

COMPREHENSIVE PLAN  
*of*  
*Lexington, Kentucky*  
*&*  
*Environs*

CITY PLANNING &  
ZONING COMMISSION

L · SEGOE  
Consulting Engineer & City Planner  
Cincinnati, Ohio

COMPREHENSIVE PLAN  
for  
LEXINGTON  
AND ITS ENVIRONS

CITY PLANNING AND ZONING COMMISSION  
Lexington, Kentucky  
1931

L. SEGOE  
CONSULTING ENGINEER AND CITY PLANNER  
CINCINNATI, OHIO

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KENTUCKY  
1931

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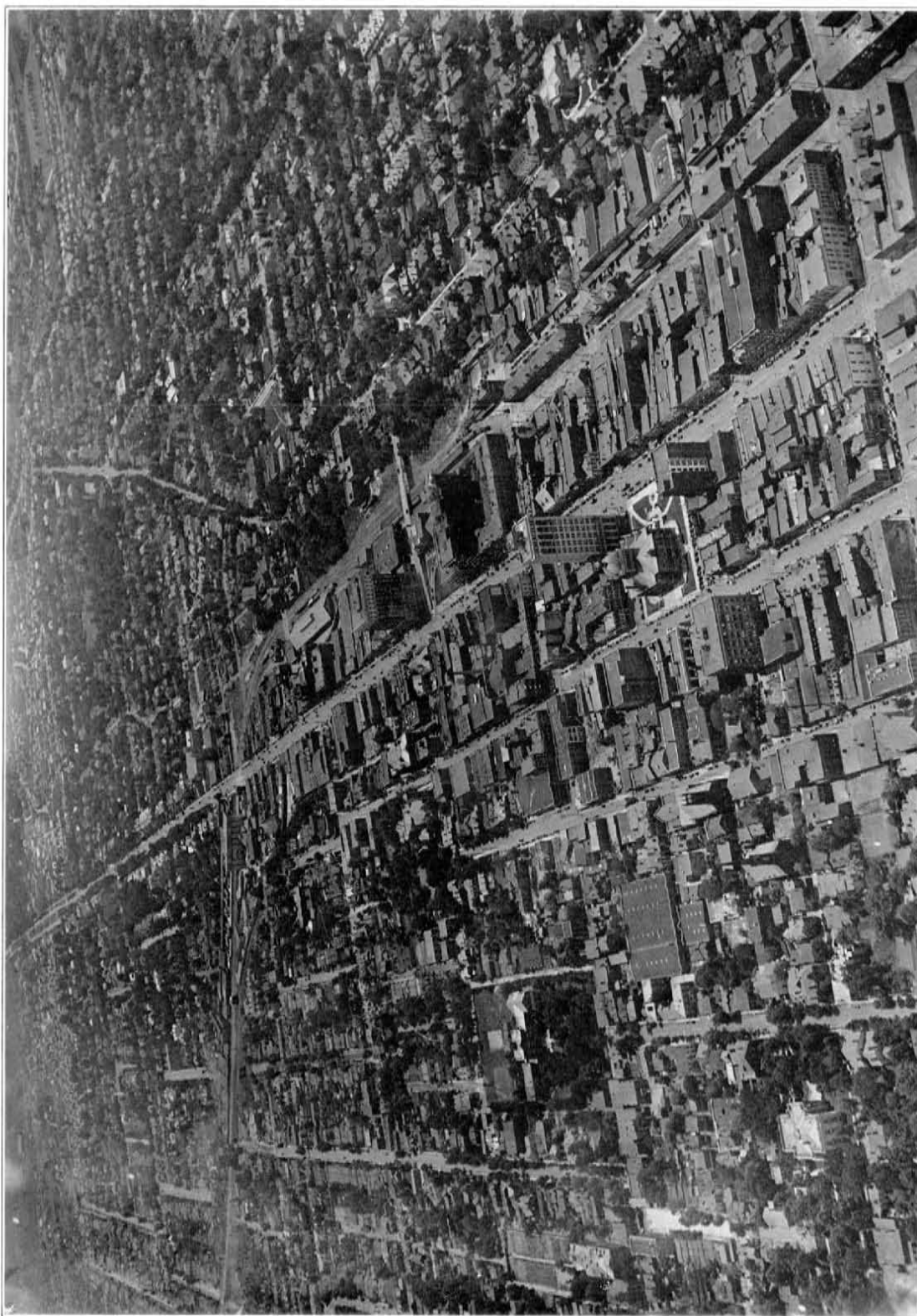
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AIRPLANE VIEW OF THE CENTRAL DISTRICT OF LEXINGTON  
(Taken before the new City Hall was built)

# Foreword

It is with a deep sense of the importance and value to the City of Lexington and the surrounding area, of a comprehensive plan, to preserve its places of beauty and of historical interest, and to guide its development and growth into a better and more beautiful community, that we herewith submit this Comprehensive Plan for Lexington and its Environs.

The City Planning and Zoning Commission was appointed and organized in June 1928, shortly after the enactment by the Kentucky Legislature of "The City Planning and Zoning Law" providing for the creation of such commissions in cities of the second class. Realizing the urgent necessity of protection and control of the uses of property, in advance of the time, when after adequate surveys and study a comprehensive city plan could be completed, a Temporary Zoning Ordinance was recommended by this Commission, and was adopted by the Board of Commissioners of the City and the Fiscal Court of Fayette County.

At the same time, the Board of Adjustment provided by the Act was appointed and organized, and rendered valuable service in administering the Temporary Ordinance.

Realizing the impossibility of accomplishing the purposes of the Act, and of rendering the best service, without technical assistance and advice; and after careful consideration, and conference with many experts, the Commission retained the services of Mr. L. Segoe as its technical adviser and consultant in the preparation of a comprehensive plan.

We wish to record our high estimate of his technical skill, his sympathetic interest and cooperation in the preparation of this Plan, and his diligence and constructive service in advising this Commission, as well as the Board of Adjustment, in the many novel problems which have necessarily arisen.

The final Building Zone Ordinance is the result of the most elaborate and painstaking survey and study, having been adopted after careful consideration, not only by our technical adviser, but by every member of the Commission, and after numerous conferences and public hearings.

It will be noted that the Board of Adjustment continues its activities under the final Building Zone Ordinance, granting variations and exceptions upon appeal from the decision of the Building Inspector in exceptional cases, where the strict application of the provisions of the Ordinance would work unnecessary hardship.

The benefits already derived from such Ordinance, as well as from the Temporary Ordinance, in the matter of stabilization of real estate values and the protection of owners of homes and of other property, are being more and more appreciated.

The other features of the Comprehensive Plan, such as the Major Street Plan, Subdivision Regulation, the plans for a School System, for Parks and Playgrounds, for a Transit System, for Grade Crossing Elimination and for a Civic Center, considered of no less importance than the Building Zone Ordinance, are likewise the result of careful and competent consideration and studies.

The several features of the Plan, just above mentioned, have been submitted to, and upon recommendation of this Commission, been approved by the Board of Commissioners of the City.

As instances of benefits already realized from such planning may be cited the large number of subdivisions developed since the organization of the Commission, all of which were passed upon by the Commission, and made to conform to the Subdivision Rules and with the Major Street Plan; the acquisition by the City of Castlewood Park and the playground for colored children at Third and Ann Streets, a total of thirty-three acres, almost doubling the acreage of the City's recreational grounds; the building of Henry Clay Boulevard; cooperation with City and County Boards of Education in selection of school sites; construction of the viaduct on West High Street; and widening of portions of East Main, Limestone and other streets.

These are but the beginning, however, of what it is hoped to accomplish by such plans, the value of which is dependent upon the manner in which they are adhered to and carried out.

It is the hope of the Commission that this publication will stimulate their consideration by the public and by those who may be instrumental in carrying them out, to the end that the best ideals of our City may be realized.

Respectfully submitted,

CITY PLANNING AND ZONING COMMISSION,

E. L. McDONALD, Chairman,

JAMES J. O'BRIEN

W. C. WILSON

P. P. O'NEILL

W. L. THRELKELD

LOUIS E. HILLENMEYER

R. D. HAWKINS



MEMBER  
AMERICAN SOCIETY OF CIVIL ENGINEERS

MEMBER  
AMERICAN CITY PLANNING INSTITUTE

**L. SEGOE**  
CONSULTING ENGINEER AND CITY PLANNER  
35 EAST SEVENTH STREET  
CINCINNATI, OHIO

January 20, 1931

City Planning and Zoning Commission,  
Lexington, Kentucky.

Gentlemen:

We are pleased to submit herewith a Comprehensive Plan for Lexington and its Environs. This Plan, prepared under the authority and in accordance with the provisions of the City Planning and Zoning Law, is intended to guide the future physical development of the city and surrounding region along orderly, wholesome, efficient and economic lines, to promote the healthfulness, safety, convenience and economies of life in the community and the general welfare and prosperity of its inhabitants.

The methods by which the Plan purports to attain these ends fall into two general classes, the corrective and the preventive. It is proposed by the Plan to remedy the defects and deficiencies in the present physical development of the community, the results of planless and uncontrolled growth, by the gradual and systematic carrying out of corrective improvements; and to guard against the repetition of such mistakes in the as yet undeveloped areas by preventive control. Major street widenings and extensions in the built up area, grade separations, school relocations, are some of the projects that will require the application of the first method; subdivision control and zoning, provisions in the undeveloped districts for major streets, for the widening of existing ones, for school sites, parks and playgrounds, are illustrations of the application of the second method.

The Comprehensive Plan presented in this volume provides for the control of both private and public improvements. Certain regulations have been developed and already put into effect for the control of the subdivision of land and for the use of private property for residential, business and industrial purposes, which, when properly enforced, will prevent the congestion of population, the unduly intensive use of land and the consequent diminution of light and air, the indiscriminate intermingling of residential, business and industrial buildings, the breakdown of residential neighborhoods, the creating of blighted and slum districts, and the social problems and economic losses as a resultant thereof. Comprehensive plans have

been prepared for the various facilities and utilities, such as major streets, schools, parks, playgrounds, etc., intended to insure adequate space for circulation and traffic, for transportation, for educational and recreational needs, to make up for present deficiencies and to provide for future needs.

Thus the proposals of this Comprehensive Plan and Report may be divided into two groups:

- Regulation of the development and use of private property by Zoning

- Subdivision control

- Control of signs, other outdoor advertising devices and street privileges.

Proposals for providing necessary public facilities by the gradual and systematic carrying out of the recommended plans for

- Major Street System

- Recreation System

- School System

- Grade Crossing Elimination

- Transit System

- Civic Center

- Street Tree Planting

- Street Lighting

- Installation of improved Street Fixtures

The above component features of the Comprehensive Plan are presented and discussed in separate chapters of this volume. Attention is invited to the fact that, while the plan of every one of the features enumerated is comprehensive by itself, in that it represents a comprehensive plan for the development of a particular type of public facility or utility, or for the control of the use of private property, the plans of all of the above features were thoroughly coordinated with one another, so that, collectively, they form the Comprehensive Plan of Lexington and its Environs, an integrated and harmonious plan for the development of the community.

The Plan herein presented is a long term plan to be carried out gradually over a long period of years. Although the quantitative studies were based on the estimated population of the community in 1970, and while the recommended facilities, particularly schools, parks and playgrounds, are those that will be needed, it is believed, to adequately serve the population 40 years hence, many of the improvements projected by the Regional Highway Plan, the Major Street Plan, Grade Crossing Elimination Plan, etc., will not likely be necessary even by 1970 (these plans representing very nearly the ultimate plans for these facilities), so that the Comprehensive Plan as a whole may be considered a plan for the next 60 years rather than a 40 year plan.

An order of urgency or program of execution has been worked out separately for each type of facility and will be found in the chapter dealing with such facility. A combined order of urgency for all improvements estimated to become necessary within the next ten years is presented in a separate chapter.



The need for securing additional city planning legislation to facilitate the effectuation of the Plan, and the imperative necessity of obtaining legislative authorization for the use of up to date methods of financing public improvements, is discussed in considerable detail in the several chapters of this volume. It is evident from an analysis of the financial resources of the community that, unless such legislation is secured, it will be impossible to carry out many of the recommendations of this Plan, to provide thereby the public improvements and facilities that the citizens of the community will need and should have.

The Comprehensive Plan for Lexington and its Environs contained in this volume will be of value only to the extent to which it will be carried out. Obviously, the fact that the community now has a comprehensive plan does not alone suffice to make same effective, and to derive the benefits therefrom that are possible to obtain and may justly be expected. To accomplish this will require continuous effort and attention on the part of the City Planning and Zoning Commission and others interested in the appropriate development of the community. Some of the essential activities of the Commission in these directions may be outlined as follows:

Advisory assistance to and contact and cooperation with the various administrative departments of the City and County, with the City and County Boards of Education, with the railroads, and public utility companies, with other public, semi-public and private agencies and individuals, on the interpretation and application of the plans and regulations, and on all problems of physical development of the city and its environs, to obviate the conflicts between the Plan and current improvements, whether public or private.

The initiation, the making of detailed preliminary studies of the most necessary improvements in accordance with the definite program, the presentation to and the obtaining from the public support for the projects initiated, and the initiation and promotion of preventative measures to reduce the ultimate cost of necessary improvements.

Recommendations to the City Commission and to the Fiscal Court in connection with amendments to the Building Zone Ordinance and Map, and on all current matters relating to the physical development of the community.

The careful examination and study of each subdivision plat, to see that it conforms to the Comprehensive Plan in all details with only such modifications as are reasonably necessary.

The acquainting of the public with the Plan and the arousing of public interest and support in its favor.

In conclusion we wish to acknowledge the wholehearted cooperation and to express our appreciation to the City and County officials, private organizations and the many individuals, for the valuable assistance rendered in the collection of the mass of pertinent data used in the formulation of this Plan and Report. We are especially indebted to Mayor James J. O'Brien,

whose untiring efforts secured the present City Planning and Zoning Law; to Vice-Mayor W. C. Wilson, Commissioner of Public Works, and to Mr. J. White Guyn, City Engineer, for their valuable assistance; as well as to Commissioner J. Foley Price, to Commissioner S. E. Alexander, to Mrs. Katherine B. Hessel, the Secretary of the City Planning and Zoning Commission, to Miss Viola Kaufman, City Auditor, to the City and County Boards of Education; to the Board of Commerce, the Civic League, the Automobile Club, to the Kentucky Traction and Terminal Company, and the Lexington Utilities Company, and to the local officials of the various railroad companies; all of whom aided materially in the preparation of this Comprehensive Plan for Lexington and its Environs.

Respectfully submitted,

L. SEGOE.

# CHAPTER I

## THE CITY OF LEXINGTON

### Its History—Present Conditions

#### Brief History

Lexington has such an extremely rich and colorful history that it is rather difficult to limit this chapter to a brief outline of the outstanding historical events that bear some definite relationship to the general nature of the principal subject of this volume.

The early history of Lexington is identified with the first efforts of the American Colonists to penetrate the "wilderness" that loomed forbiddingly west of the Allegheny Mountains. Established in 1775 by a group of hunters from the nearby Harrodstown, it was one of the very first settlements in what was then known as West Fincastle County, Virginia. The name of the City commemorates the Bat-

tle of Lexington, the news of which reached the above group of hunters just as they were discussing the naming of the new settlement.

The first blockhouse was built in the spring of 1779 by Robert Patterson, who later founded Cincinnati and Dayton, on a site now the southwest corner of Main and Mill Streets. There were then numerous groups of hunters and prospectors scattered in this region, blazing trails, prospecting and pre-empting lands in the "wilderness" full of dangers and hardships. However, the fertile limestone soil, the marvellously rich flora and fauna proved an irresistible lure to the more enterprising of the Colonists of the southern states, and these were soon pouring into the region in an interminable stream.



**BRYAN STATION MEMORIAL**  
In honor of the heroism of pioneer women

Chosen because of the wonderful forage, splendid water and extensive high and dry lands, the settlement of Lexington was growing rapidly. First formally surveyed in 1779, two years later Main Street was laid out, necessitating the demolishing of all of the stockade. On May 6, 1782, the settlement was incorporated as a town by the Virginia Legislature.

The laying out of Main Street is of particular significance from a city planning standpoint. No doubt the first platting was prompted by the desire to formulate some kind of an orderly arrangement of the cabins that were scattered both inside and outside the stockade. It is logical to surmise that the direction of Main Street was chosen parallel with the course of the Town Branch of South Elkhorn Creek which skirted the young town, and that it was not selected on the ground of any consideration of the relationship of street orientation to the amount of sunlight obtainable. It is a fortunate coincidence that the direction of the Town Branch, which controlled the direction of practically all other streets up to the present day, follows the northwest-southeasterly direction, so that, in general, the entire street system of the city is oriented at 45 degrees to the principal compass points. There are probably very few people in the city who are aware of this unique orientation, as all city maps except those prepared by the City Planning and Zoning Commission have disregarded this feature of the city's layout. There are perhaps even fewer people who know that such orientation is considered ideal from the standpoint of insuring the maximum possible amount of sunlight for every room.

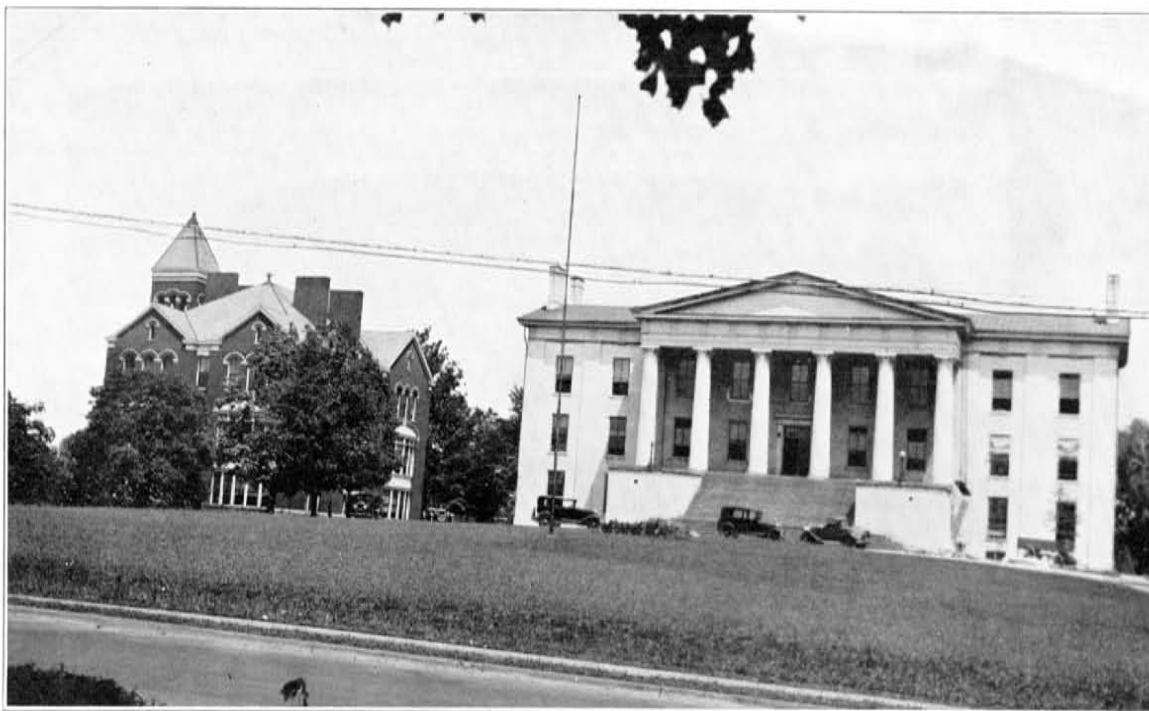
While the fortunate orientation of the city's streets is likely the result of coincidence, the requirements for streets of generous width, as stated in a resolution of the local Board of Trustees of March 7, 1788, only 13 years after the founding of the settlement, proves without a doubt the wisdom and foresight of the early city fathers and their concern for the orderly and spacious development of the young town. In view of the general inadequency of the city's present street system, one of the major problems confronting the City, it is of particular interest to recite that this resolution stipulated 60 feet as the minimum width of all streets and required that all buildings recognize a set-back line of 11 feet 3 inches. Had these requirements been observed all streets would now be 82 feet 6 inches wide between building lines (the approximate width of North

Broadway), and not 40, 50 and 55 feet wide as at present. An early map of the city shows Main Street and Broadway 85 feet wide, and Limestone, Upper, Mill, and Spring Streets 66 feet wide. All of these streets are from five to ten feet narrower today.

Lexington was still a part of Virginia while these significant measures were taken toward the physical growth of the town. Kentucky did not become a state until 1792, the first Legislature having convened on June 4th of that year in Lexington. In 1832 Lexington was incorporated as a city by the Kentucky Legislature.

Unfortunately for the development of the city, not only did future generations lack the interest and foresight in city building manifested so early by the leaders of the Town of Lexington, but the wise regulations which the latter initiated were permitted to go unenforced, and the cumulative effect of the encroachments on the public streets by defiant property owners reduced the once generously platted streets to mere lanes.

Very early in the nineteenth century Lexington developed into an educational and cultural center. Many of the early settlers came from the cities and towns of Virginia and Maryland, and brought with them the culture and social graces of their communities. Transylvania University or Seminary, as it was first called, was established in 1783 through an Act of the Virginia Legislature of 1780. It was the first institution of higher learning west of the Allegheny Mountains. Several other institutions for higher education were opened in the first half of the nineteenth century, such as St. Catherine's Academy, Sayre College, the latter the first institution for the higher education of women, besides the regular schools and several "finishing schools for young ladies." Its library, founded in 1795, its pioneer newspaper, the Kentucky Gazette, (first published on August 11th, 1787), the fine homes built with spacious settings in the manner of the old English manor houses, its refined culture and social life; all contributed to make Lexington known as the "Athens of the West". The home of such distinguished statesmen as Henry Clay, Senator James Brown, and of such scholars and scientists of world wide fame as Doctor Benjamin Winslow Dudley and Constant Refinesque; culture, elegance and social life of the highest order characterized Lexington in the pre-Civil War period.



MORRISON CHAPEL — TRANSYLVANIA UNIVERSITY  
Built in 1833

All this cultural and social progress was made possible by the prosperity of the young city and its inhabitants, grown wealthy from the rich yields of the fertile Blue Grass Region. Agriculture and stock raising were, of course, the predominant occupations, and the first industries were those accessory to the utilization and marketing of farm products, such as flour milling, tobacco factories, distilleries, harness making, and saddlery.

It is of interest to note that the first steam driven flour mill in the west was constructed in Lexington in 1810. It stood at the northwest corner of Bolivar and Upper Streets.

The raising of thoroughbred horses, cattle and small animals has become very early one of the principal occupations. It was discovered that the free limestone in the water and forage of the region builds exceptionally strong bones. With the blue grass green practically throughout the winter, young foals and other young animals matured rapidly and were raised to a fine degree of excellence.

Saddle and harness racing, as a stimulus for the breeding of thoroughbreds, has been in vogue in the city almost from the begin-

ning. Races on the "Commons", Water Street, were recorded as early as 1787 when the Town Trustees placed racing on Main Street under ban. The first race path in 1780 was due south on Broadway from a point between High and Maxwell Streets. The Kentucky Jockey Club was organized in 1797 and the Lexington Jockey Club in 1809.

Up until the time of the development of river navigation and particularly the coming of the steamboat, the city flourished unrivalled as the agricultural and commercial center of the region. Louisville and Cincinnati were not competing. It is the consensus of opinion that it was due to river transportation that Lexington had to yield its leadership to these river cities. With undaunted enterprise its citizens subscribed generously to the building of a railroad to Louisville (claimed to have been the first railroad west of the Allegheny Mountains), intended to secure connection with the Ohio River, to thus offset the losses sustained by steamboating.

Unfortunately the "Lexington and Ohio Railroad," as it was called, only reached Frankfort. The first six miles were opened on



August 15, 1832. In 1834 it was completed to Frankfort and the first locomotive, made in the city after the model designed by Thomas H. Barlow, Lexington's noted inventor, made its first run in December 1835. The railroad was sold to the state in 1840 and was extended to Louisville in 1851. At present the Louisville and Nashville Railroad uses most of the original right-of-way.

The Civil War more than any other factor checked material progress in Lexington and in the State in general. Foregoing slavery as a matter of principle at the outset of the struggle, large farms were deprived of the attention they received in former years. Being neither distinctly Union nor Confederate, small colonies, groups and even families, were divided among themselves. The scars of disintegration have been lasting.



HOME OF GENERAL JOHN H. MORGAN  
The Raider of Civil War fame

After the Civil War, Lexington came once again into the substantial position that her educational institutions and agricultural advantages had given her. The city wore the charms of an English village more gracefully than ever, with its town houses and institutions of excellent architecture, its fine trees and spacious lawns. People came to establish their homes in a city that had so much to offer through its educational institutions, its culture and the elegance of its social life. The

city reclaimed its title as the shopping center of the surrounding region with the importation of the best products available.

During the last two or three score of years the history and development of Lexington is more or less analogous with that of other American cities. The industrialization of production has brought booms to some communities smaller than Lexington, which either had natural advantages, made better use of their opportunities, or merely by reason of fortunate coincidences. Lexington's growth has not received much of a spurt from the industrialization of the country. For one reason or the other (no acceptable explanation is obtainable), the few industries that were established in the city soon moved to other communities, and the older ones failed to adjust themselves to changes ushered in by the present century.

As all other communities, Lexington was eager to attract business establishments and industries, but while it did not succeed in this as much as some other communities, it has thoughtlessly allowed in its eagerness certain abuses of property, and permitted serious inroads into the attractiveness and livability of many of the splendid old residential neighborhoods. The charming old districts were invaded by warehouses, stores, billboards, and more recently by garages and filling stations. The old population of course soon abandoned these locations and moved out into the outlying areas, leaving the blighted districts to deteriorate.

It was not until the establishment of the City Planning and Zoning Commission that any steps were taken to save what still remains of the attractiveness of the Lexington of old. It is very disturbing to think of what Lexington could be today if such action had not been delayed so long.

### Geographic Location

Lexington, with a population of 45,736 according to the 1930 Census, the third largest city in the State of Kentucky, is located almost due south and due east respectively of Cincinnati and Louisville, and approximately 80 miles distant from each. It is the county seat of Fayette County, which, with a population of 68,543, is the fourth most populous county in the State.

The city is situated on both sides of the valley of the Town Branch of South Elkhorn Creek, now flowing through a sewer within



HOME OF MARY TODD—LINCOLN'S WIFE

the city, which empties into the Kentucky River. The latter describes virtually a semi-circle around the Lexington region, and is a little over six miles distant at its nearest point in a westerly direction.

Situated at the approximate center of the far famed Blue Grass Region, Lexington is the agricultural and marketing, the cultural and social center of this rich agricultural area. Spotted through this area and within 30 miles of Lexington are 14 towns, Paris, Cynthiana, Georgetown, Versailles, Lawrenceburg, Frankfort (the capital of the State), Harrodsburg, Danville, Nicholasville, Wilmore, Richmond, Lancaster, Winchester, and Mt. Sterling, of which the largest, Frankfort, has less than 12,000 inhabitants. The aggregate population of the above 14 towns was 66,375 persons according to the 1930 census.

### Topography

The city is situated at an average elevation of approximately 950 feet above sea level on the gentle slopes of a range of hills, a sort of a "divide", which lies in a semi-circle at the approximate edge of the present built-up area, from about midway between Nicholasville and Tate's Creek Pikes to a few hundred feet west of the Loudon Avenue bridge over the L & N Railroad, and rises to a height of 1,065 feet above sea level. The northwesterly slopes of this range of hills, the highest for many miles around, on which the city is built, is divided almost symmetrically by the valley of the Town Branch of South Elkhorn Creek, which at one time extended perhaps as far southeasterly as Ashland, along the

lines of the present Water Street and Central Avenue. The founders of the city first settled near the northeastern bank of this creek, now the corner of Main and Mill Streets. It is safe to surmise that the northwest-southeasterly course of this creek is responsible for the direction of Main Street and the general orientation of the city's street system, as it was natural to lay out the first street of the city parallel with the creek.

The slope of the terrain over the city's site is so gentle that few people realize that it is not located on a plateau. The gently rolling topography offered very little resistance to the laying out of the streets in the unimaginative gridiron fashion, and where it did offer some resistance, as on the banks of the Town Branch, such was completely disregarded. This accounts for the relatively steep grades of the north-south streets between High Street and Water Street, the only ones in the city. Even today the city's growth has not reached the lower regions, where the terrain is furrowed by the valleys of numerous creeks flowing away from the city in all directions.

Both the range of eminences that form the divide around the south-eastern section of the city and the former valley of the Town Branch, are significant from the drainage standpoint. The first represents somewhat of a barrier to the city's growth in a southeasterly direction, as it is the limit of the area that can be drained to the northwest, where the city's disposal plant is situated. The fact that Water and Main Street are located in the valley of the former Town Branch, the natural drainage channel of much of the city's area, accounts for the flooding of these streets at times of exceptionally heavy rains, which has caused serious damage and inconvenience on a number of occasions. An inadequate storm drainage system aggravates the situation, which should be remedied without much delay.

While it is true that the gently rolling topography of the site is not particularly interesting, the plan of the city is open to the same criticism as that of most of our cities, namely that by rigidly adhering to the stereotyped gridiron system, such opportunities as did exist were not taken advantage of in laying out the city. Only within the last few years and only to a limited degree have the advantages of close contact with topography been recognized in some of the outlying subdivisions. In view of the general evenness of topography it is difficult to find reasons for the

disorganized structure of the City's street system, the discontinuity of even the more important traffic streets, the many dead ends, offsets and other irregularities, except in the selfishness of the individual subdivider, in his refusal to conform to past developments, and in his complete disregard for his neighbors' interest and for that of the community at large. This criticism applies to even the most recent subdivisions with very few exceptions. The defectiveness of the present street system is the most convincing proof that could possibly be put forward of the need of city planning in Lexington.

### Climate

Lexington enjoys an exceptionally pleasant climate. Temperatures are moderate and humidity is lower than prevails in most midwestern cities.

The average yearly temperature is 55° and the average relative humidity 78. The average summer temperature of 75° and the average winter temperature of 35° are both mild. The average high summer temperature of 84° is considerably tempered by cool nights. The average low winter temperature is only 28°, and it is only two or three times a year that the temperature drops below 10°.

The average rainfall is 42.5 inches, which is more abundant than the average rain fall for this part of the country, but there are no long or particularly hard rains. There is little snow, and no deep snow, the average annual snowfall amounting to only 20.8 inches. The greatest rainfall experienced amounted to six inches in 24 hours. The city is remarkably free of fogs and enjoys an unusual wealth of sunshine. The hours of sunshine for the various seasons are given in the table that follows:

	Hours	Percentage of possible sunshine
Winter	376	42
Spring	675	55
Summer	936	73
Fall	668	65
Entire year	2655	59

Wind velocities are moderate. The direction of prevailing winds is from the southwest.

### Population

According to preliminary figures of the United States Census Bureau, Lexington had a population of 45,736 persons in 1930 and

Fayette County 68,543 persons. However, these figures do not give an accurate picture of the distribution of population between the urban and rural areas, since much of the County's population is found in the outlying subdivisions just beyond the present city limits. The total population of Lexington's built-up area in 1930 has probably been close to 56,000.

The rate of growth of the city and county population in each of the last five decades is, given in the following table:

Decade	City	County
1880-1890	35.5 percent	22.9 percent
1890-1900	22.3 "	18.1 "
1900-1910	33.1 "	12.9 "
1910-1920	18.3 "	18.1 "
1920-1930	10.2 "	22.9 "

Of the figures those for the County are more truly characteristic of the growth of the Lexington Region than those for the City, as the former were not affected by annexations. As may be noted Lexington is a rather slow growing city for its size.

According to the 1920 Census (the 1930 figures are not yet available), the composition of the City's population was as follows:

Native born whites	28,277
Foreign born whites	800
Negroes	12,450

The almost exclusively native born white population and a relatively large percentage of negroes characterize the composition of the City's population.

There are relatively few industrial wage earners in the city. Their number is given as 857 by the 1925 U. S. Census, but their average earnings of \$1232 per wage earner are relatively high.

Lexington is a city of home owners. Of the 7470 homes listed by the 1920 Census 3456 or 45.3 percent were owned.

### Water

Lexington is supplied with water by a private corporation, the Lexington Water Company, operating under a franchise. Up until the fall of 1930 the water supply depended exclusively on springs and surface run-off, stored in the Company's reservoirs to the southeast and just outside of the city.

The 1930 drought placed the water supply in a precarious condition. The City was actu-



ally menaced with a water famine. Thanks to the energetic stand taken by the City Government and to the cooperation of the Company, this has been prevented by the construction during the fall of 1930 of a pipe line, a little over six miles long, to the Kentucky River. With the installation of some additional equipment now under way it has been estimated that this pipe line can be made to supply the City's needs for the next 30 or 40 years.

The quality of the water is unusually soft for a municipal water supply. The city is well served with water lines except for certain alleys in the poorest colored districts. Unfortunately, these are the locations of greatest population congestion where the lack of adequate sanitation has the most deplorable effects.

The average per capita consumption of over 80 gallons per day is relatively high for cities of Lexington's class.

#### Gas and Electricity

Lexington is served exclusively by natural gas of which an ample supply is available. The gas mains are laid and the service furnished by the Lexington Utilities Company, which also generates and supplies electric light and power. Over a high tension transmission system this Company furnishes electricity to

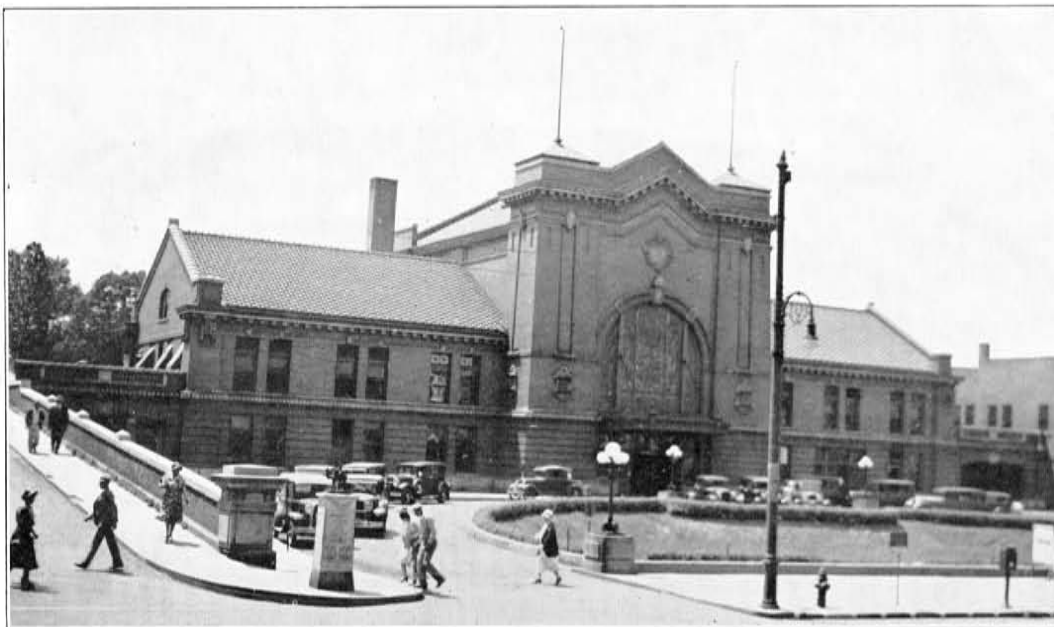
about a dozen nearby towns. The very modern power plant is located in Lexington.

Street lighting in the city is furnished by the Company under a 25 year contract which expires in 1941. Under this contract the Company supplies and maintains all necessary equipment.

#### Railroads

There are few cities in the same population class that enjoy better railroad facilities than Lexington. It is served by three railroad systems operating six divisions, the Southern Railway with two divisions, the Louisville & Nashville Railroad with three divisions, and the Chesapeake and Ohio Railway with one division. This extensive railroad system brings a very large trade territory within easy reach of Lexington's commerce.

Of the three railroads the Southern is by far the most important, the city being located on the main line between Cincinnati and Chattanooga, soon to be double tracked throughout. Lexington's position is not quite so fortunate in its relation to the L & N Railroad, the main line of this road passing through Paris, about twenty miles to the northeast. The city is the westerly terminus for the Lexington Branch of the C & O Railway, the trains of this road between Lexington and Louisville operating over the L & N tracks.



THE UNION STATION

Sixty passenger trains are arriving and departing daily at the two passenger stations, an exceptionally high number for a city of the size of Lexington. Three conveniently located freight houses with ample car capacities and well distributed team tracks offer excellent freight service to shippers. In addition, there is almost unlimited frontage available for industries on the six radiating railroad lines and on the belt line around the north-central section of the city.

While the exceptionally generous railroad facilities are undoubtedly a great asset from a commercial standpoint, the six railroad lines that radiate from the center of the city and, with very few exceptions, cross all streets at grade, constitute a source of danger and interference to vehicular traffic. Although some progress has been made in recent years to free at least the most important streets of the city of grade crossings, the systematic elimination of the more important grade crossings should be one of the major undertakings in carrying out the City Plan.

### Transit

Facilities consist of five street car lines and seven motor bus lines operated by the Kentucky Traction and Terminal Company. Both in the matter of mileage and distribution the transit system of the city may be considered adequate.

The principal defect of the transit system, which accounts for its lack of popularity, is in the indirect and in some cases even tortuous course of the routes which results in slow operating speeds. The single track switch operation, commonly used throughout the city, militates against the flexibility of the system and is the cause of additional delays. In justice to the Company it should be stated that both of the above principal defects are rooted basically in the shortcomings of the street system of the city, in the bad alignment and in the narrowness of the streets. The routes should be straightened and the switch operation discontinued with the gradual rehabilitation of the street system in accordance with the Major Street Plan.

The Kentucky Traction and Terminal Company also operates the interurban electric railways and motor buses. The electric railways are operated between Lexington and the following towns: Paris, Georgetown, Nicholasville, Versailles, and Frankfort. Hourly ser-

vice is offered on practically all lines. These operate into the Interurban Station at the northwest corner of Broadway and Main Street.

Lexington is the center of a network of interurban bus lines. Every day 160 buses enter and leave the city, practically all of which operate into the Union Bus Terminal on the east side of Walnut Street between Main and Short Streets, and use the street for loading and unloading. At certain times of the day this practice is the cause of considerable traffic congestion. The growth of interurban bus travel in Lexington has reached such proportions that the establishment of a bus terminal entirely on private property is believed to be justified.

### Highways

Even before the coming of the automobile Lexington was the focal point of 14 "pikes", that radiated from the city like the spokes of a wheel and connected it with the larger towns in the surrounding region. Thanks to these the city and its environs possess today a remarkable system of radial highways. It is true that the rights-of-way of all of these highways are utterly inadequate and will have to be widened, but it is also true that practically no new radial highways were found to be necessary in the working out the Plan.

Three Federal highways are passing through the city, of which No. 25, the Dixie Highway, is the best known and most important. This connects Cincinnati and Knoxville. Route No. 60 runs east and west through Charleston, Ashland and Louisville. Route No. 68 leads from Maysville to Paducah and connects with Nashville. As may be seen, Lexington is at the crossing point of highways of considerable importance, and is the focal point of the highway system of the region with a radius of about forty miles. With the completion recently of a shorter and much more convenient section of the Dixie Highway between Lexington and Cincinnati and with other major highway improvements now in the state of planning or already under way, the city will truly be placed in an exceptionally favorable position from the standpoint of highway facilities.

In contrast, the street system of the city is unusually defective and inadequate. Connections with the highway system of the region are few and constricted. Even the more im-

portant traffic arteries are discontinuous. Off-sets and dead ends are numerous, and, with very few exceptions, even the main thoroughfares are barely wider than the modern standard for minor streets.

The preparation of a Major Street Plan and of a Regional Highway Plan, which should enable the authorities to gradually and systematically correct these defects of the present street system and to prevent the recurrence of such in the as yet undeveloped areas surrounding the city, was one of the principal features of the work of the City Planning and Zoning Commission. Consistent adherence to these plans and their gradual execution is of utmost importance, to insure the city's continued growth by providing adequate streets for traffic circulation, also to enable the City to capitalize the potentialities of its highway system.

### Housing

Lexington is essentially a city of single family homes. The 10,720 families listed by the 1920 census lived in 9500 dwellings. While there may have been about 200 double houses and small apartments scattered throughout the city in 1920, there were practically no large apartment houses.

During the last decade the proportion of double houses increased somewhat and the



SMALL APARTMENT HOUSE IN DETACHED HOME DISTRICT

apartment house of the "efficiency" type made its appearance. The apartments are located mainly in the district bounded by High, Maxwell, Rose Streets and Broadway, although some were built north of the central business district between Broadway and Upper Street. The latter are mainly large old houses remodeled into small apartments. Curiously enough, small apartments for from four to six families have recently been built even in the best outlying residential sections.

In studying the shifting of population during the last two decades, certain highly significant facts were discovered from the housing standpoint. It was found that 65 percent of the increase in the white population located in



IN MOST RESIDENTIAL DISTRICTS THE HOMES ARE UP TO THE BEST AMERICAN HOUSING STANDARD

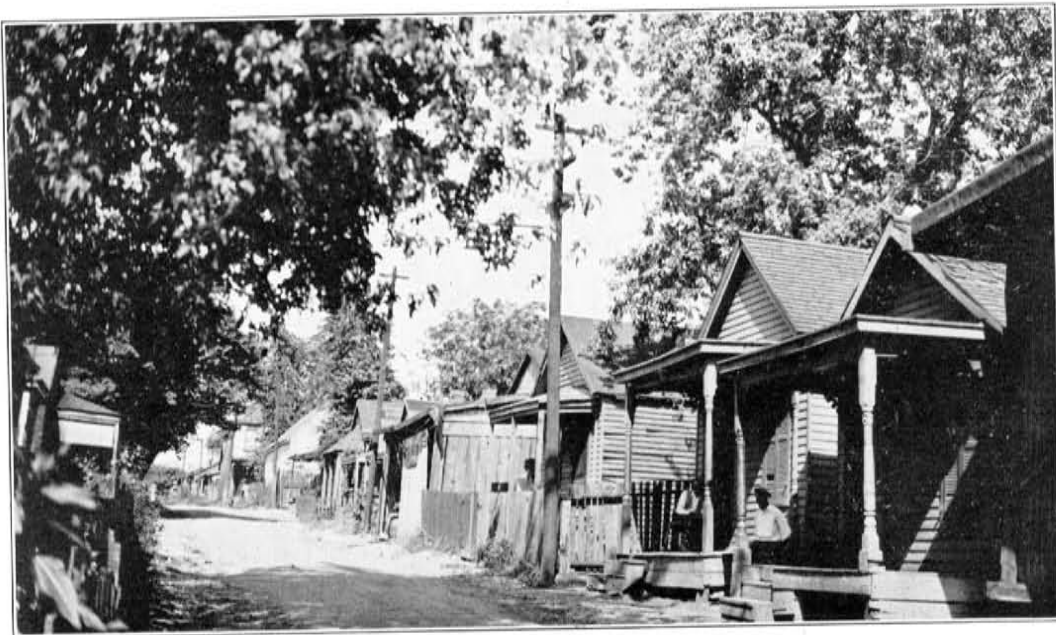
the outlying subdivisions, in the most part outside of the city limits. This increase of about 11,000 persons in the new subdivisions, was, of course, only partially due to population increase. A large portion was caused by the movement into the suburbs due to the automobile, quite general in all but the smallest of communities. However, it was found that this migration has been accelerated in Lexington by the intrusion in the older residential districts of commercial establishments, also by the shifting of the negro population, which tended to break down and depopulate the older residential districts, with consequent depreciation of both land and building values. The enactment of the comprehensive Building Zone Ordinance, prepared by the City Planning and Zoning Commission, will have the effect of stabilizing residential neighborhoods and to thus lessen the economic and social losses caused by constant changes.

It is of interest to note that, in contrast to the white population, most of the increase in the colored population in the last 20 years was found in the older sections of the city. Only about 20 percent of this increase has located in the outlying Georgetown district, confirming the course of events indicated by the migration of the white population.

While in most of Lexington's residential districts the homes are up to the best American

housing standards, there are several relatively small areas where housing conditions are deplorable. On alleys and narrow lanes, through the center of deep blocks, in such neighborhoods as Chicago Bottom, Brucetown, Davis Bottom, Goodloetown, Yellmantown, Pralltown, Irishtown, most of which are poor colored neighborhoods, three room frame houses and flimsy shacks are crowded together, many of them dilapidated, damp, unsanitary, which do not qualify even as shelters against inclement weather. It is easy to trace the development of some of these blighted neighborhoods on the back streets that in old days gave access to the servant quarters in the rear of the large, fine residences, and it makes little difference now who are responsible for the present conditions in such neighborhoods. The fact remains that these unhealthy, unsanitary settlements are a menace to health and safety in the city, and a constant drain on the economic resources of the citizens for free medical work, for charities, and for extra police and fire protection.

The need for remedying these conditions was forcefully brought to the attention of the authorities and the public at large by the Housing Survey made in 1924. The remedial measures suggested by this Survey included: (a) the completion of the sanitary sewer system; (b) the making of an ample water supply



HOUSING CONDITIONS ARE POOR IN MANY COLORED DISTRICTS



accessible for every dwelling; (c) the requiring of adequate open spaces around every house; (d) requiring that every house be made weatherproof; (e) the vacating of houses unfit for human habitation; (f) the relieving of the housing shortage. While much progress has been made toward carrying out the above recommendations, by providing additional sanitary sewers and water mains, by amendments to the Health Code, by the adoption recently of an improved Building Code, by more strict inspection and enforcement, and, more recently, by the adoption of the comprehensive Building Zone Ordinance, much remains to be done still to bring these blighted areas up to standard from the sanitary and housing standpoint.

The importance of rehabilitating the substandard neighborhoods was constantly borne in mind in the preparation of the Comprehensive Plan, and the various proposed street, park and school projects were planned with the view of injecting new life into these "backwater" districts, in the hope that the raising of the standard of public facilities will be conducive to the improvement of the housing and sanitary conditions.

Fully appreciating the difficulties presented by the physical and especially by the economic side of the problem, it is believed, that the public, which because of tradition and perhaps sentimental reasons has been wont to look with tolerance upon these conditions, should be aroused to the vital importance of co-operation with the public authorities in this matter, and of taking drastic action if necessary to rid the community of substandard housing and sanitary conditions in these neighborhoods.

#### Real Estate Values

Property values in the central business district of the city are somewhat higher than in cities of approximately the same population, but are about "in line" if the population of the "built-up area" is considered rather than the population inside of the city limits. Moreover, these values may be regarded as somewhat lower than the average for cities of comparable size, if it is remembered that Lexington is the shopping center for 14 towns, all within a 30 mile radius, with an aggregate population larger than that of the city and its environs.

In the outlying business districts property values are comparable to those found in cities of approximately the same size.

This may be said also of the residential values of various types, except that best residential values are somewhat higher, due perhaps to the exceptionally high character of one or two of the more recent subdivisions, rarely found in cities of the same population class.

In contrast, the values of desirable industrial properties are considerably lower than in other communities of the same population class, for which the explanation can be found probably in the abundant supply of such properties along the city's exceptionally numerous railroad lines, and in the very limited demand for this kind of property.

With construction costs no higher than the average and perhaps somewhat lower, the cost of land and buildings in Lexington for homes, mercantile establishments and industries, should be no more but rather somewhat less than in other communities of the same class.

#### General Living Conditions

Living conditions in Lexington are exceptionally attractive. Located in the center of a rich agricultural region, food prices are reasonable and choice fresh produce is brought to the markets in abundance. Being a city of medium size, real estate values, rentals, and the cost of living in general are much lower than in the larger communities. At the same time the quality and choice of merchandise offered by the numerous retail establishments compare favorably with those in much larger cities. This may be explained, on the one hand, by the large population and area for which Lexington serves as a shopping center, and, on the other hand, by the traditional good taste and high standards of its population. This contrast between the size of the city and the standard of its commercial, cultural and social life and facilities, is the dominant characteristic of living conditions in Lexington.

The City was noted from earliest times for its exceptional educational institutions. Aside from its very complete system of public schools, (consisting of eight elementary, two junior high and two senior high schools, for white children, and the four elementary, one junior and one senior high school, for colored children), it has two girls colleges, two universities, Transylvania and the University of Kentucky, and several parochial, private and commercial schools. The libraries of the two universities, of St. Paul's School, and the

Public Library, one of the oldest in these parts, provide ample material for reading and research.

While the City's public recreational system is not as adequate as might be desired, the acquisition recently of some 33 acres of property for two parks may be regarded as a long step toward making up for the deficiency in park and playground areas. It is true, on the other hand, that the open spaces around the many institutions compensate in some measure for this deficiency. Moreover, much of the beautiful and historically interesting Blue Grass Region is within short riding distance and accessible for a very large portion of the population. Several athletic fields and golf courses should also be mentioned in this connection.

At one time Lexington was quite an amusement center. Even today it has some half a dozen theatres and moving picture houses, besides the Auditorium in Woodland Park where each season concerts and musical attractions of the very highest order are presented.

Among other leisure time possibilities the

spring and fall races of the Kentucky Association and the trotting races in the fall, are events of national and even international interest.

Churches and clubs are fully as widespread as in any city of similar size, and hospital facilities compare favorably with those in similar cities.

The business interests of the city are being promoted with considerable success by its progressive and energetic Board of Commerce. In social welfare work the Associated Charities, the Community Chest, the Civic League, are well established and successful institutions.

Enough has been said, it is believed, about living conditions in Lexington to prove that the city offers, on the one hand, all the advantages of the medium sized community in low living cost, openness, lack of congestion and easy access to the surrounding countryside, and, on the other hand, commercial, educational, cultural, and social life and facilities of a standard difficult to find in communities several times its size.



**THE PUBLIC LIBRARY**  
The first Public Library west of the Alleghanies

## CHAPTER II

# THE MAJOR STREET PLAN

### Introduction

Lexington, like practically every other city in the country, is confronted with the problem of augmenting and modernizing its street system, to meet the pressing demands now made upon it and to prepare for the inevitable increase of these demands resulting from the ever and ever increasing volume of street traffic.

An adequate system of major streets that will provide for the effective, convenient and safe circulation of traffic is all-important to insure the community's future growth, welfare and prosperity. The development of such a Major Street System is an inescapable responsibility of every forward-looking community.

Until recently the street system of the city was quite capable of handling without difficulties the rapidly-increasing volume of traffic. However, during the last few years the pressure of this traffic for additional street space has manifested itself throughout the city, and is beginning to cause considerable inconvenience on the most important traffic arteries. This experience, common in practically every city of any size, should seem natural, when it is considered that the present street system was designed for an entirely different type of traffic, and that the almost universal use of the automobile could not be foreseen.

In 1921 there were 5,516 registered motor vehicles in Fayette County. This has increased to approximately 15,800 in 1930, or an increase of 186 percent, while during the same period the population of the county has increased from 55,700 to 62,500, or an increase of only 12 percent. These figures illustrate in a general way the increase of the demand for street space that the city's street system is called upon to meet.

Unfortunately, the city's street system is exceptionally inadequate. Excepting one or two streets, even the main traffic arteries are narrow and discontinuous. Connections

between the central section of the city and the outlying areas are utterly inadequate. There is a lack of proper connections between the streets of the city and the country highways leading in and out of the city. There is almost complete absence of continuous cross-connecting or circumferential arteries.

The remedying of the defects of the present circulation system and provision for future needs requires the systematic development of a major street system in accordance with a carefully prepared Major Street Plan.

Insofar as the built-up portion of the city is concerned, the major street system will have to be made up mostly of existing streets properly widened, connected and extended, to form a system of wide, continuous thoroughfares, so located that they may properly fulfill their functions and to interconnect every section of the city with every other section, and thus provide for the free and safe movement between these sections of the present and anticipated future traffic.

It should seem obvious, that in order to design such Major Street Plan it is necessary to make thorough studies of the existing physical and traffic conditions throughout the city and surrounding area, as well as of all factors that effect the future growth of the city and the future increase of traffic, such as: the growth and distribution of population, the increase of automobile ownership and registration, the relationship of registration to traffic increase, the probable increase of traffic and its distribution. Naturally, too, in developing the Major Street Plan this must be thoroughly coordinated with other features of the Comprehensive Plan, such as: the Building Zone Plan, the Recreational System, Grade Crossing Elimination, the Transit System, etc.

The studies above enumerated that may be considered the basic studies for the preparation of the Major Street Plan, will be discussed in more or less detail in the following pages.

## SURVEYS OF EXISTING CONDITIONS

### Field Survey

During the city planning field survey, that consisted of a lot-to-lot survey of the city and surrounding area—in addition to all information about the use and occupancy of every piece of property, the height of every building and structure, and the open spaces around each structure—all information has been collected in reference to the physical condition of streets.

This general survey of the physical condition of the street system was supplemented by frequent inspection trips during the course of preparing the Major Street Plan, to test the appropriateness and the feasibility of the recommendations. Every proposed major street shown on the proposed Major Street Plan has been either ridden over or inspected.

### Comprehensive Traffic Count

The exact knowledge of the relative importance of existing streets from a traffic standpoint, as well as of the volume and articulation of street traffic, is indispensable in the preparation of a major street plan.

During the first part of May of 1929 a com-

prehensive traffic count was conducted on all important traffic streets of the city and of the surrounding area. Street traffic was checked at 50 observation points throughout the region.

At the most important intersections traffic counts were taken during an 18-hour period, from 6:00 a. m. to 12:00 midnight. At the other intersections the time period varied from twelve hours to four hours, depending upon the importance of the intersection. A special traffic count was made one Saturday during the racing season, to ascertain the effect of the volume and movement of this special type of traffic upon the city's normal traffic.

The traffic counts were recorded on "field sheets" for each 10-minute period, separately for each of the twelve traffic movements possible at the ordinary intersection. Passenger vehicles, commercial vehicles, horse-drawn vehicles, street cars, buses, and special vehicles, were recorded separately by means of different symbols. At the observation points just outside the built-up area vehicles from outside the county and from other states were counted separately, to ascertain the volume of out-of-town traffic.

The data recorded on the "field sheets" were tabulated and analyzed on "summary sheets". These contain the hourly summaries of the typical twelve traffic movements at each intersection, also the totals for 4, 8, 10 and 18 hours, the maximum hourly traffic in one direction, and the ratios between the traffic counts of varying time periods.

Over 1500 sheets were used for recording and tabulating these traffic counts.



**LEXINGTON'S TRAFFIC ARTERIES ARE EXCEPTIONALLY NARROW**  
Limestone Street—the City's most important  
north-south thoroughfare



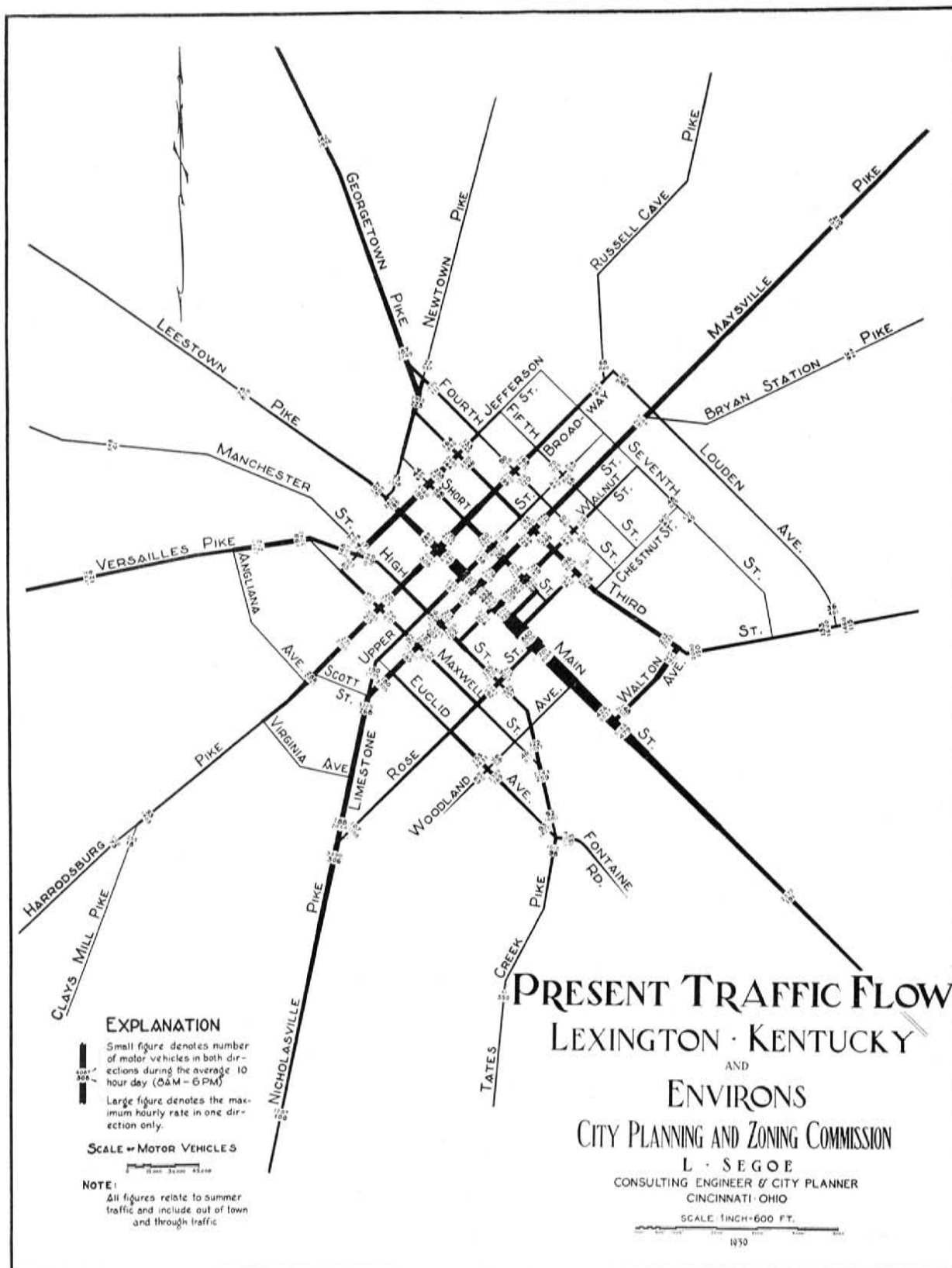


EXHIBIT I

## TRAFFIC FLOW MAP

From the summary data of the comprehensive traffic count the map in Exhibit 1, showing the Present Traffic Flow, has been prepared. The relative amount of traffic over the principal traffic streets is shown on this map by means of bands of varying widths, drawn to such scale that 15,000 vehicles in ten hours (between 8:00 a. m. and 6:00 p. m.) are represented by a band one inch wide. The map presents a diagrammatic picture of the volume and direction of traffic flow throughout the city, which can be easily interpreted. At each location two figures are shown across the traffic bands: the smaller denoting the total traffic to and from the nearest intersection during a ten-hour day, and the larger figure the maximum hourly flow in one direction.

From the standpoint of testing the effectiveness or capacity of a street, or in determining its required width, obviously, the maximum hourly traffic in one direction controls. The relationship between ten-hour traffic in both directions and a maximum hourly traffic in one direction has been found to vary considerably throughout the area, averaging 7.5 percent on the principal radial arteries and 6.4 percent on cross-connecting streets.

As will be noted, Main Street is by far the City's most heavily used traffic street. North Limestone Street carries about as much traffic through the central part of the city as North Broadway. Traffic on South Broadway, on the other hand, is almost as heavy as the combined traffic on South Limestone and South Upper Streets. Jefferson Street between Third Street and Versailles Pike carries almost as much traffic as Limestone Street between Third and High Streets. Third Street is beyond question the City's most important cross-connecting street. It is interesting to note on the map that this street is much used by traffic from the south-eastern residential district over Walton Avenue, to by-pass the congestion on Main Street, thus pointing to the need for additional connections between this district and the central section. The narrowness of and the unfavorable physical conditional on Georgetown Street are reflected by the relatively light traffic on this street south of Fourth Street, and particularly south of

Third Street. The value of the Traffic Flow Map in ascertaining the locations where relief is needed and the type of solution applicable in each case, is illustrated by the above examples.

It may be of interest to note that of the highways leading into and out of the city, Maysville Pike carries the heaviest traffic, Richmond Pike is second, Georgetown Pike third and Versailles Pike fourth.

### Variation of Traffic Flow With Distance From Center.

When attempting to prognosticate the probable future increase of traffic along the various traffic arteries, it is important to know the variation of traffic with the distance from the center of the community. As commonly observed, traffic on any particular thoroughfare decreases with the distance from the central district. Although the rate of decrease has been found to follow the same general rule, it was also found to vary in different communities and even in the same community along different traffic arteries.

With the aid of the Traffic Flow Map, which gives the traffic movements at present, it was relatively simple to ascertain this variation. With the intersection of the center lines of Limestone and Main Streets as the center, circles were drawn with radii of one-half, one, one and one-half, and two miles. The traffic crossing each circle was summed up, plotted and a curve drawn through the points so obtained.

Assuming the amount of traffic entering and leaving the central business district as 100 percent the traffic found at various distances has been expressed in percentages of this traffic. It was found that only 51.67 percent of the traffic entering and leaving the central business district crosses the one-mile circle, and only 28.71 percent the two-mile circle.

