A Consultant's Report to the TRI-STATE TRANSPORTATION COMMITTEE on A Reconnaissance of the Tri-State Region

1965

The Tri-State Transportation Committee was formed in August 1961 by joint action of the Governors of the States of Connecticut, New Jersey and New York. The Committee was charged with developing long-range solutions to the transportation and development of this large, interstate, metropolitan Region. In addition, the Governors directed that the Committee give urgent attention to immediate problems and provide recommendations for action as soon as practicable.

The Committee has developed a long-range and an immediate action program of work. Immediate action programs were started first to study particular problem areas of transportation and urban development. As a part of its immediate action program, the Committee has initiated mass transit experiments where service improvements have been made and careful measurements are being taken of the induced changes in travel habits.

Longer-range planning studies were started in late 1962 and field surveys were conducted in 1963-4 to prepare a careful factual base for projection and for preparing longer-range plans.

The work of the Committee is financed by the three States and by the Federal Government through highway planning aid administered by the U. S. Bureau of Public Roads and also from planning and mass transportation grants provided by the U. S. Housing and Home Finance Agency.

THE PREPARATION OF THIS REPORT WAS FINANCED IN PART THROUGH FEDERAL FUNDS MADE AVAILABLE BY THE U.S. DEPARTMENT OF COMMERCE, BUREAU OF PUBLIC ROADS AND THE FEDERAL GRANT FROM THE URBAN RENEWAL ADMINISTRATION OF THE HOUSING AND HOME FINANCE AGENCY, UNDER THE PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED, AND IN COOPERATION WITH THE THREE STATES -CONNECTICUT-NEW JERSEY-NEW YORK.

5002-1760-3M

A CONSULTANT'S REPORT

TO THE

TRI-STATE TRANSPORTATION COMMITTEE

ON

A RECONNAISSANCE OF THE TRI-STATE REGION

AND SOME IDEAS FOR A DEVELOPMENT PLAN

This report represents the views of the author, Professor Arthur T. Row, Chairman of the Department of City Planning, Yale University who was engaged as a consultant. The report does not represent a recommendation from the Tri-State Transportation Committee.

The purpose of publishing this reconnaissance of the New Jersey-New York-Connecticut metropolitan region is to place before the public for discussion purposes a qualified professional planner's view of the future of this region.

The Tri-State Transportation Committee will in the course of its study program publish other alternative plans for discussion purposes on the future land development of the metropolitan region.

TO: TRI-STATE TRANSPORTATION COMMITTEE

In 1963 you authorized me, as a planning consultant, to undertake a quick, reconnaissance appraisal of the development problems and prospects facing Tri-State Region in the future.

This report represents my personal views. They are based on a brief study, and present a sketch of proposals and ideas. These are transmitted for discussion purposes rather than as "the answer".

I gather that other professionals on your staff, working in close partnership with State and local officials, are considering other alternative directions in which the Region may grow.

In making this report, I have worked with existing materials, integrating them into a particular view of the Region and its future growth. While the proposals and ideas presented represent my own opinion, I request that acknowledgement be given to the ready assistance provided me by the New York City Planning Commission, the Connecticut Development Commission, the New York Office for Regional Development, the New Jersey Department of Conservation and Economic Development - Division of Planning and the Regional Plan Association of New York.

Arthur T. Row, Jr., Consultant
PROFESSOR OF CITY PLANNING
YALE UNIVERSITY
NEW HAVEN, CONNECTICUT

TABLE OF CONTENTS

LIST OF PLATES

I INTRODUCTION

An urban region has an identifiable physical structure, an essential framework which changes slowly over time. Related to this structure is a surface development pattern which changes rapidly over time. An example of structure is the trunk line transport system. Its elements remain through several cycles of land use in its service area. This cycling of land use represents the dynamics of the region. Clearly structure and dynamics are related, act upon and modify each other.

Identifying, dimensioning, estimating direction and rates of changes of the dynamic elements of the region, and determining effects of these changes on the structure of the region are essential steps in the physical planning process.

These changes are responses to changes in the society and its economy, to changes in the processes of its daily business as well as to changes in its mores and its ideals. Therefore, the planning process requires an essay into the difficult area of a region's society and economy and government (which itself is a response), to estimate pressures and forces that will evoke responses in the region's physical make-up. This examination in turn may lead to proposals for modification to those parts of the machinery of government upon which execution of the plan depends. (The process of deciding whether or not to institute such proposed changes represents one test of a plan.)

For two reasons, a plan must be continuously tested and revised. A first is that plans have a way of falling short of our expectations, of not quite achieving the objectives we set, and therefore, constant appraisal must be built into the process. A second, and partial explanation of the first, is that a plan devised to meet the needs of change, must, by definition, be subject to change itself.

Forces of change and growth in the region frequently conflict one with another. They are not all acting automatically in the direction of a "better" region. Growth in one sector of the economy may induce obsolence and decline in another. As the region's physical pattern responds to these underlying changes, dislocations in the metropolitan "system" occur. Buildings remain, for example, which have no value yet are "assessed" at value, and increase costs in the system. The resolution of the conflicting pressures as they are expressed in the land suggest three responsibilities of government for physical development: the adjudication of conflicts; the control of certain pressures or their manifestation for the common good; and planning, or directing the flow of changes into directions chosen as being most closely aligned with the public welfare.

Such choices reflect social objectives in the sphere of physical development, and are expressions of public policy.

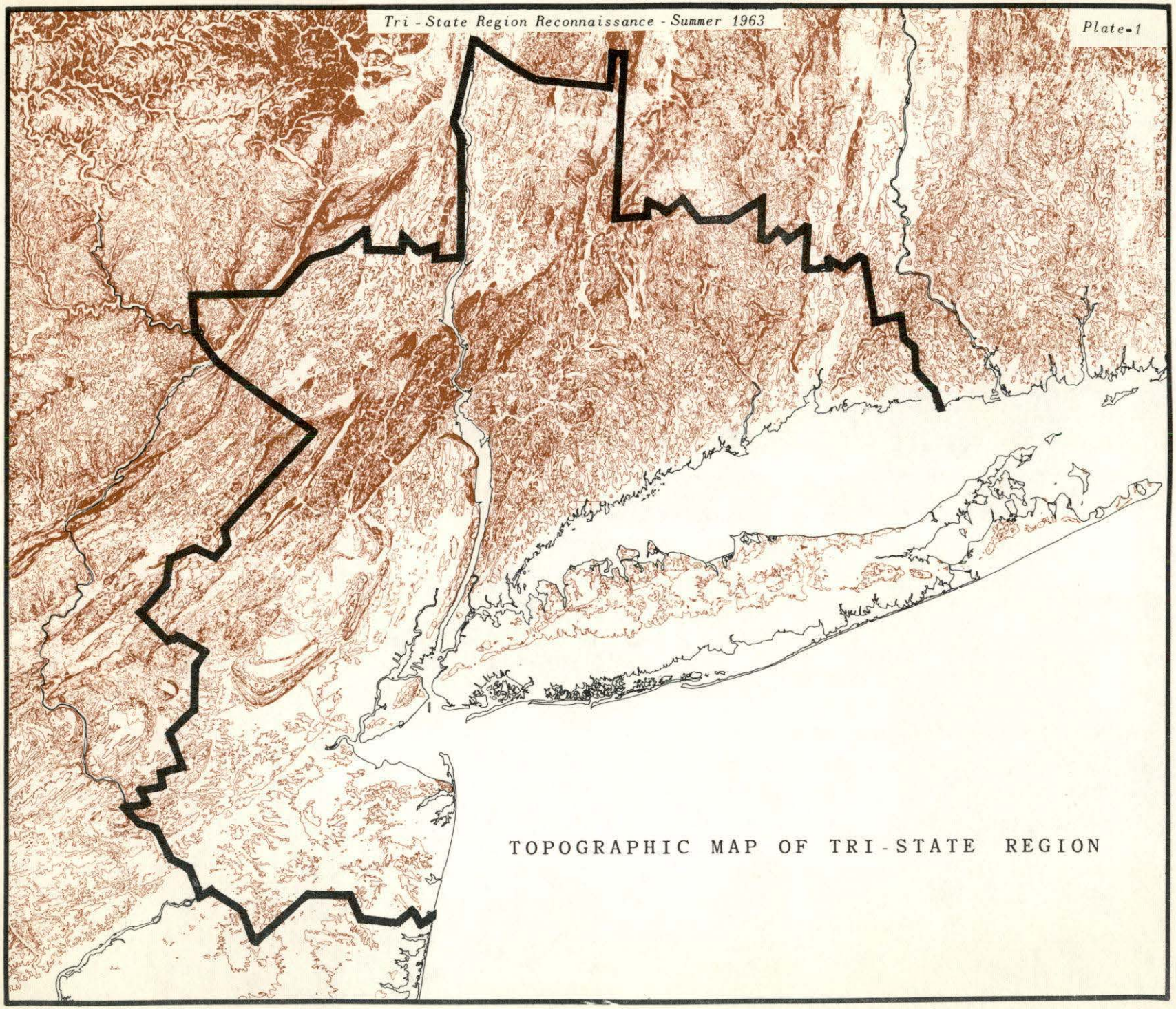
By setting measurements of change on the one hand, against objectives on the other, proposals for the development and redevelopment of the region are generated. These proposals, linked together into an internally consistent system, and tested for adherence to the objectives, constitute a plan.

Because these proposals take on meaning in public policy, and for their execution require some public action or investment, a further step in the planning process is an examination of the machinery of government to assess its capability for implementing the proposals. [1].

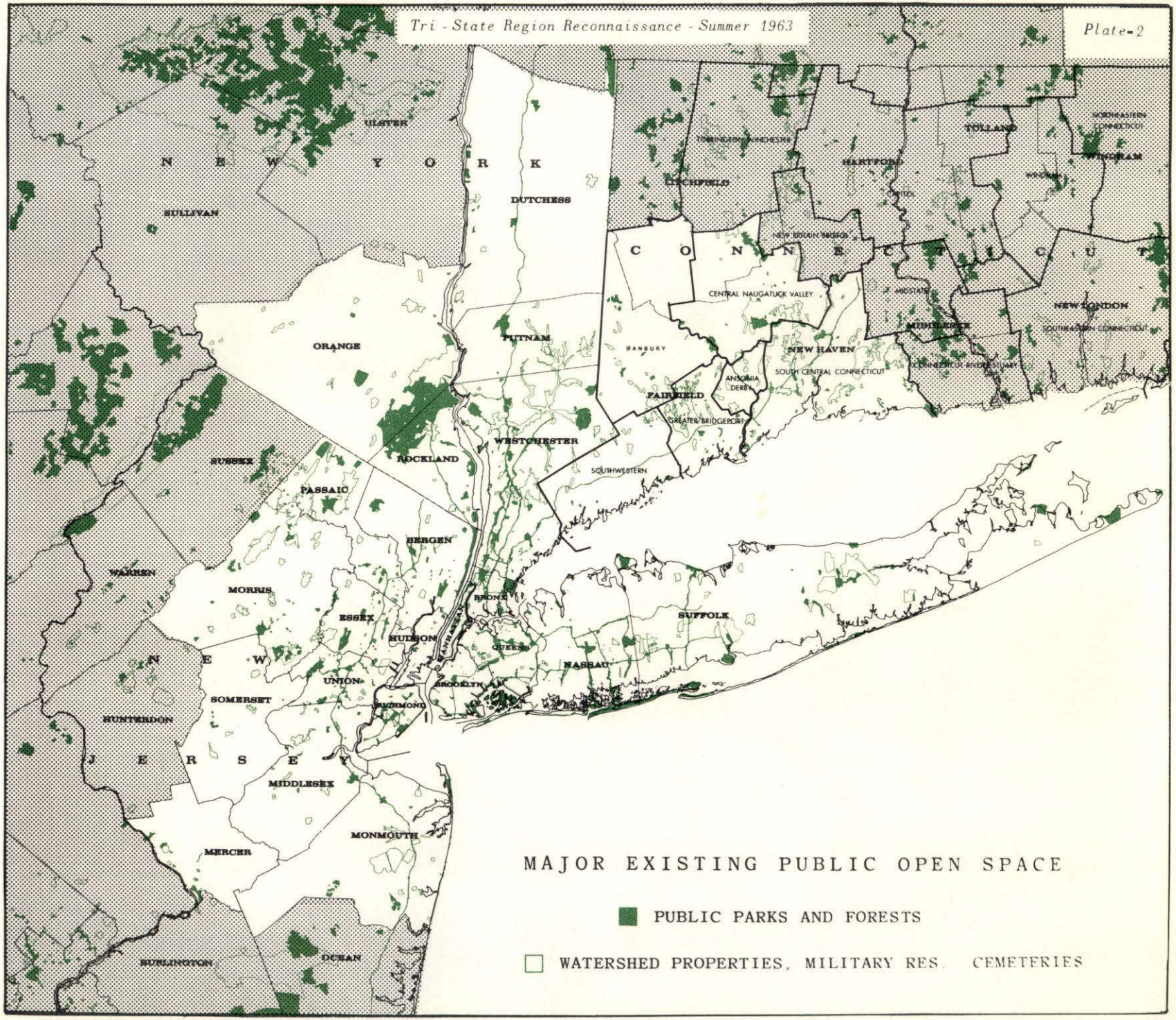
Clearly the process outlined above cannot be executed in a few short months for a region as large and as complex as the Tri-State Region. But this process in skeleton forms the structure of this report. It is thus divided into the following sections:

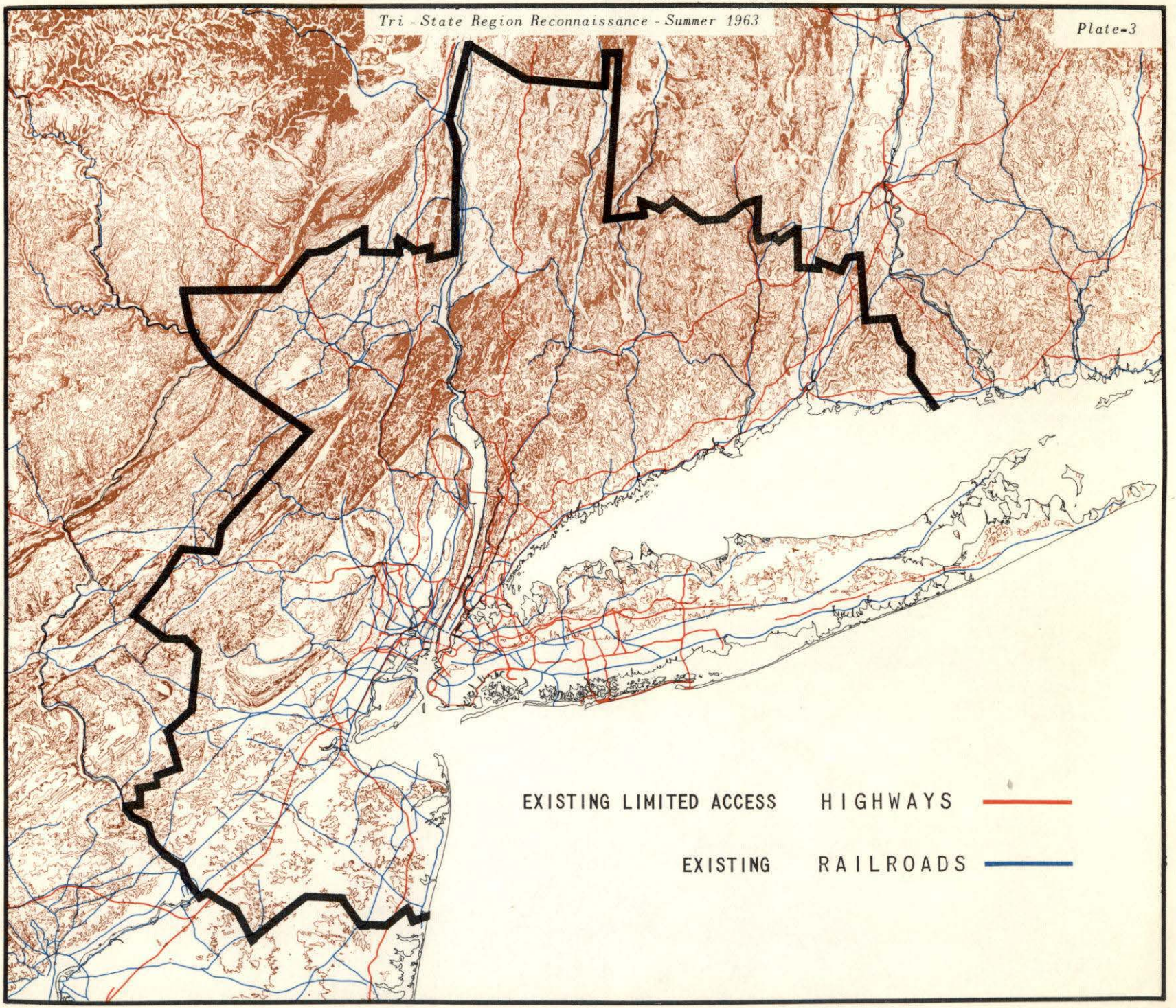
1. THE STRUCTURE OF THE REGION.
2. THE DYNAMICS OF THE REGION.
3. THE THRUST OF THE NEAR FUTURE.
4. SOME OBJECTIVES FOR A REGIONAL PLAN.
5. SOME PROPOSALS FOR REGIONAL DEVELOPMENT AND REDEVELOPMENT.

1. No attempt to deal with this phase of the planning process has been made in this reconnaissance study.



TOPOGRAPHIC MAP OF TRI-STATE REGION


Tri - State Region Reconnaissance - Summer 1963
Plate-2
N E W Y O R K
C O N N E C T I C U T
N E W J E R S E Y
ULSTER
SULLIVAN
DUTCHESS
ORANGE
PUTNAM
ROCKLAND
WESTCHESTER
SUSSEX
PASSAIC
BERGEN
WARREN
MORRIS
ESSEX
HUDSON
UNION
SOMERSET
HUNTERDON
MIDDLESEX
MERCER
MONMOUTH
BURLINGTON
OCEAN
LITCHFIELD
HARTFORD
TOLLAND
WINDHAM
NEW BRITAIN
CENTRAL NAUGATUCK VALLEY
NEW HAVEN
SOUTH CENTRAL CONNECTICUT
FAIRFIELD
GREATER BRIDGEPORT
SOUTHWESTERN
NEW LONDON
SOUTHEASTERN CONNECTICUT
BRONX
QUEENS
BROOKLYN
RICHMOND
NASSAU
SUFFOLK
MAJOR EXISTING PUBLIC OPEN SPACE
PUBLIC PARKS AND FORESTS
WATERSHED PROPERTIES, MILITARY RES. CEMETERIES


EXISTING LIMITED ACCESS HIGHWAYS
EXISTING RAILROADS

II. THE STRUCTURE OF THE TRI-STATE REGION.

The structure of the Region, its essential framework, consists of several primary components. Although they change, their rate of change is slow, they endure through change of the secondary components related to them.

Four components of structure in the Region have been identified and are treated in turn:

1. THE PHYSIOGRAPHY
2. THE MAJOR PUBLIC OPEN SPACES
3. THE MAJOR ELEMENTS IN THE TRANSPORTATION SYSTEM
4. THE MAJOR ACTIVITY CENTERS

Plate 1 shows the physiography of the Region. The development pattern of the New York Region has been molded in large degree by major natural features. Not only has the topography determined location of transportation routes, and in conjunction with the transport routes, significantly affected settlement patterns of the past, it continues to do so. The roles played by the harbor and the rivers in shaping the region are well known. The Watchung and Ramapo mountains have obviously influenced development patterns. The rapid growth of Long Island in the post-war period has been due in large part to the gentle topography which made large scale building easier than in areas at similar time-distance from the center in other sectors of the Region. A different example is the New Jersey meadows, three miles from Manhattan, after 300 years still largely underdeveloped.

Whereas the natural landscape as a whole plays a passive role in the development pattern, an environment to which man has adjusted his building over the years, parts of it have been deliberately set aside for preservation or for open uses in an otherwise intense pattern of urbanization. These include, as well as public parks, water company reservations, military camps, institutional areas of various kinds, and conservancy holdings. As a component of regional structure open space has a considerably greater structural potential than has been exhibited to date in the Region. Plate 2 shows the pattern of present public open space.

The most obvious element of regional structure is the system of major or trunk-line highways and railroads. These are shown on Plate 3. These systems make the Region a region. Without them it could not function, and therefore would not be. They are enduring, well beyond the time their creators imagined them to be. Through the industrial revolution and the present technological revolution, the corridor served by the Boston Post Road, the New Haven Railroad, and the Connecticut Turnpike has gone through many development changes, but consistently the changes have related to these trunk lines. The case is similar in the great transportation corridor to the south: the Pennsylvania Railroad, Route 1 and the New Jersey Turnpike.

Until fairly recently new growth in the Region has been concentrated in the immediate service areas of these arteries. Over time new units have been added to the system. Rarely have units been deleted. For the most part new facilities hew closely to the paths of old and obsolescent facilities.

These successive systems have hardened a development pattern that in its overall form probably will not change significantly.

Activity centers in the Region represents a different aspect of regional structure. In the composition of the Region, and in its daily functioning, certain places have developed, and retained over time, dominant positions to which other activities relate. "Downtown" type business centers such as Newark constitute the most obvious example. But specialized groupings of activity like Lincoln Center also fall into this category.

Regardless of the old saw that Manhattan Island rebuilds itself every forty years, Manhattan remains the unique central place of the Region. If a schoolboy were asked to identify the essence of the Tri-State Region, he would identify Manhattan or some part of it. But Manhattan is too gross an identification. The essence lies in certain activities that take place in Manhattan: commerce and exchange; government and business decision-making; education; culture and entertainment. Although these activities may move about in space over long periods of time, they do not move very far. Destinations of the regional transport net, these activi- cannot relocate very far from these facilities. One characteristic of these activities that tends to hold them in place is that the manner in which they are performed changes slowly. Thus the site does not become obsolete rapidly. The ritual of the theatre, the function of the library, the ceremony of the court of law, remain fundamentally the same through history. These are activities in which the person is a paramount. This is not so of manufacturing, for example, in which site requirements may change rapidly for technological reasons. Thus, not only because central place activities are person-serving and therefore must be at the nexus of a transport net, but also because their physical space requirements remain relatively constant, they tend to stay put, or to move in a small orbit.

But Manhattan is not the only center...it is the chief center. What of others? Do downtown Brooklyn, Newark, White Plains qualify as centers of activity that will endure, will retain dominant positions in their own sub-region, to which secondary activities will continue to relate? And further, are there other centers of activity than the more or less typical business center, the "downtown" area?

Three criteria have been established for identifying regional activity centers:

A) That the "center" be "region serving", i.e. that it serve people coming to it from all, or some significant sector of the region;

B) That, during the period of its functioning, it attracts a concentration of people;

C) That it have (in the life cycle of cities), a relative permanence, that it lives through changes in the region as a whole and the center's own immediate surroundings.

Fundamentally three kinds of activity centers appear to meet these criteria:

A) Regional business centers, either the traditional downtown such as Brooklyn or Newark, or the sub-urban regional shopping center such as Roosevelt Field;

B) Major institutional centers, such as universities, medical centers, or government centers (e.g. Trenton);

C) Major industrial concentrations which are tied to the resources of a place such as the port facilities, or the industrial concentration along Newton Creek, or the Passaic Valley.

Certain characteristics of such central places may be observed (The other side of the criteria coin).

Three are:

A) The activity remains relevant to the urban community;

B) There is a major dollar investment in place;

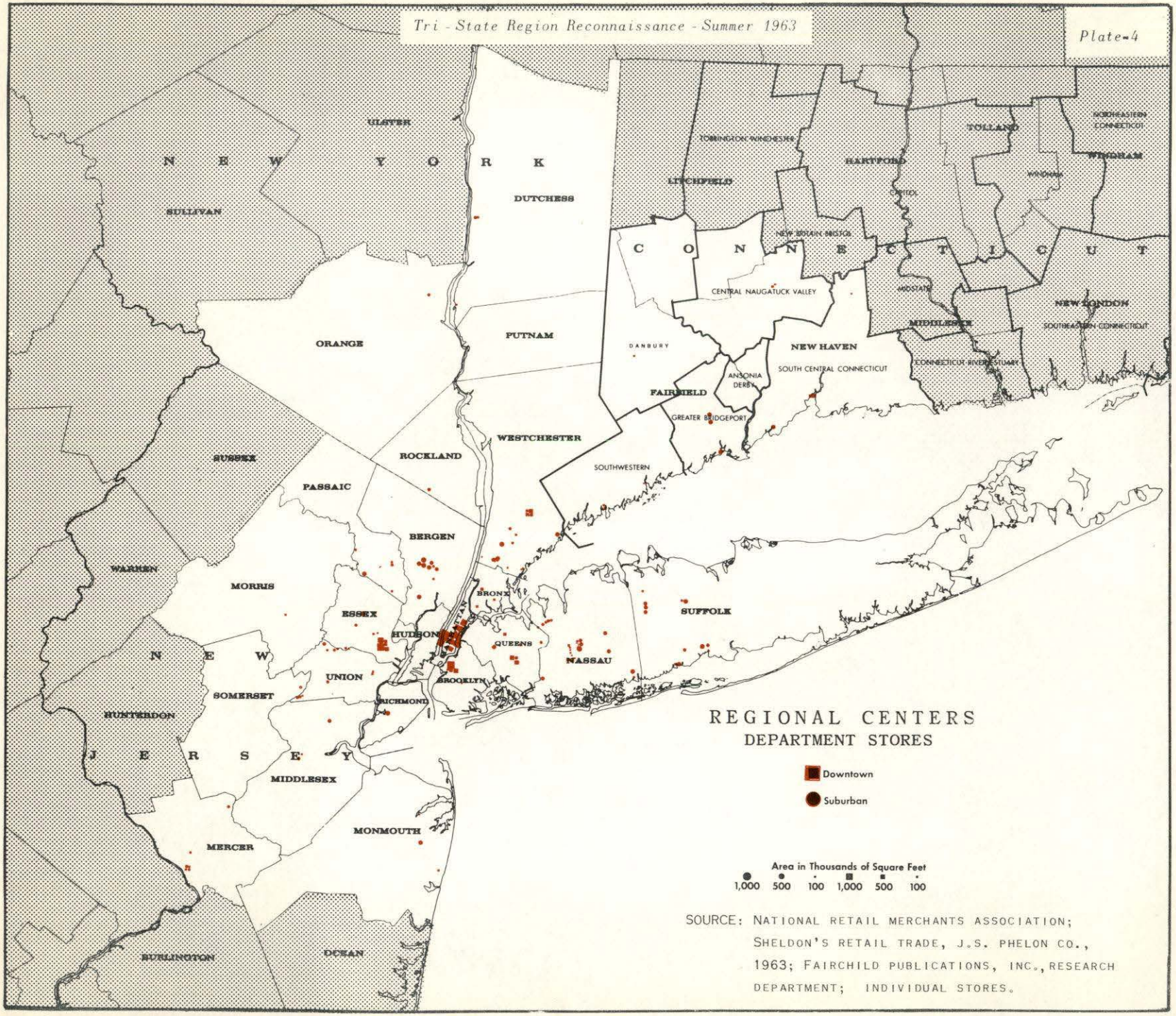
C) The functions of the activity change slowly and therefore the structure or facilities become obsolete slowly.

