

1951

A Master Plan: Bangor, Maine

Bangor City Planning Board

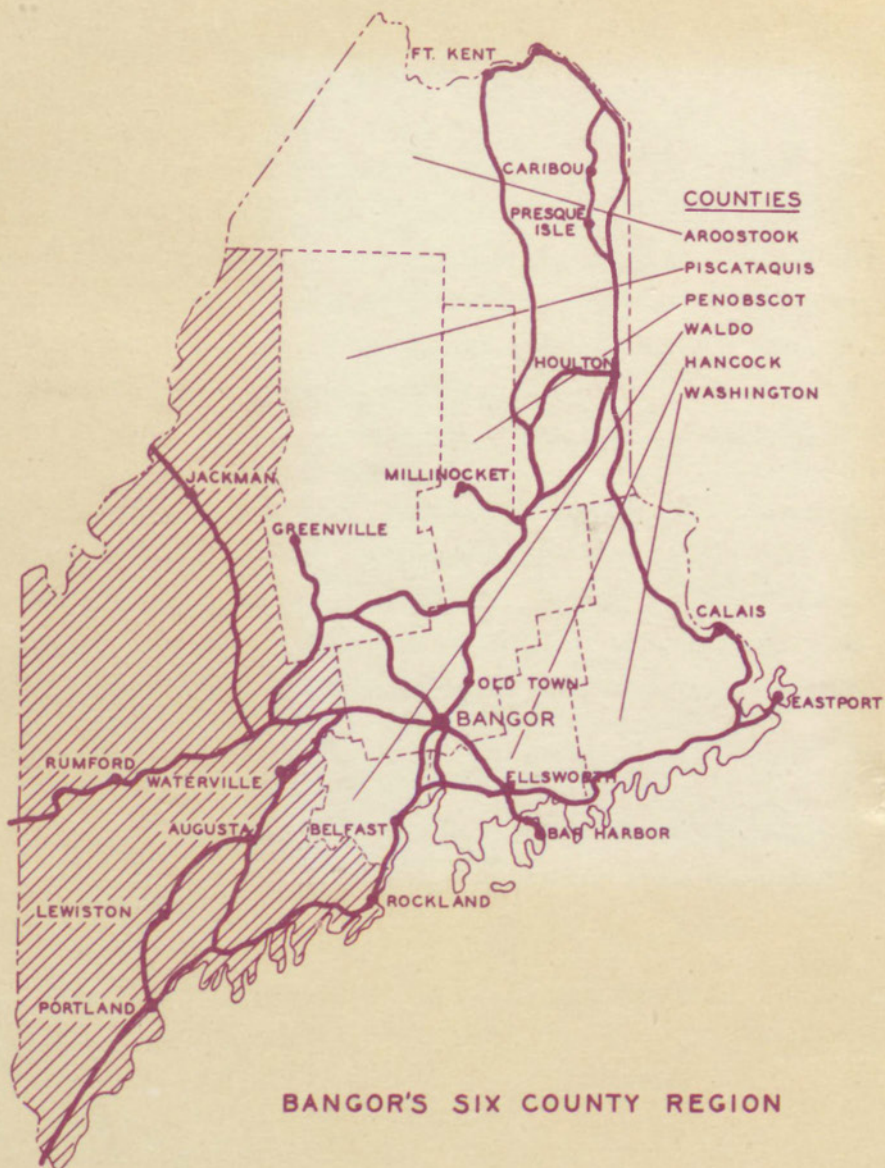
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A MASTER PLAN BANGOR, MAINE



CITY PLANNING BOARD

BANGOR, MAINE
CITY PLANNING BOARD
JUNE 18, 1951

The Bangor Planning Ordinance, which was adopted by the City Council in 1948, provided for a Planning Board, which was to "make and adopt a Master Plan of the city." This report briefly describes the Board's recommendations for a Master Plan. After a public hearing and possible revision, the plan may be officially adopted by the Board. Thereafter it will become a guide to the future recommendations of the Board for the improvement and development of Bangor.

This plan is not a fixed or final plan. It must be changed and added to from time to time as changing conditions dictate. In this respect the Board hopes that the people of Bangor will offer suggestions to improve the plan. The continual constructive criticisms and ideas of the citizens of Bangor are needed to make planning effective.

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A MASTER PLAN

BANGOR, MAINE

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HISTORY AND PHYSICAL CONDITIONS

HISTORICAL SETTING

The annals of Bangor begin with the visit of Samuel de Champlain. Intrigued by the reports of a fabulous city, Norumbega, Champlain ascended the Penobscot in 1604 only to find an important Indian rendezvous and camping place where the Kenduskeag and Penobscot Rivers merge.

Jacob Buswell, who, in 1769, built a log hut near the present site of St. John's Catholic Church, had the distinction of being Bangor's first settler. In 1776 there were some 75 persons, adults and children, residing in Kenduskeag Plantation, the settlement being in the neighborhood of Penjejawock Stream, near Mt. Hope Cemetery. After the close of the Revolutionary War, more settlers arrived and with them the first pastor, Reverend Seth Noble, a native of Westfield, Massachusetts.

Pastor Noble was delegated to appear before the General Court of Massachusetts, of which Maine was then a part, to petition for the incorporation of the growing frontier town under the name of Sunbury. On the long journey to Boston, the clergyman solaced himself by singing his favorite hymn, "Bangor", and when the petition to the Court was made, he asked that the new town be designated "Bangor" instead of "Sunbury". The incorporation was allowed on February 25, 1791.