These figures illustrate the extent to which wider roadways or a greater number of streets are needed to accommodate traffic in the central section of the community.



## POPULATION GROWTH

In the preparation of a plan for the development of public facilities of every type, if these are to be designed to adequately meet future needs, a study and prognostication of the probable future increase of population is a cardinal requirement. Every facility and utility in a city must be "dimensioned" on the basis of the population to be served. Unless the population for which the facilities are to be provided is known with reasonable accuracy, the plan cannot be "drawn to scale", there can be no assurance that the facilities planned will not be inadequate or may not be over-sized.

Obviously, any estimate of probable future growth must be founded on a study of the past. Few statistics cover as long a period as do the population data contained in the reports of the United States Bureau of Census. These were compiled for both Lexington and Fayette County, and may be found in Tables I and II. The population growth curves shown in Exhibit 2 were based principally on these statistics. Data on the growth of post office receipts, of registrations, of public school enrollment, of assessed valuations, of building construction, etc., were used to check the trend of population growth developed from the Census statistics.

The population curve of Lexington exhibits the form characteristic of population curves for cities, states and countries. The general shape of these population curves resembles the letter "S", depicting a period of slow early growth, followed in the middle section by a period of greatly-accelerated growth and ending with a long period of slow but steady increase. As may be seen in Exhibit 2, Lexington is now in its middle period of growth. Its growth during the last ten years was probably faster than during any similar period in the past. During the last forty years its population increased from 21,567 to probably 46,000 (counting the population within the city limits only), an increase of about 25,000 persons. There is every reason to believe that its growth during the next forty years will not be less than 30,000 persons.

Two population curves have been drawn for the City, the lower one for the "Lexington Variable Area", which gives the population in any year within the then-existing city limits, and the upper one for the "Lexington Built-

up Area", which includes, in addition to the City's population, the population of as much of the area contiguous to the city as was and may be expected to become more or less urbanized.

By comparing the latter curve with that drawn for Fayette County, it will be noted that the population of the county outside of the Lexington Built-up Area will remain practically stationary.

The derivative curves shown were used as one of the means for extending the population curves.

Since many of the needed facilities have to be provided separately for the white and the colored population, it was necessary to make a separate study of the probable growth of the colored population. The percentage curves shown were developed first, and were then applied to figures taken from the curves for the total population just above discussed. The results were plotted and show the probable future increase of the colored population, both for the Lexington Variable Area and the Lexington Built-up Area.

The rapid decrease of the proportion of colored population is conspicuous. In 1870 the colored population represented 46.8 percent of the total population of the County and 48.4 percent of the population of the City; in 1920 the corresponding percentages were 28.7 and 30.0 respectively. According to the curves, by 1970 the percentage of colored population in the city will probably be only 20 percent, and in the county only a little over 18 percent. These would still be approximately twice the percentage that applies to the country as a whole. Attention is also invited to the population curves for the colored population, which show that the growth of colored population in the future will be considerable slower than that of the white population. While it may be expected that during the next forty years there will be an increase of about 30,000 in the total population of the City, the increase in the colored population probably will not exceed 2,600 persons.

The persons per family curve, also in Exhibit 2, shows the gradual decrease in the size of the family, a condition found in practically every city of any size.

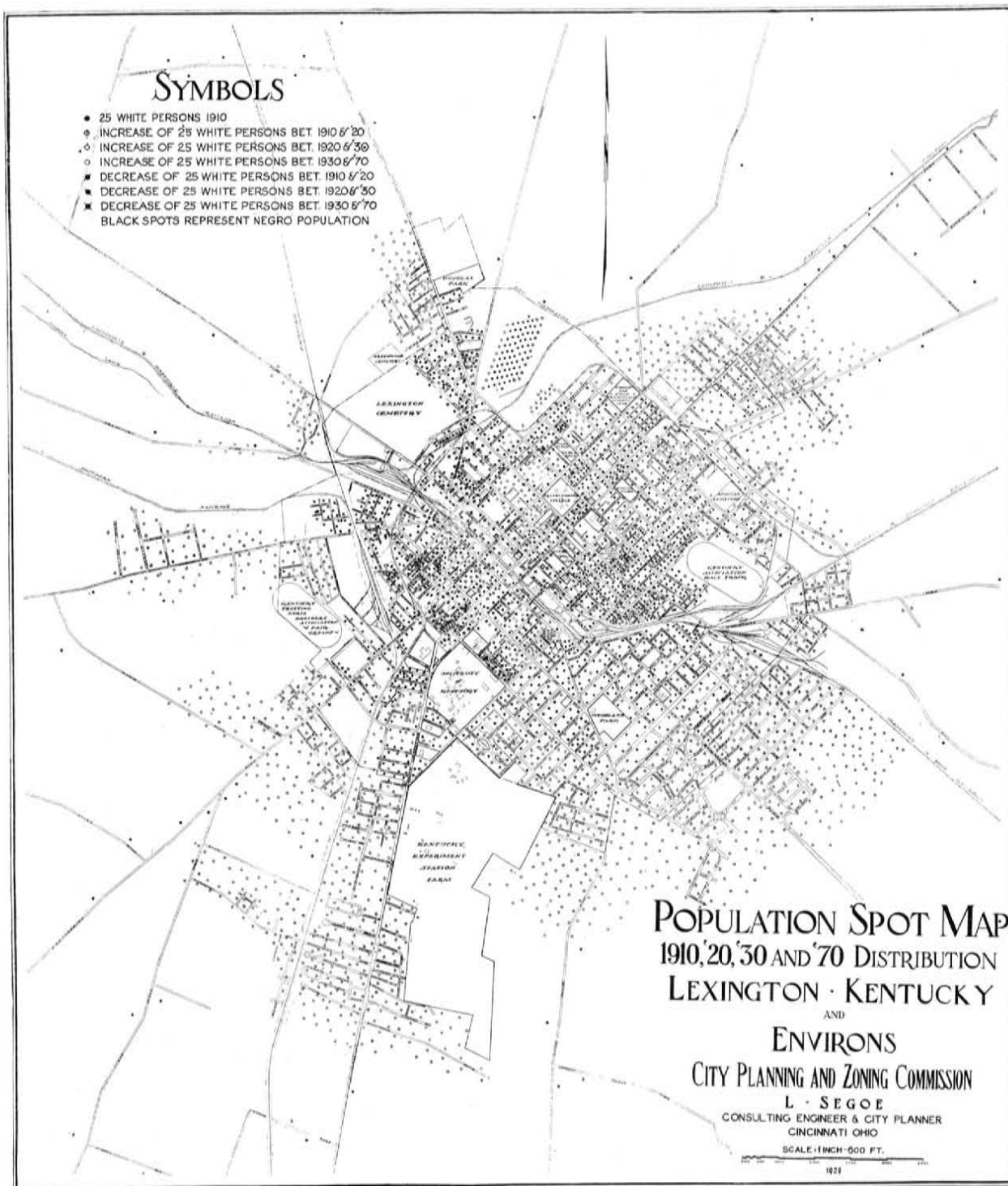


EXHIBIT 3

Size of reproduction did not permit differentiation between white and colored population



## POPULATION DISTRIBUTION

When plans are to be developed for the various public facilities and utilities with the view of providing for the future increase of population, the knowledge of the probable distribution of the future population over the area of the community is as important as the knowledge of the probable sum total of the population increase that may be expected. The usefulness and effectiveness of most facilities are principally dependent upon the convenience by which these may be used by the portion of the population they are intended to serve. This consideration in turn requires that in determining the location and size of future facilities, the probable amount and distribution of future population within the "service area" of each facility be given careful study.

A forecast of the probable distribution of the future population had to be founded necessarily on a study of past tendencies. On the basis of data taken from the original U. S. Census enumeration sheets, supplemented by information obtained during the field survey in reference to the relative age and condition of buildings, with the aid of the Zoning Data Map, and by observing the date of corrections on the Sanborn insurance maps, the distribution of population for the years 1910, 1920 and 1930 has been worked out as shown in Exhibit 3. Every spot shown on the map represents 25 persons. The solid dots represent the 1910 population. The increases and decreases of population between each decade since 1910 are indicated by different symbols.

With the aid of this graphic compilation of the past and present distribution of population, the natural tendencies in the movements of the population during the last twenty years were studied, and the extent of shifting caused by various factors determined. It was ascertained, for example, that approximately 11,000 white persons have moved into new subdivisions during the last twenty years, which corresponds to 70 percent of the total increase during that period. It was also found that approximately 20 percent of the total increase in the colored population during the last twenty years, has located in the Georgetown Pike district. Obviously, these increases in the outlying sections were caused not only by the actual increase in population, but also by migration from the central area. From the Population Spot Map the amount of popula-

tion replaced by business and industry, the amount of white population replaced by colored, the extent to which the tendency towards apartment houses has manifested itself, as well as the location of these changes, could be ascertained.

On the basis of this study of the population movements during the last twenty years, and by careful consideration of the factors to be described presently, the probable population distribution for the year 1970 was developed. The estimated population increase during the next forty years is shown by the open circles, and the decrease by the spots through which crosses are drawn.

Generally speaking, the principal factors upon which the distribution of population of a community has been found to depend are:

1. Total increase in population
2. Building Zone Plan
3. Topography
4. Distance from the center of the community measured along existing and proposed thoroughfares
5. Time distance from the center of the community by existing and proposed transportation facilities
6. Distance from main arteries and from transit lines
7. Distance from local centers
8. Present building tendencies
9. Existing population tendencies
10. Land values and their trends
11. Distribution of schools and playgrounds
12. Status of public services and public utilities.

The order in which the above factors are enumerated represents but in a very general way their importance from the standpoint of population distribution. All of the above factors are inter-related and have to be considered more or less collectively in any particular district. The controlling effect of some of the factors should seem quite obvious. For example: nowhere can the population density exceed that permissible under the Building Zone Plan for the particular district, assuming that this plan is put into effect and is enforced.

It may be of interest to point out the movement of the "center of population" during the last twenty years. In 1910 it was located ap-

proximately in the center of the block bounded by North Limestone Street, Second Street, North Upper Street and Church Street. By 1920 the center of population moved to a point on Second Street approximately 100 feet west of North Limestone Street. At present it was found to be practically at the intersection of Short and Walnut Streets. The movement of the center of population between 1910 and 1920 appears to reflect the development of the residential section along Limestone Street north of Loudon Avenue, while the far more conspicuous movement during the last decade almost directly to the South, was obviously due to the growth in the south-eastern section and in the district along Nicholasville Pike. It is an interesting fact that the new City Hall is practically at the present center of population.

#### Population Densities

Based on the population spot map previously described, a study was made of present population densities.

It was found that, with the exception of the colored district in the north-eastern part of the central area between the central business district and the race track of the Kentucky Association, nowhere does the density of population exceed 40 persons or approximately ten families per acre. Next to this colored district the colored district between Broadway and Limestone Street and north of Transylvania College, and the district south of High Street and between Mill and Merino Streets, were found to be most intensively populated, also a small section around the intersection of Georgetown and Short Streets. In these districts the population density varies between 30 and 40 persons per acre. Except for some of the older subdivisions just outside of the city limits, the density of population in the area surrounding the city, including the more recent subdivisions, is less than 10 persons per acre.

The general openess of the city's development is illustrated by these low population densities.

### AUTOMOBILE OWNERSHIP, REGISTRATION AND TRAFFIC INCREASE

Inasmuch as the increase of street traffic obviously depends upon the increase of automobile registration in the community, a forecast of the probable increase of traffic to be provided for by the major street system requires an appraisal of the probable increase of automobile ownership and registration.

Motor vehicle registration figures for the City of Lexington are not available, as registration figures are recorded by counties. However, since at least 90 percent of the motor vehicle registration of the County is found within the "Lexington Built-up Area", the figures may be assumed to apply.

The motor vehicle registration figures for Fayette County since 1921, which is the first year for which they are available, are given in the following table:

Year	Passenger	Truck	Total
1921	4,686	830	5,516
1922	5,650	1,047	6,697
1923	7,097	525	7,622
1924	6,296	1,422	7,718
1925	9,286	1,542	10,828
1926	9,969	1,690	11,659
1927	10,687	1,735	12,422
1928	11,925	1,893	13,818

From these and from the corresponding population figures for the County, the persons-per-motor-vehicle figures were computed for each of the above years, separately for passenger vehicles and for all motor vehicles. These are shown in Exhibit 4. The persons-per-motor-vehicle curves are hyperbolic in character, have been found to be very similar in every community, and are therefore readily extended.

The rapid increase in automobile ownership is clearly illustrated by these curves. In 1921 there was in the County one motor vehicle to approximately every ten persons. At present there is one for each family of about four persons, and it is probable that within the next fifteen years there will be an automobile for every 2.2 persons, or nearly two motor vehicles per family.

By reading the values from the extended persons-per-motor-vehicle curve for any future year and by dividing the figure thus obtained into the corresponding estimated population of the County, the estimated motor vehicle registration for that year can be found. These figures have been plotted and connected by the curve marked "Motor Vehicle Registration."

An indication of the extent to which additional street space will be needed to provide for the increase of traffic, is given by the increase in motor vehicle registration of the County. This has increased from 5,516 in 1921 to 13,818 in 1928, and to approximately 16,000 at present. According to the studies in Exhibit 4, motor vehicle registration may be expected to reach nearly 31,000 in 1950, and almost 43,000 in 1970, or nearly twice and over two and one-half times, respectively, of the present motor vehicle registration.

With regard to the relationship between motor vehicle registration and traffic increase, independent studies in a number of cities have shown, that traffic in the central business districts of cities and at the entrances to these districts increases in almost direct proportion with the increase of registration, while in the outskirts of communities traffic on the main thoroughfares increases more slowly than registration and more nearly as the square-root of registration. In applying these relationships to any particular thoroughfare, the present traffic figures are compared with the present motor vehicle registration of the area tributary to that thoroughfare, and then compared with the estimated future registration of the area that is to be tributary to the same thoroughfare. The application of the method is

more fully described in the next section on the Future Traffic Load.

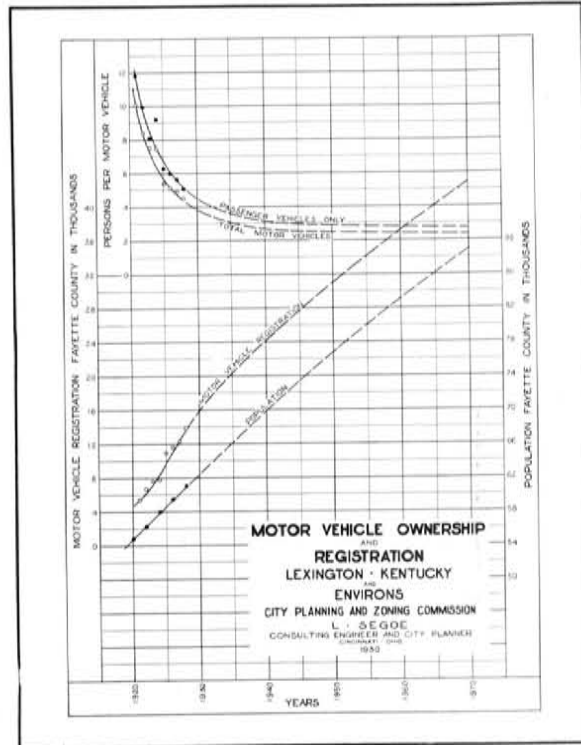


EXHIBIT 4



DEWEESE STREET CONTINUES AS AN ALLEY NORTH OF THIRD STREET  
 One of the many discontinuous arteries



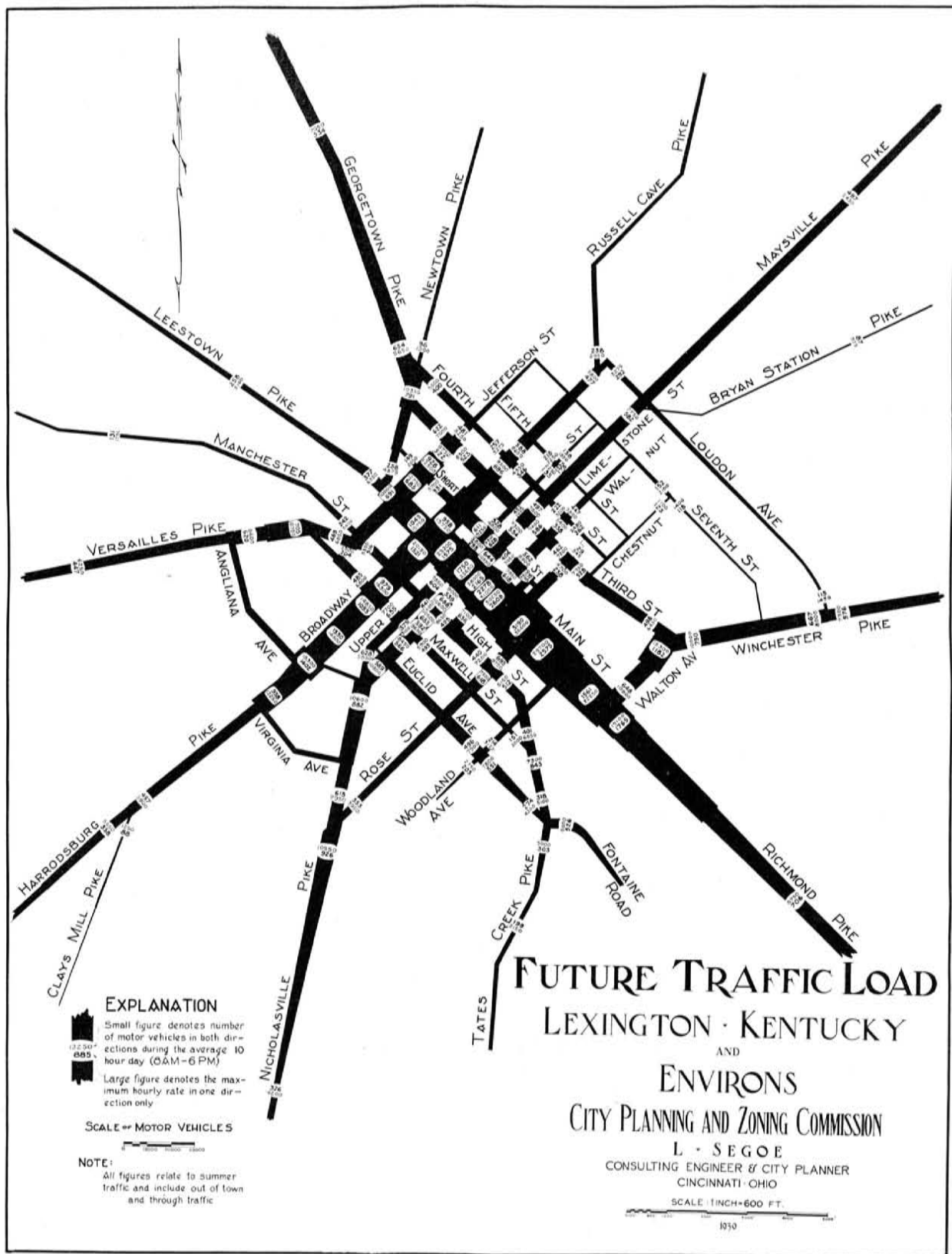


EXHIBIT 5

## FUTURE TRAFFIC LOAD

The estimate of the probable amount and flow of future traffic to be expected, shown in Exhibit 5, has been prepared to serve as a basis for the quantitative design of the Major Street Plan. In such connection it serves the same purpose as, for example, the estimates of run-off or of the amount of sanitary sewage in the design of a sewer system. All of the studies previously discussed were utilized in developing this estimate of the probable future traffic load. In fact, some of these were undertaken primarily for the purpose of obtaining the data upon which such an estimate could be founded.

Briefly, this estimate was prepared on the basis of the comprehensive traffic count and the present traffic flow map developed therefrom, by determining the factors that need to be applied to the present volume of traffic at different points on the various thoroughfares, to obtain the probable volume of traffic in the year 1970. The studies of population distribution, motor vehicle registration, the relationship between the motor vehicle registration and traffic increase, and others, were used to determine these factors.

In preparing this estimate, the community was first divided into sections principally tributary to one particular thoroughfare. These sections were again subdivided into more or less homogeneous districts. The motor vehicle registration of each of these districts was next determined, then by a comparison with the total motor vehicle registration of the community and by considering the various factors that may affect the future motor vehicle registration of these districts, an appraisal was made of the probable 1970 motor vehicle registration of each district. By a summation of the estimated motor vehicle registration of districts tributary to each thoroughfare and comparison with the corresponding present registration figures, the probable registration increase of the area tributary to each thoroughfare was calculated. The factors by which the present volume of traffic at various points along each thoroughfare was to be multiplied, to obtain the estimated traffic for the year 1970, were determined by applying the relationship between registration and traffic increase heretofore discussed, also the rate of traffic decrease with the distance from the center of the community.

These factors, which express how many times the present traffic may be expected to increase, naturally varied for each thoroughfare and for different points

along the same thoroughfare, depending upon the location of such points. In the central business district and at the entrances to this district, the average value of these factors was nearly 4.5, while at points in the outskirts of the city their average value was around 2.5. This means that by 1970 traffic in the central district may be expected to increase to four and one-half times the present volume, while in the outlying districts this increase may amount to only two and one-half times the present volume.

The factors of increase so determined for various points along each thoroughfare were applied to the present traffic figures, and the estimated traffic so calculated was plotted upon the map in Exhibit 5, much in the same way as the traffic counts were plotted on the map showing Present Traffic Flow described hereinbefore. The scale of the two maps being identical (a traffic band one inch wide representing 15,000 vehicles in both directions during a ten-hour day), comparison between the two offers an opportunity for the appraisal of the probable increase of traffic. Similarly to the map showing Present Traffic Flow, of the two sets of figures, shown in Exhibit 5, the smaller ones represent the ten-hour traffic in both directions and the larger ones the maximum hour traffic in one direction.

Thus, from this estimate of the future traffic load, the probable amount of traffic that each of the present traffic arteries of the city would be expected to handle in the year 1970, can be readily determined. By comparing the expected traffic load with the maximum traffic capacity of existing arteries, the additional street space necessary to handle such traffic can be ascertained. Whether such additional street space should be provided by the widening of the present street, by developing a parallel relief artery, or by otherwise diverting traffic into new channels, were questions that were next investigated. By this method the need for additional street space and the amount of such need in each case was ascertained by comparison between the traffic capacity of existing traffic arteries and the estimated Future Traffic Load. The manner in which such additional street space should be provided was worked out in the design of the Major Street Plan.

## THE PRESENT STREET SYSTEM

The streets of Lexington are exceptionally narrow. Few streets are wider than 50 feet. There are many streets even among the main traffic streets that are scarcely wider than 50 feet and some that are even narrower. Main Street, Broadway, Walton and Cramer Avenues, are about the only main traffic streets of any width. These are approximately 80 feet wide. Loudon Avenue, Euclid and Woodland Avenues, have widths varying from 60 to 75 feet.\*

Even more serious than the narrowness of the principal traffic streets is the discontinuous and defective layout of the street system, easily discernible by studying the map of the city. All of the cross-town streets north of Third Street, with the exception of Loudon Avenue, lack connections with other traffic arteries, either at one end or at both ends. In the entire north-eastern section of the city, between Limestone street and the Lexington & Eastern Branch of the Louisville & Nashville Railroad, not a single north-south street can be found that is continuous from Main Street to Loudon Avenue: Walnut Street terminates in an alley at Rand Avenue, Dewese Street ends dead north of Third Street, Ohio Avenue and Elm Tree Lane have an offset at every cross street, Eastern Avenue stops at Third Street, Chestnut Street runs only between Third and Seventh Streets, etc. It is deplorable, that even in the more recent residential sections the street layout shows no improvement over that in the central section of the city. Along East Main Street and Richmond Pike, with one or two exceptions, the intersecting streets are not in alignment, as if purposely planned to form offsets, a particularly regrettable condition in view of the center planting on this street. The Nicholasville Pike section has been built up with a series of dead-end streets. There is not a single continuous street cross-connecting these dead-end streets between Nicholasville Pike and the Southern Railroad, a distance of over one-third of a mile.

Admitting that railroad facilities, cemeteries, and large institutional properties are responsible to a considerable extent for the lack of continuity of many streets, it cannot be

denied, that the present street plan of the city directs attention to the need of more intelligence and less selfishness in the laying out of new subdivisions, and to the very real necessity of controlling the layout of these subdivisions by the City Planning and Zoning Commission in accordance with the Major Street Plan.

Aside from the general shortcomings of the present street system of the city, just above discussed, the present street layout was found to be principally defective in the following particulars:

- Inadequate connections between the central district and the outlying residential areas.

- Lack of crosstown or circumferential routes of any continuity in the central section, and the almost complete absence of such routes in the outlying districts.

- Lack of adequate connections between the street system of the city and the county highways over which traffic enters and leaves the city.

Congested traffic conditions on North Limestone Street are a matter of common knowledge. It is not commonly realized, however, that North Limestone Street is the only street within the entire north-eastern sector of the city, between the Lexington & Eastern and the Paris & Lexington Branches of the Louisville & Nashville Railroad, that has an outlet to the North-East and gives access to the rapidly-growing residential district along Maysville and Bryan Station Pikes. In addition, it is the only street over which traffic from Paris and the towns beyond can leave and enter the city.

East Main Street offers the only direct connection between the central district and much of the south-eastern section of the city, including the fast-growing and populous Kenwick and Ashland districts.

Similarly, the southern section of the city, which during the past ten years has probably been growing faster than any other section, is served exclusively by Nicholasville Pike.

\*It is of interest to note that, as early as in 1788, the Board of Trustees in a resolution adopted on March 7, declared 60 feet to be the minimum width of streets and

prescribed a setback or building line of eleven feet and three inches for all buildings. Had these requirements been enforced Limestone Street would now have a width of 82 feet and 6 inches, and not one varying from 40 to 60 feet.

It is an unfortunate coincidence that the outlying districts of the city just mentioned, which are the most rapidly-growing and the most populous sections of the city, should have the most inadequate connections with the central district.

The lack of continuous circumferential routes is a defect in the City's street system which is common in most cities. The effect of this shortcoming manifests itself by increased congestion in the central section, since the lack of crosstown arteries forces all traffic to come into the center over one radial thoroughfare, before it can go out on another. Thus, for example, traffic approaching over Winchester Pike must come into the city as far as Third Street, before it can travel crosstown to Georgetown Pike. Similarly, traffic from the direction of Frankfort must come to the Jefferson Street Viaduct to reach Georgetown Pike and continue towards Cincinnati. These illustrations referred to through-traffic movements. However, it is frequently impossible or difficult even for intra-city traffic to get from one section to another without crossing the central district.

Except for the newer sections of the city, and particularly the Nicholasville Pike district, which completely lacks cross connections, the city has a good basis for a system of crosstown thoroughfares. The principal defect of the existing crosstown streets lies in their lack of continuity. Loudon Avenue stops at Broadway; Seventh Street has no western outlet; Sixth Street and Fifth Street both lack outlets at both ends; Fourth Street has no outlet to the East; etc.

It will be noted by an inspection of the map of the city, that few of the city streets are directly connected with the highways of the surrounding country. Consequently, traffic over these highways is forced to enter the city over a limited number of streets. It may be seen, that in several instances two or more of these highways converge in one city street, which must thus carry their combined traffic load. This condition is exactly the reverse of

the desirable. It is a fact commonly known that traffic increases as one approaches the central section of a community. Therefore, to properly provide for this traffic increase, every highway should be connected with two or more city streets.

The convergence of Bryan Station Pike and Maysville Pike in Limestone Street, that of Georgetown and Newtown Pikes in Georgetown Street, and of Versailles and Frankfort Pikes in High Street, are examples of faulty arrangement. The triple entry provided for Nicholasville Pike, namely over Rose Street, Limestone Street and Upper Street, may be pointed to as an illustration of the desirable layout.



BROADWAY — THE CITY'S WIDEST NORTH-SOUTH ARTERY ENDS AT ITS NORTH END IN A TOBACCO FIELD

## THE MAJOR STREET PLAN

The street system of the community should be planned with the functional requirements of each street in mind. Free circulation of street traffic should be provided for by a limited number of main traffic streets forming the primary or major street system of the city, while the remainder of the streets, intended to serve only their immediate neighborhoods, should be kept free of through traffic. Under such an arrangement the major streets are to be made of good alignment, of generous width, and are to be provided with substantial pavement to accommodate the heavy traffic, including street car lines and bus lines; in contrast, the local streets can be made relatively narrow, built with a light surface, and may be designed with sharp curvature or with occasional offsets so as to discourage their use by through traffic.

The design of the Major Street Plan is confined to the design of a system of major traffic arteries with the view of providing for the free circulation of general traffic. It represents a comprehensive scheme for the gradual and systematic development of a major street system, by remedying in the built-up area the defects of the present system of major streets heretofore discussed, and by providing for the orderly extension of the major street system into the as yet undeveloped territory.

There are two principal phases in the preparation of a major street plan.

The first of these is the design of a qualitative plan, as it might be called, developed from the existing system of main traffic arteries by the application of such corrective measures as the cutting through of missing connections, the straightening out of defective alignments, the elimination of jogs, and the addition of a number of main arteries, radial and crosstown, which in the main have to be made up of existing secondary streets widened and connected in the best possible manner under given conditions. The design so developed naturally needs to be coordinated with other features of the Comprehensive Plan, such as the Building Zone Plan, the plans for school and recreation facilities, for grade crossing elimination, etc.

The second phase in the design of the Major Street Plan consists of what may be termed the "dimensioning" of the plan. The width of each major street in the plan must be determined on the basis of the anticipated

volume of traffic to be handled by such major street. Thus, the qualitative design of the Major Street Plan was studied side by side with the diagram showing the estimated Future Traffic Load, the preparation of which has been previously described. Where it was indicated by the latter that the estimated traffic to and from a section will exceed or will approximate the traffic-carrying capacity of the major streets provided for such section by the qualitative plan, it was necessary to provide additional traffic-carrying capacity. The question whether such additional capacity should be secured by the widening of existing major streets, by developing relief arteries or bypasses, by cutting through new connections, or by developing new major streets, had to be determined separately in each case on the basis of local conditions and in full consideration of physical circumstances as well as the financial aspects.

The recommendations with respect to each major street are shown on the Major Street Plan in Exhibit 6. This plan shows the proposals for street widenings, street extensions and connections, also the location of new major streets to be developed. In a word, all of the projects and improvements, the gradual and systematic carrying out of which is held necessary and is recommended to provide an adequate circulation system for the City of Lexington and Environs.

The recommended major street improvements are also given in Table III, the Major Street Improvements Table. In this table the existing and recommended street and roadway widths for each section of every proposed major street, boulevard or parkway, are listed, also the recommendations for the method to be employed in and the approximate time suggested for the carrying out of each improvement.

The dates proposed for the carrying out of specific improvements are predicted on an extensive use of the method of establishing building lines as herein recommended; also upon obtaining state enabling legislation for the application of the district or local benefit assessment method for the financing of a portion or of the entire cost of major street improvements—similar to the Act (House Bill No. 354) enacted for cities of the first class during the recent session of the Legislature.



## Description of Major Street Improvements

In the following, the recommendations concerning each major street and the reasons therefor are discussed in more or less detail.

### 1. Richmond Pike—Main Street—Leestown Pike

True to its name Main Street is by far the most important street in the city. Besides being the City's principal retail business street and the only outlet from the central retail district to the rapidly-growing residential areas of high purchasing power in the south-eastern sector, it is also part of U. S. Highway No. 25. Thus, it is not surprising that Main Street carries several times the amount of traffic carried by any other street in the city. The pressure of this traffic has been quite noticeable in recent years. The need for relief, particularly through the central retail district, has been keenly felt for some time.

Main Street through the central section is approximately 80 feet wide, which width, considering the demand for the parking or at least for the stopping of vehicles, the presence of double car tracks and the need of generous sidewalk space, greatly limits the capacity of any possible roadway. Since the City's high value district is along Main Street, the widening of the street between property lines would undoubtedly prove prohibitive in cost. As a result of a special study of traffic conditions on this street and in the central retail district, it is recommended that, to effect immediate relief, certain changes be made in traffic and parking regulations and that the signal system be modernized; all as set forth in considerable detail in a separate section of this report.

As may be noted on the Major Street Plan, the widening and extension of Short Street and the construction of the Third Street-Cramer Avenue Boulevard are recommended as the ultimate solution for traffic relief on Main Street. It is also recommended that Main Street be widened between Rose Street and Ransom Avenue to 90 feet; between Ransom Avenue and the present 120-foot section, near Richmond Avenue, to 100 feet; and to 140 feet east of Woods Point Road. It is further recommended that west of Broadway, Main Street and Leestown Pike be widened to 90 feet as far as Wilton Avenue and to 120 feet west of Wilton Avenue.

Except for the widening between Rose Street and Walton Avenue, or preferably Hanover Avenue, which should be undertaken within the next five to ten years, the recommended widening of other sections could well be accomplished by the early establishment of building lines.

### 2. Short Street—New Extension—Ann Street

As has already been mentioned, Short Street is to be developed as a relief street to Main Street. Aside from the importance of this improvement from the traffic standpoint, it should be undertaken to prepare for the expansion of the central retail district.

Unfortunately, except between Jefferson Street and Limestone Street, where it is from 60 to 62 feet wide, Short Street is less than 50 feet wide most of the way, and from Limestone Street to Walnut Street it is only 30 feet wide.

It is recommended that Short Street be widened from Georgetown Pike to Curley Avenue to a uniform width of 80 feet, and that from Curley Avenue it be extended eastwardly 80 feet wide, approximately parallel to the railroad right-of-way and from 100 to 150 feet distant therefrom, to connect with the Third Street-Cramer Avenue Boulevard at Ann Street. The widening of Ann Street to 60 feet is also recommended.

It is appreciated that the widening and extension of Short Street will prove a costly undertaking. At the same time, it is felt that there is no cheaper alternative, that this improvement is essential not only from a traffic standpoint, but also to insure the proper development of the central business district, and that the accruing benefits will more than justify the cost of this project.

It would be desirable to complete the widening between Limestone and Walnut Streets and the extension eastwardly, within the next ten years. Building lines should be established between Walnut and Dewees Streets and west of Limestone Street to secure the widening of these sections.

### 3. Third Street—New Connection—Cramer Avenue—Extension

Third Street is already a very useful and, in parts, quite attractive crosstown street. It is proposed to increase both its usefulness and

attractiveness by developing it into a boulevard connection between opposite sections of the Inner Boulevard.

To this end it is recommended that Third Street be extended south-eastwardly from Chestnut Street, carried over the railroad tracks on a viaduct structure, thence through the center of the block between Ellerslie Street and Boonesboro Avenue to Cramer Avenue, and that Cramer Avenue be also extended south-eastwardly to Sherman Avenue and beyond; it is further recommended that Third Street be extended north-westwardly from Georgetown Street over Whitney Avenue and Chiles Avenue to the Inner Boulevard and eventually to Sandersville Road and to Georgetown Pike. A width of 80 feet is recommended for this boulevard route throughout its length. The extension of Third Street to Cramer Avenue is intended to provide an out-

let in that direction for both Third Street and Short Street, and additional entrances to the central district, which is held to be one of the most pressing needs of the City from the traffic standpoint.

This improvement, including the railroad grade separation, should be undertaken within the next five years. The section between the east end of Cramer Avenue and Sherman Avenue requires immediate attention. The section between Walter Avenue and Georgetown Street should be carried out within the next ten years to provide over Walter Avenue a bypass for Georgetown Street between Walter Avenue and Third Street. The extensions through undeveloped territory can be obtained by platting control, and the recommended widenings through the built-up sections by the establishment of building lines.

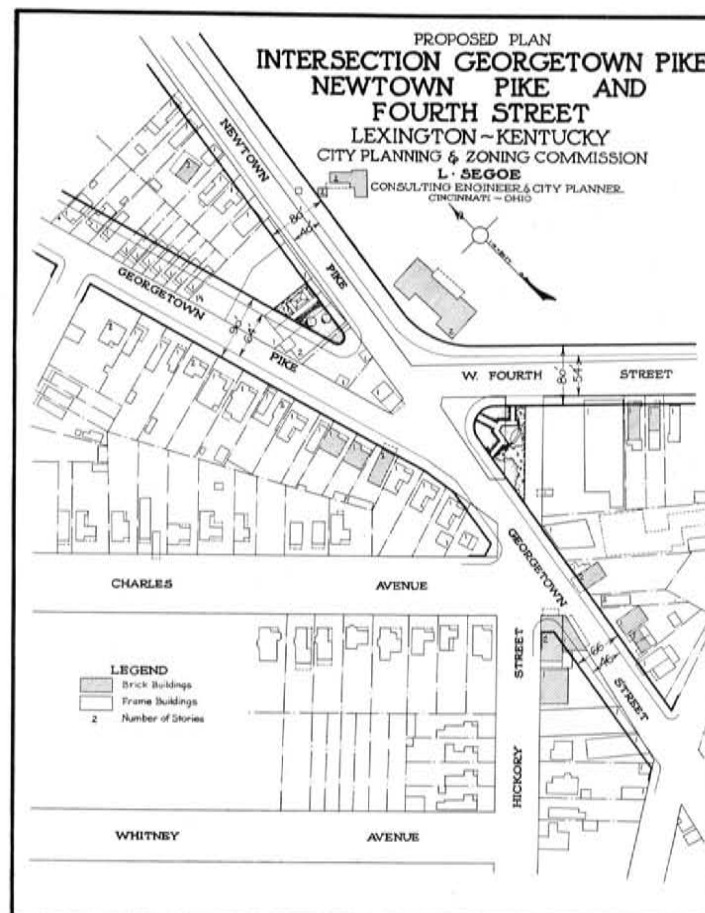


EXHIBIT 7

#### 4. Fourth Street—New Connection—Third Street—Winchester Pike—Liberty Pike

Fourth Street, by reason of its location and the common junction formed with both Georgetown and Newtown Pikes, may be regarded as the potential principal crosstown thoroughfare of the north-central section of the city. At present, lacking an outlet to the east beyond Race Street, its usefulness is greatly impaired.

It is proposed to remedy this condition by an extension to Third Street near Ann Street. Fourth Street so extended would form a bypass route for traffic between Winchester Pike and Georgetown Pike and between the intermediate major streets. An 80-foot width is recommended for this major street connection, including the section of Third Street east of Ann Street, and including Winchester Pike as far as Loudon Avenue. Beyond Loudon Avenue Winchester Pike should have a right-of-way 140 feet wide.

Liberty Pike, which forms a secondary radial highway through the sector between Winchester and Richmond Pikes, should be widened to 100 feet throughout its length.

The recommended widenings could well be accomplished by establishing building lines. It is believed, however, that the improvement of the intersection of Georgetown Pike, Newtown Pike and Fourth Street, and the short extension from Fourth Street to Third Street, may well be undertaken within the next five and ten years respectively. A proposed plan for the former improvement is shown in Exhibit 7.

It will be noted that this crosstown route parallels within the central district the Third Street-Cramer Avenue Boulevard. It should be remembered in this connection that the use of this boulevard would be restricted to passenger vehicles, and that, therefore, there is need for a parallel route to handle general crosstown traffic.

#### 5. Seventh Street—New Extension—Walter Avenue — New Connection — Wilton Avenue — New Extension — Angliana Avenue—New Extension—Curry Avenue—Forman Avenue—Colfax Street; Inner Circumferential

This circumferential, or belt line of major streets, is proposed to provide a continuous connecting route between various sections of

the city around the central district. It is made up of existing streets and proposed connections. Over Winchester Pike, Walton Avenue, Clay Avenue, Euclid Avenue, and Limestone Street, it forms a complete belt around the central district. It was found impracticable to propose a more direct route for the part of this belt line through the south-eastern section than the one above described, because of the University grounds, the layout of existing streets, and the difficulties of crossing the Netherland Yards of the C. & O. Railway.

It is recommended that Seventh Street throughout its length, as well as all of the extensions and existing streets that form part of this belt line, from Winchester Pike over Seventh Street, Walter Avenue, etc., to Limestone Street, should have a uniform width of 80 feet.

The extension to the west of Georgetown Pike to Walter Avenue should be undertaken in the near future, before this district becomes more intensively built up. The same holds true of the short connection between Angliana and Curry Avenues. The widening and improvement of the section between the C. & O. Belt Line and Winchester Pike, including the elimination of the offset of Liberty Pike and Seventh Street, could well be undertaken within the next ten to fifteen years. The extension of Seventh Street west to Georgetown Pike could follow this improvement. The other sections can be obtained on platting, and the widening of existing streets accomplished by the establishment of building lines.

#### 6. Loudon Avenue—Henry Clay Boulevard — Sherman Avenue—Woods Point Road — New Extension—Virginia Avenue—Connection—Uhlman Court—New Extension; Inner Boulevard

As may be seen on the Major Street Plan, Loudon Avenue is part of an inner boulevard that would practically encircle the city. This proposed boulevard would lead over Loudon Avenue, the newly-constructed Henry Clay Boulevard, Sherman Avenue, Woods Point Road, Virginia Avenue and Uhlman Court, thence over an entirely new right-of-way to Loudon Avenue at Maple Avenue. New sections are suggested to provide connections between these streets, including a semi-circular boulevard from South Broadway around the north-western section of the city. Several offset corrections and a number of short con-

nections will also be necessary, and are recommended as a part of this project.

The section of this boulevard between North Broadway and Richmond Pike should be 90 feet wide, which would necessitate the widening of Loudon Avenue as well as of Henry Clay Boulevard and Sherman Avenue. For the section between Richmond Pike and Rose Street the width of 120 feet is recommended, also for the section between South Broadway and North Broadway. Within the relatively short section between Rose Street and South Broadway over Virginia Avenue, where existing developments impose severe limitations, the width of the right-of-way may be reduced to 80 feet.

By far the major portion of this boulevard route lies in undeveloped territory, where the right-of-way may be secured either at the time of platting or by dedications. Along the existing streets to be widened, building lines should be established at an early date. It is recommended that an effort be made to develop the entire Inner Boulevard within the next twenty-five years.

#### 7. High Street—Versailles Pike—Frankfort Pike—Tates Creek Pike

Through the central section, High Street is already extensively used as a bypass and a relief route for Main Street. In addition it acts as a collector and distributor for traffic entering and leaving the city over Frankfort Pike, Versailles Pike and Tates Creek Pike. Unfortunately, it is altogether too narrow to meet the demands of even the present traffic. It is particularly narrow between Rose Street and Woodland Avenue; only 36 feet wide between property lines. East of Woodland Avenue, where it also carries a single car track, its width varies from 45 feet to 56 feet. Through the central district, the average width of the street is only about 55 feet, varying from 50 feet at Rose Street to 68 feet at Patterson Street. Nowhere is the roadway wide enough to accommodate more than three lines of vehicles including the street car line.

Although, because of the grade of connecting streets and the railroad crossings, it is not likely that the central business district will spread to High Street, this will no doubt become intensively built up with apartment houses, which tendency is quite pronounced already. This type of use of abutting property

will greatly increase the demand for additional street space.

It is recommended, therefore, that High Street between Angliana Avenue on the west and Fontaine Road on the east be widened to 76 or 80 feet to provide for six lines of vehicles, and that the roadway of the grade separation structure over the Southern Main Line now under consideration should be designed for four lines of traffic. It is also recommended that the width of 120 feet be adopted for Versailles Pike west of Angliana Avenue and for Tates Creek Pike south of Fontaine Road. Frankfort Pike should be widened to 80 feet between the Viaduct and Wilton Avenue, and to 100 feet west of Wilton Avenue.

The rights-of-way along the pikes may be obtained when the abutting tracts are to be platted and by establishing building lines. The latter should also be established at an early date along the entire length of High Street. It is recommended, however, that the section of High Street west of Jefferson Street as far as Angliana Avenue should be widened within the next five years, and the section between Rose Street and Fontaine Road within the next ten years.

#### 8. Euclid Avenue—New Connection—Bolivar Street—Fontaine Road—Extension

The major street to be formed by widening and connecting these existing streets is intended to serve as the main crosstown artery for the south-central section. It is believed that the advantages to be gained would not justify its extension west of Broadway. The extension of Fontaine Road is recommended to provide a secondary radial artery for the rather wide sector between the Richmond and Tates Creek Pikes.

As will be noted, the connection between Euclid Avenue and Bolivar Street contemplates cutting across the north-west corner of the University of Kentucky grounds and the use of a sewer right-of-way between Limestone Street and Upper Street. This improvement could well be undertaken within the next five years. A width of 80 feet is recommended for the entire route, except the section east of Woods Point Road, which should be 100 feet with roadway widths of 40 to 56 feet in successive stages.



9. Waller Avenue—New Connection—Mason Boulevard—New Connection—Hamilton Park—New Connection—Sandersville Road—New Connection—Easton Road—New Connection; Outer Circumferential

This circumferential major street formed by the above named existing streets, roads and new connections, is intended to provide an outer belt line for general traffic, to connect various parts of the undeveloped or partially developed regions surrounding the city. Except for the section between Nicholasville Pike and Harrodsburg Pike, where 80 feet appears to be the maximum practicable width, the right-of-way of this route should be 100 feet.

It will probably take several decades before this belt line will be fully developed. Where the route does not follow existing streets, but is projected through undeveloped territory, it is to be obtained by platting control. It is important that on the existing streets, forming a part of the belt line, building lines be established at an early date.

10. Mt. Tabor Pike—New Extension—Edgemoor Drive—New Extension—Rosemont Avenue—New Extension—Lane Allen Road—New Extension—Swigert Avenue—New Extension; Outer Boulevard and Parkway

This outer boulevard and parkway is proposed as a scenic pleasure drive through the surrounding country. As will be noted, it will connect the proposed Water Works Reservation with the proposed Elkhorn Creek Reservation over several attractive existing roads and by following a series of picturesque valleys.

A uniform width of 120 feet is recommended for the right-of-way of this boulevard outside of the proposed reservations. Within the reservations it would continue in the form of drives. It is not proposed that the right-of-way for this boulevard be obtained by acquisition, but rather by subdivision control and by securing right-of-way dedications from property owners. There should be no difficulty in obtaining such dedications, considering the benefits that such improvement would confer on the holdings of these property owners.

11. Limestone Street—Maysville Pike—Nicholasville Pike

Limestone Street forms the north-south axis of the city. Except for Main Street, it is

at present the City's most important traffic artery. As has been previously mentioned, it offers the only outlet to the north-east from the central section of the city. It is the most direct connection between the fast-developing suburban residential sections along North Limestone Street and Nicholasville Pike, and the central business district. It also carries considerable through traffic. Inasmuch as through the central section it is quite intensively developed as a retail business street, it attracts much local traffic, with consequent demand for parking.

While congestion on this street has become very acute of late and the need for relief has been felt for some time—when it is considered that, in addition to the functions just above described that this street must perform, it carries a street car line with occasional switches (that in some places practically preempt the entire roadway)—it is indeed surprising that this street—which is only 49 feet to 52 feet wide through its most congested section and has a roadway of only 29 to 30 feet wide—can handle as much traffic as it does and that matters have not come to an impasse.

Limestone Street occupies such a strategic location that, in spite of the several projects recommended for diverting traffic from this street, the eventual widening of Limestone Street is considered inevitable. Accordingly, it is recommended that between the North Upper Street connection and Rose Street, Limestone Street should be widened to 76 or 80 feet to provide for six lines of traffic. To the north of the North Upper Street connection it should be widened to 90 feet as far as the North Broadway extension, and to 140 feet beyond this intersection. Nicholasville Pike south of Rose Street should have a right-of-way 120 feet wide as far as the Outer Boulevard, and 140 feet beyond this boulevard.

Except for the four or five blocks within the central district, the widening of Limestone Street should not prove difficult of accomplishment. By establishing building lines in the very near future, it may be possible to widen even the central section within the next 25 to 30 years. It is recommended that the widening of the short section between Loudon Avenue and the North Upper Street extension be carried out within the next five years. The widening of the section south of Main Street



may be undertaken upon repaving or by 1940 at the latest.

Until such time as the widening of Limestone Street between Scott Street and York Street can be accomplished, it is proposed that this street and Upper Street be used as one-way streets: Limestone Street north-bound and Upper Street south-bound. By prohibiting parking entirely on one side of each of these streets, four moving traffic lanes can be provided on the two streets. As far as street cars are concerned, it would probably be best to discontinue street car operation on Limestone Street, until such time at least when South Limestone Street will have been widened and double car tracks provided thereon. Should it be desired to continue street car operation of Limestone Street, the south bound street cars would have to use Broadway, which would require a track connection between South Broadway and Limestone Street somewhere north of the Southern Main Line crossing.

#### 12. Upper Street

As has just been mentioned, it is proposed to use Upper Street as a one-way street south-bound, to relieve traffic congestion on Limestone Street.

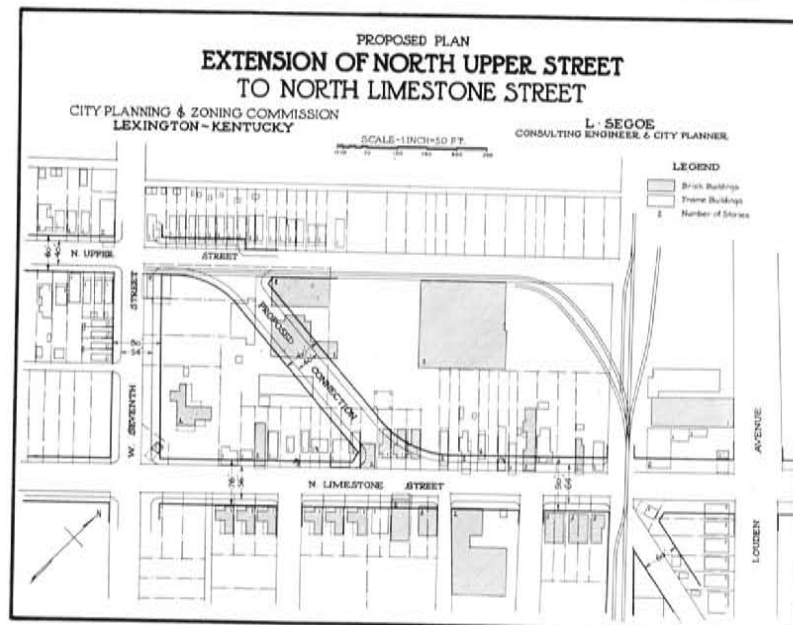
To facilitate this manner of operation, it is recommended that within the next five years a

diagonal connection be constructed between North Upper Street and North Limestone Street at York Street, just south of the power plant of the Kentucky Traction and Terminal Company, as shown on the plan in Exhibit 8. It is also recommended that Upper Street be widened ultimately throughout its length to 60 feet by the establishment of building lines. The actual widening of this street may well be deferred for 30 to 35 years.

#### 13. Broadway—Harrodsburg Pike — Clays Mill Pike—Russell Cave Pike

Broadway is at present the City's widest and most attractive north-south traffic artery through the central district. Potentially, no doubt, it is the City's most important north-south thoroughfare. At present its usefulness is greatly lessened, because it has no connection at its north end with any of the major highways. The extension of North Broadway north-eastwardly to Maysville Pike, approximately parallel with the P. & L. Branch of the L. & N. R. R., has already been mentioned as a most obvious means for relieving traffic congestion on Limestone Street. It is recommended that this extension be undertaken in the immediate future.

Since Broadway ultimately will carry a double-track street car line, and because the present state of building development lends



itself to the widening of this street, it is recommended that preparations be made to provide for eight traffic lanes on this street throughout its length. This will require a width of 100 feet between property lines. In the central district such width should be obtained by the early establishment of building lines. South of Mason Boulevard, a right-of-way width of 140 feet is recommended for Harrodsburg Pike, and 100 feet for Clays Mill Pike.

Beginning at its intersection with the North Broadway extension, the right-of-way of Russell Cave Pike should be widened to 120 feet. This widening can be accomplished by platting control.

#### 14. Jefferson Street—Bellaire Avenue—New Extension

Under the proposed Major Street Plan, Jefferson Street is intended to function as a by-pass route for the interchange of traffic between Maysville and Russell Cave Pikes on one hand, and Leestown, Frankfort and Versailles Pikes on the other hand. The section between Fourth Street and Main Street is also intended to act as a relief street for Georgetown Pike.

To prepare Jefferson Street for this role, it is recommended that the offset between Jefferson Street and Bellaire Avenue be eliminated by a short connection across the south-east corner, and that Bellaire Avenue be extended north-eastwardly, approximately parallel with the P. & L. Branch of the L. & N. R. R., to connect with a similar extension recommended for Broadway. The present width of Bellaire Avenue is 60 feet, and that of Jefferson Street varies from 50 to 60 feet, but it is 60 feet throughout most of its length. It would appear desirable to make this entire route 80 feet wide to provide for six lines of traffic. The extension to the north-east, it is believed, should be undertaken within the next 15 to 20 years. The widening of the rest of the route may be accomplished by establishing building lines.

#### 15.—Georgetown Street—Newtown Pike

The importance of Georgetown Street was greatly increased by the completion of the new route for U.S. Highway No. 25. Except for Maysville Pike and Richmond Pike, through traffic was found to be the heaviest on this highway. Unfortunately, the section of Georgetown Street between Fourth and Main Streets is not only very narrow (from 46 to 51 feet),

but also very intensively built up, and its usefulness hampered by two grade crossings. For these and other reasons, it is not considered practicable to appreciably widen this section of Georgetown Street, in spite of the fact that it carries and is the logical location for a street car line that no doubt will have to be double-tracked ultimately.

It is recommended, therefore, that this section of Georgetown Street be widened to provide only for four traffic lanes, or to a width of 66 feet. As has already been mentioned, it is intended to use Jefferson Street as a relief street for this section of Georgetown Street. North of Fourth Street it should be widened to 90 feet as far as Roosevelt Drive, and to 120 feet beyond. Until such time as this widening may be accomplished, the proposed Chiles Avenue-Whitney Avenue—Third Street connection over Walter Avenue is to act as a by-pass route. Eventually, the extension of this route beyond Sandersville Road to Georgetown Pike will form a new route for passenger vehicles entering and leaving on U. S. Highway No. 25.

Newtown Pike should have a width of 80 feet between Fourth Street and the proposed Seventh Street extension, and 100 feet beyond this intersection.

The proposed method of traffic routing over Fourth Street accentuates the need for improving the intersection of Fourth Street, Georgetown Street and Newtown Pike.

The establishment of building lines is recommended throughout this route. It would be desirable to widen the section of Georgetown Street between Main Street and Walter Avenue by 1950 at the latest.

#### 16. Rose Street—New Extension—Deweese Street—New Extension—Illinois Street New Extension—Elm Tree Lane—Lancaster Street—New Extension—Bryan Station Pike

Rose street is now extensively used by traffic to and from the Nicholasville Pike section, as a relief route to Limestone Street. This is reflected by the finding during the traffic survey, that traffic on Main Street just west of Rose is heavier than at any other point along Main Street. The proposed extension of Rose Street northwardly to Short Street is intended to relieve Main Street of much of this traffic. The same extension is also in-

tended to connect Rose and Deweese Streets, to develop, by several short connections between existing streets approximately on the line of Deweese Street, a north-south through traffic artery, between Nicholasville Pike and Bryan Station Pike, through the eastern part of the central section of the city. It has already been pointed out, that throughout this entire section, between Limestone Street and the L. & E. Branch of the L. & N. R. R., there is not a single continuous north-south street north of Main Street. The proposed route is advanced to remedy this situation, besides functioning as a relief route to Limestone Street and as a by-pass for through traffic between Nicholasville Pike, and the Bryan Station and Maysville Pikes.

Rose Street now has a uniform width of 50 feet. The several streets which are to be connected north of Main Street have widths varying from 40 to 75 feet. Since it is intended that this route should provide ultimately for a street car line, and because it will be the only north-south major street through the east-central section, it is recommended that it be made 80 feet wide throughout, providing for six lines of traffic.

Bryan Station Pike should have a right-of-way 60 feet wide between Limestone Street and the Lancaster Street extension, and 100 feet beyond this extension.

It is believed that the section of this route between Third and Fifth Street should be built not later than by 1945. The extension of Lancaster Street to Bryan Station Pike could well be undertaken within the next ten years. Along Deweese Street and Elm Tree

Lane, building lines should be established as soon as possible.

Should it be found that the widening of South Limestone street cannot be undertaken in the near future, it is recommended that Rose Street be widened instead and used as a route for street cars and interurbans, either south-bound only or in both directions.

#### 17. Walton Avenue—Clay Avenue—Alford Avenue—Extension

This route is proposed to provide a continuous north-south route through the south-eastern section of the city. Ashland Avenue, because of the C. & O. Railroad yard, cannot be linked up at the northern end with the major street system.

The offsets between Walton Avenue and Clay Avenue and again between Clay Avenue and Alford Avenue will have to be eliminated. Clay Avenue, which is now 60 feet wide, should be widened to 80 feet, also Alford Avenue, which is now only 50 feet wide. The extension southwardly through the Experiment Station Farm may have to wait until this property is brought into the market, although it would be desirable to open up the section between Alford Avenue and the Inner Boulevard at the time when this section of the Inner Boulevard is built.

With the exception of the elimination of the offset at Clay Avenue and Main Street, which should be undertaken before more costly business structures are erected, perhaps within the next 15 years, the widening of the remainder of the route will be protected by front-yard requirements, and could be undertaken at any time.

## IMPROVEMENT OF TRAFFIC FLOW AND PARKING REQUIREMENTS IN CENTRAL BUSINESS DISTRICT

The major street improvements held necessary and recommended to prepare for the expansion of the central business district, to relieve the present traffic congestion, and to make provision for the future increase of traffic in this district, are shown on the Major Street Plan and discussed in more or less detail in the section, Description of Major Street Improvements. In this section, certain changes are recommended in traffic and parking regulations to improve traffic conditions in this district, and principally on Main Street, with the view of preventing excessive congestion during the time that the carrying out of the recommended major street improvements will require.

It may not be amiss to set forth a few basic principles that should govern the regulations of street traffic.

Any principal traffic and business street, such as Main Street, has to perform from the traffic standpoint two principal functions: (1) it must provide for the expeditious handling of the maximum amount of persons and commodities by vehicles consistent with public safety; (2) it must provide effectively for the terminal operations of these vehicles.

The most efficient use of a street should be measured not by the number of vehicles passing at any point during a specified period of time, but by the number of persons and the amount of commodities that pass a particular point during such period. The purpose of traffic is not the moving of vehicles, but the transportation of persons and materials.

The loading and unloading of passengers or commodities are called the "terminal operations", as distinguished from parking which is termed storage. The terminal operations are just as essential a part of vehicle operations as the moving of that vehicle from origin to destination, since without the possibility of performing such terminal operations at either end of the trip there would be no object in making the trip. For that reason these terminal operations, as distinguished from storage, can and should be considered as a part of the traffic movements.

The maximum traffic handling capacity of a street is reached when vehicles are traveling at an average rate of speed of from 15 to 20 miles per hour. Greater speeds do not produce greater capacities, since the capacity or traffic discharge of a street is dependent on speed as well as car spacing (the distance between cars), and the latter is increasing rapidly with increased speed.

The vehicular traffic capacity of a street is measured by the number of vehicles it can handle in an hour in one direction.

The variation of vehicular traffic along Main Street from Georgetown Street to the C. & O. Railway crossing, is shown in Table IV. The figures given in this table were taken from a comprehensive traffic count made during August 1929 throughout the entire city, covering about 50 observation points. It will be noted, that the maximum movement during the rush hour in one direction occurred at Deweese Street eastbound and amounted to 855 vehicles. At Rose Street and at the Esplanade, the maximum movement in one direction amounted to 775, and at Walnut Street 720; the minimum occurring at Georgetown Street and amounting to 107 vehicles westbound.

The number of automobiles, street cars and buses passing Walnut Street on Main Street, and the number of passengers carried by same, are given in Table V. The latter figures indicate the comparative importance from the transportation standpoint of these vehicles.

The width of Main Street varies from 76 feet at Jefferson Street to 81.9 feet at Broadway, although it is understood that the street, as originally platted, was uniformly 82.5 feet wide. The width of the roadway also shows considerable variation, from 54 to 57.8 feet. The safety loading platforms are of a uniform width and length, of 3.5 feet and 36 feet respectively. The distance between these loading platforms and the curb was found to be different at different locations. At Broadway on the north side, for example, it is 15.75 feet, at Limestone on the south side it is only 12.5 feet. However, nowhere is the space between a loading platform and the curb wide enough for two lines of traffic.

A street with a roadway of from 54 to 56 feet provides, in midblock, for six traffic lanes, three in each direction. Disregarding in the case of Main Street the lane next to the curb, which is taken up by parked vehicles, and also disregarding the two lanes near the center of the roadway which street cars and automobiles use in common, to say that Main Street, as far as the physical conditions of the street are concerned, provides for one full lane of moving traffic in each direction, in mid-block as well as at intersections, should seem a conservative statement. It was pointed out hereinbefore that 855 is the maximum number of



vehicles that this lane is handling at present at any point along Main Street. That this traffic is not handled freely and expeditiously is the direct reason for the present study of the situation.

Experiments conducted by the United States Bureau of Public Roads and by the Regional Plan of New York and Environs have shown, that a single traffic lane with uninterrupted traffic and with an average speed of 15 miles per hour can handle, without congestion, 1880 vehicles per hour, and even with a synchronized system of traffic lights, such as are in operation on Main Street, it can handle 1020 vehicles per hour. What then are the reasons for the low traffic handling capacity of Main Street?