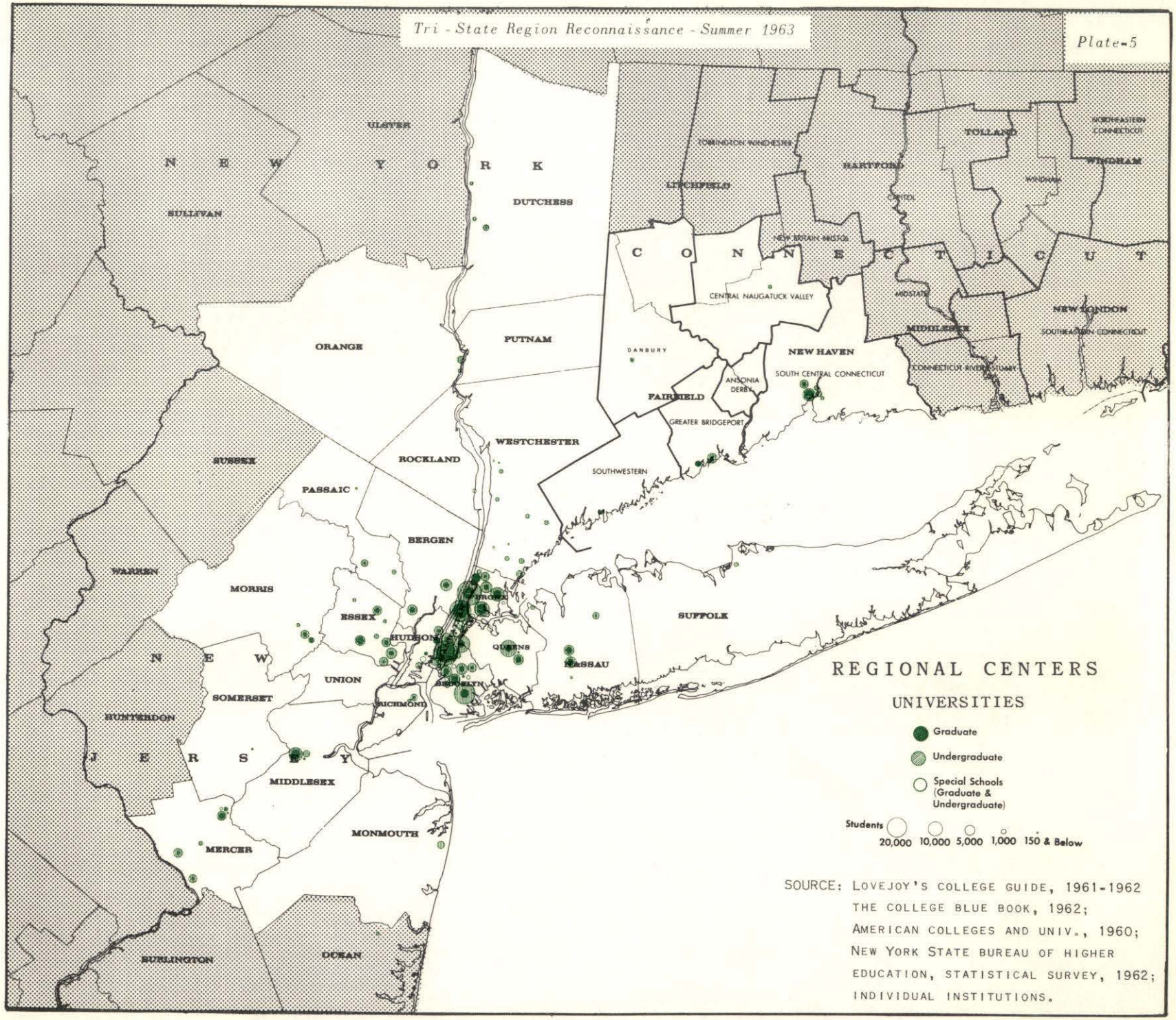
In order to identify existing centers in the region in a brief reconnaissance, easily obtainable indices had to be used. Thus regional business centers were identified by the existence of the department stores. 2.

We know that characteristics of such centers are changing and that in some ways a more reliable indicator of a major long term business center is the relative importance of office space as compared with retail space, but it was impossible during the reconnaissance period to identify and measure this element. However, for all practical purposes, the department store identification is a suitable indicator of regional business centers, and the relative size is a crude measure of the relative importance of the various centers.

The pattern of these centers can be seen on Plate 4. The rectangular symbol identifies department stores in the older downtown centers (e.g. Brooklyn, Newark). The circular symbol identifies newer outlying centers (e.g. Roosevelt Field on Long Island).

2. Defined as stores over 50,000 sq. ft. with at least 25 departments, and branches of these stores.


Tri - State Region Reconnaissance - Summer 1963
Plate-4
N E W Y O R K
ULSTER
SULLIVAN
DUTCHESS
ORANGE
PUTNAM
ROCKLAND
WESTCHESTER
SUSSEX
PASSAIC
BERGEN
WARREN
MORRIS
ESSEX
HUDSON
UNION
SOMERSET
HUNTERDON
MIDDLESEX
MERCER
MONMOUTH
BURLINGTON
OCEAN
N E W J E R S E Y
BRONX
QUEENS
BROOKLYN
RICHMOND
NASSAU
SUFFOLK
C O N N E C T I C U T
TORRINGTON-WINCHESTER
LITCHFIELD
HARTFORD
CAPITOL
TOLLAND
WINDHAM
NORTHEASTERN CONNECTICUT
NEW BRITAIN-BRISTOL
CENTRAL NAUGATUCK VALLEY
DANBURY
MIDSTATE
MIDDLESEX
NEW LONDON
SOUTHEASTERN CONNECTICUT
NEW HAVEN
SOUTH CENTRAL CONNECTICUT
CONNECTICUT RIVER ESTUARY
ANSONIA DERBY
FAIRFIELD
GREATER BRIDGEPORT
SOUTHWESTERN
REGIONAL CENTERS
DEPARTMENT STORES
Downtown
Suburban
Area in Thousands of Square Feet
1,000 500 100 1,000 500 100
SOURCE: NATIONAL RETAIL MERCHANTS ASSOCIATION; SHELDON'S RETAIL TRADE, J.S. PHELON CO., 1963; FAIRCHILD PUBLICATIONS, INC., RESEARCH DEPARTMENT; INDIVIDUAL STORES.


Tri - State Region Reconnaissance - Summer 1963
Plate-5
N E W Y O R K
C O N N E C T I C U T
N E W J E R S E Y
ULSTER
SULLIVAN
DUTCHESS
ORANGE
PUTNAM
ROCKLAND
WESTCHESTER
SUSSEX
PASSAIC
BERGEN
WARREN
MORRIS
ESSEX
HUDSON
UNION
SOMERSET
HUNTERDON
MIDDLESEX
MERCER
MONMOUTH
BURLINGTON
OCEAN
QUEENS
NASSAU
SUFFOLK
RICHMOND
LITCHFIELD
TORRINGTON-WINCHESTER
HARTFORD
TOLLAND
WINDHAM
NORTHEASTERN CONNECTICUT
NEW BRITAIN-BRISTOL
CENTRAL NAUGATUCK VALLEY
DANBURY
NEW HAVEN
SOUTH CENTRAL CONNECTICUT
ANSONIA DERBY
FAIRFIELD
GREATER BRIDGEPORT
SOUTHWESTERN
MIDSTATE
MIDDLESEX
CONNECTICUT RIVER ESTUARY
NEW LONDON
SOUTHEASTERN CONNECTICUT
REGIONAL CENTERS
UNIVERSITIES
Graduate
Undergraduate
Special Schools (Graduate & Undergraduate)
Students
20,000 10,000 5,000 1,000 150 & Below
SOURCE: LOVEJOY'S COLLEGE GUIDE, 1961-1962
THE COLLEGE BLUE BOOK, 1962;
AMERICAN COLLEGES AND UNIV., 1960;
NEW YORK STATE BUREAU OF HIGHER EDUCATION, STATISTICAL SURVEY, 1962;
INDIVIDUAL INSTITUTIONS.

It is clear that, despite the diffusion of residential construction over the period 1946-1960, the business centers are much more heavily concentrated in Manhattan and adjacent counties of the Region, and along the old development corridors. Only Long Island significantly departs from this pattern.

All of these centers will change, but in some form all will probably remain. Some may decline in activity, others increase. But, generally speaking, these business centers will persist as structural elements in the Region.

The major class of the second kind of activity center, the institutional center, has also been mapped. All of the institutions of higher education in the Region have been identified and classified by size. They are shown on Plate 5.

For the most part, these central places will remain in their present location, and for the most part will increase in activity at their locations. Universities change location rarely. Sometimes they will spawn a new campus. But they clearly meet the criterion of relative permanance in place.

Further, over the next quarter century, when college age population in the region will double (from 1.22 million in 1960 to 2.37 million in 1985) these centers are bound to increase in importance as attractors of people to particular locations.

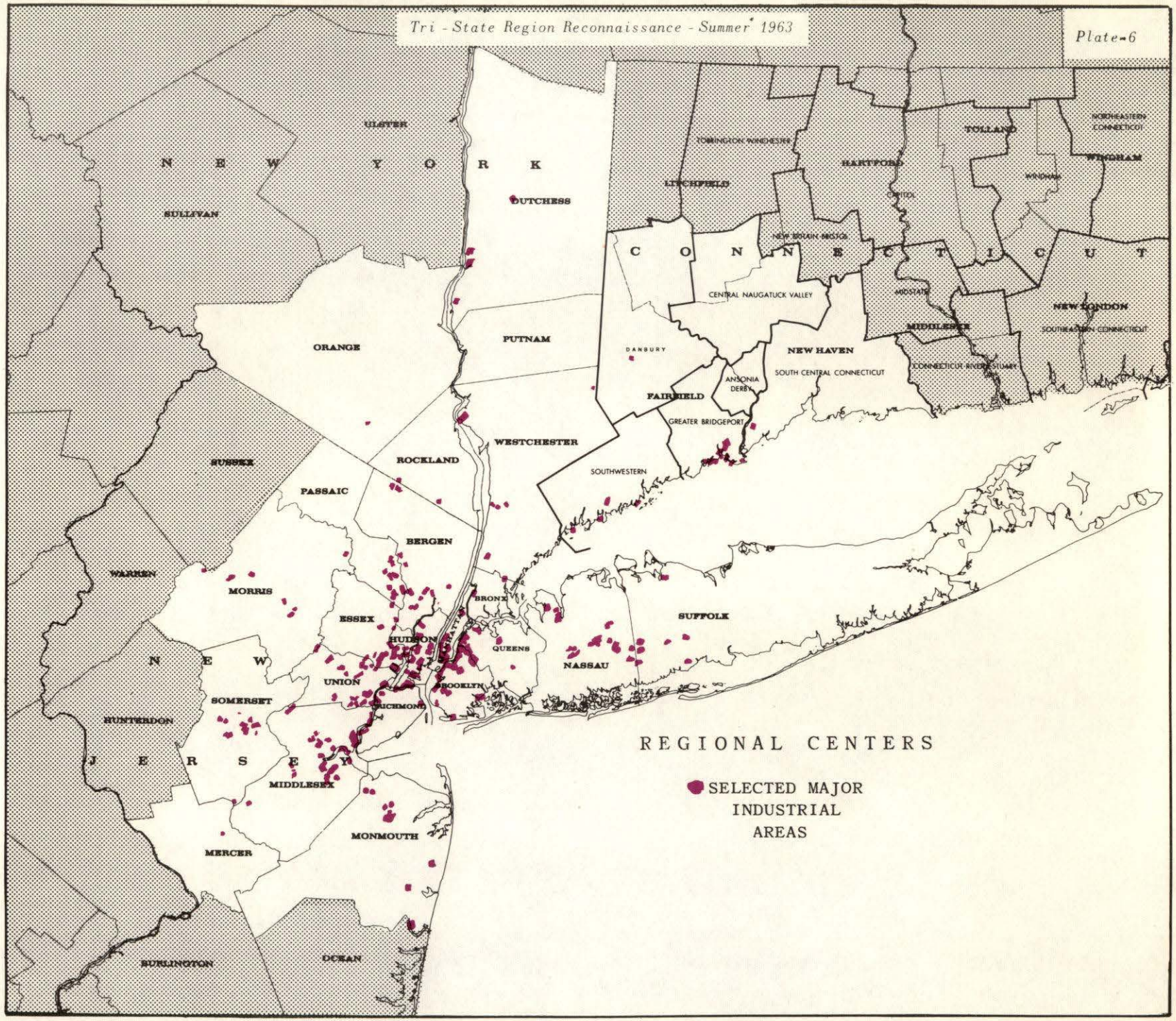
These centers will increase in relative importance in the Region for another reason. The university is becoming increasingly involved with the life of the urban community. Its faculty consult with business and government, its research is increasingly supported by business and government, its library and classroom resources are being opened to a wider clientele.

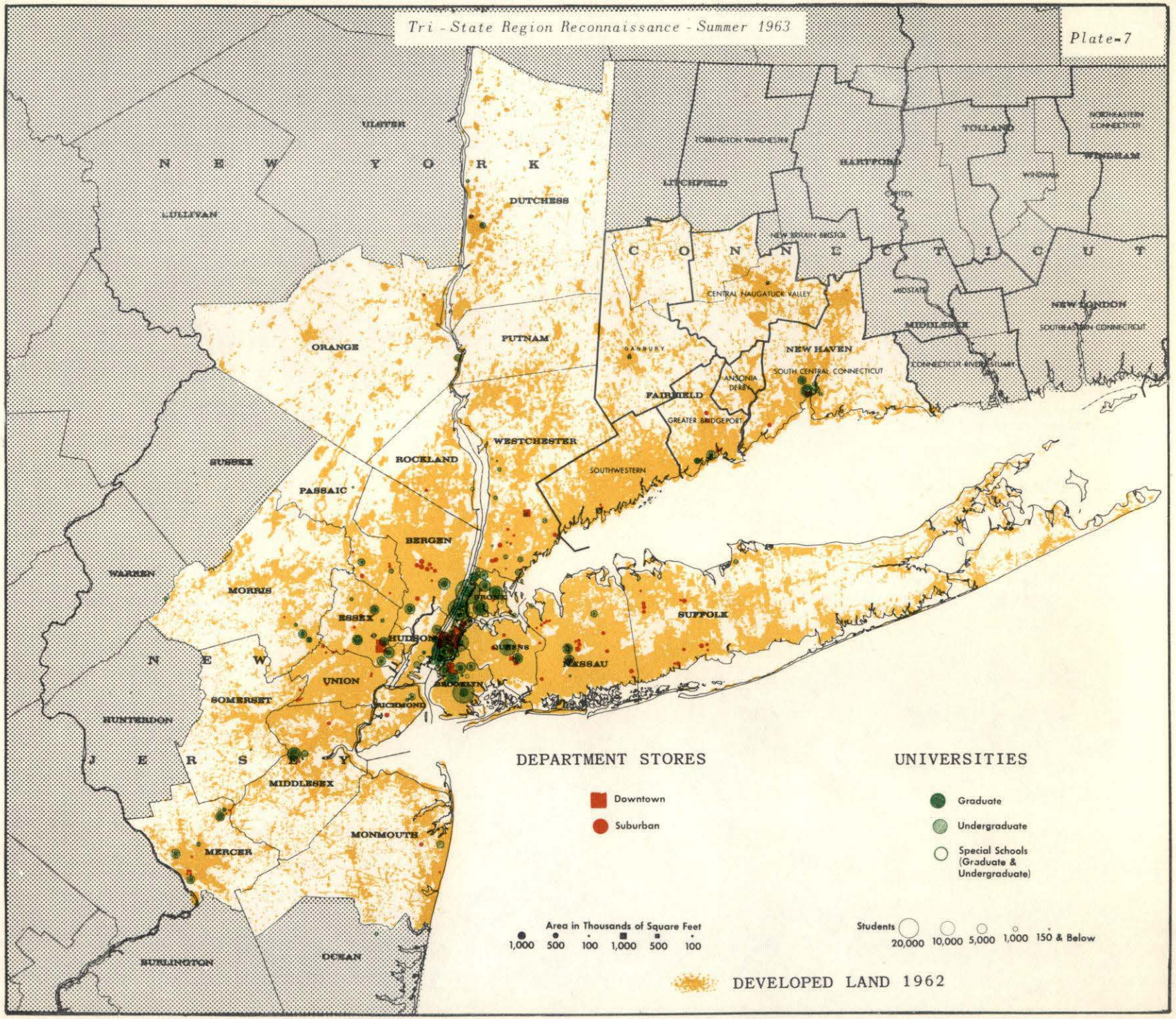
As our economy moves in the direction of more brainpower and less manpower per unit of industrial production, as our society moves in the direction of more reasoned concern for its inequities and its functioning, the relative importance of the university in the daily life of the urban community will increase.

Not only will these centers function as important collectors of people, but they will increasingly attract other activities to them-research laboratories for example-perhaps even some kinds of corporate headquarters or government offices.

There is no question that the centers of teaching and research shown on Plate 5 are structural elements in the regional community.

As with business centers, the concentration in Manhattan, close to the center of the Region, of these institutional centers, is striking. Many of the smaller ones on the periphery will expand and increase in importance. But presently, these activity centers are highly centralized, despite the diffusion of other kinds of recent development, primarily residential.


Tri - State Region Reconnaissance - Summer 1963
Plate-6
N E W Y O R K
ULSTER
SULLIVAN
ORANGE
PUTNAM
DUTCHESS
WESTCHESTER
ROCKLAND
SUSSEX
PASSAIC
BERGEN
WARREN
MORRIS
ESSEX
HUDSON
UNION
SOMERSET
HUNTERDON
MIDDLESEX
MERCER
MONMOUTH
BURLINGTON
OCEAN
BRONX
QUEENS
BROOKLYN
RICHMOND
NASSAU
SUFFOLK
N E W J E R S E Y
C O N N E C T I C U T
TORRINGTON-WINCHESTER
LITCHFIELD
HARTFORD
CAPITOL
TOLLAND
WINDHAM
NORTHEASTERN CONNECTICUT
NEW BRITAIN-BRISTOL
CENTRAL NAUGATUCK VALLEY
DANBURY
MIDSTATE
NEW LONDON
SOUTHEASTERN CONNECTICUT
MIDDLESEX
CONNECTICUT RIVER ESTUARY
NEW HAVEN
SOUTH CENTRAL CONNECTICUT
ANSONIA DERBY
FAIRFIELD
GREATER BRIDGEPORT
SOUTHWESTERN
REGIONAL CENTERS
SELECTED MAJOR INDUSTRIAL AREAS

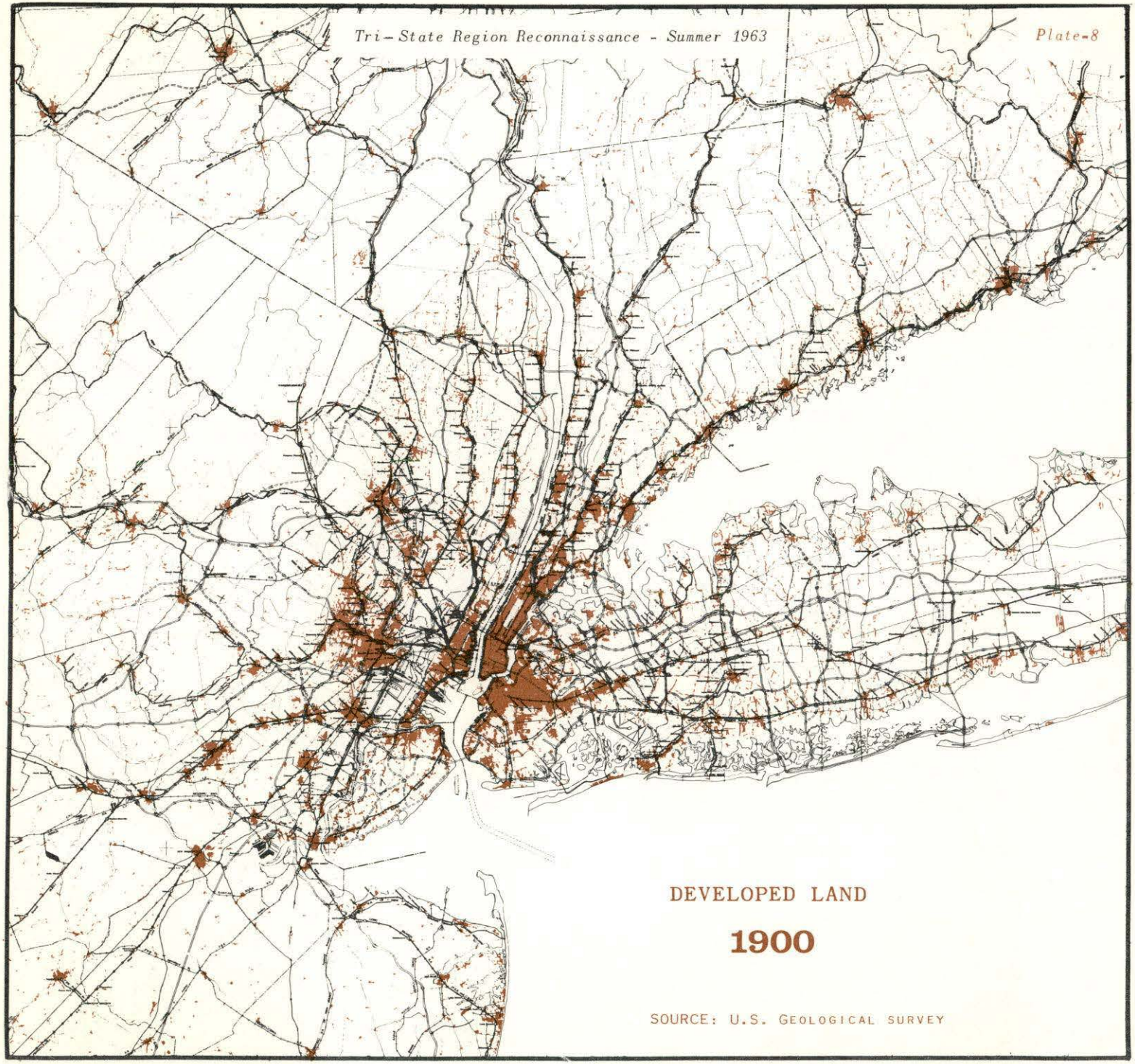

Tri - State Region Reconnaissance - Summer 1963
Plate-7
N E W Y O R K
CONNECTICUT
ULSTER
SULLIVAN
DUTCHESS
PUTNAM
ORANGE
ROCKLAND
WESTCHESTER
SUSSEX
PASSAIC
BERGEN
WARREN
MORRIS
ESSEX
HUDSON
UNION
SOMERSET
HUNTERDON
MIDDLESEX
MERCER
MONMOUTH
BURLINGTON
OCEAN
NASSAU
SUFFOLK
QUEENS
BROOKLYN
RICHMOND
LITCHFIELD
TORRINGTON-WINCHESTER
HARTFORD
CAPITOL
TOLLAND
WINDHAM
NORTHEASTERN CONNECTICUT
NEW BRITAIN-BRISTOL
CENTRAL NAUGATUCK VALLEY
WESTERN
NEW HAVEN
SOUTH CENTRAL CONNECTICUT
ANSONIA-DERBY
FAIRFIELD
GREATER BRIDGEPORT
SOUTHWESTERN
MIDSTATE
MIDDLESEX
CONNECTICUT RIVER ESTUARY
NEW LONDON
SOUTHEASTERN CONNECTICUT
DANBURY
DEPARTMENT STORES
Downtown
Suburban
UNIVERSITIES
Graduate
Undergraduate
Special Schools (Graduate & Undergraduate)
Area in Thousands of Square Feet
1,000 500 100 1,000 500 100
Students
20,000 10,000 5,000 1,000 150 & Below
DEVELOPED LAND 1962

There are, of course, other kinds of institutional centers which meet the criteria set forth. Lincoln Center is such a place. But in the course of a summer reconnaissance only the universities were identified. And, except for certain specialized institutions in Manhattan, as a class they are the most important components of this type of center in the regional development pattern as a whole.

The third class of center is more difficult to identify. Industrial activity may be viewed along a continuum from those locked in place over very long periods of time to those which change rapidly. Identification of these industrial centers which meet our criteria as structural elements in the Region was not carried through as systematically as the first two types. The most obvious in the Region are the activities tied to the port and the concentration along Newton Creek in Brooklyn and Queens. Plate 6 shows a crude pattern of major industrial concentration drawn from the 1954 land use map of the New York Regional Plan Association. This area of investigation in both structural and dynamic terms is the weakest in the reconnaissance. Time was too short to permit a thoughtful establishment of criteria and a collection, shifting, selection and mapping of data. But the main outlines are apparent.

The pattern is much less concentrated than the patterns of business and university centers, and, as many writers have pointed out, is heavily weighted to New Jersey (although New York City continues to have the major share of manufacturing employment).

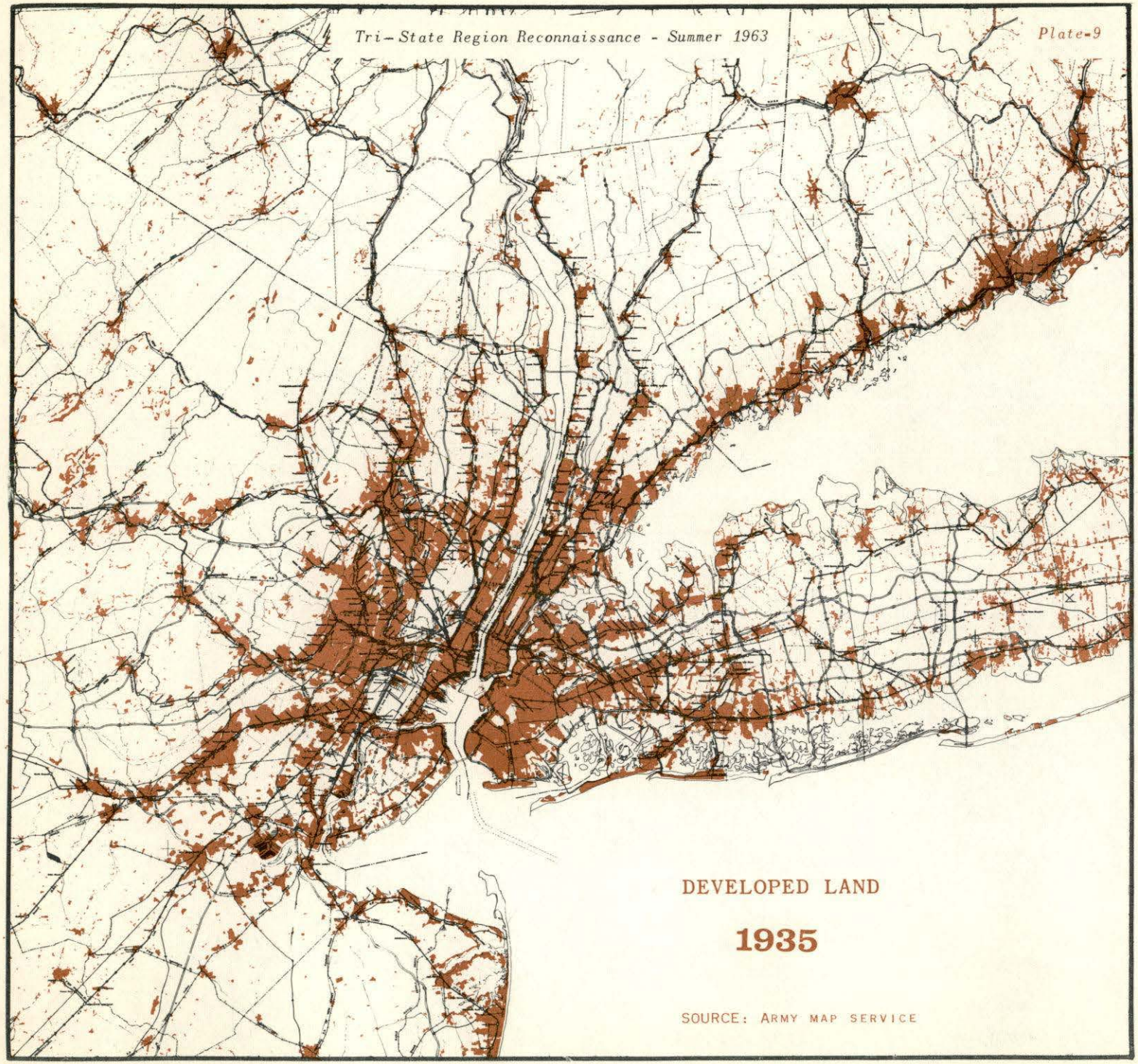
In summary then, plates 1 through 7 represent a composite portrait of the structure of the Tri-State Region. As changes swirl in and about the Region in the decades to come, most of these places will continue to exist and to exert influence on the Region and its new development.