THE FIRST "PLAN"

In 1801 Park Holland, Esq. and others surveyed a major part of Bangor into 113 lots of 100 acres each for the settlers. This first "plan" set the general pattern of the present city. The general direction and angles of most of today's streets and the shape of many lots were determined by the "Holland Plan" of 1801. The remaining part of Bangor was surveyed in 1842 by Rufus Gilmore into lots of from 13 acres to 237 acres in size, or an average of about 50 acres.

Bangor was occupied by the British in the War of 1812, and the scourge of war impeded progress until 1820, when new impulse was given by the creation of Maine as a separate state. The first bridge between Bangor and Brewer was built in

1832 and the military road to Houlton, the first connection with the great north section of the State, was constructed in the years 1828-1830.

THE TIMBER INFLUENCE

Because of its proximity to the timberlands, Bangor became an important center for shipyards and sawmills, which sent their products far and wide. The city grew rapidly, many residents being attracted by the magnitude of the lumber industry, which, about 1870, made Bangor the foremost lumber market of the world.

THE 1911 PLAN FOR BANGOR

After the great fire of 1911, which destroyed a large part of Bangor's central district, a plan for its reconstruction was prepared by Mr. Warren H. Manning, "Landscape Designer", of Boston, Massachusetts. This plan showed a tremendous amount of foresight and city planning ability. For example, "These (auto vehicle) traffic streams will soon so congest the present city center as to compel its removal and the depreciation of values or the broadening of streets at great cost." The "Manning Plan" included recommendations for the High School—Library development, the two malls in the Kenduskeag Stream, and the widening of Central and Franklin Streets, all of which were carried through by the city. It is interesting to note, in this report on a 1951 city plan, that in 1911 Mr. Manning made the plea to make Bangor "better known as a center of city and country beauty and of *good city planning*".

BANGOR AS A REGIONAL CENTER

With the passing of the tall timber in Maine, the big timber camps and most of the timber activity moved westward to Michigan and finally Washington. However with the development of agriculture, fishing, and recreation in the north-eastern counties of Maine, Bangor became a distribution point and business center for this region of six counties: Aroostook, Washington, Hancock, Penobscot, Waldo, and Piscataquis. Today, in 1951, Bangor continues to be the wholesale, retail and service center for the predominantly

rural population of northern and eastern Maine. More will be said about this in Chapter II of the Master Plan report.

PHYSICAL CONDITIONS

THE KENDUSKEAG SPLIT

Perhaps the greatest influence on the physical development of Bangor has been the "lay of the land", or the topography. The steep banks and gorges of the Kenduskeag Stream valley split the city into two almost disconnected parts: the East Side and the West Side. As the Kenduskeag merges with the Penobscot the valley broadens slightly, but still constricts the business district to a relatively small area of level land. The 1911 Manning Plan took note of this topographical feature, which helps make the business center the hub of radial roads leading to a "state wide territory in all directions". Except for the sharp cut of the Kenduskeag Stream, Bangor's land is generally "gently rolling" towards the Penobscot River.

TOUGH GROUND

The outcropping and underlying rocks in Bangor are mostly of the slate type. The soil is clayey loam, with small areas of gravelly loam, while there is generally a hard pan of clay; so that much of the land is relieved of water only by thorough drainage.

VARIED CLIMATE CONDITIONS

Precipitation. The mean annual precipitation in Bangor is between 40 to 42 inches. The average annual snowfall is 70 to 80 inches.

Temperature. The mean annual temperature is from 42 to 44 degrees, while the seasonal mean temperatures vary from 18 to 20 degrees in Winter to 65 to 67 degrees in Summer.

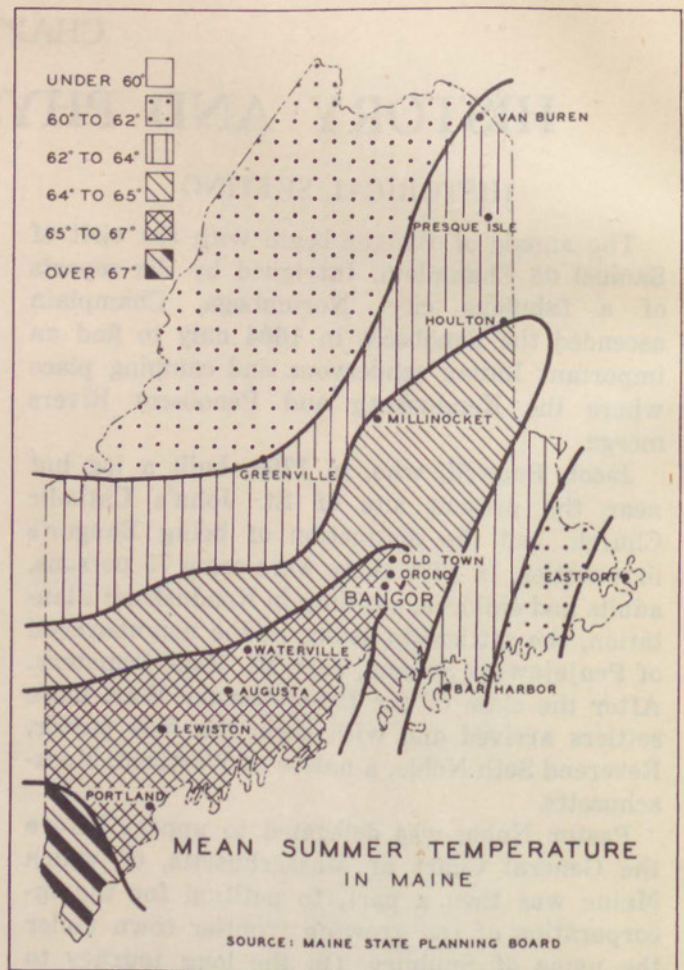


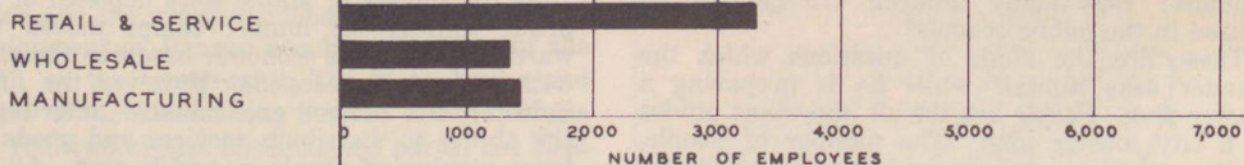
Figure 1.