It is held that three factors primarily contribute to this condition. They are: (1) inadequate parking restrictions opposite the mid-block end of street car loading platforms; (2) double-parking resulting from inadequate provisions for curb space for terminal operations; (3) the Synchronized System of Stop and Go signal lights.

As to the first, the measured distances back from the mid-block end of loading platforms within which parking is prohibited, where marked, were found to show considerable vari-

space between the loading platforms and the curb, by keeping parked vehicles at a sufficient distance back from the loading platforms, this roadway space cannot be freely used by even one line of traffic.

As regards double-parking, this is considered the most serious source of congestion on Main Street and throughout the central business district. In the course of several inspection trips made along Main Street, between Jefferson Street and Rose Street, it was found that, even during the rush hour, there were from six to fourteen vehicles guilty of this violation. Some of these remained in double-parked position for 10, and in one instance, for 15 minutes. There can be no doubt that the reason for these vehicles "double-parking" is the inadequacy of free curb frontage to perform the terminal operations. They do not park in the second lane by choice, but because all available curb space is preempted by long term parking or storage of automobiles.

The third primary factor mentioned as contributing to the traffic difficulties on Main Street, namely, the Synchronized Traffic Light System, is inherent to the type of existing signal installation.

Under this system the lights are so timed, that all signal lights give the Go or Stop signal in a certain direction at the same time. The shortcom-



**DOUBLE PARKING ON MAIN STREET**  
Note commercial vehicles parked in second lane

ation. Just west of Upper Street it measured only 17.75 feet, as against 47.5 feet west of Limestone Street, although in the latter case parking prohibition, due to a fire hydrant, contributed to this greater length. At only two locations may the designated distances be considered as adequate. Manifestly, unless free and easy access is provided to the roadway

ings of this system are, that it invites speeding in the short blocks and that it requires traffic to stop at certain intervals, resulting in low average speed and low street traffic capacity, in spite of the periodic excessive speed. Under the Progressive Traffic Control System, the individual signal lights are operated in relation to one another showing alternating colors, and their timing is so determined that any vehicle starting on the Go signal at any intersection and traveling at the speed for which the system has



been designed, will be able to pass the entire length of the street so controlled without being stopped by a signal light. This system gives a greater average speed and increased traffic capacity per lane, with moderate and definitely controlled speed. The timing is dependent upon the distance between intersections and the desired speed of vehicles selected for such timing. Obviously, the desired speed should be that which will handle the maximum number of vehicles.

The Progressive Traffic Control System is a very recent development in street traffic control. At the time when the present installation of traffic lights was made, about six years ago, this more modern and effective system of control was not known. The signal units in the existing system do not have the necessary flexibility of operation required by the Progressive System.

In view of the above, the following recommendations are submitted for the purpose of improving the handling of traffic along Main Street and in the central business district:

1. It is recommended that all parking and stopping of vehicles within 35 feet of the mid-block and of all street car loading platforms be prohibited, and that this regulation be definitely designated by special markings and signs, and that it be vigorously enforced.

2. It is recommended that in order to provide the necessary free curb frontage for the terminal operations of vehicles, "Loading Zones" should be reserved on the streets listed in the following on each side of every block:

Main Street from Broadway to Rose Street  
Short Street from Broadway to Deweese Street

Broadway from Second Street to High Street

Mill Street from Short Street to High Street  
Upper Street from Second Street to High Street

Limestone Street from Second Street to High Street

Walnut Street from Barr Street to Main Street

Rose Street from Main Street to High Street.

Between the hours of six A. M. and six P. M. of any business day, it shall be unlawful for the operator of any vehicle to stand such vehicle in any loading zone for a period of time longer than is necessary for the actual loading or unloading of passengers or property, provided that the loading or unloading of passengers shall not consume more than three minutes, and the loading or unloading and delivery of property or materials more than 20 minutes.

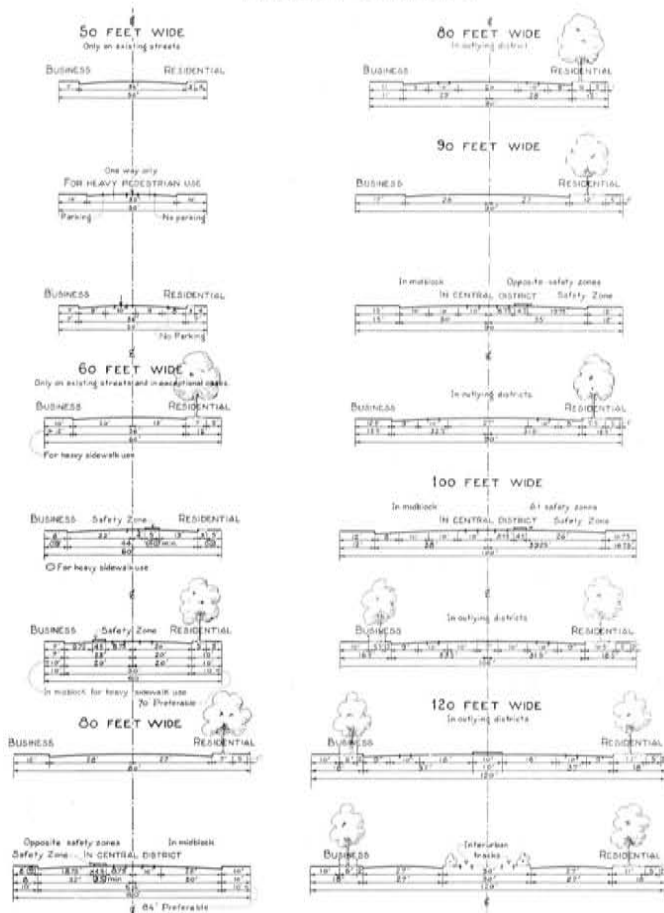
It is recommended that the length of these loading zones should be multiples of 20 feet, and that they should be of such length as required by local conditions in each block, but not less than 60 feet long. Generally speaking, these loading zones should be established near the middle of each block, and in determining their location and their necessary length, the needs of commercial establishments should be given proper consideration. The loading zones should be designated by appropriate markings and signs, and the regulations concerning their use be vigorously enforced.

3. It is recommended that as soon as funds may be obtained for this purpose, the present Synchronized Traffic Control System on Main Street and Short Street be replaced by an up to date Progressive Traffic Control System, consisting of signal units of such flexibility as to render it possible to adjust this system to the great inequalities of block lengths, and to the varied requirements of traffic on these streets and on intersecting streets; that the installation of such Progressive Traffic System shall be based on a thorough engineering study of traffic requirements and signal lighting.

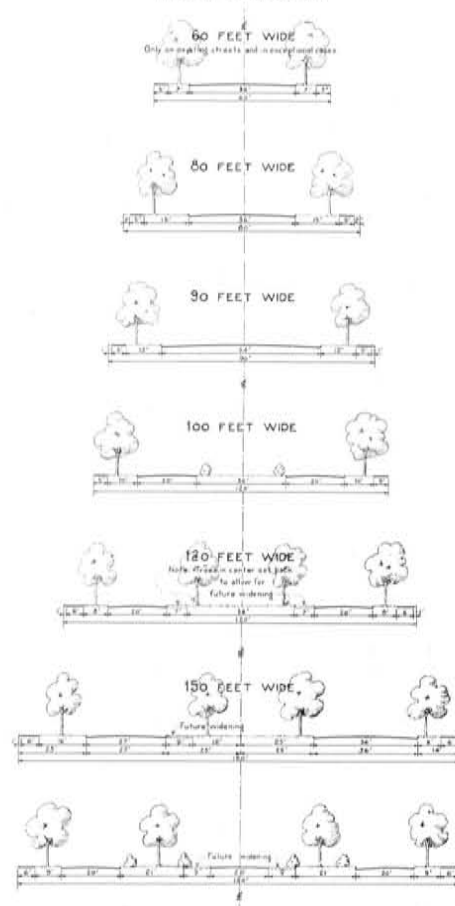
The carrying out of the first two recommendations involves very little financial outlay, except for enforcement. The cost of installing the new signal system, it is believed, would be fully justified by the improvement of traffic conditions and the reduction of the economic losses due to traffic congestion. The present signal lights could be installed at isolated intersections in the outlying districts requiring such installations.

# RECOMMENDED TYPICAL STREET CROSS SECTIONS

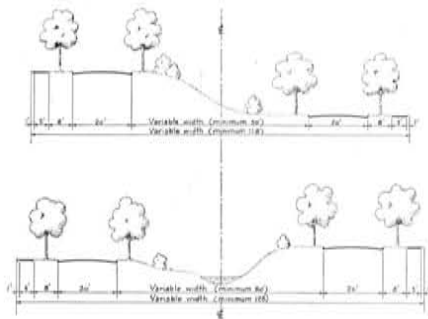
## MAJOR STREETS



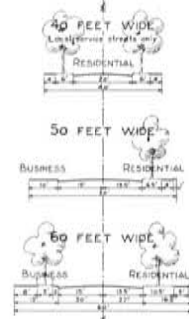
## BOULEVARDS



## PARKWAYS



## MINOR STREETS



OCTOBER 1929

SCALE: 1 INCH=10 FT.

## RECOMMENDED TYPICAL STREET CROSS SECTIONS

Exhibit 9 shows the Recommended Typical Street Cross Sections.

The apportionment of street widths between roadway and sidewalk spaces including planting, as found throughout the city, does not appear to follow any particular principle, and having been largely inherited from a horse and buggy age, bears no relationship to the requirements of modern traffic.

Following the functional classification of the streets of the city into major streets, boulevards, parkways, minor streets, and local service streets, in accordance with the Major Street Plan, and with the specifications set forth in the Rules Governing the Control of Subdivisions adopted by the City Planning and Zoning Commission, the standard cross sections shown in Exhibit 9 have been prepared to serve as a guide in the future design of street cross sections.

All roadway widths were designed to be multiples of traffic lanes, and, in determining the width of each traffic lane, the character of traffic and the total number of traffic lanes in the roadway were taken into consideration. Additional roadway space was provided on street car streets to accommodate street car loading platforms, unless, in the case of wider streets, the need for such platforms was obviated by the off-center location of street car tracks.

Thus, the minimum width of a four lane roadway for passenger traffic only and without street car tracks should be 36 feet. This should be increased to 40 feet on streets to be used by trucks or buses; to 44 feet where the street carries a single car track; and to 46 feet for streets with double car tracks. A six lane street restricted to passenger vehicles should have a minimum width of 54 feet; while a six lane street, with double car tracks with the customary center car track arrangement and safety loading platforms, requires a minimum width of 64 feet; this may be reduced to 56 feet when the car tracks are placed on the side next to the parking lane.

Although, as will be noted, the width required for roadways of the same traffic lane capacity varies with the type of traffic, the presence and arrangement of street car tracks, certain accepted standards may be set forth for general guides:

Lane width for moving vehicles or street cars—10 feet\*

Lane width for parking vehicles parallel to curb—8 feet

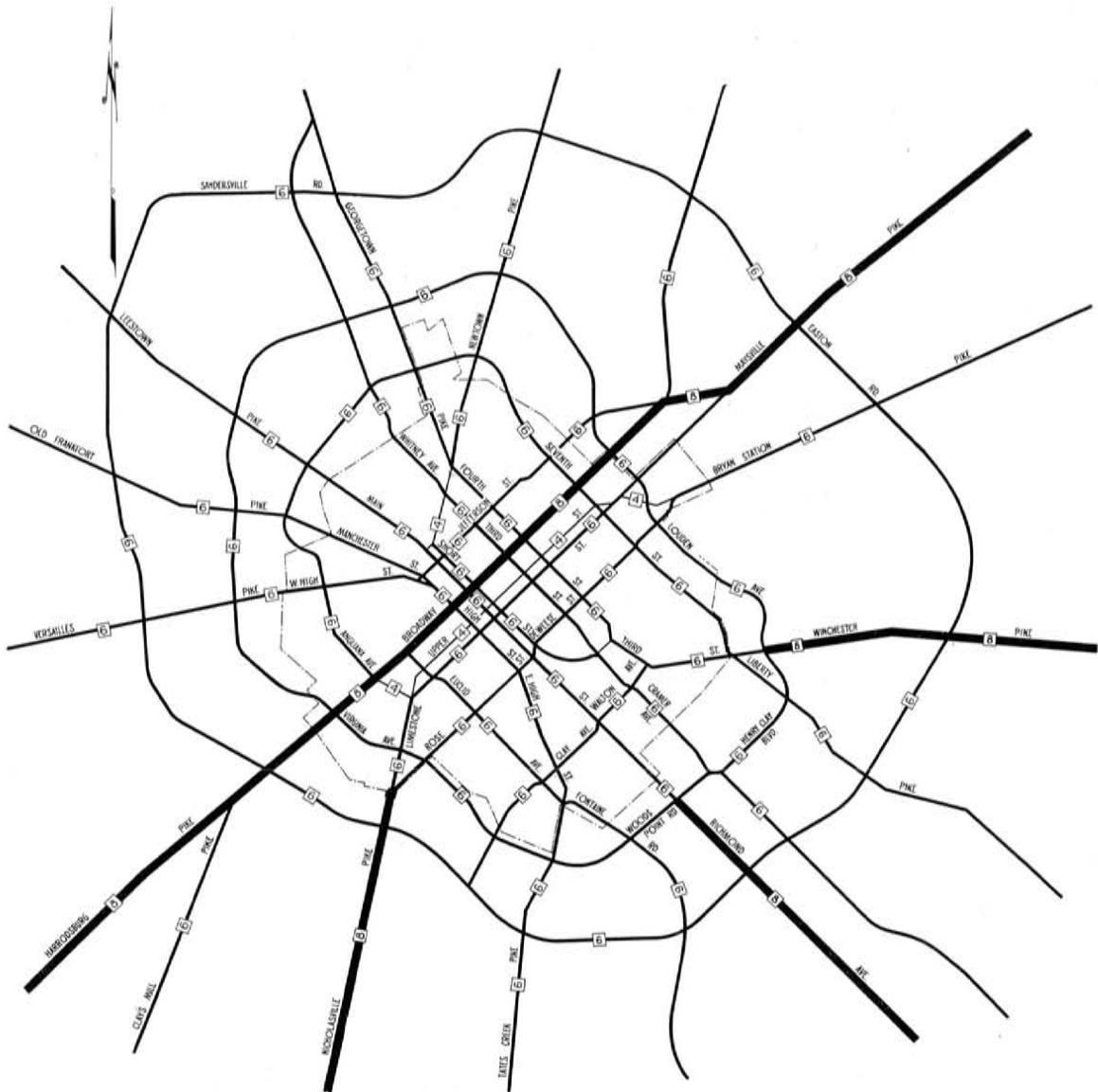
Lane width for parking vehicles at 45 degree angle—15 feet

Lane width for parking vehicles at 90 degree angle—16 feet.

\*This may be reduced to nine feet for light traffic, such as on parkways or boulevards not used by buses, and on roadways of six lane capacity or wider.



STREET CAR TRACKS IN THE OUTER TRAFFIC LANES  
80 foot street, 56 foot roadway



**EXPLANATION**

- Four lanes of traffic
- Six lanes of traffic
- Eight lanes of traffic
- - - Present city limits

# TRAFFIC CAPACITY OF PROPOSED MAJOR STREETS LEXINGTON · KENTUCKY

AND  
ENVIRONS  
CITY PLANNING AND ZONING COMMISSION

L · SEGOE  
CONSULTING ENGINEER & CITY PLANNER  
CINCINNATI · OHIO

SCALE · 1 INCH = 1000 FT.  
1950

## TRAFFIC CAPACITIES OF PROPOSED MAJOR STREETS

The proposed traffic capacity, in terms of traffic lanes, of all major streets which make up the proposed Major Street System is shown on the diagrammatic map in Exhibit 10.

It will be noted that **six lane roadways are recommended for the great majority of the proposed major streets.** This roadway width is considered the minimum that should be provided on any major street. Such roadway width is also held by many traffic specialists to represent the most desirable width from the standpoint of efficiency of traffic handling.

For a few major streets of secondary importance and for a number of short connecting streets, a four lane capacity is recommended. Among these are: **Upper Street**, which is to serve as a relief street to Limestone Street; **the section of Georgetown Street south of Fourth Street**, traffic from which will be diverted over Fourth Street and Third Street to other radial streets; **the short section of Bryan Station Pike between Limestone Street and the proposed Lancaster Street extension**; **the short connection from the junction of Limestone Street and Upper Street to Broadway, over Colfax Street and Forman Avenue.**

For some of the dominant radial major streets **eight lane roadways are recommended.** These traffic arteries are passing through districts which are considered potential high class residential areas, and the proposed eight lane roadways are intended to provide for the separation of through and local traffic by means of service drives, to promote the development of abutting properties for such residential purposes. This aspect of the planning of a major highway system, that is, consideration in the design of the width and cross section of highways for the appropriate use of abutting properties, is more fully discussed in connection with the Regional Highway Plan.

A comparison between Exhibit 10 and the Major Street Improvement Table in Table III shows, that the widths between property lines recommended for the various major streets of the same proposed lane capacity are by no

means uniform. In the central district the standard width for four lane streets is 60 or 66 feet, and that of six lane streets 76 or 80 feet. In the outlying districts the standard width of six lane streets is 120 feet, although a few of these considered as secondary highways have been given a proposed width of 100 feet. The standard width of eight lane streets is 140 feet in the outlying districts and 100 feet within the built up area. This variation of proposed widths between property lines for streets of the same lane capacity, is due to the presence or absence of street car tracks, existing or anticipated, the restrictive effect of existing improvements, and the existing and potential use of abutting property. The recommended street widths between property lines, above referred to, are subject to variation, should future developments fail to bear out the assumptions on which these widths are predicated.

Considering that North Broadway and parts of Main Street are the only six lane streets in the city, the eight lane major streets and the large number of six lane major streets may appear extremely ambitious. It should be remembered, however, that the proposed Major Street Plan represents very nearly what may be considered the ultimate major street system, to be accomplished over a long period of years, and not a plan and program to be carried out within a generation or two.

The purpose of projecting such plan many years in advance is to make possible its realization at a minimum cost. Within the built up area, such plan should enable the public authorities to obtain the necessary widths very largely without building damages, by the early establishment of building lines; while in the outlying undeveloped areas, the recommended rights-of-way can be obtained at the time the abutting property is subdivided, or by securing the dedication of necessary strips from abutting property owners. Thus the widening and extension of major streets by the purchase or condemnation of land and buildings will be largely limited to a small number of major street projects of immediate urgency.



## REGIONAL HIGHWAY PLAN

The Major Street Plan presented and discussed on the previous pages is largely confined to the city and the as yet undeveloped area surrounding the city within a distance of a mile to a mile and a half. On the Regional Highway Plan, shown in Exhibit 11, the Major Street Plan has been extended into the surrounding open country practically to the limits of Fayette County.

As may be noted, the proposed system of highways resembles a spiders web. It consists of sixteen primary and secondary radial highways, and of a series of six circumferentials or belt lines. The former are to provide convenient and direct connections between all parts of the county and the central city; the latter are to serve as interconnecting highways between various sections of the county, as well as by-pass routes for through traffic.



**IRONWORKS ROAD**

One of the few cross-connecting highways in the Region

These circumferentials are to be alternately designated as thoroughfares and boulevards, with the view of segregating light and heavy traffic, and to provide for pleasure drives as a part of the Recreation System. In selecting the routes for these boulevards and parkways, consideration for the requirements of traffic was

combined with the effort to find the most attractive routes, and to connect by means of these boulevards the existing and proposed parks and outlying reservations.

It may be noted, that the proposed widths between property lines of the proposed radial highways are 100 feet, 120 feet and 140 feet, depending upon their importance from the standpoint of traffic, present and future, also upon the anticipated type of development of abutting frontages and adjacent districts. Except where passing through districts already developed, the width between property lines recommended for circumferentials or belt line thoroughfares is 100 feet, and for boulevards 120 feet.

The generous widths between property lines of 100 to 140 feet for the six and eight lane highways are recommended principally to conserve the desirability of abutting properties for residential purposes. One of the problems that has developed in connection with heavily traveled highways, particularly in the vicinity of the larger cities, is the problem of the appropriate use of properties fronting on such highways. The heavy traffic and the inevitable noise and fumes that it produces, have been found to render these frontages undesirable for residential use under the ordinary type of highway construction. On the other hand, even on the outskirts of the largest of cities, there is not enough demand for business to absorb all these frontages. Experience has shown that, where rights of way of generous width have been provided, these, together with deep front yards, have proved a successful means to combat to an appreciable degree the adverse effects of traffic on abutting properties.

Conditions can be further improved by constructing service drives on either side of the main roadway used principally by through traffic. These service drives need not be over 20 feet wide, and may be separated from the main roadway by planting strips. Minor intersecting streets should connect only with these service drives, and only the major intersecting streets should be carried across the principal roadway. Such an arrangement not only serves the convenience of local traffic, but greatly increases the safety and convenience of through travel on the center roadway.

Although it would seem desirable to adopt

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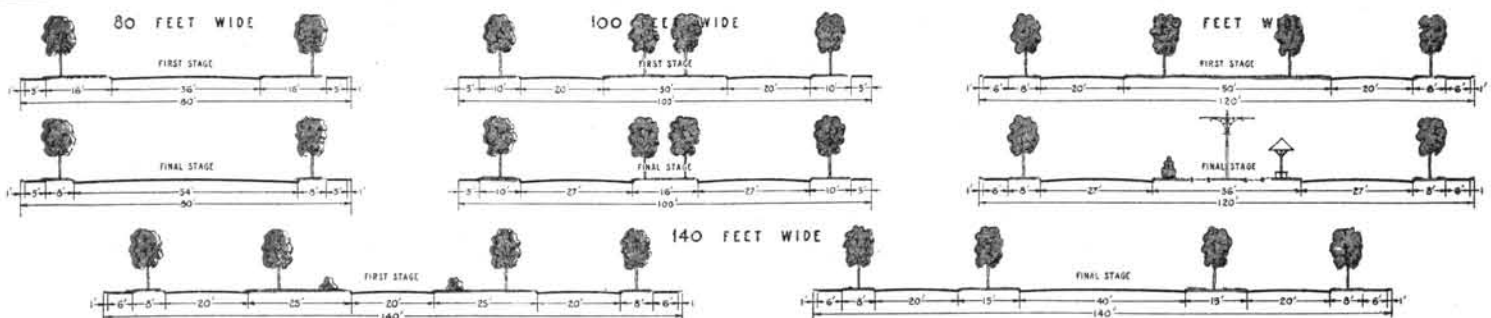


APPROVED AND ADOPTED <sup>MARCH 19 1931</sup>  
CITY PLANNING AND ZONING COMMISSION

CRIMINAL  
JULY 1947  
Katherine B. Howell

## LEGEND

— EXISTING HIGHWAYS OR STREETS  
 - - - PROPOSED HIGHWAYS  
 - - - PROPOSED WIDTH OF RIGHT OF WAY (FEET)



this or similar roadway arrangements for all main highways in the undeveloped areas, it should seem manifest that, because of the cost of providing the separate service drives, this type of construction would have to be restricted to the districts where higher priced residential developments can be anticipated. The highways for which a 140 foot right-of-way is recommended, are believed to be passing through districts that would warrant this type of highway construction.

The cross-section given in Exhibit 11 shows, that in the center of such 140 foot highways there is room for a roadway of an ultimate width of 40 feet, principally for through traffic, for two 20 foot service drives, separated from the principal roadway by planting strips 15 feet wide; leaving two 15 foot strips for side-

walks and planting. The tracks of any inter-urban railways or street car lines can be placed in the 15 foot planting strips separating the principal roadway from the service drives.

The recommended cross section for the 120 foot highways is also shown in Exhibit 11, both in the possible first stage and in the final stage of improvement. The 36 foot center planting strip in the final stage, is wide enough to provide for double car tracks, planting and waiting shelter. Obviously, for the initial construction 20 foot divided roadways would be quite adequate, each to be increased ultimately to 27 feet.

The recommended cross sections for highways and for boulevards 100 feet and 80 feet wide, are similarly shown in Exhibit 11.



TWIN ROADWAYS AND CENTER PLANTING ON RICHMOND PIKE  
120 foot street — 20 foot roadways

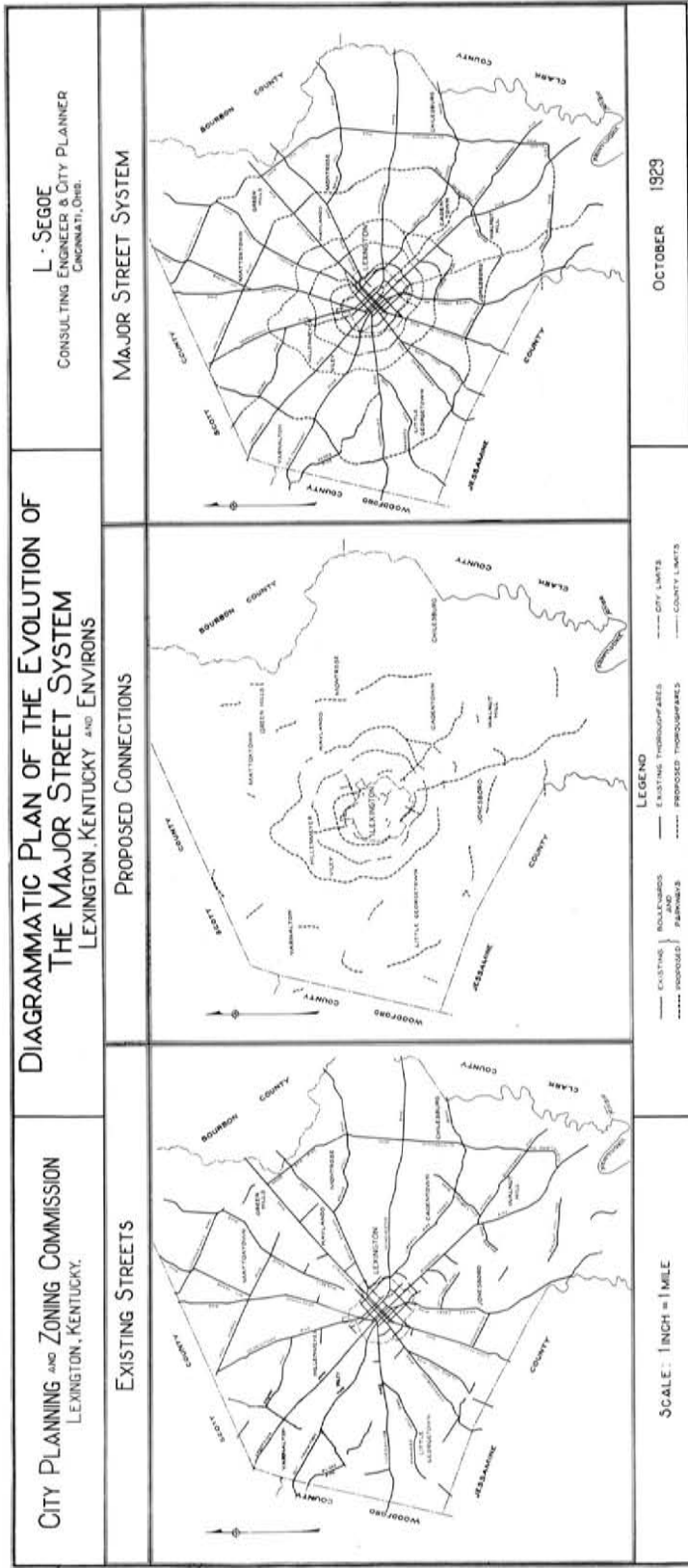
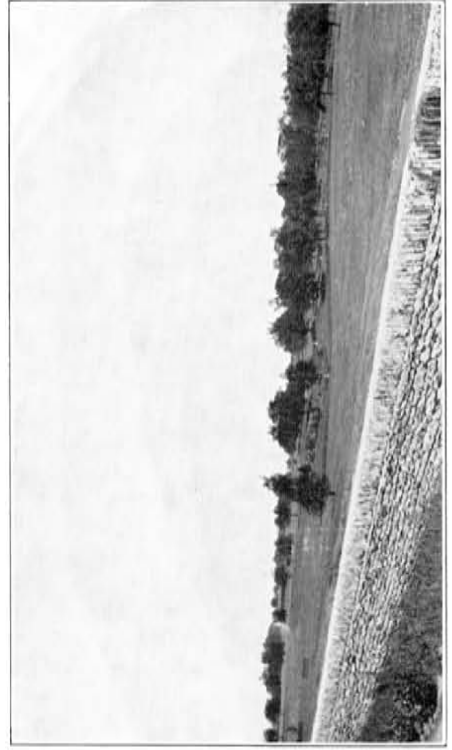


EXHIBIT 12



MT. TABOR PIKE  
Part of the proposed system of regional parkways



TYPICAL LANDSCAPE IN THE LEXINGTON REGION



## EVOLUTION OF THE MAJOR STREET SYSTEM

The three diagrams shown in Exhibit 12, entitled Diagrammatic Plan of the Evolution of the Major Street System, have been prepared to illustrate graphically how the existing streets and highways were extended and interconnected to form the proposed Major Street Plan.

The first of the three diagrams shows those of the existing streets and highways that have been incorporated in the proposed plan. It clearly illustrates the condition repeatedly called to attention, that while the Region possesses an excellent system of radial highways, cross connections or circumferential routes are completely lacking.

This is also illustrated by the diagram in the center that shows the proposed connections. With one or two exceptions, such as the new secondary radial route about half way between Richmond Pike and Tates Creek Pike, and the new radial boulevard to be formed by the extension of Cramer Avenue, no new radial routes are recommended. With these exceptions and with the exception of some other minor connections, all other proposed connections, shown on this diagram, are intended to provide the circumferential or by-pass routes in which the present highway system is so deficient.

The proposed Major Street System is

shown on the third diagram. Naturally, this is a combination of the other two diagrams, showing existing streets as well as proposed connections.

In the past, the Lexington region has been growing by accretions to the central city. There are no indications that there will be changes in this form of growth and that future growth may be in the form of satellite communities. Lexington is a circular city, and although it is not growing as fast in certain directions as in others, there are no physical obstacles that would permanently limit its growth in any direction. In a community of this general type the intensity of development decreases from the center of the community in geometric proportions with the distance from such center.

The design of the Major Street System is based on the above assumptions, and reflects this decreasing intensity of land use with increasing distance from the central community. The distances between the radial highways, as well as between the circumferentials, are increasing with the distance from the city, in an attempt to conform to the ideal theoretical distribution of major traffic routes. Obviously, existing highways, physical conditions, ownership lines and other factors, required adjustments and compromises in the adaptation of the theoretical design to local conditions.



## WAYS AND MEANS OF CARRYING OUT THE MAJOR STREET PLAN

The method best adapted for the carrying out of the various major street improvements, shown on the Major Street Plan, will vary in each case, depending upon the presence or absence, the condition and intensity of building improvements, the urgency of the project, the extent of benefits to be secured, etc. However, most of all, such method will depend upon the possible means of financing the execution of the improvement under available legislation.

In the sparsely settled sections outside of the city, the recommended major street extensions can and should be obtained by subdivision control, except in such cases where pressing need warrants the acquiring of the right-of-way and the construction of the improvement by public authority. With the City Planning and Zoning Commission constantly demanding that the layout of new subdivisions conform with the Major Street Plan, the rights-of-way for most of the major streets, within the undeveloped area, will be secured automatically, and without cost to the community.

In the built-up area, the major street extensions will require the acquisition of the necessary rights-of-way. Where such rights-of-way are as yet unencumbered by buildings, such as some in the outlying subdivisions, these should be acquired at the earliest possible date. Where, in the older sections, the rights-of-way necessary are now occupied by buildings, unless urgently needed, it will be found advisable to defer the improvement until the buildings to be taken become substantially amortized.

The widening of major streets through the outlying residential districts, can be accomplished, in most cases, with relatively small building damages. Residence buildings, particularly in the newer districts, set back from the present street lines for enough to permit these street widenings without building damages in many cases. It is only in the older sections of the city and on business streets, that the widening of major streets becomes particularly costly. It will be noted, when consulting the Major Street Plan, that the great majority of major street projects involve such widenings, because of the narrowness of the existing streets. It is all the more important,

therefore, that some method be employed that would reduce the ultimate cost of these street widenings to a minimum.

The most successful and satisfactory method known in this respect, is the method of establishing future street lines or building lines many years in advance of the actual street widening, and requiring all new buildings to observe such building lines.

Except for the most intensively developed business sections, properties along the major streets to be widened are more or less in a state of transition. Under the recommended method, building lines are to be established by ordinance to prevent the encroachment of the new structures on the strips needed for the widening. The substantial parts of the new buildings are required to set back on the new street line. The owners may be permitted, however, to occupy the strip between the old and the new street lines by one-story projections, false fronts, or other inexpensive structures, on condition that they are not to be reimbursed by the municipality when the actual widening is undertaken. It can be readily seen that, if such building lines remain in force along the major streets from 15 to 30 years, the great majority of buildings will already set back on the new street line. Thus, when the City undertakes the actual widening, only the old buildings will have to be taken, most of which by that time will have outlived their usefulness. It should seem obvious, however, that this method could not be employed for widening projects of immediate urgency.

The early establishment of building lines is recommended on all major streets the widening of which is proposed by the Major Street Plan. It is doubtful whether this could be accomplished by local legislation under the present City Planning and Zoning Law. It is recommended, therefore, that state authority be obtained, possibly in the form of an amendment to the above Act, authorizing the establishment of building lines or street lines and regulating buildings in mapped or platted streets, in accordance with the Major Street Plan, providing also for a Board of Adjustment to make adjustments in case of unusual hardship or difficulty. (A model for such legisla-

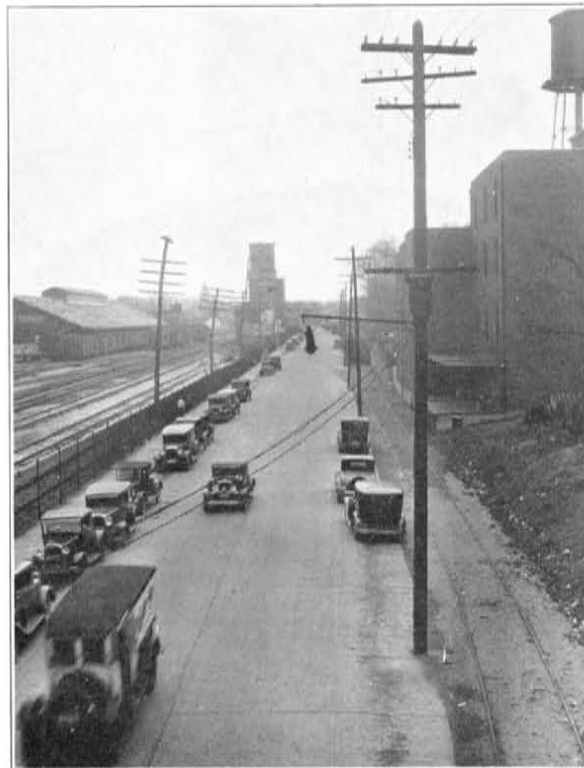
tion may be found in the Standard City Planning Act prepared by the Department of Commerce.)

It is pointed out in connection with other features of the Comprehensive Plan that, assuming even the most judicious selection of improvements and the use of the most ingenious methods for reducing the cost of their execution, it will not be possible for the City to catch up with present deficiencies and to properly prepare for the future, unless modern methods of financing of public improvements of all sorts are made available by state legislation. This is stressed particularly in Chapter III on the Recreation System, and is equally applicable to the problem of carrying out the Major Street Plan. It has been mentioned hereinbefore that, in preparing the program given in Table III, the Major Street Improvement Table, the availability of modern methods of financing these improvements was assumed.

In accordance with the above considerations, it is recommended that state legislation be obtained:

(a) To permit the levying of special benefit assessments, for the financing of public improvements of all kinds, on properties especially benefited by such improvement, not exceeding the amounts of such benefits, but not otherwise limited either as to the area of the district within which such benefits may be assessed, or the proportion of the cost that may be so financed, or by the value of any individual property against which benefit assessments are to be levied. It should also permit the payment of benefit assessments in interest-bearing installments, and the issuing by the City of temporary bonds, outside of the City's bonded debt limit, to defray the portion of the cost of the improvement to be financed through benefit assessments.

(b) To provide for an expeditious method and procedure for the condemnation of properties for public improvements.



THE NEW VINE STREET—CENTRAL AVENUE  
THOROUGHFARE  
Recently constructed to relieve Main Street

TABLE I.  
STATISTICS, LEXINGTON, KENTUCKY  
(From U. S. Census Reports)

	1920	1910	1900	1890	1880	1870	1860	1850	1840	1830	1820
Total Population.....	41,534	35,099	26,369	21,567	16,656	14,801	9,325	—	6,997	6,026	5,279
Male .....	20,048	16,829	12,328	10,305	—	7,031	—	—	—	—	—
Female .....	21,486	18,270	14,041	11,262	—	7,770	—	—	—	—	—
White .....	29,077	24,076	16,237	13,020	9,073	7,629	6,241	—	—	—	—
Negro .....	12,450	11,011	10,130	8,544	7,583	7,171	3,084	—	—	—	—
Foreign-born											
white .....	800	936	914	1,082	1,081	1,084	33.0	—	—	—	—
Percent of negro ..	30.0	31.4	38.4	39.6	45.5	48.4	33.0	—	—	—	—
Males to 100 females											
White .....	94.1	95.3	94.9	—	—	—	—	—	—	—	—
Negro .....	91.4	85.5	77.4	—	—	—	—	—	—	—	—
City .....	93.3	92.1	87.8	—	—	—	—	—	—	—	—
Age											
under 5   *	2,914	*	1,904	—	—	—	—	—	—	—	—
5-9       (6-9)	3,113	2,055	2,230	—	—	—	—	—	—	—	—
10-14     (10-14)	3,066	2,719	2,369	—	—	—	—	—	—	—	—
15-19     (15-17)	3,142	1,830	2,553	—	—	—	—	—	—	—	—
20 plus   (18-20)	29,299	2,045	—	—	—	—	—	—	—	—	—
Dwellings .....	9,500	7,880	5,450	4,317	—	—	—	—	—	—	—
Families .....	10,720	8,530	6,053	4,551	—	—	—	—	—	—	—
Persons per											
Dwelling .....	4.4	4.5	4.8	5.0	—	—	—	—	—	—	—
Persons per family..	3.9	4.1	4.4	4.74	—	—	—	—	—	—	—
All homes .....	7,470	—	5,990	—	—	—	—	—	—	—	—
Homes owned .....	3,456	—	1,707	—	—	—	—	—	—	—	—

TABLE II.  
STATISTICS, FAYETTE COUNTY, KENTUCKY  
(From U. S. Census Reports)

	1920	1910	1900	1890	1880	1870	1860	1850	1840	1830
Total Population .....	54,664	47,715	42,071	35,698	29,023	26,656	22,599	22,735	22,194	25,098
Male .....	27,214	23,780	—	—	—	13,144	11,580	11,786	—	—
Female .....	27,450	23,935	—	—	—	13,512	11,019	10,947	—	—
White .....	39,042	32,821	26,660	22,069	16,049	14,112	11,899	11,178	—	—
Negro .....	15,613	14,879	15,409	13,625	12,974	12,513	10,700	11,557	—	—
Foreign-born										
white .....	864	1,069	1,175	1,411	1,432	1,415	1,189	—	—	—
Percent. of Negro.....	28.7	31.3	36.5	37.0	44.6	46.8	47.4	50.8	—	—
Urban Population .....	—	35,099	26,369	—	—	—	—	—	—	—
Rural Population .....	—	12,616	15,702	—	—	—	—	—	—	—
Age										
6-9       (7-13)	6,370	3,090	—	—	—	—	—	—	—	—
10-14     (14-15)	1,795	4,156	—	—	—	—	—	—	—	—
15-17     (16-17)	1,890	2,813	—	—	—	—	—	—	—	—
18-20     (18-20)	2,886	2,923	—	—	—	—	—	—	—	—
Dwellings .....	12,196	10,503	8,420	6,660	—	—	—	2,089	—	—
Families .....	13,442	11,205	9,117	6,993	—	—	—	2,114	—	—
dwelling .....	—	—	—	5.36	—	—	—	—	—	—
dwelling .....	—	—	—	5.36	—	—	—	—	—	—
Persons per family..	—	—	—	5.10	—	—	—	—	—	—
All homes .....	13,442	—	9,025	—	—	—	—	—	—	—
Homes owned .....	4,620	—	2,994	—	—	—	—	—	—	—

## INDEX TO MAJOR STREET IMPROVEMENT TABLE

Street	Route	Street	Route
<b>A</b>		<b>L</b>	
Alford Ave. ....	17	Lancaster St. ....	16
Angliana Ave. ....	5	Lane Allen Road ....	10
Ann St. ....	2	Leestown Pike ....	1
<b>B</b>		Liberty Pike ....	4
Bellaire Ave. ....	14	Limestone St. ....	11
Bolivar St. ....	8	Louden Ave. ....	6
Broadway ....	13	<b>M</b>	
Bryan Station Pike ....	16	Main St. ....	1
<b>C</b>		Manchester St. ....	7
Clay Ave. ....	17	Mason Boulevard ....	9
Clays Mill Pike ....	13	Mt. Tabor Pike ....	10
Chiles Ave. ....	3	Maysville Pike ....	11
Colfax St. ....	5	<b>N</b>	
Cramer Ave. ....	3	Newtown Pike ....	15
Curry Ave. ....	5	Nicholasville Pike ....	11
<b>D</b>		<b>R</b>	
Deweese St. ....	16	Rose St. ....	16
<b>E</b>		Rosemont Ave. ....	10
Easton Road ....	9	Russell Cave Pike ....	13
Edgemoor Drive ....	10	<b>S</b>	
Elm Tree Lane ....	16	Sandersville Road ....	9
Euclid Ave. ....	8	Seventh St. ....	6
<b>F</b>		Sherman Ave. ....	6
Fontaine Road ....	8	Short St. ....	2
Forman Ave. ....	5	Swigert Ave. ....	10
Fourth St. ....	4	<b>T</b>	
Frankfort Pike ....	7	Tates Creek Pike ....	7
<b>G</b>		Third St. ....	3 & 4
Georgetown St. ....	15	<b>U</b>	
<b>H</b>		Uhlan Court ....	6
Hamilton Park Ave. ....	9	Upper St. ....	12
Harrodsburg Pike ....	13	<b>V</b>	
Henry Clay Blvd. ....	6	Van Meter Lane ....	10
High St., East ....	7	Versailles Pike ....	7
High St., West ....	7	Virginia Ave. ....	6
<b>I</b>		<b>W</b>	
Illinois St. ....	16	Waller Ave. ....	9
<b>J</b>		Walter Ave. ....	5
Jefferson St. ....	14	Walton Ave. ....	17
		Wilton Ave. ....	5
		Winchester Pike ....	4
		Woods Point Road ....	6

**TABLE III.**  
**MAJOR STREET IMPROVEMENT TABLE**

No	Route	Existing Width in feet		Proposed Final Width in feet		Proposed Final Capacity in lanes	To be Under- taken in or before
		Street	Roadway	Street	Roadway		
1. Richmond Pike—Main St.—Leestown Pike							
	Richmond Pike—From South to Holliday St. ....	90	30	140	20-40-20	8	Pl.*
	“ “ —Holliday St. to Woods Point Road .....	120	40	140	20-40-20	8	Rp.**
	“ “ —Woods Point Rd. to Richmond Ave. ....	120	40	120	27-27	6	Rp.
	“ “ —Richmond Ave. to Hanover Ave. ....	90	36	100	66	6	Rp.
	Main Street—Hanover Ave. to Ransom Ave. ....	60	30-45	100	66	6	1950
	“ “ —Ransom Ave. to Rose St. ....	68-78	50	90	66	6	1945
	“ “ —Rose St. to Broadway .....	82	56	82	56	6	Rp.
	“ “ —Broadway to Georgetown St. ....	60-82	54	90	66	6	1960
	“ “ —Georgetown St. to Wilton Ave. ....	60	18-54	90	66	6	Rp.
	Leestown Pike—Wilton Ave. to northwest .....	40	16	120	27-27	6	Pl.
2. Short St.—New Extension—Ann St.							
	Short St.—Georgetown St. to Felix St. ....	49-50	35-40	80	56	6	1950
	“ “ —Felix St. to Limestone St. ....	60-62	46	80	56	6	1965
	“ “ —Limestone St. to Walnut St. ....	30-40	28	80	56	6	1940
	“ “ —Walnut St. to Deweese St. ....	48	35	80	56	6	1945
	“ “ —Deweese St. to Curley St. ....	50	35	80	56	6	1940
	New Extension—Curley Ave. to Goodloe St. ....	—	—	80	56	6	1940
	Ann St.—Goodloe St. to Third St. ....	35	19	60	40	4	1940
3. Third St.—New Connection—Cramer Ave.—New Extension							
	New Connection—Inner Blvd. to Walter Ave. ....	—	—	80	54	6	Pl.
	Chiles Ave.—Walter Ave. to Douglas St. ....	x	x	80	54	6	1940
	New Connection—Douglas St. to Corp. Line .....	—	—	80	54	6	1940
	Whitney St.—Corp. Line to Hickory St. ....	70	16	80	54	6	1940
	Third St.—Hickory St. to Georgetown St. ....	42	25	80	54	6	1940
	“ “ —Georgetown St. to Walnut St. ....	50-52	34	80	54	6	1945
	“ “ —Walnut St. to Chestnut St. ....	45	33	80	54	6	1945
	New Connection—Chestnut St. to Walton Ave. ....	—	—	80	54	6	1935
	Cramer Ave.—Walton Ave. to terminus .....	80	25	80	54	6	Rp.
	New Extension—Cramer Ave. to Sherman Ave. ....	—	—	80	54	6	1930
	“ “ —Sherman Ave. to southeast .....	—	—	100	54	6	Pl.
4. Fourth St.—New Connection—Winchester Pike—Liberty Pike							
	Fourth St.—Newtown Pike to Limestone St. ....	50	33-34	80	56	6	1960
	“ “ —Limestone St. to Race St. ....	46-48	30-33	80	56	6	1960
	New Connection—Race St. to Ann St. ....	—	—	80	56	6	1940
	Third St.—Ann St. to Walton Ave. ....	45	33	80	56	6	1955
	Winchester Pike—Walton Ave. to Loudon Ave. ....	40	18-23	80	56	6	Rp.
	“ “ —Loudon Ave. to east .....	40	18	140	20-40-20	8	Pl.
	Liberty Pike—Winchester Pike to southeast .....	28	16	100	56	6	Pl.
5. Inner Circumferential							
	Seventh St.—Winchester Pike to C. & O. Belt .....	50	23	80	56	6	Rp.
	“ “ —C. & O. Belt to Upper St. ....	50	28	80	56	6	1965
	“ “ —Upper St. to Bellaire Ave. ....	50	33	80	56	6	1965
	New Extension—Bellaire Ave. to Georgetown Pike....	—	—	80	56	6	1960
	“ “ —Georgetown Pike to Booker Ave. ....	—	—	80	56	6	1930
	Walter Ave.—Booker Ave. to New Connection .....	40	18	80	56	6	Pl.
	New Connection—Walter Ave. to Leestown Pike .....	—	—	80	56	6	1970†
	Wilton Ave.—Leestown to terminus .....	35	14	80	56	6	1970†
	New Connection—Wilton Ave. to W. High .....	—	—	80	56	6	1970†
	Angliana Ave.—W. High to New Connection .....	40	32	80	56	6	Rp.
	New Connection—Angliana Ave. to Curry Ave. ....	—	—	80	56	6	1940
	Curry Ave.—New Connection to S. Broadway .....	40	34	80	56	6	Rp.
	Forman Ave.—S. Broadway to Southern Ry. ....	40	34	80	56	6	Rp.
	Colfax St.—Southern Ry. to S. Limestone St. ....	40	34	80	56	6	Rp.



# THE MAJOR STREET PLAN

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No.	Route	Existing Width in feet		Proposed Final Width in feet		Proposed Final Capacity in lanes	To be Under- taken in or before
		Street	Roadway	Street	Roadway		
<b>6. Inner Boulevard</b>							
	Loudon Ave.—Maple Ave. to Shropshire St. ....	75	18	90	54	6	1955
	“ “ —Shropshire St. to Winchester Pike ....	65	18	90	54	6	1955
	New Connection—Winchester Pike to Liberty Pike....	—	—	90	54	6	1955
	Henry Clay Blvd.—Liberty Pike to Cramer Ave. Ext.	60	16	90	54	6	1955
	Sherman Ave.—Cramer Ave. to Richmond Pike .....	50	16	90	54	6	1955
	Woods Point Rd.—Richmond Pike to Fontaine Rd....	100	33	120	27-27	6	1955
	New Extension—Fontaine Rd. to Rose St. ....	—	—	120	27-27	6	1955
	“ “ —Rose St. to S. Limestone St. ....	—	—	80	54	6	1955
	Virginia Ave.—S. Limestone St. to Winnie St. ....	52	37	80	54	6	1955
	“ “ —Winnie St. to New Connection .....	40	30	80	54	6	1955
	New Connection—Virginia Ave. to S. Broadway .....	—	—	80	54	6	1955
	Uhlan Ct.—S. Broadway to terminus .....	40	18	120	27-27	6	1955
	New Extension—Uhlan Ct. to N. Broadway .....	—	—	120	27-27	6	1955
	“ “ —N. Broadway to Maple Ave. ....	—	—	80	54	6	1955
<b>7. Frankfort Pike—Versailles Pike—High St.—Tates Creek Pike</b>							
	Frankfort Pike—From west to Wilton Ave. Ext. ....	35	16	100	56	6	Pl.
	“ “ —Wilton Ave. Ext. to Southern Ry....	35	18	80	56	6	Rp.
	Manchester St.—Southern Ry. to Viaduct .....	60	20-27	80	56	6	Rp.
	Versailles Pike—From west to Angliana Ave. ....	50	24	120	27-27	6	Pl.
	W. High St.—Angliana Ave. to Patterson St. ....	42-49	24	76-80	56	6	1935
	“ “ —Patterson St. to S. Upper St. ....	60-68	30	76-80	56	6	1950
	E. High St.—S. Upper St. to Rose St. ....	50-57	28-30	76-80	56	6	1950
	“ “ —Rose St. to Kentucky Ave. ....	36	27	76-80	56	6	1940
	“ “ —Kentucky Ave. to Clay Ave. ....	56	30	80	56	6	1940
	“ “ —Clay Ave. to Fontaine Rd. ....	45	27	80	56	6	1940
	Tates Creek Pike—Fontaine Rd. to south .....	50	16	120	27-27	6	Pl.
<b>8. Bolivar St.—New Connection—Euclid Ave.— Fontaine Road.—New Extension</b>							
	Bolivar St.—S. Broadway to S. Upper St. ....	65	43	80	56	6	1970†
	New Connection—S. Upper St. to Euclid Ave. ....	—	—	80	56	6	1935
	Euclid Ave.—New Connection to Rose St. ....	50	30	80	56	6	Rp.
	Euclid Ave.—Rose St. to Tates Creek Pike .....	66	32	80	56	6	Rp.
	Fontaine Rd.—Tates Creek Pike to Woods Point Rd.	60	25	80	56	6	1970†
	Fontaine Rd.—Woods Point Rd. to Dudley Rd. ....	60	25	100	56	6	1970†
	New Extension—Dudley Rd. to south .....	—	—	100	56	6	Pl.
<b>9. Outer Circumferential</b>							
	Waller Ave.—Nicholasville Pike to Crescent St. ....	50	30	80	56	6	1970†
	New Extension—Crescent St. to Harrodsburg Pike....	—	—	80	56	6	Pl.
	Mason Blvd.—Harrodsburg Pike to New Connection	50	18	100	56	6	Pl.
	New Connection—Mason Blvd. to Versailles Pike....	—	—	100	56	6	Pl.
	Hamilton Park Ave.—Versailles Pike to terminus ....	50	20	100	56	6	1960
	New Extension—Hamilton Park to Old Frankfort Pike .....	—	—	100	56	6	1960
	New Extension—Old Frankfort Pike to Sandersville Pike .....	—	—	100	56	6	Pl.
	Sandersville Rd.—New Extension to Georgetown Pike	x	x	100	56	6	Pl.
	New Extension—Georgetown Pike to Maysville Pike	—	—	100	56	6	Pl.
	Easton Rd.—Maysville Pike to Bryan Station Pike....	40	14	100	56	6	Pl.
	New Extension—Bryan Station Pike to Nicholasville Pike .....	—	—	100	56	6	Pl.
<b>10. Outer Boulevard Parkway</b>							
	Mt. Tabor Pike—Richmond Pike to Tates Creek Pike	x	x	120	27-27	6	Pl.
	New Extension—Tates Creek Pike to Edgemoor Dr....	—	—	120	27-27	6	Pl.
	Edgemoor Drive—Extension to New Connection .....	50	12	120	27-27	6	Pl.
	New Connection—Edgemoor Drive to Rosemont Ave.	—	—	120	27-27	6	Pl.
	Rosemont Ave.—New Connection to Clays Mill Pike..	60	40	120	27-27	6	Pl.
	New Connection—Clays Mill Pike to Harrodsburg Pike .....	—	—	120	27-27	6	Pl.
	Lane Allen Rd.—Harrodsburg Pike to Parker's Mill	40	14	120	27-27	6	Pl.
	New Connection—Parker's Mill Pike to Versailles Pike .....	—	—	120	27-27	6	Pl.
	Van Meter Lane—Versailles Pike to New Connection	x	x	120	27-27	6	Pl.

## COMPREHENSIVE PLAN of LEXINGTON AND ENVIRONS

No.	Route	Existing Width in feet		Proposed Final Width in feet		Proposed Final Capacity in lanes	To be Under- taken in or before
		Street	Roadway	Street	Roadway		
	New Connection—Van Meter Lane to Van Meter Lane	—	—	120	27-27	6	Pl.
	Van Meter Lane—New Connection to Leestown Pike	x	x	120	27-27	6	Pl.
	New Extension—Leestown Pike to Russell Cave Pike	—	—	120	27-27	6	Pl.
	Swigert Ave.—Russell Cave Pike to New Extension..	50	18	120	27-27	6	Pl.
	New Extension—Swigert Ave. to Richmond Pike .....	—	—	120	27-27	6	Pl.
<b>11.</b>	<b>Maysville Pike—Limestone St.—Nicholasville Pike</b>						
	Maysville Pike—From northeast to N. Broadway Ext.	50	25	140	20-40-20	8	Pl.
	Maysville Pike—N. Broadway Ext. to Loudon Ave.....	60	32	90	66	6	1965
	Limestone St.—Loudon Ave. to N. Upper Ext. ....	45	30	90	66	6	1935
	“ “—N. Upper Ext. to Fifth St. ....	45-50	30-36	76-80	56	6	1945
	“ “—Fifth St. to Fourth St. ....	60	36	76-80	56	6	1945
	“ “—Fourth St. to Third St. ....	52-55	36	76-80	56	6	1945
	“ “—Third St. to Second St. ....	51-52	29-30	76	56	6	1960
	“ “—Second St. to Main St. ....	49-51	29	76	56	6	1960
	“ “—Main St. to S. Upper St. ....	45-51	28	80	56	6	1940
	“ “—S. Upper St. to Virginia Ave. ....	55-60	27	80	56	6	Rp.
	“ “—Virginia Ave. to Rose St. ....	40	27	80	56	6	Rp.
	Nicholasville Pike—Rose St. to Outer Blvd. ....	50	25	120	82	8	Rp.
	“ “—Outer Blvd. to south .....	50	25	140	20-40-20	8	Pl.
<b>12.</b>	<b>Upper Street</b>						
	Upper St.—S. Limestone to Maxwell St. ....	59-60	27-39	60	40	4	1950
	“ “—Maxwell St. to Short St. ....	51	28	60	40	4	1965
	“ “—Short St. to Third St. ....	45-47	27-36	60	40	4	1965
	“ “—Third St. to Sixth St. ....	39-43	25-26	60	40	4	1965
	“ “—Sixth St. to Seventh St. ....	50	26	60	40	4	1965
	Extension—Seventh St. to N. Limestone St. ....	—	—	60	40	4	1935
<b>13.</b>	<b>Broadway—Harrodsburg Pike—Clays Mill Pike— Russell Cave Pike</b>						
	Clays Mill Pike—From southwest to Harrodsburg Pike .....	35	16	100	56	6	Pl.
	Harrodsburg Pike—from southwest to Mason Blvd. ..	50	20	140	20-40-20	8	Pl.
	Broadway—Mason Blvd. to Maxwell St. ....	63-66	48	100	76	8	1970
	“ “—Maxwell St. to Second St. ....	76-83	52-56	100	76	8	1970
	“ “—Second St. to Seventh St. ....	76-78	52-57	100	76	8	1970
	“ “—Seventh St. to terminus .....	74	52	100	76	8	Rp.
	New Connection—N. Broadway to Maysville Pike ..	—	—	100	76	8	1930
	New Extension—N. Broadway to Russell Cave Pike..	—	—	120	27-27	6	Pl.
	Russell Cave Pike—New Extension to north .....	50	16	120	27-27	6	Pl.
<b>14.</b>	<b>Jefferson St.—Bellaire Ave.—New Extension</b>						
	Jefferson St.—W. High St. to Main St. (Viaduct)....	40	30	54	40	4	Rp.
	“ “—Main St. to Fourth St. ....	60	35-41	80	56	6	1970
	“ “—Fourth St. to New Connection .....	53-56	34-36	80	56	6	1970
	New Connection—Jefferson St. to Bellaire Ave. ....	—	—	80	56	6	1950
	Bellaire Ave.—Sixth St. to terminus .....	60	34	80	56	6	1970
	New Extension—Bellaire Ave. to N. Broadway Ext..	—	—	80	56	6	1950
<b>15.</b>	<b>Georgetown St.—Newtown Pike</b>						
	Georgetown St.—Main St. to Second St. ....	46	23-31	66	46	4	1950
	“ “—Second St. to Fourth St. ....	51	35	66	46	4	1950
	“ “—Fourth St. to Thompson St. ....	45	30	90	64	6	1950
	“ “—Thompson St. to Walter Ave. ....	50	30	90	64	6	1950
	“ “—Walter Ave. to north .....	50	20	120	27-27	6	Pl.
	Newtown Pike—Fourth St. - Seventh St. Ext. ....	50	20	80	56	6	1970
	“ “—Seventh St. Ext. to north .....	50	18	100	56	6	Pl.
<b>16.</b>	<b>Rose St.—New Extension—Deweese St.—New Extension—Illinois St.—New Extension—Elm Tree Lane—Lancaster St.—New Extension— Bryan Station Pike</b>						
	Rose St.—Limestone St. to Main St. ....	50	33-42	80	56	6	Rp.
	New Extension—Main St. to Short St. ....	—	—	80	56	6	1955
	Deweese St.—Short St. to Third St. ....	50-48	32	80	56	6	1960
	“ “—Third St. to Locke St. ....	45	20	80	56	6	1945

# THE MAJOR STREET PLAN

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No.	Route	Existing Width in feet		Proposed Final Width in feet		Proposed Final Capacity in lanes	To be Under- taken in or before
		Street	Roadway	Street	Roadway		
	New Extension—Locke St. to Fourth St. ....	—	—	80	56	6	1945
	Illinois St.—Fourth St. to terminus .....	23	16	80	56	6	1945
	New Extension—Illinois St. to Fifth St. ....	—	—	80	56	6	1945
	Elm Tree Lane—Fifth St. to Sixth St. ....	75	40	80	56	6	1960
	“ “ —Sixth St. to Seventh St. ....	50	29	80	56	6	1960
	Lancaster St.—Seventh St. to terminus .....	40-49	30	80	56	6	1960
	New Extension—Lancaster St. to Bryan Station Pike	—	—	80	56	6	1940
	Bryan Station Pike—Limestone St. to Lancaster						
	St. Ext. ....	40	27	60	40	4	1945
	Bryan Station Pike—Lancaster St. Ext. to east .....	40	16	100	56	6	Pl.
<b>17.</b>	<b>Walton Ave.—Clay Ave.—Alford Ave.—New</b>						
	<b>Extension</b>						
	Walton Ave.—Third St. to Main St. ....	80	34	80	56	6	Rp.
	Clay Ave.—Main St. to Euclid Ave. ....	60	43	80	56	6	1965
	Alford Ave.—Euclid Ave. to terminus .....	50	25	80	56	6	1965
	New Extension—Alford Ave. to Outer Circumferential	—	—	80	56	6	Pl.

TABLE IV.

## Variation of Vehicular Traffic along Main Street

AT	Ten Hour Traffic (8:00 AM-6:00 PM)			Rush Hour Traffic (5:00 PM-6:00 PM)	
	W	E	Total:	West-bound	East-bound
Georgetown St. 1803	2825	4628	107	197	
Jefferson St. 2825	3414	6239	152	256	
Broadway 4340	6389	10729	287	431	
Limestone St. 7066	7708	14774	481	593	
Walnut St. 8532	8356	16888	625	720	
Esplanade 8360	8996	17356	612	775	
Deweese St. 8984	9914	18898	667	<b>855</b>	
Rose St. 9926	8082	18008	775	704	
C. & O. Ry. 8064	8064	17128	544	701	

NOTE— W—West of intersection.  
E—East of intersection.

