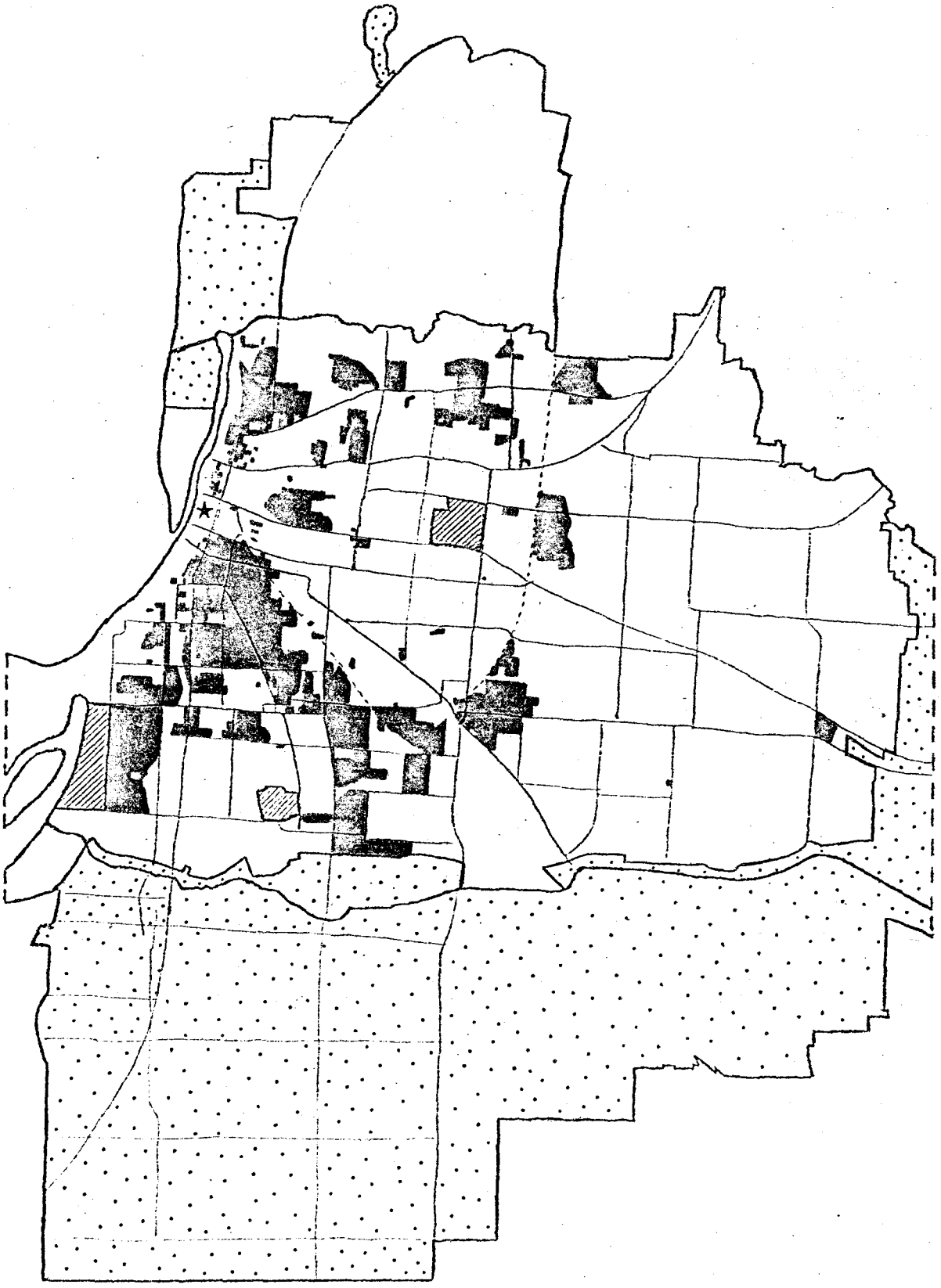
MEMPHIS, 1940

MAP 58



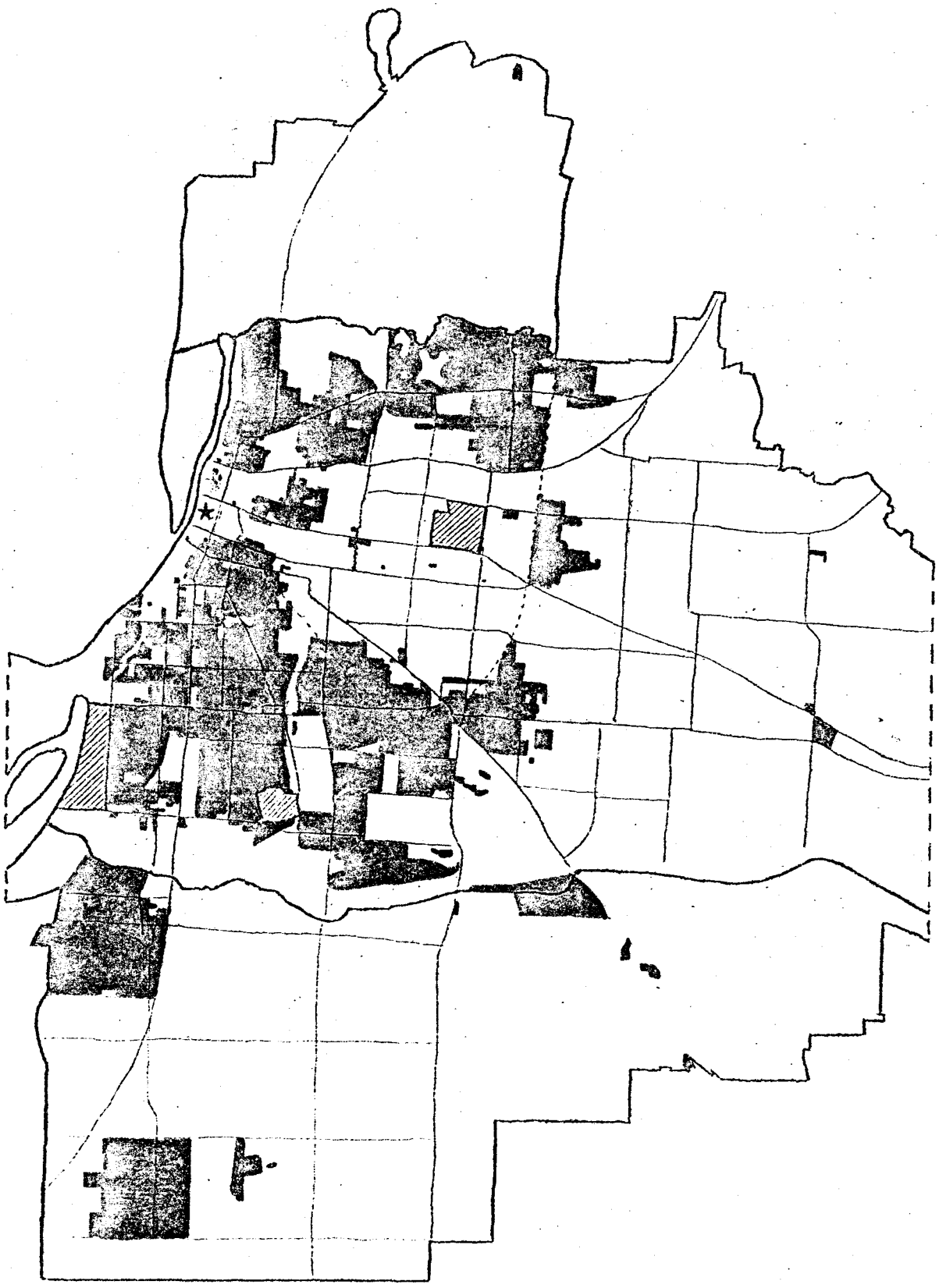
MEMPHIS, 1950

MAP 59



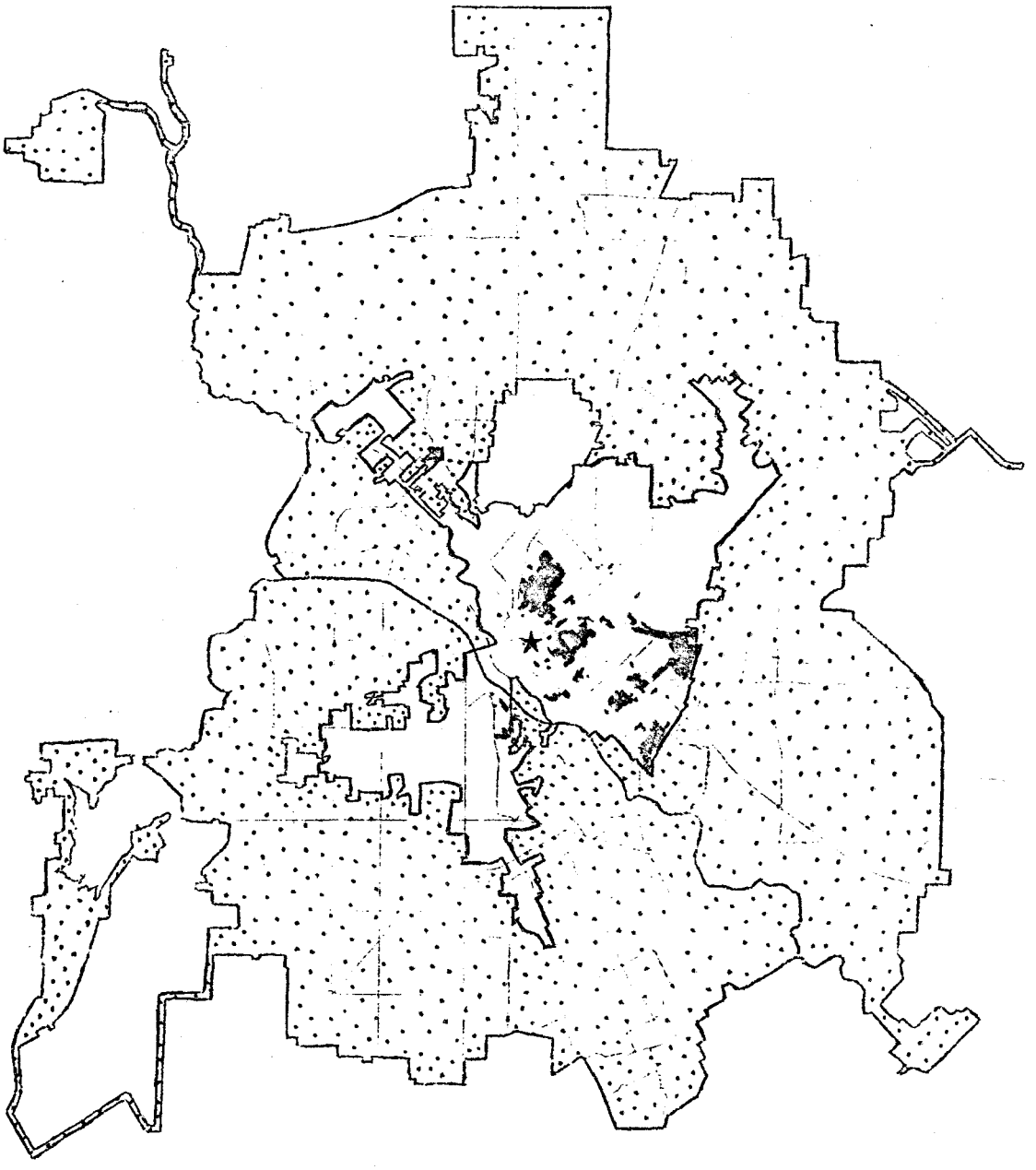
MEMPHIS, 1960

MAP 60



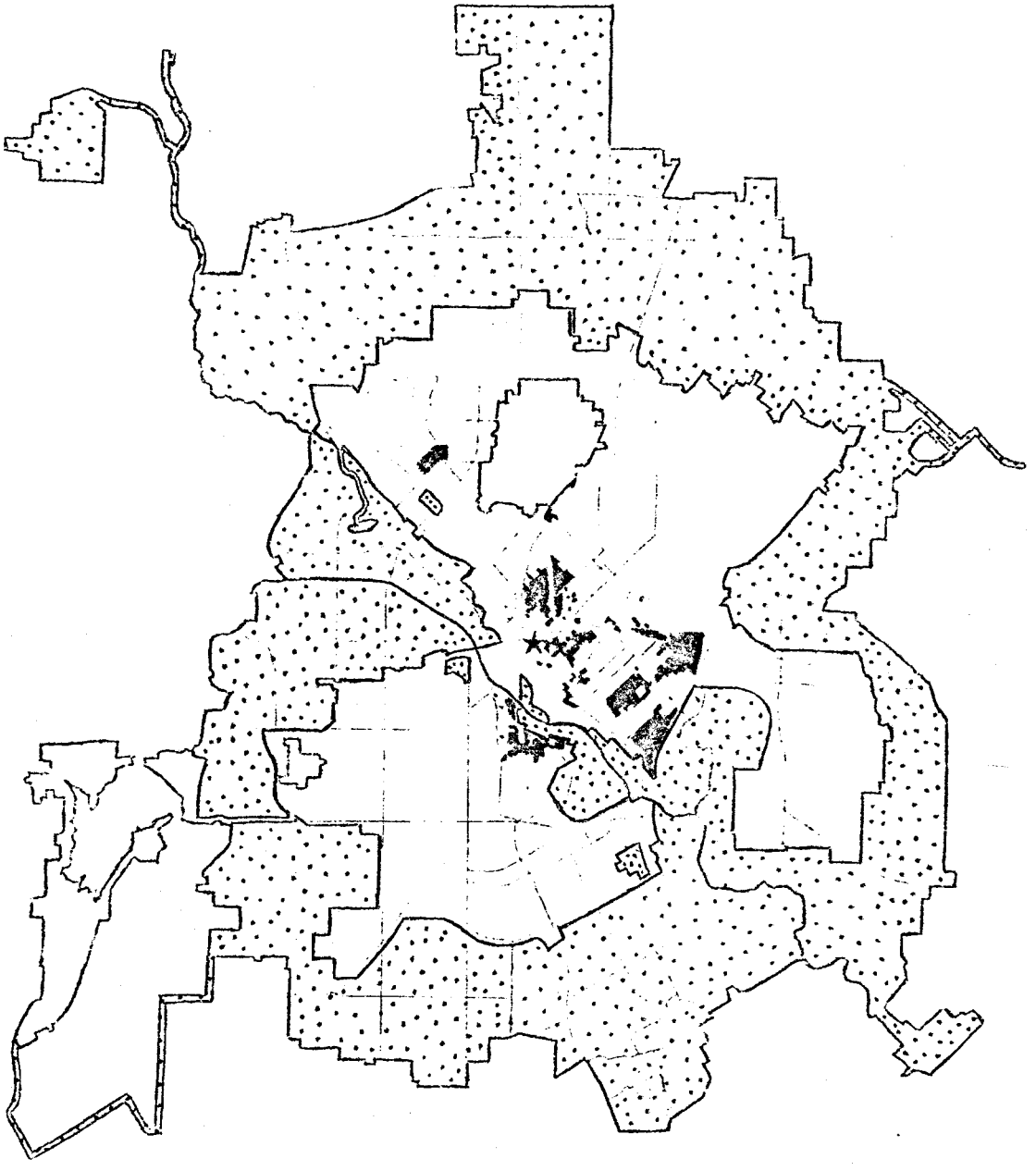
MEMPHIS, 1970

MAP 61



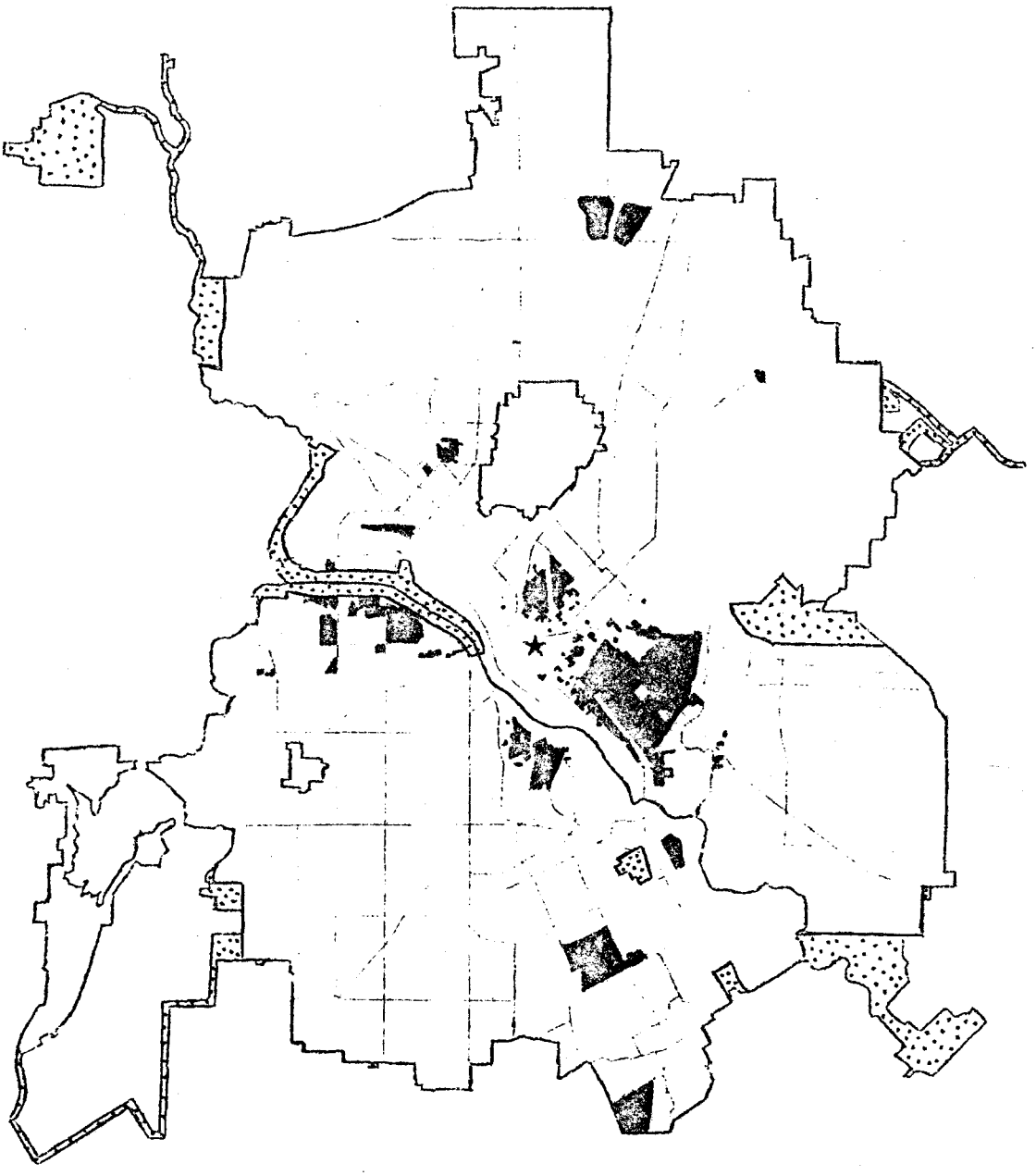
DALLAS, 1940

MAP 62



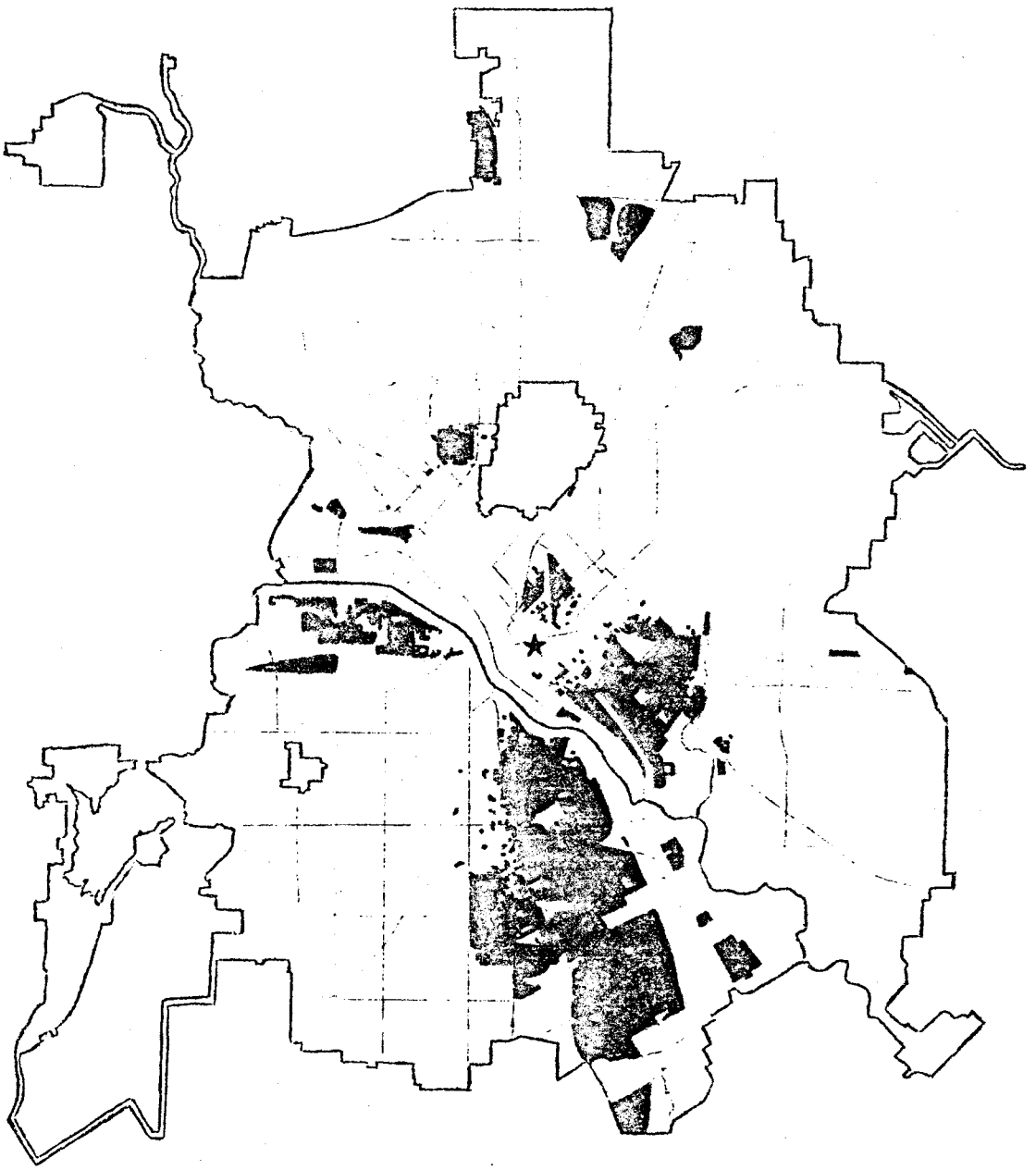
DALLAS, 1950

MAP 63



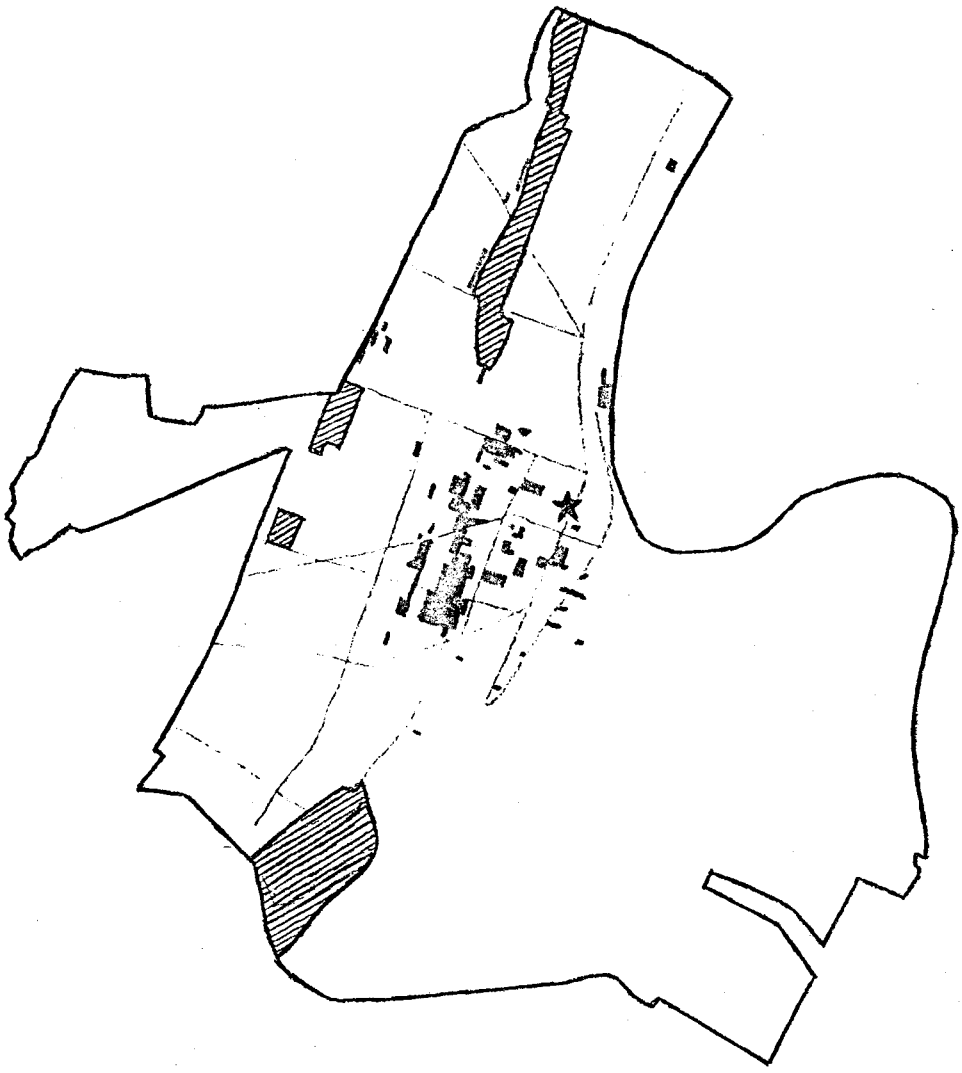
DALLAS, 1960

MAP 64



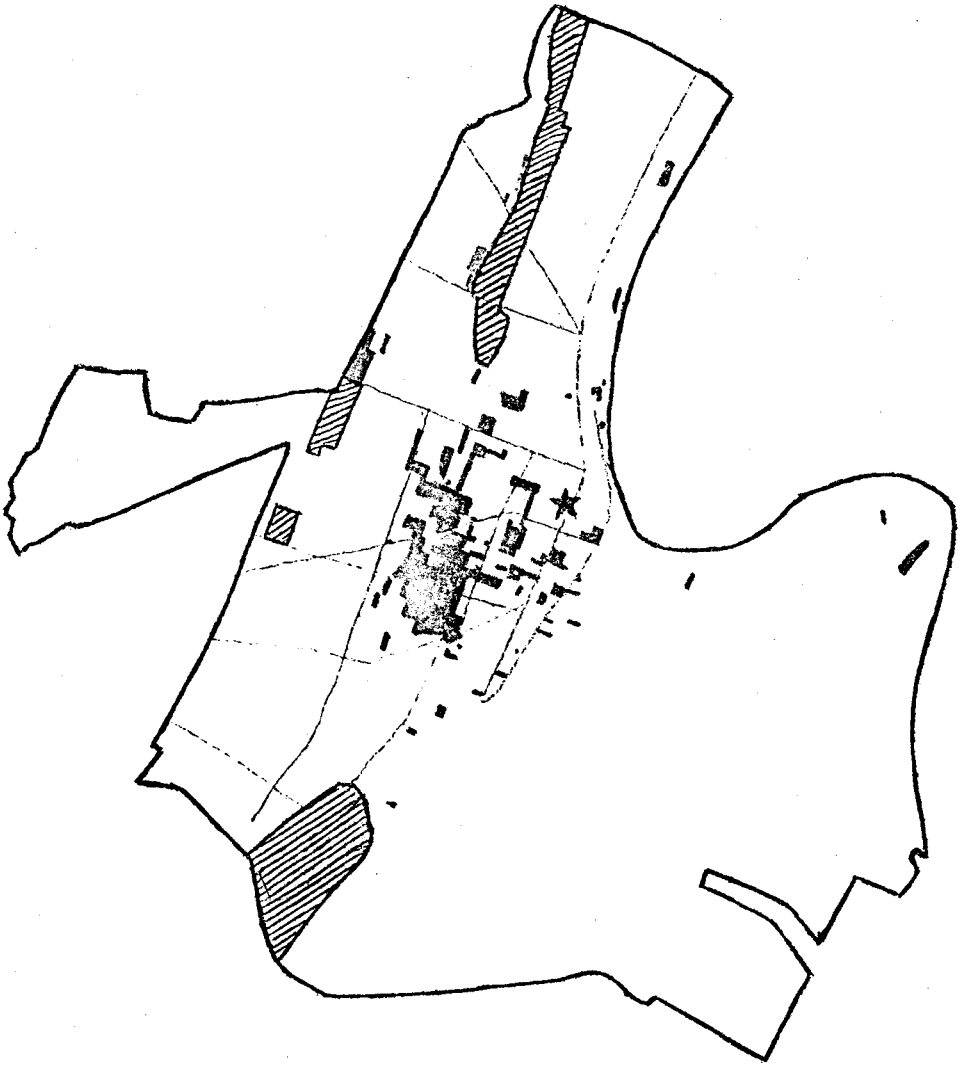
DALLAS, 1970

MAP 65



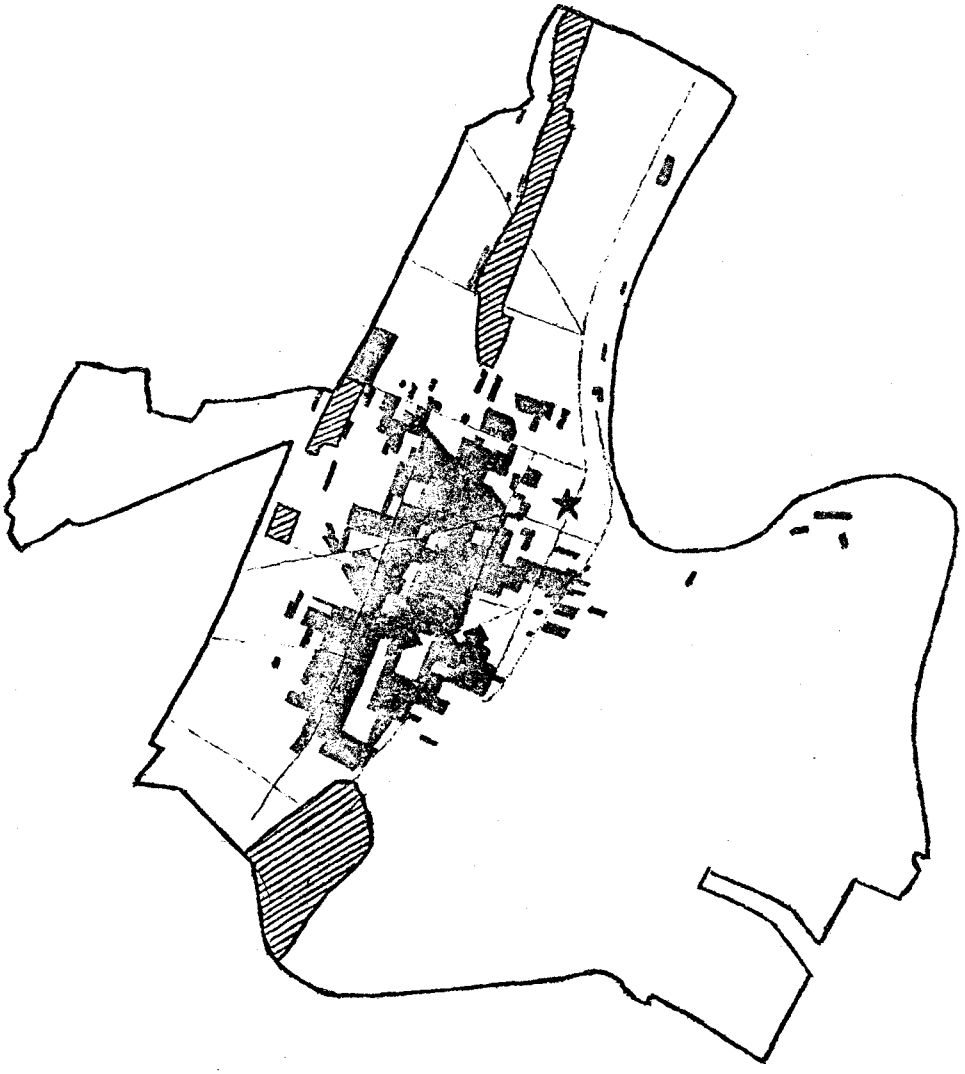
NEWARK, 1940

MAP 66



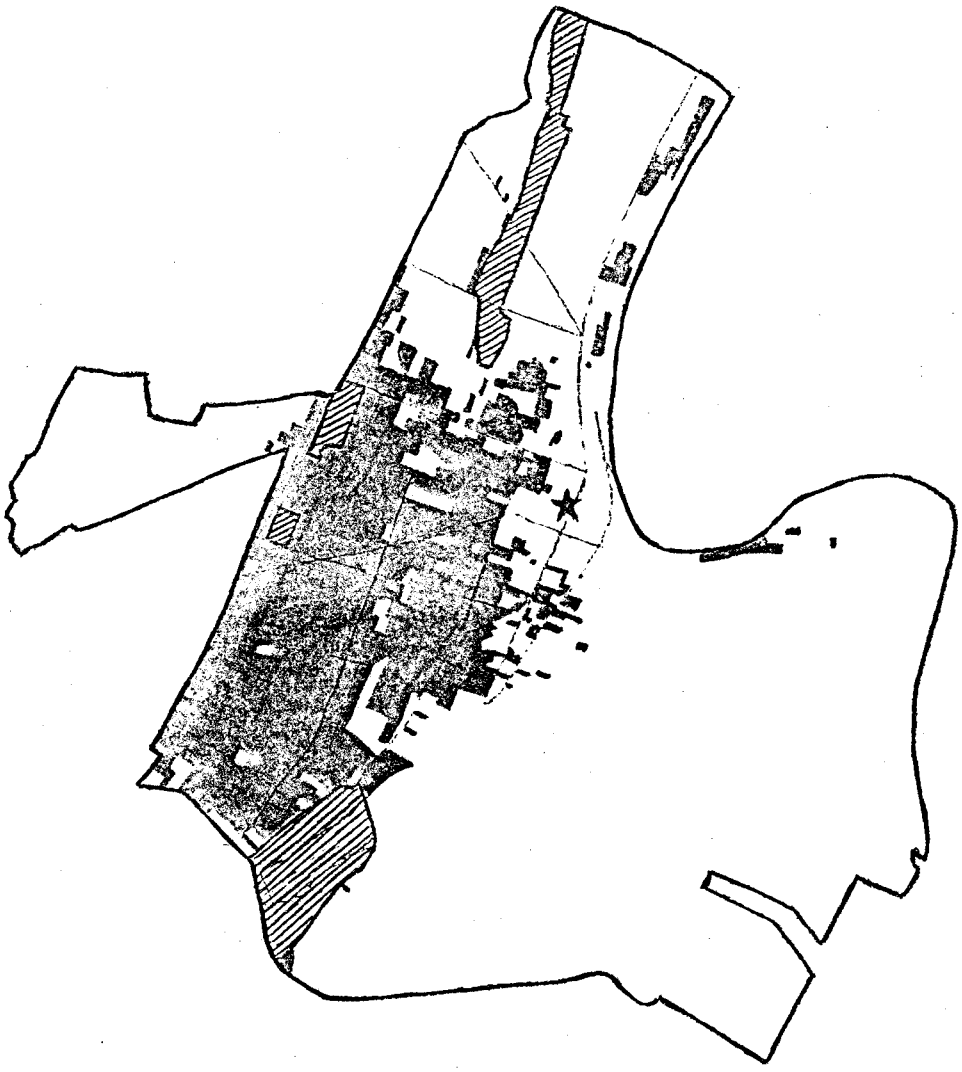
NEWARK, 1950

MAP 67



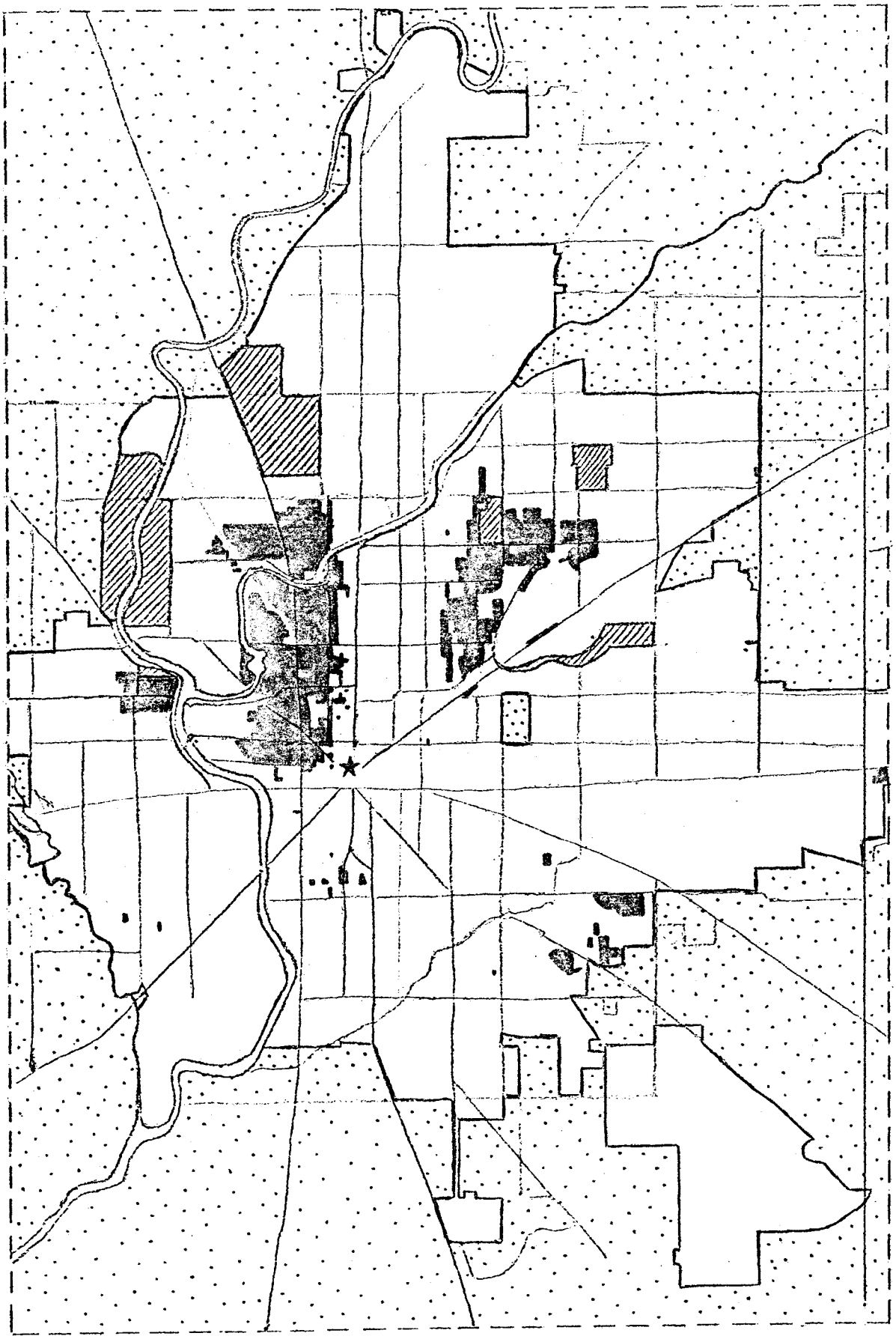
NEWARK, 1960

MAP 68



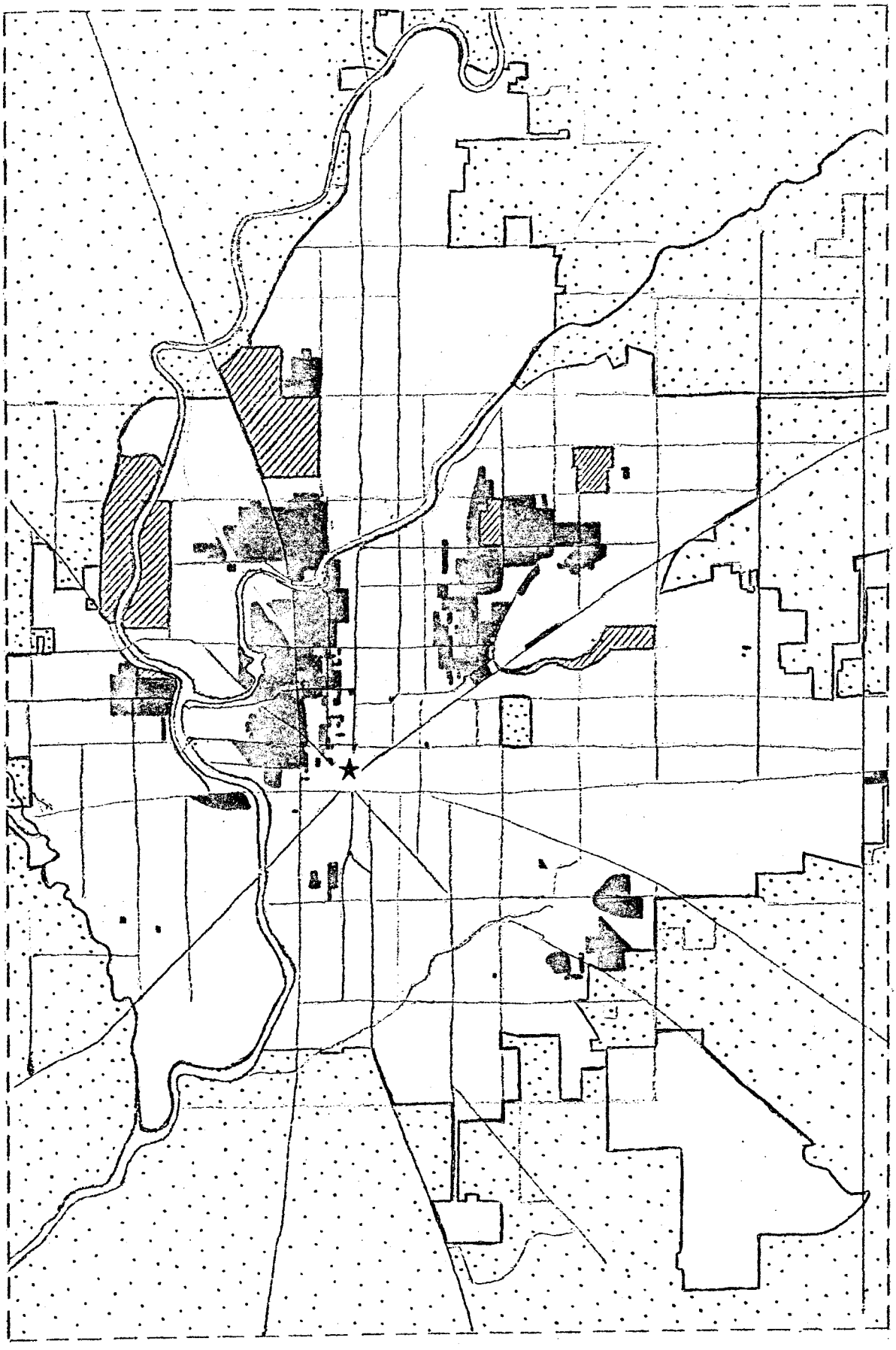
NEWARK, 1970

MAP 69



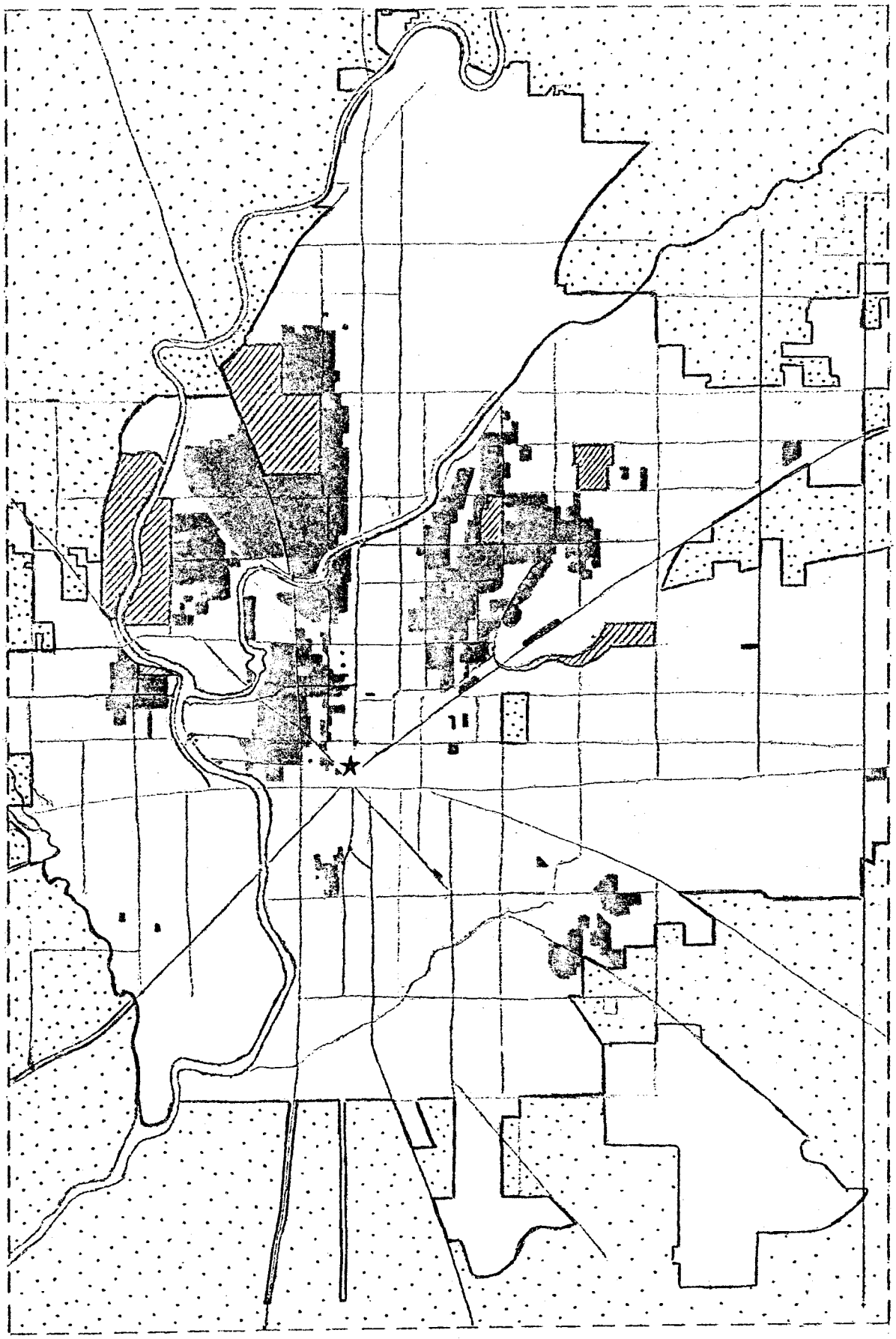
INDIANAPOLIS, 1940

MAP 70



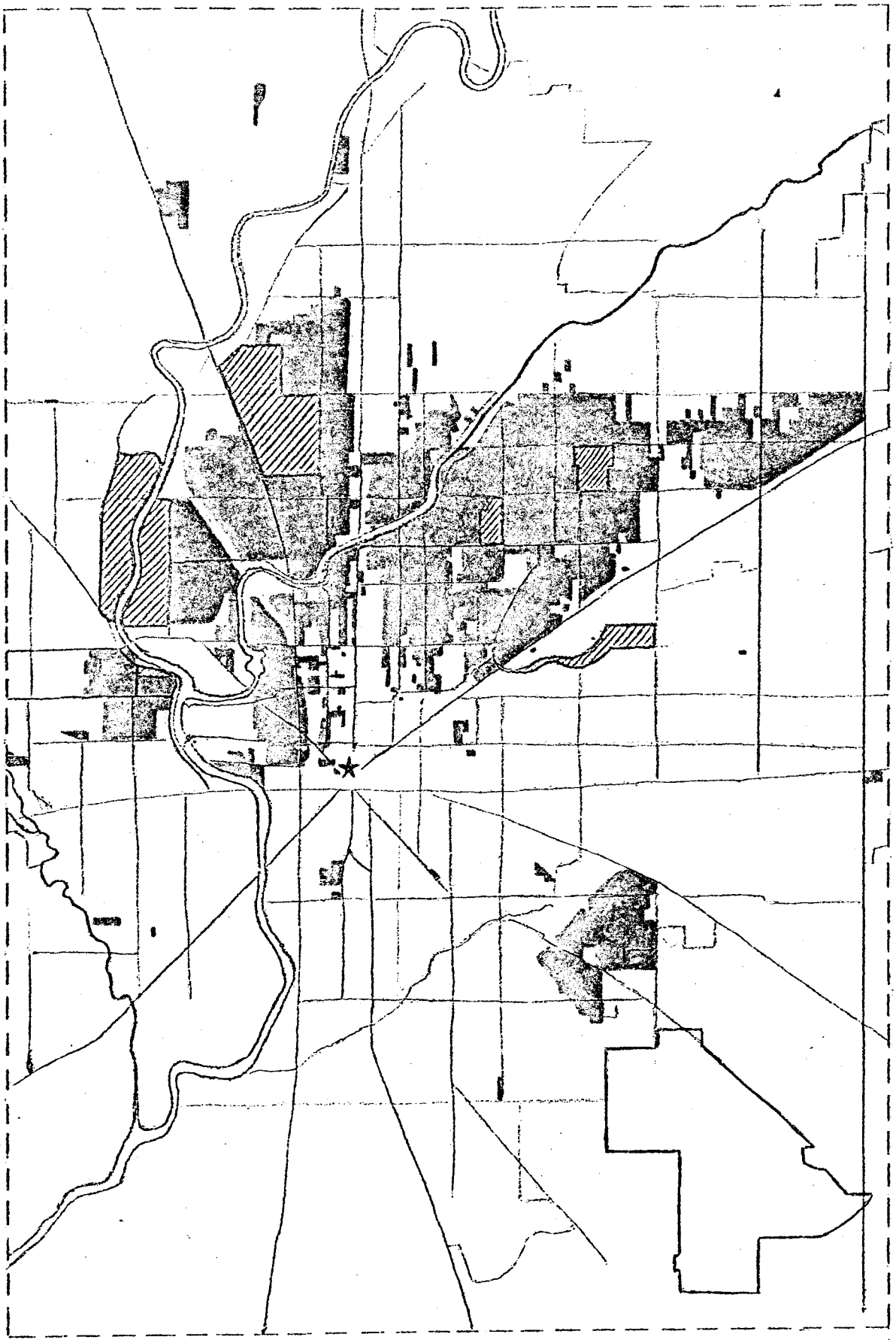
INDIANAPOLIS, 1950

MAP 71



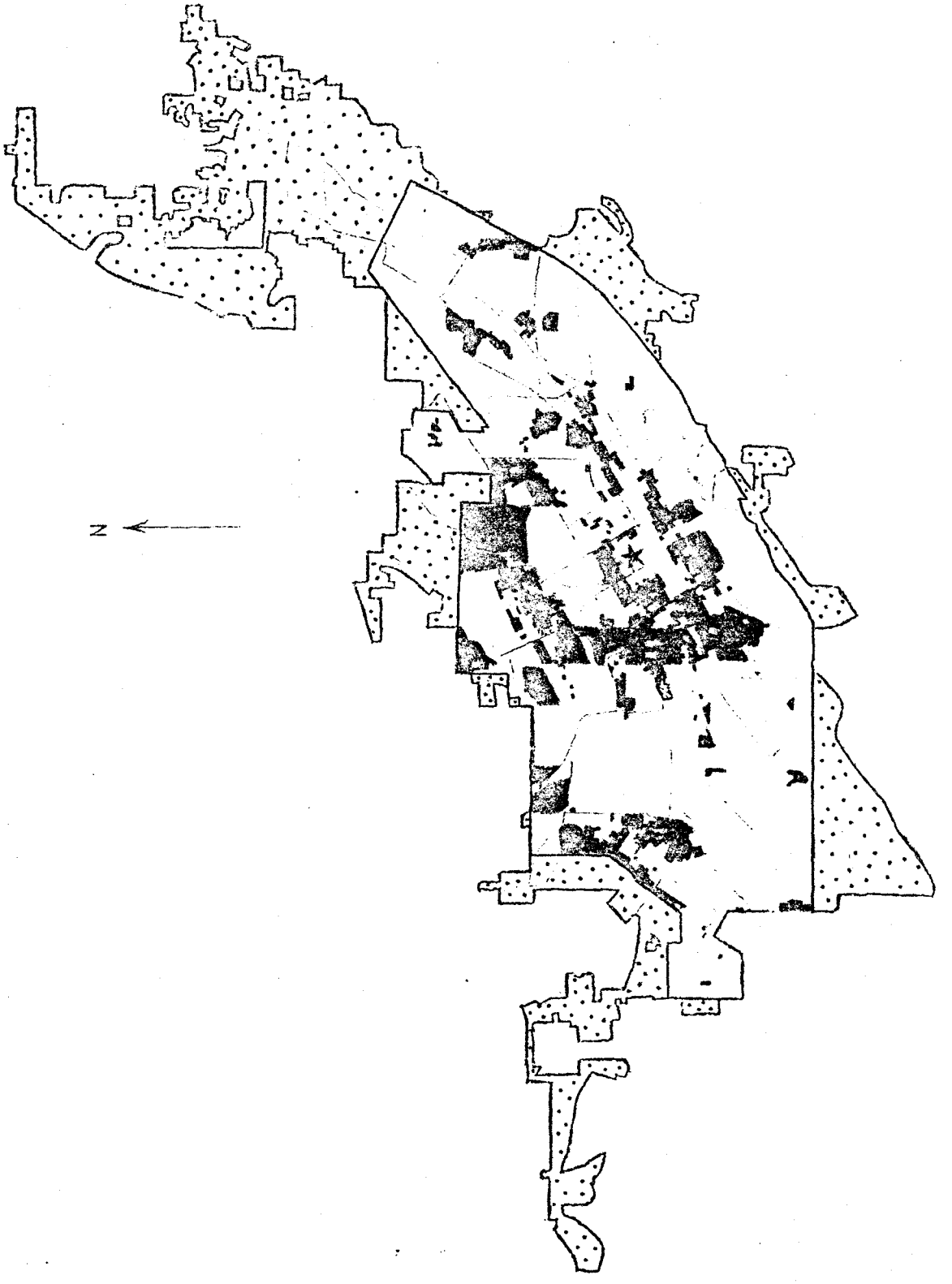
INDIANAPOLIS, 1960

MAP 72



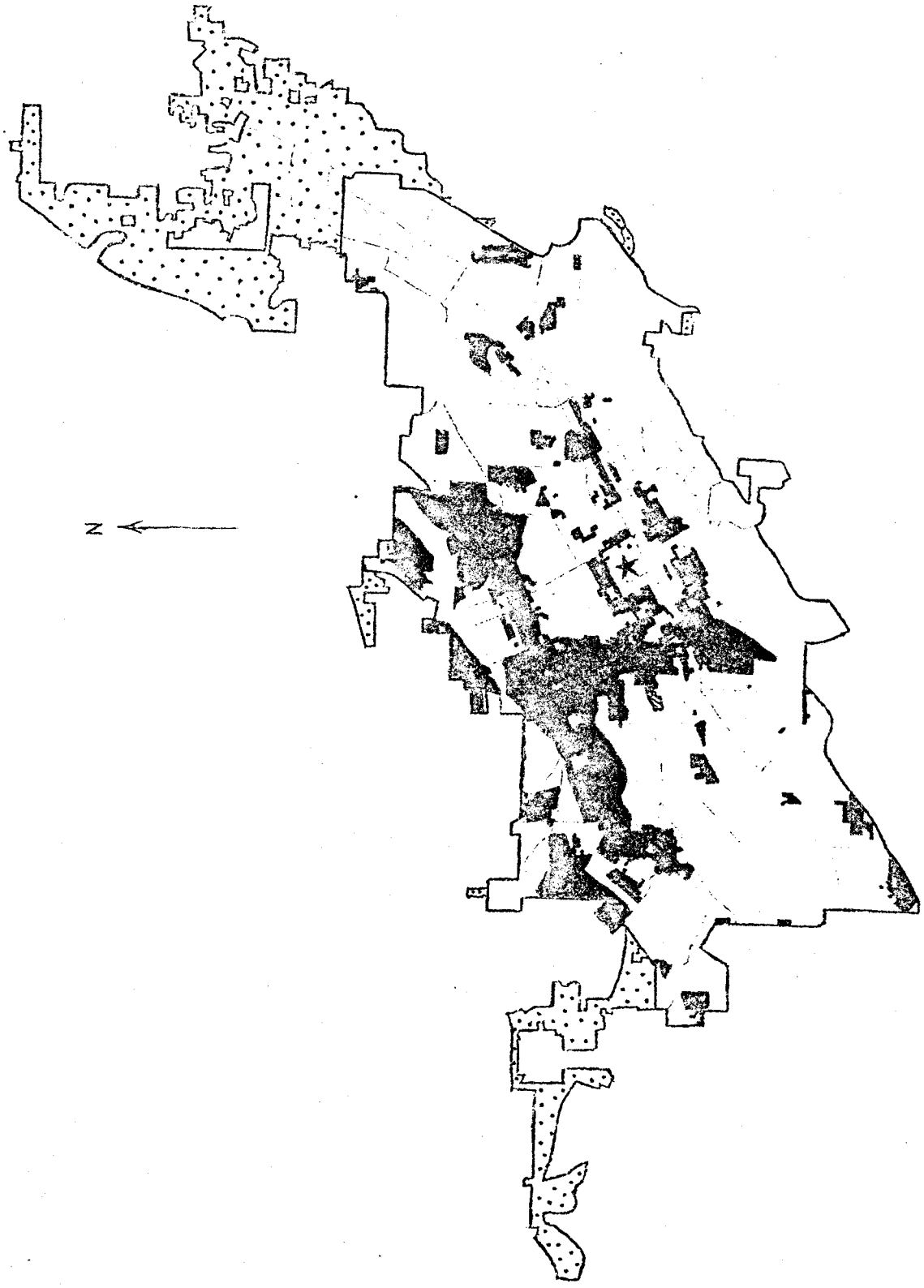
INDIANAPOLIS, 1970

MAP 73



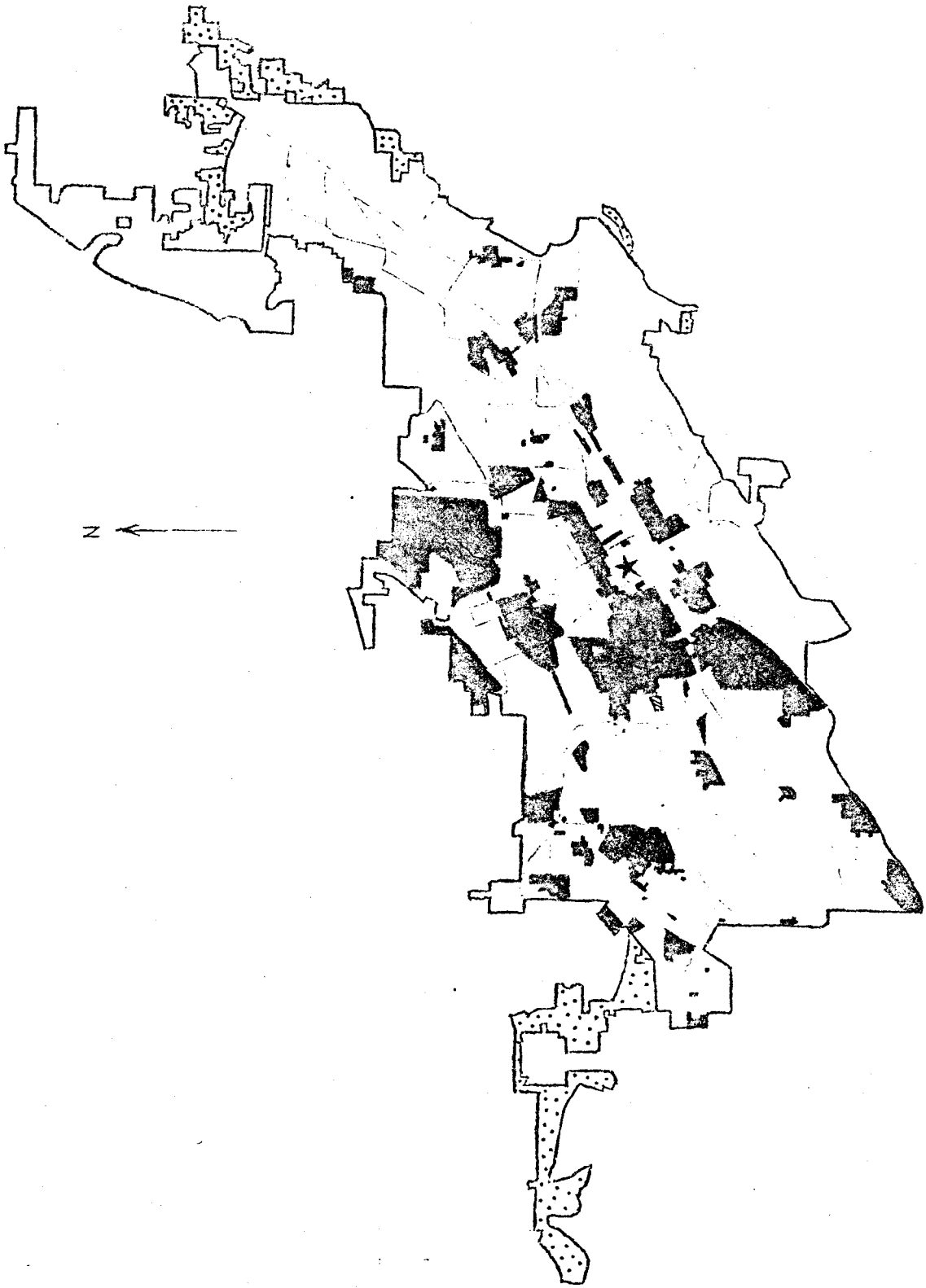
BIRMINGHAM, 1940

MAP 74



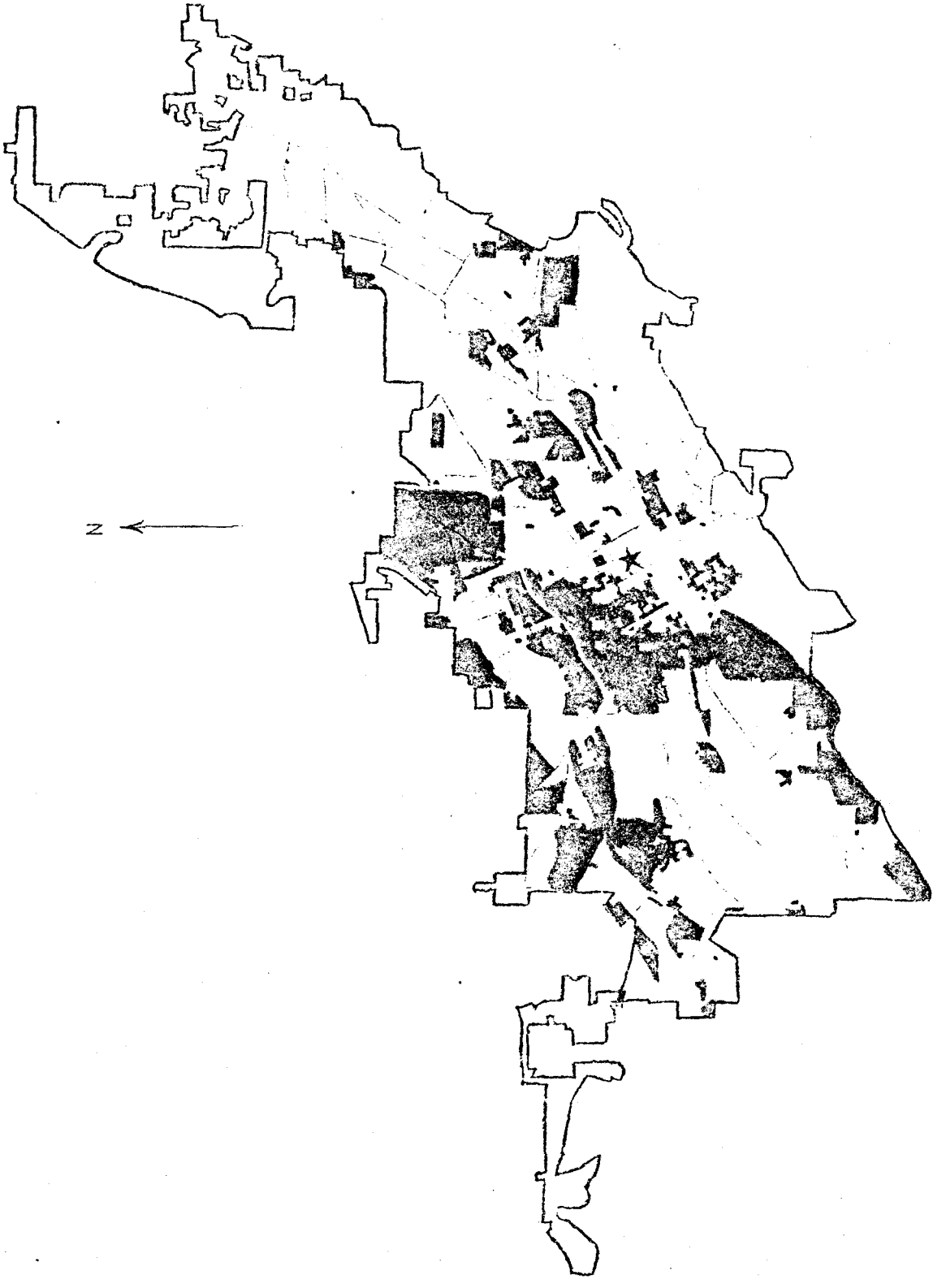
BIRMINGHAM, 1950

MAP 75



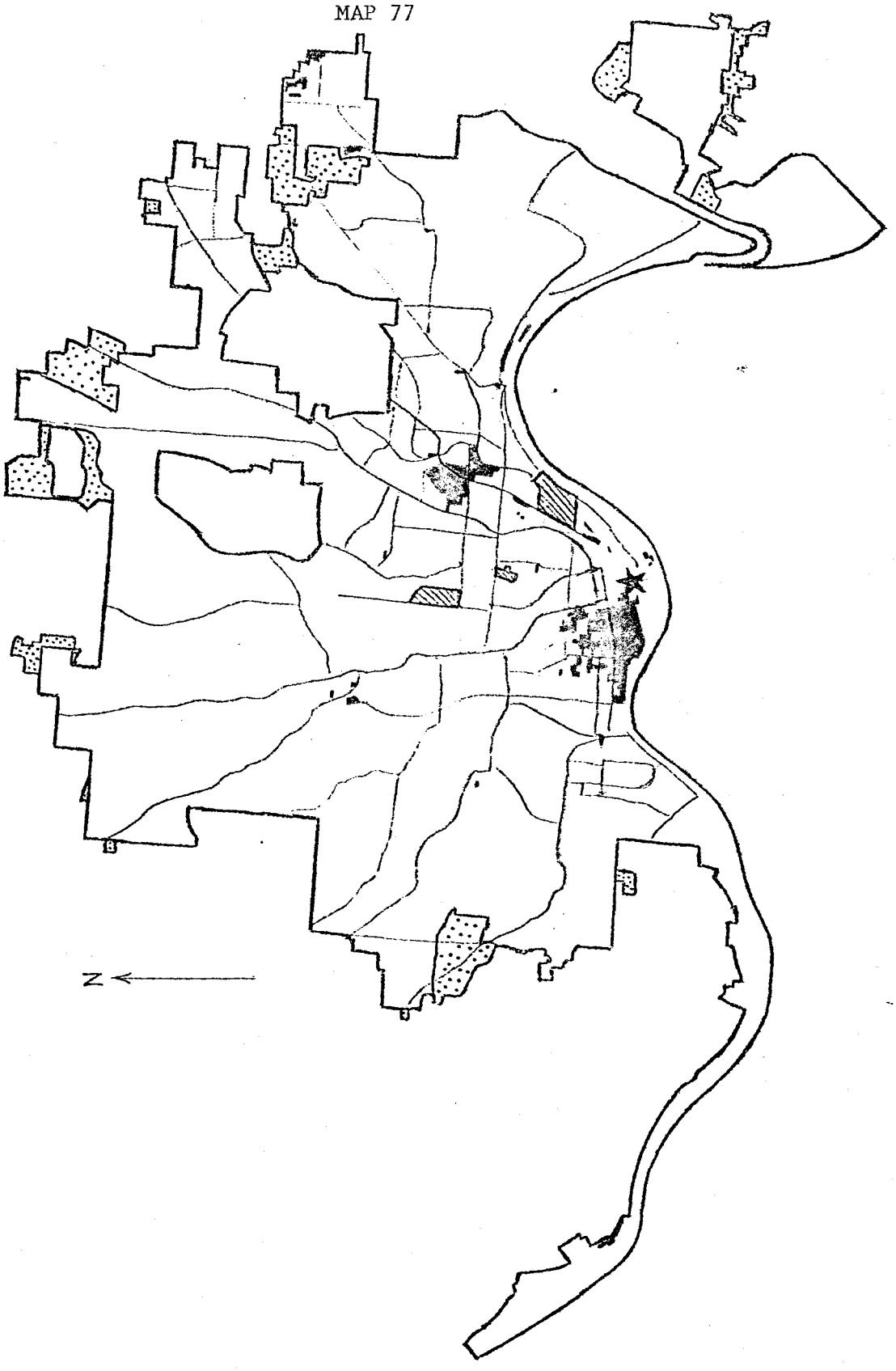
BIRMINGHAM, 1960

MAP 76



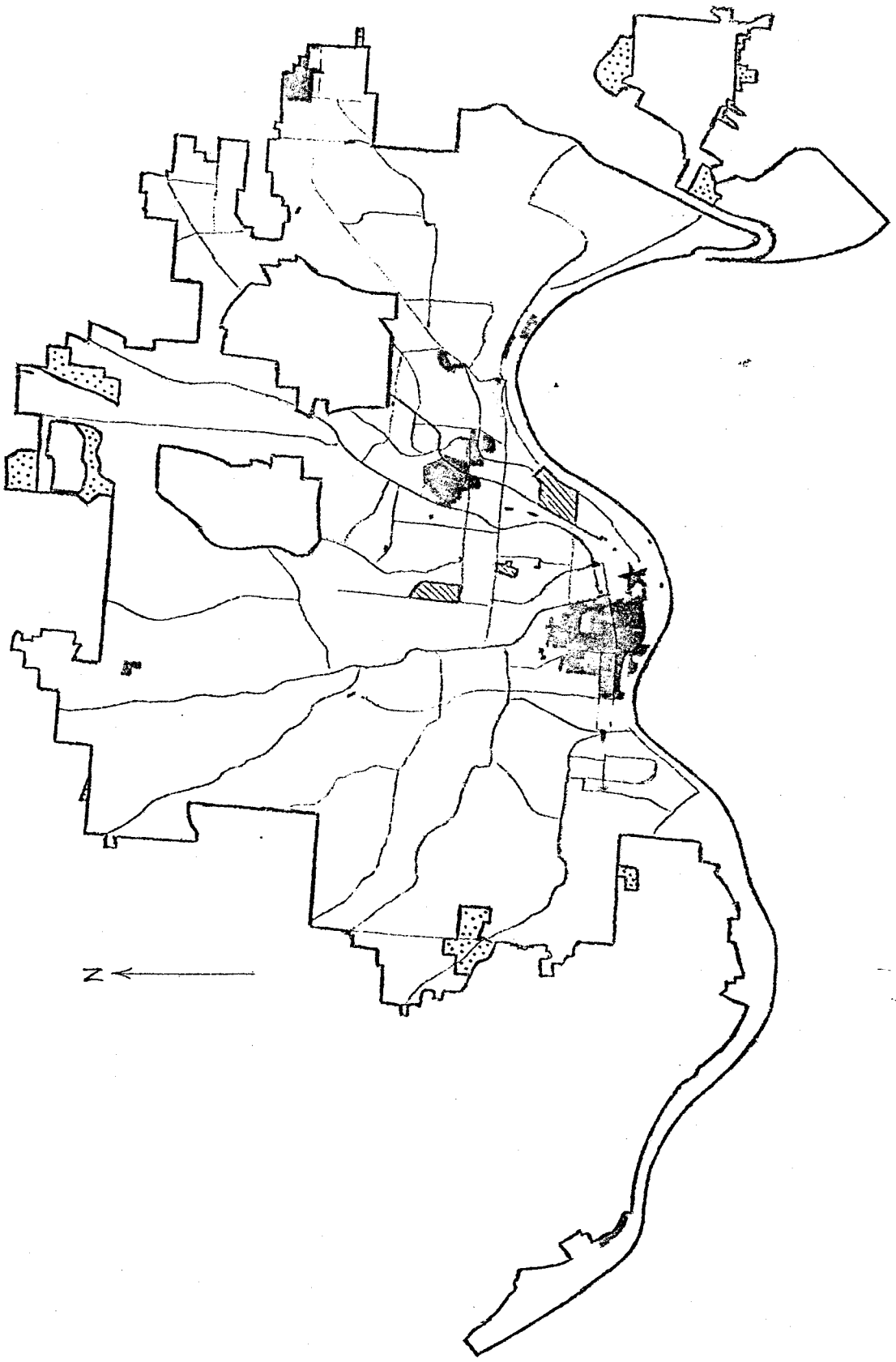
BIRMINGHAM, 1970

MAP 77



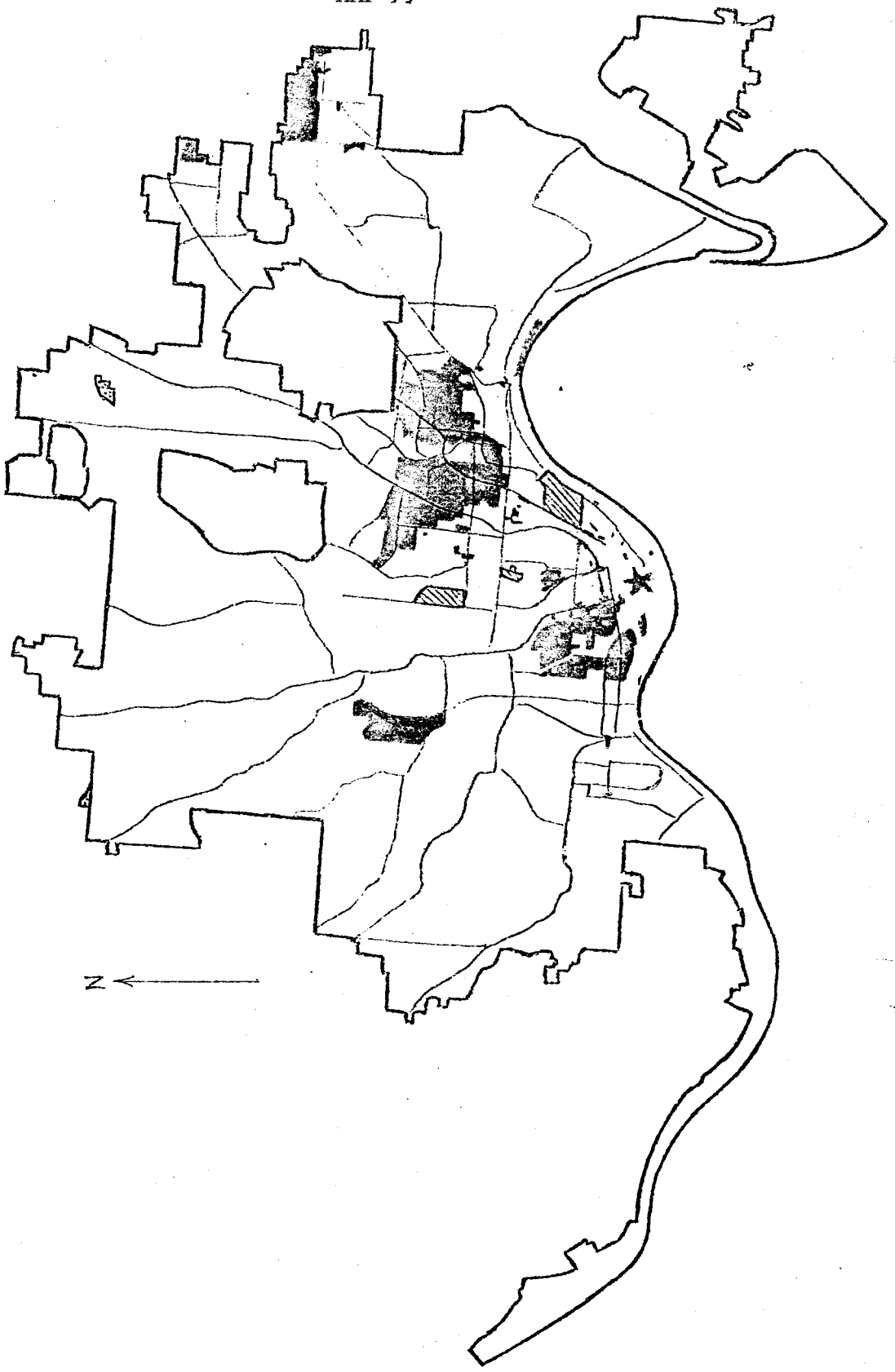
CINCINNATI, 1940

MAP 78



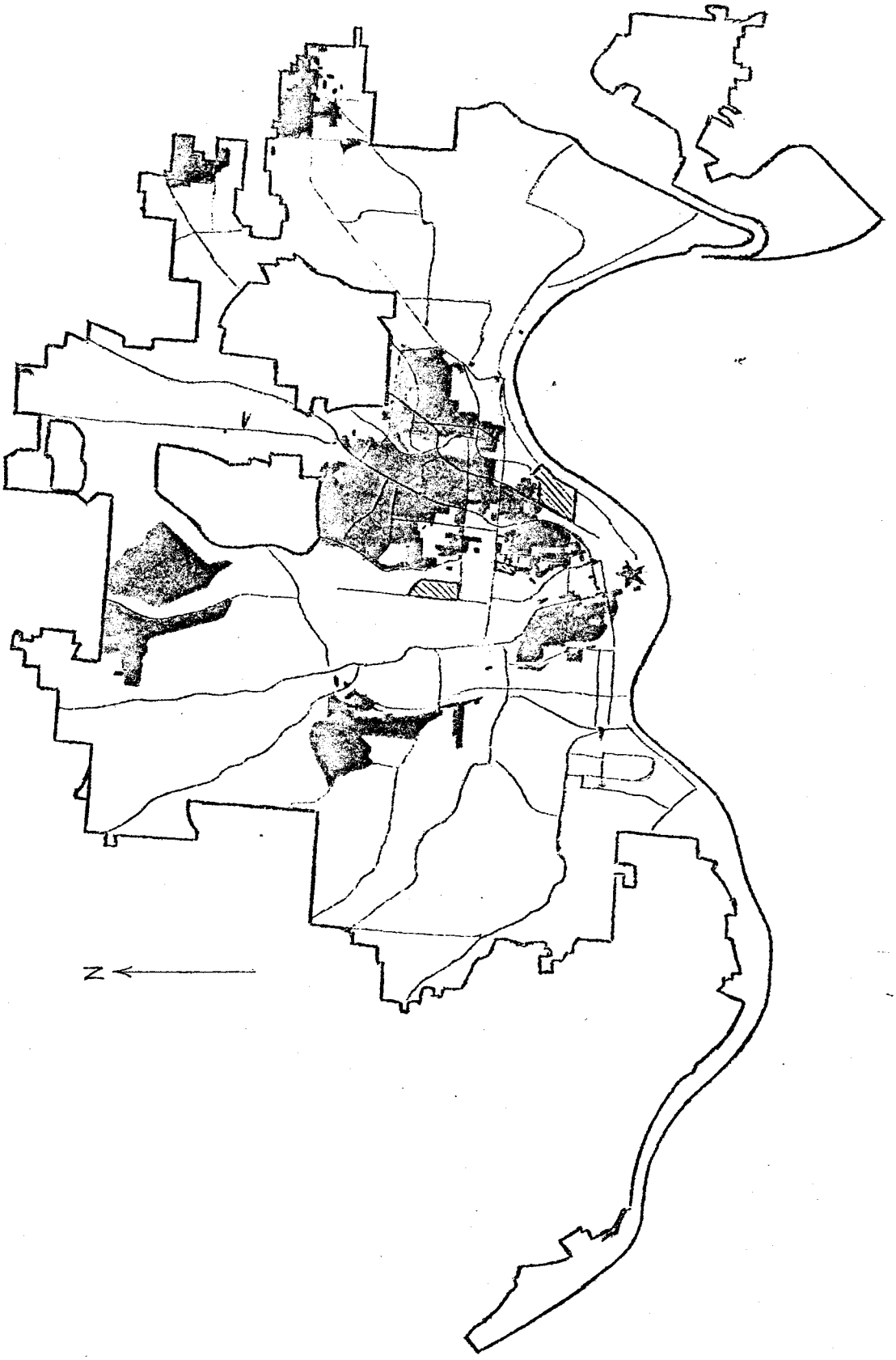
CINCINNATI, 1950

MAP 79



CINCINNATI, 1960

MAP 80



CINCINNATI, 1970

MAP 81

OAKLAND, 1940

MAP 82

OAKLAND, 1950

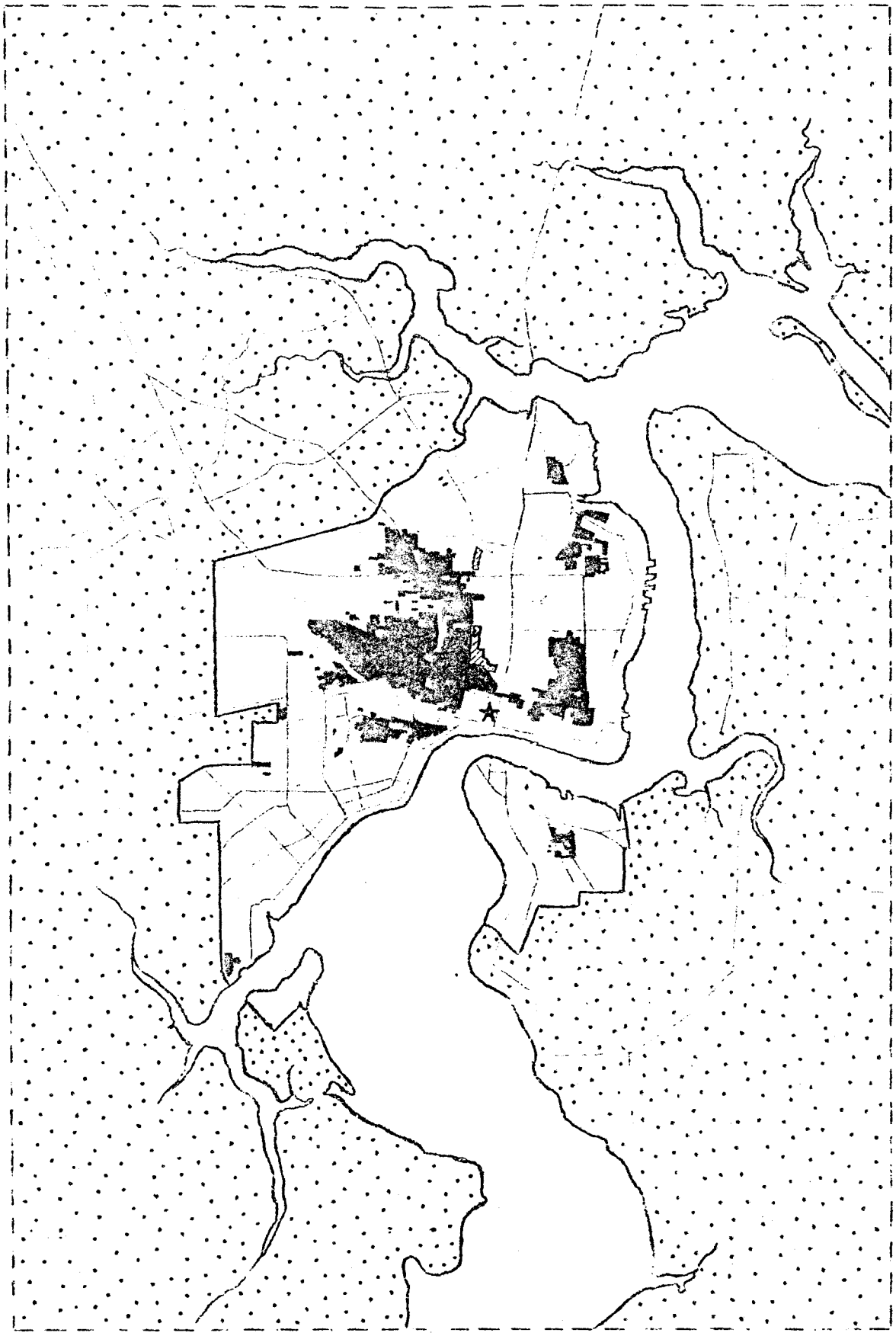
MAP 83

OAKLAND, 1960

MAP 84

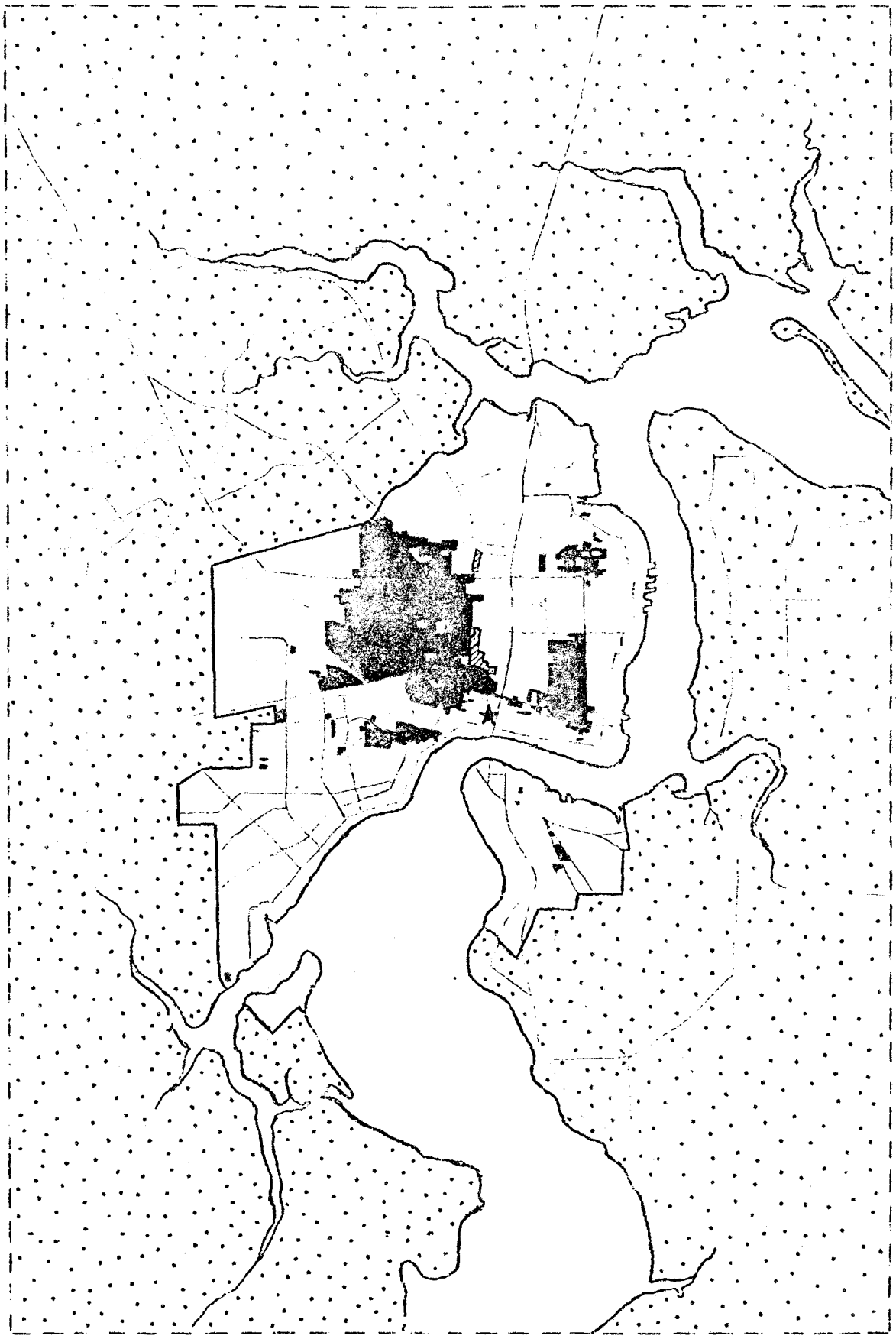
OAKLAND, 1970

MAP 85



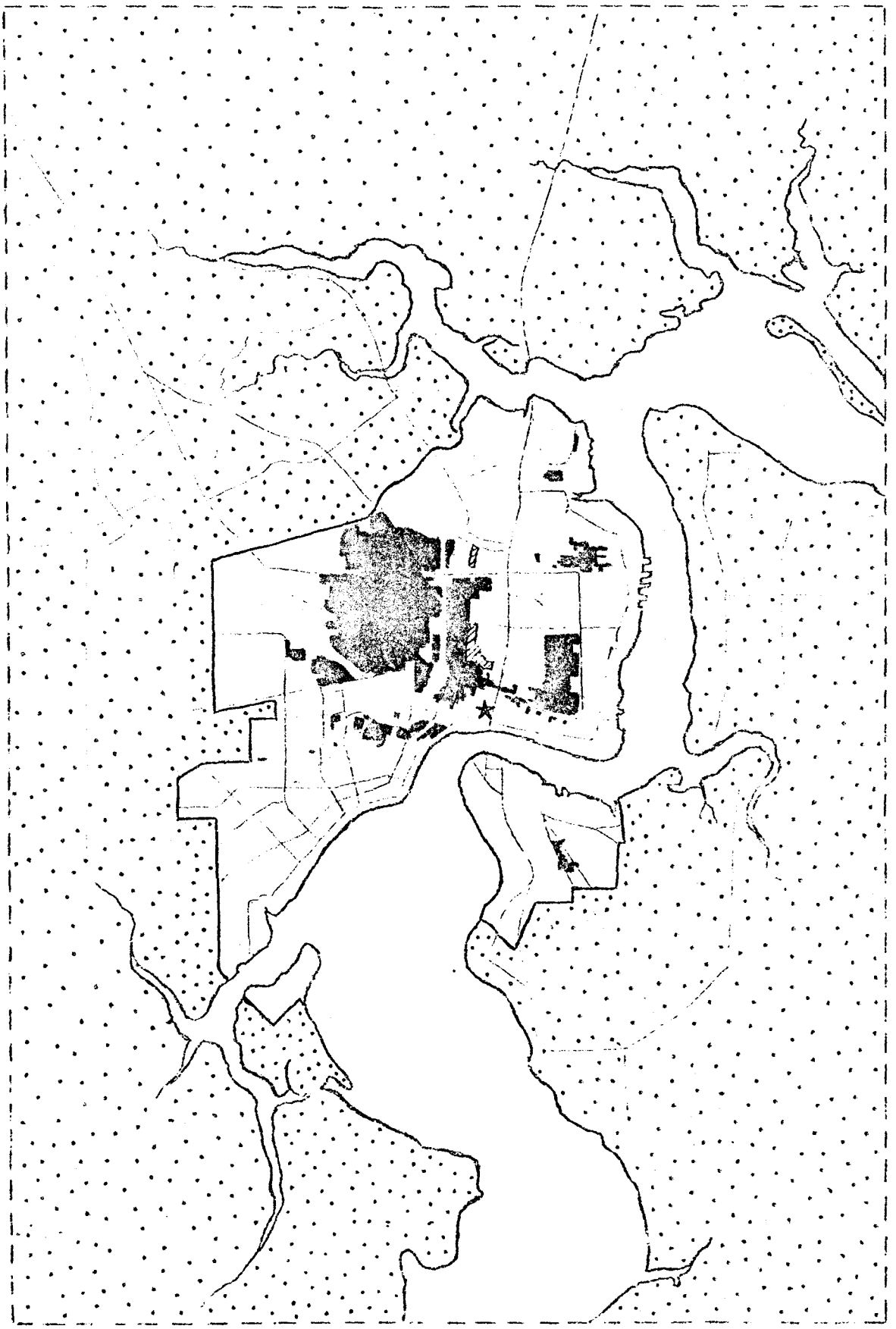
JACKSONVILLE, 1940

MAP 86



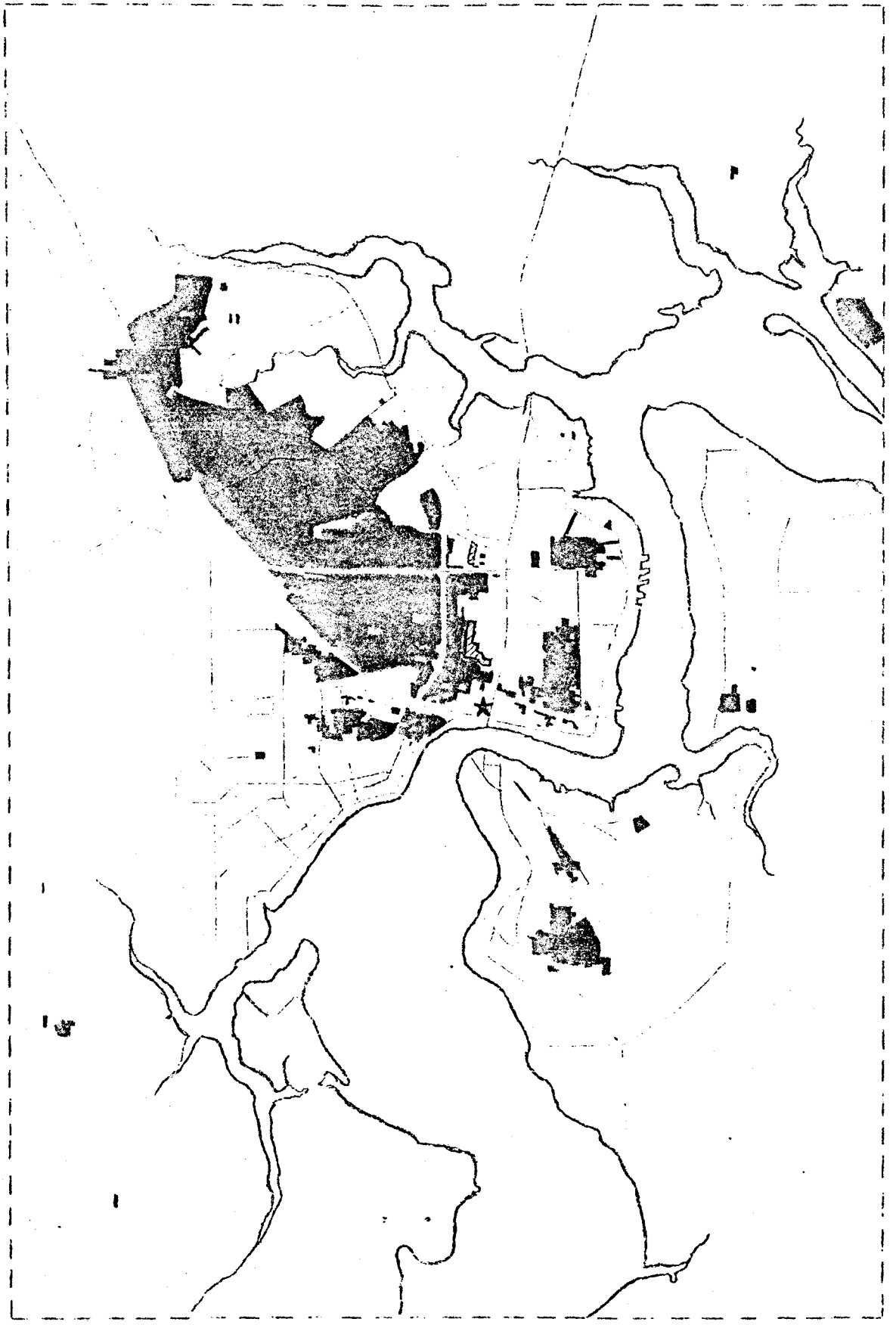
JACKSONVILLE, 1950

MAP 87



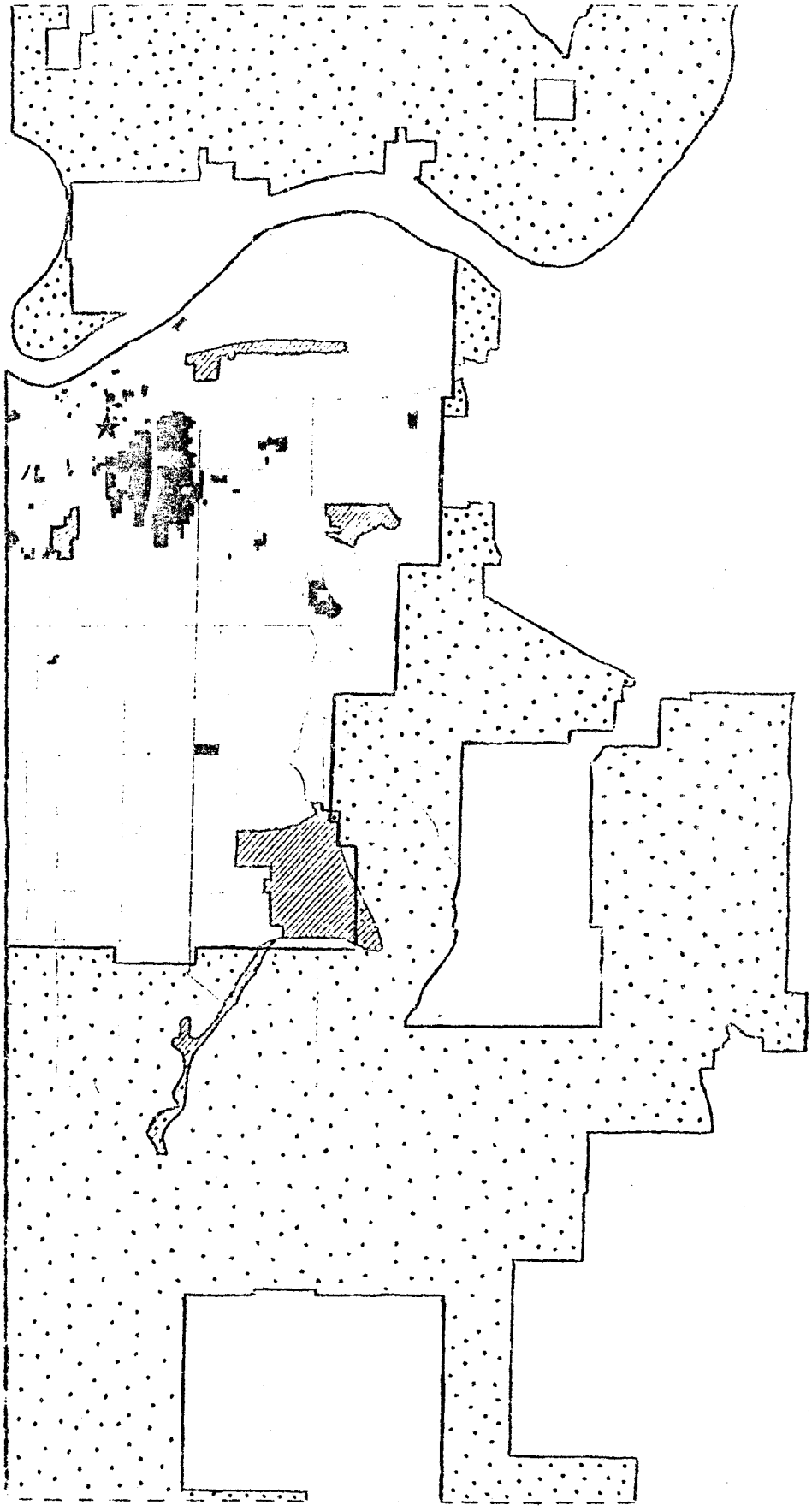
JACKSONVILLE, 1960

MAP 88



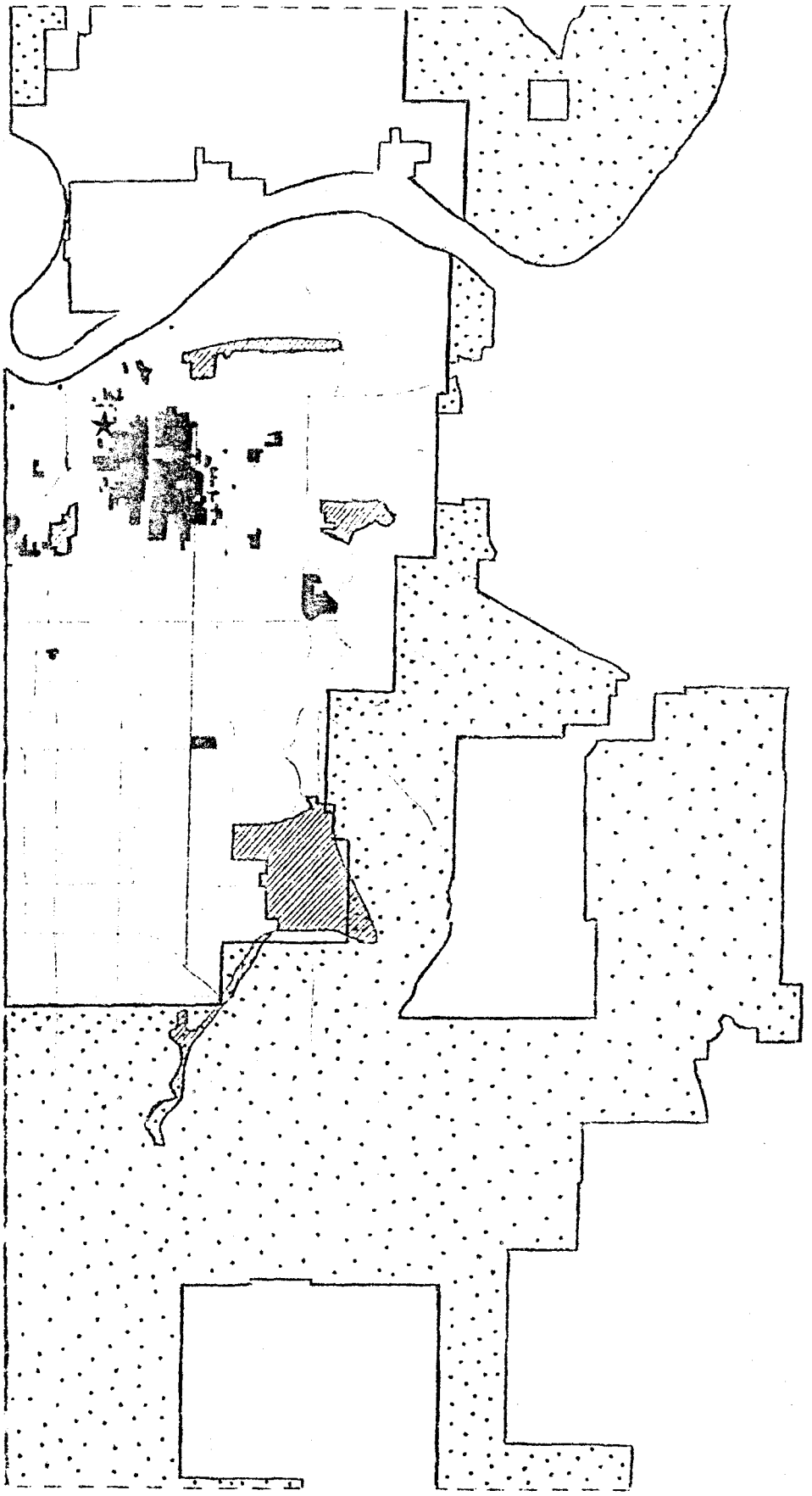
JACKSONVILLE, 1970

MAP 89



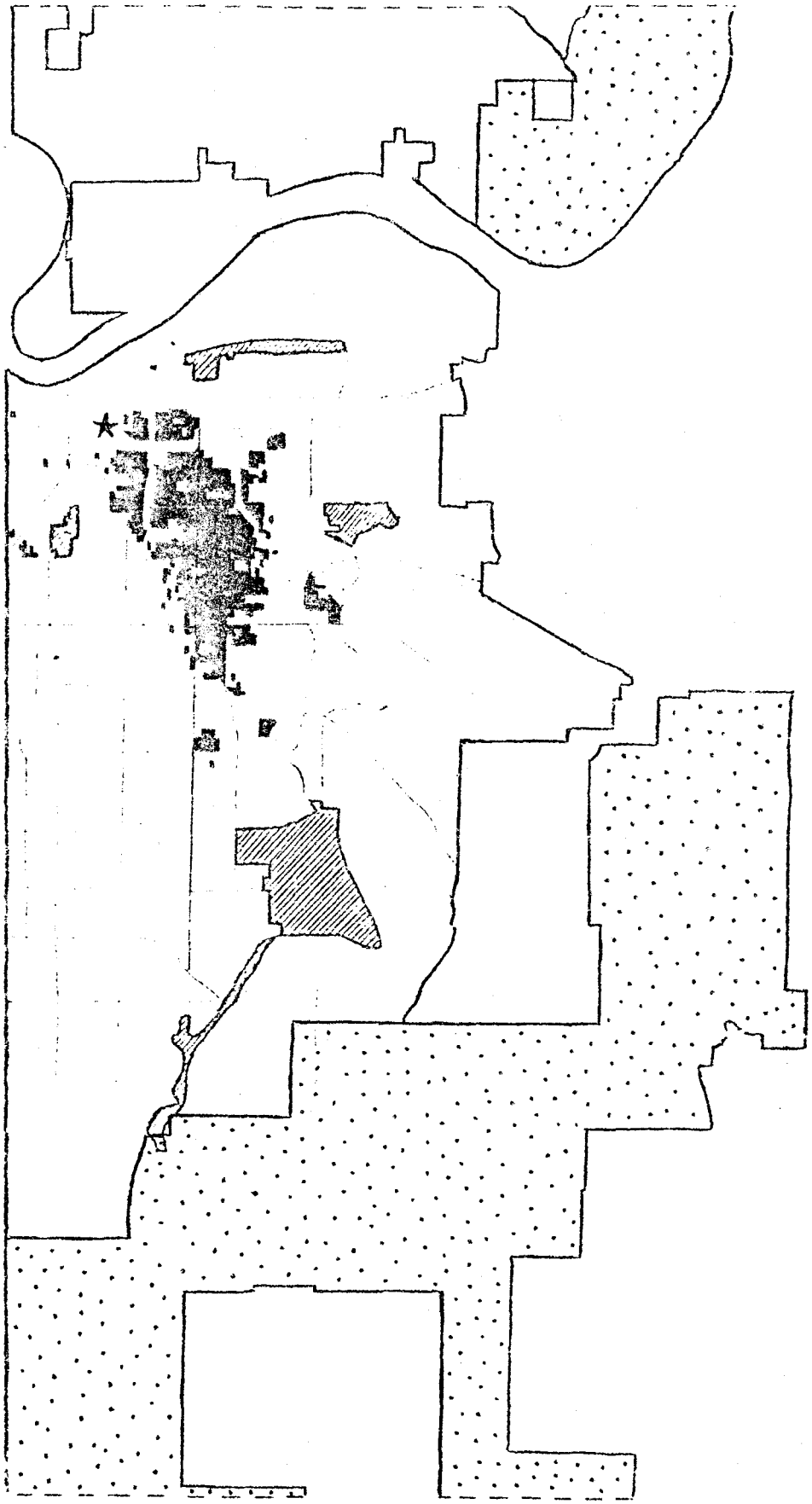
KANSAS CITY, 1940

MAP 90



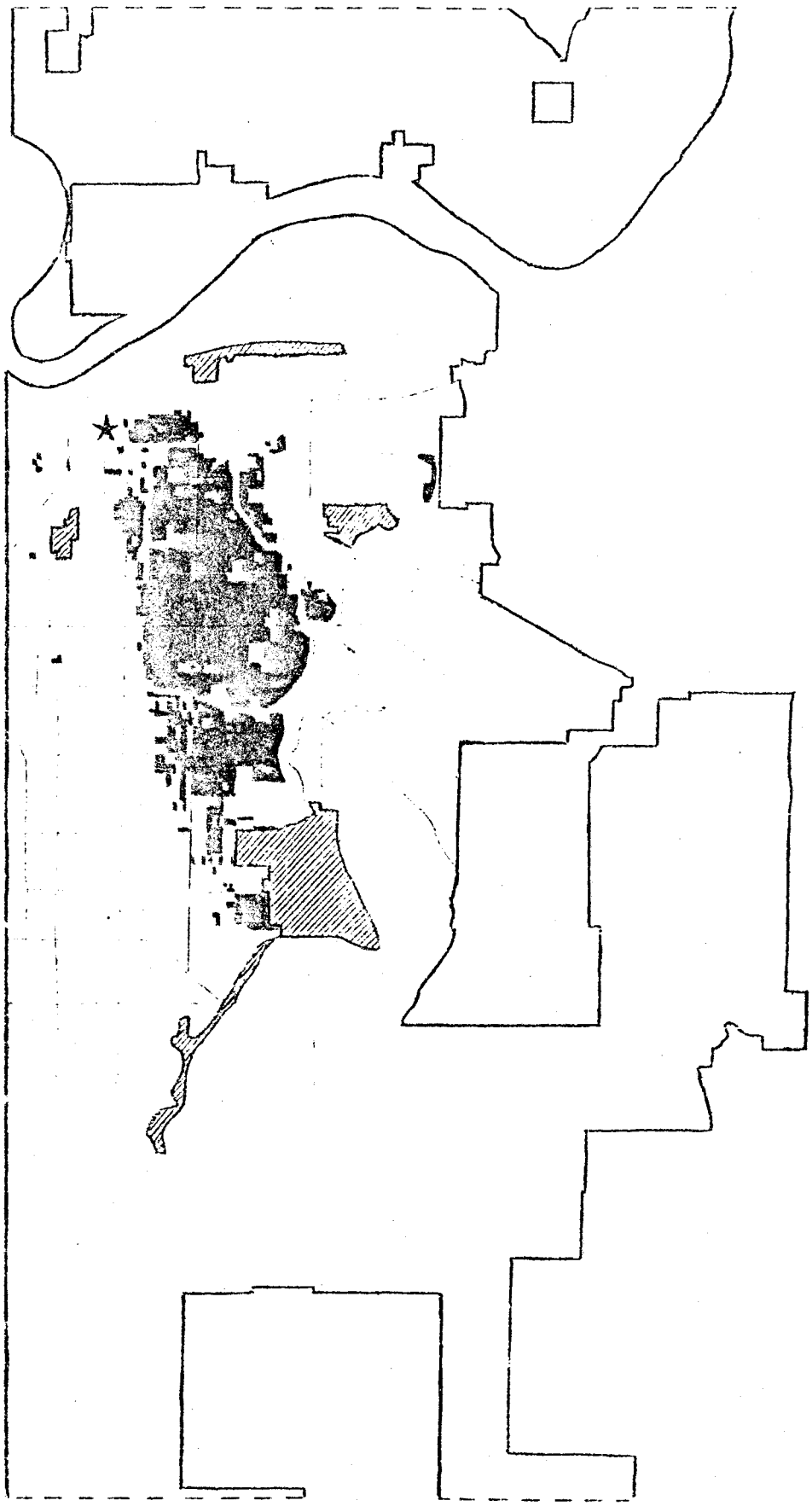
KANSAS CITY, 1950

MAP 91



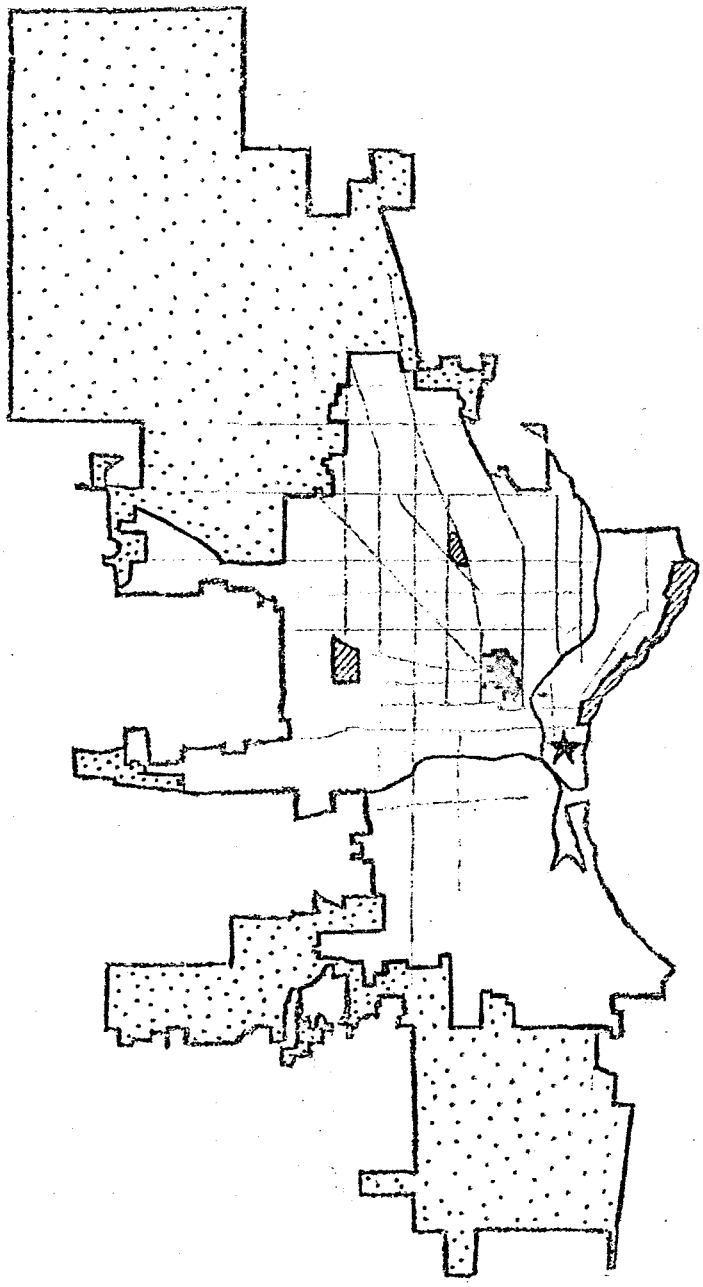
KANSAS CITY, 1960

MAP 92



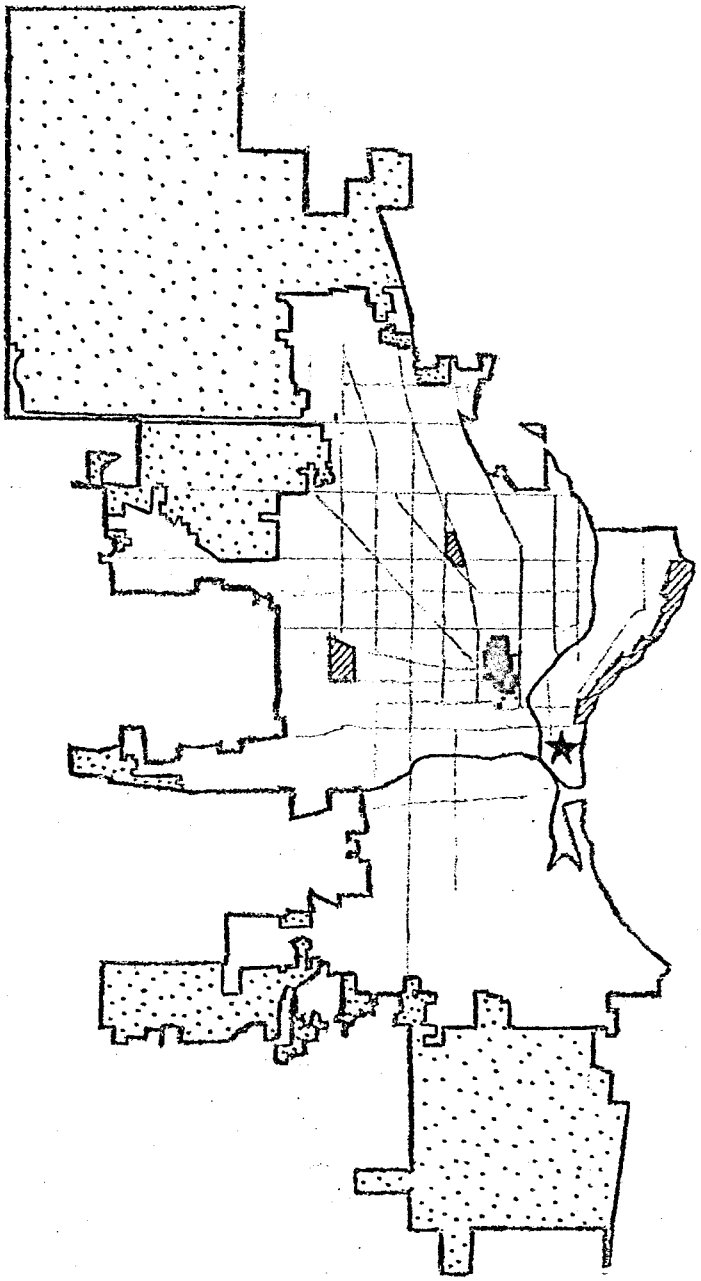
KANSAS CITY, 1970

MAP 93



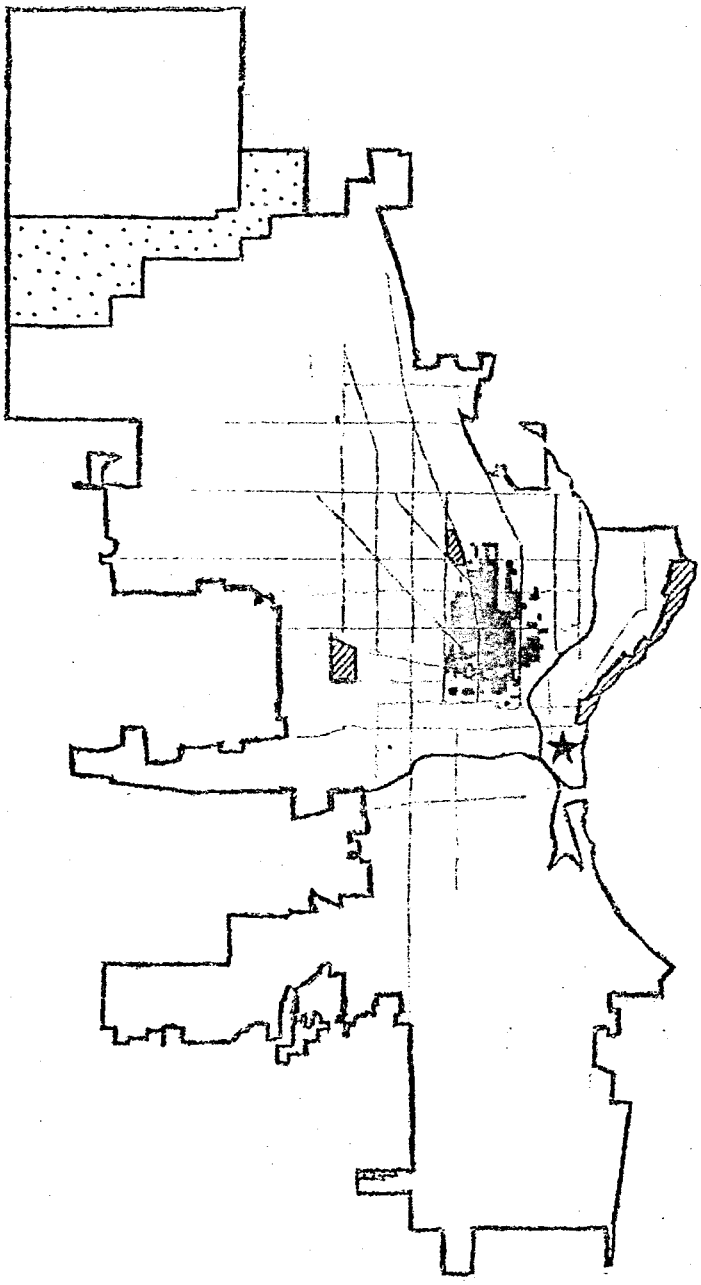
MILWAUKEE, 1940

MAP 94



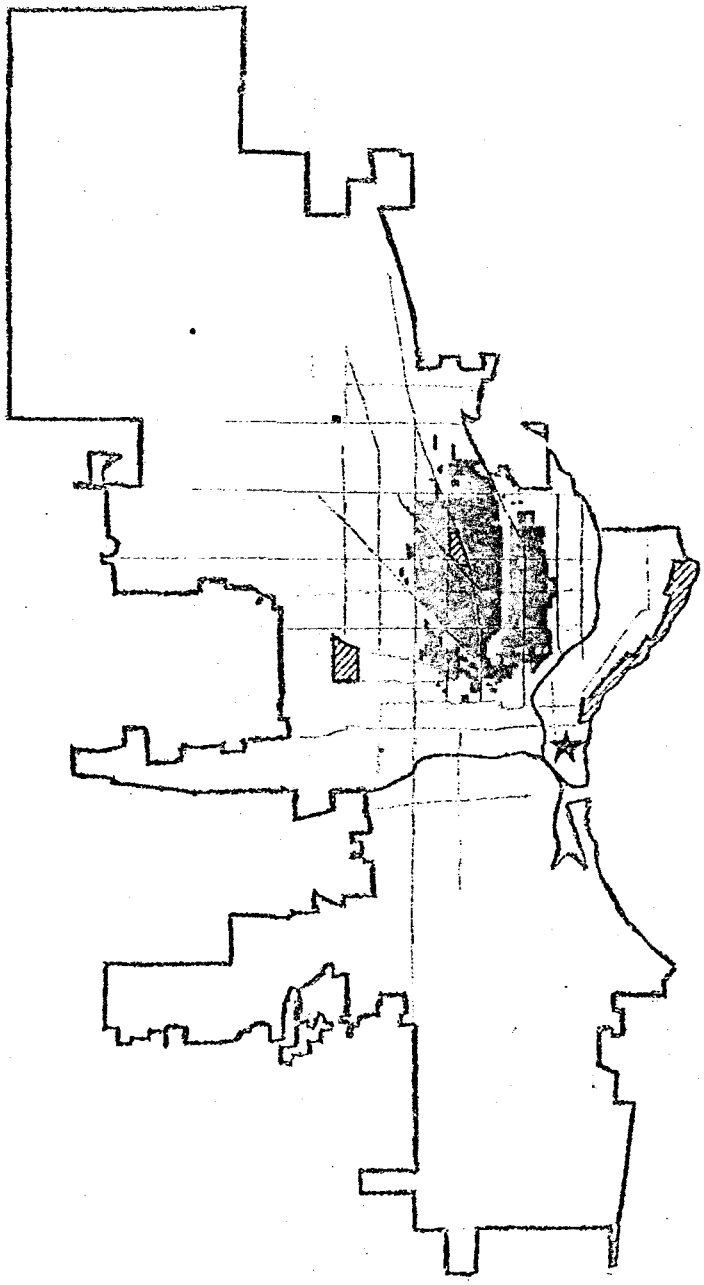
MILWAUKEE, 1950