Growing season. Bangor generally has a growing season of 130 to 140 days as compared to under 90 days in northern Aroostook County and over 170 days in Portland.

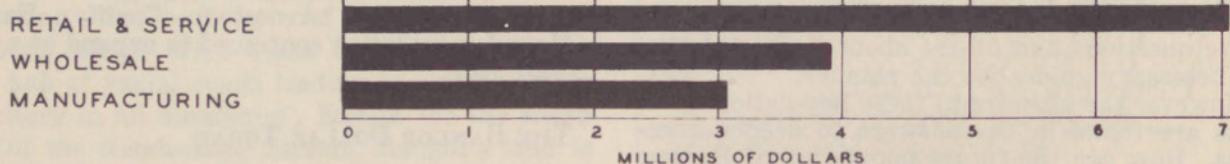
Historical and physical conditions have each played an important part in shaping the Bangor of today: the number of people, their places of living and working, the streets and highways, the parks, schools, and other municipal facilities. The Bangor of today is the starting point for the Master Plan for the Bangor of tomorrow.

EMPLOYMENT AND PAYROLL IN BANGOR

EMPLOYMENT



PAYROLL



SOURCE: 1947, 1948 U.S. CENSUS

Figure 2.

cheap water transportation has not improved the transportation picture.

The bright spot is the labor supply. No doubt the supply is not unlimited, but the available supply is predominantly skilled, and is willing to work for lower wages than most industrial workers of similar skills. This is shown in Figure 3. Industry in Maine also enjoys having very little labor strife. The labor supply has attracted certain "mobile" industries, principally the shoe industry, to the Bangor area, but the other three factors have deterred any highly industrialized economy.

BANGOR'S FUTURE ECONOMIC SUPPORT

What is in the cards for Bangor's future economic support? Can the people of Bangor help deal the hand?

Retail trade

As long as there are people in Bangor's six-county market it seems certain that the city will continue to be their chief supply center. However, the population trends in these counties are not too encouraging. Two of them lost population between 1940 and 1950; three of them increased only slightly, and the sixth county, which includes Bangor, made only a modest gain. These trends do not foretell of any business boom for the city. Business depends upon selling, and selling

depends upon people to buy. Unless the purchasing power of the people increases, these population trends indicate that Bangor's business world can expect only slight gains in its potential market.

Is there any increasing competition for this market? In 1929 Bangor's share of the six-county retail market amounted to 23.6% of the total sales volume. In 1939 it remained at 23.6%, but in 1948 it dropped to 21.5%. For the same periods the combined total for five other cities, which are within the same six-county market area, was 15.7%, 16.4%, and 18.8%. And these trends took place despite the fact that Dow Field was operating as an Air Force Base in 1948 and that Penobscot County had made the largest population gains between 1940 and 1950. Apparently Bangor has lost some of its grip on the retail market, although this may not be a serious loss.

It is difficult to draw any hard and fast conclusions about the future of Bangor's retail trade. There are no obvious reasons why the city should not continue to be the major business center for a large part of Maine. However the people of Bangor, who lean heavily on the business dollar, should continue an aggressive policy of attracting people to the city. Translated into planning terms this policy means making Bangor an efficient and pleasant place for shoppers. Park-

ing problems and traffic congestion must be dealt with through planning. Public recreation facilities, such as an auditorium, may be planned to bring people into Bangor for special events. Anything that makes Bangor a magnet for people will pay dividends in shopping dollars.

Wholesale trade

The future of wholesale trade also depends upon people to buy, and again the population trends in Northern and Eastern Maine offer little hope for any significant expansion. However it is likely that the factors which have established Bangor as a wholesale distribution center will continue to keep the city in the forefront of wholesale trade for whatever market exists. Bangor's location, and its transportation facilities are firmly entrenched obstacles to any effective outside competition. Of course the importance of Bangor as a port has shown sharp declines, but other forms of transportation apparently have effectively taken its place. Ships and barges carrying pulpwood, coal, and oil, which in recent years were the sole survivors of Bangor's water transportation, have been replaced to a great extent by railroads, trucks and pipelines. Even without its port Bangor will probably continue as the chief distribution point of Northern and Eastern Maine for goods in wholesale lots.

Industry

The future of manufacturing in Bangor is more difficult to predict than the other major segments of the economic base. It is known that the city lacks many of the major attractions of industrial expansion—cheap transportation, available markets, and a supply of basic mineral raw materials. It's safe to assume that the future of Bangor will not be tied in with any expansion

of the heavier industries, at least not from natural causes. The city cannot expect a steel mill or an automobile manufacturing plant.

However Bangor does have assets which could at any time influence the establishment of additional industries of certain types. The most important of these assets is, as previously noted, an inexpensive, skilled labor supply. In the past this labor supply has proved attractive to the boot and shoe, woolen goods, and printing and publishing industries. In the future it could continue to be an asset to this type of industry, which has a considerable amount of "mobility" in its location.