TABLE V.

## Number of Automobiles, Street Cars and Buses Passing Walnut Street on Main Street and Number of Passengers Carried by Same

TYPE	Number		Number of Passengers	
	Rush Hour	Ten hours	Rush Hour	Ten hours
Automobiles	1375	8532	1614	10238
Street Cars	42	440	966	3520
Buses	34	280	578	2240
Street Cars and Buses	79	720	1544	5760
Average per street car	—	—	23	8
Average per bus	—	—	17	8

\*Pl.—On Platting.  
x—Not Obtainable.

\*\*Rp.—On Repairing.  
1970†—Later than 1970.

# CHAPTER III

## RECREATION SYSTEM

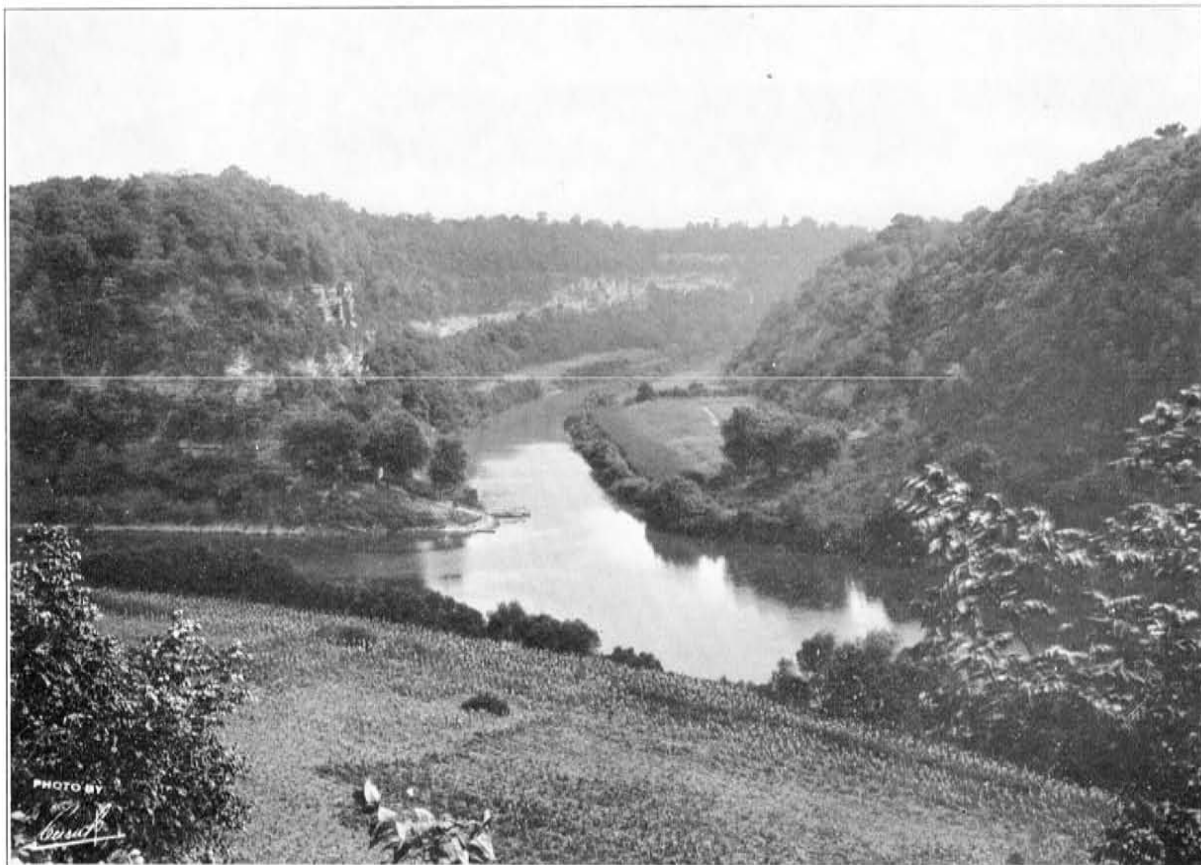
### Why Public Recreation Areas Are Necessary

The desire for play and recreation in the open air, among natural surroundings, is innate and has an historic biologic purpose and significance. For children and during the years of adolescence, the satisfying of this desire is a cardinal requirement for proper physical and mental development. For adults, it is essential to relieve the mental and physical strain, concomitant with the increasingly intensified working and living conditions in the urban community of the present industrial era.

Opportunity for recreation is now commonly regarded as a true necessity of life. It is a proven fact that wholesome play acts as a preventative of delinquency and of other misuses of time and energy. For children and

youth play means more than a safety valve for overflowing energy,—it is one of the most serious factors of their life. For adults, recreation in the open air, among attractive natural surroundings, provides one of the best means for the use of leisure time for physical and mental regeneration. This leisure time will unquestionably increase in the future. Its proper utilization is most important from the social and economic standpoint.

As a result of the above considerations, public recreation facilities, like public schools, are recognized as essential facilities in a modern community. People prefer to live in communities or in neighborhoods where these facilities have been provided.



THE KENTUCKY RIVER  
Where the Dix River flows into it

## THE INADEQUACY OF EXISTING PUBLIC RECREATION GROUNDS

Until recently the development of Lexington was of an exceptionally open character. In the diaries of early travelers Lexington is referred to as a city of attractive homes on large allotments, and of spacious open grounds. Substantial family homesteads on plots of one or more acres, was the predominating type of development even in the central section of the city. The surrounding countryside, "equal in beauty and fertility to anything the imagination can paint",\* was also accessible to anyone desiring to retire to nature for either passive or active recreation.

However, within the last few decades the use and occupancy of land within the city has become greatly intensified. Large home sites have been subdivided into small building lots, or multi-family houses were built in place of the old mansion. With the gradual increase of land values the surrounding open country became more thickly settled, and the more intensive use of land for farming or for stock raising has rendered the countryside unavailable for recreational purposes. The private open spaces that provided so generously for the admission of air and sunlight and for the recreation of children and adults alike, have gradually disappeared, or were withdrawn from the possibility of such use. At the same time, the need for these open spaces has become increasingly intensified. The elimination of the public street by the motor car, as a play space for children or a space for walking and riding, further aggravated the situation.

Unfortunately, until quite recently the City has not recognized this need. Practically all the parks and playgrounds which the City now owns have been acquired within recent years, but, even with these acquisitions, the city is greatly deficient in public recreation areas.

According to a survey conducted by the Playground and Recreation Association of America, in 134 cities out of the total of 143 having a population between 25,000 and 50,000 in 1920, the average acreage of parks and playgrounds (not including school playgrounds) was 226.6 acres per city. On the basis of an average population of 37,500, the average ratio of park and playground acreage to population would be one acre to approximately every 165 inhabitants. Selecting 20 cities of this group as most adequately provided with park and playground areas, the average number of acres per city amounted to 686.47, and the ratio of park and playground acreage to population to one acre for every 53 inhabitants.

In the cities having a population from 50,000 to 100,000, of which there were 76 in 1920, on the basis

of data from 73 of these cities, there was an average of 509.64 acres per city in this group. Assuming 75,000 as the average population per city, the average ratio of park and playground property to population would be one acre to every 147 inhabitants (again exclusive of school playgrounds). For 15 cities which were selected as most representative of this group, the average acreage per city was found to be 1,348.68, and the ratio of park and playground property to population, one acre to approximately 70 inhabitants.

Referring to Table VI, in which a summary of the Present and Proposed Public Recreational Areas is presented, it will be noted that there are at present only 42.53 acres of publicly owned and operated areas in the entire city (exclusive of school playgrounds), giving a ratio of acreage of recreational grounds to population of one acre to about every 1,050 inhabitants in the city, and to about 1,300 persons in the built-up area. This compares most unfavorably with the averages just above given for cities in both the 25,000—50,000 group and the 50,000—100,000 group, which amounted to 165 and 147 persons per acre of park and playground property, respectively, not to mention the averages for the selected cities within these groups most adequately provided with recreation areas.

As a result of exhaustive studies conducted within recent years by the Playground and Recreation Association of America, the Regional Plan of New York and Environs, and recreation specialists, there has developed an almost unanimous agreement to the effect, that no quantitative standards can be given for the measuring of the adequacy of recreational grounds in different communities, since this depends so greatly upon the physical, social and economic conditions in different communities, and even within different sections of the same community. However, for very general purposes it has been accepted, that the average community may be considered to have provided adequately for its recreational needs, if there is in such community one acre of city recreation area of all kinds, inclusive of school playgrounds, to every 300 to 500 inhabitants, plus liberal provision for outlying large recreational grounds, such as reservations, forest preserve, bathing beaches, etc., with the total of recreational areas of all kinds in the vicinity of 100 persons per acre.

The Urban Report of the Liberal Land Committee of England of 1925 recommends one acre of city recreational areas to each 200 inhabitants as ideal, but considers one acre for 400 inhabitants as a minimum, not including the outlying reservations.

Again referring to Table VI., it will be seen, that, aside from a complete lack of large public outlying parks, measured by the above standards, the present city recreation areas of

\*Journal of Josiah Espy, 1805.



Lexington represents only 47 percent of the minimum standard.

Furthermore, as will be pointed out hereinafter, the adequacy of a recreation system cannot be measured alone by the amount of recreation area provided, or its ratio to the city's population or area, as the proper distribution of the various recreation grounds is fully as important as the amount. In view of the meagreness of public recreation areas in the city, obviously, there can hardly be any question of any balanced distribution. The three park-playgrounds for the white population, are located fairly close to the center in the southeastern and north-central sections of the city, and the only colored park-playfield, in the out-lying colored settlement in the Georgetown Pike district. Except for these districts and the immediate vicinity of the Clifton Playplot of about one-third of an acre, all other sections of the community are without any public recreation grounds.

The above comparisons and review of present conditions, it is believed, strikingly illustrate the inadequacy of public recreation areas in Lexington. Fortunately, the large acreages of the numerous educational, charitable and other institutions, and of cemeteries, are relieving in some degree this deficiency of public open spaces, certainly, by admitting sunlight and air to the surrounding built-up sections, and to a more limited extent, by being available for recreational uses of a more or less passive nature. However, it is believed, that this brief review of the city's present recreation facilities and the appraisal of its future recreational needs which follows, forcefully point to the necessity of giving immediate attention to the development of a coordinated and balanced system of public recreation areas, to make up for the great deficiency above illustrated.

### ELEMENTS OF A RECREATION SYSTEM

In accordance with principles universally accepted by town planners and recreational specialists, to meet the recreational needs of all population age groups in a community such as Lexington and its Environs, a recreational system should include the following general types of recreational areas:

- I. Playgrounds and Playfields
  1. Playgrounds or playlots for small children of kindergarten age and under
  2. Children's playgrounds for children from 5 to 14 years of age
  3. Playfields for youths from 15 years up and for adults
- II. Parks
  1. Neighborhood parks
  2. Outlying reservations
- III. Boulevards and Parkways.

The relationship of the above types of recreational grounds to the various age groups, their desirable size and distribution, and the recommendations of the proposed plan with respect to each type, will be briefly discussed in the following.

#### I. PLAYGROUNDS AND PLAYFIELDS.

##### 1. Playgrounds or playlots for small children.

The primary purpose of these areas is to provide a safe play space in the open air for children of five or six years of age and under. Their secondary function is to serve as a

breathing space, a space of rest and relaxation, for the mothers or nurses of these little children. In 1920, this age group composed about seven percent of the total population.

Playgrounds of this type are principally needed in the densely populated sections of the city, in the apartment or tenement house districts, where there are no private yards or gardens which can be used for such purpose. In an ideally developed district of this kind there should be such playground in the interior of each block, so that no small child should be required to cross a street in getting to or returning from such playground. Unfortunately, there is no city where these ideal conditions have been attained or even approximated, although in a number of cities block interior playgrounds are being provided in connection with new real estate developments.

One of the best examples of such block interior playgrounds may be found at Sunnyside, a housing project of the City Housing Corporation in New York City. This development, comprising approximately 70 acres, is located only fifteen minutes from Grand Central Station. Practically every block is laid out to include an interior block park and little children's playgrounds.

Unfortunately, in the district where, as has been mentioned, these playgrounds for little children are most needed, namely, the apartment house or tenement house districts, there is no longer opportunity to secure these play-

grounds by proper initial layout. They have to be provided, where necessary, by the acquisition of such plots as may still be available at reasonable cost. Fortunately, these playgrounds for little children can be quite small; 5,000 to 10,000 square feet can be considered an adequate size.

These playgrounds or playlots for little children, as such, are seldom found in recreational systems of cities. It is doubtful whether it is desirable to provide them separately and independently of other recreation areas. Where not provided in the block interiors as a part of the initial layout, these are generally located together with other recreation areas, such as neighborhood parks, neighborhood playgrounds or playfields, ornamental parks, etc.

In connection with the proposed Recreation System for Lexington and Environs, it is expected that such playgrounds for little children will be set aside in every one of the existing and proposed neighborhood parks, and especially in the small neighborhood parks in the central section of the city, the establishment of which is recommended principally for this purpose. As may be seen in Exhibit 13

\*These are arbitrary names assigned for convenient reference.

\*\*Acquired by the City on August 9, 1930.

which shows the Proposed Recreation System the small park areas last referred to include the proposed **Maxwell Park** and **Wyandotte Park\***, the first of which would be a block interior park taking advantage of the excessive depth of lots facing Maxwell Street, and the second of which would largely utilize the site of the Dudley School, the relocation of which has been recommended. Both of these are either in the midst of, or adjacent to growing apartment house districts which completely lack public recreation grounds. Both of these would serve the white population. In the colored sections, in the south-eastern part of the central district the proposed **Breckinridge Park** and **Lewis Park\*\*** are intended for such playgrounds, and the proposed **Tanner Park** in the colored section around Fifth and Tanner Streets. The tracts suggested for these parks are comparatively free of improvements.

## 2. Children's Playgrounds

These playgrounds are intended for children from about five or six years to 14 years of age. This age group comprises approximately 15 percent of the city's population, and includes the children from the last year of kindergarten to the third grade in the junior high schools, inclusive.



**BLOCK INTERIOR PARK AND PLAYGROUND**  
In apartment house district in Kansas City

There is almost unanimous agreement among city planners and recreational specialists that the **playgrounds for this age group of children should be an integral part of the public school system.** It is held that no educational system is discharging its responsibility, which does not provide to the fullest extent, particularly in the primary and intermediate grades, for both indoor and outdoor recreational opportunities, since these are considered as important for the proper mental and physical development of the child, as the education imparted in the classrooms.

There are a number of reasons why these playgrounds for children of primary and intermediate school age should be provided for as a part of the school system.

The principles followed in the distribution of schools, such as convenient walking distance, the delineation of school districts with a view of avoiding the need for crossing heavily-traveled streets, railroad tracks, and other physical obstacles, are the very considerations that should govern the distribution of these children's playgrounds. Therefore, when provided in connection with each primary and intermediate school, they will be properly distributed.

From the standpoint of economy, it should seem manifest that the community has so much invested in its educational facilities, that it should fully capitalize such investment. That is, the recreational facilities provided in connection with the public schools should be available all the year round and outside of school hours, when these are most needed.

Then too, if these children's playgrounds for the primary and intermediate school age groups were provided separately from the educational center, certain service facilities, such as shelter, toilets, drinking fountains, already available in the school plant, would have to be duplicated.

It is therefore poor economy for a community to plan these playgrounds elsewhere. Such action is justified, however, in the case of old schools where the cost of providing adequate play areas would be excessive. In such cases a separate children's playground should be located as near as possible to such school.

**In the proposed Recreation System for Lexington and Environs it was assumed that these playgrounds for children of grammar school and junior high school age will be provided in connection with the development of the school system.** The chapter on the School Sys-

tem contains recommendations for developing an adequate system of such playgrounds as a part of the school plant.

### 3. Playfields for Youths and Adults

These playfields are intended for the older boys and girls, for young men and women, and for adults, for outdoor games and active recreation. The age group for which these playfields are intended includes the group of senior high school age and over.

There is a difference of opinion whether or not playfields of this type, even for children of senior high school age, should be provided in connection with such high schools. It is not always possible to acquire sufficient ground, particularly in connection with older high schools or in the city of from 50,000 to 100,000, where it is desirable to locate centrally the only senior high school. Furthermore, only a certain proportion of the children of high school age are actually enrolled in the school, in Lexington less than one-fourth, and those not so enrolled would hesitate to make use of a field attached to the high school, even if encouraged to do so. For these reasons, **there appear to be certain advantages in locating the senior high school athletic field away from the school, in the outlying district, where land can be provided generously.** In the case of this age group, such considerations as walking distance, or the crossing of traffic streets, do not have the controlling influence as in the case of the lower age groups.

However, in addition to the senior high school age group, these playfields must accommodate young men and women over 18, also adults who partake in active recreation. This age group may amount in Lexington to about 30 percent of the total population. These playfields should be well distributed over the city, so as to have one conveniently accessible to every part of the community. Their location, distribution and size, similarly to other recreational areas, depend upon the distribution of population. However, considering the age of those they are intended to serve, there is considerable elasticity with respect to location.

It has been recommended by some recreation specialists that there should be one such playfield for each 500 children of high school age, and that each such playfield should comprise a minimum of five to six acres. It is probably true that the size of playfields of this kind is controlled more by the divisional layout, than by the number of persons in the

tributary area. Such divisional layout may include a children's playground, a playfield for girls and women, a playfield for boys and men, a field house, a community house, and a swimming pool. **These facilities, plus proper planting and border, would require at least six to eight acres.**

Experience has demonstrated that, unless these playfields are surrounded by a wide border of planting, they do not make good neighbors. Where this has been done, however, a practice uniformly employed in Milwaukee, it has actually resulted in an increase of the desirability and value of properties facing such playfields. However, it is admitted that the most desirable location for these playfields is within neighborhood parks, in which case, together with such parks, they form what is known as the neighborhood playfield-park unit. In such composition, the playfield can be so located in the interior of the neighborhood park, as to eliminate all objectionable features it might otherwise have from the standpoint of the surrounding residential areas. Since the border of park, that would enclose such playfield under such arrangement, could

be used to good advantage for other recreational purposes, such as little children's playgrounds, the combined acreage necessary for the neighborhood park-playfield would be less, than would be required if they were located separately. Again, the joint use of certain facilities such as community house, shelter, drinking fountains, etc., promises to effect economies.

For the above reasons, in designing the **Recreation System for Lexington and Environs**, the proposed playfields have been made a part of proposed neighborhood parks, thus creating recreational centers, where both the active and passive recreational needs of the population can be taken care of in an attractive and economical manner, and with substantial benefit to the surrounding properties. The location and size of these recreational centers will be discussed in more or less detail hereinafter, in connection with neighborhood parks.

## II. PARKS

Park areas, in contrast with playfields or playgrounds, are intended to provide for the



TYPICAL SCENE IN WOODLAND PARK  
Diamond ball practice



passive or semi-active recreation of all population age groups.

Due to the almost universal use of the automobile, there has come about a radical change, during the last generation, of the theory and practice of locating, distributing, and determining the size of parks, both inside and outside the city. But 25 years ago park planners and municipal authorities sought to bring the country into the city by means of large landscaped parks, whereas now, they aim to take the people out of the city into the country. The type of recreational need served by these large landscaped parks, namely, the renewal of contact with nature, can be satisfied at greatly reduced cost by these outlying reservations. But aside from these large outlying park areas or reservations, which are situated several miles from the city, there is need within the city for a system of smaller neighborhood parks for daily use of people not inclined to active recreation, and particularly for mothers and very small children.

In the proposed Recreation System for Lexington and Environs full provision was made for the above two types of park areas in accordance with the above principles.

#### 1. Neighborhood Parks

Functionally, as has been just stated above, these neighborhood parks are to serve as breathing spaces, as the "lungs" of the city. They are to provide oases of rest and relaxation for all population age groups. Particularly do mothers and little children flock to these parks on hot summer days for rest, and for the fragrant coolness which trees and lawns alone can give. There is something restful and regenerative in the contact with nature at its best, such as is found in these parks. To a limited extent, they offer an opportunity for semi-active recreation, in the form of walking, listening to band concerts, taking part in or observing festivals, pageants, etc. Then too, these parks introduce light and air to the built-up city areas, adorn the neighborhood in which they are located, and enhance the value of surrounding property.

The distribution of these parks should be governed by the same considerations as those of the playfields, discussed hereinbefore. To be really useful they should be so distributed that there be one of these within easy walking distance of every part of the community. Half a mile may be considered an effective radius.

Thus the number of these parks will practically duplicate the playfield type of recreational areas. Similarly to the little children's playgrounds, these parks are most necessary in the densely populated apartment house or tenement house districts, where there are no private yards or lawns to compensate for their absence or inadequacy. Unfortunately again, it is in these districts that adequate provision for these parks is the most difficult.

**As to the size of these neighborhood parks,** other conditions being equal, **this should vary with the ultimate population of the district to be served.** They should be large enough to create the illusion of the country, and so that the effect of trees and lawns should appreciably freshen the air. **Ten to 25 acres is a practicable size.** Woodland Park is of just about the right size for this type of park; Duncan Park is altogether too small to be effective. On the basis of population, it is desirable to provide one acre of neighborhood park area for every 500 people, but at least for every 750 people, within the district to be served. Manifestly, there may be locations in the central section of the city, where even this minimum standard might prove prohibitive.

These neighborhood parks may be located separately, or may be combined with other recreational areas. As has already been pointed out, there are substantial advantages to be gained by combining such parks with playfields into so-called neighborhood park-playfields. It has been mentioned that by locating the playfield in the interior of a neighborhood park, the objections to certain features of the playfield by surrounding property owners can be effectively allayed. Little children's playgrounds can also be included in such recreation center.

In the design of the Recreation System for Lexington and Environs this combination of neighborhood parks, playfields and little children's playgrounds in one recreation center, was worked out wherever such combination was possible and appeared to offer advantages. In some instances, schools and school playgrounds were also combined with such recreation unit.

As may be seen in Exhibit 13, showing the Proposed Recreation System, in addition to the existing Woodland Park, Duncan Park, Gratz Park, and Douglas Park, eight new neighborhood parks are recommended, besides a large addition to Douglas Park. For the





**DUNCAN PARK**  
The Limestone Street front with the band stand

sake of ease of reference tentative names have been assigned to each of the proposed park areas.

Starting with the southeastern section of the city, it is recommended that, to serve this quite intensively developed section which at present is without any recreational facilities, the entire block bounded by Bassett, Menifee, Preston and Monroe Avenues, comprising about seven acres, be acquired and developed. The block in question is the only one in the district as yet entirely free of buildings.

At Winchester Pike and Loudon Avenue a neighborhood park of about five acres is proposed, to provide for the future population of the sector between the L. & N. and C. & O. Railroads. The tract is part of a larger farm and contains a considerable number of good trees.

In the northeastern section of the city, which is particularly in need of recreational grounds, it is proposed to provide a park between Bryan Station Pike and Castlewood Drive, by acquiring part of the property known as Castlewood. The 20 acres suggested for this park would include, in addition to a playfield of about five acres and of a little child-

ren's playground, a site for the new Arlington School, the ultimate relocation of which to this site is recommended under the school program. The site of this park is one of the two properties which by reason of their location, topography and old timber, are particularly suitable for park purposes, the other being Ingleside. As a matter of fact, it would be difficult, if not impossible, to find a piece of property more advantageously located or more suitable for the purpose in question. The old mansion could well be converted into a community center and shelter house.\*

The ten acre park along Russell Cave Pike, between North Broadway and the L. & N. Railroad, is proposed to serve the future population of the district west of Limestone Street, and would also include a playfield, a little children's playground, and a site for the proposed Headley Elementary School.

To provide for the increase of the colored population in the Georgetown Pike district, it is proposed to enlarge Douglas Park by the acquisition of eleven acres of adjacent property in the interior of the sector between Georgetown and Newtown Pikes. The property to be acquired should be had at reasonable cost, and should be obtained to prevent an undesirable type of development.

\*30 acres acquired by the City for this park on September 22, 1930.

Reference has already been made to the neighborhood park on part of the property known as Ingleside. The suitability of this property for park purposes has already been touched upon. The many good trees, its gently rolling topography, and the large old building that, similarly to Castlewood, could be remodeled into a community recreation building, are assets that cannot be found on any other property in this section. This park is intended to serve the southwestern section of the city, roughly between the Louisville Division of the Southern Railroad and its Main Line going south. In consideration of the large service area, it is recommended that 30 acres be acquired for this park, which should be inclusive of a playfield of seven acres or more, or possibly a stadium, and also of a little children's playground. The general location of this park would be about a third of a mile to the northwest of South Broadway and about the same distance southwest of the Trotting Track.

In consideration of the openness of private development along Nicholasville Pike, a relatively small neighborhood park of twelve acres is suggested for this section. This park should also include a little children's playground and might include a small playfield. The plot recommended abuts on Elizabeth Street south of Westwood Drive, and includes the interior of the block, leaving the lots facing Nicholasville

Pike about 300 feet deep. A detailed plan prepared for this proposed neighborhood park, shown in Exhibit 14, is intended to illustrate the proper development of a typical park-playfield.

The neighborhood park of 20 acres abutting Bates Creek Pike is proposed to prepare for future population growth along Bates Creek Pike. Its location is about a half-mile beyond the city limits. The tract contains some good trees and has interesting topography. It should include a playfield of five acres or more.

In the north central section of the city, it is suggested that, to augment the acreage of Duncan Park and Gratz Park, the block bounded by North Limestone, Fourth, North Upper and Third Streets, comprising about four and a half acres, be gradually acquired. In addition to providing for the recreational needs of this section, which, by reason of increasing apartment house developments, will have a much larger population than at present, this neighborhood park is intended to open up a connection between Transylvania College and the block to the east of Limestone Street between Third and Fourth Streets, which is proposed as the eventual site of the Senior High School. It is also intended that this park should round out the development of an at-



CASTLEWOOD PARK  
Recently acquired (30 acres) as a result of this study

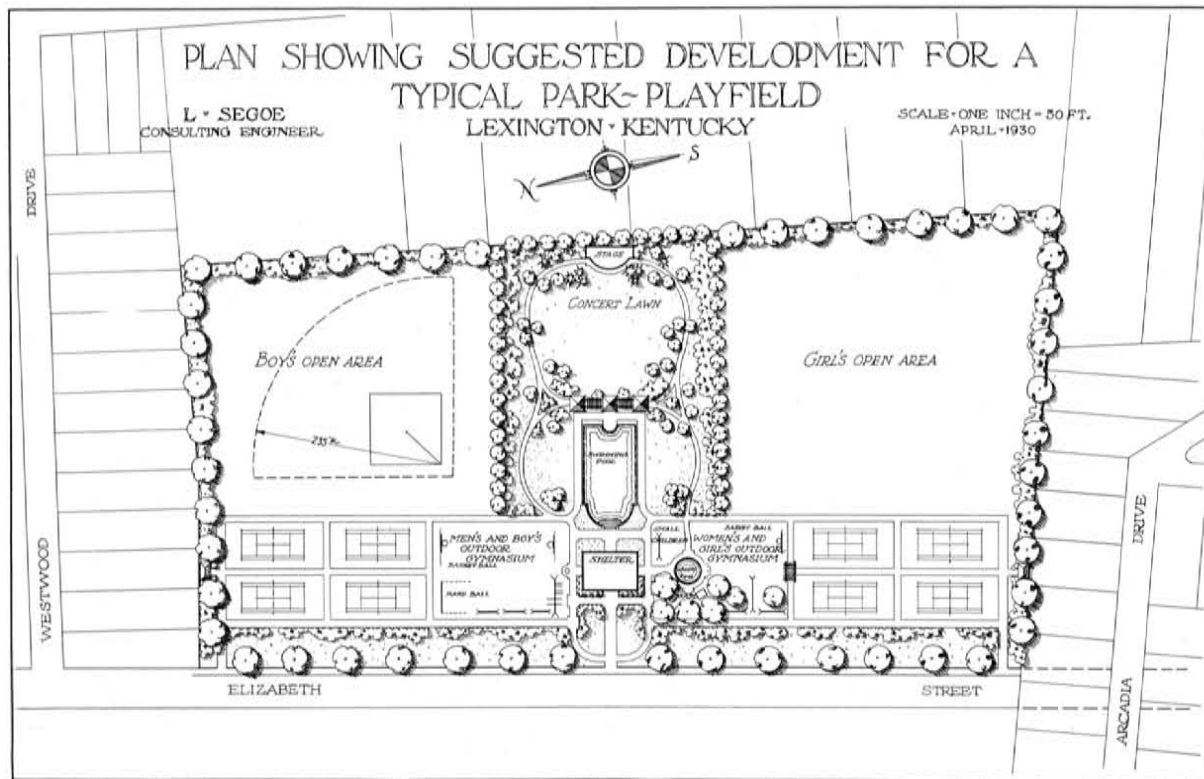


EXHIBIT 14

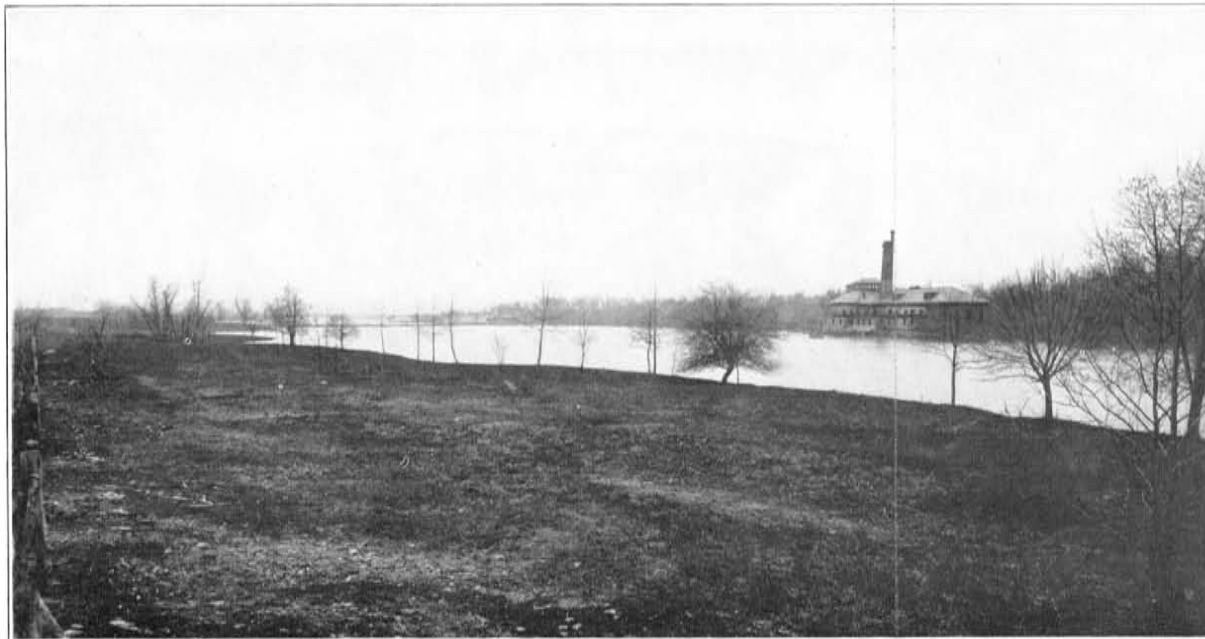
tractive setting for Transylvania College and for the many private buildings of historical significance in this neighborhood, and to clear the way for creating an interesting and attractive composition of educational and historic buildings. Incidentally, the acquisition of this block for park purposes would also eliminate one of the worst slums in the city.

## 2. Reservations.

As has already been stated, these large outlying parks or reservations are to supplant the large intown landscaped parks in the Recreation System. The general use of the automobile and the building of good roads, that are responsible for this change, also made it possible to use greater freedom in the selection of suitable areas for such purposes. Natural beauty and spaciousness should therefore be considered prime requisites in their selection. They should be large enough to give the feeling of the open country and a sense of freedom, even by intensive use. The region within 10 or even 20 miles can well be combed for any especially interesting topography, good timber, body of water, etc., and if there are areas

with such assets, they should be included in such reservations. However, the nearer these may be found to the city and the more accessible they are made to the largest number of people, the more useful they will be. Since the same features that render certain areas especially attractive for these large outlying parks also attract high-class real estate development, or commercialization in other ways, and, since in most cases there is only a very limited number of such properties, they should be acquired early.

During recent years a number of cities have been successful in acquiring considerable acreages of attractive outlying reservations. The city of Denver, Colorado, for example, owned 10,237.14 acres of Mountain Forest Park areas already in 1925, and the City of Phoenix, Arizona, has a reservation, the Phoenix Mountain Park, that contains 15,080 acres. To cite an example or two nearer home: the City of Cincinnati owns in Mount Airy Forest 1,131.5 acres, and has under consideration the rounding out of this reservation by acquiring several hundred additional acres; the City of Dayton, (Ohio) owns two reservations, one containing 320 acres just beyond the city limits, and one of only 50 acres about twelve miles from the city.



THE RESERVOIRS OF THE WATER COMPANY  
To be included in the proposed Reservation

Within such reservations, which may contain anywhere from 100 to 10,000 or more acres, there is generally ample opportunity to provide facilities for active recreation of all sorts, such as golf courses, baseball diamonds, football fields, bridle paths, picnic groves, etc. The number and size of these play areas naturally depend upon the size, topography and other physical features of the reservation.

In the design of the Recreation System for Lexington and Environs provision was made for two reservations, one for the white and one for the colored population. **It is recommended that 800 acres or more of that part of the property of the Water Company lying to the south of Richmond Pike and including the reservoirs, should be obtained and developed as a reservation for the white population.** It is the eastern portion of the Water Company's property that is proposed for this purpose, which, by reason of its ruggedness and marshiness in spots, is not particularly suitable for residential development, but has exceedingly attractive features from the recreational standpoint. There are a number of nice groves within this area, and the reservoirs offer opportunities for water sports of all kinds. **The second reservation is intended for the colored population, and would include 100 acres or more in the valley of Elkhorn Creek, about two miles outside and to**

**the north-west of the city.** This is a particularly charming valley, with a clean winding creek and a number of nicely wooded groves. Because it is not suitable for cultivation and being sufficiently remote from the city, it should be had at a reasonable cost.

As regards the water works reservation, it is not intended that the City should acquire it immediately. This is not necessary. These grounds and the reservoirs are now being used to a certain extent for recreational purposes, for picnics and also for fishing and boating. The use of water-works properties for recreational purposes, especially where publicly owned, is quite customary.

As a notable example, Fort Worth, Texas, may be mentioned, where in the Lake Worth reservation, owned by the municipal Water Department, there are 9,000 acres, of which approximately 2,780 acres are definitely dedicated to park and recreational purposes. In Cincinnati, 200 acres of City Water Works property are being used more or less intensively for public recreation, and in Dayton, Ohio, 500 acres along the Mad River, also owned by the municipal Water Works, are so used.

**It is recommended, however, that whenever the Water Company will have to turn to a new source of water supply, or should the City acquire the properties and plant of the Water Company, the 800 or more acres recommended should be preserved and developed as a reservation.**



### III. BOULEVARDS AND PARKWAYS.

These types of recreation properties are fundamentally different in design and primary function from any other types of recreation areas in the Recreation System.

As a part of this system, their primary function is to give access to and to connect the various larger units of the park and playground system, also to provide arteries for pleasure driving. Some of these may also be used for horseback riding and hiking. Secondly, these boulevards and parkways serve as broad lanes for introducing light and air, they embellish the section of the city through which they pass, and can be used to good advantage to redeem areas that otherwise might become waste lands or unsightly dumps, such as the banks of rivers and streams.



INFORMAL PARKWAY DRIVES  
Are recommended for the Lexington Region

From the standpoint of traffic, these boulevards and parkways are complementary to the Major Street System; inasmuch as their use is customarily restricted to passenger vehicles,

they provide for the expeditious movement of this type of traffic.

Although the functions of both boulevards and parkways are the same, and therefore the two terms are often interchanged in general parlance, there is a difference in their physical characteristics. A boulevard is really but a major street that is probably wider than the average, and is embellished by central planting strips or unusually broad grass strips and by tree planting. A parkway is a road through a park or a road which is flanked on one or both sides by planted areas of sufficient width to create the impression that the road leads through a park.

In the design of the Recreation System for Lexington and Environs two belt-like boulevard drives and one radial boulevard have been projected. These were developed both on the basis of what traffic will require, as a part of the Major Street Plan, and as an integral part of the Recreation System. It may be noted in Exhibit 13 that an effort was made to lead these through or near the proposed parks and reservations, so as to provide connections between the units of the Recreation System; also to increase the attractiveness of these boulevards for pleasure driving.

### SPECIAL TYPES OF RECREATION AREAS OR OPEN SPACES

In addition to the general types of recreation areas, discussed hereinbefore, and which, as has been stressed, should be developed fully as a part of a comprehensive Recreation System, depending upon local conditions and opportunities certain other types of open spaces or recreational facilities may also be included. These may be landscaped areas, such as ornamental plots, grounds around public or historical buildings, around landmarks, monuments, etc.; or they may be recreation grounds devoted to some major form of recreation, such as golf courses, stadiums, camp sites, bathing beaches, etc.

In connection with the park-like types of special open spaces it is desired to make particular mention of the Henry Clay Home and surrounding grounds. It would indeed be highly desirable to preserve for future generations this building and property connected with so much of the personal life of this great citizen of Lexington and of the history of the City. However, in view of the great and pressing need for additional recreation areas of the more important types, that will make great demands upon the City's financial resources, and in view of the fact that this property is located in a section of the city that probably least needs public recreation grounds, the



acquisition and preservation of this historical landmark will have to be left to private effort.

As regards the special types of areas for active recreation, there certainly should be at least one public golf course in the city. Such may be provided in the proposed Water Works

Reservation. A city of the size of Lexington should also have a municipal stadium for the holding of major games and athletic events. Possibly the playfield, that is recommended in connection with Ingleside Park, could be developed as such stadium.



"ASHLAND" — THE HOME OF HENRY CLAY

#### PARK RESERVATION AND PLAYGROUND PROGRAM

The recommendations of this study of a Recreation System for Lexington and Environs are presented graphically in Exhibit 13 which shows the Proposed Recreation System; they are listed in considerable detail in the **Park, Reservation and Playfield Program in Exhibit 15.** This program includes all existing and proposed recreation areas, the radius of service of each, their present size, and **recommended acreage to be acquired,**—also, as a measure of adequacy, the persons per acre in the district to be served by each. **A program for the acquisition of the recommended recreation areas in five-year periods is also included.**

While the data and recommendations given in the program can be readily interpreted, it

should be mentioned that, in connection with preparing the acquisition program, in addition to the measure of urgency, other factors, such as the developed or undeveloped nature of the area to be acquired, the possibility of losing the tract to private development, the age and condition of buildings on plots already developed, were fully considered. In a case where it was felt that a tract especially suitable for a park or playfield would be likely subdivided shortly unless acquired, the date recommended for its acquisition has been advanced. Where it appeared desirable to allow buildings to further amortize themselves before making the purchase of an improved tract, the date recommended for its acquisition was correspondingly deferred.

CITY PLANNING & ZONING COMMISSION  
LEXINGTON KY

PARK RESERVATION & PLAYGROUND PROGRAM

L. SEGOE  
CONSULTING ENGINEER & CITY PLANNER  
CINCINNATI, OHIO

NO.	NAME	LOCATION	RADIUS OF AREA SERVED IN MILES		POPULATION SERVED		NO. OF PERSONS IN 1970 PER ACRE		ACREAGE				ACREAGE TO BE ACQUIRED BEFORE										REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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### ADMINISTRATIVE CONTROL

While the question of proper administrative control of public recreation properties is not a city planning problem and, therefore, its discussion is not strictly within the scope of this study, the success of carrying out the proposed program for the development of the Recreation System and the usefulness of recreation properties is so largely dependent upon proper administrative control, that it appears appropriate to submit in this report certain considerations pertaining to this question.

At present, the maintenance and operation of the few City-owned parks and playgrounds is divided between the Commissioner of Public Property and the Lexington Civic League; the former maintaining and supervising the parks, and the latter operating the playgrounds. Including a superintendent and a park policeman, four men are engaged on park maintenance in all parks; the Lexington Civic League employs nine men and eleven women as play supervisors. The maintenance and supervision of parks is financed entirely from public funds, while the operation of playgrounds by the Lexington Civic League is partly paid for by the City and partly by funds raised through the Community Chest.

In a small community possessing only a few parks and playground properties this method of park and playground administration may answer the purpose, but in a community of any size initiating a plan for the systematic development of a Recreation System and for a definitely-organized recreation service, such an arrangement is likely to be found unsatisfactory.

It has been previously shown that the city is singularly deficient in public recreation areas. This deficiency will have to be met if the community is to live up to its obligations. A plan and program has been prepared and is recommended for the systematic building up of an adequate recreation system. The carrying out of this plan and program is an undertaking of first importance and of considerable magnitude. The person or persons charged with this responsibility will have to demonstrate, by the usefulness of such recreation grounds as now exist or will have been acquired, the justification for additional expenditures. It is therefore desirable that the planning, development, operation and maintenance of the entire Recreation System be placed under the control of some central administrative authority.

As regards the question, who shall be such authority, it may be suggested that it be the Commissioner of Public Property, who is now in charge of the existing park and playground properties. While such an arrangement has undoubtedly many points of merit, experience throughout the country has demonstrated that, generally speaking, the cities that were most successful in the development and operation of their park and playground systems, were those where these properties are under the control of Park Boards or Commissions. In the majority of cities the administration of parks is in the hands of Park Boards or Commissions. This form of administrative control is strongly favored by recreation specialists as well as town planners.

Among the advantages of the Park Commission form of control are the following: (a) continuity of plan and policy by the rotation of the appointment of members; (b) the exceptionally high type of men and women attracted to this service, which is generally non-salaried; (c) the possibility of drafting for this service, by appointment, outstanding citizens, who are known to be naturally inclined to work of this nature; (d) the possibility of securing the services of well-trained park executives, because of the more secure tenure of office under a Park Commission; (e) no division of interest, since the members are chosen for one definite service to the community and are not distracted by other duties; (f) the weight of influence of a Park Commission in educational work, in creating sentiment in favor of bond authorizations, and in obtaining donations or dedications of property from public-spirited individuals or organizations, is likely to be more powerful than that of a single individual; (g) cooperation in the planning, development, operation, and maintenance of the park system, between a Park Commission and the various public and private agencies, such as boards of education and civic groups, has been found to be easier and closer than under other forms of park administration.

Of course, in spite of the many advantages of the park commission form of control, it may also have its weaknesses. These, however, are not inherent in the commission form. There can be no question but that, among all the forms of park administration, the administration by Board or Commission has thus far proved itself on the whole to be the most satisfactory form, one under which much progress has been made in the past few decades.

It is believed, therefore, that it would be desirable to entrust the development of the Proposed Recreation System, as well as the maintenance and operation of present properties, to judiciously-chosen Park Board or Commission.

## FINANCING

In the financing of the acquisition and improvement of recreation areas the following are the more or less customary methods employed: (a) use of current funds; (b) proceeds from the sale of bonds secured by general taxation; (c) proceeds from the sale of bonds secured by special assessment; (d) a combination of general bonds and special assessments; (e) installment payments out of the net proceeds obtained from the operation of the particular projects itself; (f) proceeds from gifts, donations, bequests, etc.; (g) acquisition of properties through the use of the principle of excess condemnation or excess purchase.

Of the above methods of financing, the methods of excess condemnation and special assessment are not available for Lexington. Admitting that there is little hope of obtaining legislative authority in the near future for the use of excess condemnation, it is desired to stress the importance of obtaining authority at the earliest possible time for the use of the method of financing permanent public improvements, wholly or partly, by special assessments. Indeed if the recommendations of this Comprehensive Plan, and particularly the development of the Recreation System and the Major Street System are to be carried out, this is considered imperative.

Except for projects by which the entire municipality is benefited more or less uniformly, it is not equitable to finance these by general taxation. There is hardly an improvement which is not accompanied by special local benefits. It is unjust that the taxpayers throughout the city should be taxed to create wealth for a limited number of individuals. Those who are especially benefited by an improvement, should pay for it within the extent of such benefits, and in proportion to the aggregate of such special benefits, compared with the value of the improvement to the community at large.

Little children's playgrounds, neighborhood parks and playfields, are the types of improvement which, by reason of their functions, are clearly benefiting primarily the population living within a specific range of such recreation areas. The equitability of applying in their acquisition the method of special assessment, is probably as clear or clearer than in the case of any other type of public improvement.

Extensive use has been made of this method in the case of the above types of recreation areas in various cities, but especially in Minneapolis. The experience in that city has been so favorable, that the public authorities were swamped with petitions from neighborhoods requesting the establishment of such recreation areas, and declaring themselves willing to be assessed for the entire cost of acquisition and development. No wonder, since, in addition to other benefits, property values have nearly doubled as a result of such park and playground improvements.

Obviously, this method of financing cannot be used without discrimination. Too many such recreation areas can easily overtax the City's capacity to properly maintain and operate them. Care must be exercised not to attempt this plan in neighborhoods where the benefits to property values would not compensate for the outlay; this is almost always the case in the intensively built up sections of the city. In general, the levying of special assessments should only be employed, where there is clear assurance that the special benefits are equal to or greater than the proposed assessments.

There are, of course, other types of properties in the Recreation System which are of general benefit to the community at large, in addition to specially benefiting the properties immediately surrounding them, and there are other recreation areas that may be considered of general and more or less uniform benefit to the community as a whole. In the former case, the appropriate method of financing would be partly by special assessment bonds and partly by general bonds, and in the latter, entirely by general bonds or other general revenues.

However, since so many of the recreation areas and those that will probably prove most costly, are intended to provide recreation facilities primarily for a limited neighborhood, it should seem evident that their financing by the method of special assessments would be not only the most practicable, but also the most equitable method. **It is being urged, therefore, that an organized effort be made to obtain legislative authority for the use of this method of financing, not only for the acquisition and improvement of parks and playgrounds, but also for other types of permanent improvements.**

## CONCLUSION

It is appreciated that the acquisition and development of the recreation areas recommended by this plan and program will seem an ambitious undertaking. From 42.53 acres of publicly-owned recreation areas at present, to 1,134 or more acres by 1960, does look like a formidable order. It may serve as an en-

couragement and inspiration to state that a similar and even greater task has been mastered before. In 1914 the city of Dayton, Ohio, had only 35 acres of city parks and playgrounds. At present it owns 1,427 acres of parks, playgrounds and reservations.

TABLE VI

## SUMMARY OF PRESENT AND PROPOSED PUBLIC RECREATIONAL AREAS.

Types of Recreational Areas		PRESENT (1929)				PROPOSED (by 1970)			
		Publicly-Owned OR Operated		Publicly-Owned AND Operated		Publicly-Owned		Publicly-Owned AND Operated	
		Acres	Pers. Per. Acre	Acres	Pers. Per. Acre	Acres	Pers. Per. Acre	Acres	Pers. Per. Acre
Neighborhood Parks, Playgrounds and Playfields (exclu- sive of School Playgrounds)	White	28.05	1450	27.15	1500	27.15	1500	140.45	465
	Colored	17.13	870	15.38	970	15.38	970	33.38	495
	TOTAL	45.18	1230	42.53	1305	42.53	1305	173.83	470
All Public Recrea- tional Areas ex- cept Outlying Reservations (in- clusive of School Playgrounds)	White	30.26	1340	29.36	1385	40.38	1005	190.82	342
	Colored	17.13	870	15.38	970	16.97	880	43.39	380
	TOTAL	47.39	1170	44.74	1240	57.35	970	234.21	350
Outlying Reservations	White	—	—	—	—	—	—	800	82
	Colored	—	—	—	—	—	—	100	165
	TOTAL	—	—	—	—	—	—	900	91
All Public Recreational Areas	White	30.26	1340	29.36	1385	40.38	1005	990.82	66
	Colored	17.13	870	15.38	970	16.97	880	143.39	115
	TOTAL	47.39	1170	44.74	1240	57.35	970	1134.21	72



## CHAPTER IV

### SCHOOL SYSTEM

#### Purpose And Scope of Study

From the city planning point of view, the study of the development of the public school system involves the determination of the location and size of future schools and school play yards in such manner, that the development of the School System should become thoroughly coordinated with the physical growth of the city under the Comprehensive Plan, and that the School System should always keep abreast or somewhat ahead of the demand for school facilities as the city continues to grow, and, further, that this development of the School System be accomplished systematically and with sound economy. From the educational and school administrative point of view, it is demanded that the School System should measure up well with desirable standards in these respects, so as to form a thoroughly coordinated system conducive to furnishing in an efficient and economical manner the best educational facilities. Obviously, a proper plan for the future development of the School System of the City of Lexington and Environs should be prepared in full consideration of both of the above major points of view.

Based on studies of population growth and of the increase of public school enrollment, the average annual increase in enrollment during the next 40 years has been estimated at around 140 pupils, requiring a yearly addition of about four class rooms in elementary, junior high and senior high schools, or an addition of about twenty class rooms in each five-year period. These figures illustrate the importance of providing the additional school facilities in accordance with a carefully prepared program, in harmony with the physical growth of the city and as a part of a coordinated school plan.

The specific problems that confront the Boards of Education year after year are, where and how the additional school facilities should be provided or the existing obsolete facilities replaced: Whether it would be preferable to add the needed rooms to one or more existing schools or whether to build a new school at a new location; whether an obsolete school building should be re-built on its present site or whether it would be more desirable to abandon the old location and to re-locate the building.



THE HENRY CLAY HIGH SCHOOL  
(Note excellent architecture)

Obviously, from the standpoint of educational and administrative requirements, the City and County Boards of Education are better qualified to select school sites, to delineate school districts, and to determine when the new school facilities should be provided, than is any other body. It cannot be denied, however, that even with the utmost care and thought it has been extremely difficult to avoid mistakes in the selection of school sites, due to the limited information hitherto at the disposal of these Boards concerning the probable future development of the city and surrounding territory. The studies of Lexington's present School System show that both Boards of Education have been quite fortunate in their selections, but schools may be found here, as in almost every city, that are gradually being surrounded by industry or business, or closely approached by a type of development which renders a school location increasingly undesirable, and school sites at the intersection of streets that had developed into heavily traveled thoroughfares. It appears that such mistakes as have been made in the selection of school sites, here and in other cities, are almost invariably due to inadequate information as to the probable trends in the future growth of the city.

The City Planning and Zoning Commission, on the other hand, is not only now in possession of a more comprehensive collection of facts than has ever been assembled heretofore in regard to the past and probable future development of the city and its environs, but has prepared the very plans for guiding and regulating this development. The Commission is therefore singularly qualified to be of the greatest assistance to both Boards of Education in the future development of the School System, by its study of this problem from the city planning point of view.

From the standpoint of the Comprehensive Plan, it is one of the functions of the City Planning and Zoning Commission, under The City Planning and Zoning Law, to prepare plans for the location and extent of public buildings and grounds. Such plans must necessarily include the public schools and school play yards. It is also important that the school system should be correlated with the various other features of the Plan, such as the location of public playgrounds, parks, parkways, thoroughfares, transit facilities, etc. Thus, the plan for the development of the school system becomes an integral part of the Comprehensive Plan.

This plan and program for the future development of the School System of Lexington and its Environs, is based on a thorough study of the present school plant, of the increase of school enrollment, and of population growth and distribution, both present and future. It has been thoroughly coordinated with other features of the Comprehensive Plan, especially with the Major Street Plan, the Building Zone Ordinance and Map and with the Proposed Recreation System. The established educational and administrative standards and policies of the City and County Boards of Education were constantly observed in its preparation.

It will be noted in the following that separate and complete systems of public schools and school play yards were studied and developed for the white and for the colored population. Also, that the proposed plan shows the public school system in the year 1970, and that the expansion program, similarly to other features of the Comprehensive Plan, covers the next 40 years.

### ASSUMPTIONS

The following assumptions were made in the preparation of this plan and program for the future development of the Public School System of the City of Lexington and its Environs:

1. That the Building Zone Ordinance will be put into effect and that the Comprehensive Plan for Lexington and its Environs will be carried out, at least in its major features.

2. That the population growth and population distribution studies, upon which the estimates of future enrollment were based, are reasonably accurate.

3. That there will be no radical change in the trend toward the slow reduction of the size of families.

4. That there will be no radical change in the public school attendance. This also includes the assumption that the same proportion of the school age population will attend parochial and private schools as they do at present.

5. That the future boundaries of school districts will be approximately as outlined on the maps showing the Public School System for 1970.

6. That the school system will be built upon the 6-3-3 basis.

The traditional plan was assumed in calculating the permanent number of seats needed, that is, a separate seat was provided for each pupil in the school expansion program.

The school studies were confined to grades 1 to 12 inclusive. The kindergarten grades,

the normal schools, training schools, and other special schools, were not considered in estimating enrollment and preparing the school expansion program. The latter schools, because of their selective nature, may be assumed as superimposed upon the regular public school system, and considered as a factor of safety in these calculations.

## STANDARDS

The following standards were observed during the course of these studies:

1. The desirable size for elementary schools is 800 or possibly 1000 pupils. Such schools prove to be equally satisfactory from an educational standpoint and from the standpoint of administration. In consideration of the above, an attempt was made to determine the school districts so as to keep the enrollment of the schools within the limits just mentioned.

However, it will be noted that the estimated enrollment for 1970 for some of the elementary school does not exceed 300 pupils. In some cases, where the school districts are in a sense isolated by natural boundaries or artificial barriers (such as cemeteries, large institutions, heavily-traveled thoroughfares and railroad lines), or in the outlying districts that will not be likely built up completely enough in 1970, recommendations call for smaller schools. Manifestly, the enrollment figures for the schools in the type of districts last mentioned do not represent the ultimate size of schools.

The size of junior high schools was kept under 1,000 seats, although there are few objections to larger junior high schools.

The maximum size for senior high schools was assumed as 2,000 pupils.

2. In the calculation of the number of rooms needed, the capacity of regular class rooms was assumed as 40, 35 and 30, respectively, for elementary, junior and senior high school grades.

3. Play yard space was provided, wherever possible, in connection with the elementary and junior high schools on a basis of a minimum of 100 square feet per pupil.

4. To provide for the proper setting of school buildings, for adequate play yard space, and for possible future expansion, 1.5 acres was assumed as the minimum size plot for new elementary schools and 5.0 acres for new

junior high schools, although larger plots are highly desirable wherever land is cheap enough.

In the selection of locations for new schools and in making decisions as to whether it would be preferable to retain an existing school and reconstruct or extend it as needed, or whether it would be more desirable to abandon and relocate the same, the following factors were carefully considered:

- (a) Adequate size of lot
- (b) Practicable shape of lot
- (c) Topography
- (d) Reasonable cost of land
- (e) Minimum amount of existing improvements to be removed
- (f) Dryness of ground and foundation conditions
- (g) Adequacy of playground on the same or adjacent sites
- (h) Possibilities of using other existing playgrounds or other City-owned properties
- (i) Avoidance of business or industrial districts and uses
- (j) Avoidance of nuisances, of hospitals and cemeteries
- (k) Avoidance of dangers of thoroughfare traffic, of railroad crossings
- (l) Central location in consideration of the future distribution of the tributary population
- (m) Accessibility
- (n) Convenient walking distance to existing and proposed thoroughfares, transit and bus lines
- (o) Possible grouping with other public or semi-public buildings.

In outlining the proposed school districts, after the selection of school sites was completed, the following considerations were constantly kept in mind:

1. Children of elementary school age should not be required to walk further than one-half mile and those of junior high school age not further than one mile.
2. Children should not be required to cross railroad lines at grade or heavy traffic streets, except those residing along such streets.
3. Children should not be required to cross business or industrial districts.
4. Long walks along open institutional or public properties should be avoided, since these offer little protection against weather conditions.
5. Other conditions being equal, school district boundary lines should be drawn equidistant between schools.

### METHOD OF STUDY

The method followed in the preparation of this plan and program for the development of the School System was necessarily based on a thorough-going study of existing conditions. In addition to the inspection on the ground, of each school and its surroundings, the following data were collected with reference to each public school and shown on school study maps, and in the Schools and Play Yards Table:

1. Name
2. Location
3. Date of construction and dates of additions
4. Number of rooms added
5. Number of regular rooms
6. Capacity of regular rooms
7. Grades in school
8. Number of permanent rooms
9. Number of permanent seats
10. Enrollment for June, 1929
11. Seats needed or now vacant
12. Boundaries of school district
13. Population in school district in 1929
14. Area of plot in acres, including building
15. Play area needed at 100 sq. ft. per pupil, June 1929.

From the above data "the enrollment factor" was calculated for each elementary school district. The enrollment factor represents the proportion of the total school district population enrolled in a particular school, and furnishes a very reliable means for the prognostication, from future population figures, of the probable future enrollment of the school district. These enrollment factors may be considered fairly constant for and characteristic of the district for which they were determined, there being little probability that the character of the various districts will undergo much change in the future, due to the stabilizing effect of zoning. For new school districts, the enrollment factors were assigned by comparison with existing school districts of similar character for which the enrollment factors were known.

As may be noted in Exhibit 16, the Schools and Play Yards table, the enrollment factors for the elementary schools show a variation from 6.5 percent in the Harrison and the Constitution school districts to 17.9 percent for the Booker T. Washington school district; the average for the entire city being 9.6 percent.

The enrollment factor used in connection with junior high schools was derived from a comparison of the total enrollment in the

7th, 8th and 9th grades, throughout the city, with the total city population. Junior high school districts are necessarily so large, that special local characteristics tend to counteract each other within each district. Therefore, the average enrollment factor of 3.0 percent was estimated and uniformly applied to all sections of the city. In a similar manner 2.5 percent and 2.0 percent was estimated as the enrollment factor for the white and colored senior high schools respectively.

The 1970 population of the proposed school districts was determined from the population spot map in Exhibit 3, and by the application of the enrollment factors the probable 1970 enrollment figures were calculated. Then, by a process of adjustment, the district boundary lines and the enrollment figures for each school were made to approximate the requirements and standards hereinbefore discussed.

Generally speaking, the same course was followed in revising the limits of existing school districts and checking the adequacy of existing school facilities, also in the determination of needed additions to buildings and sites. The results of these calculations are given in Exhibit 16.

In the same exhibit is presented, by five-year periods, a program for the development of the school system during the next forty years; for the erection of new schools and additions to existing ones, also for the acquisition of land for schools and for additional play-yard space. More or less arbitrary names were assigned to the proposed schools for the sake of convenient reference.

The dates recommended for the acquisition of land for new schools or additions for play-yards, are primarily governed, of course, by the estimated time of actual need for the new school facilities, but they were also influenced by the character and location of the recommended sites. Wherever a desirable, unimproved site is situated in a fairly well developed district where the choice is limited, it appears advisable to acquire the site before it is developed privately and its acquisition made prohibitive. Where the plot of ground to be acquired is now occupied by a number of buildings, the date of purchase may well be delayed until a majority of the buildings have nearly amortized themselves.







## RECOMMENDATIONS

Generally speaking, the facts and recommendations listed in Exhibit 16 can be readily interpreted and do not need to be elaborated upon. However, it is felt that additional explanations are desirable concerning certain schools, where alternative selections are offered, or where it has not been found possible to present in this tabular form all of the facts, conditions and considerations underlying the recommendations. The comments on the special cases that follow should be considered, therefore, as supplementary to the Schools and Play Yards table in Exhibit 16.

The general location of existing schools, as well as of all proposed Elementary Schools, Junior High Schools and Senior High Schools, is indicated in Exhibits 17 and 18, showing the proposed Public School System for 1970. The first shows the system of schools for the white population and the second for the colored population.

## ELEMENTARY SCHOOLS (WHITE)

**JAMES LANE ALLEN SCHOOL.** It is recommended that the proposed site for this new school should be acquired in the immediate future, and that a new school building be erected on this site not later than 1940. The site selected, in the undeveloped western part of Pensacola Park, while not ideal, because of its proximity to the Southern railroad line, is about the only available spot that would be centrally located to the district that it will be called upon to serve. Until 1940, the Jefferson Davis School and the Picadome School should be able to care for the enrollment of this district, assuming that the city limits will be extended to about Westwood Drive.

**ARLINGTON SCHOOL.** It would be highly desirable to abandon this school by 1955 and to rebuild the same on a new site, for which a location east of Bryan Station Pike and north of Castlewood Drive is suggested. While the present school is centrally located for the district it serves, the estimated 1970 population of this district would necessitate a school far too large to be handled effectively from the educational and administrative standpoint. The relocated school, together with the proposed Headley School, would far more effectively care for this section. Furthermore, the present school is on a heavily traveled highway and in the line of business growth.

However, since this school will serve the district until about 1955, it is desirable to obtain, as soon as possible, about one acre of additional land adjoining the school, for playground purposes. By 1955 the new additions will have probably amortized themselves.

**JEFFERSON DAVIS SCHOOL.** Since ten to twelve rooms of this school building would be available until about 1960 for other purposes, it is suggested that these be used to relieve the overcrowding at the Henry Clay High School. It is also recommended that the athletic facilities of the Henry Clay High School be removed from the site of this school to a new athletic field, to be provided in conjunction with the proposed McDowell Junior High School. It is estimated that with the above recommendations carried out, this school would still be more than adequate to accommodate any future enrollment from its district.