MAP 95



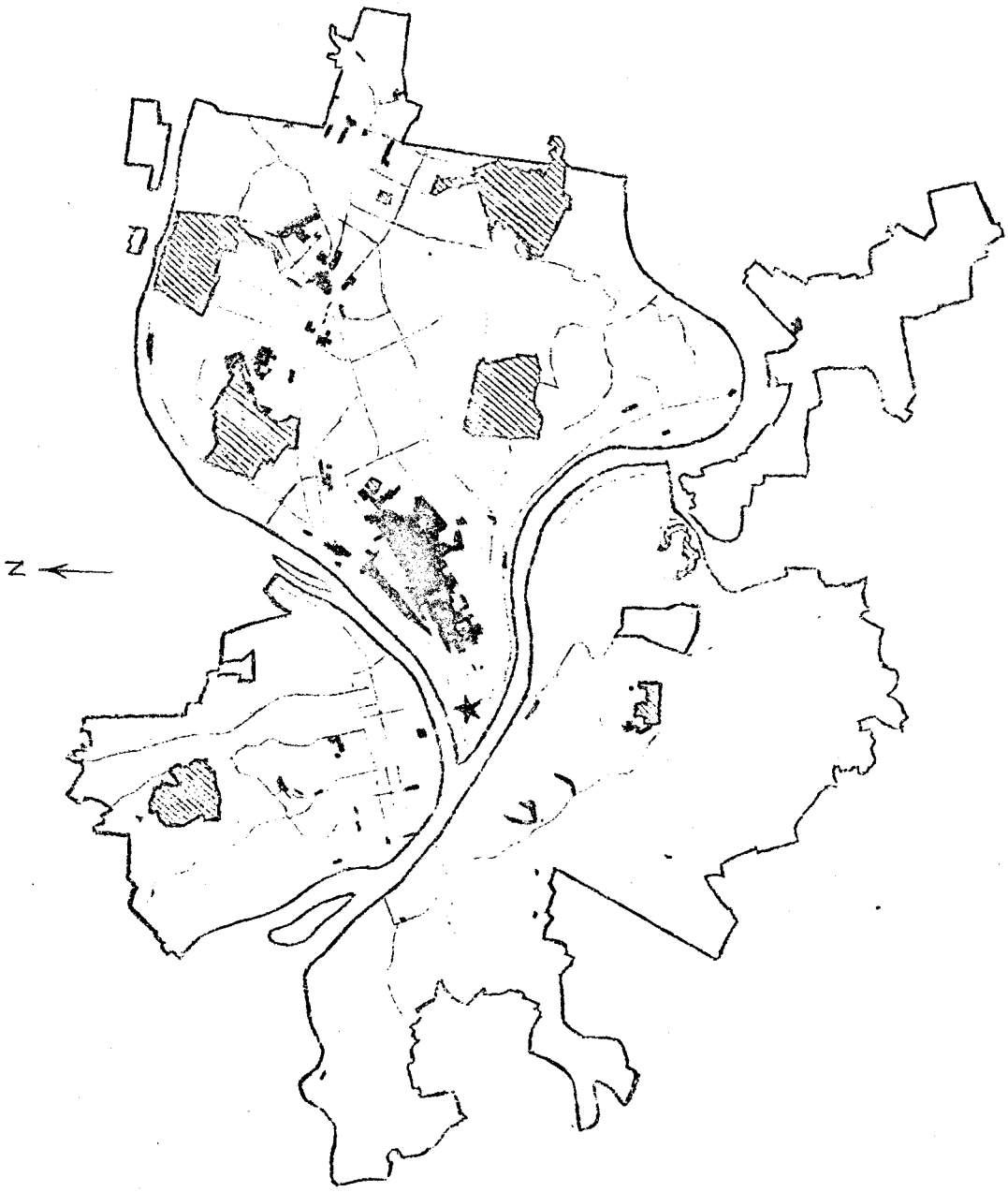
MILWAUKEE, 1960

MAP 96



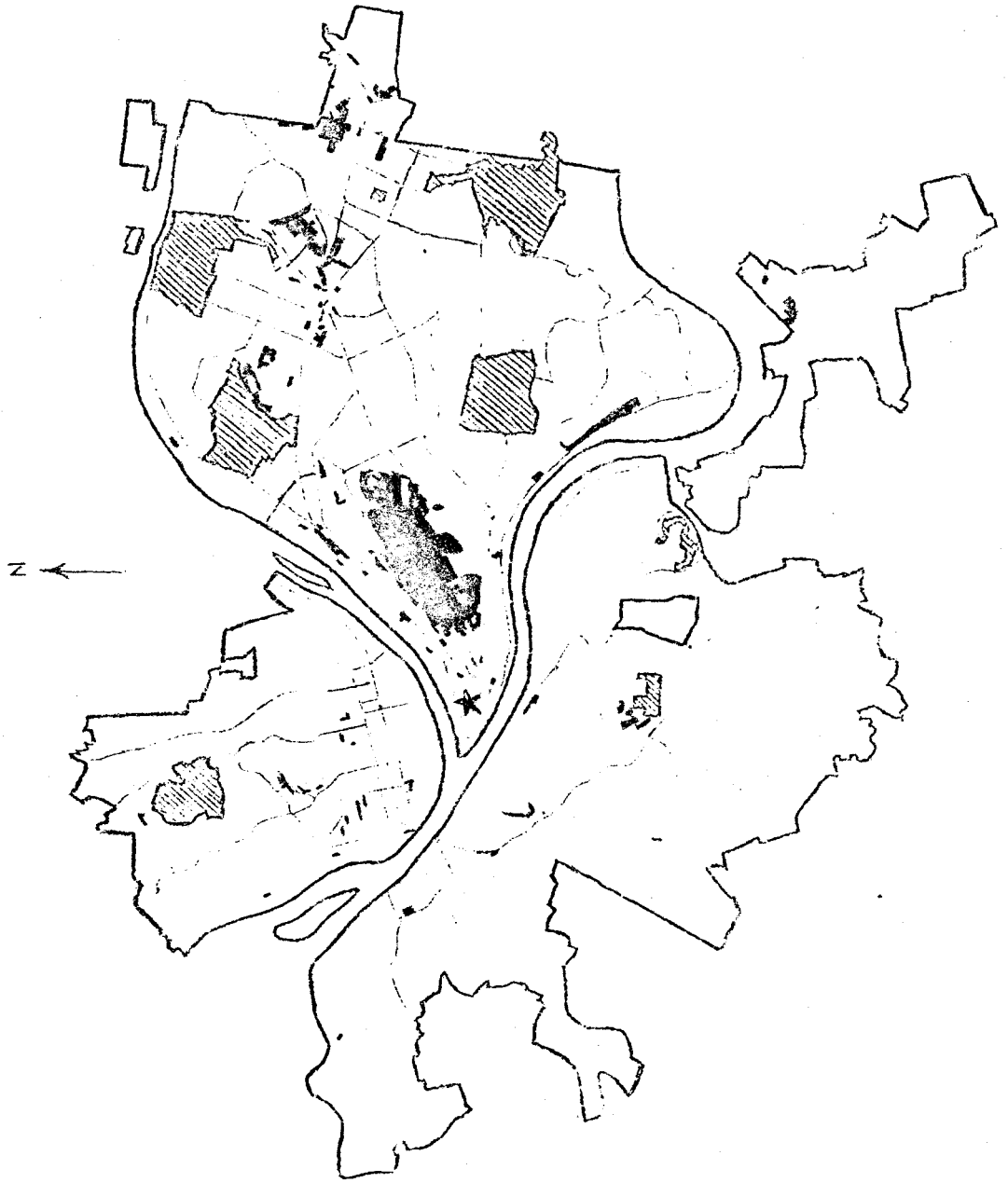
MILWAUKEE, 1970

MAP 97



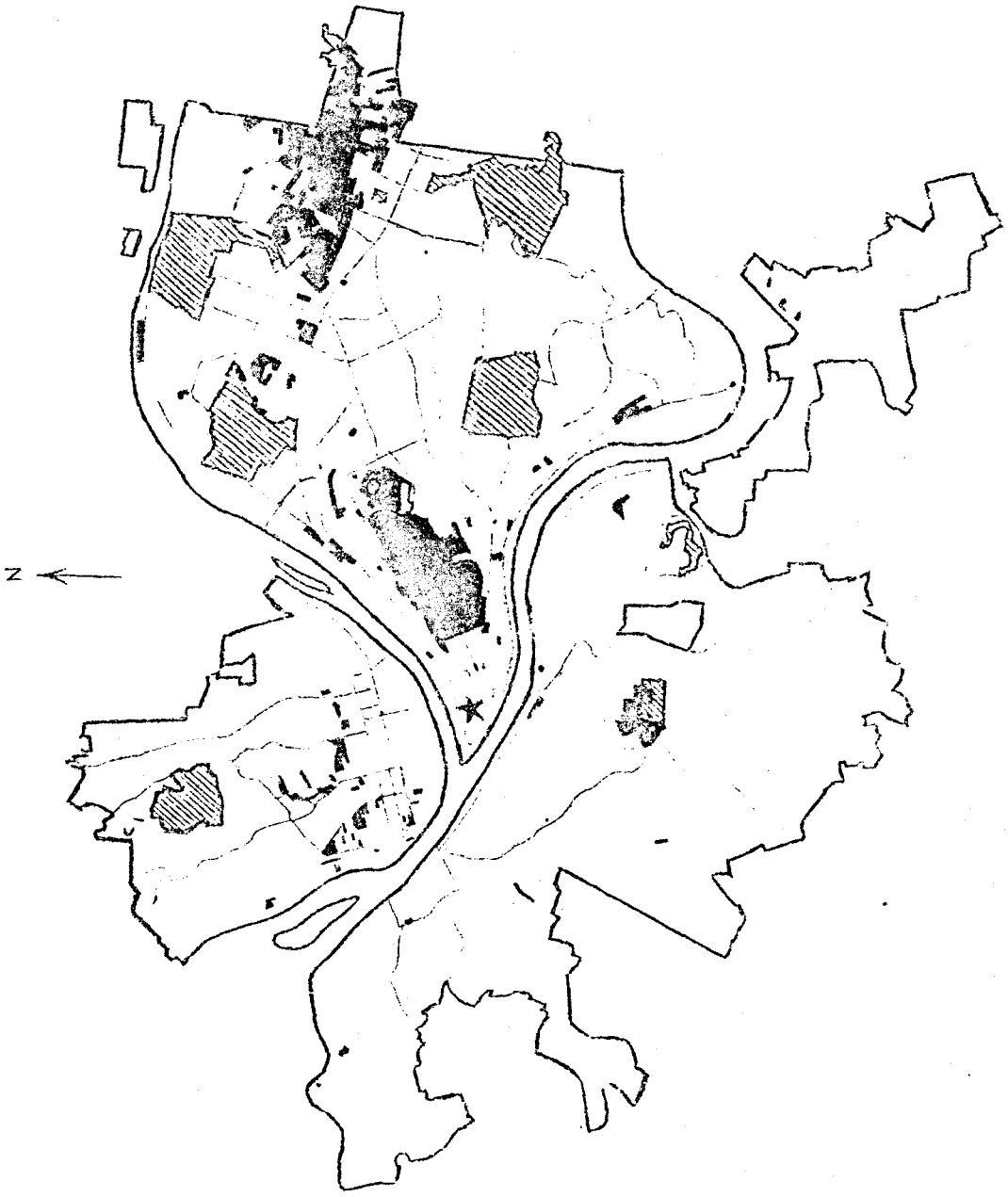
PITTSBURGH, 1940

MAP 98



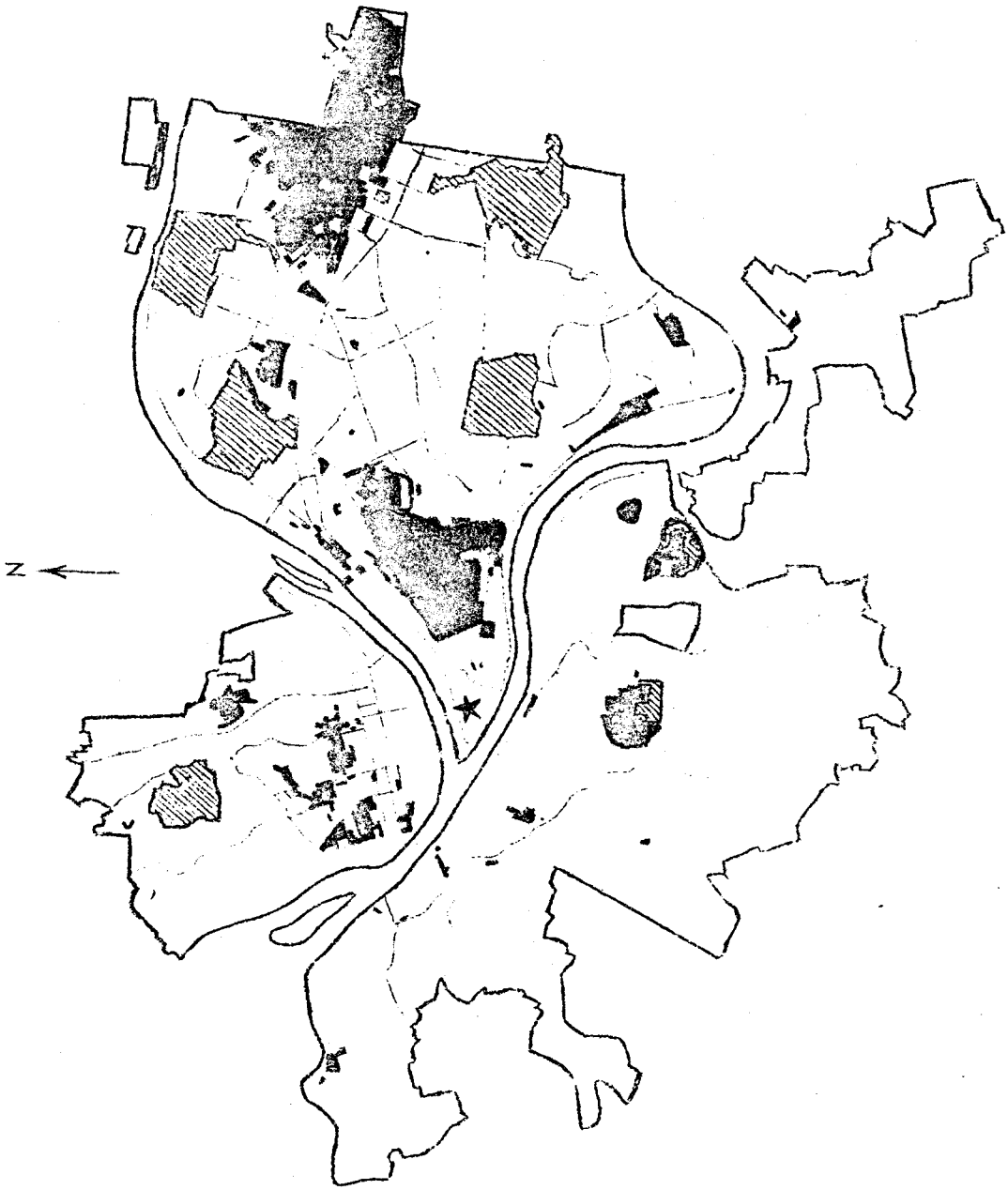
PITTSBURGH, 1950

MAP 99



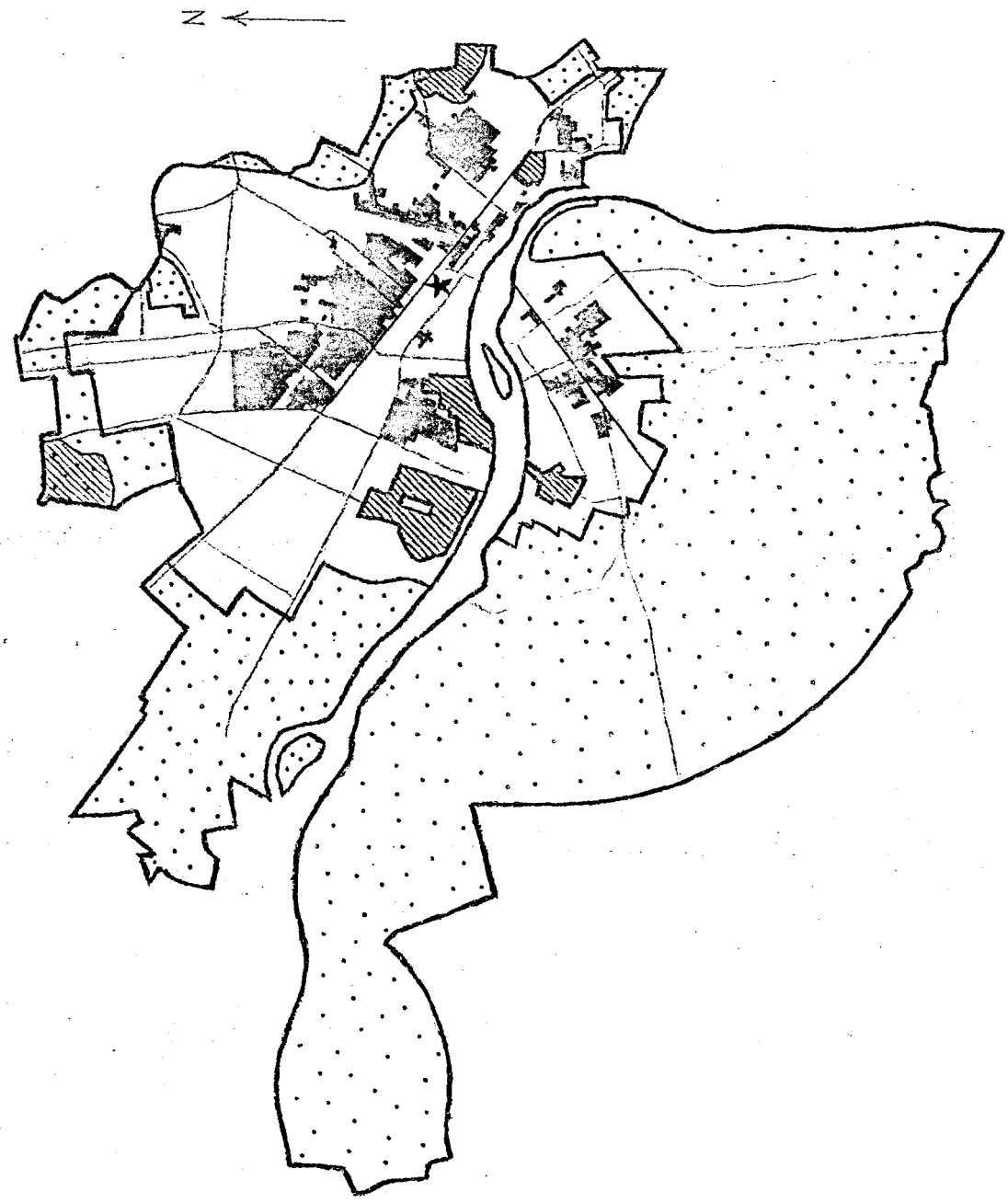
PITTSBURGH, 1960

MAP 100



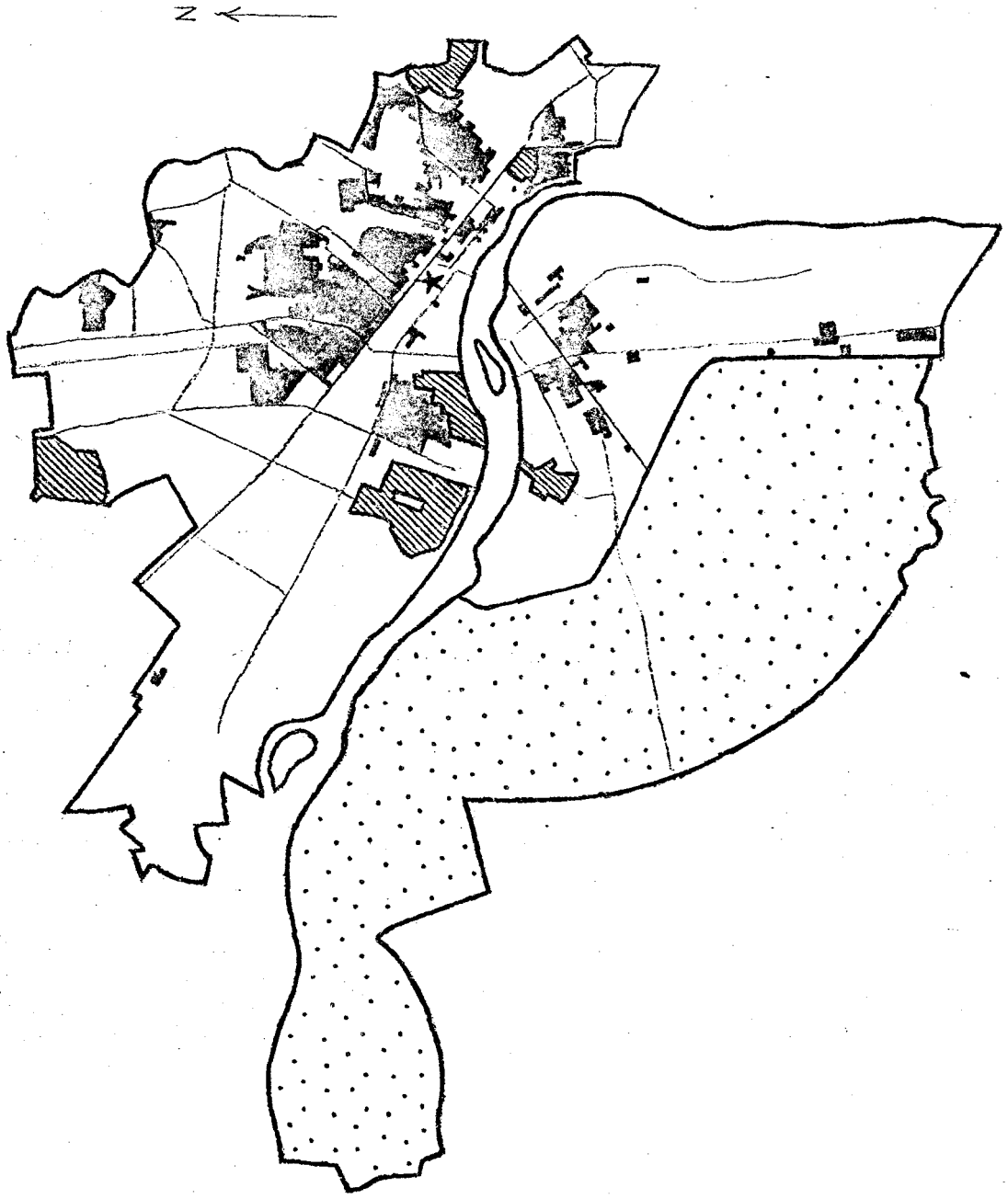
PITTSBURGH, 1970

MAP 101



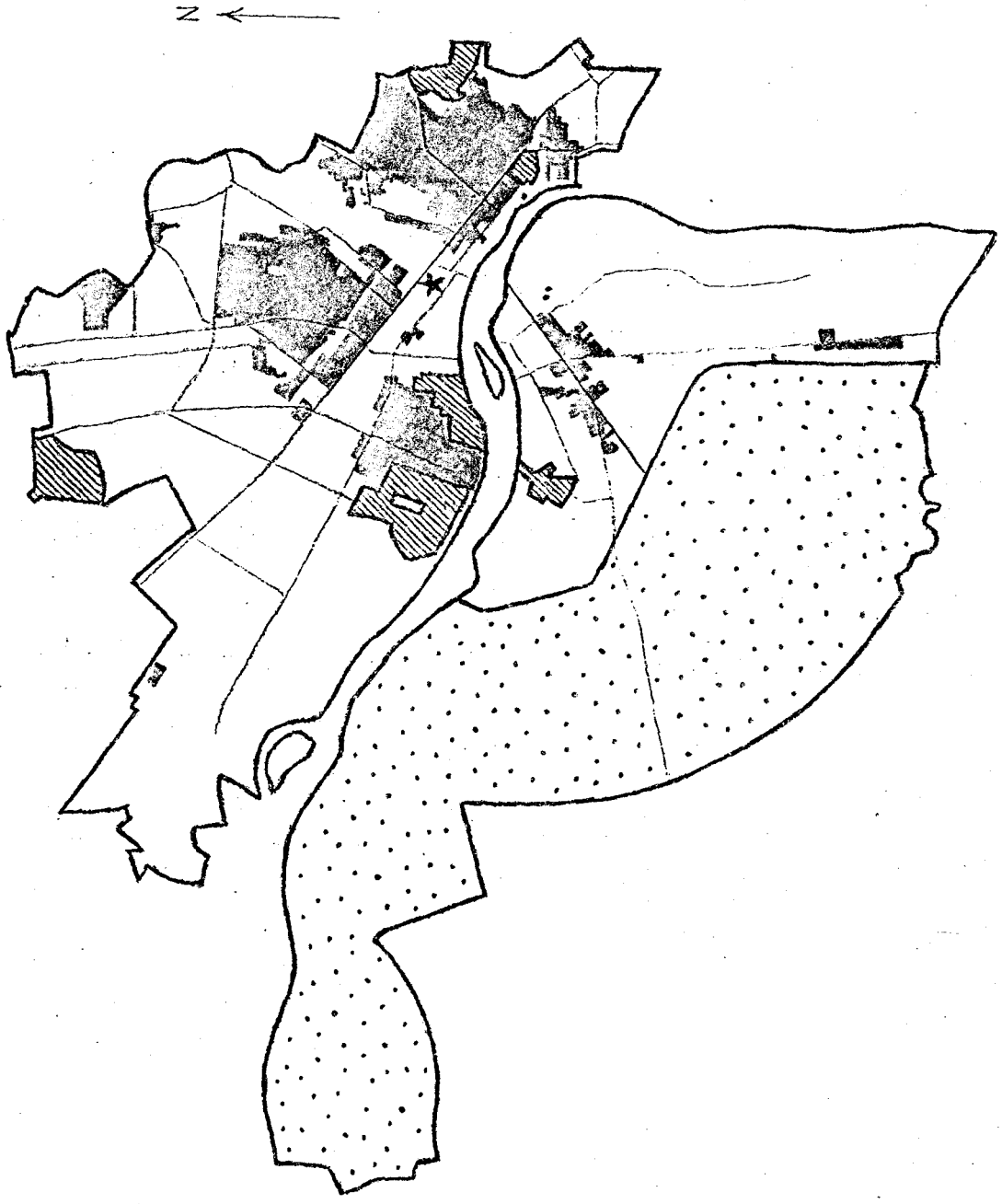
RICHMOND, 1940

MAP 102



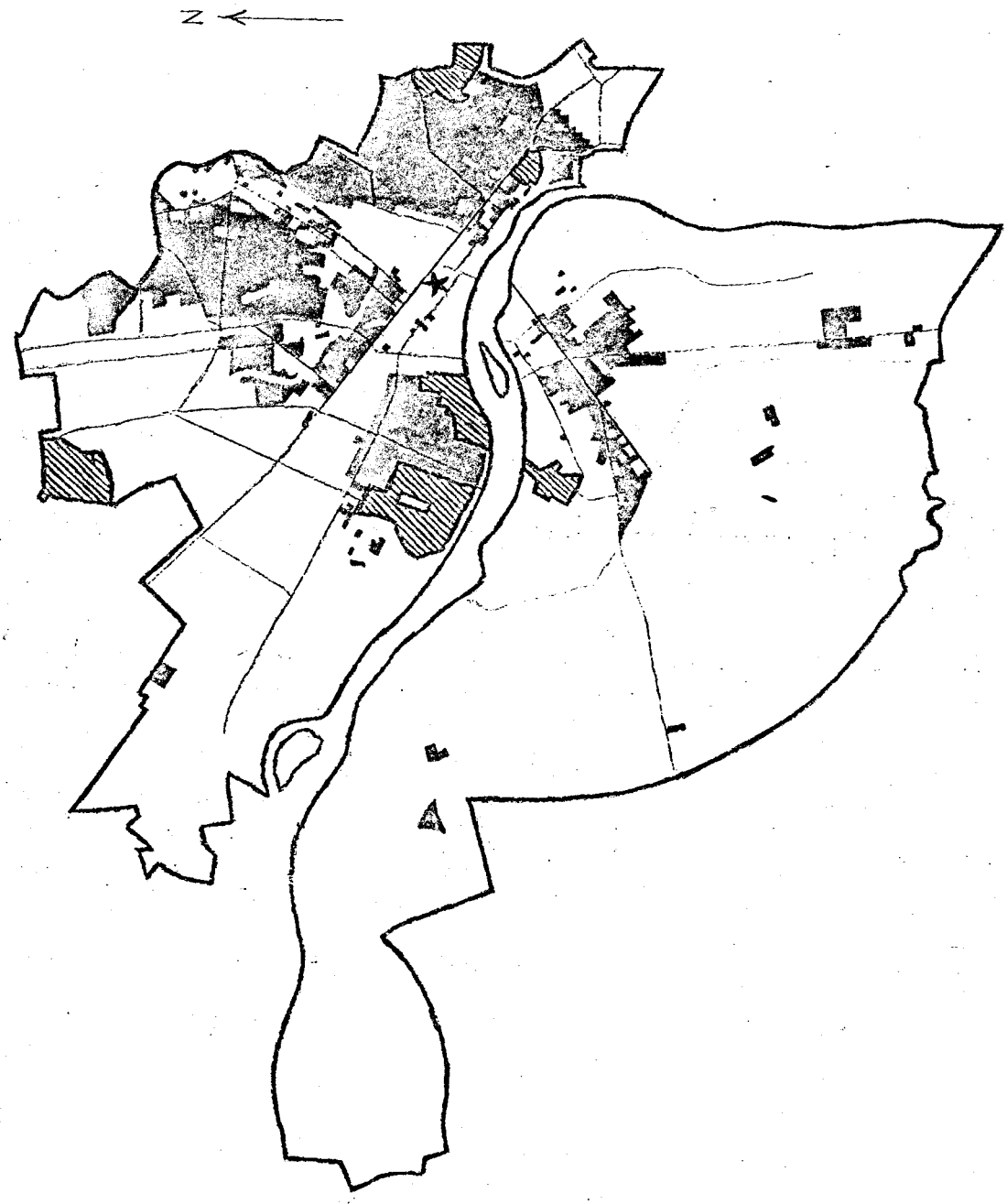
RICHMOND, 1950

MAP 103



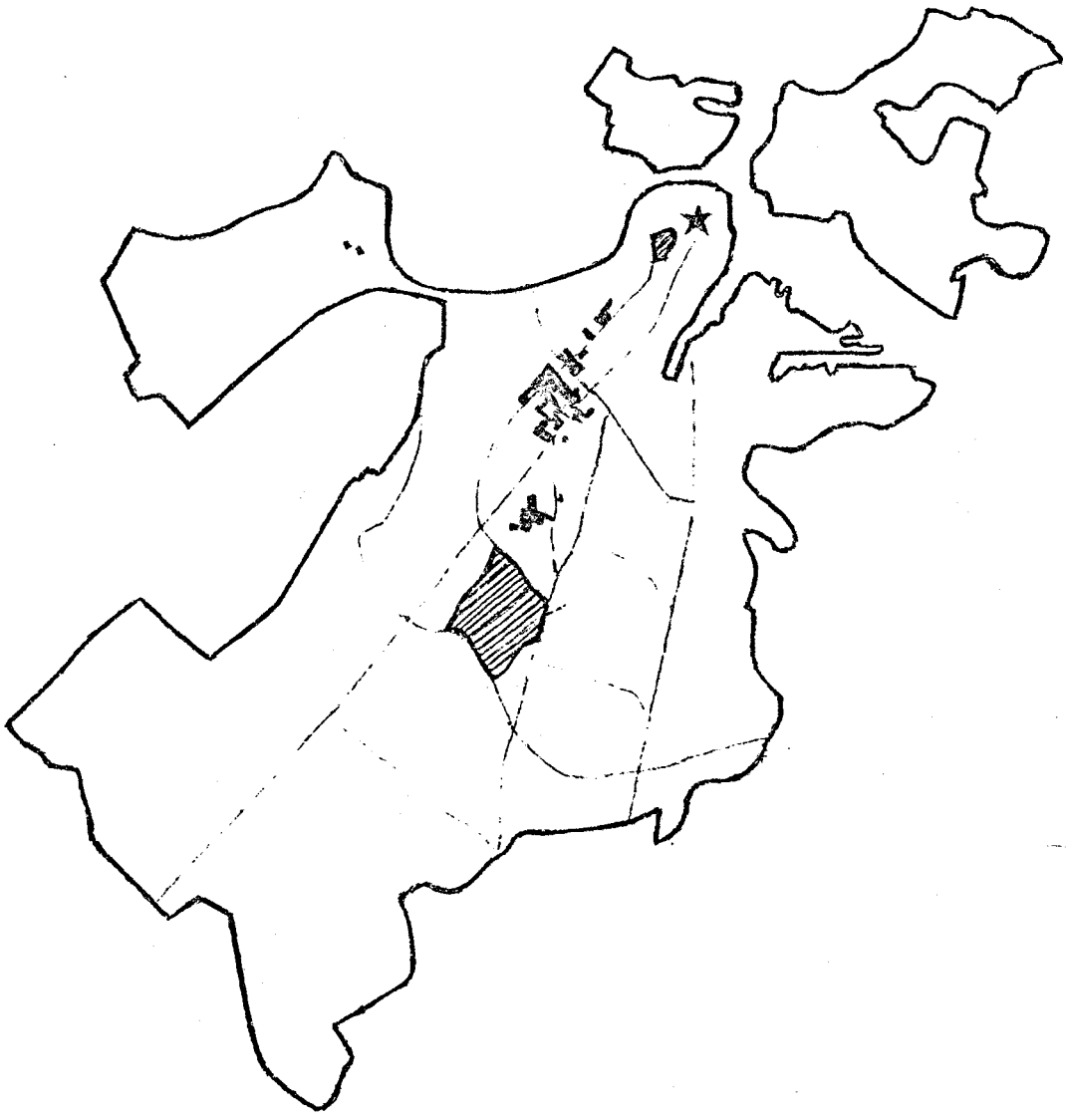
RICHMOND, 1960

MAP 104



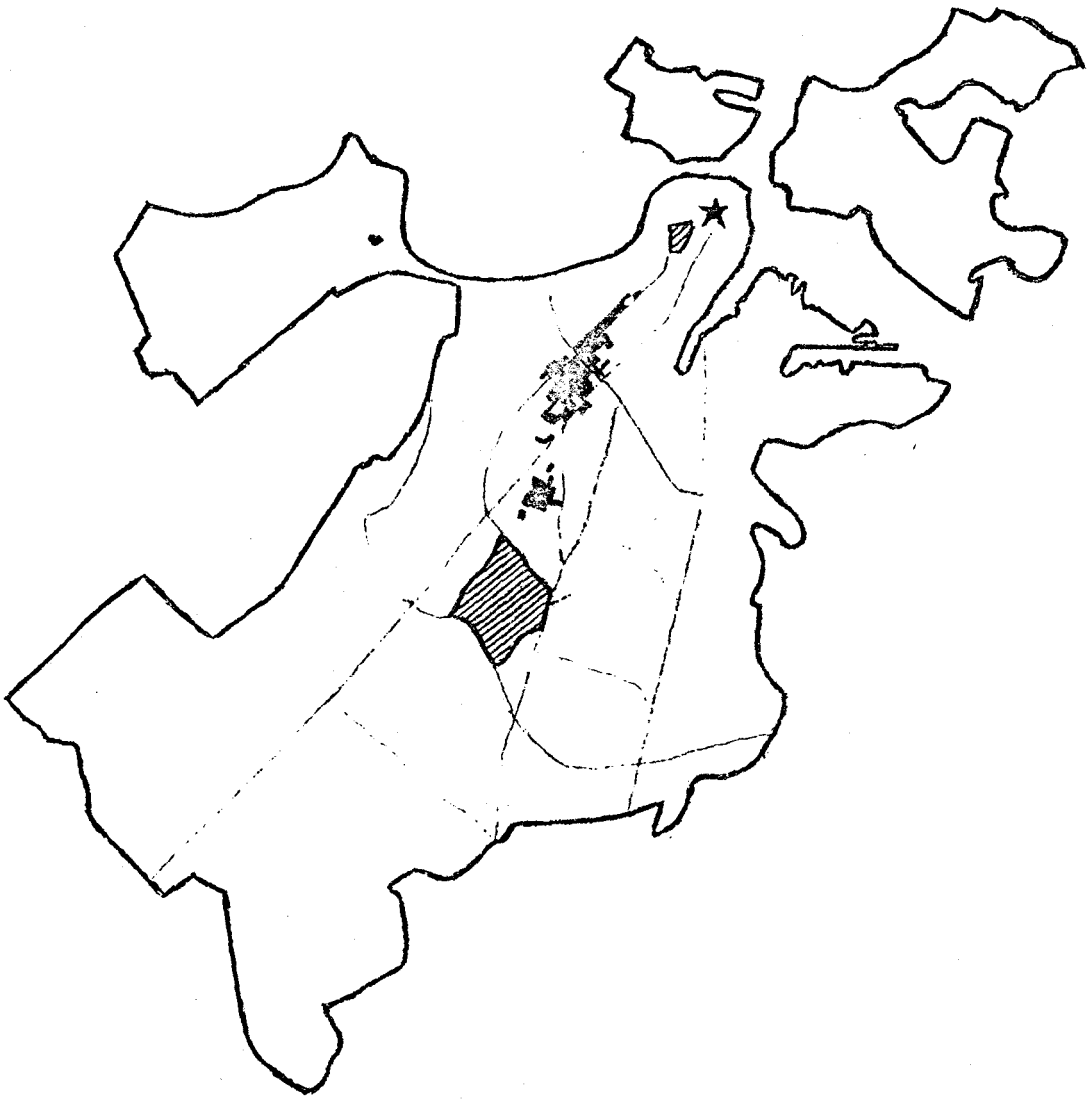
RICHMOND, 1970

MAP 105



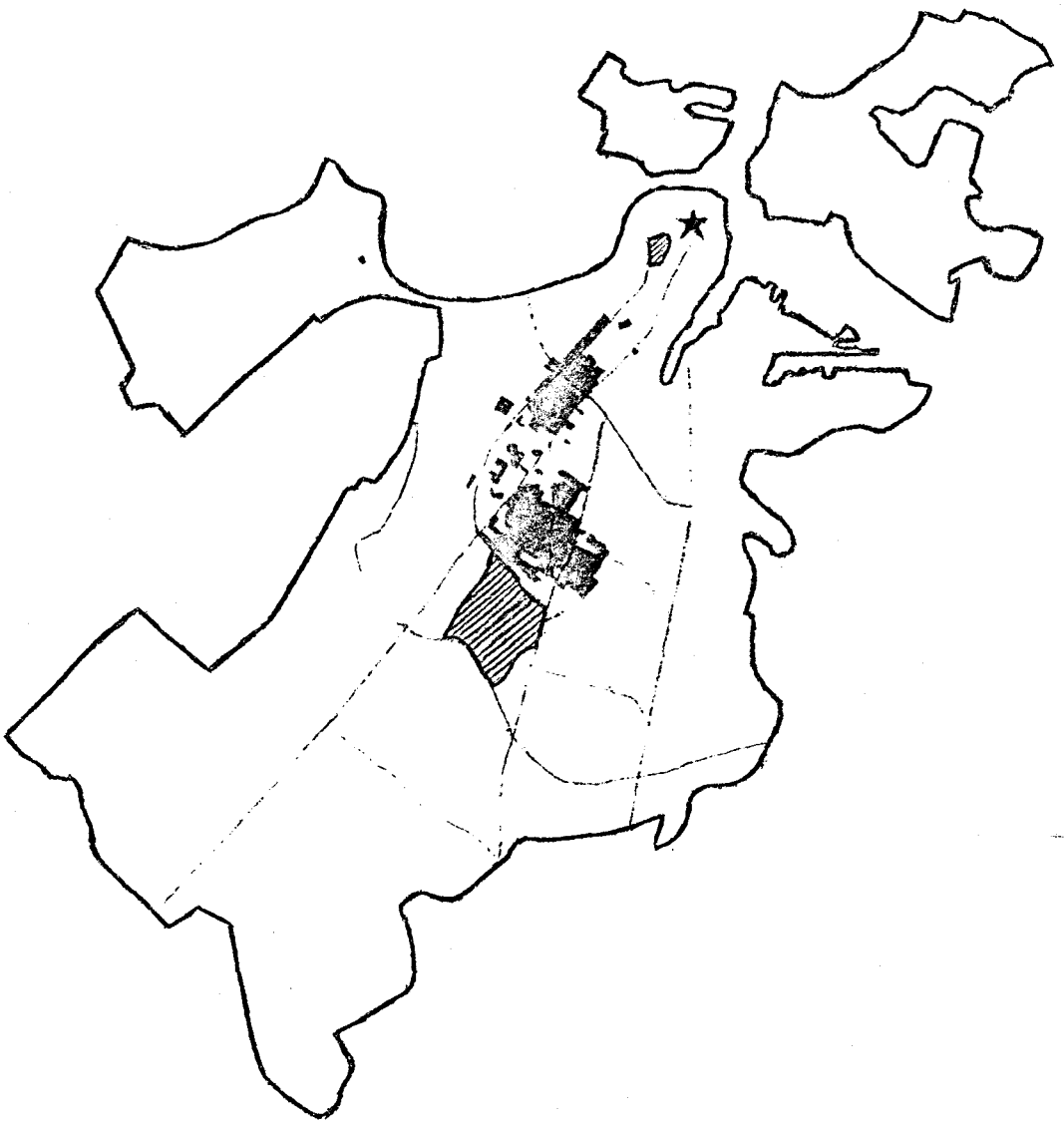
BOSTON, 1940

MAP 106



BOSTON, 1950

MAP 107



BOSTON, 1960

MAP 108

BOSTON, 1970

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Dallas Texas.
Detroit, Michigan.
Houston, Texas.
Indianapolis, Indiana.
Jacksonville, Florida.
Kansas City, Missouri.
Los Angeles, California.
Memphis, Tennessee.
Milwaukee, Wisconsin.
New Orleans, Louisiana.
New York, New York.
Newark, New Jersey.
Oakland, California.
Philadelphia, Pennsylvania.
Pittsburgh, Pennsylvania.
Richmond, Virginia.
St. Louis, Missouri.
San Francisco, California.
Washington, D.C.

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Birmingham, Alabama.
Boston, Massachusetts.
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Cincinnati, Ohio and Adjacent Area.
Cleveland, Ohio and Adjacent Area.
Dallas, Texas and Adjacent Area.
Detroit, Michigan and Adjacent Area.
Houston, Texas.
Indianapolis, Indiana and Adjacent Area.
Kansas City, Missouri.

Los Angeles, California and Adjacent Area.
Memphis, Tennessee and Adjacent Area.
Milwaukee, Wisconsin.
New Orleans, Louisiana.
New York, New York.
Newark, New Jersey.
Oakland, California and Adjacent Area.
Philadelphia, Pennsylvania.
Pittsburgh, Pennsylvania and Adjacent Area.
Richmond, Virginia.
St. Louis, Missouri and Adjacent Area.
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Part 10: Florida.
Part 11: Georgia.
Part 13: Illinois.
Part 14: Indiana.
Part 18: Louisiana.
Part 20: Maryland.
Part 21: Massachusetts.
Part 22: Michigan.
Part 25: Missouri.
Part 30: New Jersey.
Part 32: New York
Part 35: Ohio.
Part 38: Pennsylvania.
Part 42: Tennessee.
Part 43: Texas.
Part 36: Virginia.
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Chapter 11: Cincinnati, Ohio and Adjacent Area.