DEVELOPED LAND

1900

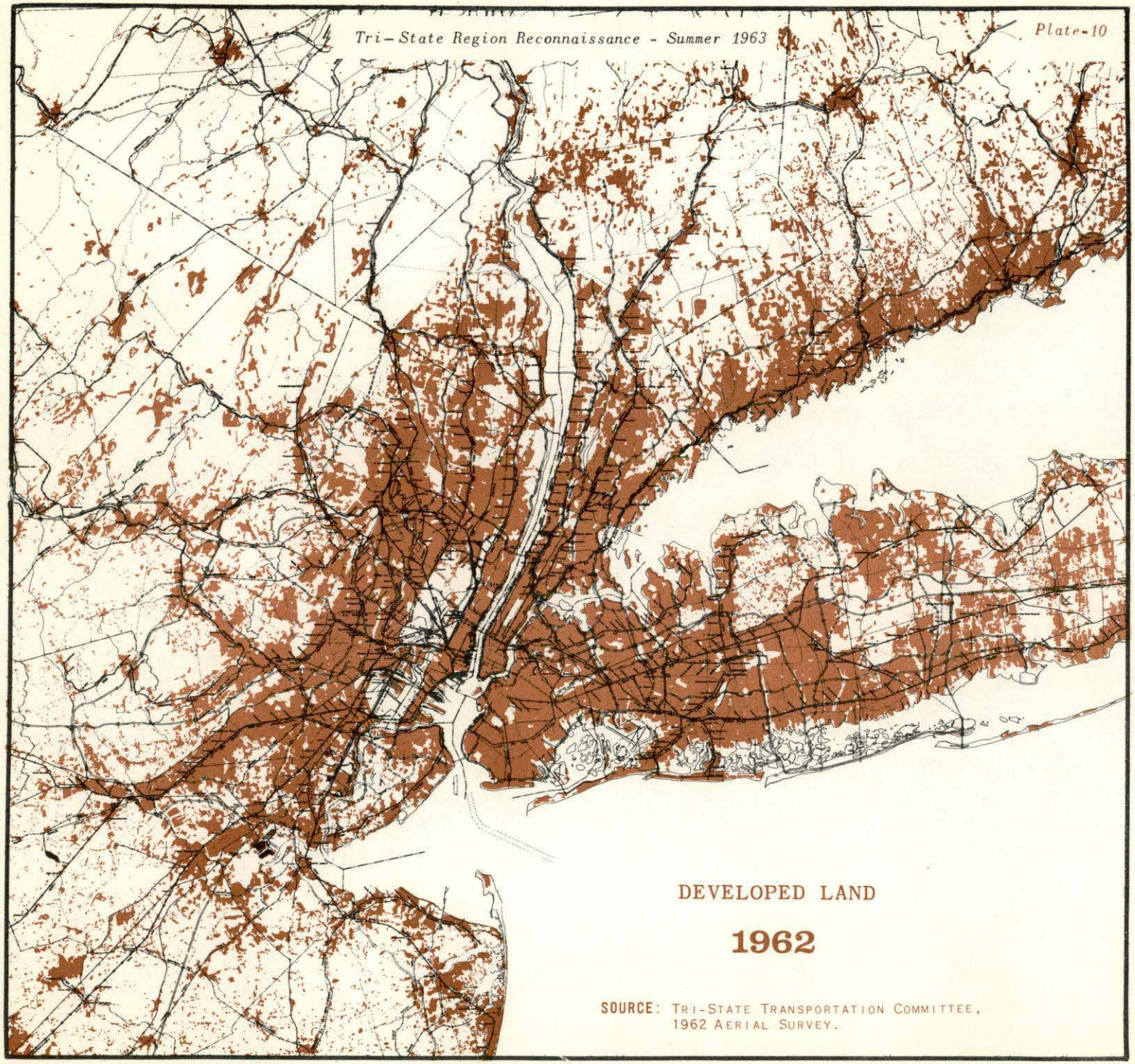
SOURCE: U.S. GEOLOGICAL SURVEY



DEVELOPED LAND

1935

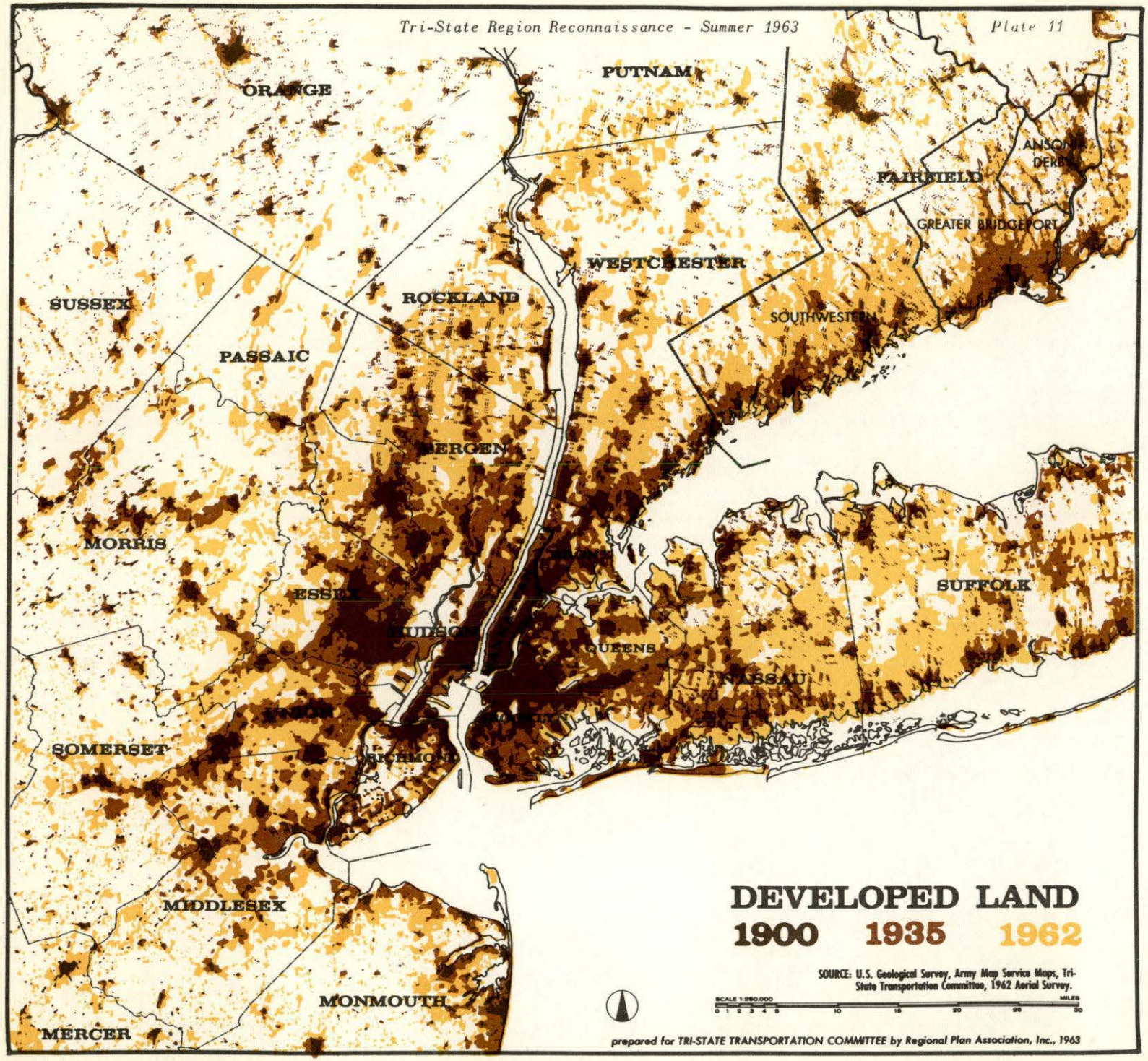
SOURCE: ARMY MAP SERVICE



DEVELOPED LAND

1962

SOURCE: TRI-STATE TRANSPORTATION COMMITTEE, 1962 AERIAL SURVEY.



DEVELOPED LAND
1900 1935 1962

SOURCE: U.S. Geological Survey, Army Map Service Maps, Tri-State Transportation Committee, 1962 Aerial Survey.

SCALE 1:250,000
0 1 2 3 4 5 10 15 20 25 30 MILES

prepared for TRI-STATE TRANSPORTATION COMMITTEE by Regional Plan Association, Inc., 1963

III. THE DYNAMICS OF THE TRI-STATE REGION.

Since a plan represents a major publicly adopted set of reference points for public intervention in the natural and ungoverned flow of regional change and growth, an important phase of the planning process is the identification of the major components of change. In this reconnaissance a few indices of change have been selected to obtain a summary picture of the Region's dynamism.

Plates 8 through 20 were prepared for this purpose. They are graphic displays of:

A) The Region's development in time;
B) The Region's intensity or density pattern;
C) The state of physical deterioration in the Region ... or blight;
D) The pattern of new home construction in the Region;
E) The present status of attack on deterioration in the Region ... urban renewal.

The maps which show development of the region in 1900, 1935, and 1962 are generally self explanatory. They represent a major resource for study of the Region's change over time. See Plates 8 through 11.

The primary regional transportation net in 1900 was the railroad system. The development pattern of 1900 clearly reflects this. At that time the Region's development was primarily spoke-like, clustered along the rail lines. It was an extended region. Although many of the towns and cities were relatively independent communities, some were commuter towns and even the independent ones were probably related to Manhattan on a daily interchange basis.

The period between 1900 and 1935, (see Plate 9) was one of tremendous growth and change in the Region. Two decades of this era saw sharp population increases: the first 1900 to 1910; the second 1920 to 1930. In the first of these two decades immigration to the United States hit its peak, with 8 million new arrivals from Europe, almost twice that of the previous decade, which in turn was almost twice that of the preceding decade. And the Tri-State Region received a greater number of these new Americans than any other metropolitan region. During the decade 1920 to 1930, the rate of population increase in the Region turned upward again. During this 10 year period following World War I over 700,000 new dwelling units were built in New York City alone. This surge was accounted for by migration rather than immigration.

Although the development surged into previously open areas in this 1900 to 1935 period, new construction took place adjacent to earlier development along the rail lines; the influence of this transport system remained strong. But the influence of street transit, and later the automobile and truck, began to affect the development pattern. Although the radial configuration of the metropolis continued to be its dominant characteristic, the extended form of the earlier period became less pronounced. The Region does not appear to

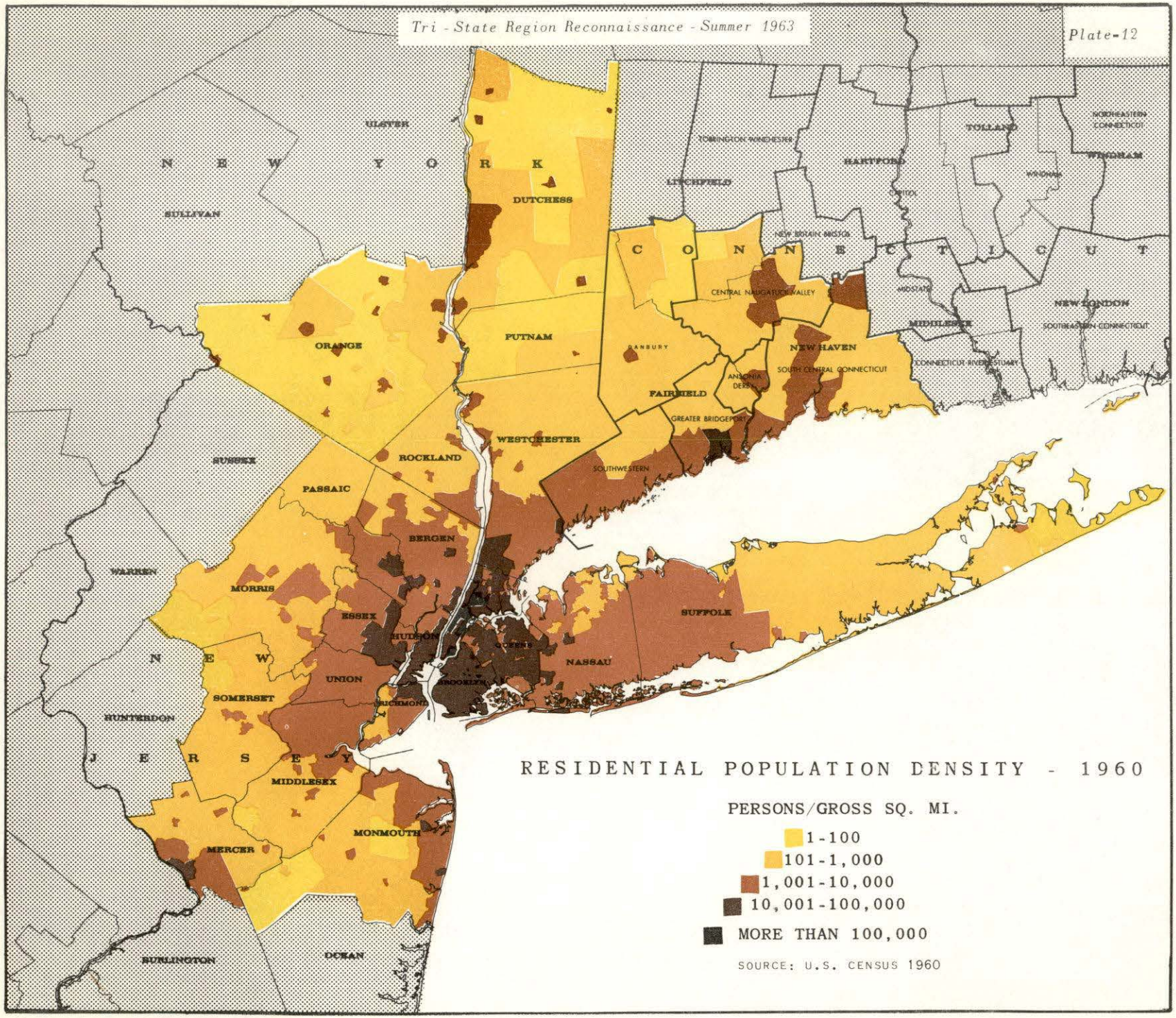
have been further extended along the rail lines but to have expanded its development away from the spokes of the rail system.

In the period 1935 to 1962 (Plate 10), the postwar expansion of the metropolis comes clear. And, although a span of almost three decades is covered, by far the greatest part of the new development occured in the postwar period, for in the preceding years the depression and World War II repressed any significant new building. The release of these restraints is one of the factors involved in the great changes of the last fifteen years. This recent development has been a response both to new people and new demands superimposed on a large backlog of needs, powered by an active, growing economy or incremental quantitative need, and a response to change in our society and economy, change which could not be realized and manifested physically until after the war.

The combination of growth and change during this most recent period is reflected in the flowing out over the landscape of the lower density new developments... lower density in every category of land use; industrial as well as residential, institutional as well as commercial. For the most part this flow has been into the wedges between the sectors developed along the old rail lines, a filling of interstices in the fabric of the metropolis.

This period is witness to the greatest areal expansion in the three century history of the metropolis. But, in general terms, the metropolis has not been further extended. Although a significantly greater proportion of the urbanized land in the region is now farther in distance from Manhattan, the perimeter as identified by the old rail lines has not increased in distance. The radial form of 1900 is much less pronounced. The outline of urbanization is more circular or elliptical. Obviously this is a reflection of the flexible capabilities of the automobile, and its ubiquitous ownership and use. As this new wave of building occured on vacant land away from the rail lines, old and established communities built on the railroad either maintained their status-quo or declined. Only within the last few years, through the medium of urban renewal, have many of these older communities begun to adjust to the change in their situation in the expanding metropolis.

Urban regions of course are not two dimensional, as maps such as those we have been discussing suggest, but three dimensional. One of the great variations in urban pattern and composition is the intensity with which land is used. Plate 12 shows the present residential population density of the Region. [3] The densities, population per square mile of gross land area by municipality, are plotted on a logarithmic scale. The most striking aspect of the map is the surprising regularity of the density gradient, in every direction from Manhattan.


N E W Y O R K
C O N N E C T I C U T
N E W J E R S E Y
ULSTER
SULLIVAN
DUTCHESS
PUTNAM
ORANGE
ROCKLAND
WESTCHESTER
SUSSEX
PASSAIC
BERGEN
WARREN
MORRIS
ESSEX
HUDSON
UNION
SOMERSET
HUNTERDON
MIDDLESEX
MERCER
MONMOUTH
BURLINGTON
OCEAN
NASSAU
SUFFOLK
LITCHFIELD
TORRINGTON-WINCHESTER
HARTFORD
TOLLAND
WINDHAM
NORTHEASTERN CONNECTICUT
NEW BRITAIN-BRISTOL
CENTRAL NAUGATUCK VALLEY
DANBURY
NEW HAVEN
SOUTH CENTRAL CONNECTICUT
MIDDLESEX
NEW LONDON
SOUTHEASTERN CONNECTICUT
FAIRFIELD
GREATER BRIDGEPORT
SOUTHWESTERN
RESIDENTIAL POPULATION DENSITY - 1960
PERSONS/GROSS SQ. MI.
1-100
101-1,000
1,001-10,000
10,001-100,000
MORE THAN 100,000
SOURCE: U.S. CENSUS 1960

Several forces have been at work over time in constructing the present gradient of the Region. Although the numeric values in the Tri-State Region are unique in North America, the regularity of the pattern is not unique. Most large urban regions exhibit a similar degree of regularity. Primarily the pattern represents a combination of economic forces at work in the Region. These have been discussed in various writings.[4] The observed patterns reflect relative strength in the competition for land, and for most urban purposes land nearer the center serves needs more economically and is competed for more intensively.

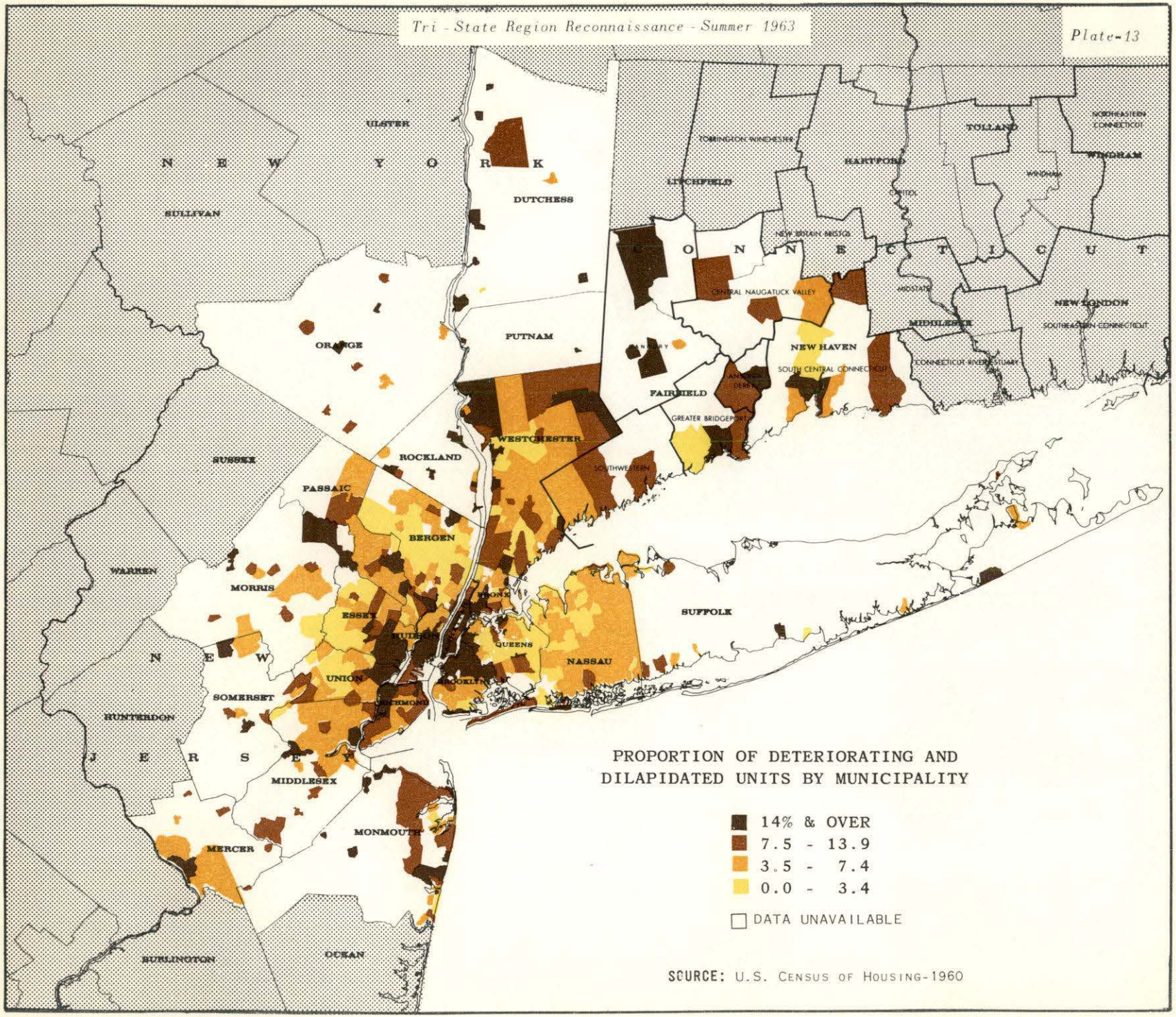
There are two components to the ability to generate rent from land: the first is the economic capability of the individual unit (family, business enterprises, etc.); the second is the number of such units that can occupy a given piece of real estate. In simplest terms the combination is income and density, and, again in the simplest terms, since most incomes fall into a large middle bracket, the rent generated for land closer to the center is heavily determined by density.

3. In many ways a map of total population density is more useful and more revealing. Data for such a plot are not now available. They should become available through surveys now being conducted by the Tri-State Transportation Committee.

4. For example, "Economic Forces Shaping Land Use Patterns" by Arthur T. Row and Ernest Jurkat, AIP Journal, No. 2. Vol. XXV.

The critical factor determining competitive pressure upon a site is its accessibility to and from the rest of the metropolitan region. High levels of competitive pressure are reflected in high densities. The extremely high densities in New York City are associated directly with the concentration of opportunities of all kinds in Manhattan and a high capacity transport system oriented to Manhattan. But as movement throughout the region, and between its several parts and Manhattan, is facilitated through transportation improvements, site accessibility is multiplied accross the face of the region. Hence the pressure for concentration in certain locations tends to diminish. Other things remaining equal then, it can be expected that the density gradient exemplified by Plate 12 will tend to flatten.

Although this argument suggest a decline in the residential density of Manhattan and the older areas of the region near Manhattan, there are counterforces that will tend to hold densities high. Some of these are: the slow rate of readjustment and relocation of present non-residential opportunities, primarily, but not solely, employment; the large number of low income population for whom distance costs are significant factors in location choice; the increasing numbers of people serving activities in the region which will generate new kinds of uses and space demands within reasonable travel distances. Therefore, although some decrease in density can be expected, significant de-


Tri - State Region Reconnaissance - Summer 1963
Plate-13
N E W Y O R K
C O N N E C T I C U T
N E W J E R S E Y
ULSTER
SULLIVAN
DUTCHESS
PUTNAM
ORANGE
ROCKLAND
WESTCHESTER
SUSSEX
PASSAIC
BERGEN
WARREN
MORRIS
ESSEX
UNION
SOMERSET
HUNTERDON
MIDDLESEX
MERCER
MONMOUTH
BURLINGTON
OCEAN
QUEENS
NASSAU
SUFFOLK
LITCHFIELD
TORRINGTON-WINCHESTER
HARTFORD
TOLLAND
WINDHAM
NORTHEASTERN CONNECTICUT
NEW BRITAIN-BRISTOL
CENTRAL NAUGATUCK VALLEY
MIDSTATE
MIDDLESEX
NEW LONDON
SOUTHEASTERN CONNECTICUT
NEW HAVEN
SOUTH CENTRAL CONNECTICUT
CONNECTICUT RIVER ESTUARY
FAIRFIELD
GREATER BRIDGEPORT
SOUTHWESTERN
PROPORTION OF DETERIORATING AND DILAPIDATED UNITS BY MUNICIPALITY
14% & OVER
7.5 - 13.9
3.5 - 7.4
0.0 - 3.4
DATA UNAVAILABLE
SOURCE: U.S. CENSUS OF HOUSING-1960

clines cannot be expected short of radical public intervention.

There are several public policy questions that relate to the density pattern and future development objectives of the Region, particularly its central cities. These will be raised in a later section of this report.

Another index of change in the Region is its state of physical deterioration. Deterioration occurs in the Region's entire physical plant as sections of that plant age and become obsolescent structurally, functionally, or locationally. The most easily available data index is the United States Census of Housing. Data from the 1960 U.S. Census of Housing provide reasonably approximate descriptions for the purpose of this reconnaissance at a regional scale.

The status of residential decay in the Region is illustrated by Plates 13 and 14. Dilapidated and deteriorating housing units have been mapped by municipality. These two maps should be read together as complements of one another.

In order to construct Plate 13 the percentage of dwelling units in a dilapidated and deteriorating condition in each municipality [5] was calculated, the municipalities were then arrayed in rank order from highest percentage to lowest, and the order was divided into quartiles.

Thus, Plate 13 is a display of the status of each municipality in the Region in terms of the condition of its housing stock. It is well known that major sections of Manhattan and Brooklyn are seriously deteriorated as are old centers such as Newark (whose proportionate deterioration is the highest of the old populated centers exceeding even Manhattan). What is frequently overlooked is that there are municipalities in the intermediate and outer rings of the region with high proportions of substandard housing. If the Region is divided into rings (see Plate 15) from core to outer ring, Table 1 below shows the pattern of proportionate deterioration.

TABLE 1

Residential Deterioration by Ring

30 County Area

Ring	Total Dwelling Units	Dilapidated & Deteriorating Units	Percent
Core	3,032,632	488,731	16.1
Inner Ring	1,308,294	90,755	6.9
Intermediate Ring	1,160,254	116,779	10.1
Outer Ring	379,822	52,909	13.9

The Core includes New York City (less Richmond), Newark and Hudson County, New Jersey.