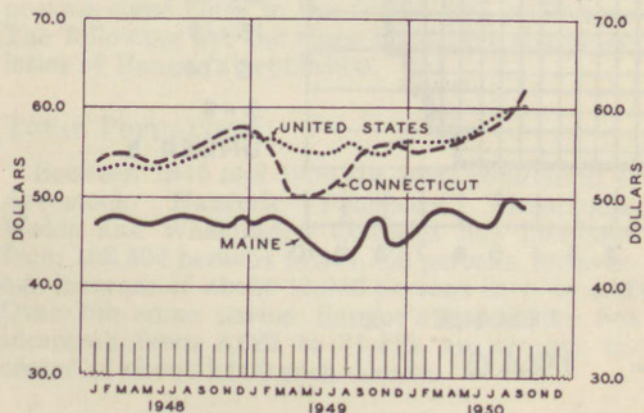
A second asset, which apparently has not been thoroughly exploited, is Bangor's location in a large region of Maine's chief raw material—its forests. Bangor could profit indirectly from improved forestry practices, such as forest management and cutting on a sustained yield basis, which would produce more and better sources of lumber; better processed, seasoned and graded lumber could compete more successfully for New England markets. Bangor could profit more directly as a location for new or expanded wood industries. Posts, poles, piling, and railroad ties, which have been obtained in large quantities from the South, could be produced in New England. The manufacture of plastics, wallboards, and insulating materials offers a use for surplus sawdust and mill wastes. The hardwoods and low-grade softwoods, which are restocking much of the cut-over timber lands of Maine, offer a source of raw materials for veneer, turnery, furniture, and laminated wood industries. Bangor's labor supply and its location near a previously neglected and mistreated raw material are potential factors in any future industrial expansion.

There are intangible assets which make a community more desirable to industry. Community spirit, efficient government, a modern school system, good housing, an adequate water supply and sewer system, and available recreation facilities are examples. Bangor cannot boast of perfection in these assets but it does have a better than average core which can be added to and improved through planning. Taken by themselves these intangible assets would probably never draw new industries to Bangor, but combined with more tangible assets they could provide the extra selling point.

Whether or not Bangor grows industrially depends to a great extent upon the attitudes and efforts of the people toward selling and supplementing its assets. The attraction and keeping of industry has become a competitive business between cities and regions. Bangor is not forced to enter the competition, but if it wants to assure further growth for itself and a more diversified economy, then it must follow a more aggressive policy of bringing in new industries.

The provision of suitable industrial zones, with the necessary utilities and roads, is a basic step

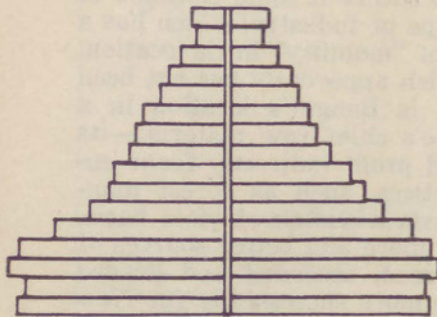
AVERAGE WEEKLY EARNINGS
FACTORY WORKERS



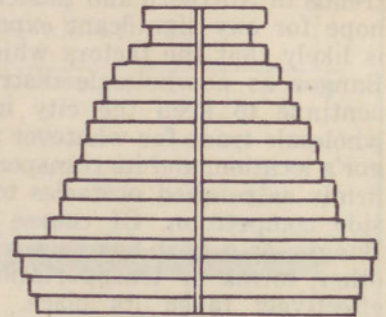
SOURCE: "MONTHLY REVIEW", FEDERAL RESERVE BANK OF BOSTON

Figure 3.

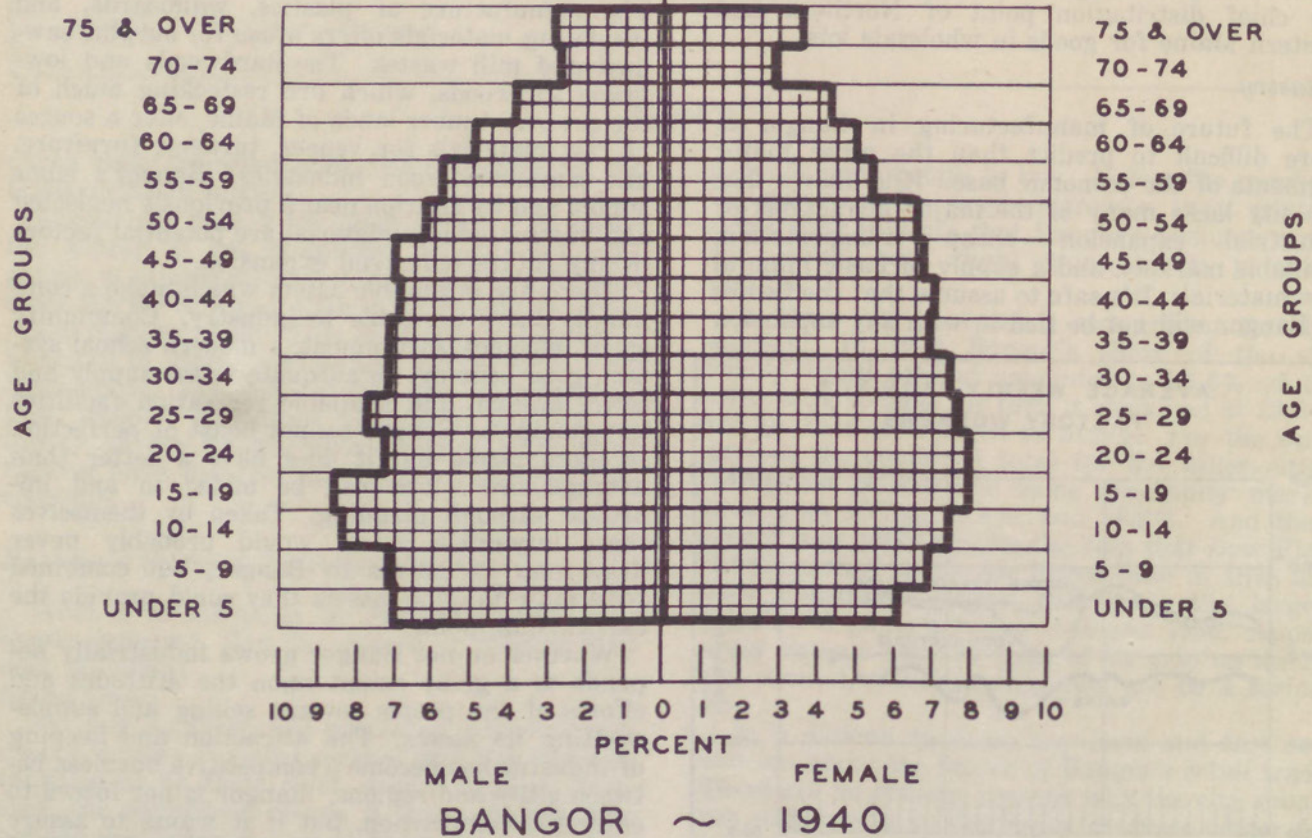
POPULATION BY AGE AND SEX BANGOR AND MAINE