Chapter 12: Cleveland, Ohio and Adjacent Area.
Chapter 14: Dallas, Texas and Adjacent Area.
Chapter 17: Detroit, Michigan and Adjacent Area.
Chapter 24: Houston, Texas and Adjacent Area.
Chapter 25: Indianapolis, Indiana and Adjacent Area.
Chapter 27: Kansas City, Missouri and Adjacent Area.
Chapter 28: Los Angeles, California and Adjacent Area.
Chapter 30: Memphis, Tennessee and Adjacent Area.

Chapter 32: Milwaukee, Wisconsin and Adjacent Area.
Chapter 36: New Orleans, Louisiana and Adjacent Area.
Chapter 37: New York, New York.
Chapter 42: Philadelphia, Pennsylvania and Adjacent Area.
Chapter 43: Pittsburgh, Pennsylvania and Adjacent Area.
Chapter 45: Richmond, Virginia and Adjacent Area.
Chapter 47: St. Louis, Missouri and Adjacent Area.
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Cincinnati, Ohio, Part 37.
Cleveland, Ohio, Part 38.
Dallas, Texas, Part 45.
Detroit, Michigan, Part 52.
Houston, Texas, Part
Indianapolis, Indiana, Part
Jacksonville, Florida, Part 86.
Kansas City, Missouri, Part 91.
Los Angeles, California, Part 100.
Memphis, Tennessee, Part 110.
Milwaukee, Wisconsin, Part 112.
Newark, New Jersey, Part 119.
New Orleans, Louisiana, Part 123.
Bronx Borough, New York City, Part 126.
Brooklyn Borough, New York City, Part 127.
Manhattan Borough, New York City, Part 128.
Queens Borough, New York City, Part 129.
Richmond Borough, New York City, Part 130.
Oakland, California, Part
Philadelphia, Pennsylvania, Part 143.
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Part 11: Florida.
Part 12: Georgia.
Part 15: Illinois.
Part 16: Indiana.

Part 20: Louisiana.
Part 22: Maryland.
Part 23: Massachusetts.
Part 24: Michigan.
Part 27: Missouri.
Part 32: New Jersey.
Part 34: New York.
Part 37: Ohio.
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Part 44: Tennessee.
Part 45: Texas.
Part 58: Virginia.
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PHC(1)-17 Birmingham, Alabama.
PHC(1)-18 Boston, Massachusetts.
PHC(1)-26 Chicago, Illinois.
PHC(1)-27 Cincinnati, Ohio-Kentucky.
PHC(1)-28 Cleveland, Ohio.
PHC(1)-34 Dallas, Texas.
PHC(1)-40 Detroit, Michigan
PHC(1)-54 Gary-Hammond-East Chicago, Indiana.
PHC(1)-63 Houston, Texas.
PHC(1)-64 Indianapolis, Indiana.
PHC(1)-66 Jacksonville, Florida.
PHC(1)-70 Kansas City, Missouri-Kansas.
PHC(1)-82 Los Angeles-Long Beach, California.
PHC(1)-89 Memphis, Tennessee.