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

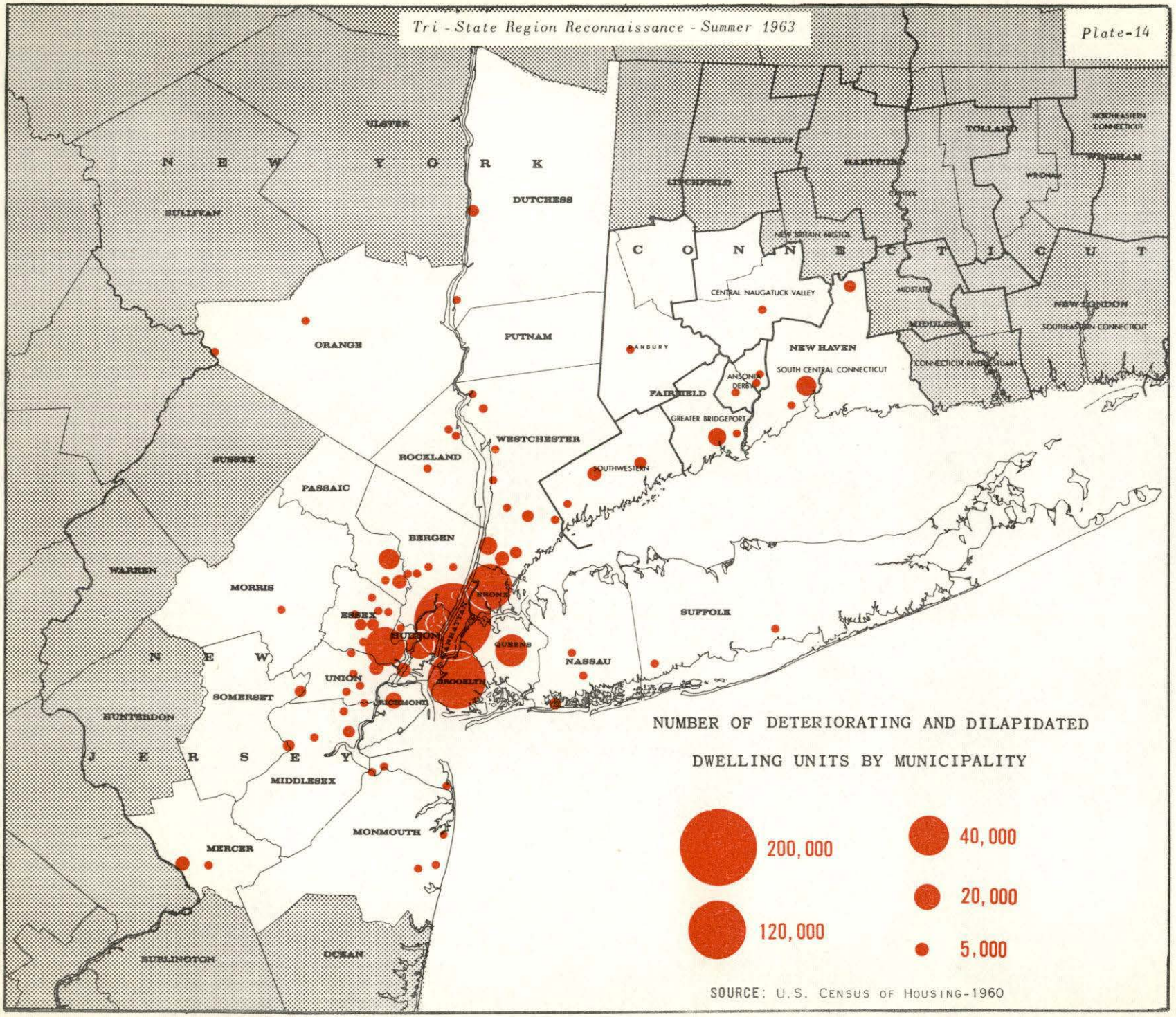
5. Except for New York City which for this purpose was subdivided into its constituent counties.

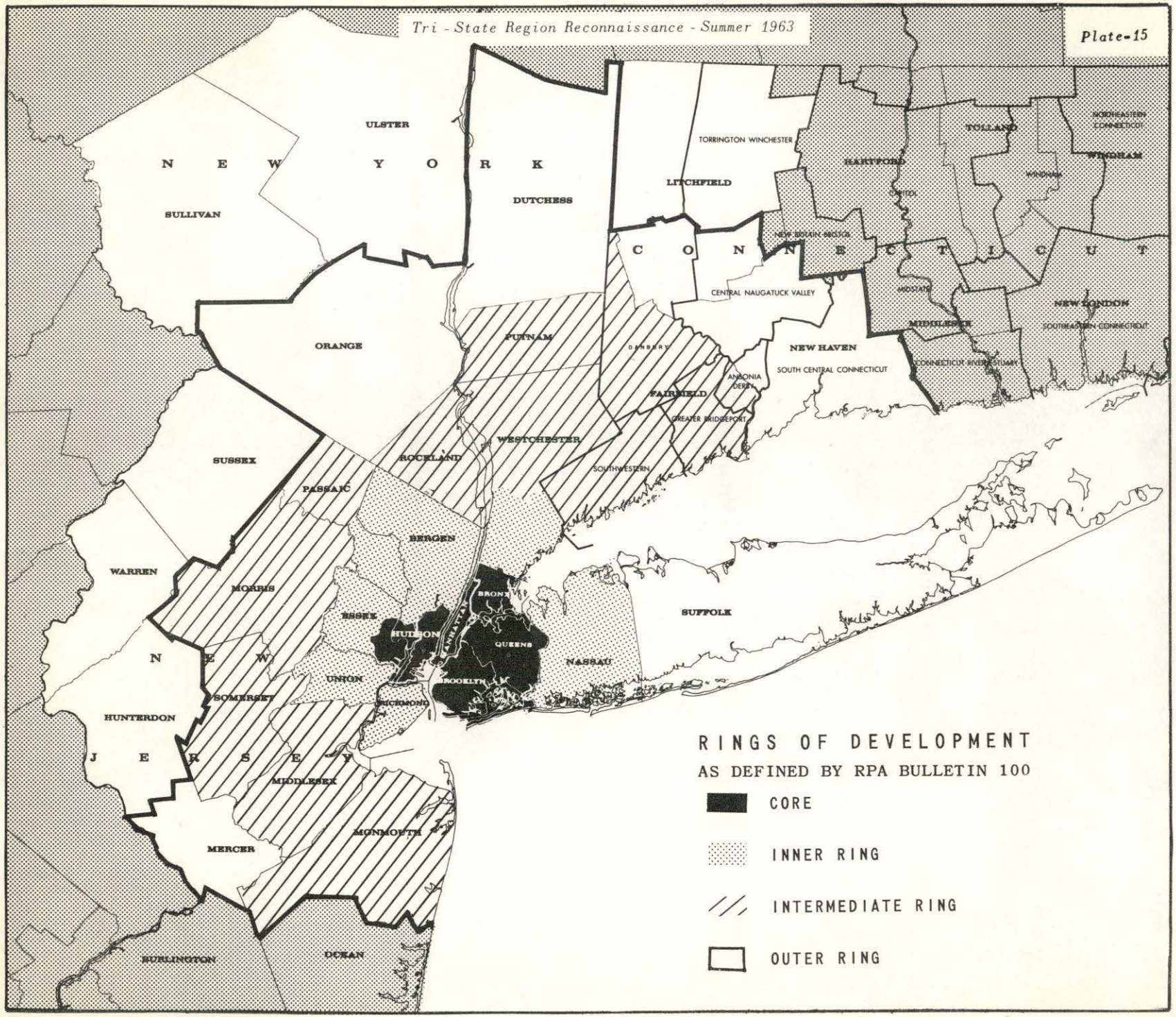
The fact that the lowest incidence of deterioration is in the second, or "inner" ring is interesting. Both actual and proportionate deterioration is less than in the next more distant ring. Some of the reasons may be: that this ring contains fewer of the old manufacturing cities; it contains older suburbs built for middle and upper income families and, therefore, the housing units themselves, and their neighborhoods, were reasonably well designed and built at the outset; that pressures of change are felt more at the center and on the periphery of urban regions than in areas between.

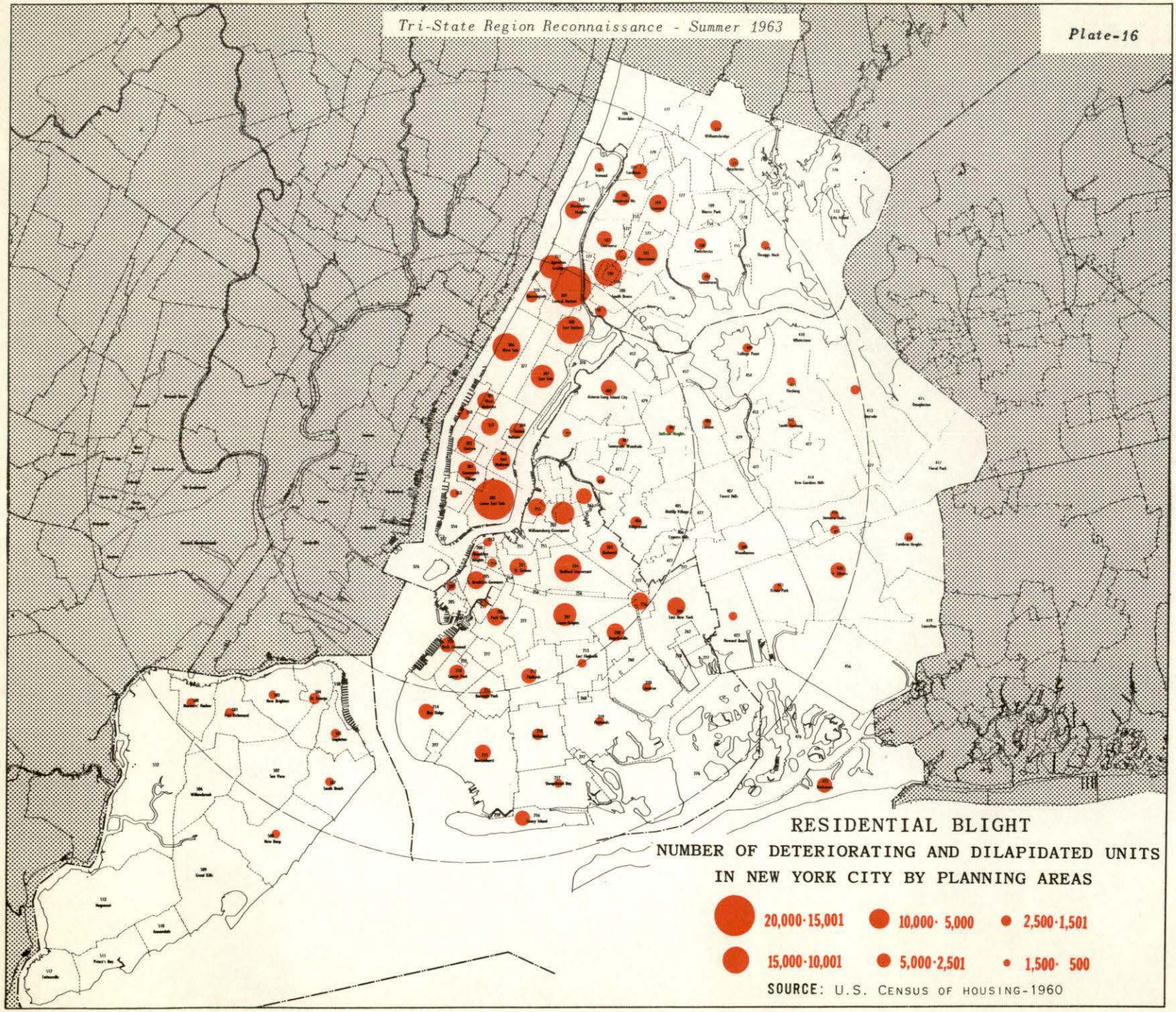
In the intermediate and outer rings (e.g., Middlesex County, New Jersey, New Haven County, Connecticut, etc.) deterioration is of three distinct types. The first is the small analogue of the Region's core ... old industrial cities, major sections of which were built to house industrial workers in the late 19th and early 20th century. The city of Bridgeport, Connecticut, for example, in 1960 had 7,261 dilapidated or deteriorating units, 14% of its housing stock; Paterson, New Jersey, 10,000 units or 20% of its stock. As the growth of the Region encompasses these old cities they will face serious problems of readjustment, but at the same time may realize new potentials from their re-orientation to a larger metropolitan region ... given a new lease on life if their leadership is alert to capitalize upon it.

The second kind of deterioration is that of the old rural communities. Relatively insignificant in number of units, these components of the pattern of "blight" are not important at the regional scale. They do constitute local problems that in particular cases may be quite acute. But at the regional scale they will probably be erased in the normal course of new growth. For in these instances new growth can sweep **OVER** such dispersed units or small groups whereas new growth sweeps **AROUND** the old industrial centers and may even be repressed or impeded by them.

The third type of blight in these rings is represented by the old and obsolescent resort communities ... the lakefront and oceanfront developments of closely packed, small and flimsily built summer houses. These represent a more serious problem than the rural units identified above but less serious than the problem of the old industrial cities. There are two distinct facets to the problem. The first is primarily a local housing and public health issue, namely the conversion of many of these units to year around use. Not designed for this purpose, in communities frequently lacking adequate sewage disposal facilities, they represent a makeshift housing for the most part. Although there are variations in this pattern, this facet is, to repeat, primarily a local program. The other facet of the problem is regional. Many of these developments have taken place on land that has considerable site potential for an array of uses ... that is why they are there in the first place. Thus, without some form of public renewal action for land acquisition and replanning, they


Tri - State Region Reconnaissance - Summer 1963
Plate-14
N E W Y O R K
C O N N E C T I C U T
ULSTER
SULLIVAN
DUTCHESS
PUTNAM
ORANGE
ROCKLAND
WESTCHESTER
SUSSEX
PASSAIC
BERGEN
WARREN
MORRIS
ESSEX
HUDSON
UNION
SOMERSET
HUNTERDON
MIDDLESEX
MERCER
MONMOUTH
BURLINGTON
OCEAN
N E W J E R S E Y
LITCHFIELD
HARTFORD
TOLLAND
WINDHAM
NORTHEASTERN CONNECTICUT
CENTRAL NAUGATUCK VALLEY
NEW HAVEN
SOUTH CENTRAL CONNECTICUT
FAIRFIELD
GREATER BRIDGEPORT
SOUTHWESTERN
NEW LONDON
SOUTHEASTERN CONNECTICUT
BRONX
QUEENS
BROOKLYN
RICHMOND
NASSAU
SUFFOLK
NUMBER OF DETERIORATING AND DILAPIDATED
DWELLING UNITS BY MUNICIPALITY
200,000
120,000
40,000
20,000
5,000
SOURCE: U.S. CENSUS OF HOUSING-1960


Tri - State Region Reconnaissance - Summer 1963
Plate-15
N E W Y O R K
ULSTER
SULLIVAN
DUTCHESS
ORANGE
PUTNAM
TORRINGTON WINCHESTER
LITCHFIELD
HARTFORD
CAPITOL
TOLLAND
WINDHAM
NORTHEASTERN CONNECTICUT
NEW BRITAIN-BRISTOL
C O N N E C T I C U T
CENTRAL NAUGATUCK VALLEY
MIDSTATE
MIDDLESEX
NEW LONDON
SOUTHEASTERN CONNECTICUT
CONNECTICUT RIVER ESTUARY
NEW HAVEN
SOUTH CENTRAL CONNECTICUT
DANBURY
ANSONIA DERBY
FAIRFIELD
GREATER BRIDGEPORT
SOUTHWESTERN
ROCKLAND
WESTCHESTER
SUSSEX
PASSAIC
BERGEN
WARREN
MORRIS
ESSEX
HUDSON
MANHATTAN
BRONX
QUEENS
BROOKLYN
RICHMOND
SUFFOLK
NASSAU
UNION
SOMERSET
HUNTERDON
N E W J E R S E Y
MIDDLESEX
MONMOUTH
MERCER
BURLINGTON
OCEAN
RINGS OF DEVELOPMENT
AS DEFINED BY RPA BULLETIN 100
CORE
INNER RING
INTERMEDIATE RING
OUTER RING



RESIDENTIAL BLIGHT

NUMBER OF DETERIORATING AND DILAPIDATED UNITS IN NEW YORK CITY BY PLANNING AREAS

20,000-15,001 · 10,000-5,000 · 2,500-1,501

15,000-10,001 · 5,000-2,501 · 1,500-500

SOURCE: U.S. CENSUS OF HOUSING-1960

withhold from the metropolitan development market land with characteristic natural features of, in some cases, considerable desirability for new development or for public recreational use.

The other side of the decay coin is the geographic distribution of residential "blight" in sheer quantitative terms. These are the more usual terms in which the situation is put and therefore the more familiar terms. Table 1 is self explanatory of this point. Almost two thirds of the dilapidated and deteriorating dwelling units are in the core of the Region. Manhattan alone has 25% of all the substandard units in the entire Region, Brooklyn 18%. Almost half a million dwelling units in New York City are substandard. And they are concentrated in areas of significant geographic extent ... block upon block of the most depressing human enviroment.

Plate 14 shows the quantitative distribution of blight in the Region. Plate 16 shows in more detail the distribution within the City of New York.

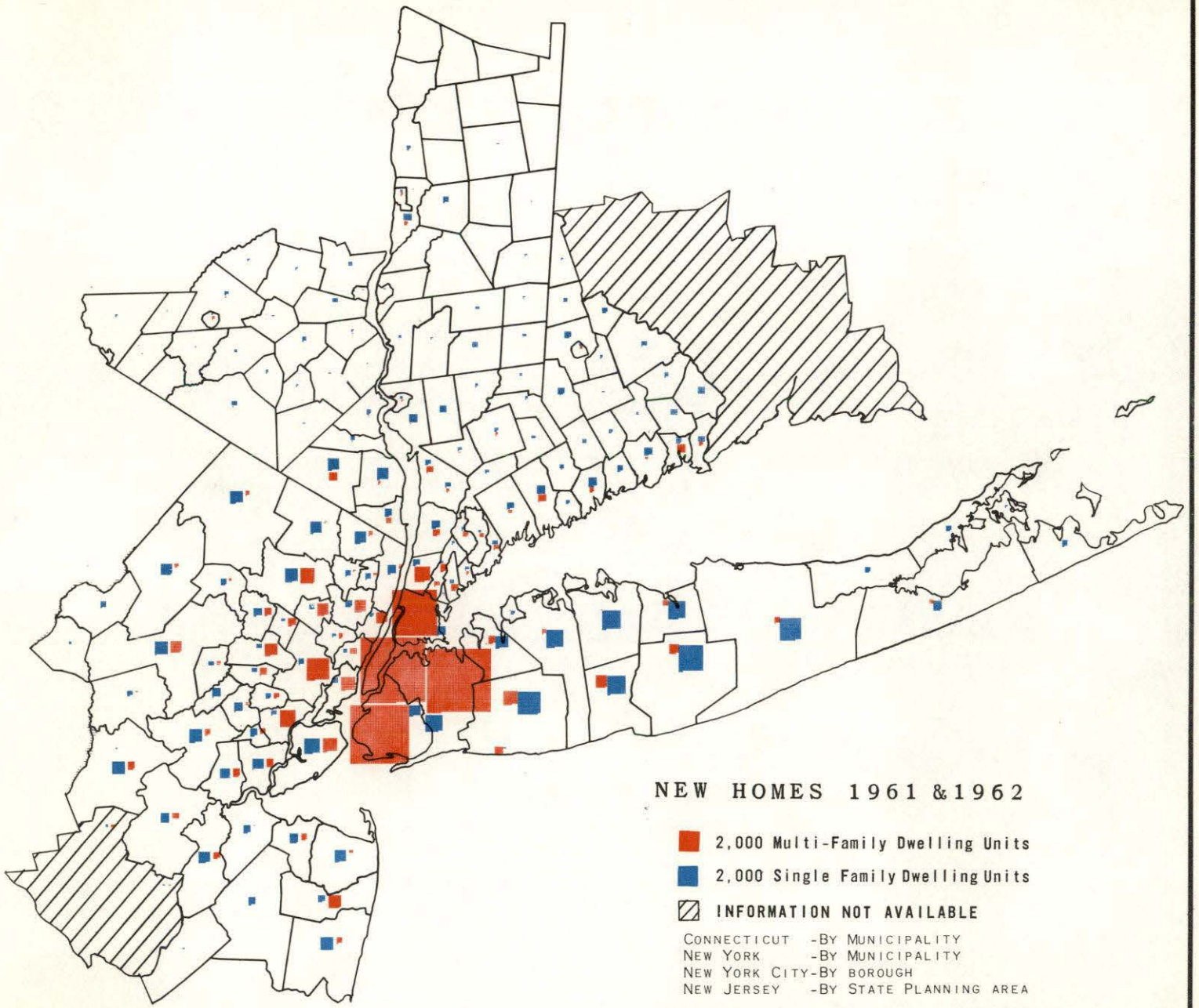
It would be presumptuous in a reconnaissance to suggest solutions to this gigantic problem. But a few observations may be in order here, and again later in this report.

In a sense, the City of New York for a variety of purposes can be divided into Manhattan on the one hand and all the other boroughs on the other. Manhattan's situation is in a curious way similar to that of the old cities in the intermediate ring discussed earlier. Growth carries within it potential for rebuilding as well as building anew. There is no question of the rebuilding potential of Manhattan. It is self evident. It is the most volatile piece of real estate in North America, if not in the world. Location, use change, population exchange, and social welfare programming should permit a rebuilding of the deteriorated areas of Manhattan at a reasonable rate.

But such areas as Bedford–Stuyvesant and East New York in Brooklyn represent quite a different situation. Serious enough in pure terms of physical deterioration and the subsistence level of their inhabitants, these areas are ghettos of the negro whose rehousing and relocation is dependent in large part upon resolving the painful color conflicts of our society.

In the consideration of the dynamics of the Region the whole question of "blight" and deterioration looms large in public policy. In the first place, the aging and deterioration of a community are "natural" phenomena. But the central cities of the Region have a major backlog of deficiency that must be overcome while still working at reducing the rate of obsolescence in areas not yet deteriorated.

"Blight" is a normal product of growth and change. It is not simply the result of structural aging and deterioration. If it were, the resolution of the



SOURCE: RPA BULLETIN NEW DWELLING PERMITS ISSUED DURING 1961-1962

problem would be reasonably direct ... and in those areas where aging is the principle cause, the solution is reasonably direct. But underlying causes are several. Obsolescence, for example, is not purely structural; it is frequently functional (the structure or the cluster of structures are no longer useful for the purposes for which they were built); technological (the structure does not contain the devices available elsewhere in the market); or locational (the structure or group is no longer in an appropriate location for its purpose, i.e. urban change and growth has altered its relative location in the metropolis).

The metropolis is, by definition of growth and change, constantly (although at varying rates) building anew. The opposite of indices of deterioration and obsolescence is the pattern of new construction in the Region. Plate 17 shows the location of new residential construction in the Region in the two years 1961 and 1962. (It would be helpful to have the companion set of data on nonresidential construction but such data were not easily available for this exercise.) On Plate 17 residential construction is plotted by community [6] in two types: single family homes and multifamily dwelling units.

6 In order to display graphically the data in units of approximate areal similarity, the communities are the Boroughs of the City of New York, the municipalities in the rest of New York State within the Region and in Connecticut, and the class IV regions (groups of towns) as defined by New Jersey State Division of Planning.

The first characteristic is that new construction is occuring THROUGHOUT THE REGION. It is not simply an accretion on the underdeveloped periphery of the urbanized area. The particular aspect of growth and change represented by new dwelling unit construction permeats the Region. As a matter of fact, with few exceptions, for this two year measurement period, little of it represents significant areal expansion of the Region.

In sheer vloume of new building, the boroughs of the City of New York led the parade in 1961 and 1962. Rank–ordered by volume of new construction, the first five counties of the Region are shown in the following table.

TABLE 2*

Leading Five Counties in New Dwelling Unit Construction, 1961 and 1962

Tri-State Region

County	Rank	No. of Units in Thousands	
New York	1	41	(Manhattan)
Queens	2	40.5	
Kings	3	34.5	(Brooklyn)
Suffolk	4	28.5	
Nassau	5	13.7	

*SOURCE: New Homes 1961 and 1962, Bulletin 101, Regional Plan Association, June, 1963.

Since the publication of the 1960 Census of Population there has been considerable publicity given to the fact that most central cities in metropolitan areas

TABLE 3

Change in Population, Dwelling Units, and Households
1940, 1950, 1960 in Core of Tri-State Region*
(000's omitted)

		1940	1950	1960
Manhattan	Population	1.889.9	1.960.1	1.698.3
	Dwelling Units	617.4	635.9	727.4
	Households	548.4	624.5	695.8
Brooklyn	Population	2.698.3	2.738.2	2.627.3
	Dwelling Units	762.5	814.1	875.8
	Households	716.9	795.7	850.9
Bronx	Population	1.394.7	1.451.3	1.424.8
	Dwelling Units	395.2	432.3	473.2
	Households	377.8	425.0	463.4
Queens	Population	1.297.6	1.550.8	1.809.6
	Dwelling Units	394.4	495.3	617.1
	Households	361.7	461.2	583.1
Hudson	Population	652.0	647.4	610.7
	Dwelling Units	184.1	189.6	204.8
	Households	173.4	187.3	198.0
Newark City	Population	429.8	438.8	405.2
	Dwelling Units	116.8	124.4	134.9
	Households	112.2	122.5	127.8

*SOURCE: U.S. Census of 1940, 1950, 1960.

TABLE 4*

New Dwelling Units Authorized in the Region, by Ring, 1957–1962

		1 Core	2 Inner Ring	3 Intermed. Ring	4 Outer Ring	5 Region
1957	Total	24,710	22,100	26,970	2,710	76,490
	Multi–Family	21,960	4,490	1,130	100	27,690
	% Multi–Family	88.9	20.3	4.2	3.8	36.2
1958	Total	34,970	25,190	27,050	2,440	89,650
	Multi–Family	32,660	8,440	2,600	410	44,100
	% Multi–Family	93.4	33.5	9.6	16.8	49.2
1959	Total	39,100	30,040	30,750	2,480	102,380
	Multi–Family	36,370	11,830	2,960	140	51,300
	% Multi–Family	93.0	39.4	9.6	5.8	50.1
1960	Total	46,870	25,280	28,560	2,530	103,230
	Multi–Family	44,420	10,620	4,110	220	59,370
	% Multi–Family	94.8	42.0	14.4	8.8	57.5
1961	Total	73,630	25,250	31,690	2,630	133,200
	Multi–Family	70,880	12,110	6,260	140	89,390
	% Multi–Family	96.3	48.0	19.8	5.4	67.1
1962	Total	69,210	27,540	35,260	2,990	134,990
	Multi–Family	66,660	14,640	7,840	490	89,620
	% Multi–Family	96.3	53.1	22.2	16.4	66.4

NOTE: Detail may not add to totals because of rounding.

*Published as Table 3 in New Homes 1961 and 1962, Bulletin 101 of the New York Regional Plan Association.

across the nation, and particularly in the East, lost population. This isolated statistic is of little meaning in the context of total growth and change. (There are serious implications to local government in the shifts of the population composition in the old central cities but that is a separate issue). In fact, in the core of New York Region four of the five counties and one city (Newark), had less population in 1960 than in 1940, let alone 1950 (a year at the tag end of the housing shortage when central city populations were kept high by the "artificial" restraint on new home construction.)