**DUDLEY SCHOOL.** It is recommended that this school be abandoned in the very near future and that it be replaced by 1945 on a new site, for which a location between High and Maxwell Streets and between Patterson and Merino Streets is suggested. There can be little doubt that eventually the Dudley School will have to be rebuilt to serve this district. The population distribution studies show that such school will be necessary. The above recommendation for delaying the building of a new Dudley School, is made for the purposes of economy and for relieving the construction program proposed for the next five years. To accomplish this, it will be necessary, and it is recommended, that the Board of Education arrange with the University of Kentucky for accommodating about two hundred pupils in the elementary grades of the new training school; further, that a two-room temporary addition be made immediately to the Harrison School, which two schools would be called upon to handle the enrollment of the present Dudley School district, with some assistance by the Maxwell School. This arrangement would be continued until about 1945, when it is proposed to move the Harrison School to a new location and to build the new Dudley School.

The other alternative would be the immediate reconstruction of the Dudley School at the proposed location.

**HARRISON SCHOOL.** It is recommended that this school should be abandoned by 1945 and replaced by a new building on a new

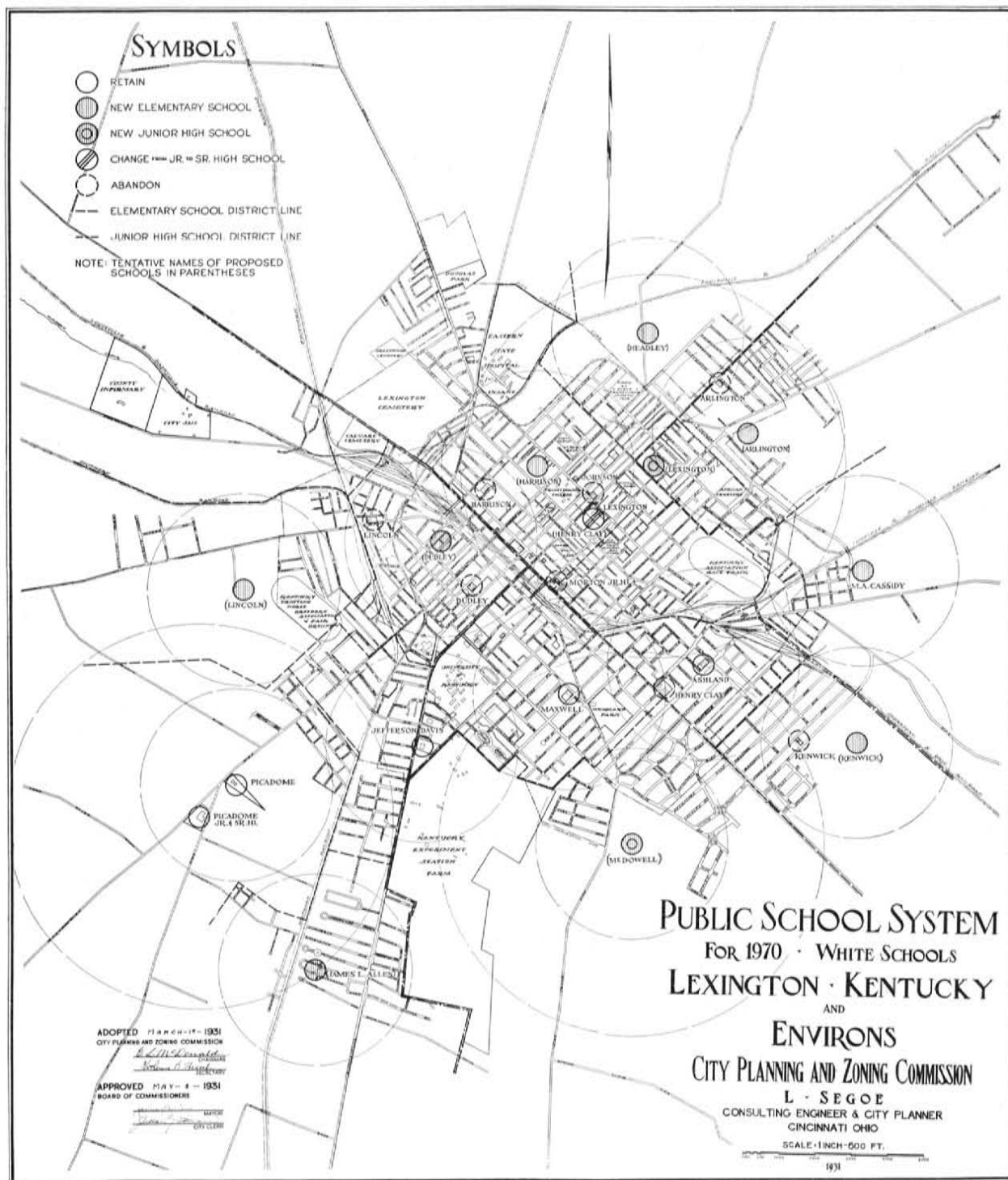


EXHIBIT 17

site, for which the area bounded by Third and Fourth Streets, Broadway and Hampton Court is proposed. The present school building is eccentrically located in relationship to its district, and is gradually being approached by business development. The size of the school at the new location has been so determined, as to accommodate the enrollment from the I. O. O. F. Orphans Home. The proposed site of this school was selected in which to illustrate the typical development of the grounds of an elementary school. The detailed design of this site is shown in Exhibit 19.

Should the construction of the new Dudley School be deferred until 1945, as has been previously suggested, two temporary rooms will have to be added to this school immediately.

**JOHNSON SCHOOL.** It is recommended that this school be abandoned in the immediate future and replaced on a new location, for which a site lying between Sixth and Alabama Streets and Limestone and Walnut Streets is suggested. This new school would be used as an elementary school until about 1960, when the Henry Clay High School may be abandoned and rebuilt on the present location of the Lexington Junior High School. At the same time, the last named school may take over the new Johnson School building. This should therefore be so designed at the start, that it should be readily convertible into a junior high school. The enrollment of the Johnson School, then abandoned as an elementary school, would be absorbed by the new Harrison, the new Arlington and the Headley Schools.

**KENWICK SCHOOL.** It is recommended that this school be abandoned in the near future, and rebuilt on a new site, for which a location northeast of Holliday Street and about one-fourth mile southwest of the C. & O. R. R. is suggested. The present school is more or less a temporary structure, inadequate both as to class room and play facilities.

**LINCOLN SCHOOL.** It is recommended that this school be abandoned by 1950 and replaced by a new building on a site for which the location west of the Kentucky Trotting Horse Breeders Association's track and about one third mile south of Versailles Pike is suggested. While the present site of this school is quite adequate as to size, its location is extremely poor, being very close to the railroad and on a main thoroughfare. Moreover, it would be eccentrically located for this district, after the Dudley School will have been rebuilt at its new location.

**McDOWELL SCHOOL.** It is recommended that this new school should be built within the next two to five years, somewhere between Tates Creek Pike and Fontaine Road, about one-third mile to the south of the intersection of these two streets; that in this school plant should be housed both an elementary and a Junior High school, and that the site should be large enough to provide an athletic field for the Henry Clay High School. The district that this elementary school will be called upon to serve is developing very rapidly, and, with the probable annexation in the very near future of most of the built-up area within this district, the Maxwell School will be unable to care for the increased enrollment. The junior high school to be placed in this school plant is to replace the Morton Junior High School, which is to be abandoned. The removal of the high school athletic field to this site from the Jefferson Davis school, has already been recommended in discussing the facilities at this last named school.

#### ELEMENTARY SCHOOLS (COLORED)

**CONSTITUTION SCHOOL.** It is recommended that this school be abandoned by 1940, and relocated on a site for which the general location of the block bounded by Ohio, Deweese, Third and Fourth Streets is suggested. The present school is unfortunately located, in an undesirable neighborhood, in close proximity to the railroad, and in the extreme southeast corner of the district which it serves. The size of the site is also inadequate. The new school site, in addition to being better related to the future school district, would be in a far more desirable neighborhood, and would, incidentally, clear one of the most congested and dilapidated neighborhoods in the city.

**PATTERSON SCHOOL.** It is recommended that this school be abandoned in the immediate future and moved to a site a block or two farther north. The site of the present school is entirely inadequate and undesirable, because of its proximity to the switching tracks of the Southern Railway. The new school, at the suggested location, would be more central for its district. There are a great many dilapidated dwellings at the proposed location, and the new school would probably help to raise the character of the neighborhood.

**RUSSELL SCHOOL.** It is recommended that this school should be abandoned in the immediate future and replaced in a new school plant combined with a Junior High School,

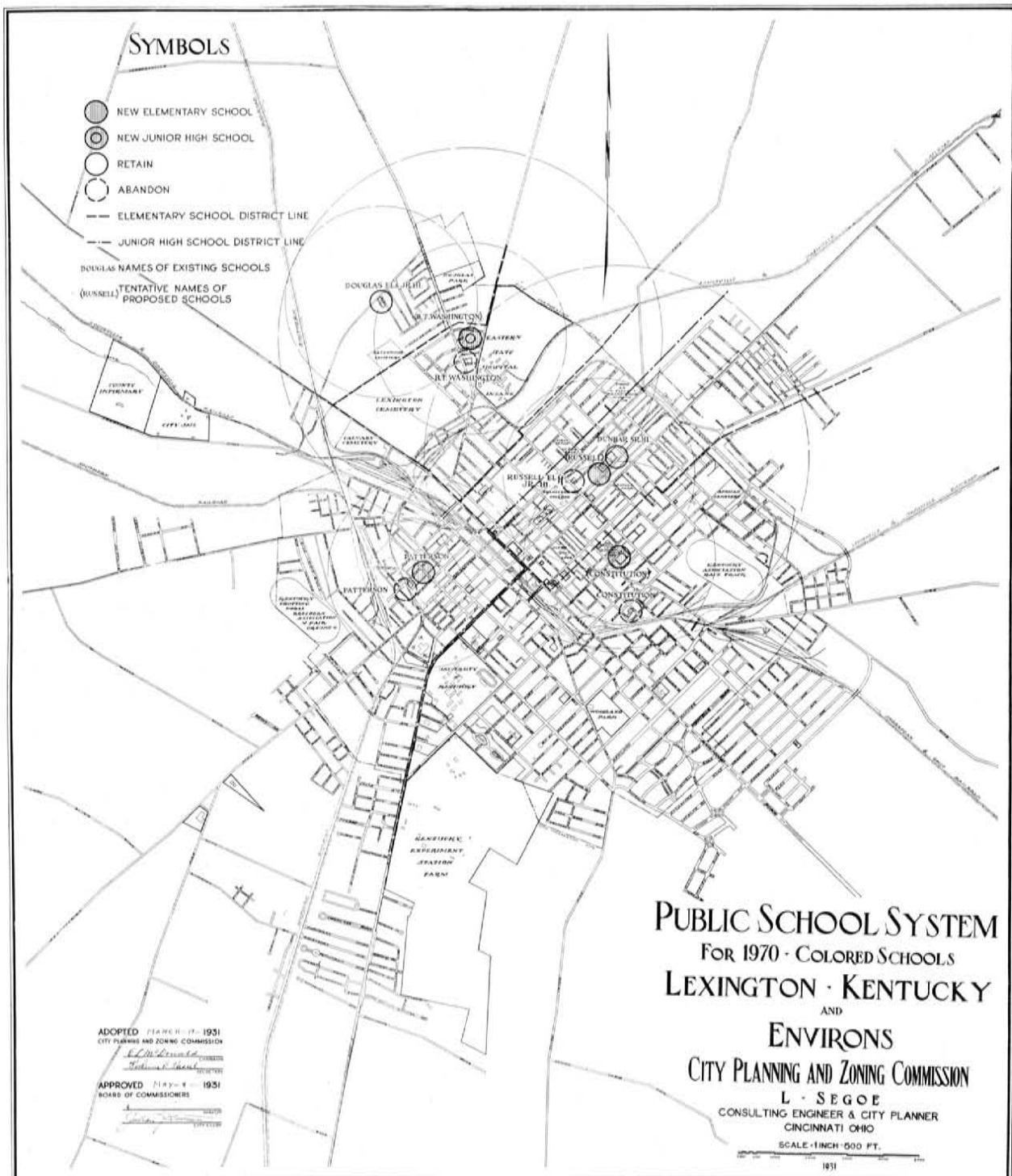


EXHIBIT 18





THE PATTERSON ELEMENTARY SCHOOL  
(Note freight car in adjacent railroad yard)

on the property now used by the Lexington Children's Home on the corner of Fifth and Upper Streets. The present school has long outlived its usefulness. Its site is entirely too small. At the new location, together with the Dunbar Senior High School, it would be part of a 1—12 school plant which, considering the relatively small ultimate enrollment of each of the three units which are to make up the plant, should have advantages from the administrative standpoint.

**BOOKER T. WASHINGTON SCHOOL.** It is recommended that this school be abandoned by 1955, to be relocated on property now used by the Normal School, where it should be combined with the Willis Junior High School, the latter taking the place of the junior classes at the Douglas school plant. The site of the present normal school is much larger than could be obtained at reasonable cost at the Booker T. Washington School. Again, the combination of 1—9 grades in one school plant is expected to result in operating economies and administrative advantages.

#### JUNIOR HIGH SCHOOLS (WHITE)

**LEXINGTON JUNIOR HIGH SCHOOL.** It is recommended that by 1960 this junior high school be moved into the new Johnson School Building; that the present location of this

Junior High school be then occupied by a new senior high school that is to take the place of the Henry Clay High School to be abandoned; and that additional acreage be acquired at this location for ultimate use by the senior high school. The proposed location of the new Johnson School is very advantageous for a junior high school to serve the northern district of the future city, while the southeastern and southern districts will be cared for by the new McDowell Junior High School and the Picadome Junior High School; the last named school to be ultimately a junior high school exclusively.

**MORTON JUNIOR HIGH SCHOOL.** It is recommended that this school should be abandoned in the immediate future and replaced by a new junior high school as a part of the new McDowell school plant. Morton Junior High School is very unfortunately located. It is outside of the district which it serves, and to get to it all children are required to cross Main St. Furthermore, the school is practically in the heart of the business district, and occupies an entirely too small and all too valuable site.

**PICADOME JUNIOR HIGH SCHOOL.** It is recommended that by about 1960 this entire school be used as a junior high school exclusively.



## JUNIOR HIGH SCHOOLS (COLORED)

**RUSSELL JUNIOR HIGH SCHOOL.** It is recommended that this school be abandoned in the immediate future and, together with the Russell Elementary School, removed to the new location proposed for the latter.

**WILLIS JUNIOR HIGH SCHOOL.** It is recommended that this new Junior High school be built about 1945 on property now used by the Normal School. This junior high school is to take over the junior high school classes from the Douglas School, when the latter is converted into a strictly elementary school. It will be combined, eventually, on the proposed site, with the Booker T. Washington School to be moved to this location.

## SENIOR HIGH SCHOOLS (WHITE).

**HENRY CLAY HIGH SCHOOL.** It is recommended that this school should be abandoned by about 1960 and replaced by a new building on its original location, at present occupied by the Lexington Junior High School. In the interim, all available means should be utilized to provide for the increase of enrollment, which already exceeds the seating capacity of this school. It is suggested that these means include the lengthening of the school-day, the use of ten to twelve rooms at the Jefferson Davis School, and the addition of probably eight rooms to the present building. It is appreciated that the above will seem a rather radical recommendation, in view of the fact that the Henry Clay High School is hardly a year old, but, it is believed, that the suggested location for this senior high school is far superior to the present one, which is at the intersection of two main thoroughfares, in the midst of a district that is rapidly developing into a most important local business center, and on a site the extension of which would no doubt prove prohibitively costly.

It has already been mentioned in connection with the McDowell School, that an athletic

field for the senior high school should be provided as a part of that school plant.

## Summary of Recommendations

According to data furnished by the City and County Boards of Education, the total actual enrollment in 1929 in the elementary, junior high and senior high schools, amounted to 7,560 pupils.

The studies made of the probable future growth of Lexington and the surrounding urban or semi-urban area, which area would correspond to the region now cared for by the City and County School System considered in this study, give 84,000 persons as the probable population of this region in 1970. On the basis of the average enrollment factors, given hereinbefore for the elementary schools, junior high schools and senior high schools respectively, the probable total public school enrollment in all of these schools was calculated as 13,040 pupils. The composition of this enrollment was found as follows:

Elementary Schools	(1-6)	8620
Junior High Schools	(7-9)	2470
Senior High Schools	(10-12)	1950

The estimated increase in the public school enrollment is thus found as 5480 pupils. This, as has already been mentioned, gives an average of about 140 pupils per annum, which in turn represents a need for about 20 class rooms in each five-year period in all three types of schools.

In all, 132 rooms will have to be built under the recommended program to provide additional facilities, plus 126 rooms in new buildings which are to replace existing schools at new locations. The reconstruction of existing schools on their present sites, which may become necessary due to obsolescence, is not included in this program.

A summary of the recommendations for additions, new schools and land acquisition is presented in the following tables:

## SUMMARY OF FORTY-YEAR BUILDING PROGRAM

Number of rooms to be provided in periods of five years.

Type of School	in or before							
	1935	1940	1945	1950	1955	1960	1965	1970
Elementary	32	29	19	17	38	11	9	11
Junior High	32	6	8	8	7	7	2	—
Senior High	—	1	—	—	—	48	6	—
TOTALS	64	36	27	25	38	66	17	11

## COMPREHENSIVE PLAN of LEXINGTON AND ENVIRONS

## SUMMARY OF FORTY-YEAR LAND ACQUISITION PROGRAM

Acres in periods of five years.

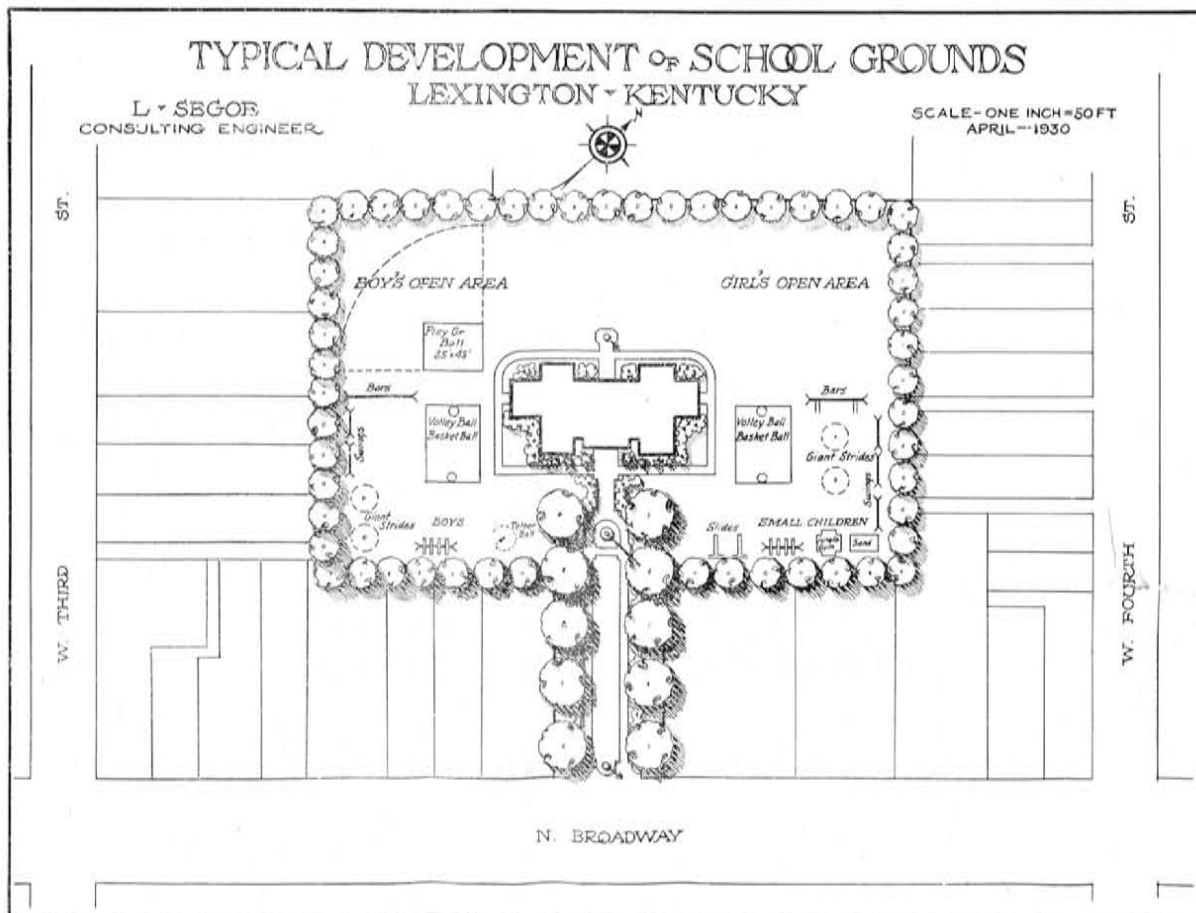
Type of School	in or before				
	1935	1940	1945	1950	1955
Elementary	15.5	14.5	4.0	1.5	1.6
Junior High	5.0	—	3.0	2.0	—
Senior High	13.3	—	—	—	—
<b>TOTAL</b>	<b>33.8</b>	<b>14.5</b>	<b>7.0</b>	<b>3.5</b>	<b>1.6</b>

In the present school system, which cares for an estimated population of 57,250 in Lexington and the surrounding area, there are 24 schools in 21 school plants. The school system recommended for 1970, for an estimated population of 84,000, is composed of 25 schools in 21 school plants.

Under the recommended school expansion program it is proposed to retain 7 existing schools plus 2 existing school locations, to abandon 12 existing school sites, and to build 16 new schools in 14 school plants.

In conclusion, it is desired to emphasize that each of the specific recommendations made in this chapter or listed in Exhibit 16, the Schools and Play Yards table, is typical rather than specific.

It will be noted that in many cases it is recommended to build a new school by additions of units. It is understood that the school should be designed at the start for its ultimate size, and that these additions are to be built as units of the ultimate building.



## JUNIOR HIGH SCHOOLS (COLORED)

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In all, 132 rooms will have to be built under the recommended program to provide additional facilities, plus 126 rooms in new buildings which are to replace existing schools at new locations. The reconstruction of existing schools on their present sites, which may become necessary due to obsolescence, is not included in this program.

A summary of the recommendations for additions, new schools and land acquisition is presented in the following tables:

## SUMMARY OF FORTY-YEAR BUILDING PROGRAM

Number of rooms to be provided in periods of five years.  
in or before

Type of School	1935	1940	1945	1950	1955	1960	1965	1970
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Senior High	—	1	—	—	—	48	6	—
<b>TOTALS</b>	<b>64</b>	<b>36</b>	<b>27</b>	<b>25</b>	<b>38</b>	<b>66</b>	<b>17</b>	<b>11</b>

## CHAPTER V

### SUBDIVISION CONTROL

The growth of a living organism takes place under the control of biological laws which insure balance, harmony and order. The city is a synthetic conglomerate organism which grows by accretions, without the beneficial guidance of the laws of nature.

Unfortunately, until recent years no attempt was made to exert a measure of control over the physical development of our cities along orderly lines and with the view of making provisions for present and future needs, to thus emulate what nature is doing in the case of biological organisms. The disorganized or unplanned structure of most of our cities, the defects of and the deficiency in their facilities, and the enormous amounts that will have to be spent to correct them, are the direct results of this haphazard, uncontrolled growth. As cities grow by means of subdivision developments, the guiding of their growth requires control over the layout of these subdivisions, to obviate by prevention the repetition of past mistakes in city building.

It is pointed out in the various chapters of this volume that, unfortunately, the physical layout of Lexington suffered severely by the

planless, uncontrolled growth of the past. Up until the organization of the City Planning and Zoning Commission in June 1928, the owner of a tract of undeveloped land could divide his property by means of streets of any location, width and alignment and into lots of any size, with no regard for adjoining developments or for the interest of the community. He could place his plat on record and thus all but perpetuate conditions in the new neighborhood. An inspection of the map of the city suffices to prove that the lack of foresight, whims or selfishness of subdividers have inflicted great damage on the physical development of the city, and created conditions some of which will probably never be remedied quite satisfactorily.

With the exception of the fourteen radial highways (survivors of the remarkable system of pikes that connected Lexington with neighboring towns even before the coming of the automobile) and except for a limited number of early crosstown streets, there are few streets in Lexington which are continuous for any length. All of the crosstown streets north of Third Street, with the exception of Loudon Avenue, lack connections with other traffic arteries either at one end or at both ends. In



GEORGETOWN STREET  
The narrow entrance of the Dixie Highway

the entire northeastern section of the city, between Limestone Street and the L. & E. Branch of the Louisville and Nashville Railroad, not a single north-south street can be found that is continuous from Main Street to Loudon Avenue; Walnut Street terminates in an alley at Rand Avenue, Deweese Street ends dead north of Third Street; Ohio Avenue and Elmtree Lane have an offset at every cross street; Eastern Avenue stops at Third Street; Chestnut Street runs only between Third and Seventh Streets.

It is to be regretted that even in the more recent residential sections the layout of the streets shows no improvement over that in the older districts. Along East Main Street and Richmond Pike, and along North Limestone Street, with very few exceptions, the intersecting streets are not in alignment, as if purposely planned to form offsets.

The Nicholasville Pike Section has been built up with a series of dead-end streets, some nearly 2000 feet long. Not a single continuous street has been provided parallel or nearly parallel to Nicholasville Pike, to interconnect these long dead-end streets. Admitting that the dead ending of these streets may be justified by the location of the Southern Railroad, there certainly were no physical reasons for not extending Elizabeth Street through the entire Nicholasville Pike section. Already there

is a demand for such a street to relieve congestion on Nicholasville Pike and for better intercommunication between the various sections of the district. Such faulty arrangements as that of the Nicholasville Pike district cause serious inconvenience to the residents in reaching neighborhood facilities, whether public or private, such as schools, playgrounds, community business centers, and increase the cost of furnishing public services and utilities.

The extent to which coordination with existing developments has been disregarded by successive subdividers, is strikingly illustrated by the street layout of the section north of East Main Street and to the east and south of the Chesapeake and Ohio Railroad. From a map of the city, without any additional knowledge, it is possible to determine the dividing lines between successive subdivisions from the changes in the arrangement or the sudden ending of streets. Walton Avenue, Ashland Avenue, a line in the rear of the lots facing the west side of Owsley Avenue, and a similar line in the rear of the lots facing the east side of Sherman Avenue, are no doubt the original dividing lines. The results of such complete disregard for the need of coordinating the layout of one subdivision with that of an adjacent earlier one, are rather disastrous. There is not a single continuous



CHANGE OF CROSS-SECTION AND OFFSET ON LOUDON AVENUE



street in a general northwest southeasterly direction in the entire district. Although the district measures over one and one-fourth miles in such direction, there are only two streets of the same direction that are as much as a half a mile in length, the others being all less than 1000 feet long. The average distance between East Main Street and the Chesapeake and Ohio Railroad being about 3000 feet, it is only a question of time when the community will be compelled to provide, no doubt at considerable expense, a continuous street in a northwest southeasterly direction somewhere through the center of the section, which should have been provided by the subdividers as a part of the initial subdivision layouts.

The inadequacy of the width of even the important arteries is so generally known that it is hardly necessary to call attention to it. Even in the newer subdivisions no provision is made for more generous street rights-of-way for streets that are likely to become important from the traffic standpoint. It must be admitted in this connection that the blame for this cannot be laid entirely upon the shoulders of the subdivider. Without some definite plan of the future major street system of the community, it is difficult for the average subdivider to know on what streets to concentrate rights-of-way and pavement widths for the handling of through and semi-through traffic.

While, generally speaking, Lexington and particularly the surrounding region has been fortunate with respect to the sizes of lots in the newer subdivisions, there have been several instances of too narrow and badly arranged or oriented lots.

Unfortunately, many other examples, similar to the Nicholasville Pike and Kenwick districts, could be marshalled to show the regrettable results of uncontrolled subdivision development, the inconveniences and the financial burden that the present and future generations will have to bear as a consequence thereof, and to prove the great need and importance of intelligent subdivision control to guard against the further use of such practices and the creating of additional problems.

The City Planning and Zoning Law vests in the City Planning and Zoning Commission the authority to control subdivision layouts and to withhold the privilege of public record from subdivision plats that do not measure up to the minimum standards held acceptable by

the Commission, or which are in conflict with the general plan of development for the area in which they are located. The State Law provides that

"All plats of the subdivision of lands within the corporate limits of the city or within three miles thereof, and all instruments of dedication of lands for public use, shall be submitted to the Commission and approved thereon in writing by it before they may be offered for record or accepted by the City. The approval of the Commission shall not be deemed the City's acceptance of the dedication of any street, alley, way or other public ground shown on the plat or set forth in the instrument.

"No street, alley, way or other public ground shall be accepted by the City as a public street, way or ground, unless the plat and location thereof shall have been submitted to and approved by the Commission, provided, however, that the City may submit to the Commission any ordinance proposing to accept the dedication of any such unapproved street, alley, way, or ground, and if approved by the Commission, the City shall have the power to accept the dedication thereof by a majority vote of its legislative board, or, if disapproved, by a vote of not less than two-thirds of its members."

The major objectives of the control of land subdivisions are first, the conservation and promotion of wholesome living conditions in the subdivision itself, conducive to the health, safety, morals and general welfare of its residents, by means of providing adequate spaces for light and air, for traffic, for recreation, and by preventing undue congestion. Its second objective is to provide in the layout of subdivisions for streets and other public open spaces required for the appropriate development of the neighborhood and the community at large, by coordinating the layout of subdivisions with the City Plan, especially with the plans for the Major Street System, Recreation System, School System, and the Building Zone Plan, to thus secure the intelligent development of these public facilities in the unbuilt outlying districts and to insure permanency in the use of private property.

Accordingly, the measures of subdivisions control should include:

Regulations requiring compliance with the Major Street Plan, with the plans for the Recreation and School Systems, and with the Building Zone Plan.

Regulations to obtain a satisfactory standard of subdivision layouts: the proper arrangement and width of streets in accordance with their character and in relation to other existing or platted streets, the proper widths and grades or roadways, the proper sizes and orientation of lots, and proper provisions for open spaces other than streets.

Regulations to secure the installation of surface and sub-surface improvements, reasonably necessary to render the lots suitable for home sites before these are sold for building development.

It is desirable that the control of subdivisions be exercised in accordance with general rules and regulations promulgated, so as to thereby reduce the field of arbitrary discretion and so that the subdivider in the preparation of his surveys and plats may have a general indication of the standards to which he is expected to conform.

In accordance with the above statutory provisions, principles and considerations, the City Planning and Zoning Commission had prepared and has adopted on June 7th, 1929, the following set of standards and procedure for the control of real estate subdivisions.

### Requirements and Standards

#### STREETS

**General.** The street layout of all subdivision plans shall conform with the Major Street Plan. Whenever a tract to be subdivided embraces any part of a street designated as a major street on the Major Street Plan, such part of such street shall be dedicated by the subdivider.

All streets will be required, as far as practicable, to be in alignment with existing adjacent street and in general conformity with the plans made for the most advantageous development of the entire area.

Streets will be required to intersect one another as nearly at right angles as is practicable.

In general, it will be required that streets shall be extended to the boundaries of the tract to be subdivided, unless in the opinion of the Commission such extension is not necessary for the coordination of the layout of the subdivision with the development of adjacent tracts.

Dead-end streets will not be approved where a through street is practicable, unless in the opinion of the Commission such dead-end street is appropriate for the specific location and for the building development contemplated.

Alleys at least 20 feet wide will be required in all business and industrial districts, so designated by the Building Zone Map, and in the rear of all properties facing on major streets shown on the Major Street Plan.

Where walks are provided these shall be at least 10 feet wide.

**Widths.** The widths of all major streets and of their roadways shall be as shown on the Major Street Plan, and shall have a roadway width of at least 27 feet.

Minor streets shall be at least 50 feet wide, and local service streets which give access solely to properties abutting thereon, shall be 40 feet, and the minimum width of roadways on such streets shall be 20 feet.

Wherever a dead-end street is permitted, a turning circle of a diameter of at least 50 feet shall be provided.

At all intersections the corners of property lines shall be rounded by a circular arc the minimum radius of which shall be 15 feet when both intersecting streets are 50 feet or less in width, and at least 20 feet when either or both intersecting streets are wider than 50 feet. These minimum radii shall be increased when the angle of intersection is less than 60 degrees. In business districts a cut-off may be substituted in place of the circular arc. Where two alleys intersect a 10-foot cut-off shall be provided. Curb intersections shall be rounded by radii of at least 20 feet.

**Grades and Alignment.** The maximum grade shall not exceed 6 percent on major streets and 10 percent on minor or local service streets. All changes in grade shall be connected with vertical curves of minimum length equal to fifteen times the algebraic difference in the rate of grade for major streets, and one-half of this minimum length for minor or local service streets.

The minimum radius of curved streets shall be such as to insure clear visibility on the center line for a distance of at least 300 feet on major streets and for at least 150 feet on minor or local service streets. (The general formula for computing these radii,  $R = \frac{22,500 + d^2}{2d}$ , where "d" is the distance from the center line of the streets to the building line.) Between reverse curves there shall always be a tangent.

#### BLOCKS

Blocks shall not exceed 1000 feet in length, unless in the opinion of the Commission, adjoining layouts or physical conditions justify a variation from this rule. Dead-end streets shall not be over 400 feet long.

The width of blocks in general shall be sufficient to allow for two tiers of lots.

#### LOTS

The size, shape and orientation of lots shall be such as the Commission shall deem appropriate for the location and for the type of building development designated for the tract by the Building Zone Plan.

All residence lots shall have an area of at least 5,000 square feet and shall be at least 40 feet wide on the building line. Corner lots shall be made 5 to 10 feet wider to permit near-conformance to the setback line of the side street; butt-lots shall be made at least 5 feet wider than those in midblock.

Side lot lines shall be as nearly at right angles to the street line as practicable.

#### STREET IMPROVEMENTS

Streets shall be graded and fully constructed with sidewalks, permanent curbs and a type of roadway approved by the proper City or County officials, and in accordance with their specifications. A serviceable and properly-drained roadway surface, permanent curbs, gutters and sidewalks, shall be provided in every case.

#### SEWERS AND DRAINS

In every subdivision provision shall be made for the appropriate disposition of sanitary sewage and storm flow.

Wherever there is within reasonable distance a sanitary or storm sewer main, the subdivision shall

be provided with a complete sewerage system which shall connect with such mains. In the absence of such sewer mains, proper provision shall be made for the disposal of sanitary sewage by means of septic tanks or other approved methods of disposal, while the storm flow may be discharged into the natural drainage system.

In general, the entire sewerage system and the disposal of sanitary and storm sewage shall be planned and built to meet the approval of the proper City or County or State officials.

#### WATER MAINS

The water-distributing system shall be designed to meet the approval of the proper City or County officials.

Fire plugs shall be provided whenever water lines are installed, even though no local fire protection is immediately available. Fire plugs shall not be over 600 feet apart.

#### ELECTRIC LIGHT OR TELEPHONE POLES

Poles for electric light or telephone shall be placed along rear lot lines wherever practicable. Easements at least 6 feet wide shall be set aside for this purpose on the plat.

Where pole lines cannot be so placed through the center of blocks, these shall be located along the curb lines.

#### TREES

Trees of a type appropriate for the specific location shall be planted on both sides of every street except at intersections, where the grass strip between the curb and sidewalk is at least 5 feet wide. These trees shall not be over 60 feet apart.

#### OPEN SPACES OTHER THAN STREETS

Due consideration should be given to the allocation of suitable property for schools, parks and playgrounds, to be dedicated or to be reserved for the common use of all property owners by covenant in the Deed. It is deemed desirable that at least five percent of the net area of every plat, exclusive of streets, should be set aside as a play park. Where the tract contains less than 40 acres, such reservation for play space should be combined wherever possible with similar reservations of adjoining tracts.

### Procedure for Obtaining the Approval of Subdivision Plats

#### PRELIMINARY PLAN

A Preliminary Plan shall be submitted to the Commission in order that the main features of the plan may be approved before the detailed Final Plan is made and the subdivision staked out.

The approval of the Preliminary Plan is revocable and shall not constitute the final acceptance of the plan by the Commission, but shall constitute a promise of such final acceptance on condition that all required improvements will have been carried out to the satisfaction of the administrative departments, and that the Final Record Plat will be substantially the same as the Preliminary Plan so approved by the Commission.

The scale of the Preliminary Plan shall not be smaller than 100 feet to the inch.

The Preliminary Plan shall clearly show:

(1) Enough information to accurately locate the plat (reference to existing thoroughfares, plats, etc., may be used; if such do not exist within reasonable distance of the plat, a vicinity plat on a small scale will be required).

(2) Boundary lines accurate in scale and bearing.

(3) 5-foot contours.

(4) North-point and scale.

(5) All township, corporation and county lines, which pass through the plat, and their distances from the boundary line of the property.

(6) Proposed location and names of streets, alleys and easements, and typical lot dimensions. (Names shall not duplicate any existing street names within the area over which the Commission has jurisdiction, except co-terminous streets).

(7) Major streets as shown on the Major Street Plan, wherever they traverse the plat. These shall be distinctly marked on the plat and their widths and roadway widths shall be given.

(8) The boundary lines of zoning districts, whenever portions of the plat are in different zoning districts.

(9) The general location of principal buildings and other major features within 50 feet outside the boundaries of the plat. (These shall include any exceptional topography, all bodies or courses of water, the location of railroad tracks and other rights-of-way, and the exact location of all existing or platted streets immediately adjacent or connecting with the property.)

(10) The location of all good trees over one foot in diameter.

(11) All parcels of land intended to be dedicated for the public use or reserved in the Deeds for the use of all property owners, with purpose indicated.

(12) The name of the subdivision and the names and addresses of the subdivider and his engineer. (The name of the subdivision shall not duplicate or too closely approximate the name of any other subdivision within the jurisdiction of the Commission.)

(13) The approximate profile of each street with tentative grades indicated thereon.

(14) The cross-sections of the proposed streets, showing width of roadways and the location of sidewalks.

(15) The plans and profiles of proposed sanitary, storm water or combined sewers, with grades and sizes indicated.

#### THE FINAL OR RECORD PLAN

The Final or Record Plat of a subdivision, the Preliminary Plan of which has been tentatively approved by the Commission, shall be submitted to the Commission after all improvements will have been completed in accordance with these rules and to the satisfaction of the proper administrative departments. Provided, however, that the Final Plat of any portion of a larger subdivision tentatively approved by the Commission may be so submitted for final approval.

Before giving its final approval the Planning Commission will require two certificates from the administrative departments, one to the effect that the final plan of the subdivision has been checked and found to be correct, and the other that the required improvements have been completed to their satisfaction. In case the streets in a subdivision or any other property are offered for dedication, the Final Plat, in addition to the above two certificates, will also have

to be accompanied, when submitted, by a Certificate of Title to the effect that the title to the rights-of-way of the streets or to such other property to be dedicated, is free and unencumbered.

In lieu of the completion of all improvements prior to the final approval of the Final Plan by the Commission, the Commission may accept a bond guaranteeing the completion of these improvements, provided that a substantial portion of the grading and the laying of sewers and water mains has been completed.

The Commission's approval of the Final Plan shall not be deemed to constitute acceptance by the public of any street or other open space offered for dedication on the plan.

The Final Plan of the subdivision shall be submitted to the Commission in the form of an original tracing in waterproof ink on tracing cloth. It shall be drawn accurately to scale, at least to the scale of one inch equals 100 feet.

The following data shall be clearly shown on the final plan:

(1) Boundary lines with accurate lengths and courses; the names, exact location, and the widths along the property line of all existing or recorded streets intersecting or paralleling the plat boundaries; the names of the owners of record of all abutting tracts.

(2) True bearings and distances to the nearest established street bounds or official monuments, which monuments shall be located or accurately described on the plat; any municipal limits, township or county lines.

(3) Direction of north and scale.

(4) The exact layout, including: (a) street and alley lines, their names, bearings or angles of inter-

section and widths (including width along the line of any obliquely-intersecting street), and all roadway widths; (b) the length of all arcs, radii, points of curvature and tangent bearings; (c) all easements or rights-of-way where provided for or owned by public services (the limitation of the easement rights should be definitely stated on the plan); (d) all lot lines with dimensions in feet and hundreds, and with bearings or angles to minutes if other than at right angles to street or alley lines, (all lots shall be numbered or lettered and all streets shall bear names); (e) the accurate location and material of all monuments; (f) the accurate outline of all property which is offered for dedication for public use, with the purpose so designated thereon; (g) the location and use of all property reserved by covenant in the Deed for the common use of property owners.

(5) District boundary lines and private restrictions: (a) boundaries of each type of use restrictions; (b) setback building lines.

(6) Private restrictions for each differently restricted section of the plat.

(7) Name of the subdivision and the subdivider, also name of the engineer or surveyor.

(8) Certification by competent civil engineer or surveyor to the effect that the plan represents a survey made by him and that all of the monuments shown thereon actually exist, and their position is correctly shown.

### Reasonable Elasticity of Rules

In any particular case where compliance with the foregoing provisions would cause practical difficulty or unnecessary hardship, the Commission may vary these provisions provided that it can be done in such a way as to grant relief and at the same time protect the public interest.



**"SAW TOOTH" BUILDING ARRANGEMENT ON WEST HIGH STREET**  
The result of improper platting



The intelligent exercise of subdivision control in accordance with the above Standards and Procedure obviously requires that there should exist a Comprehensive Plan of the city and surrounding area and, especially, comprehensive plans for a Major Street System, for the Recreation and Public School Systems, so that the City Planning and Zoning Commission should have before it definite plans with which to coordinate the layout of subdivisions submitted to it for approval.

Fortunately, the preparation of such comprehensive plans were started practically at the same time when the Commission began to pass upon subdivision layouts, were available in various stages of development during 1929 and the first half of 1930, and were all completed by May 1930.

Since its appointment the City Planning

and Zoning Commission has passed upon between 25 and 30 subdivision plats, many of them for tracts adjacent to principal thoroughfares and highways, and succeeded in obtaining the dedication by the subdivider of rights-of-way from 80 to 140 feet wide, for the widening of these principal traffic arteries in accordance with the Major Street Plan. Literally, thousands of feet of such rights-of-way were thus secured without cost to the public. However, aside from these benefits, in a good many instances the advice and assistance rendered by the Commission has resulted not only in the better coordination of layouts with existing and probable future developments in a neighborhood, but also in improved layouts and in better housing conditions in the subdivisions themselves.



## CHAPTER VI

### ZONING

The comprehensive Building Zone Ordinance and Map prepared by the City Planning and Zoning Commission for the City of Lexington and its Environs has been passed by the Board of Commissioners of the City of Lexington on May 6th, 1930. Within the city, the provisions of the Ordinance have been vigorously and conscientiously enforced since that date.

The Fiscal Court of Fayette County having disapproved on July 3rd, 1930 that part of the Ordinance which relates to the area outside of the city limits and within two miles thereof (the area adjacent to the city which was included in the Ordinance), this did not become effective within such area. The disapproval of the Ordinance by the Fiscal Court has deprived the nearly 11,000 residents in the outlying subdivisions of the general protection against injury to the value and livability of homes and home neighborhoods that zoning alone can give. Except where large residential areas are protected by private restrictions, the homes of property owners in these outlying districts are now exposed to the dangers of the harmful effects that an intruding commercial establishment, such as a road house, dance hall, filling station, garage, roadside stand, billboard, or even retail store,

commonly has on residential neighborhoods. It is to be hoped that the Fiscal Court will see its way clear to reconsider its action and to adopt the Building Zone Ordinance in its present or some modified form, before serious damage will have been done to the urban or urbanizing districts surrounding the city.

#### What Is Zoning?

Zoning may be defined as the application of fairness in the regulation by the public of the use of private real estate, in furtherance of the intelligent and orderly development of the community and of the health, safety, morals, and general welfare of its inhabitants. Under zoning regulations every one who lives or does business in the community is given free hand in the enjoyment of his property rights, as long as in the exercise of such rights he does not encroach upon the rights of others for similar enjoyment. Thus zoning protects every property owner from unreasonable injury by a selfish neighbor who would seek private gain at his expense.

#### The Need Of Zoning

While interest in city planning and zoning in general, as an instrument for promoting



**INTRUDING FILLING STATION**  
Amidst pretentious homes

the intelligent and orderly development of the city, has been in evidence in Lexington and particularly on the part of the City Administration for several years past, it may be said that it was the need of zoning, as a means for protecting residential neighborhoods against invasion by filling stations, garages, stores and other commercial establishments, that prompted the City to assume leadership in the city planning movement in the State, and to take up the preparation and effectuation of a comprehensive city plan and zoning ordinance.

The Zoning Data Map, prepared by means of a field survey of every lot and every building in the city and surrounding area, clearly shows the indiscriminate manner in which residential, business and industrial buildings were being built throughout the community,

fered losses that exceeded those caused by fire. Moreover, while insurance could be had against fire losses, no insurance is being written that protects against the depreciation of property values caused by the intrusion into a residential neighborhood of filling stations, garages, grocery stores, or other non-conforming buildings. The desirability, if not the livability, of many a residential neighborhood was greatly lessened, and except where protected by deed restrictions, all residential neighborhoods were exposed to similar dangers.

#### The Temporary Zoning Ordinance

The need of preventing the further destruction in such manner of residential neighborhoods was so keenly felt by the City Ad-



**NON-CONFORMING APARTMENT BUILDING**  
Stealing light and view of adjoining home

except in the outlying residential sections protected by deed restrictions. It was also found that many residences have been built in the past with no regard to establish setback building lines, or with side yards too narrow for adequate light, air, privacy and fire protection, that private garages have been built right on the street line, far in front of adjoining homes, and that in many other ways buildings have been placed inappropriately, with no regard to the interest of the neighborhood or of the community at large.

It was estimated that by reason of this indiscriminate way of building real estate suf-

ministration and a group of forward looking citizens that, without waiting for the enactment of the present City Planning and Zoning Law, the Board of Commissioners passed an ordinance on July 1st, 1927, which excluded commercial establishments from certain residential neighborhoods.

There being considerable doubt concerning the legal validity of this ordinance, as it was of a type known as a "block ordinance" and was passed without adequate enabling legislation, and because it was realized that the preparation of a comprehensive building zone ordinance will require many months of study,

shortly after the enactment of the City Planning and Zoning Law by the State Legislature and the organization under such law of the City Planning and Zoning Commission, the latter prepared, with the assistance of its consultant, a Temporary Zoning Ordinance. This was put into effect by the Board of Commissioners of the City on August 27th, 1928, and by the Fiscal Court of Fayette County a few weeks thereafter. This Temporary Zoning Ordinance required the obtaining of a Certificate of Occupancy for the erection or alteration of all business and industrial buildings and for the use of land for such purposes, not only in the city, but also within two miles of the city limits. It prohibited the erection of such buildings in residential neighborhoods, the latter being defined with the view of preserving the status quo. The ordinance also designated certain locations where garages, filling stations, repair shops, and similar uses were prohibited.

The ordinance was enforced by the Building Inspector of the City of Lexington, both in the city and in the two mile belt. Appeals from the decision of the Building Inspector were heard and decided by the Board of Adjustments, organized under the provisions of the City Planning and Zoning Law at the same time as the City Planning and Zoning Commission. The Temporary Zoning Ordinance was in effect until May 6th, 1930, when the final comprehensive Building Zone Ordinance was enacted by the Board of Commissioners.

#### **The Comprehensive Building Zone Ordinance**

In recognition of the consensus of judicial decisions to the effect that the legal validity of zoning, as a proper exercise of the police power, is predicated on its reasonableness and on a definite relationship of the zoning regulations to public health, safety, morals, and general welfare, the final comprehensive Building Zone Ordinance of Lexington and its Environs has been carefully prepared by the City Planning and Zoning Commission and its consultant. It was realized that, to meet the above requisites of legality, the ordinance must be founded on the full and accurate knowledge of existing conditions throughout the community, as well as on a reliable appraisal of future needs and requirements. Fourteen months

were spent in making surveys, investigations and studies, and in drawing up the plans preparatory to the drafting of the ordinance.

A survey was made of existing conditions in the field over the entire city and the two mile belt outside the city limits, by going from lot to lot and recording the use and occupancy of every lot and of every building, from university buildings to private garages. The dimensions of yards and courts around each building, the height of each building, the relative age and condition of each building, the widths of all streets, and the widths and condition of all pavements, etc., about a score of different features in connection with every piece of property and every structure were observed and recorded. Over 150 large scale maps were used to compile this information in the field.

The data so collected were next recorded on the "Zoning Data Map" by means of appropriate symbols and colors, differentiating between residential, business and industrial properties and buildings, and again differentiating between single family, double family, multiple family houses, between local and general business, between light and heavy industry, between unobjectionable and objectionable industries, and showing the height of and the dimensions of open spaces around every building and structure, by means of about 100 different indications. This Map, at the scale of 300 feet to the inch, and measuring 10.5 by 10.5 feet, shows practically everything on top of the ground in the city and within the two mile belt surrounding the city.

The physical conditions of every section of the community were carefully studied, such as topography, the natural elevation of the ground, drainage areas, and vegetation.

Table VII, presenting an "Analysis of Present Building Tendencies in Recent Sub-Division Developments", is typical of the fact finding studies made to determine the numerical standards of the Building Zone Ordinance.

This study was used specifically to analyze the present building habits in the various types of recent subdivisions, with respect to the size and kinds of houses and the size of yards and courts, for the purpose of developing standards that should recognize desirable local practices. The same data were also used to aid in the zoning classification of the districts so analyzed.

Another type of study with respect to existing conditions is shown in the table entitled "Present Use of Land". The amount and proportion of the area devoted to various uses in the city and surrounding two mile belt, compiled in this table, served as a basis in estimating the amount of future requirements for use districts of various kinds under the Building Zone Ordinance.

## PRESENT USE OF LAND

In Lexington And Within The Two-Mile Belt Around The City

Type	City Area		Unincorporated Area		Total	
	Acres	Percent	Acres	Percent	Acres	Percent
Detached Residence .....	1960	55.3	1300	4.2	3260	9.4
Apartments .....	15	0.4	—	—	15	0.05
Public Properties .....	310	8.7	155	0.5	465	1.3
Parks and Playgrounds .....	55	1.5	10	0.03	65	0.2
Semi-Public Property .....	160	4.5	135	0.4	295	0.8
Outlying Business .....	35	1.0	200	0.7	235	0.7
Warehouses .....	80	2.2	10	0.03	90	0.3
Central Business .....	155	4.4	—	—	155	0.4
Race Courses .....	165	4.7	5	0.01	170	0.5
Light Industry .....	30	0.8	100	0.43	130	0.4
Heavy Industry .....	—	—	—	—	—	—
Railroads .....	220	6.2	225	0.8	445	1.25
Cemeteries .....	150	4.2	60	0.2	210	0.6
Undeveloped .....	215	6.1	—	—	215	0.6
Rural .....	—	—	28750	92.7	28750	83.5
TOTALS .....	3550	100.0	28750	100.00	34500	100.0

To obtain a rational basis for the prognostication of future needs, detailed studies were made of population growth and distribution. The growth of the city and region was analyzed almost from the time of the first settlement, and a careful forecast was made of their probable future growth in the next 40 years. The distribution of the population over the entire area and the natural trends of population movements from one section of the city to the other and from the city into the outlying districts, was analyzed since the year

1910, and an attempt was made to predict the probable future distribution of population several decades hence, so as to obtain a measure of probable future requirements in various sections of the community and region.

A comparison between the present use of land and the proposed use of land under the Building Zone Ordinance, corresponding to the use district classifications of the latter and intended to test in a general way the balance of the zoning plan, is shown by the following two tables:

## PRESENT USE OF LAND BY ZONING DISTRICT TYPES

In Lexington and Within the Two-Mile Belt Around the City

Type	City Area		Unincorporated Area		Total	
	Acres	Percent	Acres	Percent	Acres	Percent
Detached Residence and Rural .....	2850	80.3	30410	98.03	33260	96.4
Apartments .....	15	0.4	—	—	15	0.05
Neighborhood Business .....	35	1.0	200	0.7	235	0.7
General Business .....	245	6.9	15	0.04	260	0.8
Downtown Business .....	155	4.4	—	—	155	0.4
Industry and Railroads .....	250	7.0	325	1.23	575	1.65
TOTALS .....	3550	100.0	30950	100.00	34500	100.00

## PROPOSED USE OF LAND UNDER BUILDING ZONE ORDINANCE

In Lexington and Within the Two-Mile Belt around the City

Type	City Area		Unincorporated Area		Total	
	Acres	Percent	Acres	Percent	Acres	Percent
Residence "A" .....	30	0.8	3950	12.8	3980	11.5
Residence "B" .....	1950	55.0	26635	86.0	28585	83.0
Residence "C" .....	225	6.3	—	—	225	0.6
Business "A" .....	55	1.5	20	0.1	75	0.2
Business "B" .....	490	13.8	70	0.2	560	1.6
Business "C" .....	240	6.8	—	—	240	0.7
Industrial "A" .....	520	14.7	235	0.8	755	2.2
Industrial "B" .....	40	1.1	40	0.1	80	0.2
TOTALS .....	3550	100.0	30950	100.0	34500	100.0

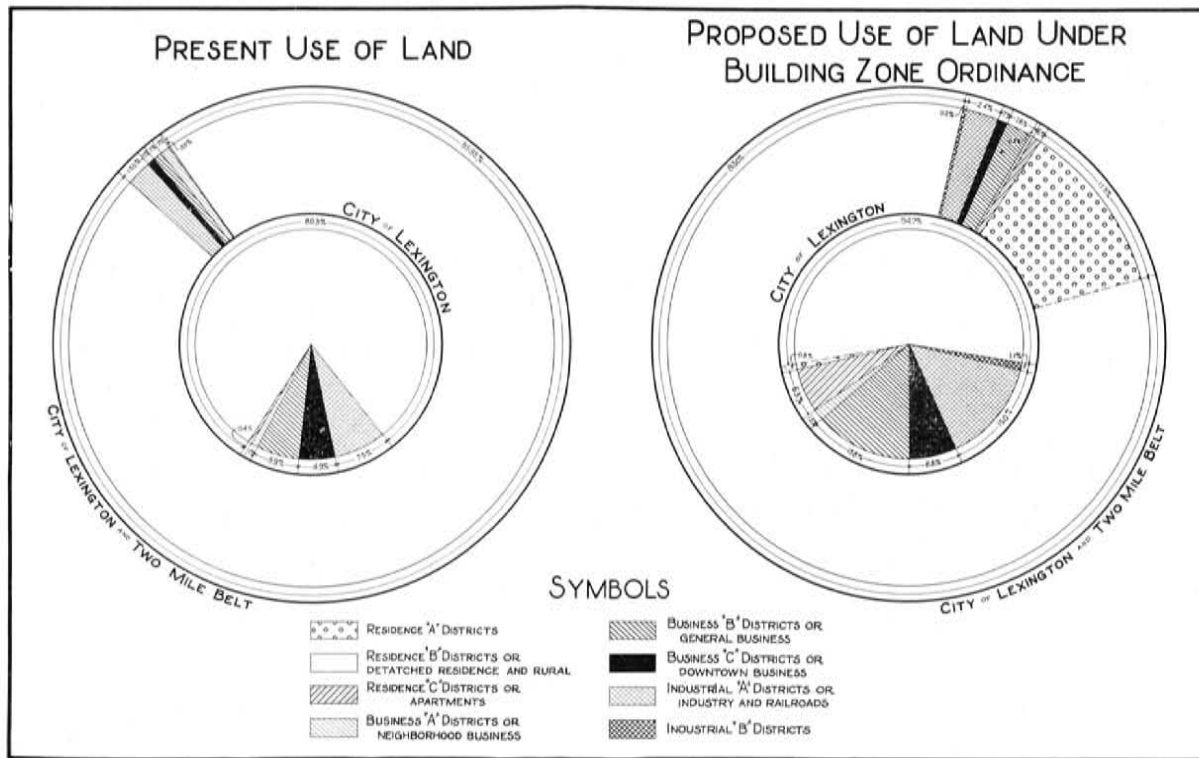


EXHIBIT 20



**WELL DEVELOPED LOCAL BUSINESS DISTRICT**  
(Woodland and High Streets)





**ATTRACTIVE LOCAL BUSINESS DISTRICT**  
Built by a progressive developer — (Kansas City)

It will be noted that in the city 55.8 percent of the entire area was placed in detached residence districts, 6.3 percent in apartment house districts, 15.3 percent in general and outlying business districts, 6.8 percent in the downtown business district, and 15.8 percent in industrial districts, as compared with the present use of 80.3 percent of the area of the city for detached residences, 0.4 percent for apartments, 7.9 percent for general and outlying business, 4.4 percent for downtown business, and 7 percent for industrial and railroad purposes. Thus it may be seen that ample provision was made in the Building Zone Ordinance for the future growth of business and industry.

The same comparison is presented in diagrammatic form in Exhibit 20, separately for the city and for the city and the two mile belt, collectively.

The following two tables, one showing "Relation of Business Frontages Provided by Zoning Ordinance to Estimated 1970 Population" and the other entitled "Business Frontages", are typical calculations used to test the adequacy of the amount of business areas designated by the Building Zone Map in various sections of the community.

**RELATION OF BUSINESS FRONTAGES PROVIDED BY ZONING ORDINANCE TO ESTIMATED 1970 POPULATION**

DISTRICT	Population	Front Feet	Front Feet per 100 Persons
Central .....	84,000	30,000	35.7
Maxwell and High .....	3,000	1,600	53.3
Main and Walton .....	2,200	900	40.9
Limestone and Rose ....	2,200	1,000	45.4
Limestone and Sixth....	2,250	1,000	44.4

**BUSINESS FRONTAGES**  
(Front Feet)

	Present	Under Zoning	Increase	Percent
Central .....	13500	30000	16500	115
Main and Walton .....	450	900	450	100
Limestone and Rose....	400	1000	600	150
High and Euclid .....	400	1200	800	200
High and Maxwell ....	800	1600	800	100
Second and Deweese ..	500	1000	500	100
Limestone and Sixth	250	1000	750	300

Because of the intimate relationship that exists between the use and intensity of development of private property, and the public facilities and utilities necessary to serve them, the zoning plan in its various stages was studied side by side with the comprehensive plans for the development of major streets, of the school system, of parks and playgrounds,

and other features of the Comprehensive Plan, all of which were being worked on concurrently. This procedure insured the integration of the zoning plan with other features of the Comprehensive Plan, a most important requirement.

The Building Zone Ordinance was drafted in such form as to render its use especially convenient for the property owners, builders or architects. As any of these are interested at any one time in one specific project in one of the seven types of districts, all requirements, that is, use, height and area requirements are set forth in a separate section for each of the seven types of districts. Although this arrangement made the ordinance less concise, as it required repetitions, the advantages of convenient use by the public were considered important enough to warrant the sacrificing of brevity.

A synopsis of the general requirements of the Building Zone Ordinance is given in Table VIII.

After the completion of the tentative draft of the Building Zone Ordinance and Map, and in accordance with the City Planning and Zoning Law, numerous and well attended public hearings were held by the City Planning and Zoning Commission. Prior to these

hearings the Commission held several conferences with a Committee of the Real Estate Board, Architects and Builders, and with numerous individuals, which were productive of a number of valuable suggestions that tended to improve and render more practical the Ordinance and Map. A considerable number of suggestions and requests for changes were received by the City Planning and Zoning Commission as a result of the public hearings. These were given due consideration before the Ordinance was transmitted to the Board of Commissioners of the City of Lexington and to the Fiscal Court of Fayette County for approval.

The text of the Building Zone Ordinance and the Building Zone Map are not contained in this volume, having been published in a separate booklet obtainable from the Secretary of the City Planning and Zoning Commission. In addition to the small scale map contained in such booklet, the boundary lines of all zoning districts are shown accurately on the official Building Zone Map at 300 foot scale, on file in the office of the Building Inspector. This map, which measures 10.5 by 10.5 feet, shows the course followed by the boundaries of the zoning districts from lot line to lot line, and should be consulted in all border-line cases.