PHC(1)-92 Milwaukee, Wisconsin.
PHC(1)-103 New Orleans, Louisiana.
PHC(1)-104 New York, New York.
PHC(1)-105 Newark, New Jersey.
PHC(1)-116 Philadelphia, Pennsylvania-New Jersey.
PHC(1)-118 Pittsburgh, Pennsylvania
PHC(1)-126 Richmond, Virginia.
PHC(1)-131 St. Louis, Missouri-Illinois.
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HC(3)-2 Birmingham, Alabama.
HC(3)-29 Compton, California.
HC(3)-46 Los Angeles, California.
HC(3)-53 Oakland, California.
HC(3)-67 San Francisco, California.
HC(3)-105 Washington, D.C.
HC(3)-109 Jacksonville, Florida.
HC(3)-118 Atlanta, Georgia.
HC(3)-133 Chicago, Illinois.

HC(3)-152 Gary, Indiana.
HC(3)-154 Indianapolis, Indiana.
HC(3)-174 New Orleans, Louisiana.
HC(3)-178 Baltimore, Maryland.
HC(3)-180 Boston, Massachusetts.
HC(3)-204 Detroit, Michigan.
HC(3)-230 Kansas City, Missouri.
HC(3)-232 St. Louis, Missouri.
HC(3)-252 Newark, New Jersey.
HC(3)-273 New York City--Bronx Borough, New York.
HC(3)-274 New York City--Brooklyn Borough, New York.
HC(3)-275 New York City--Manhattan Borough, New York.
HC(3)-276 New York City--Queens Borough, New York.
HC(3)-277 New York City--Richmond Borough, New York.
HC(3)-308 Cincinnati, Ohio.
HC(3)-309 Cleveland, Ohio.
HC(3)-344 Philadelphia, Pennsylvania.
HC(3)-345 Pittsburgh, Pennsylvania.
HC(3)-368 Memphis, Tennessee.
HC(3)-377 Dallas, Texas.
HC(3)-381 Houston, Texas.
HC(3)-403 Richmond, Virginia.
HC(3)-417 Milwaukee, Wisconsin.

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PC(1)-B 2 Alabama
PC(1)-B 6 Section 1, California.
PC(1)-B 10 District of Columbia.
PC(1)-B 11 Section 1, Florida,
PC(1)-B 12 Georgia.
PC(1)-B 15 Section 1, Illinois.
PC(1)-B 16 Indiana.
PC(1)-B 20 Louisiana.
PC(1)-B 22 Maryland.
PC(1)-B 23 Massachusetts.
PC(1)-B 24 Michigan.
PC(1)-B 27 Missouri.
PC(1)-B 32 Section 1, New Jersey.
PC(1)-B 34 Section 1, New York.
PC(1)-B 37 Section 1, Ohio.
PC(1)-B 40 Section 1, Pennsylvania.
PC(1)-B 44 Tennessee
PC(1)-B 45 Section 1, Texas.
PC(1)-B 48 Virginia.
PC(1)-B 51 Wisconsin.

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PHC(1)-14 Atlanta, Georgia.
PHC(1)-19 Baltimore, Maryland.
PHC(1)-26 Birmingham, Alabama.
PHC(1)-29 Boston, Massachusetts.
PHC(1)-43 Chicago, Illinois

PHC(1)-44 Cincinnati, Ohio-Kentucky-Indiana.
PHC(1)-45 Cleveland, Ohio
PHC(1)-52 Dallas, Texas.
PHC(1)-58 Detroit, Michigan.
PHC(1)-79 Gary-Hammond-East Chicago, Indiana.