But in each of the six cases, the city or county had more households in 1960 than in 1950, and in 1950 more than in 1940. In other words, although total population was declining the number of households and dwelling units was still growing. By this latter index then the old central cities are still growing. But this is a play in words and numbers. The fact is that the old central cities are **CHANGING.** Population is moving and exchanging within the region in rapid and complex ways. (Table 3)

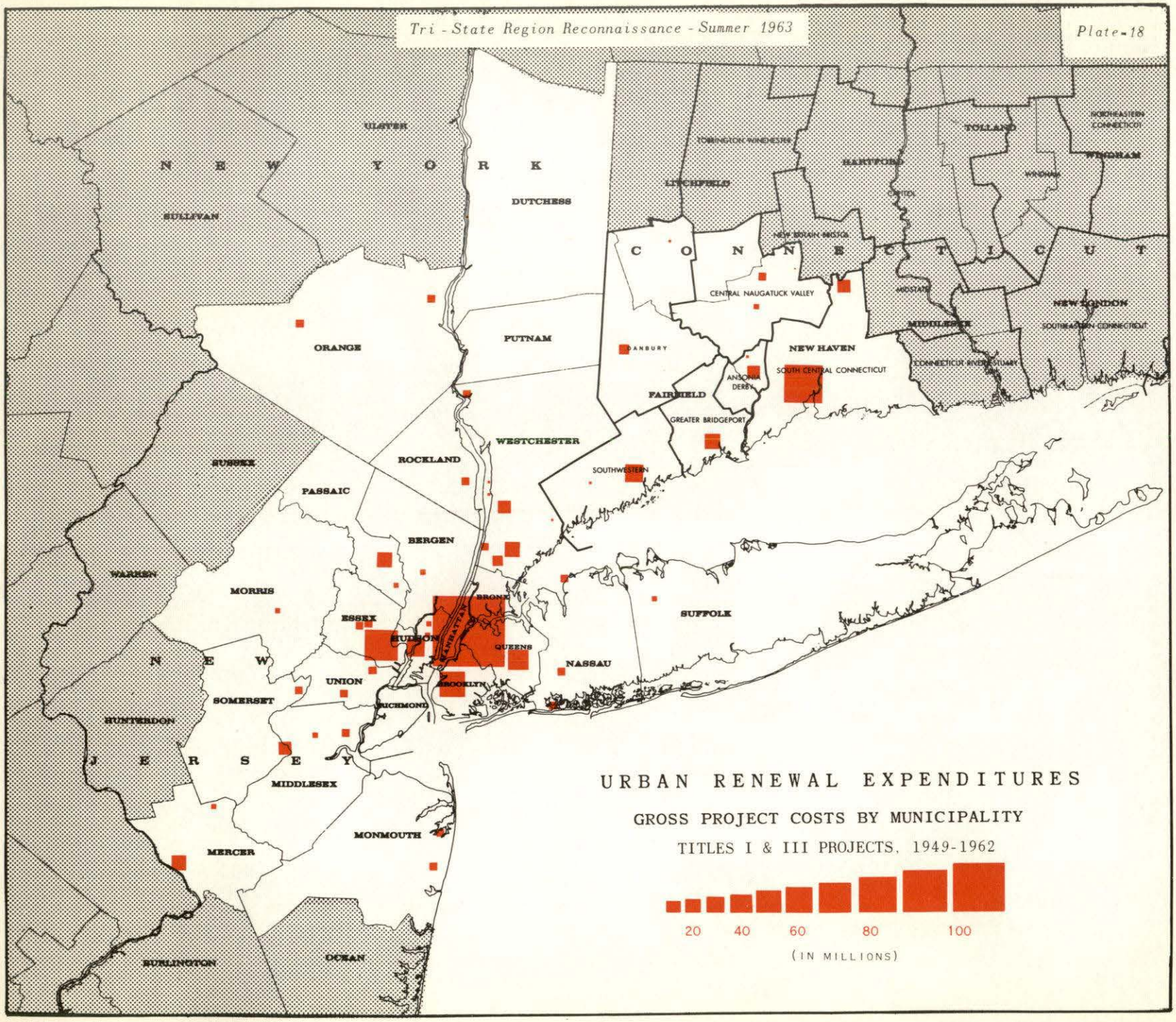
The second striking characteristic of the 1961–1962 residential construction in the Region is the heavy proportion of new units being provided in new multi-family structures. During this period precisely two-thirds of all dwelling units authorized for construction in the Region were multi-family units. This represents a present peak in a steady upward trend for this kind of housing since 1957, the first year for which the data are available.[7]

Table 4 shows in column 5 the steady change by year to 1961 where it has for the moment leveled off. Hence, at present, suburban estension has radically slowed down.

Another important aspect of this shift in the distribution of housing types is the geographic distribution. Note that even in the intermediate and outer rings of the Region (columns 3 and 4) an increasing proportion of new construction has taken place in the multi-family category. The Regional Plan Association notes: "Even in Monmouth and Middlesex Counties (New Jersey), at the southern end of the Region, multi-family authorizations account for 37.6 and 31.4 percent of the total." [8]

To a considerable extent this change in the composition of new residential construction is due to a change in the population composition in the housing market. That part of the market for whom the single family detached house represents a "normal" type is declining as the relatively small crop of depression born babies moves into that part of their lives when, with children of their own, they seek new homes. Conversely, that part of the housing market for whom

7. RPA Bulletin 101, op. cit.
8. Ibid, page 3,4.


Tri - State Region Reconnaissance - Summer 1963
Plate-18
N E W Y O R K
ULSTER
SULLIVAN
DUTCHESS
ORANGE
PUTNAM
ROCKLAND
WESTCHESTER
SUSSEX
PASSAIC
BERGEN
WARREN
MORRIS
ESSEX
HUDSON
BRONX
MANHATTAN
QUEENS
NASSAU
SUFFOLK
BROOKLYN
RICHMOND
UNION
SOMERSET
HUNTERDON
MIDDLESEX
MERCER
MONMOUTH
BURLINGTON
OCEAN
N E W J E R S E Y
C O N N E C T I C U T
TORRINGTON WINCHESTER
LITCHFIELD
HARTFORD
CAPITOL
TOLLAND
WINDHAM
NORTHEASTERN CONNECTICUT
NEW BRITAIN BRISTOL
CENTRAL NAUGATUCK VALLEY
MIDSTATE
MIDDLESEX
NEW LONDON
SOUTHEASTERN CONNECTICUT
DANBURY
NEW HAVEN
SOUTH CENTRAL CONNECTICUT
CONNECTICUT RIVER ESTUARY
ANSONIA DERBY
FAIRFIELD
GREATER BRIDGEPORT
SOUTHWESTERN
URBAN RENEWAL EXPENDITURES
GROSS PROJECT COSTS BY MUNICIPALITY
TITLES I & III PROJECTS, 1949-1962
20
40
60
80
100
(IN MILLIONS)

apartment type dwelling quarters represent a desirable type is dominant ... young one and two person households in early career, and older couples and single persons whose children have left to establish their own households. This latter segment of the market has been reinforced by the coming to fruition of social security and other forms of retirement plans. This is the first generation to whom means of independent living after the working years has become available broadly through the population.

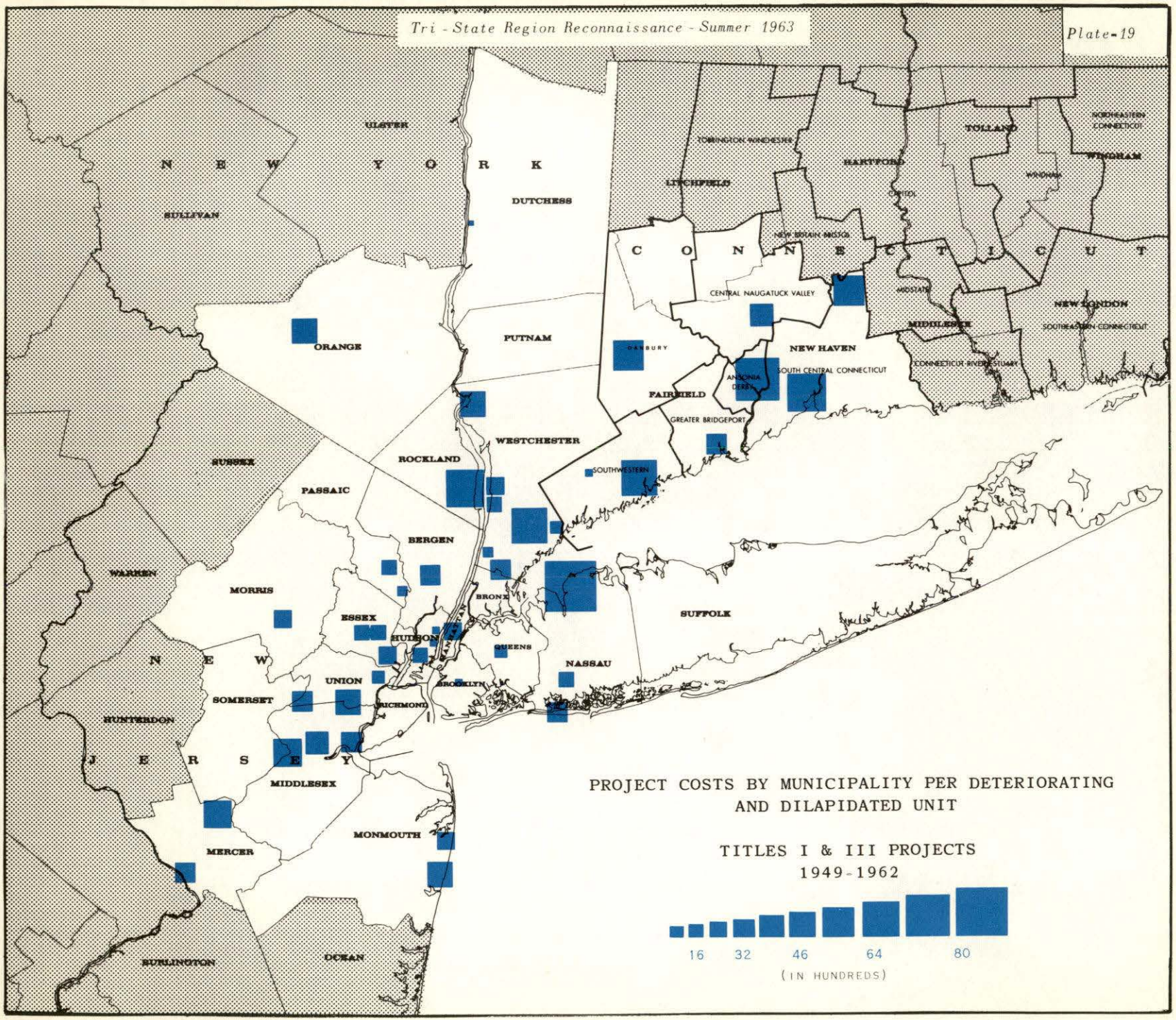
The preceding two sections have shown a picture of simultaneous growth and deterioration in the Region, each to large degree taking place in all parts of the Region. But new growth does not automatically replace old. The readjustment and reconstruction needed in most of the older communities of the Region requires the intervention of government, chiefly through the process of urban renewal.

A third aspect of the Region's dynamism is the pattern of urban renewal effort taking place in the region. These actions result from deliberately adopted public policies designed to erase deficiencies and bring communities back into balance. Because these efforts represent local public policy, the relative intensity of the effort reflects local political leadership and community awareness. Hence the pattern of present effort is very uneven across the face of the Region. Plates 18 and 19 show the expenditures for urban renewal assisted by federal aid from the inception of the program in 1949 through June 1962.[9] On Plate 18 the absolute amount of project cost is shown by municipality, and, in the City of New York, by borough. But absolute magnitude of expenditure does not suggest the RELATIVE emphasis across the Region in this endeavor. Of course, New York City is spending the most, but compared with the size of its problem is it doing as much as Newark? Therefore, the expenditure data for urban renewal are plotted on Plate 19, in terms of the expenditure PER DILAPIDATED AND DETERIORATING UNIT in each municipality. This is a measure of local effort vis-a-vis the severity of the local problem of blight and deterioration. Both maps should be looked at together.

A striking aspect of Plate 18 is the distribution of urban renewal expenditures in New York City itself. (It should be remembered that these data reflect only federally assisted Title I programs.)

The obvious characteristic of Plate 18 is the distribution of urban renewal expenditures in the Region. Of the $668,283,000 of money committed, nearly half (49%) has been allocated in New York City, $324,971,000. This amount is in close coincidence with the proportion

9. Not shown are non-federally assisted projects or various forms of governmentally assisted housing, But the data mapped are comparable data using two sources, (HHFA reports and U.S.Census reports) and are considered adequate to display the pattern of relative renewal effort in the Region.


Tri - State Region Reconnaissance - Summer 1963
N E W Y O R K
C O N N E C T I C U T
N E W J E R S E Y
ULSTER
SULLIVAN
DUTCHESS
ORANGE
PUTNAM
ROCKLAND
WESTCHESTER
SUSSEX
PASSAIC
BERGEN
WARREN
MORRIS
ESSEX
HUDSON
UNION
SOMERSET
HUNTERDON
MIDDLESEX
MERCER
MONMOUTH
BURLINGTON
OCEAN
BRONX
QUEENS
BROOKLYN
RICHMOND
NASSAU
SUFFOLK
LITCHFIELD
TORRINGTON WINCHESTER
HARTFORD
CAPITOL
TOLLAND
WINDHAM
NORTHEASTERN CONNECTICUT
NEW BRITAIN BRISTOL
CENTRAL NAUGATUCK VALLEY
DANBURY
FAIRFIELD
ANSONIA DERBY
NEW HAVEN
SOUTH CENTRAL CONNECTICUT
GREATER BRIDGEPORT
SOUTHWESTERN
MIDSTATE
MIDDLESEX
CONNECTICUT RIVER ESTUARY
NEW LONDON
SOUTHEASTERN CONNECTICUT
PROJECT COSTS BY MUNICIPALITY PER DETERIORATING AND DILAPIDATED UNIT
TITLES I & III PROJECTS
1949-1962
16
32
46
64
80
(IN HUNDREDS)

of the Region's substandard housing, 47% of which is in New York City. But in the City itself, $269,385,000 has been spent or allocated to Manhattan, 40% of the Region's total and 83% of New York City's total. This is in contrast to the concentration of 25% of the Region's blighted housing in Manhattan, and 45% of the city's dilapidated and deteriorating housing in Manhattan. Although it can be argued that the cost of land acquisition and preparation for renewal is clearly highest in Manhattan, dwelling unit density is also highest in Manhattan, on a gross basis several times that of adjacent areas. Of complementary interest is the fact that, as of June 1962 no money had been allocated for the Bronx, and only $35,000,000 for Brooklyn. As a comparison, during this period Westchester County communities had also committed $35,000,000 for urban renewal ... a county with approximately 26,000 blighted units compared to Brooklyn's 138,000.

When Plate 19 is considered, the uneven rate of attack on the widespread problem of deterioration is even clearer. The regional average commitment to renewal by municipality is $929 per deteriorating and dilapidated unit. In Manhattan it is $1409 per such unit. In New Haven, Connecticut it is $7292. In Newark it is $1567. In Brooklyn it is $253, and in the Borough of the Bronx it is $0. The actual range is wider than these figures chosen as examples ... towns like Glen Cove ($12,856) are rarities, probably specialized "one shot" jobs - but New Haven is not a "one shot" job; it is a broad scale attack on the problem of readjustment of a nineteenth century city to the demands of the twentieth century. If there is an attack "norm", New Haven may represent it. In these terms, most of the old central cities of the Region are not attacking their decay at an adequate rate.

As the Region grows and changes, new development will flow into those older areas which adapt themselves to it through urban renewal. Thus, some of the potential in the Region's dynamism will find expression in those areas. By the same token, new potential will be deflected from those areas which permit decay to advance. Although it has never been calculated, a region in which new potential is deflected from significant areas of deterioration will undoubtedly be a more expensive region to service and to live in.

A final note on the pattern of urban renewal expenditures derives from comparing this situation with other measures of the region's dynamism. The most volatile piece of real estate in North America is Manhattan Island. It is one of the exceptional urban areas that rebuilds itself. Yet it is the focus of New York City's publicly assisted urban renewal program.

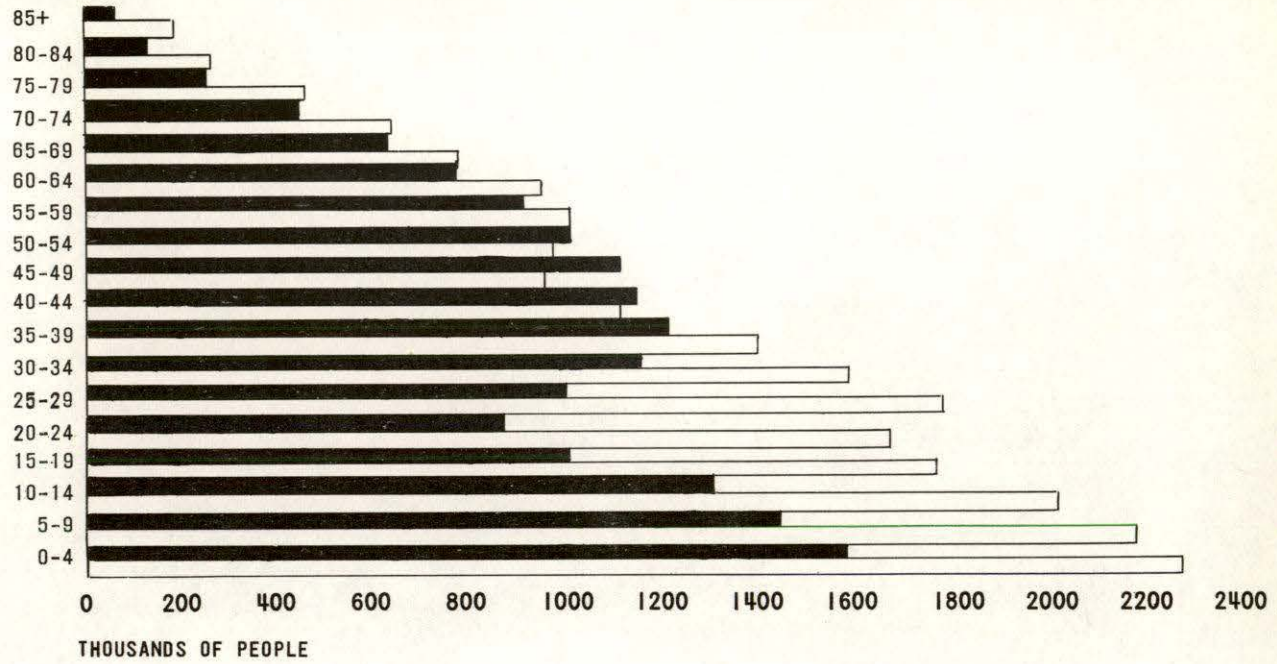
Deterioration is a continuous phenomenon. Most urban renewal effort is directed at areas that have reached a point of evident deterioration. Most planning effort is directed either at the reconstruction of such areas or at the new development on vacant unurbanized land.

Little effort is directed at identifying areas of incipient blight. An example of this kind of area is the residential community built for a different age but which has not yet physically deteriorated. Different ages are not measured in even units of calendar time. They are measured in change, which occurs at radically varying rates. The United States of the 1920's is a different age than the United States of the 1950's, 60's and 70's.

Over 25% of New York City's housing stock was built in the decade of the 1920's ... 735,000 dwelling units, the largest ten year increment of housing in the history of the city. Although we do not know how many of these units were classified as dilapidated or deteriorating in the 1960 census, it is reasonable to assume that the number was quite small. We do know that for the most part these units were built on the assumption of a mass transportation city. For tens of thousands this assumption is still valid ... for those units built in apartment type structures within reasonable transit–time distance from Manhattan. But for other tens of thousands of dwelling units built during the twenties, the mass transit assumption is no longer valid. These are one and two family structures located on small lots at some distance from rapid transit facilities. The location of this housing requires automobile ownership tomeet the range of family travel needs. The neighborhoods are not designed for automobile storage and use. In time–distance some of these neighborhoods are as far from Manhattan as many recent developments which are designed for the automobile. These neighborhoods are functionally obsolescent and areas of incipient blight.

As the planner identifies directions, weights, and rates of change in the near future, it should be possible to identify other situations in which obsolescence can be expected to occur and deterioration to set in. Early identification should permit the devising of programs of readjustment short of the costly (in every sense) programs of urban reconstruction with which cities are now faced. Reconstruction will always be necessary in cities, but an objective of reducing rates of obsolescence is certain to ease the painful and expensive readjustments with which cities are constantly grappling.

AGE DISTRIBUTION OF THE REGION'S POPULATION, 1960 and 1985



AGE DISTRIBUTION OF THE REGION'S POPULATION, 1960 to 1985 (IN THOUSANDS)

TABLE 5

	CENSUS	RPA PROJECTION					
	1960	1965	1970	1975	1980	1985	% increase 1960-1985
UNDER 5 YEARS	1,584	1,565	1,745	1,970	2,140	2,315	46
5-17 (SCHOOL AGE)	3,439	4,000	4,295	4,590	4,945	5,315	55
18-24 (COLLEGE AGE)	1,219	1,535	1,975	2,170	2,325	2,370	91
25-64 (WORKING AGE)	8,356	8,330	8,465	8,855	9,275	9,815	18
65 AND OVER	1,541	1,750	1,940	2,115	2,265	2,355	53
TOTAL POPULATION	**16,139**	**17,180**	**18,420**	**19,700**	**20,950**	**22,170**	**37**
30-34 (HOUSE-BUYING AGE)	1,156	1,045	990	1,170	1,450	1,590	38

NOTE: The population and employment figures used in this report are those prepared for the 22 counties of the Regional Plan Association's area. These totals are less than for the Tri-State Transportation Committee region of 24 counties, the additional ones being Mercer County, New Jersey and New Haven County, Connecticut. This difference does not seriously affect the inferences drawn from Regional Plan Association material.

SOURCE: U.S. Census and RPA Bulletin 100

IV. THE THRUST OF THE NEAR FUTURE

Most of the foreseeable demands and pressures of the next twenty to twenty–five years in the Tri-State Region derive from population growth and change, and from the growth and change in the Region's economy.

Considerable publicity has been given to the projections of the Region's population to 1985. There is general agreement that about 6,000,000 more people will be living in the Region in 1985 than in 1960. There is further agreement that about 2,000,000 more people will be employed in the Region in 1985 than in 1960. Although the sheer magnitude of these figures is both dramatic and important, the gross summary figures in themselves provide only limited clues to the kinds of demands that will be pressed upon the Region in environmental terms. What will be the income pattern of the Region's future population, its age distribution, its household size and composition picture? Where will these people seek to live? And in what kind of housing? What of their places of work? What kind of jobs will be available and what will the training and education requirements of these jobs be? Attempts have been made by various agencies to answer some of these questions. In some cases reasonably accurate forecasts can be made. And in some cases the answers will depend upon the public policy positions taken by the governments in the Region. In this report only the most rudimentary efforts have been made, using the work of other agencies.

Estimates for a future point in time, say 1985, are most useful if they include estimates for intermediate points in time. Table 5 is a summary in five year periods of the Regional Plan Association's projection of the Region's population.

The most important aspect of this table is the changes over time in the size of the different age groups in the population. To note that the Region's total population is expected to grow by over two million people between 1960 and 1970 is much less important for planning purposes than to note, for example, that the number of persons in the age group 30 to 34 is expected decline over this period. The Regional Plan Association has termed this latter group the house–buying group. During this same period, while that group is expected to decrease in numbers, people 65 and over are expected to increase by about 400,000. It would appear from these two sets of figures that the present pattern of residential construction with its emphasis on multi–family rental housing will continue. Meanwhile those in the school age category are expected to increase by over 850,000 and those in the college age category by 750,000. The demand for new and expanded educational facilities shows no sign of abating. Finally, during this ten year period, the number of persons in the productive earning years (25 to 64) is expected to remain almost constant. In other words, the burden of increased services of particular kinds will have to be borne by approximately the same number of people that are carrying that burden today.

This quick sketch of the internal composition of the expected population change in the Region in the present decade has very clear implications for public capital investment in the Region and for the programming of related public services.

The last column of table 5 shows the expected percentage change by age groups between 1960 and 1985 in the Region. By 1975, the intermediate age groups will have turned upward again in trend, although even in 1985 the increase over 1960 is only 18% for the working years group; it is almost doubled, on the other hand, for those in the higher education group, a 91% increase. Since most of this increase will have taken place by 1980, facilities to meet this demand must be in place and functioning well before 1985.

Frequently in city planning, as in military planning, we tend to fight the last war too long and the new war too late. If these projections are valid ... and in terms of the major directions of change their probability can be accepted ... then it would seem that for some years hence the development pattern will be intensifying rather than opposite. There is sufficient time to prepare policies for the next heavy wave of single-family type housing and all the accoutrements that go with it. Estimates of transportation needs must involve quite subtle shadings, both in terms of the location and type of facilities needed, and, equally important, in the relative construction timing of the different types of facilities. Between now and 1975 it can be inferred that movement within and adjacent to presently developed areas requires improvement effort, that during this period may well be a resurgence of demand for public transportation facilities. In the decade 1975 to 1985, major effort perhaps should shift toward the development of new highway facilities, both to meet an increased demand at that point and to direct (or influence) the new urbanization into previously chosen locations and forms.

Estimates of the spatial distribution of population and employment have been made by the Regional Plan Association and published in their report SPREAD CITY. In this report and the working papers that underlie it, the population projection discussed above has been carried forward into estimates of its probable distribution geographically within the Region. The Association staff is careful to point out that this is not a plan, nor is it a forecast. It is an estimate of the probable development pattern if present policies and trends continue. In-so-far as trends are a manifestation of the Region's response to growth, and policies are a response to need as measured by policy makers, it may be argued that the critical assumption of the Association is more useful to paint a picture of a possible

10. SPREAD CITY, Projections of Development Trends and the Issues They Pose: The Tri-State New York Metropolitan Region, 1960-1985, Regional Plan Association Bulletin 100, September, 1962.

TABLE 6 Distribution of Households and Employment by Sector in the Tri-State New York Metropolitan Region, 1960.* (000's omitted)

Sector	County	Households	Employment	Ratio: Employment to Households
CENTER				
	Manhattan	696	2,522	3.62
EAST		1,956	1,581	0.81
	Brooklyn	851	648	0.76
	Queens	583	428	0.73
	Nassau	349	359	1.06
	Suffolk	173	146	0.85
NORTH		1,043	929	0.89
	Bronx	463	239	0.52
	Fairfield	194	262	1.35
	Westchester	241	258	1.07
	Putnam	9	8	0.89
	Dutchess	47	64	1.36
	Rockland	35	38	1.09
	Orange	54	60	1.11
JERSEY NORTH		916	1,166	1.26
	Hudson	198	278	1.41
	Essex	289	421	1.46
	Bergen	231	233	1.01
	Passaic	126	162	1.29
	Morris	72	72	1.00
JERSEY SOUTH		472	521	1.10
	Richmond	62	41	0.66
	Union	150	201	1.34
	Middlesex	124	152	1.23
	Somerset	40	45	1.13
	Monmouth	96	82	0.86
REGION TOTAL		5,211	6,716	1.29

*SOURCE: Regional Plan Association and U.S. Census, 1960.

future than to provide a basis for planning. But the estimates represent the only present source of effort in this direction and as long as the underlying assumption is kept in mind, they are a useful device for first crude working purposes.

The procedures used by the Association staff are carefully explained in the appendix to SPREAD CITY. [11] Generally speaking the population distribution estimate represents the pattern that would occur if present zoning policies are maintained. The estimates are tabulated by county and are summarized by rings. [12]

In this reconnaissance, the materials of the Association have been heavily used, but they have been summarized in a different way. Rings of urbanization, as used by the Association, represent a valuable device for the purposes of analysis and interpretation. An equally valid device is the subdivision of the Region into sectors for the purposes of analysis and interpretation. This has been chosen as the means of looking at the projections of population and employment. Much of the kind of change discussed earlier in terms of the Region's dynamics is best understood in terms of sectors, subdivisions of the metropolis in which change and exchange take place, cross sections from the intensely developed core to the unurbanized periphery. Table 6 sets forth the sectors established for working purposes.

11. Ibid. page 41 and ff.

12. Core, inner ring, intermediate ring, outer ring.

They are shown also on plate 21. Table 6 provides some insight into the present pattern of use in the sectors selected and serves as a point of departure for looking at the estimates of the future.