MAINE ~ 1870



MAINE ~ 1940



SOURCE: U.S. CENSUS

Figure 4.

in any attempt to secure industry. This step is a proper function of the municipal government. A further step could be taken by the people of Bangor—the formation of an “industrial foundation.” Such a foundation could raise capital through a corporate vehicle including the sale of low-denomination stock to local residents, and use this capital to construct new plants or to purchase older plants and renovate them for new occupants. This type of program has been used successfully by a number of New England communities. Seven local development corporations in New England have constructed 18 new manufacturing plants. Twelve community corporations have taken over 148 idle industrial buildings. These 166 plants employ 22,070 persons. An industrial foundation in Bangor could provide the active program to attract new industries.

EFFECT ON THE POPULATION

If there is to be any significant growth in Bangor it is apparent that it must be supported by more factory jobs. The population trends in Bangor's service area do not indicate any large increases in either retail or wholesale business. Therefore, industry, the remaining major segment of the economic base, must shoulder any future basic city growth. And there is no guarantee that industry will expand if not nurtured by a “go get it” attitude.

POPULATION

CHARACTERISTICS

This brief look at Bangor's economic life and its capacity to provide jobs is a necessary background for any forecast of population growth. However, before making such a forecast it would be wise to discover some of the characteristics and trends in the population. Not only do they have some value in themselves but they may also provide some clues to the future size of Bangor. The following are the more important characteristics of Bangor's population.

TOTAL POPULATION

Between 1840 and 1950 the total population of Aroostook, Hancock, Penobscot, Piscataquis, Waldo and Washington Counties has increased from 192,404 persons to 311,159 persons, an average increase of about 11,000 persons each decade. Over the same period Bangor's population has increased from 8,627 to 31,473, an average increase of about 2,000 each decade.

AGE AND SEX

Figure 5 shows that the population of Maine is “growing older”: the proportion of old people to

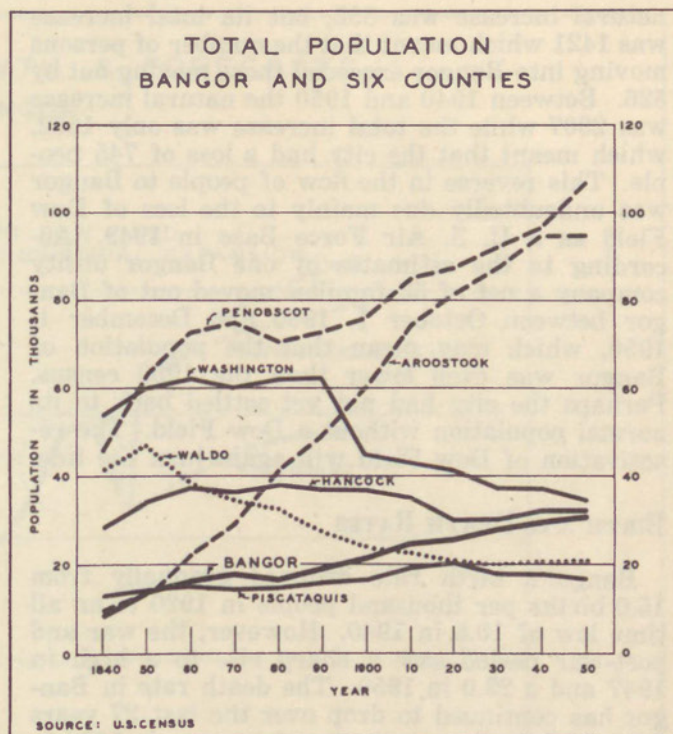


Figure 5.

the total population has increased since 1870. At least this trend followed through 1940. Statistics for the 1950 population will probably show increases in the child age groups because of the high war and post-war birth rates. The general aging population trend is due to the increasing life span, the decrease in the normal birth rate, and perhaps because of the out-migration of young people from Maine who are looking for better job opportunities.

Bangor also follows this trend, but there are two differences. Because of a typically lower urban birth rate, the city has a lower proportion of persons in the young age groups than the State. Bangor also seems to hold onto its middle age groups better than the State.