PHC(1)-89 Houston, Texas.
PHC(1)-92 Indianapolis, Indiana.
PHC(1)-95 Jacksonville, Florida.
PHC(1)-99 Kansas City, Missouri-Kansas.
PHC(1)-117 Los Angeles-Long Beach, California.
PHC(1)-127 Memphis, Tennessee-Arkansas.
PHC(1)-131 Milwaukee, Wisconsin.
PHC(1)-144 New Orleans, Louisiana.
PHC(1)-145 New York, New York.
PHC(1)-146 Newark, New Jersey.
PHC(1)-159 Philadelphia, Pennsylvania-New Jersey.
PHC(1)-162 Pittsburgh, Pennsylvania.
PHC(1)-173 Richmond, Virginia.
PHC(1)-181 St. Louis, Missouri-Illinois.
PHC(1)-189 San Francisco-Oakland, California.
PHC(1)-226 Washington, D.C.-Maryland-Virginia.

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HC(3)-18 Los Angeles-Long Beach, California.
HC(3)-24 San Francisco-Oakland, California.
HC(3)-44 Washington, D.C.
HC(3)-46 Jacksonville, Florida.
HC(3)-56 Atlanta, Georgia.
HC(3)-68 Chicago, Illinois--Northwestern Indiana.
HC(3)-78 Indianapolis, Indiana.
HC(3)-101 New Orleans, Louisiana.
HC(3)-106 Baltimore, Maryland.
HC(3)-108 Boston, Massachusetts.
HC(3)-120 Detroit, Michigan.
HC(3)-135 Kansas City, Missouri.
HC(3)-137 St. Louis, Missouri.
HC(3)-159 New York-Northeastern New Jersey.
Part 1 - New York City.
Part 2 - New York Portion Outside New York City.
Part 3 - Northeastern New Jersey.
HC(3)-177 Cincinnati, Ohio.
HC(3)-178 Cleveland, Ohio.
HC(3)-204 Philadelphia, Pennsylvania.
HC(3)-205 Pittsburgh, Pennsylvania.
HC(3)-220 Memphis, Tennessee.
HC(3)-229 Dallas, Texas.
HC(3)-234 Houston, Texas.
HC(3)-257 Richmond, Virginia.
HC(3)-271 Milwaukee, Wisconsin.

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No. 653 California.
No. 657 Florida.
No. 658 Georgia.
No. 661 Illinois.
No. 662 Indiana.
No. 666 Louisiana.
No. 668 Maryland.
No. 669 Massachusetts.
No. 670 Michigan.
No. 673 Missouri.
No. 678 New Jersey.
No. 680 New York.
No. 683 Ohio.
No. 686 Pennsylvania.
No. 690 Tennessee.
No. 691 Texas.
No. 694 Virginia.
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APPENDIX A

METHODOLOGICAL NOTES

APPENDIX A

METHODOLOGICAL NOTES

The block statistics for the cities in this cample from 1940 to 1960 use the racial division white-nonwhite, in contrast to the better dichotomy of black-other for purposes of this study. Therefore, the compilation of block maps of the black population of the city prior to 1970 is subject to a certain amount of error. The nonblack component of the nonewhite population ranges from virtually nothing in