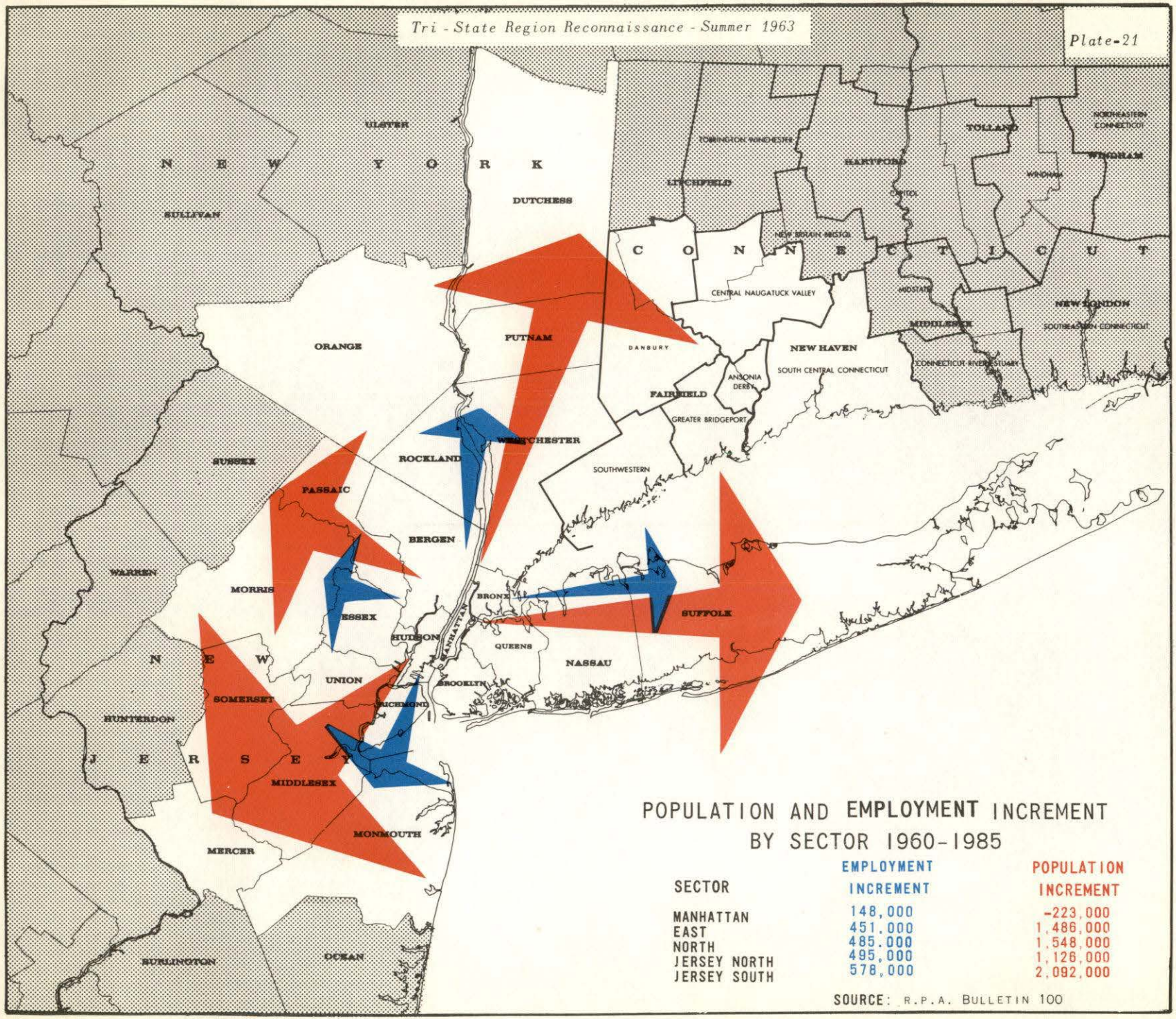
Two things are clear from Table 6. The first is the apparently heavy dependence in the East and North sectors upon employment in Manhattan as compared with the two New Jersey sectors. The second is the striking degree to which the boroughs of New York City outside Manhattan are primarily dormitory communities for Manhattan.

Table 7 sets forth by these same sectors, the estimates of new population and employment by 1985. It should be noted that the population figures are in persons, not households as in the previous table.

The derivation of the 1985 estimated employment by county is explained in SPREAD CITY. [13] The basic model was constructed by the New York Metropolitan Study in 1956. Base figures were revised when 1960 U.S. Census figures became available, and certain other adjustments were made in the interest of sharpening the accuracy of the estimates for the base year. Three factors were then taken into account in the revised projections made by the Regional Plan Association.

a. A revised prospect for each industry in the Region as a whole;

13. SPREAD CITY, op. cit. p.37 and ff.



POPULATION AND EMPLOYMENT INCREMENT BY SECTOR 1960-1985

SECTOR	EMPLOYMENT INCREMENT	POPULATION INCREMENT
MANHATTAN	148,000	-223,000
EAST	451,000	1,486,000
NORTH	485,000	1,548,000
JERSEY NORTH	495,000	1,126,000
JERSEY SOUTH	578,000	2,092,000

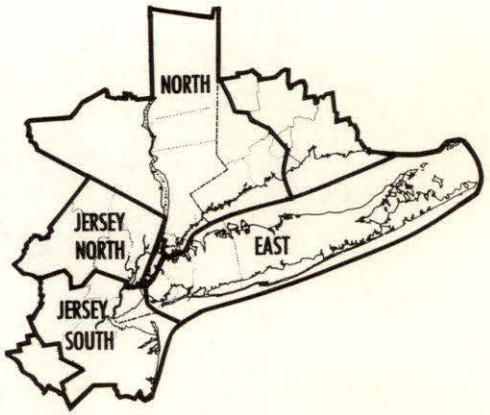
SOURCE: R.P.A. BULLETIN 100

TABLE 7

Estimated Population and Employment Increment
by Sector of Tri-State Region 1960–1985*
(in thousands)

Sector	Population Increment	Percent Increase	Employment Increment	Percent Increase	Uncommitted Vacant Land (Square Miles)
Manhattan	–223	–13%	219	12%	—
East	1,486	23%	342	34%	731
North	1,548	45%	267	43%	2,696
Jersey North	1,126	38%	273	41%	592
Jersey South	2,092	127%	363	119%	941

*SOURCE: Regional Plan Association



b. Availability of vacant land zoned for industry in each county;
c. The new projections of distribution of the Region's population.

It can be seen that, as in the population projections, present zoning is built into the employment projection. This obviously is subject to change. Further, for the geographic distribution of employment in the population-serving activities, the geographic distribution of future population is a major determinant. Thus the basic assumptions underlying the population distribution projection carry over as secondary assumptions in the employment projection.

It is of some interest to compare the two preceding tables (6 and 7) in terms of the relationship in the sectors between residence and employment. The comparison is to some degree impressionistic because residential population in the first table is classified by household and in the second by individual, but for the purpose it is adequate. In these projections, Manhattan, already the most intensive employment center, becomes, in terms of its own composition, even more so. Thus, although Manhattan's employment is estimated to increase moderately, work travel to the island will increase more. The imbalance of the East sector in the direction of dormitory characteristics, is slightly redressed; the proportion of "local" employment is expected to increase. In the North sector on the other hand, also largely a dormitory area, the pattern does not change significantly; a minor shifty in the dormitory direction is suggested. In Jersey North, the sector with the highest proportion of "local" employment in 1960, the proportion of such employment relative to resident population is expected to increase; this sector moves further in the direction of being an employment attractor on the New Jersey side of the Hudson River. Jersey South, more heavily residential than its northern counterpart in 1960, is expected to enhance that characteristic.

A number of observations can be made on the basis of these estimates. Perhaps the most significant is that these projections do not indicate much change in the present composition of the region as it exists on the landscape. Although the 1985 region as imagined in these projections is larger and expanded, the activity mix is not significantly changed. Manhattan remains the chief center of non-residential activity. The eastern and northern sectors of the Region remain largely dormitory areas. New Jersey continues to be a more separate and independent part of the Region with the preponderance of the Region's goods-handling employment. Since the projections are based upon a probable development pattern if present policies and trends continue, the result is not surprising.

Discussion of the effects of the projected trends in the Regional Plan Association report is carried on

entirely in terms of the problems that may be expected to arise from a development pattern of low intensity. But intensity is only one aspect of development pattern. The other aspect is land use pattern or composition on the regional landscape. No attempt has been made to evaluate the possible effects of the projected land use distribution. It would appear that there are three reasons why this aspect of the projections might be considered. They are:

a. As long as a major share of the local fiscal resources is drawn from the local property resources, relationship between the geographic location of residential activities and non–residential activities is important to the localities. This is an extremely complicated issue, but one which warrants some exploration in terms of the implications of future population and employment location.

b. Since the work trip is the chief component of transportation service demand, and since the cost of transportation facilities bulks so large in public investment need, it would appear that some exploration into the area of modifying work location relative to residence location on a regional scale, in the interest of reducing total transportation investment, is warranted.

c. One of the important influences in the location of new residential development is accessibility to an array of non–residential needs. Non–residential activity locations in the future will affect residential location. Thus public policies in the location of new industries and other non-residential activities can affect the location of new housing.

The immediately previous discussion of the projections of population and employment has focused on the relationship between residence and employment 1960–1985, sector by sector. What of the picture of major thrust of both population and jobs across the face of the Region between 1960 and 1985?

Looking at the Region as a whole in table 7, it is almost superfluous in the text to note the most striking aspect of the projection ... the thrust of new population and new jobs into the Jersey South sector compared to the other sectors of the region. Although Long Island will continue to attract population, leadership in the growth race will pass to the southern counties of the Region, particularly Monmouth and Middlesex Counties. In both absolute and proportionate increase terms, second place will be taken by the counties of the northern sector of the Region.

The Regional Plan Association repeatedly emphasizes that the projections are based upon present trends and policies. Policies of course are to a considerable extent responses to growth pressure and recognition of the characteristics of the local environment vis–a–vis these pressures. It is not surprising, therefore, to

note that the heaviest impact of new growth is expected in that sector of the Region where physiography is most conducive to large scale new construction. A glance back at plate 1 will confirm that of the remaining undeveloped land in the Region, topography is easiest in the southern sector. Further, the soil characteristics of this area are most susceptible to the use of on–lot sewage disposal, a fact of importance to the large scale building entrepeneur. The largest single deterrent to a heavy wave of new construction in this sector is that, in accessibility terms, with the possible exception of the western part of the northern sector, it is the farthest from Manhattan. On the other hand, its accessibility to employment areas in New Jersey is good. All in all, it would seem that heavy pressures can be expected throughout this southern sector.

The Northern sector is more complex. It is composed of several subsectors of different characteristics. It includes the gentle topography of lower Westchester and the Connecticut shore, the steep slopes on both sides of the Hudson, the ridges of the Ramapo Mountains, and the easy land beyond the ridges in Orange County. It includes a rapidly developing suburbia in Rockland County and old independent cities like Bridgeport, Connecticut and Poughkeepsie, New York. Some of it lies along the main line of urbanization on the eastern seaboard, some of it is off the line. Except for its farthest reaches its accessibility to mid–town Manhattan is relatively good. Pressures in this sector can be expected to vary considerably by location. Sensitivity to local geography will be particularly important in preparing plans for this sector.

The pressures on the Eastern sector and on the Jersey North sector are self–evident. Pressure on Long Island for residential development can be expected to continue to be heavy. Some shift in the direction of non–residential pressures may be expected if a crossing of Long Island Sound is completed during the period of the projection. The relative location of Long Island, the Region's cul–de–sac, would be changed; it would fall along a main transportation corridor of "megalopolis". Jersey North will continue to absorb industrial employment in its inner sections, and residences in its northern and western sections. In the west, development has already crossed the ridges and, the way opened, can be expected to continue.

Pressure for development, and development *per se*, are two different things. Pressure represents a vector of some set of forces. Development may be a simple resultant of these forces. Or, it may be a resultant after it has been sifted through a sieve representing the public interest. Or it may be a sifted resultant after the vector has been modified through intervention in the array of forces themselves. Planning is not simply an exercise in accommodation to pressure. It is an exercise in the identification of forces, an evaluation of the effects of these forces in terms of some

deliberately chosen objectives, an identification of public forces in the total array, and a set of decisions aimed at redirecting the vector in the direction of the selected objectives. Although, in one way or another, this has been done for some of the cities and counties in the Region, it has not been done for the Region since the Regional Plan of the 1920's.

The increments of population and employment change that have been under discussion in this chapter (as shown on plate 21) represent quantitative results of a vector or set of forces expected to be at work in the Region over the next twenty–five years. Many of the forces have been identified in the New York Metropolitan Study and by the staff of the Regional Plan Association. In this short reconnaissance study, they have not been plumbed nor have any attempts been made to examine the array for completeness or relative weight of its components. This task, including a systematic classification of these forces, is an appropriate one for the Planning Division of the Tri-State Transportation Committee.

For the purposes, therefore, of the concluding sections of this report, the projections of the Regional Plan Association have been accepted. It should be clear from the foregoing that the geographic composition of the plan ideas that follow might be changed considerably if the pressure estimates were revised by a process such as that outlined above.

V. SOME OBJECTIVES FOR A REGIONAL PLAN

Most of the goals of physical development planning are self evident: to reduce pain in the environment; to improve the liveability of the environment, and its workability; to reduce costs; to seek an environment that inspires and lifts the spirit.

Although planning is concerned with the total environment, choices must be made as to the situations in which the intervention of government will produce the greatest returns in terms of the goals set down above. In the Tri-State Region these situations are represented by two poles: the older built-up areas in varying stages of decay and obsolescence; the underdeveloped land on the periphery and in the interstices of the urbanized area. These are poles along the same scale, related to and influencing each other.

Since the Tri-State Transportation Committee is dealing with the problems of growth and change at the regional level, the objectives selected for pursuit should be demonstrably regional. The elements which the Committee chooses to influence should be those components of the Region which are regional, as distinct from local, in character and influence.

Since we are by definition people of our time, we must deal with the artifacts of our time in the arena of the pressures of our time. There are no magic technological devices that will suddenly improve the liveability of our urban regions; there are no simple political inventions that will suddenly ease the road to a more inspiring setting for our daily lives.

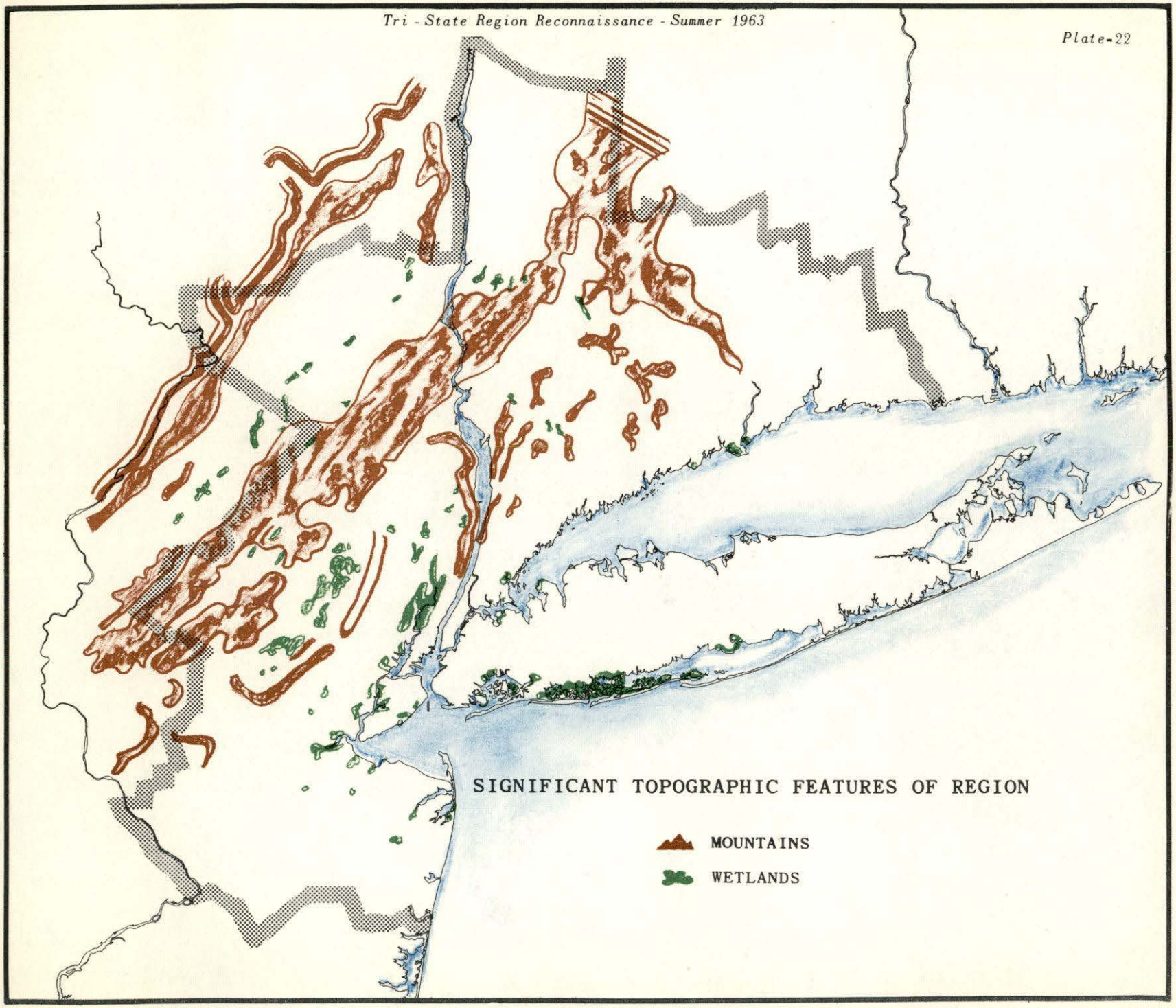
A few elements of regional structure have been selected as the critical components that will influence the total development pattern. They will be recognized from the first chapter in this report: physiography; centers; industrial concentrations; transportation; and open space. Housing is not included for two reasons. First, it is assumed that, for the most part, housing is a derivative in location from these elements. Second, it is recognized that a variety of housing possibilities exists relative to the overall structure, and these possibilities are best realized at a local scale of design.

Two objectives have been sought in the diagrammatic arrangement on the land of the selected regional components.

First, any plan for the Region must start with an objective of taking advantage of the important features in the natural landscape.

Second, a plan for the Region built upon emphasis at the regional level of selected components of regional development must seek to arrange these in a manner which provides a basic framework or structure to which all the elements of the physical environment can be related, and, at the same time, an arrangement that permits variety and flexibility in the growth patterns of the more local units over a long period of time.

In the chapter that follows, ideas for the newly developing areas of the Region are discussed first, followed by some suggestions for redevelopment in the older parts of the Region.


SIGNIFICANT TOPOGRAPHIC FEATURES OF REGION
MOUNTAINS
WETLANDS

VI. SOME PROPOSALS FOR REGIONAL DEVELOPMENT AND RE-DEVELOPMENT.

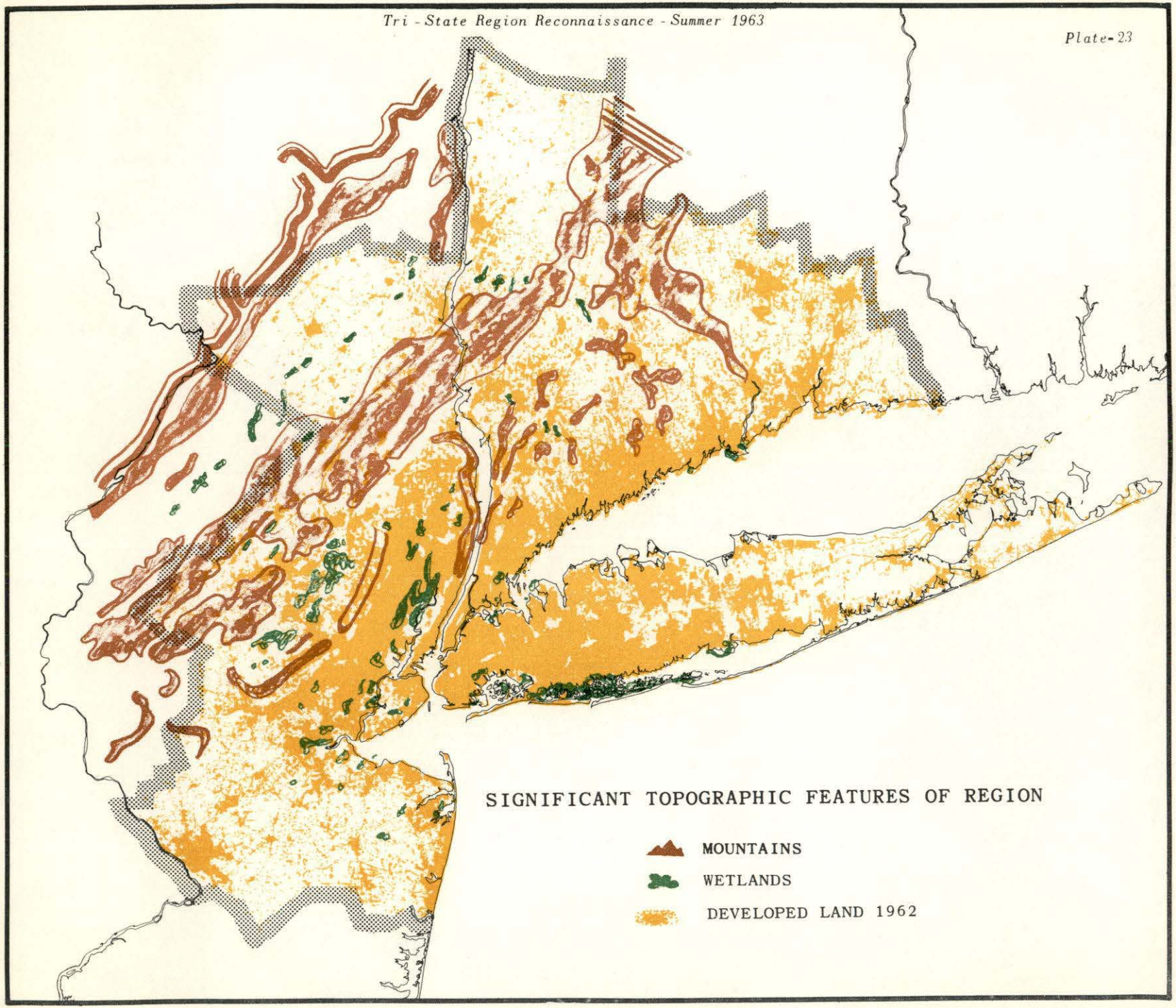
The sequence of the discussion of the components of the plan in this chapter has no significance. It simply represents the fact that everything cannot be said at once. All of the proposals are interdependent and should be thought of in terms of a single sketch.

Plate 22 is a distillation in sketch form of the significant topographic features of the Region. This is the natural setting for development. These dominant variations in the Region's natural landscape should be seen as opportunities for interest and drama in the Region's development. Maps such as this were once given such titles as "Barriers to Development" in planning reports. They are deterrents to the natural flow of developments as led by the real estate entrepreneur. But, in terms of public policy, such a point of view is grossly myopic. It simply does not make sense to permit the easy way in the first cycle of development and then to put tremendous effort into the resolution of problems that arise in succeeding cycles. There is no guarantee that a thoughtful utilization of natural landscape will reduce rates of obsolescence and decay. But there is every reason to believe that a sympathetic relation of new development to the land will, by virtue of providing a more interesting and in some cases inspiring setting for major regional activities, improve their first worth and reduce their rate of obsolescence. Any plan for the Region, therefore, must start with an objective of taking advantage in the public interest of the important features in the natural landscape. This is an objective to be sought in both renewal and in new development. Plate 23 shows the present development pattern overlaid on the sketch of topography.

For purposes of exposition, the proposals for new developments are discussed first.

There are a number of ways by which order, amenity, and common sense can be built into new suburban development. The most inclusive method would be the planning and construction of complete new towns or cities on the periphery of the presently developed area. But if this approach is to be taken, then a great machinery must be developed for the necessary land acquisition and control, planning and design, and construction and early management. In Great Britain, the Western nation best known for this kind of development, only 130,000 dwelling units of some 3,500,000 built in the postwar period were actually located in new towns. Despite the tremendous effort made in this direction, one can question the extend to which this development has affected in any significant way the structure and development of greater London for example.

The new towns concept as represented by Western European policy is rejected here basically because it is believed to be an oversimplified solution to the needs of suburbia. Suburbia is both an extension of the urbanized area and a reorganization of the urbanized area. Viewed as a whole, the urban region is an


SIGNIFICANT TOPOGRAPHIC FEATURES OF REGION
MOUNTAINS
WETLANDS
DEVELOPED LAND 1962

intricate mixture of activities in space, and the regional planning task is to rationalize this arrangement without violating the basic internal relationships. In this mixture certain activities are arranged in a crude hierarchy of service area and area of influence. It is the argument of this report that identification of, and concentration upon, the planning of the primary elements in this hierarchy is a more effective route toward improving the urban region than concentrating effort upon the planning and design of discrete new towns.

There is another reason for choosing the method of selective activity concentration over a new towns program. In a structure of government in which several levels have identifiable responsibilities, it appears more reasonable to devise a planning and development process in which each extension of government can play its role responsive to the particular needs of its constituency, than by the creation of a machinery that cuts across the entire scale of planning and design.

The aim, then, is to identify those activities at the regional and subregional level in the hierarchy whose placement will influence if not produce an order in the Region, activities whose placement and development can be effected with modest changes in the present machinery of government in the Region. This means that the selected activities are clearly within the public realm in-so-far as location, site acquisition and planning, and capital investment are concerned.

These are: new centers; a major transportation system; major industrial concentrations; an open space system.

New Centers

Why new centers? What is their composition? In what way do they meet the criterion of public investment?

There are four reasons for making a proposal for new centers. These are:

a) A limited number will, in some form, be needed to perform a regional service for a variety of purposes;

b) They will tend to emerge anyway over time, but in the natural course of events many of the "natural" components will locate apart from one another, [14] and a long and costly period of readjustment will probably follow before the primary central places emerge;

c) They provide a base for the geographic arrangement of the new elements in the landscape to which other activities will tend to relate;

d) They represent a rather simple idea at the regional and state scale that can be initiated

14. Particularly if we look back at much of the incoherent pattern of post war commercial development.

by government exercising its present powers and responsibility.

These centers are conceived as central places for population service areas in the order of 500,000 people. Thus they would contain an array of activities suitable to the service of such a population. This array would include retail and consumer service activity, professional and business service activity, public and quasi-public services, certain kinds of industrial and industry related activities. They are not simply regional shopping centers, although this function is included.

How can such an array be developed utilizing the initiative of government within our present system of powers?

It is proposed that the motivating force be the devlopment of 12 new universities. [15] The university is rapidly becoming much more closely related to and involved in our society and our economy. The research parks at Stanford and at the Triangle Research Institute in North Carolina are examples. Sterling Forest represents an attempt in the New York Region. But these examples are quite simple ones. There is no question that continued growth in our economy requires an increase in the proportionate input of brain power ... of which by definition, if not in fact, the university represents the seat.

15. Twelve is not a magic number but the scale is probably at the order of 10-15. The number 12 is a derivative from the simple artihmetic shown.

Before spinning out this argument further, it is useful at this point to undertake some simple arithmetic to establish a quantitative base for the proposal.

It will be recalled from the population projection in Chapter IV that the most rapidly growing segment of the population of the Region over the next 25 years is the college and unversity age group. This group (18-24) is expected to double (91%). The next largest increase is expected in the next younger age group, those from 5-17 years of age. The college group is projected to increase by slightly over a million persons during this period.

Present enrollment in institutions of higher education in the Region is 350,000. [16] The Region is presently operating at a slight deficit, that is, more students are attending colleges and universities outside the Region than are entering the Region for such study. Enrollment rates in the United States appear to have increased at about 1 percentage point per year in the 1950's. The Heald Committee investigating college and university needs for the State of New York estimated that enrollment would roughly triple between 1960 and 1985 in the state. The percentage of the population in the 18-24 age group enrolled in institutions of higher education in the Tri-State Region was 27%. If it is assumed that the rate of increase of enrollment between

16. Material in this paragraph is taken from working papers prepared by Professor Netzer for the Regional Plan Association.

1960 and 1985 is 50%, then 41% of the 18-24 age group would be enrolled in 1985. This would mean an enrollment figure of 970,000.

In summary, it is expected that the demand for higher education by 1985 will be in the order of 900,000 to one million students in the Region. If the mid-point of the range is taken, 950,000, then the Region must be prepared to support 600,000 additional students in college and graduate education. This is probably a conservative estimate. This demand will place a very heavy burden upon our economy, but it is a burden that must be borne if the economy is to continue to grow. It is critical that the impact be met by as effective and economic a use of facilities as possible.