SET-BACK REQUIRED IN LOCAL BUSINESS DISTRICTS  
Aids traffic and trade

TABLE VII

ANALYSIS OF PRESENT BUILDING TENDENCIES IN RECENT SUBDIVISION DEVELOPMENTS.																											
ASHLAND PARK				NICHOLASVILLE SECTION				HOLLYWOOD				KENNICK				MAYSVILLE				GEORGETOWN				IN OLDER SECTIONS			
NUMBER OF RECENT BUILDINGS	NO. OF FAMILIES	NO.		%		NO.	%		NO.	%		NO.	%		NO.	%		NO.	%		NO.	%		NO.	%		
		NO.	%	NO.	%		NO.	%		NO.	%		NO.	%		NO.	%		NO.	%		NO.	%		NO.	%	
ONE	340	69	369	99	188	99 1/2	466	99 1/2	125	98	58	98	284	97													
TWO	23	4	1	2	1	1/2	2	1/2																			
THREE	2	1/2																									
FOUR	17	4 1/2																									
ONE STORY	46	12	58	15	128	68	350	75	41	33	47	175	60														
1 1/2 - 2 STORY	356	88	315	85	61	32	118	25	84	67	12	116	40														
3 STORY																											
4 STORY																											
40-44											9	15															
45-49											9	16															
50-54	298	78	242	65	187	88	423	90	120	96	28	47															
55-59	34	9	35	9	7	4	15	3			13	22															
60-64	18	4	9	2	8	4	10	2	5	4																	
65-69	10	3	63	17	7	4	12	3																			
70+	22	6	24	7			8	2																			
10-14							13	3			13	22															
15-19		1	14	2	4	2	42	9	15	12	14	24															
20-24		19	5	1	2	1	78	16	5	4	22	37															
25-29	8	2	80	21 1/2	16	8	165	35	20	16	3	5															
30-34	292	76	109	29 1/4	151	80	65	14	35	28	3	5															
35+	82	22	164	44	16	9	105	22	50	40	4	7															
0-9	5	1			4	2	8	34																			
10-19	5	1					1	14			1	1															
20-29	8	3					2	16	1	34	7	12															
30-39											5	9															
40+	364	95	371	99 1/2	185	98	457	97 1/2	124	99 1/4	46	78															
WIDTH-IN-Feet	1F.	2F.	3F.	4F.	1F.	2F.	3F.	4F.	1F.	2F.	3F.	4F.	1F.	2F.	3F.												
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.												
1 1/2 - 3	359	141	508	47 1/5	4	125	168	18	4	150	8	13	8028	240	150												
3 1/2 - 6	4543	165	5	2987	24	3	75	198	42	45	36	2540	9	16	150												
6 1/2 - 10	8525	418	150	1	644	39	72	38		47	37	9	16	1	150												
11 - 15	3711	29	1	644	12	18	10	28	6	150	15	12	14	24	30	11											
16 +	4012	14	2	12	79	21	5	3	100	12	10																

**TABLE VIII**  
**SYNOPSIS OF BUILDING ZONE ORDINANCE**  
**LEXINGTON, KY. AND ENVIRONS**

DISTRICT	PRINCIPAL USES	HEIGHTS	AREAS
Residence "A"	One Family Residences; Churches, Public Schools, Colleges, Public Libraries, Public Museums, Public Art Galleries, Municipal Buildings; Clubs, Lodges, Parish Houses; Railway Passenger Stations; Nurseries and Farms.	2½ stories or 50 feet.	Front Yards—35 feet. Side Yards Least Width 6-7 feet. Side Yards Sum of Both 14-18 feet. Rear Yards—40 feet. Lot Area per Family 5000 square feet.
Residence "B"	Uses permitted in Residence "A" Districts; Dwellings for any number of families; Hospitals, Charitable Institutions; Cemeteries under certain restrictions; Telephone Exchanges, Static Trans-former Stations; Boarding and Rooming Houses; Commercial and Industrial Uses in farming territory under certain restrictions.	3 stories or 60 feet.	Front Yards—25 feet. Side Yards Least Width 5-8 feet. Side Yards Sum of Both 12-20 feet. Rear Yards—30 feet. Lot Area per Family—2000 square feet.
Residence "C"	Uses permitted in Residence "B" Districts; Hotels not primarily for transients.	8 stories or 100 feet.	Front Yards—20 feet; Side Yards Least Width 3-20 feet; Side Yards Sum of Both 8-40 feet; Rear Yards 15-40 feet; Lot Area per Family—800 square feet.
Business "A"	Any use except Industry, and except Dairying, Road Houses, Saw Mills, Storage and Supply Yards, Coal Yards and Warehouses.	3 stories or 60 feet.	Front Yards—20 feet; Side Yards—none required, except in certain locations; Rear Yards Residence Bldg. 15-24 feet; Rear Yards Nonresidence Bldg. 0-20 feet; Lot Area per Family—600 square feet.
Business "B"	Any use except Nuisance or Semi-nuisance Industries; Manufacturing may occupy the area of the ground floor in any case.	4 stories or 60 feet.	Front Yards—none required; Side Yards—none required except in certain locations; Rear Yards Residence Bldg.—15-24 feet Rear Yards Nonresidence Bldg. 0-20 feet Lot Area per Family—600 sq. ft.
Business "C"	Uses permitted in Business "B" Districts; Manufacturing may occupy any part of the building provided the area occupied by mechanical equipment does not exceed one-half of total floor area.	One and one-fourth times the distance from opposite street line, but 75 feet in any case. Maximum Cubage—Lot Area multiplied by 1½ times the street width.	Front Yards—none required; Side Yards—none required except when substituted for courts; Rear Yards—none required; Lot Area per Family—500 square feet.
Industrial "A"	Any use except Nuisance Industries.	6 Stories or 100 feet; distance from opposite street line, but 50 feet in any case.	Front Yards—none required; Side Yards—none required; Rear Yards Residence Bldg. 15-32 feet; Rear Yards Nonresidence Bldg. 0-28 feet; Lot Area per Family—600 square feet.
Industrial "B"	Any use except Residential.	6 Stories or 100 feet; distance from opposite street line, but 50 feet in any case.	Front Yards—none required; Side Yards—none required; Rear Yards 0-28 feet.

## CHAPTER VII

### RAILROAD FACILITIES AND GRADE CROSSINGS

Lexington's problem in connection with the steam railroads consists principally of the elimination or reduction of the accident danger and delays at grade crossings, to minimize the human and economic losses due to such accidents and delays. From the standpoint of railroad companies the reduction of the conflict between street and railroad traffic holds out the promise of lessening operating difficulties and of reducing operating costs as a resultant thereof.

With very few exceptions, all of the seven railroad lines radiating from the city in every direction cross the streets of the city at grade. In point of fact, excepting the traffic using the Walnut Street, Jefferson Street, and the West Main Street viaducts to and from the southwesterly and westerly sectors, all traffic entering and leaving the central section of the city passes over one or more grade crossings. Either because of unfavorable physical conditions or of the frequency of train movements and the volume of street traffic, at least seventeen of these crossings may be properly classed as important.

Manifestly, in formulating any plans for the physical separation of grades at certain of these crossings and the reduction of the danger and delays at others, the requirements of the railroads from an operating standpoint as well as the requirements of shippers depending on direct railroad connection, must be fully considered. Fortunately, the problem in Lexington is not complicated by congested terminal conditions, by inadequacy of service or facilities, or by lack of willingness on the part of the railroad companies to cooperate with the public authorities in minimizing the accident hazard and delays to street traffic at grade crossings.

Obviously, the proper location of railroad facilities and their operation as well as the elimination of hazardous grade crossings, are potent factors in the life and physical development of the community. As such they are integral parts of the Comprehensive Plan, closely inter-related with practically every one of its features, but especially with the Major Street Plan and the Building Zone Plan. Consequently, all features of the Comprehensive

Plan, but particularly the two just above named, were constantly borne in mind during this study of the questions of railroad facilities and grade crossing elimination, and the recommendations evolved have been thoroughly coordinated with these and other features of the Comprehensive Plan.

#### Existing Railroad Facilities

Lexington is served by three railroad systems operating six divisions:

The Southern Railway Company, operating two divisions, the Cincinnati New Orleans and Texas Pacific Railway and the Louisville Division.

The Louisville & Nashville Railroad Company, operating the Lexington & Eastern Branch, the Paris & Lexington Branch and the Cincinnati Division.

The Chesapeake & Ohio Railway Company, operating the Lexington Branch.

The Lexington Union Station Company, which operates the Union Station jointly used by the C. & O. Railway and the L. & N. Railroad, and jointly owned by these railroad companies.

In addition, the C. & O. Railway also operates the Passenger & Belt Railway.

The existing railroad facilities are presented on the general railroad map of the city and environs, in Exhibit 21. In addition to showing all existing railroad lines and the number of running tracks on each line, this map also shows the more important sidings and industrial spur tracks, the location of passenger stations, freight houses, team tracks and yards. The freight car interchange points between the different railroads, and the interurban electric lines are also indicated.

The information presented in Exhibit 21 has been secured in various ways. The local representatives of the railroad companies have been interviewed, right-of-way and valuation maps were consulted, personal observations were made in the field by walking along the rights-of-way and by studying physical conditions and operating methods at the various yards and stations.



## SYMBOLS

### STEAM R.R. LINES

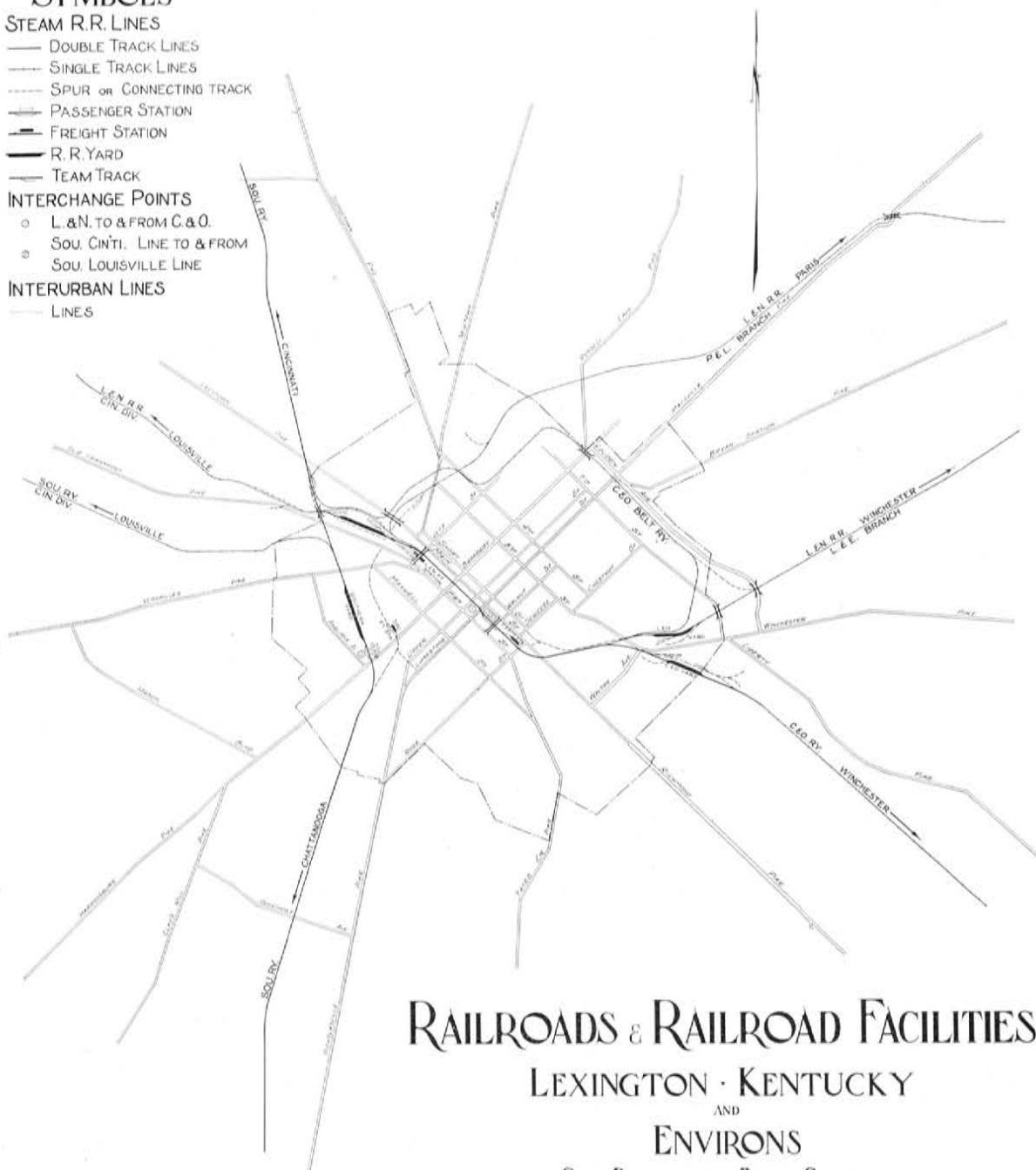
- DOUBLE TRACK LINES
- SINGLE TRACK LINES
- - - SPUR OR CONNECTING TRACK
- PASSENGER STATION
- FREIGHT STATION
- R.R. YARD
- TEAM TRACK

### INTERCHANGE POINTS

- L. & N. TO & FROM C. & O.
- SOU. CINTI. LINE TO & FROM
- SOU. LOUISVILLE LINE

### INTERURBAN LINES

- LINES



# RAILROADS & RAILROAD FACILITIES

LEXINGTON · KENTUCKY

AND

ENVIRONS

CITY PLANNING AND ZONING COMMISSION

L · SEGOE

CONSULTING ENGINEER & CITY PLANNER  
CINCINNATI OHIO

SCALE 1 INCH = 1000 FT.

1950



THE SOUTHERN PASSENGER STATION

For a full understanding of the discussion and recommendations concerning the elimination of grade crossings and changes in operating methods, presented on the following pages, it appears desirable to discuss individually and in more or less detail the present facilities and operating methods of the four railroad companies.

#### **The Southern Railway Company**

Both in point of passenger train movements and through freight train movements the Main Line of the Southern Railway (C. N. O. & T. P. Ry.) stands out as the most important railroad line in the city. This should seem obvious, since this is the main line of the Southern Railway between Cincinnati and Chattanooga, while the lines of the other railroads operating into Lexington are all branch lines.

There are 16 daily passenger trains operated in both directions over this line. These and the four daily trains on the Louisville Division operate into the passenger station on South Broadway. All passenger trains, except the last named four of the Louisville Division, are through trains.

In respect to freight movements, during an 18-hour traffic count (6 a. m. to 12 p. m.), which will be more fully described hereinafter,

28 through freight trains were checked at the South Broadway crossing. Freight trains are broken up and made up in the yards which are located adjacent to the passenger station. The southern throat of this yard is just north of Broadway and the northern throat just south of West High Street, which condition accounts for the many switching movements across these streets. The round-house and service yard are also situated in these yards.

Both the outbound and inbound freight house and the principal team tracks are located on the west side of South Broadway at Bolivar Street. The freight house is thoroughly modern, having been built only five or six years ago, and is connected with the main line by means of a spur track which extends in a north-westerly direction all the way to Manchester Street, and serves numerous warehouses and commercial establishments.

Freight car interchange between this and the other railroad companies is very slight, amounting to only one and sometimes two cuts of cars daily. The interchange point for this railroad is at the freight yards, as indicated in Exhibit 21.

#### **The Louisville & Nashville Railroad Company**

As was already mentioned, this railroad company operates three divisions, the Lexington & Eastern Branch (L. & E. Branch) to

Winchester and McRoberts; the Paris & Lexington Branch (P. & L. Branch) to Paris and Maysville; and the Cincinnati Division to Frankfort and Louisville. Both the passenger and freight trains of the C. & O. Railway Co. between Lexington and Louisville are also operated over the tracks of the Cincinnati Division.

With the exception of two through passenger trains each way that operate between Cincinnati and Knoxville over the L. & E. Branch and the P. & L. Branch, all other passenger trains over all of the three divisions are local trains that originate and terminate in Lexington. There are 22 such trains arriving and departing, divided as follows: four trains in each direction on the L. & E. Branch (one of these is a mixed train), four in each direction on the P. & L. Branch, and three on each direction on the Cincinnati Division.

All of the above trains operate into the Union Station on Main Street, while the equipment yard and round-house are located in the West Lexington Yards west of Patterson Street. Consequently, these local trains make two movements between the station and the equipment yard over the Water Street track between arrival and departure, and in so doing cross all the north-south streets between the Walnut Street and Jefferson Street viaducts.

During the grade crossing traffic survey, six through freight trains were counted during 18 hours on the L. & E. Branch, three on the P. & L. Branch, and ten on the Cincinnati Division. Two of the latter were C. & O. trains.

The principal freight yards of this railroad are located west of Patterson Street. The old round-house and freight yard of the L. & E. Branch are north of Winchester Pike at Walton Avenue.

The freight house and sheds are located west of Patterson Street, both the outbound and inbound house. The principal team tracks are also at this location. There are additional team tracks between Second and Georgetown Streets, in the rear of the old L. & E. round-house, and on East Main Street between Deweese Street and Eastern Avenue.

Interchange with the C. & O. Railway amounts to two cuts of cars daily, and is made over the Water Street track, the interchange point being in the vicinity of Limestone Street. The interchange with the Southern

Railway is made over the Passenger and Belt Railway at the West Lexington yard.

#### **The Chesapeake & Ohio Railway Company**

Lexington constitutes a terminus for the Lexington Branch of this railroad. As has already been mentioned, both freight and passenger trains of this railroad between Lexington and Louisville operate over the Cincinnati Division of the L. & N. Railroad.

The passenger trains of the C. & O. Railway operate into the Union Station. There are two daily through passenger trains in each direction, between Louisville and Ashland, operated by this company, and one local train in each direction between Lexington and Ashland.

The company operates two through freight trains in each direction. Its freight house is located at Main and Rose Streets, both the inbound and outbound freight house. The freight yards and the principal team tracks are located south of Winchester Pike, just east of Walton Avenue.

The car interchange between this railroad and the other two railroads has already been described hereinbefore.

This railroad also owns and operates the Passenger & Belt Railway, which is an industrial belt line around the north central section of the city, used principally as an industrial lead, to furnish service to a great number of industries, warehouses and material yards. This belt line is connected on the east with the C. & O. and the L. & E. Branch of the L. & N. Railway, and on the west with the Main Line of the Southern Railway and the Cincinnati Branch of the L. & N. Railroad.

#### **The Lexington Union Station Company**

This company owns and operates the Union Station and the station facilities. As has already been mentioned, it is owned jointly by the L. & N. Railroad and the C. & O. Railway Companies.

#### **Railroad Service and Facilities**

Reviewing the combined railroad facilities shown in Exhibit 21 from the point of view of available railroad service, it appears that Lexington is provided with excellent railroad service and has an abundance of railroad and shipping facilities.

There are 60 arriving and departing passenger trains daily, or approximately one passenger train for each 950 persons in the Lex-

ington area, which is an exceptionally high number in comparison with other cities.

The local freight facilities are adequate in every respect to furnish prompt and convenient service. The three freight houses, two of which are located in close proximity to the central business district, are easily accessible from every part of the city. Two of the freight houses are of quite recent construction.

Team tracks are numerous and well distributed over the city area. Except during the peak of the tobacco movement, the existing team tracks are fully adequate to handle the local business.

With respect to industrial and warehouse trackage, it would be difficult to find cities of Lexington's size, or even larger, that possess so ample track facilities. The map in Exhibit

21 convincingly illustrates the very high railroad track mileage per square mile of city area in Lexington. The more important spur tracks and sidings may also be seen in Exhibit 21. Along the three branches of the L. & N. Railroad, along both divisions of the Southern Railway, and more particularly along the Passenger & Belt Railway and along the spur track of the Southern Railway in the southwestern section of the city, there are almost unlimited opportunities for railroad sidings to serve industries and warehouses. Bearing in mind the opportunities that these railroad lines offer for the more intensive development of abutting properties by industries and warehouses, all such areas as could properly be zoned for such purposes have been so designated on the Building Zone Map.

## GRADE CROSSING ELIMINATION

It has been stated at the outset that the principal problem in Lexington, in connection with the steam railroads, is the problem of minimizing the accident hazard and delays to both street and railroad traffic at the many grade crossings throughout the city.

Unquestionably, the citizens of Lexington are cognizant of the great importance from the safety and from the financial standpoint of railroad grade separation, at least at the most important grade crossings, and of minimizing these dangers and losses at others by adequate crossing protection and by improvements in operating methods. It is doubtful, however, whether there are many who fully realize the economic losses borne directly or indirectly by them, or by the city's commerce and industry and the railroad companies, by reason of the existing grade crossing conditions. This, as well as the extent to which the population is daily exposed to the latent dangers of railroad grade crossings, was fully brought out by the findings of a traffic survey at the principal grade crossings.

### Grade Crossing Traffic Survey

This survey was undertaken to secure the facts with respect to the amount of railroad and street traffic passing over the principal grade crossings of the city, also to ascertain the amount of conflict between these two types of traffic, as manifested by street traffic delays and the potential accident danger. The survey, to which reference has been made hereinbefore, was made at about 15 principal grade crossings during an 18-hour period (6:00 a. m. to 12:00

p. m.). The traffic counts made at these crossings were recorded on "field-sheets". The observers at each crossing recorded on these sheets, for each 15-minute period, the number of passenger, freight and switching trains according to railroad ownership, the number of cars in each train, the time when each was observed, and the direction of travel; the street traffic passing over the crossing was counted, motor vehicles, street cars and buses separately, and record was kept of the amount of time during which the crossing was closed to street traffic whenever a train passed, and of the number of motor vehicles, street cars and buses that were delayed in each case.

From the data so collected in the field and by an analysis of same, "summary sheets" were prepared, which give all conceivable information regarding rail and street traffic, the amount of street traffic delays caused by trains, segregated as to passenger, freight and switching trains. The final summaries presented in Tables IX, X and XI show the railroad and street traffic, the potential danger, and the street traffic delays at the principal grade crossings, also the potential danger and the delays combined, and the order of priority of the principal grade crossings from both of these standpoints.

The data gathered in the course of this traffic survey and the summaries presented in the above tables open up an almost unlimited field for the analysis and interpretation of the facts regarding grade crossing conditions



THE SOUTHERN FREIGHT STATION

throughout the city, collectively as well as in reference to individual crossings. In the following a few general facts are presented which characterize the present grade crossing situation.

The survey revealed that during the 18 hours (6 a. m. to 12 p. m.) 66,844 motor vehicles (including buses) passed over the grade crossings observed, which is 4.6 times the number of cars registered in Fayette County. Thus, statistically at least, every motor vehicle registered in Fayette County passes over four to five grade crossings every day.

It was found that nearly 95,000 persons passed over the crossing during the 18-hour period in motor vehicles, street cars and buses. Making allowance for pedestrians, it is safe to say that the total number of persons is well in excess of 100,000, which means (theoretically at least) that daily every inhabitant of the community twice crosses the railroad tracks.

Of the 65,990 private motor vehicles that passed over the grade crossings of the city during the 18-hour period, every 15th to 16th, and of the street cars and buses every 17th, was found to be delayed by railroad traffic.

The total delays to street traffic in the city during the 18-hour period was found to amount to 145 vehicle-hours.

In regard to individual grade crossings, the proportion of delayed vehicles and the amount of delays show great variations even at crossings of comparable importance. Thus, for example, at the South Broadway crossing near the Southern Passenger Station, every fifth to sixth motor vehicle, street car and bus was found to be delayed, and the crossing was closed to street traffic for two and a half hours in the 18-hour period, while at the East Main Street crossing only every 22nd to 23rd motor vehicle, street car or bus was found to be delayed, and the crossing was closed for only 55½ minutes out of the 18 hours corresponding figures for South Broadway at the L. & N. crossing are as follows: every 13th to 14th vehicle or street car delayed and the crossing closed for one hour and 18½ minutes in the 18 hours. Of all crossings the maximum of daily delays occurred at the West High Street cross at the Southern Main Line, and amounted to two hours and 50½ minutes, or to nearly three hours during the 18-hour period.

#### Routing and Density of Railroad Traffic

From data collected during the traffic survey briefly discussed above, the diagram in Exhibit 22, showing Daily Train Movements, has been prepared. It gives the number of trains on all railroad lines, as observed at the grade crossing during 18 hours (6 a. m. to 12



p. m.). Through passenger and freight trains, and switching trains are indicated separately by means of bands the width of which corresponds to the number of trains in both directions. The solid bands indicate the through train movements, and the bands that are cross-hatched the switching movements.

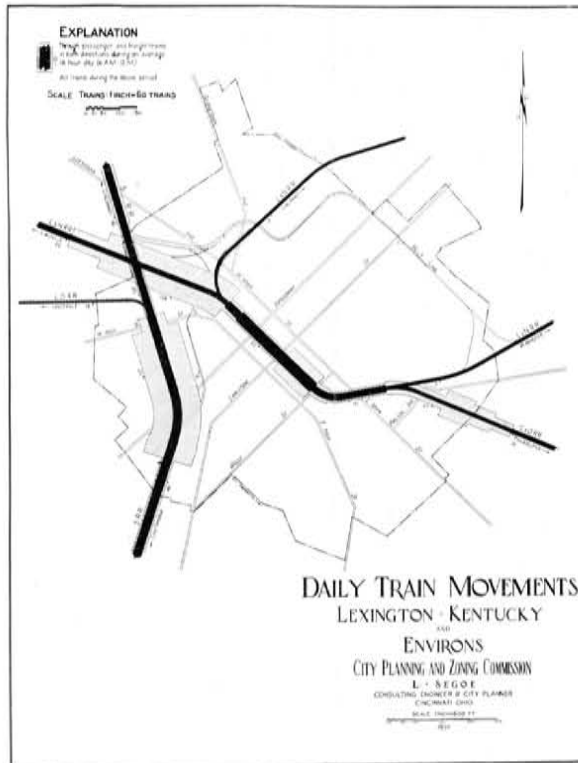


EXHIBIT 22

The relative importance of individual lines from the standpoint of train movements or traffic can be readily adjudged, in a general way, by studying the diagram in Exhibit 22. With the knowledge of the location of railroad facilities hereinbefore described, or by comparing Exhibit 22 with Exhibit 21 showing such railroad facilities, it is not difficult to trace on the diagram in Exhibit 22 the general method of operation on the various railroad lines.

The locations where the heaviest switching movements are indicated naturally identify the freight yards and freight houses. Of these the maximum train movements occurred at the Southern Freight Yard, 171 in 18 hours. At the locations with the heaviest train movements, switching movements outweigh by far

those of through freight and passenger trains.

Since, generally speaking, the delays and the danger at any grade crossing are directly proportional with the number of train movements over such crossing, the diagram in Exhibit 22 permits of a crude comparison between the different grade crossings from these standpoints. It may be noted, for example, that insofar as interference by train movements is concerned, there is relatively small interference along the Water Street track in comparison with the crossing of South Broadway or West High Street with the Southern Main Line.

It is also possible to determine by an analysis of this diagram the causes of the delays and other interference at some of the most important grade crossings. For example, the many delays on South Broadway and on West High Street at the Southern Main Line, as may be seen, are caused principally by switching movements which in turn are due to the location of the yard, both throats of which practically extend to these streets and necessitate switching across them when working the yard. A similar situation exists at the Walton Avenue crossing, where the throat of the C. & O. Netherland Yard is located just east of the crossing. Fortunately, the heavy switching movements in the L. & N. West Lexington Yards do not extend across any street. Fortunately, too, most of the switching movements by the C. & O. in working its freight house and industrial sidings along Water Street, are confined to the passenger station area between Limestone Street and Rose Street. The heavy through train movements over the Water Street track between the Union Station and the West Lexington Yards, will no doubt be noted. This is caused by the large number of passenger train movements between the Station and the equipment yard which is located in these yards. As has already been pointed out, upon arrival local passenger trains are taken to the equipment yard over the Water Street track and are brought back again over the same route, before departure. This method of operation resulted in 35 passenger train movements over the Water Street track between the Station and the equipment terminal during the 18-hour period observed. A possible reduction of delays to street traffic along the Water Street tracks by means of eliminating some of these movements, will be more fully discussed presently.

### **The Economic Losses and the Danger due to Grade Crossing Conditions**

The undesirable effects of grade crossings may be classified into two general groups:

(a) Economic losses due to street traffic delays, to the slow and inefficient operation of the railroads, and to the cost of the physical maintenance and protection of grade crossings.

(b) Accident damages and the latent danger to human life and property.

The elimination of the above economic losses and danger is the direct object of grade separation.

The cost and losses to the railroad companies due to operating across the streets of the city at grade, consists principally of the cost of grade crossing protection, of the physical maintenance of grade crossings, losses due to slow train operation and to accident damages.

The grade crossings at present are protected by watchmen. There are 21 watchmen employed by the railroad companies throughout the city. Assuming the average wages of these watchmen at \$70 per month, their yearly wages amount to \$17,640.

The physical maintenance of grade crossings, that is, the street pavement repairs, the maintenance of railroad trackage, may be appraised as about \$5,000 annually.

The losses due to slow operation are diffi-

cult to appraise. Assuming, however, a speed of 25 miles an hour under normal conditions, and assuming the reduction in the cost of train operation by \$1.00 per train mile, a saving by the railroad companies of \$200 daily, through the elimination of unnecessary stops, train delays and interference with switching operations at freight yards, should seem a conservative assumption.

Accident statistics not being obtainable, no estimate could be made of the losses of the railroads due to the payment of accident damages. Inquiries at various sources indicate, however, that, most fortunately, there have been no serious accidents in the city for many years.

On the basis of the figures given above, it is believed that the annual cost and losses of the railroads due to grade crossing conditions may be placed at \$83,000, which corresponds to an interest at six percent on \$1,383,333.

The economic losses to the city's business and industry and to its citizens in general, due to street traffic delays, can be easily appraised from the findings of the traffic survey.

It has been pointed out previously that the total delays to street traffic in the city during the 18-hour period were found to amount to 145 vehicle-hours. Applying the universally-accepted figure of five cents as the value of



**GRADE SEPARATION ON THE HENRY CLAY BOULEVARD**

one vehicle-minute, or three dollars for one vehicle-hour, which includes the time of the occupants and driver, the wear and tear, and the added gasoline consumption due to stopping and starting, these delays represent a daily loss of \$435.65. On the basis of 300 days per annum, the public is losing \$130,965 per year due to those delays, which represents six percent on a capital of \$2,178,250.

As previously stated, records were not obtainable with regard to grade crossing accidents or the damages caused by such accidents to human life and property. However, it was found during similar studies in other cities that in only 40 percent of all accidents did the railroads pay damages, and that even in such cases the damages actually paid by the railroads did not exceed 50 percent of the amount of life and property damages caused by the accidents, so that the major portion of the losses suffered through grade crossing accidents are borne by the community.

Manifestly the potential danger at grade crossings, while impressive when expressed by the volume of street and railroad traffic which uses the crossings, cannot be expressed in monetary values. This latent danger is generally recognized only after a serious accident has occurred.

Considering that the capitalized value of losses to the public of street traffic delays alone, as observed during the traffic survey, amounts to nearly \$2,200,000, which does not include the delays at the less important grade crossings, considering further the unknown losses due to accidents, it is safe to say that the capitalized losses to the community due to the present grade crossing situation in the city are in the neighborhood of two and a half million dollars. Consequently, the City could spend two and a half million dollars for the elimination of grade crossings, without spending more money annually than it is now losing due to the delays and accidents at grade crossings.

#### **The Proposed Grade Crossing Elimination Program.**

There are 18 grade crossings in the city and its surroundings which, either by reason of the volume of railroad or passenger traffic using it, by reason of unfavorable physical conditions, or in connection with the development of the Major Street Plan, may be considered important.

Obviously, the elimination of all these crossings immediately or even in the near future is beyond the financial means of the

community, and would not be warranted from the standpoint of the railroads. Consequently, the problem in connection with the grade crossing situation consists of the selection of a limited number of grade crossings, the elimination of which would reduce to a minimum the time delays and the potential danger, and, in general, would minimize the interference with the life and healthful growth of the community caused by the operation of railroads at grade. The problem also includes the devising of such changes in operating methods that would further reduce this interference at those grade crossings that will not likely be eliminated for a great many years.

In the summary of the findings of the traffic survey in Table XI, already referred to, the priority order of the different grade crossings, both in point of potential danger and amount of delays, is indicated. It will be noted that from both of the above standpoints the South Broadway crossing at the Southern Main Line stands out as by far the most important grade crossing in the city. This is followed by the West High Street and East Main Street crossings, which are of about equal importance. The South Broadway crossing at the L. & N. and the Walton Avenue crossing are fourth and fifth, the two being again of about equal importance. These are followed, according to such rating, by the crossings of South Limestone Street, South Upper Street and Rose Street with the Water Street tracks.

In order to better visualize the relative position of principal crossings, the diagrams shown in Exhibits 23 and 24 were prepared.

The first of these shows the street traffic delays in vehicle-minutes. The widths of the bands drawn along the railroad lines are in proportion to the average delay caused to each delayed motor vehicle at the different grade crossings, the widths of the cross-hatched bands drawn across the railroad lines indicate the number of motor vehicles that were delayed at each crossing. The areas of the rectangles formed by the two intersecting bands, shown in solid black, represent the product of the number of delayed vehicles and the average time delay, and therefore correspond to the traffic delays in vehicle-minutes at the different crossings. The comparative size of these rectangles therefore gives the comparative importance of the different grade crossings from the standpoint of delays. A very similar diagram in Exhibit 24 has been so drawn that the width of the bands along the railroad lines are in proportion to the number of train movements, and the cross-hatched bands the number of motor vehicles that crossed each crossing during the 18 hours. The areas of the rectangles therefore are in proportion with the product of the number of trains and of motor vehicles passing over the crossing, and hence with the amount of potential danger, and can again be directly compared.

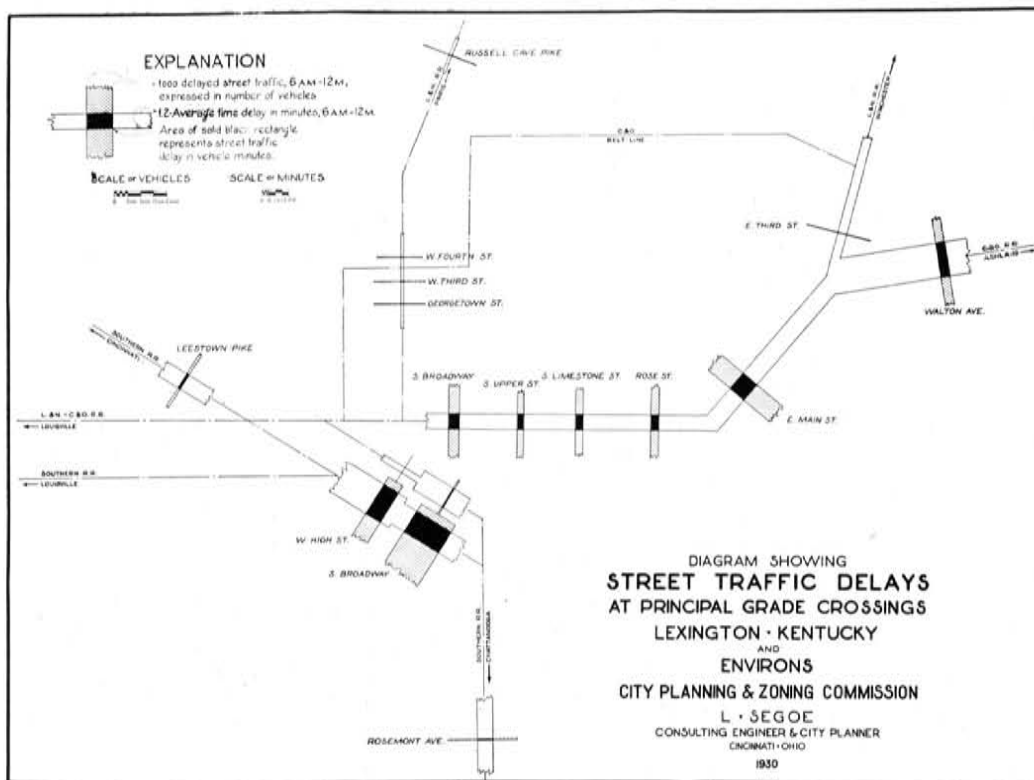


EXHIBIT 23

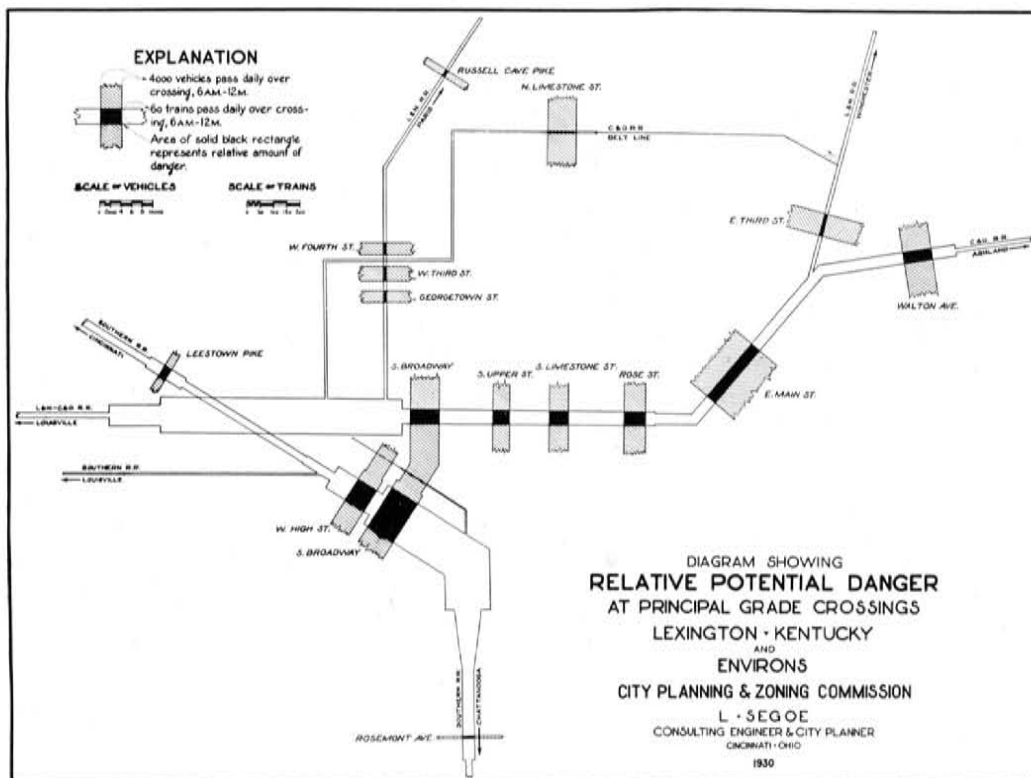


EXHIBIT 24



THE NEW WEST HIGH STREET VIADUCT OVER THE SOUTHERN  
(Looking toward the city)

Obviously, in developing a plan and program for the systematic elimination of the city's most important grade crossings, the grade crossing situation must be studied in its relationship to the plan for the development of the Major Street System. The order of urgency of grade separation projects should be determined not alone on the basis of the priorities with respect to present use and conditions, but also in consideration of the urgency of major highway improvements involving one or the other of these grade separations. The urgency of grade separation on an existing main thoroughfare, where such separation might be physically difficult or excessively expensive, can be greatly lessened by diverting traffic to a relief thoroughfare which can be more easily carried across the railroad tracks on a separate grade. In the working out of the proposed program for grade crossing elimination, the Major Street Plan and the findings of the survey of present grade crossing conditions were studied side by side.

The recommended program of grade separation is shown in Exhibit 25. It is proposed under this program to eliminate within the next 20 years seven of the city's important grade crossings.

As has already been mentioned, the South Broadway crossing at the Southern Main Line is considered the outstandingly important

grade crossing in the city. This is due very likely to the fact that, as was observed, much of the inbound traffic is shunted over this crossing from West High Street, when the crossing on the latter street is closed by switching operations. The elimination of the crossing on West High Street, construction of which will likely start within the next few months,\* will undoubtedly bring to an end this practice, and may even have the effect of diverting traffic from the South Broadway crossing.

In view of the new Veterans' and the Narcotic Hospitals' location on Leestown Pike about two miles outside of the city, and of the traffic that is anticipated over the Leestown Pike crossing, traveling between these institutions and the city, it is believed that the elimination of this crossing, which it is understood is now being negotiated, should be accomplished before the above institutions are opened.

The appropriate time for building a grade separation structure across the L. & E. Division of the L. & N. Railroad and across the C. & O. Railroad, approximately on line with Goodloe Street, is naturally dependent upon the time of constructing the proposed Third Street-Cramer Avenue connection. It is recommended that this grade separation struct-

\*Completed December, 1930.



ure should carry the street over the railroad tracks.

Assuming that it may be possible to carry out the last named project within the next five years, the South Broadway Southern Main Line crossing is recommended as the next grade separation project. From preliminary studies it appears that the carrying of Broadway over the tracks on a viaduct, with the possible shifting of its location somewhat to the west, would probably be the appropriate and the least expensive manner of grade separation in this case.

It is recommended that the Walton Avenue crossing at the C. & O. Railway be eliminated next, by means of a viaduct from Winchester Pike to Walton Avenue. By slightly changing the location of either Winchester Pike or of Third Street, the need for changing the grade of Third Street can be obviated.

In addition to the above grade separations, it is recommended that, within the next 20 years, the crossing of the Paris and Lexington Branch of the L. & N. on Georgetown Pike should also be eliminated by a street viaduct.

Another grade crossing that could well be included in the program, because of the favorable physical conditions that would make its elimination very inexpensive, is the crossing of Russell Cave Pike with the Paris and Lexington Branch of the L. & N. Railroad. By relocating this street north-eastwardly as a part of the proposed Inner Boulevard, it could be carried over the track by a short and inexpensive structure.

It will undoubtedly be noted that the elimination of the crossing on East Main Street and the several crossings along the Water Street track have not been included in this grade separation program. There are several reasons for the belief that grade separation at these grade crossings is highly improbable and would not be warranted even within several decades.

Physical conditions would render these grade separations difficult and extremely expensive. The profiles of the several north-south streets are such, that no changes in grade could be made that would help grade separation, without resorting to prohibitive gradients and without inviting prohibitive costs by reason of damages to abutting properties. Grade separation at these crossings could only be accomplished by changing the elevation of the tracks, which again is limited to the raising of the tracks, because of drainage conditions (the railroads being located in what used to be the

Town Branch of Elkhorn Creek). The Netherland Yard on the east and the West Lexington Yards on the west are further controlling factors, in limiting the distance within which such track elevation would have to be confined. A constantly-falling railroad profile from east to west contributes additional difficulties.

In spite of these limitations, preliminary studies of the profile of the railroads show that it would be possible to elevate the tracks beginning at Walton Avenue or Goodloe Street, to connect with the present grade at the throat of the West Lexington Yards, and to obtain the entire necessary clearance for grade separations at all streets from East Main Street to Broadway, both streets included, without exceeding the present maximum grade on this line. These preliminary studies also indicate, however, that this project, while feasible physically, would involve such expenditures as could not be borne readily by the City, and would hardly be justified on the part of the railroads, for several decades at least. The relocation of this railroad line is also highly improbable; firstly, because such relocation, it is held, could offer few if any advantages from the point of view of general city development, and secondly, because the abandonment of the present facilities that such relocation would entail, the cost of constructing the new line on a separate grade and the cost of new facilities, would exceed the cost of grade separation along the present line by the method just above discussed.

Consequently, insofar as these crossings along the Water Street tracks are concerned, betterment in conditions will have to be attained by such improvements in operating methods as will lessen mutual interference between railroad and city traffic and by the installation of such protecting devices as will reduce the danger to the possible minimum.

#### The Physical Features of Grade Separation Structures

The recommended street and roadway widths of the proposed grade separation structures are given in the following table:

Street	Railroad	Street Width	Roadway Width
West High Street .....	Sou.	54	40
Leestown Pike .....	Sou.	44	30
Walton Avenue .....	C&O	52	38
Third St.-Cramer Ave.*	C&O.L&N	52	38
South Broadway .....	Sou.	54	40
Georgetown Street .....	L&N	54	40
Russell Cave Pike .....	L&N	44	30

\*Recommended connection as part of new boulevard.

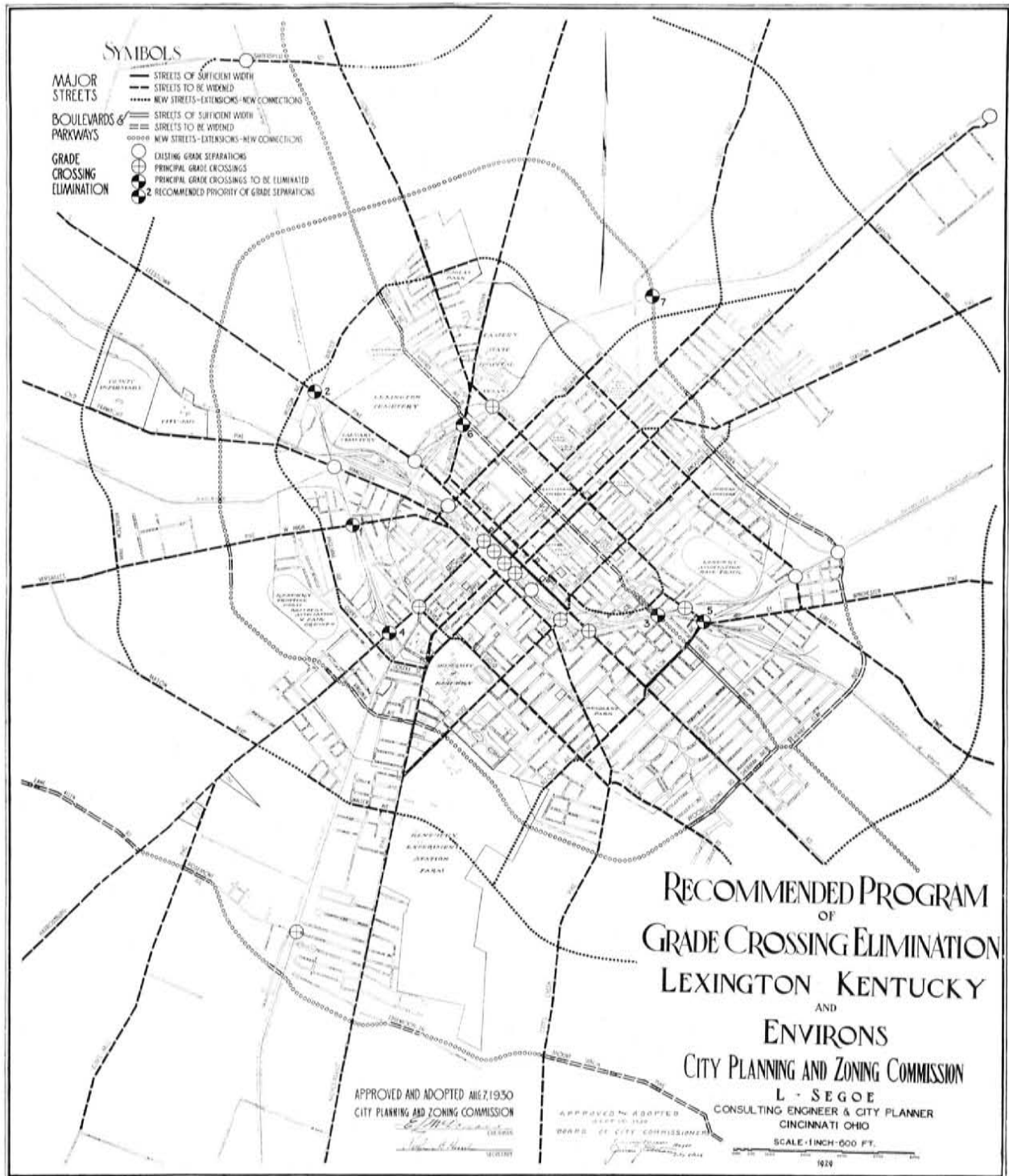


EXHIBIT 25

The recommended roadway widths are based on the estimated Future Traffic Load prepared in connection with the development of the Major Street Plan.

It is most important that when the detailed plans will be prepared for the grade separation structures, ample provision should be made for the handling without delay of not only the present street traffic but also of the much heavier traffic of the future. Therefore, it cannot be too strongly emphasized that the recommended street and roadway width should be considered minimum dimensions and should be insisted upon.

It should be mentioned that the roadway widths recommended are meant to be measured from curb to curb without allowing for

intermediate columns. Should center columns be used, one-half of the required roadway width should be increased by 18 inches (preferably by two feet) and each half of the roadway between the curb and the nearest point of center columns or their footings should conform to the roadway width so determined. Except for center columns no other columns should be placed within the roadway.

It is imperative that the minimum clearance of street underpasses should be made 13 feet. This clearance is required by the fire fighting equipment. It is strongly recommended, however, that unless warranted by exceptional conditions or difficulties, no underpass shall be built on any major street with a clearance of less than 14 feet.

### RECOMMENDED CHANGES IN OPERATING METHODS

The changes in the present methods of railroad operation are recommended principally with the view of minimizing the delays and the potential danger to street traffic at the East Main Street crossing and along the Water Street tracks, which grade crossings, as has just above been pointed out, are not likely to be eliminated for a great number of years, because of the great cost and physical difficulties which their separation would entail.

A summary of delays and potential danger at these grade crossings during an 18-hour period is given in the table below:

Location	Time Delays to Street Traffic Caused by Trains (Minutes)				Vehicle-Minute Delays to Street Traffic Caused by Trains			
	Passgr.	Freight	Switching	Total	Passgr.	Freight	Switching	Total
East Main .....	12	9	34½	55½	121	213	748	1082
Rose Street .....	17	23½	16	56½	93	132	27	252
South Limestone .....	39	23½	16	78½	278	170	34	482
South Upper .....	39	23½	16	78½	178	109	22	309
South Broadway .....	39	23½	16	78½	368	225	45	638
TOTALS	146	103	98½	347½	1038	849	876	2763

It will be noted when comparing the total time delays at these crossings caused by different trains that about 42 percent of these are caused by passenger trains. The reasons for this condition have already been set forth hereinbefore. It was pointed out that the large number of passenger train movements across the north-south streets, between the Union Station and the West Lexington Yards, are due to the movements of the local trains between the Station and the service yards that are situated in the West Lexington Yards. There are 40 daily passenger trains arriving

or departing at the Union Station, of which only 16 are through trains and 24 local trains that originate and terminate in Lexington. Every one of the latter makes two movements between the Station and the equipment yard between arrival and departure. While there are only twelve trains arriving and twelve trains departing daily over the Cincinnati Division and over the Paris and Lexington Branch, 35 passenger train movements were observed across the north-south streets in question during an 18-hour period.

The service yard at the Passenger Station

is owned and used by the C. & O. Railway. It does not have sufficient capacity to accommodate the equipment of the L. & N. passenger trains, neither is there room to provide additional capacity for this equipment. Furthermore, even though this service yard could be made large enough to take care of the L. & N. passenger equipment, it would not eliminate the double movements of locomotives.

One solution of the problem might be the establishment of a service yard in the old L. & E. Yards and the rehabilitation of the

round-house. However, this would likely be objectionable to the railroad company, since it would mean duplication of facilities.

A more feasible solution would be the through routing of some of the local trains. In fact, **there is no reason why the train schedules could not be so modified as to make such through routing possible.** By eliminating some of the switching movements between the Station and the West Lexington Yards, such through routing would not only lessen the delays along the Water Street tracks, but would reduce the operating expenses of the railroad company.

According to the traffic survey 54.5 percent of all delays in vehicle-minutes along the Water Street tracks are caused by passenger train movements. By the through routing of about one-half of the local passenger trains, it is estimated that the total delays along these tracks could be reduced by 15 to 20 percent.

**A further reduction of the delays and potential danger could be brought about at these crossings and at the East Main Street crossing by the re-routing of the through freight trains of the L. & E. Branch over the P. & L. Branch.** There exists a connection between these two branches about five miles from the city, which, if rehabilitated, could be used for this purpose. These trains would thus reach the West Lexington Yards without having to pass through the central section of the city. There are six daily through freight trains that could be so routed.

Referring again to the findings of the traffic survey, 37.5 percent of all delays in vehicle-minutes along the Water Street tracks were caused by through freight trains. Three-fourths of these trains represented those that could be routed around the city as above sug-

gested. Consequently 28 percent of all delays should be eliminated by such routing.

**Still another reduction in the delays along the Water Street tracks may be effected by using the C. & O. Passenger and Belt Railway for car interchange movements between the L. & N. Railroad and the C. & O. Railway.**

The above recommended changes in operating methods, as may have been observed, would principally benefit the crossings along the Water Street tracks. Insofar as the East Main Street crossing is concerned, it will be remembered that the principal relief for this crossing would be provided by the building of the Short Street-Cramer Avenue connection, which would include a viaduct over both the C. & O. and L. & N. tracks. However, in addition to the operating changes already recommended, and until such time as this relief artery may be provided, the delays and potential danger at this crossing could be greatly relieved by improving the manner of switching operations near this crossing.

It may be seen by referring to the table just above presented that the delays at this crossing would be negligible if it were not for the switching operations by the C. & Q. Railway when spotting cars for private industries. By making up the cuts more carefully and by working these industrial sidings from either side of Main Street, switching movements across Main Street could be greatly reduced.

It is believed that such changes in switching movements, together with other changes in operating methods previously recommended, would reduce by fully 50 percent the delays and potential danger at the East Main Street crossing.

### EFFECTS OF THE RECOMMENDED GRADE SEPARATION PROGRAM AND CHANGES IN OPERATING METHODS.

By comparing the aggregate of the delays and potential danger, that would be eliminated by the grade separation projects hereinbefore recommended, with the total of such delays and potential danger in the city, an appraisal was made of the results to be obtained by the carrying out of the recommended program. It was thus estimated that fully 60 percent of all the potential danger and 73 percent of all delays

observed at the grade crossings throughout the city, could be eliminated by the carrying out of the recommended grade separation program.

The recommended changes in operating methods, such as the through routing of local passenger trains, the re-routing of the through freight trains on the L. & E. Branch of the L. & N. Railroad around the city over the P. & L. Branch, the routing of interchange move-

ments over the Belt Line, and the reduction of switching movements across East Main Street, would effect a further reduction of delays and potential danger, raising the estimated percentage figures given above for the potential danger and vehicle-minute delays to be eliminated, to about 70 and 80 percent respectively.

Assuming the above estimates to be reason-

ably accurate, and considering that these results may be attained, under the recommended program, by eliminating only seven of the 18 most important grade crossings in the city and by the suggested changes in operating methods, the program, it is believed, commends itself as an economical and effective plan for the solution of the City's grade crossing problem.



TABLE IX  
STREET TRAFFIC DELAYS AT PRINCIPAL GRADE CROSSINGS

Location Name of Street	R.R.	Time Delays to Street Traffic Caused by Trains (Minutes)			Total	Delayed Street Traffic Number of		Vehicle-Minute Delays to Traffic Caused by Trains			Order in Amount of Delays	
		Passgr.	Freight	Switching		Vehicles	Buses & Street Cars	Passgr.	Freight	Switching		Total
S. Broadway .....	Sou.	8½	64	75½	148	1147	44	42	1010	1809	2861	1
W. High St. ....	Sou.	14½	47	109	170½	666	—	35	472	1267	1774	2
E. Main St. ....	L&N C&O	12	9	34½	55½	547	27	121	213	748	1082	3
Walton Ave. ....	L&N C&O	5½	26	52	83½	372	—	10	315	663	988	4
S. Broadway .....	L&N C&O	39	23½	16	78½	406	16	368	225	45	638	5
S. Limestone .....	L&N C&O	39	23½	16	78½	272	16	278	170	34	482	6
S. Upper St. ....	L&N C&O	39	23½	16	78½	210	—	178	109	22	309	7
Rose St. ....	L&N C&O	17	23½	16	56½	311	—	93	132	27	252	8
Leestown Pike ...	Sou.	10	31	29½	70½	121	—	12	88	66	166	9
*S. Broadway .....	Sou.	—	—	7½	7½	23	1	—	—	55	55	10
Rosemont Ave. ...	Sou.	2	18	1	21	36	—	2	42	2	46	11
E. Third St. ....	L&N	3½	5½	—	9	38	—	8	18	—	26	12
W. Third St. ....	L&N	4½	½	1	6	40	—	7	1	2	10	13
Georgetown St....	L&N	4½	½	1	6	29	—	7	1	1	9	14
W. Fourth St. ....	L&N	4½	½	1	6	24	1	6	1	1	8	15
**W. High St. ....	Sou.	—	—	1	1	2	—	—	—	1	1	16
TOTALS .....					—	4244	105	1167	2797	4743	8707	

\*at Bolivar St.

\*\*at Maxwell St.

TABLE X  
RAILROAD AND STREET TRAFFIC

AND

POTENTIAL DANGER AT PRINCIPAL GRADE CROSSINGS

Location Name of Street	RR	Number of Watchmen	Railroad Traffic		Number of Trains		Street Traffic Number of Vehicles	Buses & Street Cars	Amount of Poten- tial Danger	Order in Amount of Poten- tial Danger
			Passgr.	Freight	Switching	Total				
South Broadway .....	Sou.	3	12	28	131	171	5617	234	1281	1
East Main St. ....	L&N C&O	2	15	11	15	41	12572	589	709	2
West High St. ....	Sou.	3	15	17	63	95	4124	—	332	3
South Broadway .....	L&N C&O	2	35	8	12	55	5186	234	388	4
Walton Ave. ....	L&N C&O	1	6	8	33	47	5696	27	278	5
South Limestone St. ....	L&N C&O	2	35	8	12	55	3500	200	226	6
South Upper St. ....	L&N C&O	1	35	8	12	55	3222	—	177	7
Rose St. ....	L&N C&O	1	15	8	12	35	4000	—	170	8
Leestown Pike .....	Sou.	3	13	14	19	46	1408	4	66	9
East Third St. ....	L&N	—	8	4	1	13	4324	70	63	10
*South Broadway .....	Sou.	—	—	—	6	6	4654	234	39	11
West Fourth St. ....	L&N	—	8	3	1	12	2298	107	38	12
West Third St. ....	L&N	—	8	3	1	12	2950	—	35	13
Georgetown St. ....	L&N	—	8	3	1	12	2111	104	35	14
Rosemont Ave. ....	Sou.	—	10	21	15	46	555	—	26	15
**West High St. ....	Sou.	—	—	—	2	2	3773	—	8	16
TOTALS .....		18‡	—	—	—	—	65990	1803	3931	

\*at Bolivar Street.      \*\*at Maxwell Street.

‡In addition there is one watchman at each the Mill, Patterson and Spring Street crossings.

TABLE XI  
POTENTIAL DANGER AND DELAYS  
AT PRINCIPAL GRADE CROSSINGS

Location Name of Street	R.R.	Trains	Daily Traffic		Relative Amount of Potential Danger	Number of Delayed		Delays in Vehicle- Minutes	Order in Amount of Potential Danger	Order in Amount of Delays
			Vehicles	Buses & Street Cars		Vehicles	Buses & Street Cars			
South Broadway .....	Sou.	171	5617	234	1281	1147	44	2861	1	1
East Main St. ....	L&N C&O	41	12572	589	709	547	27	1082	2	3
West High St. ....	Sou.	95	4124	—	392	666	—	1774	3	2
South Broadway .....	L&N C&O	55	5186	234	388	406	16	638	4	5
Walton Ave. ....	L&N C&O	47	5696	27	278	372	—	988	5	4
South Limestone St. ....	L&N C&O	55	3500	200	226	272	16	482	6	6
South Upper St. ....	L&N C&O	55	3222	—	177	210	—	309	7	7
Rose Street .....	L&N C&O	35	4000	—	170	311	—	252	8	8
Leestown Pike .....	Sou.	46	1408	4	66	121	—	166	9	9
East Third St. ....	L&N	13	4324	70	63	38	—	26	10	12
*South Broadway .....	Sou.	6	4654	234	39	23	1	55	11	10
West Fourth St. ....	L&N	12	2298	107	38	24	1	8	12	15
West Third St. ....	L&N	12	2950	—	35	40	—	10	13	13
Georgetown St. ....	L&N	12	2111	104	35	29	—	9	14	14
Rosemont Ave. ....	Sou.	46	555	—	26	36	—	46	15	11
**West High St. ....	Sou.	2	3773	—	8	2	—	1	16	16
TOTALS .....		—	65,990	1803	3931	4244	105	8707	—	—

\*at Bolivar St.

\*\*at Maxwell St.

## CHAPTER VIII

### TRANSIT SYSTEM

#### Street Car Lines and Motor Bus Lines

In connection with the preparation of a city plan, the study of the transit system and the working out of a plan for its future development involves primarily the coordination of the physical lay-out and operation of transit lines with the Major Street Plan and the planning of the future extension of the transit system in a manner conducive to proper city development. Due consideration must be given, throughout the course of such study, to the improvement of service and to attaining operating efficiency, since these are of utmost importance for the success and usefulness of the transit facilities, both from the standpoint of the public and of the operating company.

The transit system of a city is inter-related in a number of ways with street traffic, and thus with the Major Street System, also with the development of the city as a whole. By attracting the largest possible number of people to the transit lines, the most efficient utilization of available roadway space may be attained, as the number of square feet of roadway space occupied per person traveling by street car or motor bus is but a fraction of that required by the same person when using a private automobile. Thus, the improving of transit service offers a means for reducing the demand for roadway space and for combating traffic congestion. On the other hand, transit lines, particularly street car lines, require broad streets and roadways of special width and construction. A street car track within the roadway constitutes a certain type of right-of-way set aside largely for the use of street cars, and for many reasons can be used only to a limited degree by vehicular traffic. The safety of street car patrons requires provision for safety loading platforms, which in turn necessitates wider roadways, at least near street intersections. The routing of street car lines or even bus lines over residence streets otherwise free of through travel, affects adversely the desirability of these streets as a place of residence. Manifestly, the transit lines should be routed over the city's major streets whenever possible.

Proper city growth depends to no small degree upon the development of the transit

system. Transit lines can aid materially in decentralizing population. To accomplish this, the transit system should keep abreast if not ahead of city development. Generally speaking, an extension, be it a street car line or a bus line, has to build up the territory it serves before it will earn a reasonable return on the investment. During such period other well paying lines will have to carry it. This in turn requires that the entire transit system be operated by the same company, and that it be operated with the highest efficiency, since it is only under such conditions that the company will be in a position to aid in this manner in the proper development of the city. In point of fact, it is believed that the granting to a company of a virtual monopoly in rendering transportation service, can be justified principally on the ground of enabling the company to render this sort of aid in the proper development of the city. Fortunately, in Lexington the transit lines are operated by the same Company. To make it possible for this Company to assist the city in the manner discussed above in its future development, it is required that the Transit System should be so developed that will insure adequate and attractive service and efficiency of operation.