many Southern cities such as Macon, Georgia to a substantial, if not preponderant, portion of that group in places like Sacramento and San Francisco, especially in 1940, before the western black population was large. Fortunately, this is not a major problem with this sample. The use of census tract reports does help somewhat in constructing a fairly accurate map because of the white-black-other division used in the tracts.

The census does not include the racial composition of blocks with very small populations, so those encountered in compiling these maps were assumed to be of the some composition as the surrounding blocks, if such was obvious. They were not matched by color in changing or very near to downtown neighborhoods where the race of the occupants was not certain. This also was to avoid erroneously overstating the size of the black areas.

The map patterns are based on the proportion black of all occupied housing units. There may be variations between the proportion of black occupied housing units and the proportion black of the total block population. A block where the number of black and white households was equal might really have a 60 to 70 per cent black population because of differences in family

size between the two racial groups. Also, various types of institutions might dramatically alter a block's composition from that of the neighborhood. Since prisons, hospitals and the like are not germane to a study of housing segregation, the maps are limited to occupied housing units.

No formal references to census works are given in the text. A complete list of census references is given in the bibliography.

There were no published census tract reports for Jacksonville in 1940 and 1950 or for Newark in 1950. The 1940 New York City population statistics were divided according to health areas, which did not correspond to the census tracts. In all of these cases, the number of nonwhite occupied housing units in each census tract was obtainable. The ratio of black persons to nonwhite occupied housing units was found for each city or borough. By multiplying the number of nonwhite occupied housing units in a given sector by the above ratio it was possible to obtain an accurate estimate of the number of black persons in the sector in question. There were no large Oriental populations in these cities at the time to distort the calculations significantly. By this roundabout method it was possible to calculate sector growth index figures for these cities even though there were no census tract reports in the three instances mentioned.