There are more women than men in Bangor. Actually about equal number of males and females are born in the city, and the numbers remain equal through the 10-14 years age group, but the remaining age groups show more women than men. Part of the cause of this excess women over men is due to the higher death rate among men; part is due to the educational and job opportunities for women in Bangor, which results in a migration of single women to the city.

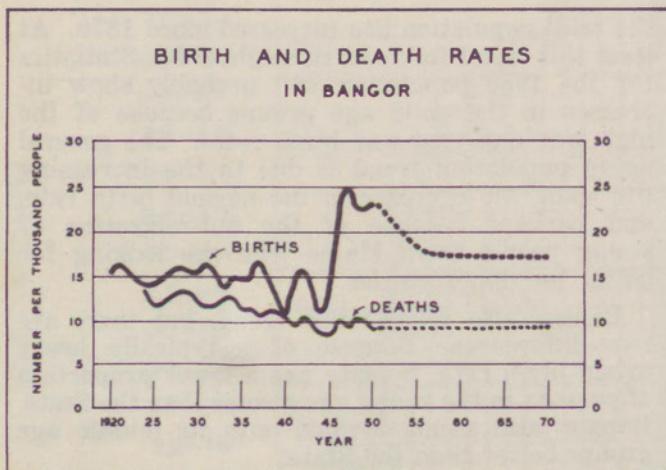
MIGRATION

This leads into the question of whether Bangor's modest population increases are due to natural increase (births over deaths) or to immigration. Between 1930 and 1940 Bangor's

natural increase was 895, but its total increase was 1421 which meant that the number of persons moving into Bangor exceeded those moving out by 526. Between 1940 and 1950 the natural increase was 2307 while the total increase was only 1562, which meant that the city had a loss of 745 people. This reverse in the flow of people to Bangor was undoubtedly due mainly to the loss of Dow Field as a U. S. Air Force Base in 1949. According to the estimates of one Bangor utility company a net of 53 families moved out of Bangor between October 1, 1950 and December 1, 1950, which may mean that the population of Bangor was even lower than the 1950 census. Perhaps the city had not yet settled back to its normal population without a Dow Field. The reactivation of Dow Field will again turn the tide.

BIRTH AND DEATH RATES

Bangor's birth rate dropped gradually from 15.0 births per thousand people in 1920 to an all time low of 10.5 in 1940. However, the war and post-war period saw a sharp rise to a high in 1947 and a 23.0 in 1950. The death rate in Bangor has continued to drop over the last 27 years from 13.3 deaths per thousand persons in 1924 to 8.9 in 1950.



FAMILY SIZE

Figure 6.

The average size of a family was 4.19 persons in 1930 and 4.02 persons in 1940. 1950 census statistics are expected to show a decrease over the 1940 size.

FORECASTS

One of the most important phases of a population study is an estimation of the size of the future population. It is also one of the most difficult and evasive problems, especially for a small city such as Bangor. The population forecaster must support his estimates with certain

assumptions which are in themselves "calculated" estimates, and therefore subject to unforeseen changes. For this reason two or three estimates based on different sets of supporting assumptions are often prepared. Three sets of estimates have been prepared for Bangor: (1) estimates based on the normal trend with Dow Field inactive as a base, (2) the first estimates plus increases due to the reactivation of Dow Field as an active Air Force base, (3) the second estimates plus increases due to the possible expansion of industry. Figure 7 shows a line graph of these three estimates.

1) NORMAL TREND

In making a forecast for the "normal" growth for Bangor the following conditions and trends were assumed.

- That the birth rate will gradually recede from the 23.0 births per thousand persons in 1950 to an estimated normal of 17.0 by 1956, which is still above the pre-war level.
- That the death rate will continue at the present average level of 10.0 deaths per thousand persons.
- That the population of Bangor's six-county region will continue to make only small population gains.
- That job opportunities in Bangor will continue to come largely from the retail, service, and wholesale businesses. There will be no substantial increases.
- That there will be no net in-migration to Bangor.

Based on these assumptions the following estimates of future population are made:

- In 1960 the population of Bangor is expected to reach 33,500. The increase will be almost entirely represented by increases in the lower age groups.
- By 1970 the population will have reached approximately 34,500. Again the increases will be mostly in the lower age groups.

Of course these estimates become less reliable as their distance in the future becomes greater.

2) DOW FIELD AS AN ACTIVE AIR FORCE BASE

At this writing Dow Field has been reactivated as a U. S. Air Force Base. It is estimated that Dow Field under full operation could add 5,000 persons to Bangor's total normal population in Air Force and civilian personnel, supporting workers in Bangor, and their respective families. 5,000 persons added to the first estimates gives:

- 1960—a population of 38,500
- 1970—a population of 39,500

POPULATION GROWTH & FORECASTS IN BANGOR

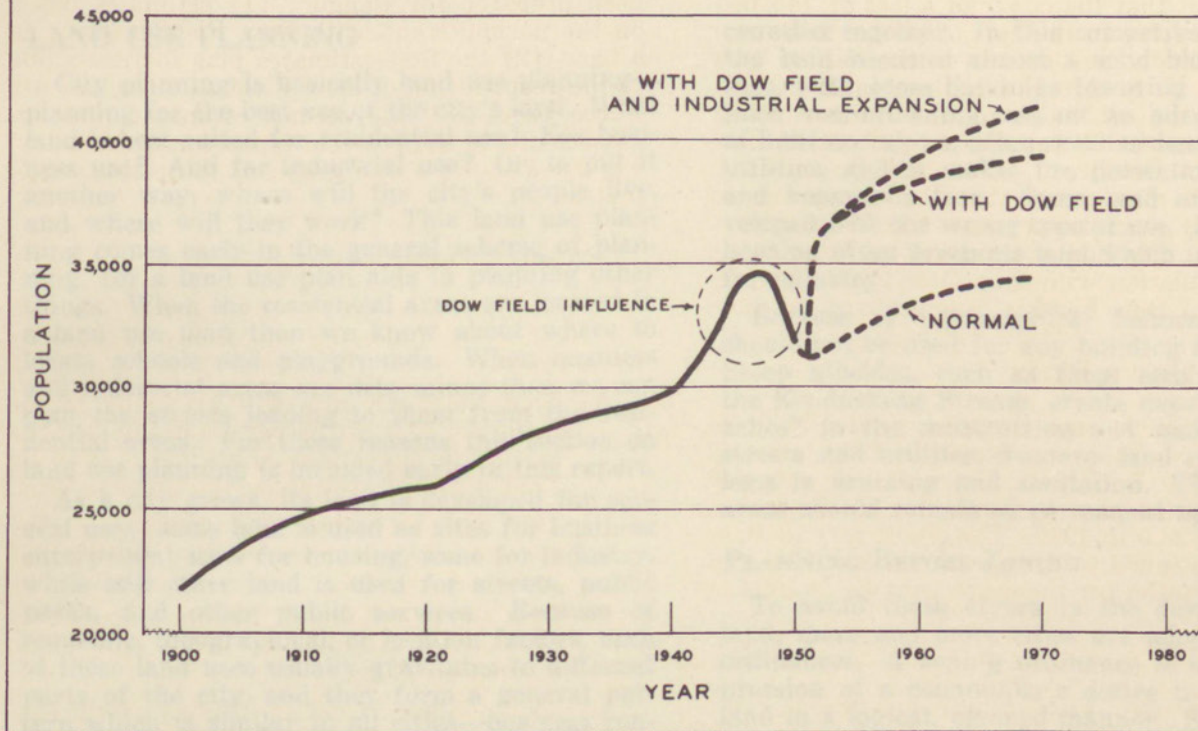


Figure 7.

3) INDUSTRIAL EXPANSION

An estimate which includes the effects of industrial growth is extremely hazy because very broad assumptions must be made. However such an estimate does have some value if only to indicate the possible effects of new or expanded industry on the total population.

The assumptions made for Bangor are:

- A) That new or expanded industry will provide 200 new jobs each decade between 1950 and 1970.
- B) That each job in industry accounts for approximately 5 persons in the general population.

Under these conditions new industry could account for an additional 1,000 population in each decade. These estimates added to the second estimates give:

- A) 1960—39,500
- B) 1970—41,500

It should be stated again, that the estimates are based on certain assumptions, anyone of which may be less valid in the future. For instance, if the birth rate does not follow the estimated course, the total population will be

affected. No mention has been made of the possibility of a war or an extremely warm "cold" war which would effect the total population.

Population estimates at best are "risky", and they depend upon many "ifs". Therefore they need frequent revision to keep them up with changing conditions.

SUMMARY

Bangor's economic future will dictate its population growth. At the present time it looks as though this future, as in the past, will be predominantly one of selling and distributing goods and services to the people of northern and eastern Maine. The buying power of this six-county market will probably not increase enough to reflect any significant increases in Bangor's retail and wholesale business. Translated into terms of population growth this economic future means that the size of Bangor's population is reaching the leveling off point, except for temporary bulges due to the high birth rates and except for the unknown situation at Dow Field.

However, the whole situation may change. If Bangor can overcome some of its industrial deficiencies, push its assets, and attract new industries then the population would increase correspondingly.

CHAPTER III.

LAND USE

LAND USE PLANNING

City planning is basically land use planning—planning for the best use of the city's land. What land is best suited for residential use? For business use? And for industrial use? Or, to put it another way, where will the city's people live, and where will they work? This land use planning comes early in the general scheme of planning, for a land use plan aids in planning other things. When the residential areas are located in a land use plan then we know about where to locate schools and playgrounds. When business and industrial areas are determined then we can plan the streets leading to them from the residential areas. For these reasons this section on land use planning is included early in this report.

As a city grows, its land is developed for several uses; some land is used as sites for business enterprises; some for housing, some for industry, while still other land is used for streets, public parks, and other public services. Because of economic, topographical, or location factors, each of these land uses usually gravitates to different parts of the city, and they form a general pattern which is similar in all cities—business concentrates at the center, residences extend away from the center with small local businesses close by, while industry clusters along rail lines or waterways.

GROWING PAINS

However, the process of city growth is not without growing pains. Without advance planning and regulation, sore spots appear, where one type of use grates against opposite, conflicting types of use. Businesses and industries often intrude into residential neighborhoods and destroy or seriously impair their value as good home environments. As an extreme example of this harmful mixing of land uses, in one residential section of Bangor, within an area of several blocks, there are the following: 41 single family houses, 30 two family houses, 6 three family houses, 15 apartment houses, 21 retail stores, for the most part in buildings which include apartments, 1 wholesale business and 3 industries, including junk yards. The result of this "crazy quilt" pattern of land development is obvious—the home environment is anything but decent, the neighborhood is anything but attractive; one use is detrimental to the other.

Other mistakes are made in the unrestrained, haphazard development of the city's land. Some land is over-developed. As the value of urban land pyramids, more and larger buildings are

crowded together. In this competition for space, the land becomes almost a solid block of buildings, with some buildings towering over others. Such over-crowding cuts off an adequate supply of light and air; it often over-burdens streets and utilities, and it makes fire protection a difficult and hazardous task. Some land areas are developed with the wrong type of use. For example, housing often preempts land which is best suited for industry.