Although it is not commonly realized, in the medium sized city the electric surface car lines are the principal agencies of urban transportation. These carry daily from sixty to eighty percent of the passenger travel between various sections of the city. In recent years the motor bus has entered the field of urban mass-transportation, either in competition with surface car lines or rapid transit lines or supplementing these facilities, but only in very few cases as the exclusive transit agency.

It has been the experience of the many traction companies that have been operating bus lines in recent years in conjunction with their street car lines, that the former can best be used as supplementary to the street car lines and not in competition therewith. The logical use of bus lines, in the urban transportation system, is in locations and for the type of service for which these are particularly

adapted by reason of their low first cost and flexibility of operation. Thus, a bus line can be used to good advantage as a feeder to a street car line or rapid transit line, also as a cross town or belt line, or an extension into sparsely settled territory, or through districts where the physical characteristics of any possible route require flexibility. It can also be

used to offer additional facilities where a street car line is overloaded and where the track facilities do not permit the augmenting of service by additional street cars. A bus line may also be used parallel with a street car line when the two lines offer different kinds of service, such as express or limited and local service.

### THE PRESENT TRANSIT SYSTEM

According to information furnished by the Kentucky Traction and Terminal Company, the operation of the present street railway system commenced in 1882. The electric cars were placed in operation in 1888.

Information is not available regarding the installation of the individual street car lines prior to 1898. The street car lines in operation at that time, it appears, were substantially the same as at present, except that the East Main Street car line stopped just east of Woodland Avenue, the South Limestone Street car line at Colfax Street, and the Jefferson Street car line operated both ways on Jefferson Street, Fourth Street and Hickory Street, to the rear of the Lexington Cemetery.

In or about 1898 the East Main Street car line was extended on Main Street to Clay Avenue, thence along Clay Avenue to the rear of Woodland Park, thence along the rear of the Park and over Kentucky Avenue to Main Street. In or about 1901 this loop at the east end of the East Main Street car line was discontinued and replaced by a new loop over Woodland Avenue, High Street, and Clay Avenue. At about the same time the South Limestone Street car line was extended to Lottie Street, now Virginia Avenue, and over Virginia Avenue to Winnie Street. After the Nicholasville Interurban line was built in 1908, this car line was extended along South Limestone Street to Rose Street. In or about 1910 a further change was made in the East Main Street car line. The line on Clay Avenue was discontinued and the tracks on East High Street extended to Hanover Avenue, thence over Hanover Avenue and East Main Street to Clay Avenue, forming the loop still in operation. In or about 1915 the present Jefferson Street—Georgetown Street car line was built by laying tracks on Georgetown Street, at the same time the westerly end of the old line along Hickory Street was discontinued. The extension of the South Limestone Street car line over the Interurban tracks

to Rosemont Garden, the present terminus of the line, was placed in operation in 1923.

All of the city bus lines were established between 1925 and 1927; the Euclid Avenue and Cramer Avenue lines in 1925, the Hollywood, Limestone Street and Liberty Heights lines in 1926, and the Elm Tree Lane line in 1927.

Comparing the above described growth of transit facilities during the last thirty years with the increase of the population and of the area of the city during the same period, it is found that the route mileage of transit lines has increased 190 percent, the population of the Lexington Built-up Area 94 percent, and the area of the Lexington Built-up Area 144 percent. In view of these figures it can be safely said that the expansion of transit facilities has certainly kept abreast with the growth of the city.

The present transit system consists of five street car lines, of which one is a long loop-line and two are short shuttle lines; and of seven motor bus lines, one of which is a short shuttle. Except for the Main Street line between Jefferson Street and Woodland Avenue, and the Broadway line between Second Street and the Trotting Track entrance, which are double-track lines, the street car lines are single-track lines provided with switches for two-way operation.

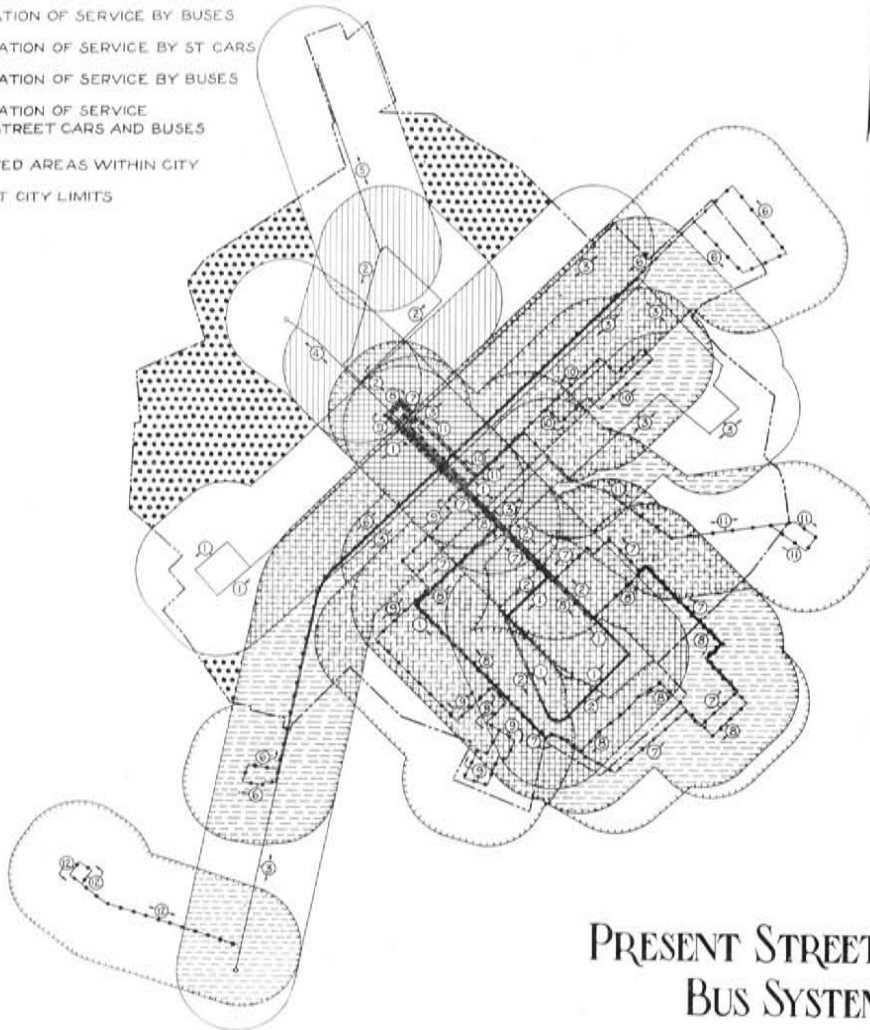
When measuring the physical adequacy of the transit system of a municipality, the route mileage of transit lines is generally compared with the area of the city and studies are made of the distribution of transit lines over the city's area.

The aggregate route mileage of street car and motor bus lines within the city amounts to 31.33 miles. The gross area of the city proper comprises approximately 3525 acres. Thus, the ratio of the city area in acres to the total route mileage is found as 113 acres per route mile. Comparing this figure with accepted standards, it may be said



## SYMBOLS

- STREET CAR ROUTES
- BUS ROUTES
- ① ROUTE NUMBER AND DIRECTION OF TRAVEL
- LIMITS OF AREAS EFFECTIVELY SERVED BY STREET CARS
- LIMITS OF AREAS EFFECTIVELY SERVED BY BUSES
- ▨ DUPLICATION OF SERVICE BY STREET CARS
- ▨ DUPLICATION OF SERVICE BY BUSES
- ▨ TRIPLICATION OF SERVICE BY ST CARS
- ▨ TRIPLICATION OF SERVICE BY BUSES
- ▨ TRIPLICATION OF SERVICE BY STREET CARS AND BUSES
- ▨ UNSERVED AREAS WITHIN CITY
- PRESENT CITY LIMITS



## PRESENT STREET CAR & BUS SYSTEM LEXINGTON · KENTUCKY

AND

## ENVIRONS

CITY PLANNING AND ZONING COMMISSION

L · SEGOE

CONSULTING ENGINEER & CITY PLANNER  
CINCINNATI, OHIO

SCALE: 1 INCH = 1000 FT.

1929

that as far as route mileage is concerned the present transit system may be considered as adequate.

As regards proper distribution of this route mileage, which is a much truer measure of the adequacy of the system, Exhibit 26 convincingly illustrates how well the existing street car lines and bus lines cover the area within the city limits, and even within the Lexington Built-up Area. In point of fact, with the exception of the relatively small area to the north-east of the Trotting Track and a still smaller area between Simpson Avenue, the Southern Railroad and the city limits, all other areas not served conveniently by the existing transit lines are either institutional properties or cemeteries. The aggregate of these unserved areas within the city amounts to 0.7 square mile out of the 5.5 square miles of total city area.

The "Present Street Car and Bus System" in Exhibit 26 shows the routing and the service areas of the existing street car lines and bus lines. The service area strips are one-quarter mile wide on either side of each car

or bus line and represent the areas within a five-minute walk of the different transit lines, which, according to accepted standards, is considered the limit of convenient service. Wherever these service areas overlap there is a duplication of service, that is, anyone within such area has a choice of two car-lines within the convenient distance of a five-minute walk. Similarly, where three of these service area bands overlap, there is a triplication of service, and persons within such areas have the choice of three transit lines. On the map under discussion, these areas are indicated by means of different cross-hatching and may be readily distinguished. It will be noted that there is very considerable duplication and triplication of service, not only in the central section of the city where such service may be justified by reason of the density of population and the unavoidable convergence of radial lines, but in the outlying sections as well. This is particularly conspicuous throughout the entire south-eastern section. The total area conveniently served by the present transit system amounts to 7.35 square miles, and the aggregate of areas with duplication or triplication of service to 4.38 square miles or nearly 60 percent of the entire area served. Unwarranted duplication of service is undesirable both from the standpoint of operating efficiency and economics, and of public convenience. Duplication of service by street car lines means needless extra investment, increased maintenance costs and depleted revenues to the transit company, and long headways to the car rider.

The routing of the present transit lines, the track installations, and the number of cars or buses during the rush hour on each line are shown in Exhibit 27. The impression received by inspecting this map is that the routes are exceptionally tortuous, and that there is considerable concentration of lines and turning movements within the central business district.

As a result of a study of the existing routes, of the track layout of street car lines, and of the present operating methods, the principal defects of the present Transit System were found to be the indirect, tortuous routes and the single-track switch operation on some of the most important lines.

The tortuous course and indirectness of the radial lines result in slow service, which in turn is a great handicap in popularizing travel by transit lines. It should be stated at this point that in many instances, the indirect-

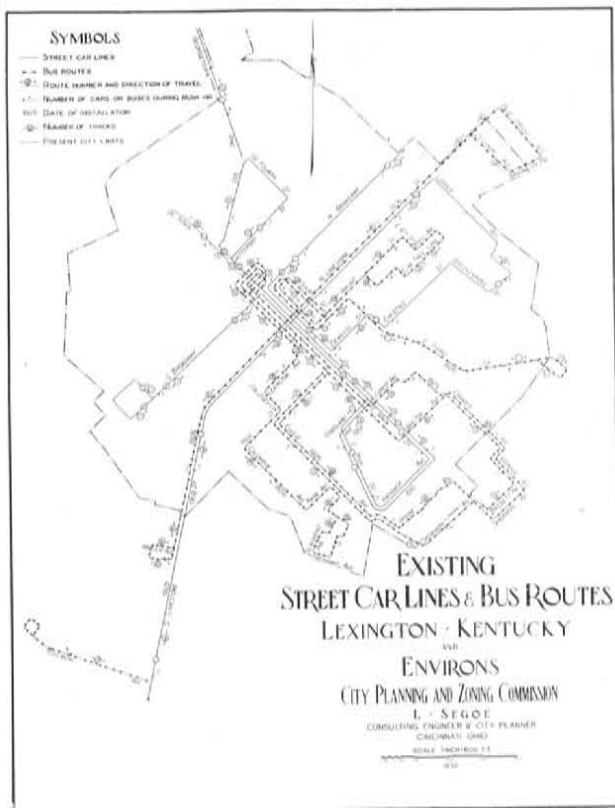


EXHIBIT 27



SWITCH-OPERATION ON LIMESTONE STREET

ness of routes has been forced upon transit lines by the street system, which is lacking continuous and direct thoroughfares between the central section and the outlying districts.

The single-track switch operation just above referred to has a great many undesirable features. The spacing of switches definitely limits the number of cars that may be operated on such lines. Consequently, headways cannot be varied in accordance with the variation of the transit demand during different hours of the day. Neither can service be increased gradually, in proportion to the demand due to the increase of population. Additional service under such circumstances can only be provided either by the reconstruction of the line with a closer spacing of switches, or by the operation of parallel lines. Switch operation also reduces the speed of transit service. From the standpoint of traffic conditions in general, these switches on some of the narrow streets occupy practically the entire roadway surface and are the cause of serious traffic interference in the central section of the city.

Referring to Table XII at the end of this chapter, giving Summary of Transit Data, it will be noted that the headways during rush hours on the Loop Line are longer than during the mid-day hours; a condition which is the reverse of what would be

required if headways were adjusted to transit demand. The explanation of this condition lies in the lack of flexibility of switch operation, just above discussed, which does not permit the pressing into service of additional cars during the rush hours without new switch spacing, and in the slowing up of car movements during these hours, due to the longer time required for the taking on and discharging of the greater number of passengers.

It should be stated that this discussion of the undesirable features of switch operation is not intended as a criticism of the Transit Company. In most instances, similarly to the indirectness of routes, the street system is responsible for this method of operation. The narrowness of most of the streets did not and does not permit the installation of double-track lines, even where traffic would justify such installation. However, in some instances the Company could have materially improved the transit service, as well as traffic conditions in general, by the installation of one-way lines on parallel streets instead of switches. Single-track switch operation is an inadequate and unsatisfactory arrangement in the built-up sections of the city. It may be used on a car line extension in the outlying, sparsely-settled territory, although it is questionable

whether a bus line feeder would not be more appropriate in such cases.

The transit statistics concerning the five existing street car lines and the six motor bus lines are presented in Table XII, already referred to. The operating statistics given in this table were furnished by the Kentucky Traction and Terminal Company and by the Kentucky Coach Company. The table contains for each line the length of the route, the number of daily single trips, and the rush-

hour, mid-day and maximum headways. The seating capacity of the present equipment, schedule speeds, the passengers carried during an average day, the average miles operated per day, and the average number of passengers per mile, are shown separately for the street car lines and the motor bus lines, this data not being available separately for each individual line. The route numbers indicated correspond to the route numbers used on the maps showing the present transit lines.

### THE PROPOSED STREET CAR AND BUS SYSTEM

In developing the Proposed Street Car and Bus System presented in Exhibit 28, every effort was made to correct the shortcomings of the present system hereinbefore discussed, and to bring the proposed Transit System into harmony with the proposed Major Street Plan. In connection with transit line extensions, the probable growth of the city as determined from population growth and distribution studies, was thoroughly considered. In developing the entire transit plan, it was endeavored to increase the attractiveness of transit service and the economics of operation.

More specifically, the following principles were applied in the rearrangement of the present transit system and in developing the plan for its future extension:

(1) Radial lines should be as short and direct as possible.

(2) Districts between which inter-communication is heavy should be connected by direct lines. (This will reduce the number of transfers, lessen congestion at transfer points, and add to the convenience of travel.)

(3) Every section of the city should be connected by direct lines with as many different sections as possible.

(4) Duplication of service should be avoided, except near the central section of the city where it may be warranted by intensive business development and the density of population.

(5) Route mileage should be reduced by the straightening out of routes.

(6) The transit system as a whole should serve the maximum area with the minimum route mileage.

(7) All lines should be routed through the central district. (This type of operation reduces the number of turns required in the central district, thereby lessening congestion,

and allows more balanced traffic in both directions during the rush hours.)

(8) The delivery and loading area in the central district should be enlarged. (This will distribute traffic over a wider area, reduce congestion, and assist the distribution of the central business district over a wider area.)

(9) Wherever possible, alternating thoroughfares should be kept free of car tracks. (This will bring about a segregation of traffic so that one thoroughfare may be used primarily by street car lines, while the other will be left for the exclusive use of free-wheel traffic.)

(10) Each line should intersect every other line, to make transfers convenient.

(11) Transfer points should be well distributed, to reduce congestion.

(12) The lines should pass through the central district with a minimum number of turns.

(13) Left-hand turns should be avoided, and where unavoidable, the left-hand turns should be from the less important street into the more important one.

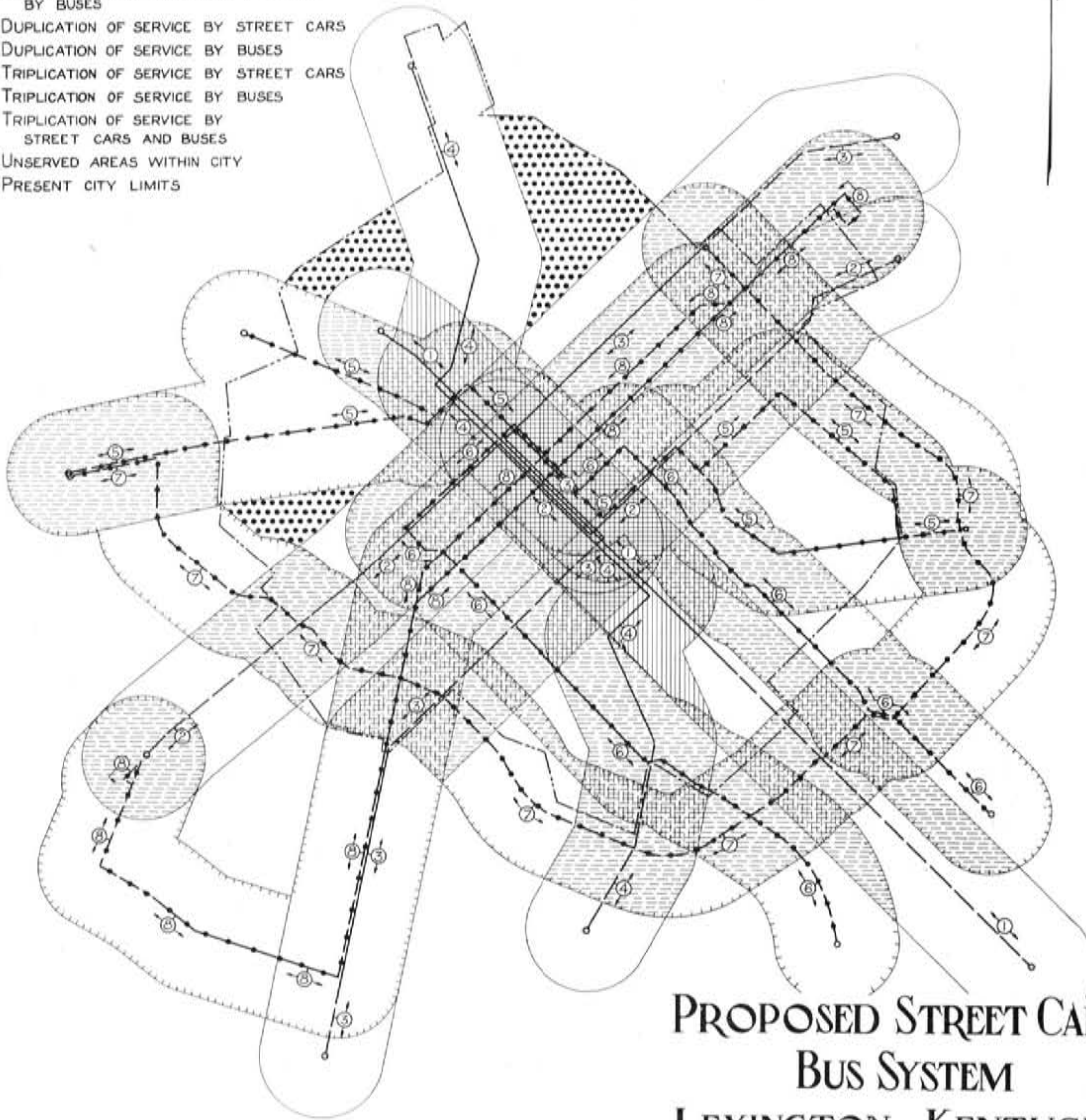
(14) The transit system should be thoroughly coordinated with the Comprehensive Plan, and especially with the Major Street Plan.

Obviously, in applying the above principles to specific cases, it was not possible to satisfy every one of these entirely or to the same degree. It was necessary to carefully weigh the importance of each in every instance and to give preference to the most essential ones, in order to arrive at a practical solution as nearly ideal as possible under given conditions.

**The Proposed Street Car and Bus System** does not represent a plan that can or need be put into effect in its entirety immediately, or even in the near future. Similarly to other

## SYMBOLS

- EXISTING STREET CAR LINES
- > EXISTING BUS ROUTES
- - - PROPOSED STREET CAR LINES
- -> PROPOSED BUS ROUTES
- ② ROUTE NUMBER AND DIRECTION OF TRAVEL
- LIMITS OF AREAS EFFECTIVELY SERVED BY STREET CARS
- - - LIMITS OF AREAS EFFECTIVELY SERVED BY BUSES
- ▨ DUPLICATION OF SERVICE BY STREET CARS
- ▩ DUPLICATION OF SERVICE BY BUSES
- ▧ TRIPLICATION OF SERVICE BY STREET CARS
- ▨ TRIPLICATION OF SERVICE BY BUSES
- ▧ TRIPLICATION OF SERVICE BY STREET CARS AND BUSES
- ▩ UNSERVED AREAS WITHIN CITY
- - - PRESENT CITY LIMITS



## PROPOSED STREET CAR & BUS SYSTEM

LEXINGTON · KENTUCKY

AND

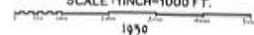
## ENVIRONS

CITY PLANNING AND ZONING COMMISSION

L · SEGOE

CONSULTING ENGINEER & CITY PLANNER  
CINCINNATI · OHIO

SCALE · 1 INCH = 1000 FT.





composite parts of the Comprehensive Plan, it is a long-term plan to be carried out gradually over a period of several decades. It should be considered a plan "to work toward" in making improvements in the Transit System and its extension. It will be noted, when studying the proposed plan, that the establishment of some of the proposed lines and routes will have to await the widening or extension of certain streets in accordance with the Major Street Plan. The laying of street car lines in such instances could best be undertaken as a part of the street construction. In the gradual approach toward the proposed transit plan, no doubt it will be desirable or necessary to resort to many intermediate and more or less temporary connections and routings. However, in establishing these transitional routes the ultimate transit plan should be always borne in mind, so that the former should not interfere with the eventual realization of the latter.

As may be seen in Exhibit 28 and 29 showing the Proposed Street Car and Bus System and the Proposed Street Car and Bus Routes respectively, in the proposed transit system some of the existing street car lines and bus lines have been eliminated, others have been re-routed, newly connected and extended. The system consists of four street car lines and four bus lines. All are radial lines, with the exception of one of the bus lines which is in the nature of a sight-seeing belt line or cross-town line, the establishment of which, besides the construction of the Inner Boulevard, will depend upon the demand for this type of service. Except for some of the extensions into what even thirty or forty years hence may be semi-urban territory, all other proposed car lines are intended to be double-track lines. As may be seen, the tortuous routes have been straightened, the area of duplication of service diminished, and loop operations of buses in the central district eliminated by the through routing of all lines.

#### Lines to be Abandoned

**LIMESTONE STREET CAR LINE.** Considering the large volume of traffic that this street is called upon to handle, it is entirely too narrow to permit of street car operation as at present without serious inconvenience to both street car patrons and automobiles. To adequately provide by street cars for the transportation needs of the area served, it would be necessary to construct a double-track line on this

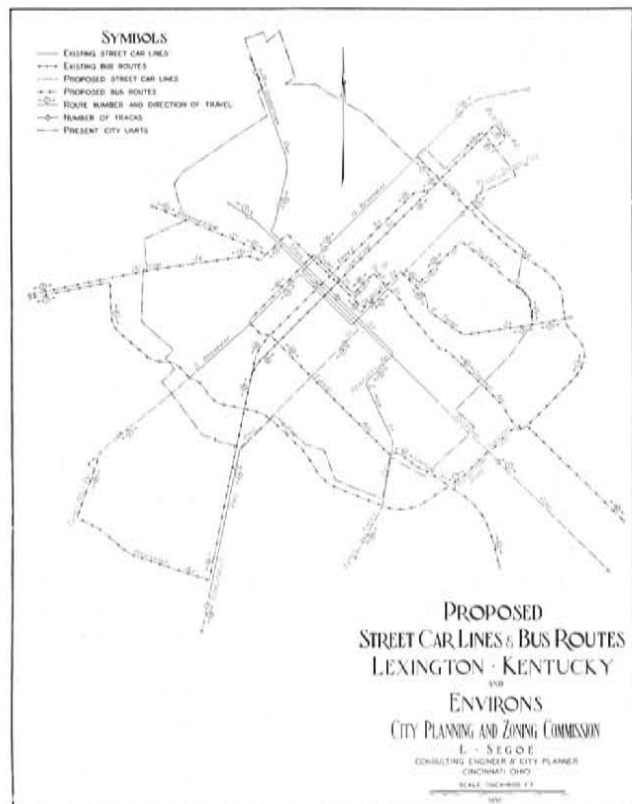


EXHIBIT 29

street, which in turn would require a roadway at least 46, but preferably 56 feet wide. The alternative would be to lay tracks in Upper Street and operate the cars north-bound on Limestone Street and south-bound on Upper Street, which would be in line with the recommended use of these streets as one-way streets. However, this alternative is not considered practicable or desirable in view of the physical conditions of Upper Street and the expense involved.

It is proposed instead that the operation of street cars on Limestone Street be discontinued and transit service furnished exclusively by motor buses operating north on Limestone Street and south on Upper Street. The inter-urban cars of the Paris line may be permitted to use North Limestone Street northbound, returning over Broadway; similarly, the Nicholasville Interurban cars may operate north-bound on South Limestone Street, and south-bound on South Broadway and over a new track connection between these two streets (somewhere north of the Southern Main Line

crossing): until the North Broadway car line is double tracked and South Limestone Street widened or until the proposed car line on Rose Street is constructed.

**THIRD STREET—CHESTNUT STREET—BRECKINRIDGE STREET—JACKSON STREET—SHELBY STREET—LOUDON AVENUE CAR LINE.** This portion of the Loop Line will become superfluous as soon as the proposed street car line over the Deweese Street extension to Bryan Station Pike will have been constructed. The latter line, together with proposed bus line Route 5, will furnish more convenient service to this district than does the present extremely tortuous Loop Line.

**ELM TREE LANE BUS LINE.** The proposed Deweese Street car line just above mentioned will render this bus line entirely unnecessary.

**HOLLYWOOD BUS LINE.** It is believed that the proposed extension of the car line along East High Street and Bates Creek Pike, as a part of Route 4 under the proposed plan, will provide adequate transit service for the small area exclusively served at present by this bus line.

#### The Proposed Transit Lines

**ROUTE 1.** This is a street car line to be operated along East and West Main Street, from the end of the present Cemetery car line to the entrance of the proposed Water Works Reservation. The present line would have to be double-tracked west of Jefferson Street and east of Woodland Avenue. The extension east of Hanover Avenue may be a double track line to Sherman Avenue or possibly Holiday Street and a single-track line beyond.

**ROUTE 2.** This is a car line to be made up of the present South Broadway line extended along Harrodsburg Pike to the Picadome School and of the car line to be constructed over the Deweese Street extension, the two lines to be connected over Main Street. It should probably be a double-track line throughout.

**ROUTE 3.** This car line is to begin at about the present southern terminus of the South Limestone Street car line near Rosemont Garden, thence over Nicholasville Pike to Rose Street and over tracks to be laid in Rose Street to Main Street, thence over Main Street to Broadway and over North Broadway and over

the proposed North Broadway extension to Maysville Pike. This car line, too, is to be a double-track line, with the possible exception of the portion south of the intersection of Rose and Limestone Streets.

**ROUTE 4.** This is to be a street car line linking the Georgetown Pike district with the Hollywood section, by connecting the present street car line on Georgetown Street over Main Street and over Kentucky Avenue with the car line on East High Street, and by extending the latter over Bates Creek Pike about one-half mile beyond the present city limits. This line, too, is intended to be a double-track line throughout. The relocation of the line from Woodland Avenue to Kentucky Avenue is proposed principally to avoid the congested intersection of Woodland and High Streets.

**ROUTE 5.** This bus line is a modification of the present Liberty Heights Bus Line and an extension thereof westwardly over the Jefferson Street viaduct and along both Manchester Street and Versailles Pike. An indicated on the plans showing the proposed transit system, it is intended that the buses from the two western divisions of this line be operated in opposite directions over the loop that forms the eastern portion of the route.

**ROUTE 6.** This bus line combines the present Euclid Avenue and Cramer Avenue bus lines. The route has been straightened by re-routing over several major street improvements to be carried out under the Major Street Plan. Loop operation in the central district has been eliminated by through routing. It may prove desirable to connect the south-eastern ends of this route over some future street.

**ROUTE 7.** As previously stated this bus line has been projected over the proposed Inner Boulevard, as a sort of a sight-seeing belt line, to serve also as a cross-town line. Considering the small area of the city and the relatively small demand for this kind of transit service in communities of Lexington's size, it is questionable whether there would be a real need for this bus line, even twenty or thirty years hence, unless in connection with the Inner Boulevard. For these reasons, this bus line was not considered in the comparison made between the present and the proposed transit system.

**ROUTE 8.** This line is substantially the same as the one operated at present over North and South Limestone Street, except that the buses are to be routed north-bound on Lime-

stone Street and south-bound on Upper Street. The route is to be extended over Rosemont Avenue to the Picadome High School.

Comparative figures for the existing transit system and the proposed transit system are presented in the following table:

COMPARATIVE FIGURES FOR THE EXISTING AND PROPOSED TRANSIT SYSTEM

	Present	Proposed
Street Car Route Miles .....	16.40	17.06
Motor Bus Route Miles .....	20.40	26.67
Total Route Miles .....	36.80	43.73
Single Track Miles .....	11.10	3.66
Double Track Miles .....	2.20	13.50
Total Track Miles .....	15.50	30.66
Double Track Miles Added .....		4.49
Single Track Miles Added .....		6.98
Total Track Miles Added .....		15.96
Single Track Miles Abandoned .....		6.02
Double Track Miles Abandoned .....		—
Total Track Miles Abandoned .....		6.02
Net Track Miles Added .....		9.94
Total Tire Miles .....	32.80	46.54
Net Tire Miles Added .....		13.74
Area Effectively Served (sq. miles) .....	7.35	10.00
Area of Duplication and Triplication of Service (sq. miles) .....	4.38	4.15
Unserved Area within Present City Limits (sq. miles) .....	0.71	0.39

It may be noted that the present transit system with a route mileage of 36.8 of street car lines and bus lines effectively serves an area of 7.35 square miles, while the proposed transit system with a route mileage of 43.73 would serve an area of approximately 10 square miles. In other words, while the route mileage of the proposed system is greater by only 19 percent than that of the present transit system, the area effectively shows an increase of 36 percent.

The area of duplication and triplication of service would be actually reduced under the proposed transit system. This reduction appears more conspicuous when the area of duplication and triplication is compared in each case with the total area served. As has already been mentioned, in the present transit system the aggregate of areas of double or triple service amounts to nearly 60 percent of the total area served. In the proposed transit system it amounts to only 41.5 percent.

As may be seen in the above table, under the proposed transit system the unserved area within the city limits would be reduced by almost 50 per cent. Comparing Exhibits 26 and 28, showing the present and the proposed street car and bus systems, it will be noted

that this reduction in the unserved area is due principally to the bringing the district north and northeast of the Trotting Track within the limits of convenient transit service.

#### Routing in Central District

Improvement under the proposed transit system of the routing of street car lines and motor bus lines through the Central District, will be noted by comparing Exhibits 27 and 29, which show the present and proposed street car lines and bus routes. The simplicity of routing and the elimination of a considerable number of turning movements are conspicuous.

This has been accomplished by the through routing of all lines. The advantages of the through routing of transit lines in the Central District, as contrasted with loop operations, have already been pointed out hereinbefore. Fortunately, the existing street car lines are through routed already. In contrast, none of the present motor bus lines are so routed. As may be seen on Exhibit 27, the bus routes operate over two loops, one of these is a loop around the block in which the Interurban Station is located, and the other a much larger loop over Short Street, Broadway, Main Street and Walnut Street. This loop operation necessitates a considerable number of turning movements in the Central District, of which the turning movements on the loop last mentioned are particularly bad, since the loop is operated counter-clock-wise involving three left hand turns and one right hand turn. As may be noted, 25 left hand turns are made by buses at the intersection of Broadway and Main Street during the rush hour period. Under the proposed routing plan, the turning movements of buses in the Central District would be almost entirely eliminated.

Another advantage of the proposed routing plan is the segregation of street car and bus traffic. The street railway lines would be concentrated on Main Street and the motor bus lines on Short Street. It is believed that this segregation of street car lines and free-wheel transit lines will be to the advantage of both of these transit facilities and of vehicular traffic in general. On Main Street, the loading platforms will become more accessible to street cars, while the buses would gain an advantage by taking on and discharging passengers at the curb, within bus stops specifically designated for such purpose.

## Interurban Electric Railway Lines and Motor Bus Lines

The relationship between the location and operation of interurban electric railways and the Major Street System is much the same as that of the city street car lines. Interurban railways should enter and leave the city over radial thoroughfares that offer the shortest possible routes to and from the terminal. In the Major Street Plan, on the thoroughfares to be used for such purpose, provisions will have to be made for tracks and safety loading platforms, unless the interurbans are to enter and leave over tracks used in common with the city street car lines.

The terminal facilities of the interurban electric railways are to be so located as to be in harmony with the city's probable future development under the Comprehensive Plan, and so that the movements of interurban cars to and from the terminal should not interfere with street traffic. It is generally considered desirable that such terminal be in proximity to the central business area of the city, preferably somewhere along the periphery of such area so as not to interfere with its normal development.

It is believed that the present Interurban Station at the northwest corner of Broadway and Main Streets meets these requirements.

Certain changes in the routing of the interurban lines have already been touched upon in connection with the changes proposed in the operation of street railway lines on North and South Limestone Street. It is proposed that, in accordance with the recommendations for the relief of traffic congestion on Limestone Street, the Lexington-Paris Interurban Line be routed north on Limestone Street and south on Broadway until such time as the North Broadway line will have been double tracked. Thereafter it is to be operated over North Broadway in both directions. It is also proposed that after South Limestone Street will have been made a one way street north-bound and until it will be widened, the Lexington-Nicholasville Line should be operated only north-bound on this street, and south-bound over South Broadway and over a temporary connection to be provided from the tracks on South Limestone Street to those on South Broadway in the vicinity of Scott Street.

A study of interurban motor buses was undertaken from the same point of view and

with the same objective as that of the interurban electric railway lines. In connection with these buses the question of routing, particularly in the Central District, and the location of bus terminals are of principal concern from the standpoint of traffic and the Comprehensive Plan.

It was found that 160 buses enter and leave the city every day; also that of these 108, or over two-thirds, enter and leave the Central District from and to the northwest, north and southeast, and 82 (or more than one-half) from and to a general northerly direction. Practically the same number of buses enter and leave the city from a general easterly direction as from a general westerly direction. These figures are of interest in considering the possible location of a union bus terminal.

The present Union Bus Terminal on the east side of Walnut Street between Main and Short Streets, it is believed, served its purpose



LOADING AT THE UNION BUS STATION

while the interurban motor bus, as a transportation agency, was in its early stages of development. This period has passed. (During the past year the interurban buses in the United States carried 384 million passengers, according to the latest statistics). During the morning rush hour period of 61 minutes, 18 buses leave or arrive at the present union station. The street in front of this station is no longer able to provide the necessary curb space. Walnut Street is a narrow street, and these buses at times seriously interfere



with normal vehicular traffic. The sidewalks in front of the station are often obstructed by the accumulation of the baggage of passengers, of newspapers and other freight handled by these buses, causing inconvenience not only to the passing pedestrians, but also to the bus passengers themselves.

It is believed that the time has arrived for the consideration of establishing a union bus terminal entirely on private property, which would take the loading and unloading of buses off the public street. This would go a long way to make travel by bus even more popular than it is at present, because of the added convenience that the Company would be in a position to offer to its passengers under such an arrangement. In view of the distribution of lines and the amount of traffic on each, hereinbefore discussed, it appears that **any location north of Main Street and within two blocks or**

so therefrom, and between the Esplanade and Broadway, may be appropriate and suitable, provided it is of sufficient size to accommodate all necessary facilities, and further provided, that it be so located that the entrance and exit of buses can be arranged from streets of subordinate traffic importance.

Insofar as the present routes of bus lines are concerned, these, it is believed, have been well chosen, except that instead of using Short Street between Limestone Street and Walnut Street, which is especially narrow, some of the bus lines now routed over this street could be routed over High Street and the Walnut Street Viaduct, thereby lessening congestion and eliminating the dangers of crossing the railroad tracks. The future routing of bus lines will have to be adjusted, of course, to the new location of the Union Bus Terminal.



TABLE XII  
SUMMARY OF TRANSIT DATA

KENTUCKY TRACTION & TERMINAL Co.—KENTUCKY COACH Co.

Route No.	Name of Line	Length of Route (Miles)	Number of Single Trips Daily	Headway in Minutes			Seat City	Speed** (M. P. H.)		Av'ge No. Pas'g'rs per day (Dec. 1929)	Trans. Free	Total	Av'ge Miles Oper-ated Daily	Av'ge No. of Pas'g'rs per Car Mile
				Rush Hours	Mid-day	Max.		Cap' Cent.	Out- side					
STREET CAR LINES														
1.	East Main—South Broadway	3.80	250	8	9	12								
2.	East Main—Jefferson	4.25	250	8	9	12								
3.	Loop Line (N. Broadway-Lime—Chestnut)	7.20	198	12	10	14	28	5	12	11,129	2,288	206	13,623	2,879 4.09
4.	Cemetery (shuttle line)	0.35	100	15	15	15								
5.	Douglas Park (shuttle line)	0.80	120	15	15	15								
MOTOR BUS LINES														
6.	Limestone Street*	3.85	188	10	12	14								
7.	Euclid Avenue	4.65	79	9	15	30								
8.	Cramer Avenue	4.65	79	9	15	30								
9.	Hollywood	2.75	136	10	15	15	21	5	15	5,345	532	152	6,029	2,070 2.91
10.	Elm Tree Lane	1.48	84	20	20	20								
11.	Liberty Heights	2.15	70	24	24	24								
12.	Rosemont (shuttle line)	.45	—	—	—	—								

\*To Forest Park only during morning and evening rush hours, at other times to Colfax St. only.

\*\*Schedule Speed.

## CHAPTER IX

### CIVIC CENTER

The locating of the public buildings of a city should enlist the serious consideration of every citizen.

These buildings reflect in no small measure the civic interest and the cultural attainments of the citizenry. The locating of public buildings in accordance with a preconceived harmonious plan, in what is commonly known as a Civic Center, is a manifestation of unity of community feeling and of civic pride, just as the haphazard scattering of such buildings is an indication of a lack of such feelings. No matter how beautiful these may be as individual structures, public buildings at unrelated locations cannot possibly count for their full value or make their full contribution to community life, either aesthetically, morally or functionally. A single public building in unrelated and uncontrolled surroundings seldom can have an appropriate setting; the same building as a part of an architectural group in a civic center attains enhanced beauty and usefulness. Fortunately, Lexington has made a start already towards developing its Civic Center.

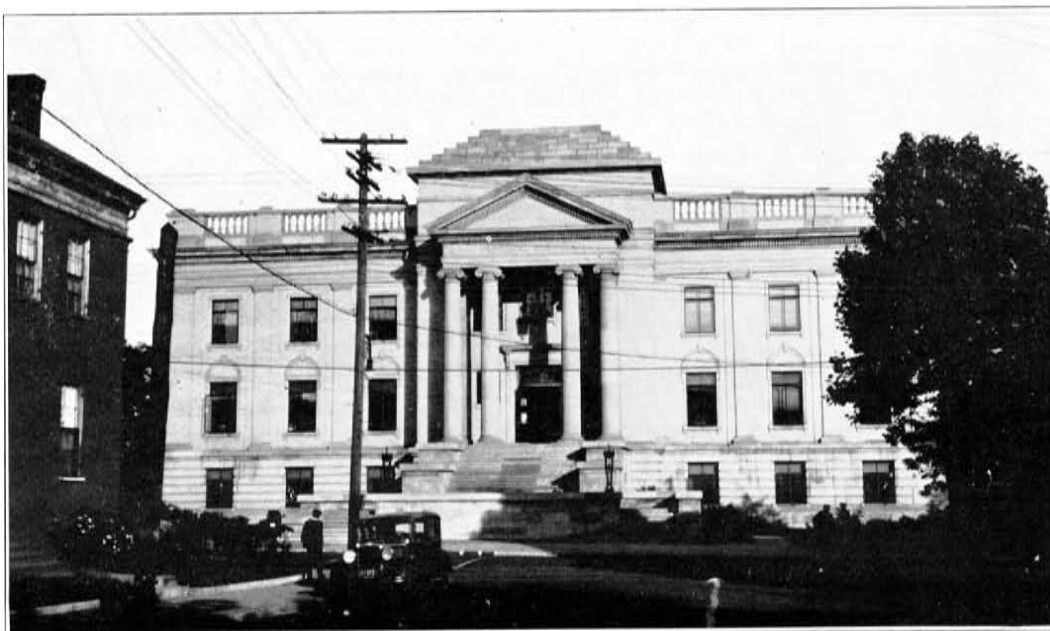
When in 1923 the question of locating the City Hall and Auditorium in harmony with the probable growth of the city arose, a plan

was prepared for a civic center and the sites for these buildings acquired in accordance with such plan.

In selecting a location for a civic center, the relationship of such location to the areas designated for other uses under the Comprehensive Plan and to established and future facilities of various kinds, and the satisfying of the functional requirements of the individual buildings which are to compose the group, are primary considerations.

A civic center should be in a central location; central in the sense that it should be near the central business district, but not a part of it. Experience has shown that institutional or public buildings have a tendency to discourage and even throttle business development. Such buildings were found to act as a sort of barrier to business growth, thus interfering with normal commercial expansion and often dislocating property values. Therefore, the Civic Center should occupy a site where it will not likely become an obstacle in the normal and desirable expansion of the central business district.

Accessibility and freedom from traffic interference are important prerequisites of a



THE NEW CITY HALL



THE NEW CENTRAL FIRE STATION

civic center location. This should be selected, therefore, near important traffic arteries, but the site should not abut directly on such arteries. The noise and fumes on heavily travelled thoroughfares is incompatible with the character of such group and interferes with the transaction of public business. A group of public buildings attracts considerable amount of traffic and, if located on a main thoroughfare, this traffic and the normal traffic of the community mutually interfere with one another, resulting in congestion and inconvenience. Therefore, the Civic Center should be located near, but off, the principal traffic arteries.

As a great majority of people who daily transact business in most of the public buildings come from the central business district it is generally desirable to locate the civic center within easy walking distance of such district. As the system of main thoroughfares is generally focused on the central business district, such location is likely to satisfy the requirement of accessibility from all sections of the community.

The size of the area needed for a civic center depends upon the building program and the style of architecture. It should be adequate to create a feeling of spaciousness. The style of architecture of government buildings

is generally the classic style, particularly appropriate in Lexington because of the city's architectural traditions. Buildings of this style would be a total loss architecturally if crowded into restricted space. As the Civic Center would be near the business district, the surplus area that may be acquired for the site would become a downtown park, which in all instances is a valuable asset.

The buildings of the government, municipal, state and federal, which constitute the principal architectural elements of a civic center, ought to be given not merely central location, but all the additional emphasis and conspicuousness that the best site can offer. No other structures are so appropriately entitled to the best position in the city as are the buildings that officially stand for the community.

Semi-public buildings, housing civic associations, fraternal groups, charitable organizations, educational institutions, and churches, may be located to good advantage in a civic center. When a part of such group, each gains from the proximity of the others.

The concentration of public business in one well defined area is a great convenience and a time saver to the whole city. From the standpoint of aesthetics, the city gains by having its public buildings grouped in a civic

center, in that a composition of beauty is created by the harmonious grouping of individual buildings, which would be more or less lost if these same buildings were placed in an unrelated manner. Furthermore, the architectural excellence of each building necessarily gains by its being an integral part of a co-ordinated and harmonious composition. Isolated buildings, in spite of architectural excellence, are insignificant in comparison to massed compositions. The erection of monumental buildings for governmental purposes without relation to one another, or without adequate setting, is a waste of opportunity and raises the question of the justifiability of the cost of monumental architecture.

The civic center group is a safeguard for the public buildings against incongruous private structures that might dwarf them, screen them from view, or shut out their light.

The ideal setting of a civic center then, is a plot of ground sufficiently large to give generous space on all sides for each building. The ideal location of such civic center is one close to but outside of the central business district, within a distance of a few minutes walk, where by virtue of topographical conditions, of an outstanding feature of the plan of the city, or of existing public or semi-public buildings or public open spaces, conditions for the development of such civic center are most auspicious. The plan proposed for the development of the Civic Center for Lexington is shown in Exhibit 30. A perspective of such Civic Center is presented in Exhibit 31.

The proposed plan is based upon the study and recommendations of 1923 for the location of the present City Hall, and represents an amplification along broader lines and in greater detail of the general scheme projected by this

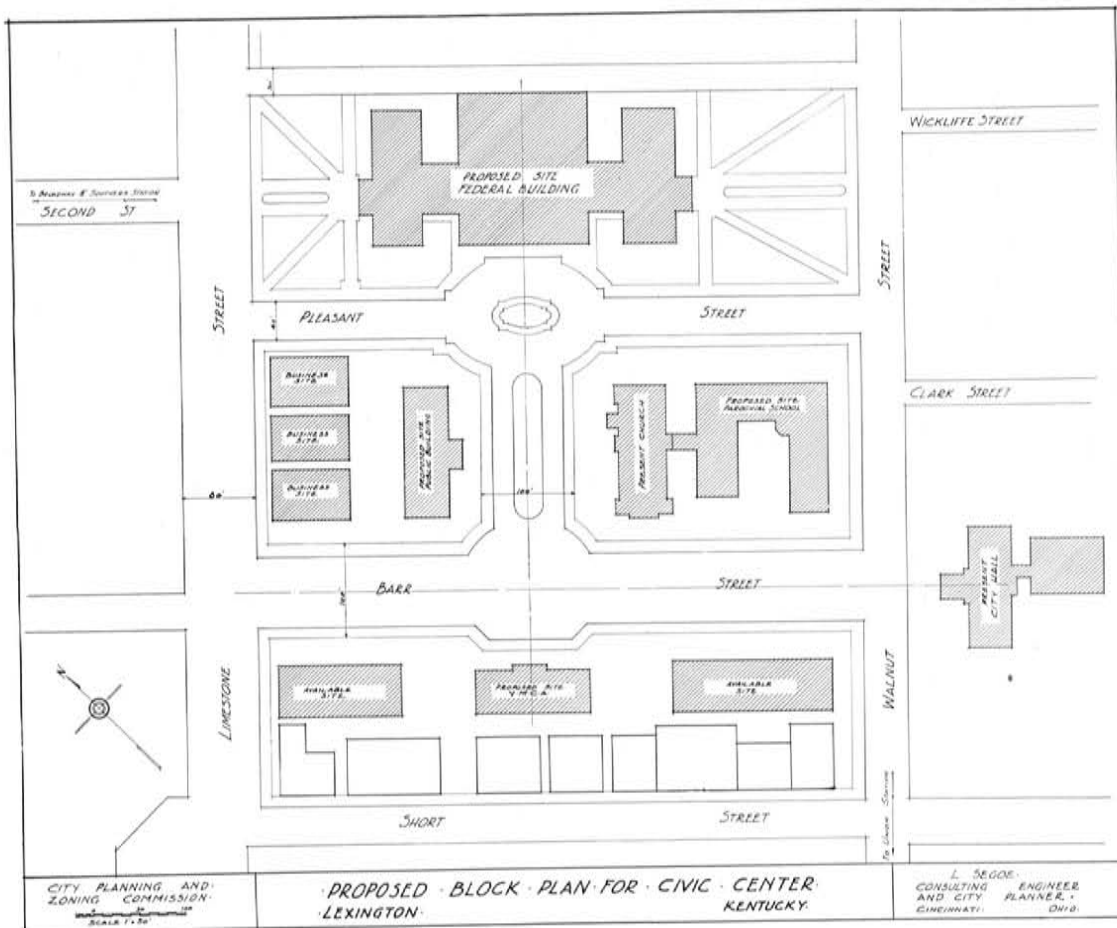


EXHIBIT 30



EXHIBIT 31

earlier study. On the proposed plan of the Civic Center, the City Hall has an axial relation to Barr Street, which is to be widened ultimately to 100 feet. The center-line of Barr Street so widened is the main axis of the composition. About midway between Walnut Street and Limestone Street, and at right angles to Barr Street, an esplanade would lead directly to the center of the Sayre College property, designated on the plan as the site of the new Federal Building. This property is equally well adapted as the location of a new County Court House. The esplanade, to be widened into a plaza at Pleasant Street in front of a new Federal Building or Court House, forms the secondary axis of the composition, to be closed on the north by the main facade of either of these two buildings and on the south by a new building for the Y. M. C. A. There are three undesignated sites in the proposed Civic Center that would be available for either public or institutional buildings. One of these, on the west side of the esplanade, should be occupied by a building so designed that it will harmonize with and balance St. Peter's Church on the opposite side of the esplanade. Pleasant Street, a narrow alley at present, is to be widened to 60 feet, to connect the plaza directly with Limestone and Walnut Streets. The alley

north of the Sayre College property could be widened to 30 feet, to provide an adequate service entrance to the building to be erected on this property.

The proposed location of the Civic Center shown on the plan, it is believed, meets the requirements and satisfies the considerations discussed hereinbefore. It lies outside but sufficiently near the downtown business center, to make its location convenient to all who may have to come to it for the purpose of transacting public business. It is located in close proximity, but just off to the side of the two principal traffic arteries of the city—Main Street and Limestone Street. It would not preempt potential business property and would not interfere with the normal development of the downtown business district. On the contrary, it would reclaim an area now occupied by residential and institutional buildings that have outlived their usefulness, and are now facing an extended period of low income or idleness. The proposed site would provide ample space for a dignified and quiet setting for all buildings that may possibly wish to locate thereon, and would insure permanent openness and an adequate supply of light and air.

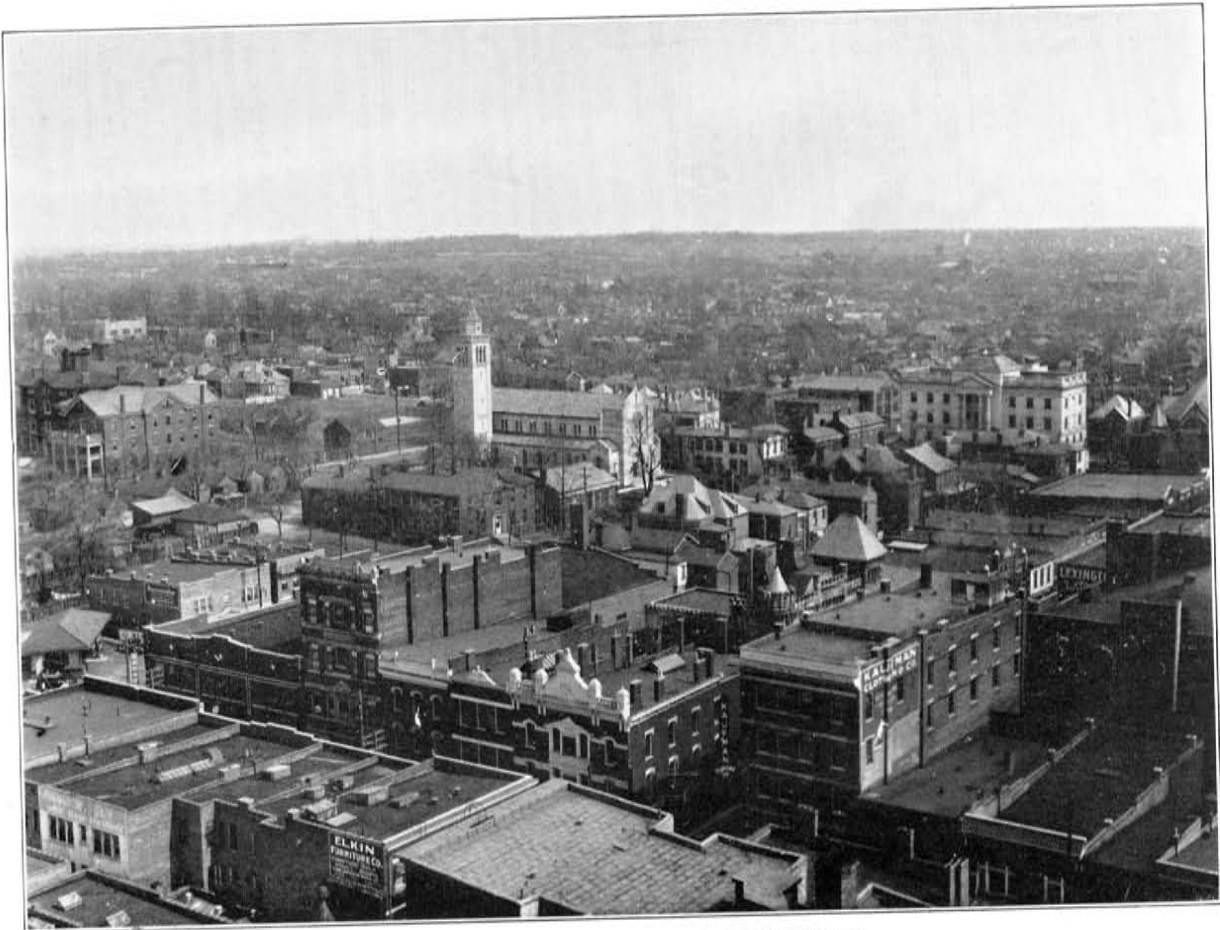


The location is easily accessible over existing and proposed traffic arteries and by public transit facilities, from all sections of the city and county. Ample provision for internal street space would obviate conflict with normal city traffic and would provide a generous amount of parking space.

At present, the Court House is removed from the City Hall by some five or six blocks. The Postoffice stands alone at a point of great traffic congestion. The Federal Courts are in a separate building. The semi-public, civic, business and fraternal groups, are scattered throughout the central section of the city, more or less lost in isolated locations and foreign surroundings. The development of the proposed Civic Center, in which all government offices would be in close proximity to

one another, should prove a great convenience to the public.

However, quite aside from the above utilitarian considerations, the Civic Center, as above repeatedly emphasized, has a contribution to offer to community life of an aesthetic, psychological and moral nature, which, while difficult to evaluate, cannot be over-emphasized. Lexington has a legacy of charm, borne of its excellent domestic architecture and that of its educational institutions. The grouping of its future public and semi-public buildings, in accordance with the Comprehensive Plan for a Civic Center, into a harmonious architectural composition, would be an appropriate expression of the City's historical and cultural traditions.



VIEW OF THE PROPOSED CIVIC CENTER SITE

## CHAPTER X

### THE CITY'S APPEARANCE

Attractive appearance is no mean asset to any community. As the economic and cultural status of its inhabitants is reflected, first by the outward appearance of the home, then of the streets, the parks, the public buildings, the general appearance of the city may rightly be taken as the outward and visible evidence of the character of its people and of its government. Unfortunately, while still showing evidences of the beauty and charm of which travelers of the latter part of the last century have written with much enthusiasm, Lexington has suffered greatly in appearance in the last few decades. The increasingly intensive use of the land not guided by any general plan or controlled by any public agency, and especially the abuses made of the streets by commercial interests, are largely responsible for the despoilation of much of the city's former attractiveness.

Approaching Lexington over any one of the thirteen main highways, the traveller passes by well arranged farms and attractive homesteads. In most cases the location and architectural design of the house and the arrangement of the grounds show careful thought and study. Arriving in the outlying sections of the city, the promise of the country suddenly vanishes, as the tree lined roads give way to narrow streets with numerous offsets lined with billboards, telephone poles with heavy festoons of wires between them and just over the badly mutilated or neglected trees. Here and there are curb gasoline pumps, cluttered with oversized signs, some with unattractive shed coverings. The visitor rarely comes across a street on which trees have any semblance of order or attractiveness. The unattractive appearance of the street pictures in the Central District is largely due to the agglomeration of flat and overhanging signs, often several stories high, to the presence of poles and wires for several purposes. The facades of the buildings, often attractive by themselves, almost disappear behind the multitude of signs. The struggle for the prospective purchaser's attention is so keen that one sign screens the other.

Unfortunately, these conditions are general and not confined to the central business district. The despoilation of fine trees continues, new poles are being erected, new billboards and signs appear every day, so that

little remains on the streets of Lexington in the wake of "progress" that begets attractiveness of any kind of order. **Regulations should be adopted and enforced by the City Authorities that will conserve what is still unspoiled, mitigate the present conditions and promote the orderly appearance of streets throughout the city.**

#### Poles and Wires

An attractive street picture is incompatible with the presence of poles and wires. Streets with buildings of architectural merit should be cleared of poles and wires, as these seriously mar and may completely nullify the aesthetic value of such buildings. When both street trees and poles for wires are placed approximately in line, customarily along the curb, the fate of the former is inevitable doom. Aside from aesthetic considerations, in the long run, the burying of wires is an economical practice and a provision for safety.

The removal of poles and wires has been accomplished for great distances along the highways in some states. It is being practiced in cities of smaller population than Lexington.

When overhead trolley feeds must be maintained, instead of a third rail system, the supporting wires can be attached to rosettes on buildings, allowing the removal of graceless trolley poles. Where this is not possible, the laudible efforts of the City for the elimination of pole accumulations should be continued virorously. The attaching of trolley feeds and other wires to the ornamental light standards along Main Street, thereby eliminating duplication or triplication of pole lines, is an illustration of the success of such efforts. In the new real estate subdivisions, whenever wires for utility are not placed underground, pole lines should be placed through the middle of the blocks in easements granted for such purpose, as required by the Rules for the Subdivision of Land of the City Planning and Zoning Commission. This provision will not only improve the appearance of streets by the exclusion of poles, but will encourage tree planting and save the trees of the future from ruthless mutilation.

However, an effort should be made by the city authorities to bring about the burying of wires, both electric and telephone, by the



UGLY VIEW OF POLES DISFIGURES AN OTHERWISE ATTRACTIVE BOULEVARD

utility companies. A program to accomplish this gradually and systematically could well be worked out jointly by the city authorities and company officials.

#### Street Fixtures

These include street name signs, light standards, fire alarm and police call boxes, fire hydrants, letter boxes, flag poles, traffic signs and signals, shelters, and comfort stations. Excellence of design has become an essential feature of modern street furnishings offered for sale. Careful selection for new installations will add to the attractiveness of the streets. It is recommended therefore that the design of each new street fixture be submitted to the City Planning and Zoning Commission for its approval.

#### Street Name Signs

Requirements of the automobile age concerning street name signs call for a type that is legible to the drivers of cars travelling at the permitted speed. Legibility depends upon the placing of the sign, its rise, the type of letter used, and the color contrast.

The position of signs should be consistent on every corner of each intersection. The signs should be placed at sufficient height to be visible over any parked vehicle. In the central business district such signs may be attached to the walls of buildings. In outlying sections street name signs should be placed preferably on separate standards.

The practice in Lexington of marking street names on curb facings is not satisfactory. Strangers may find them if the paint is fresh, otherwise they are not likely to locate them. Signs in that position are often screened by parked or passing cars. The least bit of trash or litter hides them; they are erased

by gutter wash, scuffed by tires, and demand constant renewals.

Well designed plates on standards, legible day and night, should be adopted for street name signs. Large letters for the street named with the intersecting streets in smaller type. The sign should also give the index to the numbering system. White letters on a blue enamel field was found to be an attractive and satisfactory combination in several cities.

It is recommended that within the next five years attractive and efficient blue enamel street name signs be installed throughout the city.

#### Overhanging Street Signs

The appearance of the central district in Lexington is marred by unregulated overhanging signs. Each merchant has contributed to the chaotic conditions by his efforts to surpass his neighbor's sign by size, projection or height. Aside from protecting the appearance of streets, overhanging and projecting signs should be controlled as a matter of safety. Pedestrians are in constant jeopardy during a strong wind, and the work of firemen is made more difficult by such signs and their entangling supports.