Let us assume that one-half of the new increment (300,000 students) can be educated in existing institutions. This assumption means that by some combination of new construction and changes in educational techniques, existing institutions can double their present load. This assumption still leaves 300,000 students to be absorbed by wholly new institutions.

We know from experience that a university can function with 25,000 students. This is the order of the magnitude of the University of California at Berkeley, certainly one of the top-ranking universities in the world. Columbia University is slightly smaller. New York University and the City College both exceed 25,000. Let us assume, therefore, that we shall invest in the Region in 12 new universities of approximately 25,000 students each to meet the demand of this remaining 300,000.

It is proposed that these new universities be largely day schools, that is that they be mainly non-residential universities. It is difficult to conceive how to meet this tremendous impact in residence universities because of the cost involved in providing such facilities and their services.

As largely day schools these universities must be accessible to daily commuters in the Region. Further, the number of full time as distinct from part time students is impossible to predict. These schools therefore, must be reasonably accessible to part time job opportunities, and, conversely, as part time educational opportunities. They must, in short, be urban universities. The rural setting sought out by new schools in the 19th century would not be suitable for the projected metropolitan needs.

It has been asserted above that the university is rapidly becoming heavily involved in the daily life of our society and its economy. Faculty are working in varying capacities in government and private industry. Professionals and executives in government and industry are increasingly entering universities as visiting lecturers and part time teachers. Indeed, if one looks at the age distribution projected for the Region from which the university demand is drawn, one may properly

ask where the teachers are going to come from. Whereas the college-age people are expected to increase by 90% by 1985, the working-age people are expected to increase by less than 20%. Considerable ingenuity will have to be exercised in staffing the teaching corps of the Region's institutions of higher education. It is reasonable to believe that two of the sources from which they will be drawn are the increasing number of educated women, and the persons working at professional tasks in government and industry. In each case, the need for promixity to other urban activities is self evident.

It may be useful, before passing on to additional discussion of these new urban centers, to describe the kind of university center being proposed. These are not Princetons and Dartmouths ... small private resident universities, dominating small towns. Rather they are big public universities woven into the fabric of the growing urban areas in the great metropolitan region surrounding New York. Perhaps the closest analogue is the state university program of California where many state colleges and universities are organized and placed to meet state needs. In the case under discussion, however, three states are involved, each of which will undoubtedly develop its own program. The variety that would be so fostered is an attractive aspect of the proposal. The sites for these new institutions should be chosen with the end in view that these are major components of new cities in the Region, not simply university sites with their own limited criteria.

In the postwar shopping center construction boom, three levels of center have developed. They have been variously classified but the terms "local", "intermediate" and "regional" are generally accepted as descriptive of their size and service function. The population market area of the last and largest of the three starts at 100,000 people and many run to 1,000,000. Assuming a population of 500,000 per center, 12 such centers could be developed.

Many of the suburban centers built solely as retail and consumer service operations are now attracting other activities, particularly offices, but including medical services and apartment houses. Besides retail stores and offices and apartments, the older and established business centers have included an array of public and quasi-public uses: churches, libraries, YMCA's, and the like. Postwar shopping centers (even the largest regional centers) have not included these other quasi-public activities, presumably because the centers have been built at one time as an integrated retail complex, by one entrepreneur. Provisions generally have not been made in the designs for the insertion of other activities over time. And, indeed, from the point of view of the entrepreneur interested in return on investment, there is no reason to carry reserve unused land for ultimate use by these other activities But if it is argued that a major component of metropolitan structure is the regional center, then it follows that there are more interests than simply those of the

TABLE 8

Proposed Distribution of New Centers by Sector

Sector	1960–1985 Population Increment	No. of Universities[1]	No. of Regional Business Centers[2]
East	1,486,000	3	3
North	1,548,000	3	3
Jersey North	1,126,000	2	2
Jersey South	2,092,000	4	4
TOTAL	6,252,000	12	12

1. @ 25,000 Students each
2. with a service area of approximately 500,000 persons each

entrepreneur. It is so argued here, particularly in view of the longer term pay-off of the community in contrast to the shorter term turnover by a developer.

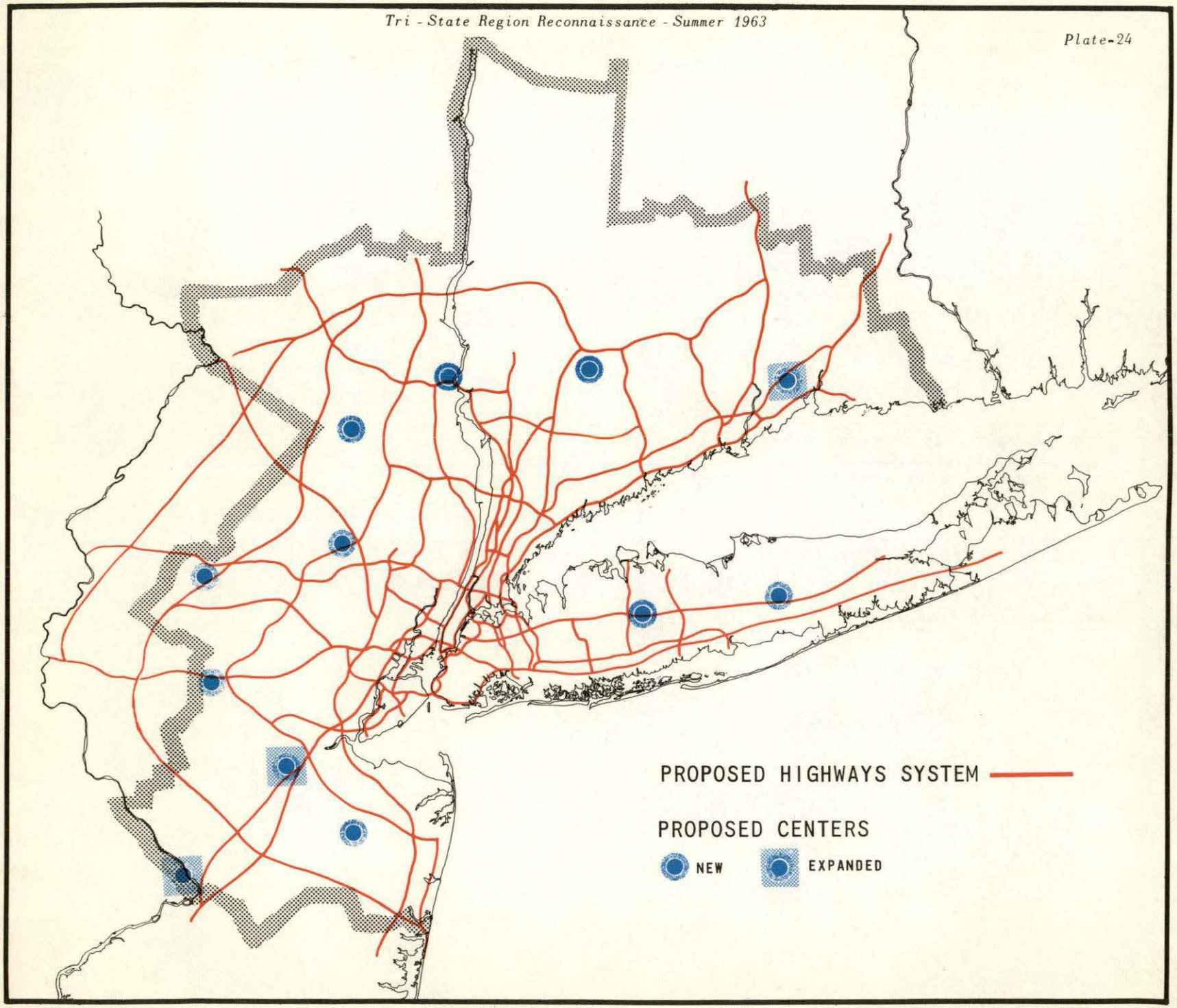
These proposed new business centers would not be simply regional shopping centers in the mode of the 1950's, but would be more inclusive developments, and more intricate, including a broad array of office and institutional activity, public and quasi-public services, parking, transit and residence. Even certain types of industrial development, an element that will be discussed separately below, could be related to these regional business centers.

The centers proposed are illustrated on Plate 25. The locations are diagrammatic but they are not solely illustrative. The first step in their location was arithmetic: the geographic distribution that would provide reasonable service for the projected new population described in Chapter IV above. The distribution of net new persons as estimated by the Regional Plan Association is summarized by sector of the Region in Table 8.

In selecting locations for new centers a first question is whether to recognize the importance of older centers and build upon them or to seek out vacant land.

There are certain advantages in selecting older centers. Some regional facilities already exist in varying stages of maturity. Existing transport facilities support these centers. Their market areas already exist and can be extended. A major regional investment would provide a strong input into the frequently thin reuse potential of these older centers. But there are significant disadvantages to this choice. Redevelopment is a slow and sometimes painful process, and the readjustments required of these older cities would be considerable. The existing supporting facilities would in most cases prove to be inadequate and would require major reconstruction, particularly in transportation. Design flexibility and alternatives would be limited; development patterns are set. Since few significant centers, and none of the composition under discussion here, have developed in the postwar period, the chief centers from which reasonable choices might be made are so surrounded by suburban development that their influence on new development would be limited.

The advantages of selecting vacant land locations are several. Planning and design flexibility is maximized. The potential for influencing the composition and form of new secondary development is considerable. New service and supporting facilities can be designed and built to the latest standards. Development could proceed more rapidly and probably at lower cost. But there are disadvantages too. Unless such new centers were well separated in space from older ones they would eat into the market and service areas of the older ones thus rendering more difficult an already tough task


PROPOSED HIGHWAYS SYSTEM
PROPOSED CENTERS
NEW
EXPANDED

of renewal in these older cities. In the early years, the new center would develop its potential more slowly because it would not have an established market and service area. Their development would be particularly sensitive to the timing of supporting facilities ... water, sewer, power, but most particularly transportation. Not least, a viable relationship with the existing local government would have to be worked out.

In the selection actually undertaken, diagrammatic as it is intended to be, the pros and cons, sector by sector, were tested as alternatives were considered. In this process one major criterion was brought to bear. The location chosen, whether vacant or developed, should be such that the new center could serve an existing market and service area but at the same time have sufficient vacant land in its immediate environs for expansion and for the new secondary development that would be influenced by the center. To this end the major new highways proposed were an important consideration.

Suggested locations are illustrated on Plate 24. Selected older centers are enclosed in a rectangle, new centers in a circle.

It is clear from Plate 24 that the selected older centers are located in the historic and urbanized development corridor of the eastern seaboard. In the highly urbanized sectors southwest and northeast of New York City, vacant land choices are limited. Further, it is extremely difficult to find locations whose development would not detract actively from the older cities struggling to renew themselves. Therefore, in this corridor, the three locations chosen are old independent cities, each of which already plays a subregional role, and each of which is sufficiently distant from the urbanized area surrounding Manhattan to have vacant land in its own immediate environs. The three cities are Trenton and New Brunswick, New Jersey, and New Haven, Connecticut.

The "vacant" land choices comprise the majority of the new center locations. In their selection it was attempted to find locations near the periphery of the presently urbanized area, so that the center would be able to tap an existing market in its early years but would have a large generally undeveloped tributary area within which to build its clientele over the long future. Starting in Monmouth County, New Jersey, and reading clockwise to the northward, the locations are:

1) Monmouth County in the vicinity of Freehold.
2) Somerset County in the vicinity of Somerville.
3) Morris County (west) in the vicinity of Netcong.
4) Morris County (east) in the vicinity of Pequannock.
5) Orange County in the vicinity of Sterling Forest.
6) Putnam County in the vicinity of Camp Smith.
7) Fairfield County in the vicinity of Danbury-Ridgefield.
8) Suffolk County (east) in the vicinity of Huntington.
9) Suffolk County (west) in the vicinity of Brookhaven.

A word about site size may be in order so that the reader may place this proposal in scale. Where new centers are being proposed, sites in the order of 5 square miles should probably be acquired. These would constitute the central places of intensively developed urban subregions of 100 or more square miles, and tributary areas of even greater size. In other words, this proposal is neither a proposal for new towns, or for new shopping centers, but for the centers of major new cities.

The conceptual basis is simple. These centers are new major structural elements of the Region. As such their location and planning is a matter of clear public interest at the level of the State governments acting in concert for the Region. Major public facilities at the level of regional service will have to be built in any case, particularly universities and medical centers. These should be located where they can perform economic and effective service. This means that they are inescapably related to the regional transportation system. They will in turn have considerable influence on the location and pattern of ancillary facilities ... particularly housing which is the largest user of land. These centers are conceived also as the major new business centers of the Region. Again, although in this case most of the actual construction and operation of the units is a matter for the private sector of the economy, the location of these facilities is a matter of public concern. Moreover, since these are regional centers serving many municipalities, it is clear that a higher level of government such as the state must be responsible for the difficult location decision. The location and character of the secondary development that will be generated, of course, will largely be determined by private entrepreneurs and approved by local governments in the course of the exercise of local zoning power. Further the public and private central place facilities at the level of regional service are ... interdependent, and their locations should foster and facilitate this ... interdependency. Therefore, it is argued that the governments should purchase land for the development of the necessary public facilities and build these facilities, and that the land purchase should include sufficient additional land for the development of the private facilities. The states, [17] or some agency thereof, should invest in the necessary utilities to service such a major development as is imagined here, and the state might then lease the land to entrepreneurs for the development of the privately owned and operated components of the center.

Critical to this concept of direct state involvement in these major central places is the idea that the remainder of the development pattern is not a concern of the state government, except in relatively general policy terms. The planning and development of tributary areas are the proper concerns of the county

17. An option to state action might be the establishment of a regional development agency.

governments and the municipal governments, working out at their level the most effective partnership of government and the private sector of the economy.

Transportation

On Plate 24 a layout of a regional expressway net is drawn. It is intended to suggest the geographic scale of additions to the present regional system and to suggest a principle in system layout.

It is apparent that the present proposals for new highway construction in the Region are inadequate to provide the geographic spread of service required by the expected population expansion in the region or by a system of centers such as those proposed above. The most obvious gaps in the present set of proposals are in non-radial or circumferential routes. The sketch suggests a system in which radial and non-radial (cross-region or distributor or bypass) service is more nearly balanced.

In a reconnaissance such as this, demand could not be estimated and the proposals are diagrammatic. But the experience of other large urban regions can provide some reference points. The plan for the Chicago metropolitan region proposes an expressway net that averages out to about 1 mile of expressway for every 15,000 persons. In the Detroit plan the same relationship is on the order of 18,000. There are important variables of course that are different in the New York Region, residential density and car ownership for example, or the proportion of employment in the central business district, or the rail service. But in the new areas coming under the pressure of urbanization, the differences are much reduced. Thus one might reasonably expect a need for some 400 miles of expressway simply to meet the incremental need of the additional 6 million people expected to inhabit the Region. Mileage to meet present deficiencies would be in addition to this. The image of Manhattan, served by railroad and subway, tends to obscure two facts that bear upon the need for automobile transportation service. The first is that the New York Region already has more expressway mileage than any other urban region. The second is that postwar suburban development in the Region has not been at a significantly higher residential density than other urban regions.

In short, the mileage of expressways suggested by the sketch is probably less than will be needed.

The other aspect of the sketch is the gridiron configuration of the proposed system. The present system in the Region is predominantly center-oriented. This center dominance probably reflects the demand in the historic corridors of movement. Such demand will continue. But demands already exist, and will increase for non-radial movements. This has been pointed out by other observers. [18]

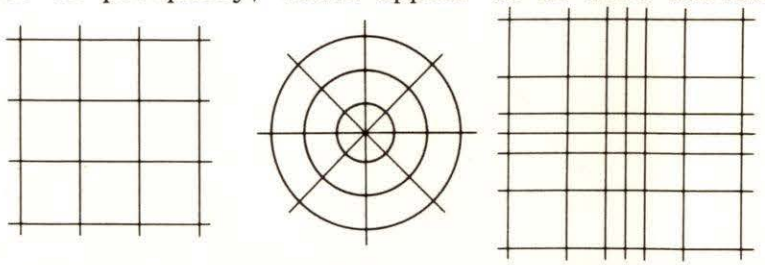
18. See Chapter 21, Metropolitan Transportation, 1980, Comprehensive Planning Office, Port of New York Authority, N.Y., 1963.

The need for cross-region service will exist regardless of the density pattern. This would be true, although to a lesser degree, even in a rigorously controlled corridor development form such as that proposed for the Washington, D.C. urban region. (And, as Plate 24 suggests, such a highly controlled form is not the import of the ideas set forth in this reconnaissance.) The increasing interdependence of the diffuse parts of the Tri-State Region can be met only by a transport system with a more inclusive pattern of service than that provided by center-oriented radials. This is particularly true in a Region in which non-center destined traffic demand must be met by reliance on the automotive vehicle.

But there is a more deep-seated reason for proposing the gridiron pattern than enhancing automotive transportation.

The fundamental question to be resolved in urban planning at the metropolitan scale in the United States is how to influence the development and redevelopment of the Region in the direction of economy and liveability and at the same time to permit flexibility and variety at the level of local public decision making and private investment. Related to this question is how to choose objects of public investment that will stand up over time for the original purposes, even if new forms of urban development occur in the future. An expanding grid pattern of transportation would appear best suited to answer these questions.

The primary justification in human terms for the enormous urban regions of today is the variety of opportunity which they present to the individual. Since these opportunities have loci, a transportation system that makes these opportunities, wherever located, most accessible to the entire region, is the grid. But these opportunities are not randomly distributed. Because certain activities are interdependent and serve either the region as a whole, or definable sectors of it, centers develop. From the primary center a gradient in density toward the periphery is a natural response to the competing pressures for land. An evenly spaced rectangular grid would not be consistent with these aspects of a regional development pattern. Therefore, in principle, a polar grid, with cells expanding from center to periphery, would appear to be most suitable.



Rectangular Grid | Polar Grid | Expanding Rectangular Grid

In the Tri-State Region, the chief center, Manhattan, cannot be served solely by automotive transportation; automotive transport should function as a necessary supplement to the rail system. All of the radial lines in a polar grid cannot be brought to the center.

Therefore, the theoretical polar grid must be adapted to a shift in the relative importance of the two travel systems (highway and rail) in the environs of Manhattan. The eventual highway pattern would appear best described as a compromise between an expanding rectangular grid and a polar grid.

Three other aspects of the situation in the Tri-State Region act to modify this diagrammatic approach to highway system. The first of these is the present development pattern including transportation. The second is the physiography of the Region. The third is the location of this Region in the "megalopolitan corridor."

The first and second of these are related. The Hudson River was a deterrent to the integrated development of the Region in its formative years with the result that high proportions of land in residential use at high densities developed in the boroughs of the Bronx, Brooklyn and Queens to support the high level of employment in Manhattan. Subways were built to carry this home to work movement. These high capacity carriers in turn justified further high intensity residential construction. On the New Jersey side of the river, separate work places developed, and much of the transportation development was oriented to their requirements. Although in the automobile era limited access facilities were first built, and in greater number, on the New York side of the river, much of the construction has been for parkway purposes, not designed for the work-a-day tasks of the urban expressway. In New Jersey, arterials were built for automobile service before the first limited access facilities were built. Although heavily congested today, they performed a service for automotive traffic and influenced the intensity of the land development pattern.

The result of this development history is a lop-sided development and transportation pattern. Note on Plate 12 the weighting of the high density areas to the north and east of Manhattan, or on Plate 10 the undeveloped land in Middlesex and Monmouth Counties in New Jersey. The transportation problems of Long Island are aggravated by this historic pattern of density. The postwar building in Nassau and Suffolk counties has been mostly composed of large lot single family detached housing, a development pattern requiring high dependence upon the automobile. Yet automobile entry to Manhattan is impeded by the barrier of high density development in Brooklyn and Queens. It is apparent that Long Island will have to depend heavily upon rail service for its entry to Manhattan for many years to come. The same is true in less degree for Westchester County and Connecticut. It is perhaps less severe for this northern sector because of the parkway system built into the Bronx so that the automobile can reach Manhattan without having to enter the local street system. But these routes are increasingly congested and as the Bronx and Queens intensify in development

it will become increasingly difficult to construct new highway facilities. Thus the northern sector too will have to depend heavily upon rail service for entry to Manhattan. This increasingly difficult situation on the New York and Connecticut sides of the Hudson is not parallelled in the same degree in New Jersey. From this sector automobile and bus transport will continue to be an important and effective means of entry to Manhattan. It is difficult to foresee the growth of a density barrier on the New Jersey side of Manhattan comparable to that which has developed on the New York side.

This development pattern and its effect on present transport needs is a major factor in resolving today's problems. But, beyond overcoming the deficiencies of today, it represents real problems in future development strategy. The strategic problem has three components: development intensity and composition in land use terms; kinds of transportation facilities and investments; and timing of development and investment.

Another aspect of physiography influencing the layout of the transportation system is the ridges that traverse the Region on the west and north. The Watchung Mountains, the ridges to the west and the Ramapo Mountains suggest an obvious alignment for the circumferential routes in this part of the Region. The sketched routes have followed this natural bent.

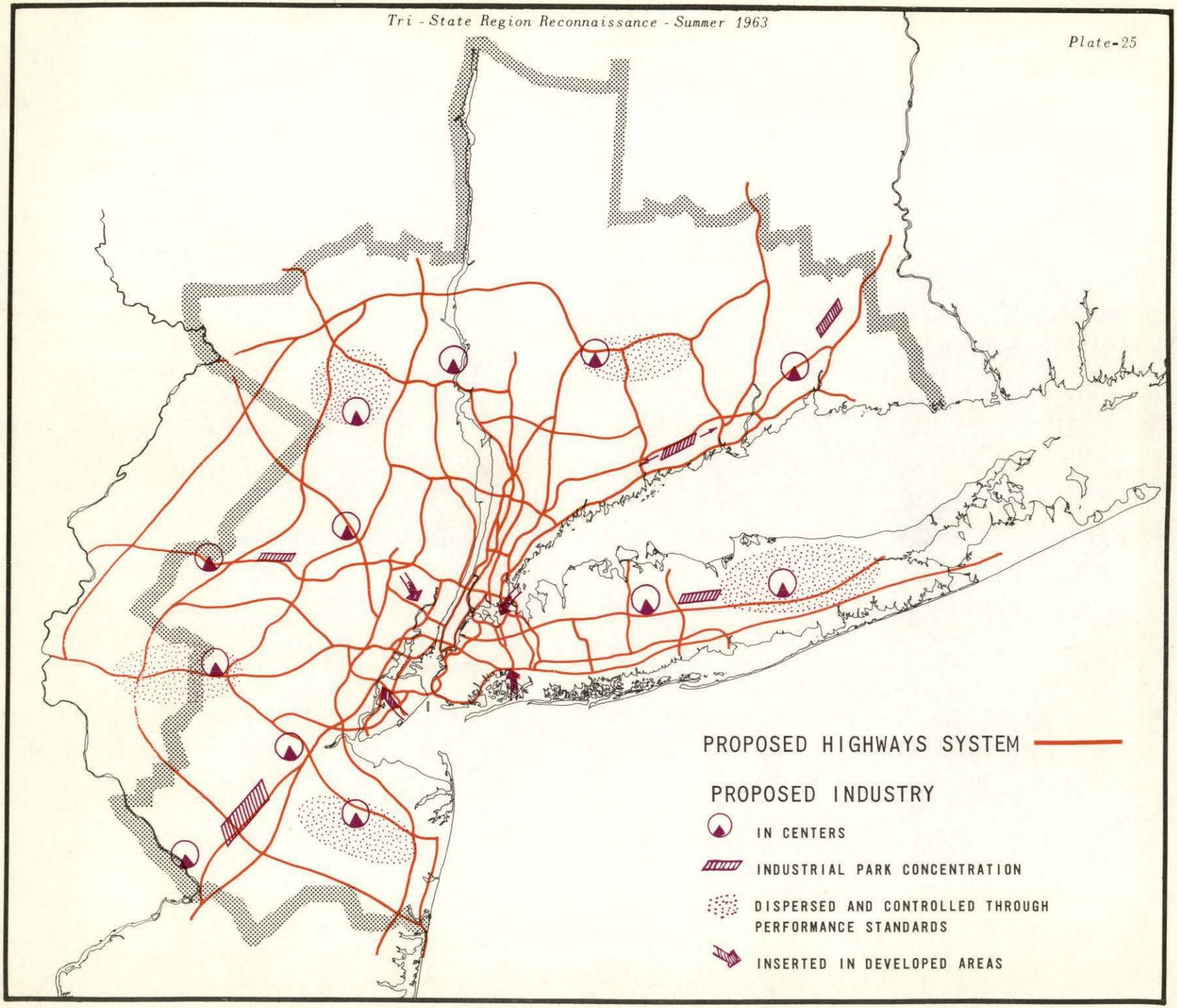
The third aspect of the situation affecting the shape of a regional highway system is the location of this Region as an element of the urbanized eastern seaboard. This means two things: first that along this axis heavy radial demands will continue to exist and must be met; second that volumes of through traffic, though low in proportion to total traffic, are high enough to warrant bypass construction which will increase the requirements of bypass routes over what will be required for regional service **per se.**

The sketch plan of a regional highway system illustrated on Plates 24 and 25 is thus a compromise grid pattern reflecting the adjustment of diagrammatic objectives to other factors of the Region.

The maps in this report show no proposals for modifications to the rail system. There is no question that rail service will continue to be required for delivery of people to Manhattan. But it is believed that in the new areas of the Region no rail service is justified for other than Manhattan–oriented movement. In this regard, the needs are more in the sphere of program than of physical plan.

Industry

The third element of the proposals for new development in the Region is industry. Once again, the first question to be answered is: what properly constitute regional proposals as distinct from local ones?


PROPOSED HIGHWAYS SYSTEM
PROPOSED INDUSTRY
IN CENTERS
INDUSTRIAL PARK CONCENTRATION
DISPERSED AND CONTROLLED THROUGH PERFORMANCE STANDARDS
INSERTED IN DEVELOPED AREAS

Although in the sketches undertaken and illustrated on Plate 25, no attempt has been made to quantify industrial proposals by location, the general weights of the Regional Plan Association's estimates have been kept in mind. It is useful to look at a summary of these projections set forth by sector. Industrial land requirements are primarily made up from manufacturing and wholesaling employment.

The Regional Plan Association estimates that the manufacturing and wholesaling employment increase will require 95 square miles of land. [19] The amount of land that will be required for plant relocations from obsolete sites will increase the need considerably. Table 9 indicates the expected heavy growth of these kinds of activities in New Jersey, with Manhattan expected to show actual loss, and the eastern sector, (Long Island, including the boroughs of Queens and Brooklyn) expected to grow moderately.

Although the proportion of the regional economy devoted to manufacturing and wholesaling is expected to decline, the absolute numbers of people employed in these activities will be substantial, and in terms of the impact upon the landscape and on public services, particularly transportation, the effect will be of great importance.

Four separate development policies are suggested for dealing with this impact at the regional level.

19. Spread City, op. cit.

The first suggested policy is the initiation of major industrial parks on vacant land along the major transportation axes of the Region. These parks would house the extensive and heavy industrial activities that require large tracts of land, have heavy goods movement and need high capacity transportation service, require industrial water and sewer service, and frequently attract smaller supporting industrial activities to their immediate vicinity. Major industrial centers of this type are of regional and subregional importance. They attract population and influence the location of residential construction and its supporting facilities; they incluence the location of supporting industrial and commercial activities. Because they make particular demand upon regional utilities such as water and sewer, and have an obvious effect in imposing demands upon the transportation system, their location should not be a matter left entirely in the hands of the entrepreneur and the local zoning board. The location, public investment in utility service, and general use control is properly a matter of responsibility for a higher than local level of government ... county and perhaps state government have both a responsibility for and a direct interest in such industrial development.