APPENDIX B

EXAMPLE OF CALCULATIONS FOR DRAWING A SECTOR AND CALCULATING THE SECTOR GROWTH CONFORMITY INDEX SCORE

APPENDIX B

EXAMPLE OF CALCULATIONS FOR DRAWING A SECTOR AND CALCULATING THE SECTOR GROWTH CONFORMITY INDEX SCORE

Kansas City Sector

Center: 12th Street and Oak Street.

1940

40-1 sector for 1940 bounded by line through center and 8th and Woodland, and a line through the center and the intersection of 16th and Oak. Outer boundary of sector described by one mile arcs drawn from 10th and Olive, 24th and Chestnut, 28th and Brooklyn and 26th and Forest. No 1-mile inner arc needed. Tracts more than 50 per cent within the sector boundaries in 1940: 14, 16-18, 24-27, 32, 33, 36-43, 49, 52, 54.

Black population of above tracts in 1940: 32,057 (77.1 per cent of city black population).

1950 Growth of 1940 Sector

The following tracts were added to sector 40-1 between 1940 and 1950, due to black neighborhood expansion: 23, 53, 55, 56. They had 676 black residents in 1940.

Black population of sector tracts in 1950: 47,346 (85.0 per cent of city black population).

Increase in sector black population 1940-1950: 14,613.

$$\frac{\text{Sector Black Increase}}{\text{City Black Increase}} = \frac{14{,}613}{14{,}108} = 1.036 \qquad 1.036 \times 100 = 103.6 \text{ per cent.}$$

The figure of 103.6 per cent means that the sector received the entire net increase of 14,108 during the decade, plus 505 black residents from parts

of Kansas City outside the sector. 1-mile arcs drawn from 11th and Prospect, 18th and Walrond, 26th and College, 30th and Park, 29th and Highland.

1960 Growth of 1940 Sector

The following tracts were added to Sector 40-1 between 1950 and 1960: 19, 22, 34, 35, 50, 51, 58, 60-65, 76, 77. They had 1,393 black residents in 1950.

Black population of sector tracts in 1960: 79,333 (95.4 per cent of city black population).

Increase in sector black population 1950-1960: 30,594.

$$\frac{\text{Sector Black Increase, 1950-60}}{\text{City Black Increase, 1950-60}} = \frac{30{,}594}{27{,}464} = \underline{1.114}$$

1.114 x 100 = 111.4 per cent.

Once again the sector received the entire city black increase during the decade, plus 3,130 blacks from areas of the city outside the sector.