A MAZE OF OVERHANGING SIGNS

These overhanging and projecting signs occupy public property. They belong in the class of street privileges authority for the granting of which is vested in the City Administration. This authority should be used vigorously, to prevent the disfiguring of business streets and the creating of hazardous conditions by an unjustifiable competition in the size and projection of these signs. **Appropriate regulations should be included in the Building Code, limiting the size, weight and height of such signs, also their projection out from buildings, and prescribing the material to be used and the structural requirements for fastening.**

### Billboards

The Zoning Ordinance for Lexington and its Environs excludes billboards and signs from all Residence Districts. By the adoption and rigid enforcement of this Ordinance by the County, the billboards that clutter the highways entering Lexington would eventually disappear. Many large corporations have agreed in recent years to abandon outdoor advertising, in response to efforts of civic betterment organizations. Under the pressure of rising public resentment, the National Association of Outdoor Advertisers has recently adopted a policy that promises to prevent at least the most flagrant despoilation of the countryside. A number of states enacted legislation that govern the erection of billboards and other advertising devices. Some states have resorted to taxation as a means of discouraging their use.

A notable example is the State of Massachusetts, which passed a constitutional amendment permitting the regulation of outdoor advertising on aesthetic grounds and facilitating their control in other ways. In certain Massachusetts cities no billboards are allowed within 300 feet of a parkway or public park or reservation, except electric display signs on buildings under certain restrictions. No outdoor advertising can be painted or fixed upon any fence or pole within 50 feet of any public way, nor upon any rock or tree, nor directly upon the wall of any building, and no advertising device of any sort is allowed where it would obstruct traffic visibility or would mar any unusual scenic beauty. Outside of business districts, no advertising device is allowed within 150 feet of the intersections of the center-lines of two public ways, nor within 50 feet of any other advertising device, except back to back, nor nearer than

50 feet to a boundary line of any public way, nor nearer than 100 feet if it covers more than 32 square feet of area, nor nearer than 300 feet if it exceeds 12 feet in height, and, in general, all existing signs that exceed these provisions were required to be removed at the owner's expense.

It is recommended that legislation be passed by both the City and County, that will regulate the erection of billboards outside of areas where these are prohibited by the Zoning Ordinance. Such regulations should prohibit the erection of a billboard in the following locations:

- (a) Where it would interfere with traffic visibility.
- (b) Within 150 feet of the intersection of the center-lines of public streets.
- (c) At or near places of unusual scenic beauty or of historic interest.
- (d) Within 200 feet of a boundary of a parkway, boulevard, public park, playground or reservation.

### Sidewalk Protection Structures

The structures built recently on Main Street for the protection of pedestrians during building operations were mere shells; weak, inadequate, and unsightly. With very little additional expenditure such sheds can be made safe, attractive and convenient. The building code should provide for the safe and appropriate construction of these protective sheds.



A VARIETY OF SIDEWALK ENCROACHMENTS  
(Note steps in background)



The City Planning and Zoning Commission could appropriately direct its efforts towards encouraging better design in such temporary structures, so that these may be less offensive and more convenient to use.

#### Encroachments and Obstructions on Sidewalks

On many streets in Lexington serious encroachments obstruct the sidewalk space. Steps, curb pumps, removable signs, curb shelters occupy the public walks, produce and merchandise are stored or displayed at numerous locations. Conspicuous violations are to be found on Mill Street, Water Street and on Vine Street. Periodic congestion prevails at the Union Bus Terminal, where the sidewalk is used as a loading platform for passengers, baggage and freight shipments.

The sidewalks are for the exclusive use of pedestrians and should not be used as storage space. Vigorous enforcement of present police regulations will correct some of these violations, but to free the sidewalks of incroaching structures, legislation should be enacted by the City that will result in the gradual removal of the existing encroachments and prevent the erecting of additional ones.

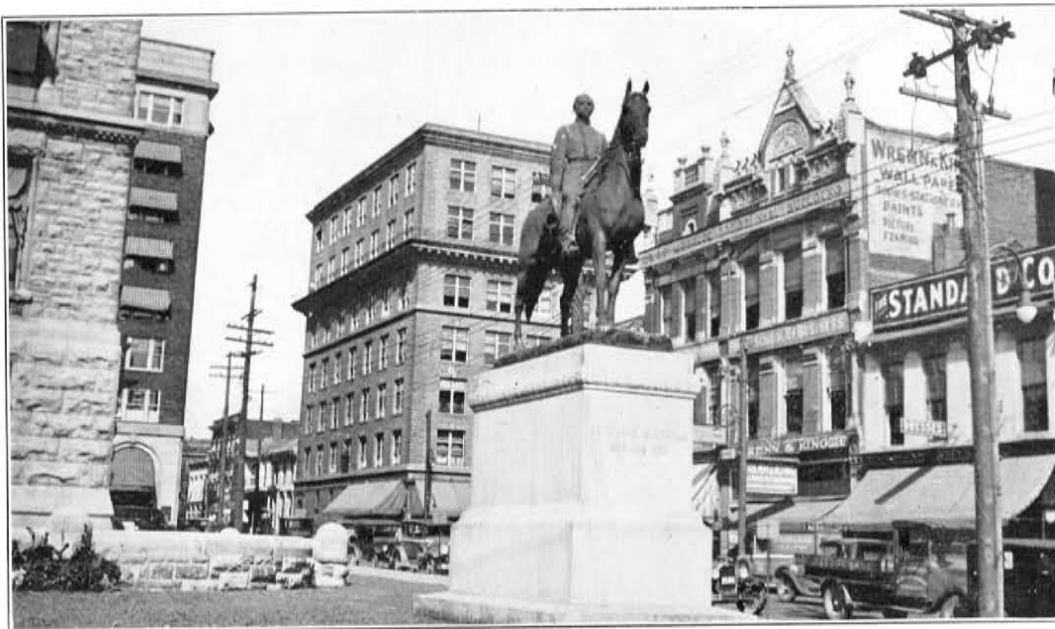
#### Public Comfort Stations

Public comfort stations are utterly lacking in practically every one of our cities.

Abroad these stations are provided by municipalities systematically and considered an essential public facility. Except for the public comfort station in the County Court House, there are no public comfort stations in Lexington. In the downtown district the railroad station and the hotels are making up in a measure for this deficiency, but there are none of these in the outlying districts. The City should establish public comfort stations at various locations throughout the community. It is recommended that such comfort stations should at least be provided in connection with every fire and police station, that there should be one in every park and playground.

#### Street Art

There are very few statues and monuments in Lexington. This is surprising in a city so rich in history. It is reasonable to expect that, as time goes on, monuments and statues will be erected to commemorate the location of historical events and in memory of historical personalities. The artistic merit of such statues and monuments should be carefully measured before admitting them to a place in a park or public street. The location and setting of all monuments, statues, fountains, and commemorative pieces, should be submitted to the City Planning and Zoning Commission for approval, as provided by the "City Planning Law".



ATTRACTIVE EQUESTRIAN STATUE OF GENERAL MORGAN  
In unsuitable setting



## CHAPTER XI

### STREET TREE PLANTING

The present remnants of trees tell a convincing story of neglect and of the wanton abuse of the many splendid trees that adorned the streets of the city fifty or even thirty years ago. Only on a few streets have the trees escaped the ruthless pruning done to accommodate the poles and wires of the overhead utilities. It has already been mentioned that in new subdivisions the requirements of the Subdivision Rules, adopted by the City Planning and Zoning Commission, will eliminate this interference with tree planting and growth, by requiring the placing of pole lines through the center of the blocks. The same Subdivision Rules also provide for appropriate tree planting as a part of the initial improvement.

In the older sections, the City should endeavor to restore the charm of its streets by the systematic replanting and care of street trees. The aesthetic dependence of any city upon trees is an undisputed fact. Properly planted and well cared for trees relieve the harshness of the street perspective, they screen the sun's glare on pavements and windows, and reduce the heat reflected from pavements. The green of the foliage provides a restful contrast to the lifelessness of pavements and buildings. Trees purify the air and lower the temperature during seasons of intense heat. They have an all year around interest, with

their various shapes and color during different seasons.

The ideal planting scheme is one specie of tree throughout the entire length of a street. Street trees should be of like size when planted, and replacements, when necessary, should conform to the established trees. The trees should be planted with uniform spacing, sufficient to allow for their full development and for the admission of light and air when mature. Street trees should not have low branches and should not be too compact. The desirable features of hardiness, straightness and symmetry, immunity from insect attack and fungous diseases, shade, cleanliness and longevity, are to be considered in their selection. A list of trees suitable to conditions in Lexington is given below.

Maples	{ Acer Platanoides
	"  Rubrum
	"  Saccharum
Hackberry	Celtis Occidentales
Ash	Fraxinus
Maiden Hair	Ginkgo Biloba
Tulip Tree	Liriodendron Tulipifera
Hophornbeam	Ostrya Virginiana
Sycamore	Platanus Occidentales
Poplar	Populus Bolleana
Pin Oak	Quercus Palustris
Linden	Tilia Americana
Elm	Ulmus

This list needs to be qualified to the extent that the planting of Pin Oaks should not be done in soil containing free limestone, and that the planting of tulip trees should be done only in a very wide street, as these require great area. The Horticultural Department of the University of Kentucky and several nurserymen cooperated in the selection of the trees listed.

The maintenance of good turf in the space between the curb and sidewalk adds materially to the orderliness of the street. The grass serves to break the continuity of hard pavements and allows surface water to reach the roots of the street trees.

In a number of municipalities the planting and care of shade trees in streets and public places has been placed under the control of either the Park Board, the city forester, the city engineer, or other public official. Such official is given complete control, under a city ordinance, of the planting, trimming, spraying, cultivation and fertilization of street trees. All



**MUTILATED TREES**  
The victims of overhead wires

such work is not necessarily done by the municipality, but a permit to undertake all such work must be obtained from the official in charge of tree planting, and is supervised by such official. Where most of the work is performed by the municipality, a municipal nursery is generally maintained, where suitable trees are prepared for street planting.

**The enactment of a city ordinance relating to the control of street trees is probably the first thing necessary to inaugurate the systematic planting and care of street trees.**

It is probably desirable, at least in the beginning, that the municipal street tree work should not include the planting of trees. Adequate control of the setting out of new trees can be maintained pursuant to such ordinance, regardless of whether the municipality lets the contract for planting the trees, or whether the trees are planted at the initiative of individual property owners.

When the planting is done by the municipality the cost thereof and the cost of any trimming or spraying is in some places assessed against the abutting property owners. It is doubtful whether this would be possible in Lexington under the existing statutes. In a few cities the cost of this work is met out of the general fund. At any rate, the costs involved are so modest, that the overhead ex-

pense necessary in assessing is quite out of proportion.

To promote the systematic planting and care of street trees in Lexington the following recommendations are submitted:

1. There shall be prepared and enacted a city ordinance providing for the municipal control of street trees (such an ordinance may be modeled after the Street Tree Ordinance of the City of Milwaukee or after the Model Ordinance prepared by the New York State Conference of Mayors and Other Municipal Officials).

2. The Commissioner of Public Property, the City Engineer, or some other appropriate official, should be designated as the City Forester, to enforce the provisions of the proposed ordinance.

3. The replanting of street trees in the built-up sections of the city should in all cases be made a part of every street widening or street resurfacing project.

4. When the Reservation surrounding the reservoirs, recommended in the chapter on the Recreation System, will have been acquired by the City, consideration should be given to the establishment in some part of such reservation of a municipal tree nursery, to provide trees for both street planting and for planting within this Reservation and in other city parks and playgrounds.



**GOOD UNIFORM PLANTING — CHEROKEE PARK**  
Line of old poplars marks old fence line

## CHAPTER XII

### STREET LIGHTING

The satisfactory lighting of the streets of a city is an important prerequisite of their safe and efficient use. Furthermore, a well designed lighting system can become conducive to the orderly development of the city, and can enhance materially the attractiveness of the streets by day as well as at night. The functional differences between various streets can be easily perceived when these are recognized by the type of lighting system provided, in which case street lighting becomes an aid in the orientation and routing of traffic. Differentiation between residential and business

streets from the standpoint of lighting should seem a rational requirement, in recognition of the differing demand for lighting by residential and business uses. Obviously, to accomplish the above rational differentiation between major traffic arteries and minor streets, as well as between business and residential streets, by street lighting installation, the plan of such installation should be based upon the Major Street Plan and on the Building Zone Plan. The program for a Street Lighting System may thus be considered an integral part of the Comprehensive Plan.

#### EXISTING CONDITIONS

The lighting of the streets of Lexington is furnished by the Lexington Utilities Company under a twenty-five year contract. This Company provides and maintains all equipment and supplies the power. The present franchise has been in effect since July 1916. All street lighting is being paid for from general taxes.

All electric light wires are carried at present on poles above the ground. In the central business district the lights are attached to steel poles by ornamental bracket arms that extend out about two feet beyond the curb.



**ATTRACTIVE LIGHTING UNITS**  
(Note attaching of all wires to lighting poles)

On Main Street this steel pole installation is found between Deweese Street and Spring Street. The present system in this district consists of 1000 candle power light units spaced 80 feet apart. These steel poles are attractive in appearance, and do not invite the usual criticism of the ordinary wooden pole with its series of cross arms. The section of the "white way system" along Main Street, from Deweese Street to Rose Street, consists of the same units (the 1000 candle power light mounted on the same type of ornamental bracket arm), but the bracket arms are attached to wooden poles; between Broadway and Jefferson Street the 1000 candle power lights are attached to wooden poles. The 1000 candle power lights attached by ornamental bracket arms to wooden poles, are also in use on Short Street and on Barr Street. The height of all light centers above the streets in all these installations is 17.25 feet.

On the Walnut Street Viaduct the lighting unit is a fifteen foot steel pole with a 600 candle power light on an overhanging ornamental bracket. This unit is placed along the steel curbing, the light suspended over the street. On the Jefferson Street and on the West Main Street Viaducts, a 600 candle power single unit caps an ornamental steel pole, the base of which rests on the top of the hand rail.

Other lighting units now in use in the city are lights of varied intensities suspended from overhead wires. The lighting of short narrow streets and alleys is done with units supported by metal bracket arms attached to wooden

poles. The suspended units in the central residential districts are 20 feet above the pavement.

A list of all the lights now used in the City of Lexington is given below:

Number	Height	Candle Power	Type
88	17.25 feet	1000	Steel Pole Orn. Bracket
128	17.21 "	1000	Wooden Pole Orn. Bracket
85	20	600	White Way Suspended
293	20	600	Street Lighting Ordinary
636	20	636	Suspended
28	20	250	"
182	—	100	"
8	—	38	"



**ORNAMENTAL BRACKET ATTACHED TO WOODEN POLE**  
(1000 candle power light)

The present lighting system on that section of Main Street where the steel pole and the ornamental bracket arm is used is quite satisfactory. The lighting units develop sufficient lighting intensity with the established spacing to meet the requirements of traffic for several years. The steel pole and bracket make an attractive standard. As other wires are also attached to these poles, they eliminate unnecessary and unsightly duplication of pole lines. On the other hand, the large 45 foot wooden poles, used between Deweese Street and Rose Street and between Broadway and Jefferson Street, with the attached lights, trolley

feed supports and multiple cross arms, are in marked contrast with the attractive appearance of the steel poles. The universal use of the present type of steel pole is urgently recommended for the entire central section, until such time as the removal of poles and overhead wires may be accomplished.

Outside of the central business district where the "white way system" is installed, all lights are suspended over street intersections by wires at a height of twenty feet above the pavement. Exceptional installations are the long metal arm brackets of the lights on Vine Street, the short arm brackets of Church Street, and the alley lights.

The lights suspended over the center of the roadway are unsatisfactory. These illuminate only the center part of the pavement, leaving the curb and adjacent area in comparative darkness. The insufficiently lighted areas in the other traffic lanes and at the curbs, are locations of constant danger. A person stepping off the curb, or coming from behind a parked car is not revealed clearly to the motorist. The suspended lights over the center line of the street, forming a continuous line, are often confusing to the driver, particularly on streets of undulating profile. The changing of suspended lights to the type with bracket arm support placed on the sides of the street, is submitted at this point as a general recommendation.

The present lighting system of the city



**SUSPENDED LIGHTING UNIT**  
(600 candle power light)



does not recognize the difference, from the standpoint of lighting requirements, between main traffic streets and minor streets. The present system does not recognize the more intensive lighting required in local business districts. There are a number of poorly lighted areas, the policing of which requires special attention.

While the above deficiencies exist and should be gradually and systematically eliminated, substantial progress has been made in recent years in improving the standard of street lighting in Lexington, with the result that this now compares favorably with the street lighting of cities of similar size. Progress in these directions began with a well de-

fined program of improvement, prepared in December 1927, and is particularly noticeable in the "white way" installations in the central business district. As a result of the efforts of the City Planning and Zoning Commission, the 1927 program of light installations has been restudied by the Lexington Utilities Company, with the view of coordinating this program with the Major Street Plan and the Building Zone Plan, prepared by the Commission. The recommendations for the systematic improvement of the city's street lighting system, given in the following, were developed in cooperation with the Lexington Utilities Company's experts, and were thoroughly coordinated with the Commission's plans.

### RECOMMENDATIONS

The major purposes of street lighting as stated by the Illuminating Engineers' Committee on Street Lighting are:

- (1) To promote safety and convenience in the streets at night through adequate visibility.
- (2) To enhance the community value of the street
- (3) To increase the attractiveness of the street.

### STANDARDS

In recognition of the functional differences between different streets, as designated by the Major Street Plan and by the Building Zone Map, the following installations are recommended as standards for the streets of various character:

<b>Downtown business districts (on streets with maximum traffic and business activity)</b>	1500 candle power on a three foot ornamental bracket, mounted on steel pole at a height of 17.5 feet above the pavement. Spacing 80 feet opposite.
<b>Downtown business district (general)</b>	1000 candle power with same mounting as above. Spacing 85 feet opposite.
<b>Main Thoroughfares</b>	1000 candle power units mounted on 4 foot ornamental bracket arms to poles at the sides of the street. The height of the light centers above the pavement to be 20 feet. Spaced 100 feet apart, staggered.
<b>Outlying Business Districts</b>	600 candle power units, mounted on 4 foot ornamental bracket arms, with the height of the light

center 20 feet above the pavement. Spaced 50 feet opposite.

#### Residence Streets

Intensity of development to be recognized by spacing. Units of 600 candle power are to be used with special globe, giving two-way refraction to avoid lighting second story rooms. All units to be mounted on a 4 foot ornamental bracket arm attached to poles at the sides of the street.

#### Alleys

250 candle power units mounted on horizontal arms.

All poles in the downtown business district are to be of steel. The wooden poles are to be of painted cedar. The smallest unit anywhere in the city should be the 250 candle power light.

#### The "White Way" System

The present "white way" installation, consisting of 1000 candle power and 600 candle power lamps, develops sufficient street lighting intensity to meet the requirements for a period of some years, except along the central section of Main Street, from Spring Street to Deweese Street, where, because of the character of business and traffic, it will be necessary within the next few years to increase the intensity of lighting by the use of 1500 candle power lamps.

Along that portion of Main Street from Spring Street to Jefferson Street and from Deweese Street to Ransom Avenue, no change will be required for at least five years. It is recommended, however, that, in view of the heavy traffic and more intensive business and residential development on that section of



Main Street between Ransom and Ashland Avenues, the present overhead units within this section should be replaced in the immediate future by the following installation:

Overhead pendant units of 600 candle power equipped with band refractors, to be placed on both sides of the street mounted on brackets, locating the lamps approximately four feet away from each curb. These units to be spaced 400 to 500 feet apart and staggered, that is, one 600 candle power unit every 200 to 250 feet measured along the center line of the street.

#### PROGRAM OF THOROUGHFARE INSTALLATIONS

The program for the immediate future should aim to improve the quality of street lighting on the principal thoroughfares. This can best be accomplished by removing the present units suspended over the roadway, and by locating the new units on both sides of the street along the curbs. All new units on these thoroughfares should be mounted four feet out from the curb, the light center 20 feet above the pavement and spaced approximately 500 feet apart staggered, that is, one lamp every 250 feet along the center line of the street.

The recommendations that follow are listed in the order in which it is believed these should be carried out, with the possible exception of Nos. 1 and 4.

1. WEST MAIN STREET, from Jefferson Street west to the Calvary Cemetery. The present 600 candle power units should be placed on both sides of the street prior to the opening of the Veteran's Hospital.

2. NORTH LIMESTONE STREET, from Third Street to Carlisle Avenue. The new lighting units to be located on both sides of the street, and equipped with internal dome type prismatic refractors and medium alabaster rippled globes with 1000 candle power, 20 Ampere incandescent lamps.

3. SOUTH BROADWAY, from Vine Street to the City Limits. The new installation should be the same as above recommended for North Limestone Street.

4. EUCLID AVENUE, from Limestone Street eastward to High Street. The present 600 candle power units should be placed on both sides of the street.

5. SOUTH LIMESTONE STREET, from Colfax Street south to the city limits. The present 600 candle power units should

be placed on both sides of the street.

6. NORTH BROADWAY, from Church Street north to the railroad bridge. The new units to be the same as those recommended above for North Limestone Street and similarly installed.

7. WEST THIRD STREET, from Upper Street to Georgetown Street and from Third Street to the city limits. The present 600 candle power units are to be placed on both sides of the street, with the exception of the large intersection at Fourth and Hickory Streets. The lighting of this intersection should consist of 600 candle power units mounted on four foot brackets and spaced approximately 250 feet apart.

8. JEFFERSON STREET, from Third Street to Main Street, and HIGH STREET, from the Jefferson Street Viaduct southwestward to the city limits. The present 600 candle power units should be placed on both sides of the street.

9. ROSE STREET, from Main Street to Limestone Street. The new installation should be the same as recommended above for Jefferson Street.

10. WALTON AVENUE, from Main Street to Third Street. The same installation as recommended for Jefferson Street.

11. THIRD STREET, from Limestone eastward to the city limits. The present 600 candle power units to be placed on both sides of the street.

12. WALNUT STREET, from Clark Street to Fifth Street, and FIFTH STREET, from Walnut Street to Limestone Street. The new units are to be located on both sides of the street, and equipped with internal dome type prismatic refractors and light alabaster rippled globes with a 1000 candle power 20 Ampere incandescent lamp.

13. MAXWELL STREET, from High Street on the west to High Street on the east. The present 600 candle power units to be placed on both sides of the street.

14. HIGH STREET, from Jefferson Street Viaduct eastward to Euclid Avenue. The same installation as for Maxwell Street.

15. UPPER STREET, from Loudon Avenue to Church Street and from Vine Street to Limestone Street, should be illuminated by the present 600 candle power units placed on both sides of the street.

16. VINE STREET, from Broadway to Limestone Street, is a heavy wholesale market

district; the present units should be mounted on brackets and located on the north side of the street only.



ALLEY LIGHT IN RESIDENTIAL SECTION  
(250 candle power light)

17. VINE STREET, from Limestone Street to Hanover Avenue. The present units should be mounted on brackets and placed along the south side of the street only.

#### RESIDENTIAL STREET INSTALLATIONS

In all residential sections of the First and Second Classes, the lighting units should be mounted on brackets, approximately four feet out from the curb and with the light center twenty feet above the pavement. These units should be spaced from 250 to 300 feet apart, and should be equipped with 600 candle power lamps. All units to be placed on one side of the street.

For residential streets of the Third and Fourth Classes, the same installations are recommended as above, except that the lighting units should be placed approximately 300 feet apart and that 400 candle power lamps be used.

Within the city the 400 candle power lamp is the smallest unit recommended on any street, except in some special cases where a 250 candle power lamp may be sufficient.

All alleys should be illuminated with units of at least 250 candle power, to be mounted from 18 to 20 feet high and suspended from four foot brackets.

## CHAPTER XIII

### TEN YEAR IMPROVEMENT PROGRAM AND PLAN FOR FINANCING ITS EXECUTION

The Plan presented in the previous chapters is a long term plan to be carried out gradually as the community continues to grow, and as fast as its financial resources permit. Programs for executing the improvements estimated to be needed within the next forty years, have been developed for periods of five years, separately for each type of facility, and may be found in the chapter dealing with such type of facility. However, studying the complete list of public improvements recommended in this Plan, it appears that there are certain projects that should be carried out immediately, or as soon as possible, to meet present deficiencies, and others, that should be undertaken without much delay if the needs of the immediate future are to be properly cared for. The improvements that are considered to belong in both the above classes were therefore combined in a comprehensive program of public improvements which should be carried out within the next ten years, and may therefore be termed a program for immediate consideration.

The improvements included in such a program follow:

#### Major Streets

The widening of the roadway of Cramer Avenue to 54 feet and the extension of Cramer Avenue, 80 feet wide, to Sherman Avenue.

The construction of a new connection between Third Street and Cramer Avenue, 80 feet wide.

The widening of West High Street to 80 feet between Patterson Street and the new viaduct, and between the latter and Angliana Avenue.

The extension of North Upper Street, 60 feet wide, to North Limestone Street.

The widening of North Limestone Street to 80 feet between the North Upper Street Extension and Loudon Avenue.

The widening of South Limestone Street to 80 feet between South Upper Street and Rose Street.

The construction of a new connection, 80 feet wide, between Bolivar Street and Euclid Avenue.

The widening of Short Street to 80 feet between Dewese Street and Curley Avenue, and its extension, 80 feet wide, to Goodloe Street.

The widening of Ann Street to 60 feet between Goodloe Street and Third St.

The widening of Third Street to 80 feet between Georgetown Street and Hickory Street. This widening to be so made as to eliminate the present jog with Whitney Street.

The widening of Whitney Street to 80 feet between Hickory Street and the city limits.

The construction of a new connection, 80 feet wide, between the intersection of Fourth and Race Streets and the intersection of Third and Ann Streets.

The widening of Curry Avenue to 80 feet, and its extension to Angliana Avenue.

The widening of Angliana Avenue to 80 feet between the Curry Avenue Extension and West High Street.

The widening of East High Street to 80 feet between Rose Street and Fontaine Road.

The extension of Lancaster Street, 80 feet wide, to Bryan Station Pike.

The widening of Main Street to 90 feet between Georgetown Street and the city limits.

The widening of Seventh Street to 80 feet between Winchester Pike and the C. & O. Belt Railway.

**It was estimated that the total cost of the above improvements would be \$1,863,000.**

#### Schools

The acquisition of a 20-acre site in the vicinity of Third Street and Broadway for the relocation of the Harrison School.

The erection of a 14-room junior high school and an 8-room elementary school on a 17.5-acre tract to be acquired on Bates Creek Pike. This junior high school would replace the present Morton Junior High School, which should be abandoned and sold.

The relocation of the Patterson School in a new 7-room building on a 1.2-acre plot, which should be acquired to the north of the present site.

The relocation of the Russell School in a

new 15-room building, to be erected on a plot adjoining the Dunbar Senior High School.

The acquisition of a 2-acre plot on Loudon Avenue, east of Winchester Pike, for a new school.

The acquisition of a 1.5-acre plot near High and Patterson Streets for a new Dudley School.

The erection of a 10-room school on a 1.8-acre plot, to be acquired near Sixth and Walnut Streets, to replace the present Johnson School.

The erection of a 13-room school on a 2-acre plot, to be acquired near Third and Deweese streets, to replace the present Constitution School.

The acquisition of 3 acres to enlarge the present Douglas School site.

**Making conservative allowance for receipts from the sale of abandoned property, it was estimated that the above school program could be carried out for \$709,500.**

### Parks

The acquisition of the 7-acre plot recommended for the proposed Bassett Park.

The acquisition of a 30-acre plot west of Duncan Street and south of the Trotting Track for the proposed Ingleside Park and Playfield.

The acquisition of a 2.8-acre plot on Lexington Avenue south of Maxwell Street for the proposed Maxwell Park.

The acquisition of 10 acres on Russell Cave Pike for the proposed Russell Cave Park and Playfield.

The acquisition of a 2-acre plot at Maxwell and Mill Streets for the proposed Wyandotte Park.

The acquisition of 2.25 acres on Sixth Street near Chestnut Street for the proposed Breckenridge Park.

The acquisition of 50 acres on Viley Pike and the L. & N. Railroad for the proposed Elkhorn Reservation.

**The carrying out of the above Park and Playfield program was estimated at \$204,000.**

### Grade Separation Projects

The proposed Third Street—Cramer Avenue Connection over the tracks of the C. & O. Railway and the L. & N. Railroad.

The South Broadway crossing at the Southern Main Line.

**The cost of constructing the above grade separation structures was estimated at \$220,000.**

In determining what portion of the total cost of the above improvement program would have to be borne by the City, that is, financed by general taxation, the local benefits that would accrue from, and the amount of such benefits that could and should justly be assessed against all property especially benefited by each project, was estimated.

In the past the City has generally financed major improvements of long life by the issuing of bonds. The interest and amortization on such bonds were met from the general city tax. In the case of certain improvements, such as streets and sewers, a portion of their cost was assessed against the properties immediately abutting on the improvements. While this practice recognizes the principle that owners of properties especially benefited by an improvement should pay a larger portion of its cost than the general taxpayer, it frequently does not reach all the property so benefited. Under the present practice, properties in a certain district that have increased in value due to the construction of a new major street, which gives such district a better or more direct access to the central section of the city, do not bear any greater share of its cost than properties in other districts that may receive little or no benefit from the improvement, unless such properties abut directly on such new major street. In the case of small neighborhood parks and playgrounds, as the present statutes do not permit the levying of special assessments, the entire city must pay the cost of the improvement, whereas frequently only a small district enjoys the use of the park and benefits by the enhancement it produces in property values.

Except for facilities that are to serve the entire community, there are few well planned improvements that do not confer special benefits on certain properties or districts. As illustrated by the above examples, due to the methods of financing such improvements under the present statutes, often the entire community is taxed to increase the wealth of a limited number of property owners. Such methods of financing are both illogical and unfair. They also greatly curtail the financial ability of the City to provide the necessary public facilities. As recommended in Chapters II and III, **it is of utmost importance that legislation be obtained as soon as poss-**

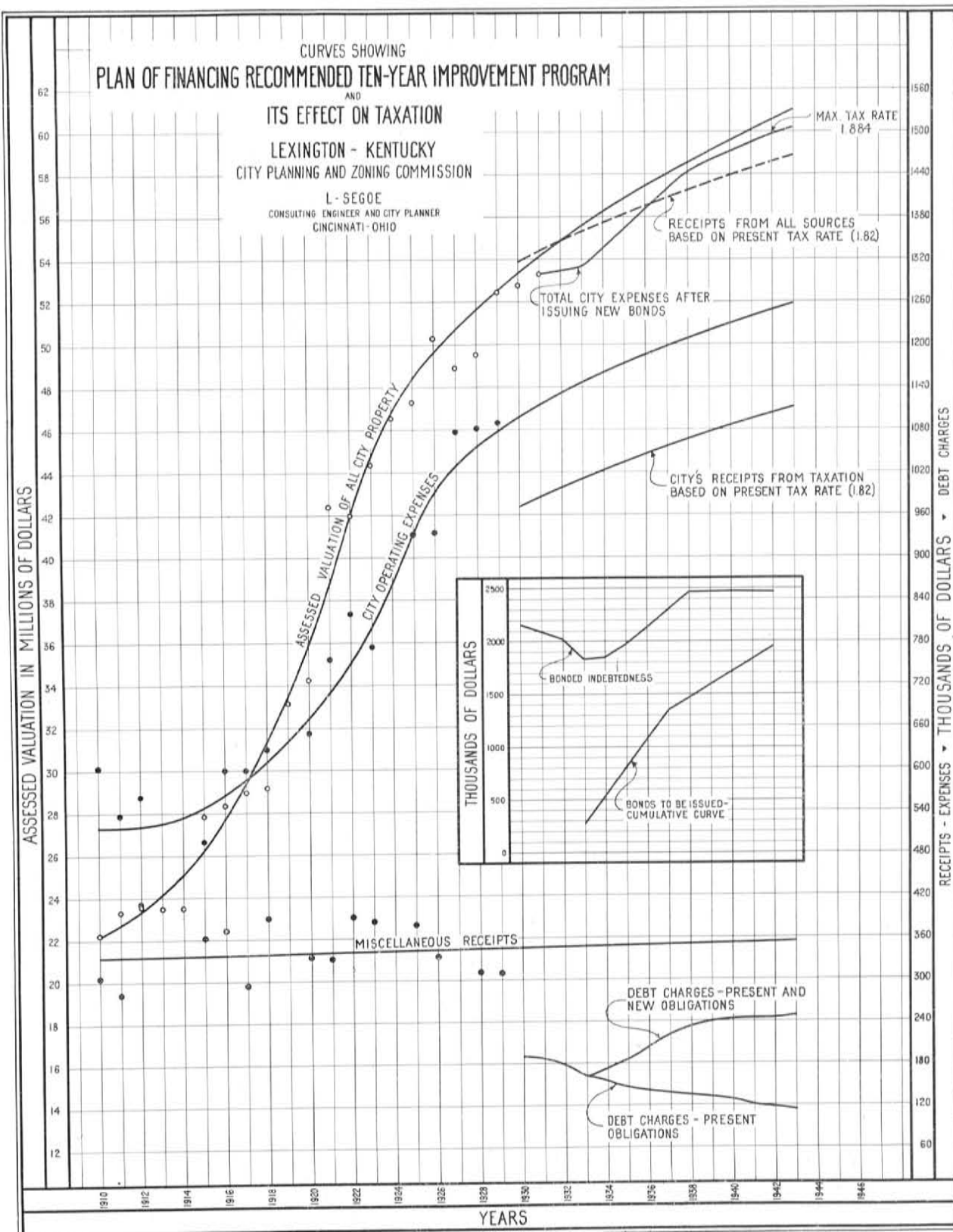


EXHIBIT 32



ible, that would permit the use of the district assessment method in the financing of major improvements of every kind where these produce special benefits.

In estimating the amount which may be raised by special assessments in financing the ten-year-program, it was assumed that legislation permitting the levying of assessments against all benefited property will be secured, since otherwise the City would not likely be able to carry out more than about one-half of this program, which, it is believed, might have serious effects on the economic and social welfare of the community.

Based on this assumption, it was found that the City's share would be 55 per cent of the total cost of the major street improvements, and 63.5 percent of the cost of park acquisition. The City would bear the entire cost of the school program. The City's share of the cost of the grade separation projects was assumed as 35 percent of the total, in accordance with the statutory provisions regulating the division of cost of such improvement. Thus, of the \$2,996,500, the total estimated cost of carrying out the ten-year improvement program, the City's share was estimated as \$1,950,000.

To develop a financial plan for executing this program, an analysis was made of the financial operations of the City during the past twenty years. From data obtained from the Annual Reports and other official records, the curves shown in Exhibit 32 were plotted. These show the increase of the total assessed valuation of all property within the city, of the miscellaneous revenues, such as license fees, privilege taxes, etc., and of the operating costs of the City Government. From the general trend of the past twenty years, indicated by these curves, it was possible to extend them to 1943.

The expected revenues from taxation were next calculated from the extended assessed valuation curve by applying the present city tax rate of 1.82 per \$100 of assessed valuation. The curve "Receipts from All Sources" was obtained by adding to the expected receipts from taxation the estimated miscellaneous receipts of the respective years, as obtained from the extended "Miscellaneous Receipts" curve.

From a study of the present outstanding obligations, the amount needed each year to pay interest and to retire these bonds at maturity was calculated, and plotted as a curve: "Debt Charges—Present Obligations."

As new bonds will not likely be issued before the year 1933, the debt charges for new obligations will not have to be met before the year 1934. With this assumption and making allowance for the debt charges on present obligations, a bond issue program was devised for the ten-year period from 1933 to 1943. This is shown by the curve "Bonds to be Issued—Cumulative Curve", which gives the amounts of bonds to be issued between 1933 and any other year in the ten-year period, also the amount to be issued each year.

The debt charges on these new bond issues were next calculated. It was assumed that the new bonds would be 30-year serial bonds bearing  $4\frac{1}{2}$  percent interest. The debt charges so calculated for each given year were then added to the debt charges on the present bonds in the same year, and plotted as the curve: "Debt Charges—Present and New Obligations."

The total city expenses for each year were next determined, by adding to the operating costs the debt charges on both the outstanding bonds and on the bonds to be issued. The result is shown by the curve: "Total City Expenses After Issuing New Bonds."

It will be observed that this curve falls below the curve "Receipts from All Sources Based on Present Tax Rate (\$1.82)" through the year 1936, but that beginning with 1937 the expense curve is higher than the receipt curve. This means that it appears to be possible to carry out the proposed bond issue program through 1936 and to even reduce somewhat the present tax rate, but that beginning with 1937 a slightly higher tax rate may be necessary.

The "Bonded Indebtedness Curve" shows that the proposed bond issue program will keep the bonded indebtedness of the City under the two and one-half million dollar mark, which is well within the statutory limitation.

The Proposed Bond Issue Program and its probable effect on taxation is given in the following table:

PROPOSED BOND ISSUE PROGRAM  
to Finance Ten-Year Program of Improvement

Year	Bonds to be Issued	Bonded Indebtedness on Bonds issued prior to 1931	Total Bonded Indebtedness including New Bonds	Debt Charges (Annual)	Estimated Tax Rate
1933	\$270,000	\$1,826,570	\$1,826,570	\$162,113	1.732
1934	270,000	1,576,570	1,846,570	176,188	1.758
1935	270,000	1,432,000	1,963,000	186,792	1.784
1936	270,000	1,338,000	2,125,000	203,867	1.812
1937	270,000	1,269,000	2,299,000	220,517	1.838
1938	120,000	1,200,000	2,464,000	236,732	1.864
1939	120,000	1,131,000	2,466,000	240,592	1.871
1940	120,000	1,062,000	2,468,000	244,472	1.878
1941	120,000	993,000	2,466,000	244,172	1.879
1942	120,000	928,000	2,464,000	247,852	1.884

It will be noted that the estimated tax rate does not exceed at any time the present one by more than 6.4 cents on a \$100 valuation. In fact, it was found by calculation that an average increase of one cent per \$100 valuation for the ten-year period, beginning with 1933, should be sufficient to produce the necessary revenue to finance the City's share of the recommended ten-year improvement program. There are, of course, other types of improvements, not included in this program, such as sewer projects, public buildings, renewals and repairs. However, in the past so many of these were financed by the City from fiscal revenues, that by extending the curve "City Operating Expenses" ample allowance was made, it is believed, for these types of improvement for the ten-year period under consideration.

The proposed ten-year improvement program and this investigation into the City's financial ability to carry out such program, should serve as a basis for the working out of a coordinated and detailed program of capital expenditures by a permanent committee on which all taxing bodies in the county, the city, county and school districts, should be represented. Such committee to prepare budgets for capital expenditures from year to year of all needs for which capital outlays are re-

quired (much like budgets are now being prepared for fiscal expenditures), also comprehensive and coordinated bond issue programs for submission to the electorate. The preparation of such programs should be based on the order of urgency of improvements and a detailed analysis of the resources of the City and County, and should include a "spending program" for the issuing of bonds authorized, with the view of keeping the tax rate at a reasonable figure. It may be mentioned that the budgeting of capital expenditures has been established in recent years in several progressive communities, and that a coordinated Improvement Program Committee, such as is recommended above, has been successfully operating in Cincinnati for the past several years.

Summarizing the findings of the financial studies presented in this chapter, it may be said that, assuming the availability of modern methods of financing public improvements, for only a one-cent increase on the \$100 valuation over the present tax rate during the ten-year period, beginning with 1933, the citizens of Lexington can obtain the long list of necessary improvements included in the proposed ten-year improvement program with resultant betterment of the social and economic conditions.

## APPENDIX

## The City Planning And Zoning Law

AN ACT to provide for the creation and organizing thereof; to prescribe and regulate the powers for cities of the second class and surrounding territory which bears relation to the planning and zoning thereof; to prescribe and regulate the powers and duties of such Commission; to empower cities of the second class, through the Mayor, Board of Commissioners or General Council thereof, to take such action as may be necessary, by ordinance or otherwise, to approve and effectuate the Commission's action insofar as it may affect property within the limits of such city, and to provide a fund for defraying the expenses of the Commission and to levy a tax for that purpose; to authorize the Fiscal Court of the County in which a city of the second class is located, to approve or disapprove the action of the Commission insofar as it affects property located outside the limits of such city, but within the limits of the county; to empower cities of the second class, by ordinance, to provide for the appointment of a Board of Adjustment and define the powers and prescribe the procedure of such Board; to provide for an appeal to the Circuit Court of the county, and thence to the Court of Appeals, from the orders, decisions or rulings of the Board of Adjustment; to provide penalties for violation of this Act or any ordinance or regulation made under authority conferred thereby, and also to provide a remedy by proceedings in court for an injunction or other similar relief, repealing sections 274lh, 274lh-1, 274lh-2, 274lh-3, 274lh-4 of the Kentucky Statutes, relating to City Planning and Zoning in cities of the Second Class.

*Be it enacted by the General Assembly of the Commonwealth of Kentucky:*

There is hereby created for each city of the second class and surrounding territory which bears relation to the planning or zoning thereof, a commission by the name of "City Planning and Zoning Commission," which Commission shall be constituted as hereinafter provided, and shall have the powers, duties and functions hereinafter conferred or imposed upon it.

## CREATION OF COMMISSION

Each Commission shall consist of seven members, five of whom shall be known as "City members" and shall be citizens and residents of the city affected thereby, and two of whom shall be known as "County members" and shall be citizens of the county in which such city is located, residing outside the limits of such city.

The city members shall be chosen in the following manner: The Mayor and Supervisor of Public Works shall be ex-officio members of the Commission. The Mayor shall appoint the remaining three city members who shall be qualified persons holding no other city or county office.

The County members shall be chosen in the following manner: The County Engineer shall be ex-officio a member of the Commission. The remaining member shall be chosen by the Fiscal Court from qualified persons not holding any other city or county office.

All members of said Commission shall serve without compensation.

The members initially appointed by the Mayor shall hold their offices, according to designation, in their appointment, one of them for a term of two years, and the others for terms of four years each, and thereafter, upon the expiration of their respective terms, the successor of each shall hold his office for a term of four years.

Vacancies in the offices of the three City members appointed by the Mayor shall be filled by successors appointed by the Mayor for the remainder of the term of office in which such vacancy has occurred.

The County member initially chosen by the Fiscal Court shall hold the office according to designation in his appointment, for a term of years, such that his tenure of office shall expire two years after the next elective period of the County Engineer and thereafter his successors shall hold office for a term of four years. Vacancies in the office of the appointive County member shall be filled by a successor appointed by the Fiscal Court for the remainder of the term of office in which such vacancy has occurred.

In all cases of both City and County members, where an ex-officio member in the employment of the City or County vacates such official position or employment, he shall ipso facto vacate his office as a member of the Commission.

In all cases of both City and County members, an incumbent otherwise qualified under this Act shall hold office until his successor is chosen and qualified.

At least four members of the Commission shall be necessary to constitute a quorum for the transaction of any business, and the affirmative vote of four members shall be required for the exercise of the powers or functions herein conferred or imposed upon said Commission.

Each Commission shall elect a Chairman, who shall be a member of said Commission not holding any other public office, and shall also elect or employ a Secretary, who need not be a member of the Commission.

It shall hold not less than one regular meeting in each month. It shall provide for its order of business and procedure, and shall keep a record of its proceedings, which shall be a public record and shall be so indexed and kept, to be of convenient and ready reference.

## POWERS OF COMMISSION

For the purpose of promoting the health, the safety, the morals, or the general welfare of each city of the second class and surrounding territory bearing relation to the planning or zoning thereof, the Commission created by this Act is hereby empowered, in a manner and upon the conditions hereinafter prescribed:

A—To make, establish and adopt plans and maps of the whole or any portion of such city of the second class, and of any land outside the limits of said city and within the limits of the county containing said city, which, in the opinion of the Commission, bears relation to the planning or zoning of such city, and it may make changes in such plans or maps when it deems same advisable.

In such maps or plans the Commission may provide among other things for changed regulations of all facilities for traffic, transportation or communication and for new or changed harbors, streets, street fixtures, alleyways, viaducts, bridges, subways, parkways, parks, playgrounds or any other public grounds or public structures or public improvements or appurtenances thereto, and for the general location and extent of public utilities and terminals whether publicly or privately owned or operated, for water, light, sanitation, transportation, communication, power or other purposes, and for the removal, relocation, widening, narrowing, abandonment (either in whole or in part) or extension of any or all such public ways or works or structures then existing, with a view to the systematic planning of the city and its environs.

It shall have power to make, establish and adopt plans for the control, development, preservation and care of historical land-marks, for the design and location of statuary and other works of art which are or may become the property of the city or the county, and may make recommendations to any public authorities or to any corporation or individuals in such city of the second class and its surrounding territory which in the opinion of the Commission bears relation to the planning or zoning of such city, concerning the location, of any building, structure of works to be erected or constructed by them.

B—To lay off and establish in each city of the second class and surrounding territory which in the opinion of the Commission, bears relation to the planning or zoning thereof, zones or districts of such number, shape and area as may be deemed by the Commission best suited to carry out the purpose of this Act, and from time to time to change such zones or districts, or any of them, as to area or boundary or location, which zones or districts shall be designated by maps or plans as well as by boundaries, which boundaries may be expressed in general descriptive terms, and to make, adopt or establish maps or plans showing such zones or districts, or changes therein, with appropriate designations thereof, and, within, such districts, to prescribe, administer and enforce, to the extent and in the manner provided by this Act, regulations of and restrictions upon the erection, construction, reconstruction, alteration, repair or use of buildings, structures or land, including the regulation and restriction of the height, number of stories and size of buildings and other structures, the percentage of lot that may be occupied, the size of yards, courts and other open spaces, the density of population and the location and use of such buildings, structures and land for trade, industry, residence or other purposes.

All such regulations and restrictions shall be uniform for each class or kind of buildings throughout each zone or district, but the regulations or restrictions in one zone or district may differ from those in other zones or districts.

C—To enter upon any lands and make examinations and surveys for the purpose of exercising the general powers hereinbefore granted.

D—to make, print and publish and distribute generally copies of any plan, map, report or recommendation made by it.

#### GENERAL PURPOSE OF COMMISSION PLAN

All plats of the subdivision of lands within the corporate limits of the city or within three miles thereof, and all instruments of dedication of lands for public use, shall be submitted to the Commission and approved thereon in writing by it before they may be offered for record or accepted by the City. The approval of the Commission shall not be deemed the City's acceptance of the dedication of any street, alley, way or other public ground shown on the plat or set forth in the instrument.

No street, alley, way, or other public ground shall be accepted by the City as a public street, way, or ground, unless the plat and location thereof shall have been submitted to and approved by the Commission, provided, however, that the City may submit to the Commission any ordinance proposing to accept the dedication of any such unapproved street, alley, way, or ground, and if approved by the Commission, the City shall have power to accept the dedication thereof by a majority vote of its legislative board, or, if disapproved, by a vote of not less than two-thirds of its members.

All plans, maps, regulations, and restrictions adopted by the Commission shall be made in accordance with a comprehensive design to promote the public health or safety or morals or general welfare in the section or community so affected, by lessening congestion in the streets or by securing safety from fire, panic or other dangers, or by providing adequate light and air, or by preventing overcrowding of land, or by avoiding the undue concentration of population, or by facilitating the adequate provision of transportation, water, sewerage, schools, parks, playgrounds or other public requirements.

Such regulations and restrictions shall be made with reasonable consideration, among other things, of the character of each zone or district affected thereby, and its peculiar suitability for particular use.

#### FINANCIAL PROVISIONS

The General Council or Board of Commissioners of said Cities of the second class shall provide for the expenses and accommodations necessary for the work of the Commission, and may levy a tax for that purpose if necessary.

Said Commission shall have the power, out of funds that may be provided for its use, to appoint or employ and control or discharge architects and engineers, and to obtain such other professional service as may be needed, and also to employ or discharge such clerks, draughtsmen and other subordinates as the Commission shall deem necessary for the performance of its functions.

The expenditure of public funds by said Commission shall be limited during each fiscal year to the amount appropriated for each fiscal year, and the fiscal year is hereby fixed so as to conform to the fiscal year of the city of the second class in which the Commission exercises its functions.

#### PUBLICATION OF PRELIMINARY REPORT

Before the Commission shall finally lay off or establish any zone or district either within the limits of said cities of the second class, or outside of said limits, within the environs thereof, or make, adopt or establish any plans or maps with reference to said zones or districts or the character of public or



private use or improvement thereof, or make any change in any of said zones or districts, or said maps or plans, it shall first embody its conclusions in a preliminary or tentative report, and give public notice thereof by not less than three insertions in some newspaper of general circulation in said city of the second class and its environs, fixing the time and place when and where objections to said preliminary or tentative report will be heard and considered by the Commission, and the Commission shall hold a meeting at such fixed time and place to consider and act upon said preliminary and tentative report, and any objections thereto. At this meeting, or any subsequent meeting, the Commission shall, upon consideration of all objections, make up its final report, and accompanying map or plan, embodying the result of its judgment upon said preliminary or tentative report and objections thereto.

#### ADOPTION OF FINAL REPORT

A—The final report of the Commission with respect to the zones or districts which it is authorized by this Act to lay off or establish, or with respect to the regulations or restrictions upon the use of property in any of said zones or districts, or with respect to any maps or plans authorized by this Act to be made, insofar as any of them may affect any property located within the limits of such city of the second class, or any zone or district laid off within such limits, shall be submitted by said Commission to the Mayor of such city of the second class, who, upon consideration thereof, shall submit same to the Board of Commissioners or General Council of said city.

If the Board of Commissioners or General Council shall approve said report and accompanying maps or plans, they shall draft an ordinance or ordinances providing for the carrying out of said report, and for the establishment of the zones or districts therein laid off or established, for the adoption and enforcement of the regulations or restrictions upon the use of property in any of said zones or districts therein provided, for the adoption and establishment of the maps or plans adopted or established by the Commission, and providing also for the enforcement of said ordinance and said Commission's report, and the various provisions of said ordinance and report.

Full power is hereby conferred upon the Board of Commissioners or General Council to approve or disapprove said Commission's report, but the Board of Commissioners or General Council shall have no power to vary or alter such report in any material aspect.

Upon the enactment, approval, and publication, according to law of an ordinance adopting said report, the same shall become immediately effective and operative as a proper exercise by the State of its police powers delegated by this Act.

In case the Board of Commissioners or General Council should refuse or neglect, for a period of more than sixty days after the submission to it of said Commission's report to take action upon said Commission's report, or to draft an ordinance providing for carrying out of said report, said Commission or any property owner aggrieved by such delay may bring action in the Circuit Court of the county in which such city of the second class is located, by mandatory injunction or other appropriate proceeding against the members of said Board of Commissioners or General Council so delaying action, to proceed to

consider and act upon said Commission's report and to draft an ordinance providing for the carrying out of such report, but the court shall have no power to determine how the Board of Commissioners or General Council shall act in the exercise of its discretion.

B—The final report of the Commission, insofar as it affects property outside the limits of cities of the second class, shall not become effective for such purpose until submitted to and approved by an order or resolution of the Fiscal Court of the county in which such property is located, and power is hereby conferred upon the Fiscal Court to approve or disapprove said report, but it shall not have power to make any changes therein; Provided, however, that no action shall be taken by said Fiscal Court with reference to the approval or disapproval of said report within ten (10) days from the filing of said report.

If said Commission's report, upon hearing, is disapproved by the Fiscal Court, it shall be ineffective for any purposes outside the limits of such city of the second class, except as the city may have jurisdiction outside said limits by virtue of any provisions of its charter.

If said Commission's report, upon hearing, is approved by the Fiscal Court, then it is hereby made effectual for all purposes, as an exercise of the police power delegated by this Act to the Commission for the purposes expressed in said report.

In case the Fiscal Court of the County should refuse or neglect, for a period of more than sixty days after the submission of said Commission's report, to take action thereon, said Commission or any property owner aggrieved by such delay may bring action in the Circuit Court of the county in which such city of the second class is located, by mandatory injunction or other appropriate proceeding, against the members of said Fiscal Court so delaying action, to compel them to proceed to consider and act upon said Commission's report, but the Court shall have no power to determine how the Fiscal Court shall act in the exercise of its discretion.

#### AMENDMENTS TO PLAN

Any regulations, restrictions or boundaries established by the Commission and made effective in the manner hereinabove provided may, by like proceedings from time to time, be amended, supplemented, changed, modified or repealed; Provided, however, that no change therein shall be made in opposition to a written protest against such change signed by the owners of twenty percent or more either in number of lots or in area of lots included in such proposed change, where the lot or any part thereof is within 200 feet of any lot affected by such change, unless the change shall be adopted by the unanimous vote of the Commission, and the ordinance approving such change be approved by a vote of at least three-fourths of the members of the Board of Commissioners or General Council; and provided, further, that no such protest shall be received or counted or considered from any owner, the use of whose property is either of a similar type or a type allowable only in less restricted districts.

#### BOARD OF ADJUSTMENT

There is hereby created a Board of Adjustment, consisting of five members, to be appointed in the



manner hereinafter provided. Said Board of Adjustment shall have power in appropriate cases and subject to appropriate conditions and safeguards, to make special exceptions to any plan or rule or regulation made therein or thereunder by the Commission, provided that all such exceptions shall be in harmony with the general purpose and intent of the plan or rule or regulation adopted by the Commission and approved or adopted by the General Council, as provided in sub-section A, of Section 7, of this Act, or by the Fiscal Court, as provided in sub-section B, of Section 7, of this Act.

Four members of the Board of Adjustment shall be appointed by the Mayor, each for a term of four years, except that, in case of those first appointed, two members shall be appointed for a term of two years, and two members shall be appointed for a term of four years. The remaining members of the Board of Adjustment shall be appointed for a term of four years by the Fiscal Court. All members of the Board of Adjustment shall serve without compensation.

Any member of the Board appointed by the Mayor shall be removable by the Mayor for cause, or written charges after public hearing. A vacancy in the office of any member appointed by the Mayor shall be filled by the Mayor for the unexpired term of such member.

Any member of the Board appointed by the Fiscal Court shall likewise be removable by the Fiscal Court for cause, on written charges after public hearing. A vacancy, in the office of such member shall likewise be filled by the Fiscal Court for the unexpired term of the member whose office has become vacant.

The Board shall have power to adopt rules and regulations for its own government, not inconsistent with law or with the provisions of any ordinance of the City, or with any order or resolution of the Fiscal Court, with reference to the plan or plans under consideration by the Board of Adjustment.

Meetings of the board shall be held at the call of the chairman and at such other times as the board may determine. Such chairman, or in his absence, the acting chairman, may administer oaths and compel the attendance of witnesses.

All meetings of the board shall be open to the public. The board shall keep minutes of its proceedings, showing the vote of each member upon each question, or, if absent or failing to vote, indicating such fact, and shall keep records of its examination and other official actions, all of which shall be immediately filed in the office of the Board and shall be a public record.

Applications to the Board of Adjustment for relief by way of special exceptions as aforesaid, may be made by any property owner aggrieved (including a tenant), and appeals to said Board may be taken by any property owner (including a tenant), or by any officer, department, board or bureau of the municipality affected by any ruling of any administrative officer administering any portion of this Act or ordinance or regulations or rules enacted pursuant to its authority.

An appeal from a ruling of an administrative officer shall be taken within a reasonable time, as provided by the rules of the Board, by filing with the officer from whom the appeal is taken, and with the Board of Adjustment, a notice of appeal specifying

the grounds thereof. The officer from whom the appeal is taken shall forthwith transmit to the Board all the papers constituting the record upon which the action appealed from was taken.

An appeal stays all proceedings in furtherance of the action appealed from, unless the officer from whom the appeal is taken certifies to the Board of Adjustment, after the notice of appeal shall have been filed with him, that by reason of facts stated in the certificate, one days notice of which shall be given to the person appealing, a stay would in his opinion cause imminent peril to life or property. In such case, proceedings shall not be stayed otherwise than by order, which may, on due cause shown, be made by the Board of Adjustment, on application, after notice to the officer from whom the appeal is taken, or by judicial proceedings.

The Board of Adjustment shall fix a reasonable time for the hearing of any application for special exception, or for the hearing of an appeal. It shall give public notice thereof by three insertions in some daily newspaper of general circulation in said city of the second class, the first of which insertions shall be published at least ten (10) days prior to the day fixed for the hearing. Upon the hearing, any party may appear in person or by agent or by attorney, and the Board shall decide the application or appeal within a reasonable time.

The Board of Adjustment shall have the following powers:

(a) To hear and decide application for special exceptions, as above provided.

(b) To hear and decide appeals taken as above provided.

(c) To authorize, upon such application or appeal, such variance from the terms of the ordinance or of any plans, rules or regulations made therein or thereunder, as will not be contrary to the public interest, where, owing to special conditions, a literal enforcement of the provisions of the ordinance will result in unnecessary hardship, and so that the spirit of the ordinance shall be observed and substantial justice done.

In exercising the above mentioned powers, such Board may, in conformity with the provisions of this Act, reverse or affirm wholly or partly, or may modify on order, requirement, decision or determination as ought to be made.

The concurring vote of four members of the Board shall be necessary to grant a special exception.

The concurring vote of three members of the Board shall be necessary to reverse or modify any order, requirement, decision or determination of any such administrative official.

#### APPEAL TO COURTS

All final rules or orders or findings of the Board of Adjustment, unless appealed from as herein provided, shall be conclusive and binding as to all questions of fact, where there is substantial evidence to support such rule, order or finding, but any property owner (including a tenant) aggrieved, or any officer, department, board or bureau of the municipality affected by such finding or final order or rule may, within twenty (20) days after the rendition of such official order or rule of the Board, by petition appeal to the Circuit Court of the county

in which such municipality is located, for the review of such order or rule of the Board of Adjustment, said officer, board or bureau of the municipality, and any applicant or appellant affected by such official rule or order, being made parties to such appeal.

Such petition shall state fully the grounds upon which a review is sought, and shall be verified by the petitioner, who shall furnish copies of the petition to the adverse parties at the time of filing the same.

Summons shall issue upon the petition, directing the adverse parties to file answer within twenty (20) days after the service thereof, and directing the Board of Adjustment to certify its complete record of the case to the Court, or, in lieu thereof, and if consented to by the petitioner and adverse parties, an abstract of the record.

No new or additional evidence may be introduced in the Circuit Court except as to the misconduct of some person engaged in the administration of this Act or any ordinance enacted thereunder, which affects the order, decision or rule, but the Court shall otherwise hear the cause upon the record or abstract thereof as certified by the Board of Adjustment, and shall dispose of the case in a summary manner, its review being limited to determining whether or not—

(a) The Board of Adjustment acted in excess of its power;

(b) The order, decision or rule was procured by misrepresentation or fraud;

(c) The order, decision or rule is not in conformity to the provisions of this Act or of any ordinance, rule or regulation adopted pursuant thereto.

The Board of Adjustment and each party to such appeal shall have the right to appear in such review proceedings. The Court shall enter judgment, affirming, modifying, or setting aside the order, decision or rule, or in its discretion, remanding the case to the Board of Adjustment for further proceedings in conformity with the direction of the Court. The Court may, in advance of judgment and upon a sufficient showing of fact, remand the cause to the Board.

Appeals may be taken from the Circuit Court to the Court of Appeals as appeals in civil cases are now taken according to statutes in such cases made and provided.

Appeals to the Circuit Court and to the Court of Appeals shall have preference in trial over all other civil actions and proceedings.

#### PENALTIES AND SUITS

It shall be unlawful for any property owner, tenant or other person to erect, construct, reconstruct, alter, repair, convert or maintain any building or structure, or to use any building or structure, or to use or subdivide land, in violation of or contrary to the provisions of this Act or of any ordinance or other regulation made under authority

conferred hereby. Any person or corporation so offending shall, upon conviction thereof in a court of competent jurisdiction, be fined not less than ten dollars nor more than one hundred dollars for each offense so committed, each day's offense constituting a separate offense, or, if a person, he shall be imprisoned not more than fifty days, or both so fined and imprisoned, within the discretion of the judge or jury, and in addition to the penalties hereby imposed, and in addition to other remedies which may be provided by ordinance adopted under authority of this Act, said city of the second class, or said Fiscal Court of the county in which such city is located or the commission created by this Act may institute in any court of competent jurisdiction, an appropriate action or proceeding to prevent such unlawful erection, construction, reconstruction, alteration, repair, conversion, maintenance or use, or to restrain, correct or abate any such violation, or to prevent such illegal occupancy of such building structure or land, or to prevent any illegal act, conduct, business or use in, upon or about such premises.

Such action or proceeding shall be conducted as other similar actions and proceedings, and the court shall adjudge therein to the plaintiff such relief, by way of injunction (which may be mandatory) or otherwise, as may be proper under all the facts and circumstances of the case, in order fully to carry out and effectuate the purposes of this Act and of the ordinances, rules and regulations adopted pursuant to authority herein given.

#### CONFLICTING REGULATIONS

Wherever the regulations made under authority of this Act require a greater width or size of yards, courts, or other open spaces, or require a lower height of building or a greater percentage of lot to be left unoccupied, or impose other higher standards than are required in any other statute or local ordinance or regulation, the provisions of the regulations made under the authority of this Act or any ordinance enacted pursuant thereto shall govern.

#### EACH SECTION OF ACT SEPARATE

If any section under this Act shall be held invalid, such fact shall not affect any other section, it being the intention of the General Assembly in enacting this Act, to enact each section and paragraph or clause thereof separately, and if any provision or exception contained in any section shall be held invalid, such facts shall not affect the remaining portion of said section, it being the intention of the General Assembly to enact each section of this Act and each provision and exception thereof separately.

This Act may be cited as "The City Planning and Zoning Law".

That sections 274lh, 274lh-1, 274lh-2, 274lh-3, 274lh-4 of the Kentucky Statutes relating to City Planning and Zoning in Cities of the Second Class, be and they are each hereby repealed.

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