Diagrammatically, a suggested few major industrial concentrations of this type are shown on Plate 25. They are represented by the long rectangles aligned with the radial elements of the highway system.

TABLE 9

Estimated Employment Increment by Sector*

Tri-State Region, 1960–1985

(in thousands)

Sector	Total Increase	Percent	Manufacturing and Wholesaling	Percent	Other	Percent
Manhattan	148	6	–71	–10	219	12
East	451	29	109	19	342	34
North	485	52	198	62	286	47
Jersey North	495	42	222	44	273	41
Jersey South	578	110	215	100	363	119
TOTAL	2,157	32	673	29	1,483	34

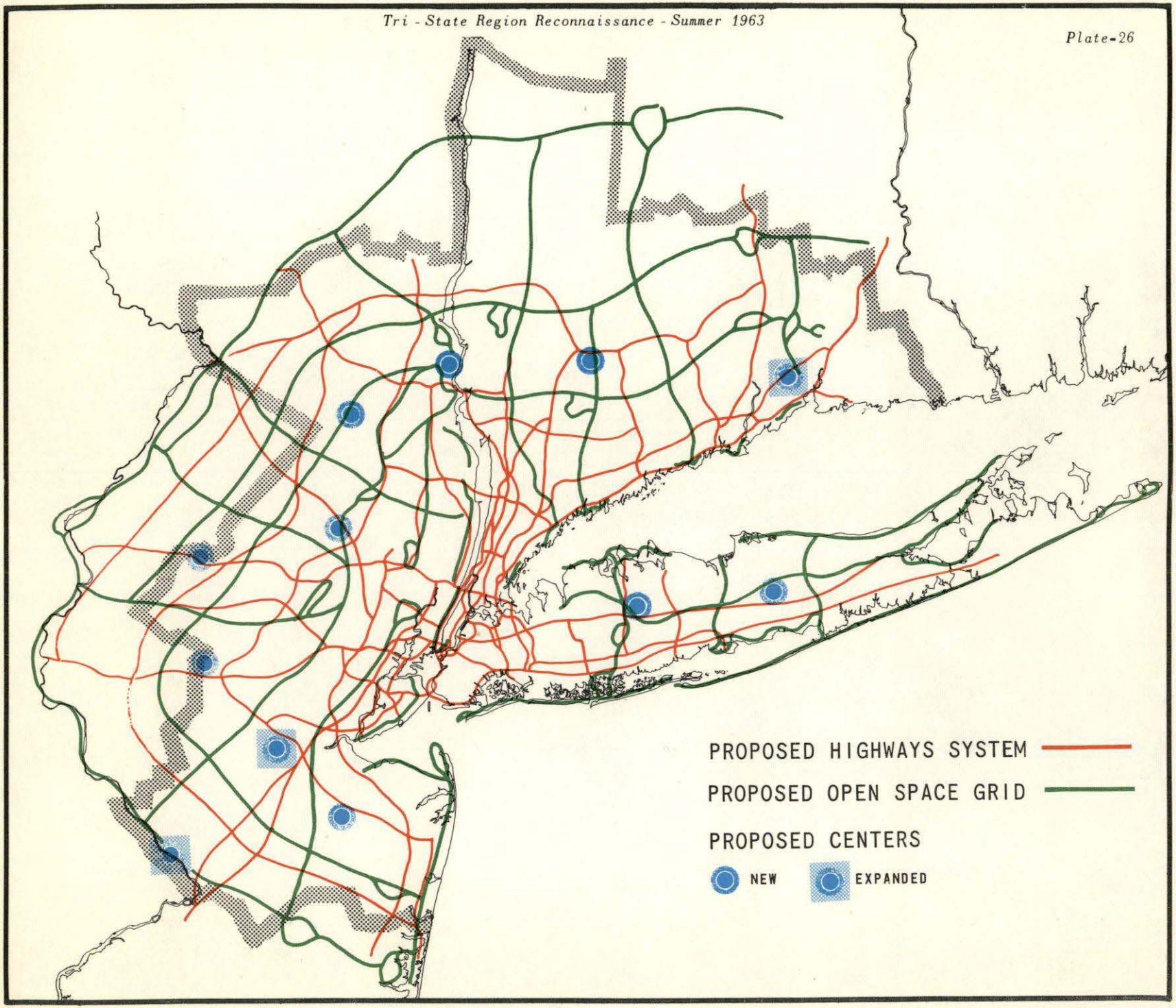
*Data from Spread City, Regional Plan Association Bulletin 100, September, 1962.

The machinery for state intervention is less clear in this subject area than of the others discussed in this chapter. Yet it is clear that some intervention is required to guide these major regional activities to locations chosen with a long term view of the public interest. Perhaps a state development corporation is needed with powers of land assembly and utility investment.

The second of these industrial developments policies relates to the major new centers suggested earlier in this chapter. All industry is not the heavy type requiring specialized services and large expanses of land. For a variety of reasons, certain industrial types continue to be approximately urban, to be closely related to urban services, to depend upon a nearby labor force, to depend upon the resources of educational and research institutions. Research industry, printing and publishing, apparel, are samples of these. Therefore, provision should be made in the major new centers for industry of this type.

Since the first zoning ordinances were prepared in this country, industry has been looked upon as an activity that is incompatible with residential use. Yet there are many industrial activities that are housed today in plants that make perfectly suitable neighbors to residence, particularly in the low density suburb. Therefore, it is proposed that some thought be devoted at the regional level to drawing up criteria for those kinds of industrial activity which can be dealt with in local zoning ordinances with greater flexibility than most of these ordinances presently provide; The third proposal is therefore a simple graphic recognition of the need to meet some part of the region's industrial land requirements in this policy manner.

The fourth policy is also one that must be met at the local level, but one that is properly a regional concern if one aspect of regional responsibility is to suggest modifications to present patterns in the directions of a more economic and liveable region. It is suggested that sites be sought out for the insertion of new employment in the fabric of the built up areas of the Region. The development policy of New York City for example is very heavily housing–oriented. This is understandable in terms of the shortage of adequate housing accommodations for the large lower income segment of the City's population. But this is questionable policy in the long run, even for the city itself. It has been seen in Chapter IV that the counties of New York, with the exception of Manhattan, have the lowest ratio of employment to residence of all the counties of the Region. In order to balance better the demand for public service and to balance better the local tax base, and to strike at the economic problems of at least some of the city's population, it is proposed that new industry be inserted into the boroughs of Richmond, Queens and Brooklyn on land that is now vacant or in low intensity use.


PROPOSED HIGHWAYS SYSTEM
PROPOSED OPEN SPACE GRID
PROPOSED CENTERS
NEW
EXPANDED

Open Space

The fourth and last element of the proposals for new development in the Region is a suggested system of open space. At the outset of this report it was said that open spaces set aside for preservation, recreation, or other low intensity uses had played a minor role in the spatial organization of the Region, and that this element of regional structure has a greater potential for ordering the Region's development pattern. But, like other elements of structure dealt with in this reconnaissance, open space is not to be laid out merely for the sake of order or structure in the metropolitan landscape: it must serve useful purposes, both long and short run. The shape or form of the system must be rational on its own terms.

At the scale of the metropolitan region, two basic open space schemes have been proposed in recent times. The first is the enclosure of urban development in open space. The second is the wedging of open space by sectors into urban development.

There are two variants to the enclosure idea. One is the "greenbelt" exemplified by the peripheral park system of Ottawa, the forest preserve on the fringe of Chicago, or the proposals by Sir Patrick Abercrombie for Greater London. The other is the idea of surrounding the metropolis by a series of new towns, each with its own surrounding greenbelt. This idea was conceived by Ebenezer Howard in the last century, and has been carried forward in the British new towns program.

In contrast to the surrounding belt system is the wedge system. This type of park and open space system was proposed in the Detroit Regional Plan and is most recently advocated in the Plan for the year 2000 for Washington, D.C. In this system, urban development is confined to corridors radiating from the primary center; these spokes, like fingers of development, are separated by wedges of rural and park open space.

Here a third system is proposed ... a grid system of open space crisscrossing the entire Region. It should be evident from earlier discussion that neither of the two systems described above would be consistent with the general scheme of proposals made in this reconnaissance study, nor with the point of view of the Region as a highly complex and intricate system, the regional proposals for which should permit variety and flexibility in the development of its subsidiary parts.

There are several reasons for suggesting a grid such as that shown on Plate 26.

Open space is the opposite of developed urban space. A chief requirement for a high degree of urbanization is accessibility. Since open space is at the other end of the urban scale it is reasonable to conceive a system that is spatially offset from the transportation grid.

But open space cannot be inaccessible or many of its purposes cannot be met. It is therefore reasonable that it should have direct contact with major traffic carriers. The open space grid meets both of these tests.

Open space is not unused space. One of its purposes is the preservation of natural features of the Region, both those which are rare or unique, and those which are simply of nature for the purpose of providing places for repair and refreshment. Open space may be cultivated. It may be the site for active recreation of urban people. It may be the right of way for urban services: water, sewer, power, pipeline. It may be the site of supporting urban activities whose site requirements are non-urban: special schools, defense activities, power generation, water resources. Although a grid system does not have inherent characteristics that meet all of these automatically, it does not create barriers to their attainment. And some of these needs can only be met in linear forms: the preservation of ridges and stream valleys, the rights of way for water and drainage. Others may be enhanced by linearity, the vista for example, or the kind of recreational activity that needs continuity such as hiking.

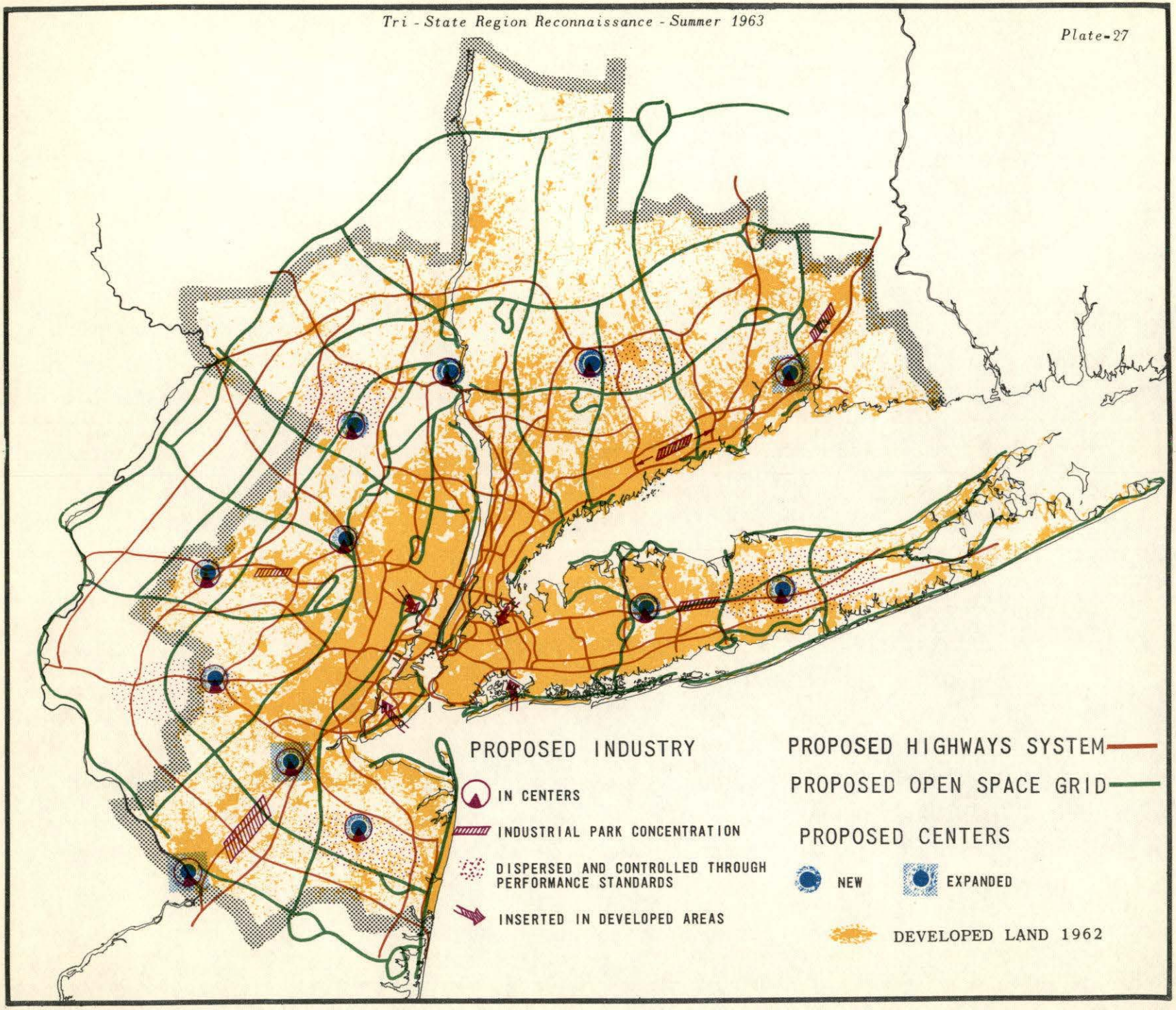
The grid suggested has practically no limits as to width. It can be miles wide in some places, a few hundred feet perhaps in others. Thus it can permeate the developed fabric of the Region as well as help to shape the growing areas. And in this latter role, the grid provides reference in space without constricting development.

Finally, like most of the suggestions in this reconnaissance, it has the virtue of being a simple idea for execution at the regional level. It can be easily communicated and understood, no mean value in the field of public development.

Its accessibility should range from the immediate to the remote, insofar as the latter is achievable in an urban region.

Just as the highway grid cannot be as precisely reproduced on the landscape as on a paper diagram, neither can the grid of open space. A regional pattern of open space should take advantage of natural features of beauty or rarity that should be available to the public, tomorrow's as well as today's.

The open space grid on Plate 26 is aligned in New Jersey and trans-Hudson New York with the ridges and valleys of the mountains fringing the western limits of the present developed area. The lines running perpendicular to these natural lines follow stream valleys where that is possible. In eastern New York, and in Connecticut, the north-south lines follow stream valleys where possible; the east-west lines are somewhat arbitrarily placed across the ridges. Obviously such a proposed system should encompass existing regional open space. This is suggested graphically on the map.


PROPOSED INDUSTRY
IN CENTERS
INDUSTRIAL PARK CONCENTRATION
DISPERSED AND CONTROLLED THROUGH PERFORMANCE STANDARDS
INSERTED IN DEVELOPED AREAS
PROPOSED HIGHWAYS SYSTEM
PROPOSED OPEN SPACE GRID
PROPOSED CENTERS
NEW
EXPANDED
DEVELOPED LAND 1962

Summary, New Development

In summary, the ideas suggested in this report for the developing sections of the Region consist of: (See Plates 26 and 27)

1. A set of major centers, 9 new, 3 radically redeveloped, and each comprising,

   a major university
   a major business and institutional center
   specialized industrial activity
   supporting activity including some housing

2. A modified grid system of new highways

3. Industrial development consisting of,

   major industrial parks
   industry in the proposed centers
   industry mixed with residence under appropriate safeguards
   industry inserted into older areas

4. A grid of open space

The chief arguments for these proposals are:

1. They constitute the primary structural elements of the developing areas;

2. thus they justify a particularly intense planning effort;

3. they are demonstrably regional in scope and nature;

4. they involve the use of, for the most part, existing public powers of the state governments;

5. they represent investments that the governments of the Region, in large degree, will have to make anyway.

Redevelopment

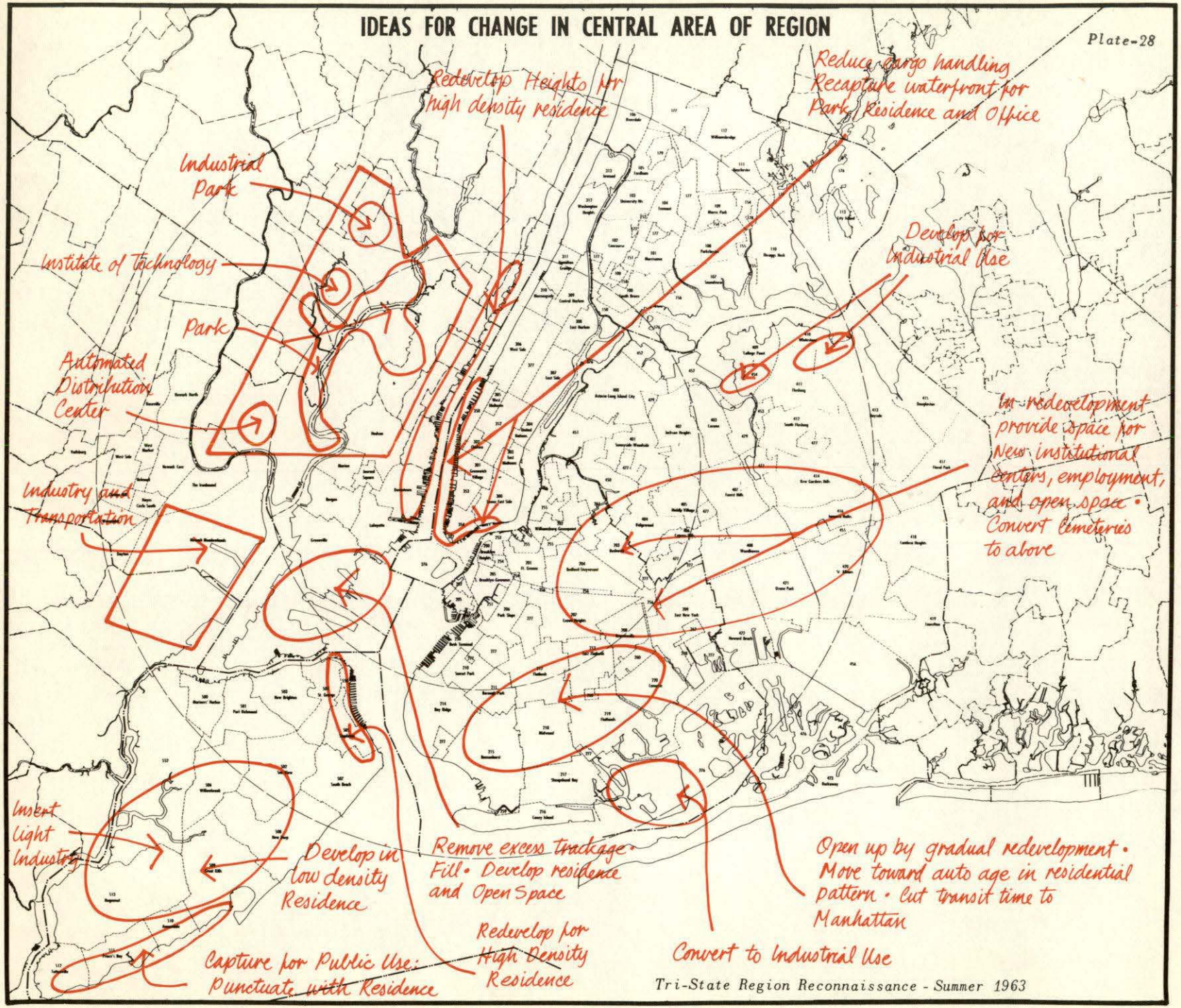
The preceding discussion in this chapter has dealt with ideas primarily but not solely applicable to the growing areas of the Region. In many ways, suggestions for the reorganization of the older built up areas of the Region is a much more subtle and difficult task. In this reconnaissance it has not been possible to devise a systematic set of ideas that can be neatly applied to the central built up sections of the Region. What follows is a series of comments on major features of the older parts of the Region which appear to be relevant to the renewal of this large and complex area. They derive both from field and data reconnaissance, and from conversations with people more knowledgeable of the local situation than the writer. For the most part they are obvious, and that may be their strength.

The suggestions are noted on Plate 28, deliberately set down in reconnaissance technique. In the following paragraphs the ideas are discussed under geographic headings.

Waterfront. The predominant natural feature of the Tri-State Region is the water: ocean, harbor and rivers.

IDEAS FOR CHANGE IN CENTRAL AREA OF REGION

Plate-28



Tri-State Region Reconnaissance - Summer 1963

Its attraction is considerably enhanced by the adjacent high ground that provides magnificent views from its slopes and ridges. Initially the economy of the Region required that most of its waterfront be worked. This is no longer the case. Considerable lengths of waterfront on Manhattan and Staten Island in the City of New York contain cargo piers of apparent obsolescence. As the Region expands in space, as cargo destinations are dispersed, as land transportation shifts toward the truck, it would appear that only highly specialized cargo handling need take place on Manhattan's waterfront. Since, in the port as a whole, general cargo marine terminal needs are estimated to increase only slightly by 1980 [20], the redevelopment of major sections of Manhattan's waterfront for housing, park and office use is an obvious proposal. Execution of this proposal should be carried out so that the river is not obscured from other Manhattan sites; this will require a high order of civic design.

Less obvious, but also of considerable potential for new high rise housing, is that portion of the Staten Island waterfront facing the harbor.

It is suggested that the ridge on the New Jersey side of the Hudson as far north as Palisades Park be redeveloped for high density housing. In this case, high density should not be read as high rise. Design solutions utilizing low rise buildings with high intensity coverage and use would seem the best solution.

20. "Metropolitan Transportation", op. cit., page 152.

One of the most striking examples of obsolescence of use in the Region is the section in New Jersey (e.g. Greenville) where rail terminals abut the water. A rationalization of rail freight facilities would free very large acreage for reuse, probably for recreation and housing.

(It may appear that uses other than housing and park are not being considered for reclaimed waterfront land. For two reasons housing and open space should have first consideration. One is that there is a small demand close to the urban center for non-residential uses that need the water. The second is that advantage of every natural feature must be taken if the residential environment of the central area of the Region is to be liveable at the densities supported in the center).

Staten Island. Staten Island, New York City's last major reserve of undeveloped land, may be committed by the time the Tri-State Transportation Committee can develop recommendations. If so, ironically, it will have to go through a long cycle of use and decay before it can be developed well. The best approach to the island is to prepare a complete design for its use. It might well qualify in entirety for urban renewal planning funds. But, if this is impossible at this date, then two objectives (in addition to the suggestion made earlier) should be sought. The first is that the island's interior should be kept at a low residential density, preferably a mixture of single family detached

houses and row houses. The reason for this proposal is that the island's location makes it possible to live in the City of New York in this kind of housing; a desirable political objective for the city. The second objective should be to encourage some light industry to locate on the island. It is to the city's benefit to generate employment outside Manhattan.

Jersey Meadows. The undeveloped section of the Meadows has fascinated planners and developers for years. The State of New Jersey is assisting the local municipalities now to prepare a development plan for this "strategic" area. It is possible (and tempting) to argue that the Meadows should not be developed, except as park and open space. The main thread of the argument would be that since they have lain undeveloped for three hundred years, they can hardly be called "strategic". But this is begging the question. If one faces the question directly, then the difficult choice is what to use the land for. The potential land area is so large that no single activity, with the exception of housing, can use it all. Of the range of possible uses, no combination appears on the surface to be better than other possible combinations. Yet, if a great amount of public money is to be spent on reclamation of the Meadows, if they are indeed "strategic", the development choice made must somehow be clearly better than alternate possibilities.

In the absence of a clear cut choice, it is suggested that the choice be permitted to become clear over a relatively long time period. There are five basic uses to which, in some combination, the land can be put. They are: park; housing; institutional; manufacturing; and distribution. It is proposed that the park area be determined first and acquired. It is then suggested that three uses be planted in different parts of the area: a distribution center to the south where transportation is good; a technical education and research institute on the western part of the mid-section; a manufacturing area to the north. Land not required by the immediate needs of these users would be held in reserve. As these activities developed, land would be released to expand those uses that had demonstrated the greatest potential during the period of initial tenure. Other land could then be released for supporting facilities for this dominant use. Thus, if the technical institute attracted industrial research activity, housing and commerce might be added to support it.

An important dimension of physical planning is time. In most undeveloped land situations government has little direct control over time, although it can influence development timing by public capital investment scheduling. In the case of the Meadows, the land should be publicly acquired before development is carried out. Ownership would put the public agency in a position to phase development according to sensitive measures of land.

The Meadows would seem to represent the rare case where rushing to the preparation of a complete master plan might in the long run do more harm than good. It is recognized that the approach suggested here would submit the controlling agency to a variety of short term pressures, but this is insufficient reason for commitment to a plan of an area of such great size until, in the public interest, its best development mix is determined.

Brooklyn and Queens. Several problems and few opportunities face this part of the Region. It will be recalled from the discussion in Chapter III on urban renewal that very little effort (as expressed in terms of urban renewal money commitments)had gone into these boroughs. The pattern of urban renewal effort in the Region as a whole indicates a concentration on its old centers. Partly this is due to the fact that the oldest and most rundown parts of cities are in and adjacent to their centers. But partly this is due to the re-use potential of this centrally located land. Many observers have noted the perplexity of the problem of improving the intermediate areas, the "gray areas", in the term coined by the New York Metropolitan Study.

Three suggestions are made here. The first is the need for finding sites for employment in these boroughs. Despite the heavy concentrations of industry on the waterfront of the East River and along Newtown Creek, both of these boroughs have a low ratio of households to employment. They are largely dormitories for work-places in Manhattan. Manhattan's employment opportunities are changing character. Manufacturing employment is declining and expected to continue to decline. In order to maintain a range of employment opportunities for workers in these boroughs, and perhpas to relax somewhat the transportation requirements of the peak hour, it is reasonable that more work opportunities should exist in the boroughs themselves.

The most obvious locations for seeking sites for employment, particularly in industrial activity, are in the vicinity of Jamaica and Flushing Bays. Floyd Bennet Field, for example, might provide a better service to New York City as an industrial estate than as a Naval Air Station.

The second suggestion is to develop employment centers and community uses, including open space, in the central east-west spine of Brooklyn-Queens. In this otherwise congested area, the most obvious sites for new development are the cemeteries. There is irony in the fact that the people least disturbed by the painful readjustments of the great metropolis are the dead. Yet, if change is to be introduced into this otherwise vast and obsolescent residential area, it is difficult to avoid raising the question of the long term validity of the acres of land in cemetery use. Relocation of cemeteries is a slow and difficult process, but it may well be in the City's interest to enter into this task.

The third suggestion relates to the residential pattern of the southern part of Brooklyn, that area built in the 1920's. In Chapter III, it was pointed out that much of the housing built in this decade was of a single and two–family type, but packed together at high land coverage. Although most of this housing is sound, the tightness of the neighborhood pattern will probably cause rapid obsolescence. These neighborhoods are not suited for the automobile; its storage alone causes friction. In time–distance from Manhattan, these neighborhoods are as far as postwar developments in larger lots in more amenable neighborhoods. In this area of incipient blight, it is suggested that a program be devised to loosen up the area be the insertion of offstreet parking, playgrounds and small open spaces. Such a program will require ingenuity and a high order of government–community relations. But an experiment in postponing decay in a presently sound area would seem to be valuable in a city already staggering under a burden of poor housing and inadequate neighborhoods.

In summary, this concluding section of the report has selected for comment a few of the many problems facing the older sections of the Region. Specifically it is proposed that:

1. Major sections of waterfront in obsolescent non–residential use be recaptured for housing and park purposes.
2. That decaying residential areas with views of the Hudson River and Manhattan be redeveloped.
3. That light industrial uses and low density single family housing be built on Staten Island.
4. That the Jersey Meadows be publicly acquired, park land reserved, and the remainder released to development over a relatively long time period.
5. That sites for employment and community uses be sought in Brooklyn and Queens. Apparent choices are land in the vicinity of Jamaica and Flushing Bays and the cemeteries.
6. That an experiment in forestalling decay be undertaken by attempting to loosen the tight development pattern of those sections of Brooklyn built in single and two family home types in the 1920's.