1-mile arcs drawn from 12th and Elmwood, Elmwood and Truman, 28th and Spruce, 35th and Spruce, 46th Terrace and Cleveland, 45th and Chestnut, 44th and Wabash, 37th and Woodland.

1970 Growth of 1940 Sector

The following tracts were added to sector 40-1 between 1960 and 1970, due to black neighborhood expansion: 59.01, 59.02, 66, 74, 75, 78.01, 78.02, 79-82, 87-89. They had 888 black residents in 1960.

Black population of sector tracts in 1970: 108,669 (97 per cent of city black population.

Increase in sector black population 1960-1970: 28,448.

$$\frac{\text{Sector Black Increase, 1960-1970}}{\text{City Black Increase, 1960-1970}} = \frac{28{,}448}{28{,}859} = \underline{.986}$$

.986 x 100 = 98.6 per cent.

1-mile arcs drawn from 12th and Elmwood, Truman and Elmwood, 27th and Kensington, 33rd and Denver, 34th and Raytown, 36th and Raytown, Blue Parkway and Chelsea, 58th and Manchester, 62nd and Swope, 67th and Indiana, 68th and Bellefontaine, 67th and Chestnut, 57th and Woodland, 53rd and Woodland, 48th Terrace and Flora.

Kansas City	Per Cent of 1940-1950 Black Increase in Sector	Per Cent of 1950-1960 Black Increase in Sector	Per Cent of 1960-1970 Black Increase in Sector
1940 Sector	100.00 (Actual score, 103.6)	100.0 (Actual score 111.4)	98.6
21 Tracts	25 Tracts (Increase of 4)	41 Tracts (Increase of 16)	53 Tracts* (Increase of 12)

*Because of subdividing of tracts in 1970, the total is 59 in the 1970 census.

APPENDIX C

SCALE IN MILES PER INCH FOR MAPS 1-108

APPENDIX C

SCALE IN MILES PER INCH FOR MAPS 1-108

Maps	City	Approximate Number of Miles Per Inch
1-12	New York	2.2
13-16	Chicago	3.2
17-20	Detroit	2.5
21-24	Philadelphia	2.6
25-28	Washington	2.5
29-32	Los Angeles	5.7
33-36	Baltimore	2.5
37-40	Houston	4.1
41-44	Cleveland	2.2
45-48	New Orleans	1.6
49-52	Atlanta	2.5
53-56	St. Louis	1.8
57-60	Memphis	2.0
61-64	Dallas	4.2
65-68	Newark	1.3
69-72	Indianapolis	1.5
73-76	Birmingham	2.8
77-80	Cincinnati	2.0
81-84	Oakland	2.3
85-88	Jacksonville	2.2
89-92	Kansas City	2.7
93-96	Milwaukee	2.8
97-100	Pittsburgh	1.9
101-104	Richmond	1.8
105-108	Boston	2.0

APPROVAL SHEET

The dissertation submitted by Timothy Kenny has been read and approved by the following committee:

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The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

October 29, 1980
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