Because of topographical factors some land should not be used for any building development. Steep hillsides, such as those sloping down to the Kenduskeag Stream, create expensive "head-aches" in the construction and maintenance of streets and utilities. Swampy land creates problems in draining and sanitation. These difficult areas should remain as permanent open space.

PLANNING BEFORE ZONING

To avoid these errors in the development of land, more and more cities are adopting zoning ordinances. A zoning ordinance is the legal expression of a community's desire to develop its land in a logical, planned manner. Specifically a zoning ordinance regulates the use of land, the density of its use, the height and bulk of buildings, and the number of families per acre.

However, the first step towards a zoning ordinance should be a land use plan, developed as part of a master plan. Without planning, particularly a land use plan, the zoning ordinance rests on a precarious foundation. The purpose of this land use plan is to designate the best future use of land according to its physical characteristics, its location, its existing use, and the needs of the community. In forming the plan several factors must be considered; the economic base of the city, the physical character of the land, the street system, and the utilities. These have all been considered in the Planning Board's studies as separate parts of the Master Plan. Another important factor is the existing pattern of land use of the city. Existing buildings and other uses constitute one of its most valuable assets in building the city of the future.

A city which develops without land use planning could be compared to a garden which is planted by scattering a mixture of corn, squash, wheat, and beet seeds. In both cases the confused growth does not produce the best results. Everything has its proper place and its own requirements for healthy growth. The land use plan locates the proper place for each of the several types of land uses.

EXISTING LAND USE

THE GENERAL PATTERN

The first step in designing a land use plan for Bangor was to survey the existing land uses. Using the records of the City Assessors' office and other sources, a large scale Land Use Map of the urban area was drawn which designated by color the use of each lot in the city. This Land Use Map provides the essential information to obtain a detailed picture of how the community uses its land.

The Bangor land use pattern is generally similar to the typical pattern of all American cities. Business is concentrated in a central district, and land is less intensively utilized as the distance away from this business district becomes greater. Surrounding the business district is a congested belt of wholesale warehouses, small factories, and dilapidated dwellings. Next is an area built up with a number of apartment buildings and large mansions. From this area to the edge of the urban part of Bangor the land is developed for the most part with single family dwellings.

Of course there are several variations from this diagramatic description. As Bangor has expanded, business, particularly filling stations, has gradually mixed with the older residences along the main traffic arteries, such as Main, Hammond and State Streets. Neighborhood stores have become scattered throughout residential areas. Industry, which has always been concentrated toward the center of the city, has had to find new space by locating outside the urban district on vacant or farmlands. As is the case of most of the smaller cities of New England large areas of farm and forest land are included within Bangor's city limits.

PROPORTIONS OF LAND IN DIFFERENT USES

An analysis and comparison of the amounts of land in the different types of uses gives a valuable insight into the land requirements of the city. The following table shows the proportion of each type of land use to the total urban developed area of Bangor. Bangor's total land area is about 21,056 acres. Its developed urban area occupies only 17% of this.

<i>Land Use Classification</i>	<i>Developed Urban Area In Acres—1949</i>	<i>Percent of Developed Urban Area</i>
Single family dwellings	724	20.6
Two family dwellings	153	4.3
Three family dwellings	26	0.8
Apartment, hotel, lodging houses	62	1.8
Retail business	47	1.3
Wholesale, warehouses	32	0.9
Industry	64	1.8
Railroad	94	2.7

Parks and Recreation	111	3.1
Cemetery	295	8.3
Airport	1393	39.5
Church	11	0.1
School	55	1.6
Other public and semi-public*	466	13.2
Total	3533 acres	100.0%

*Semi-public includes hospitals, institutions, clubs, private schools, fraternal organizations, and lodge halls.

COMPARISON WITH OTHER CITIES

How do these proportions compare with those of other cities of similar size in the United States? Such a comparison is useful in pointing out differences, and in evaluating these differences for future land requirements. Figure 8 shows this comparison and reveals several differences between Bangor and other cities:

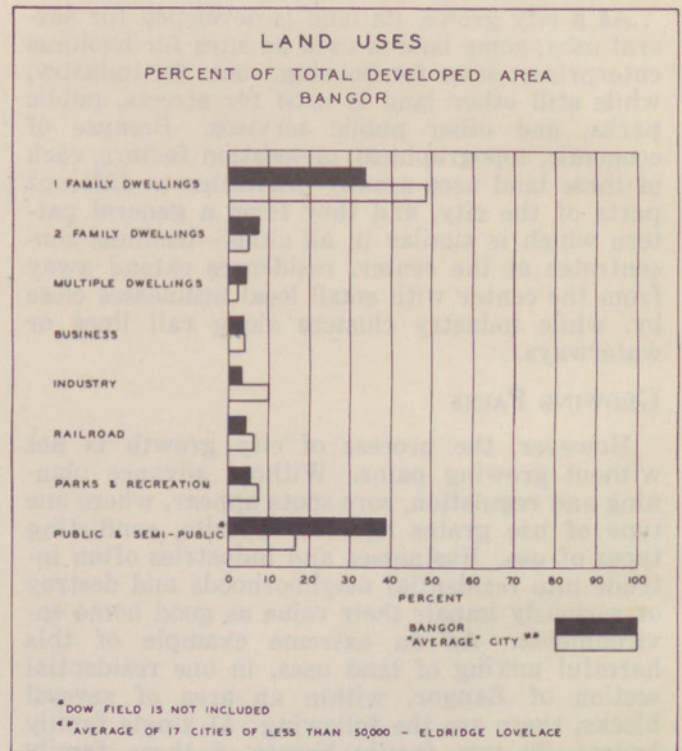
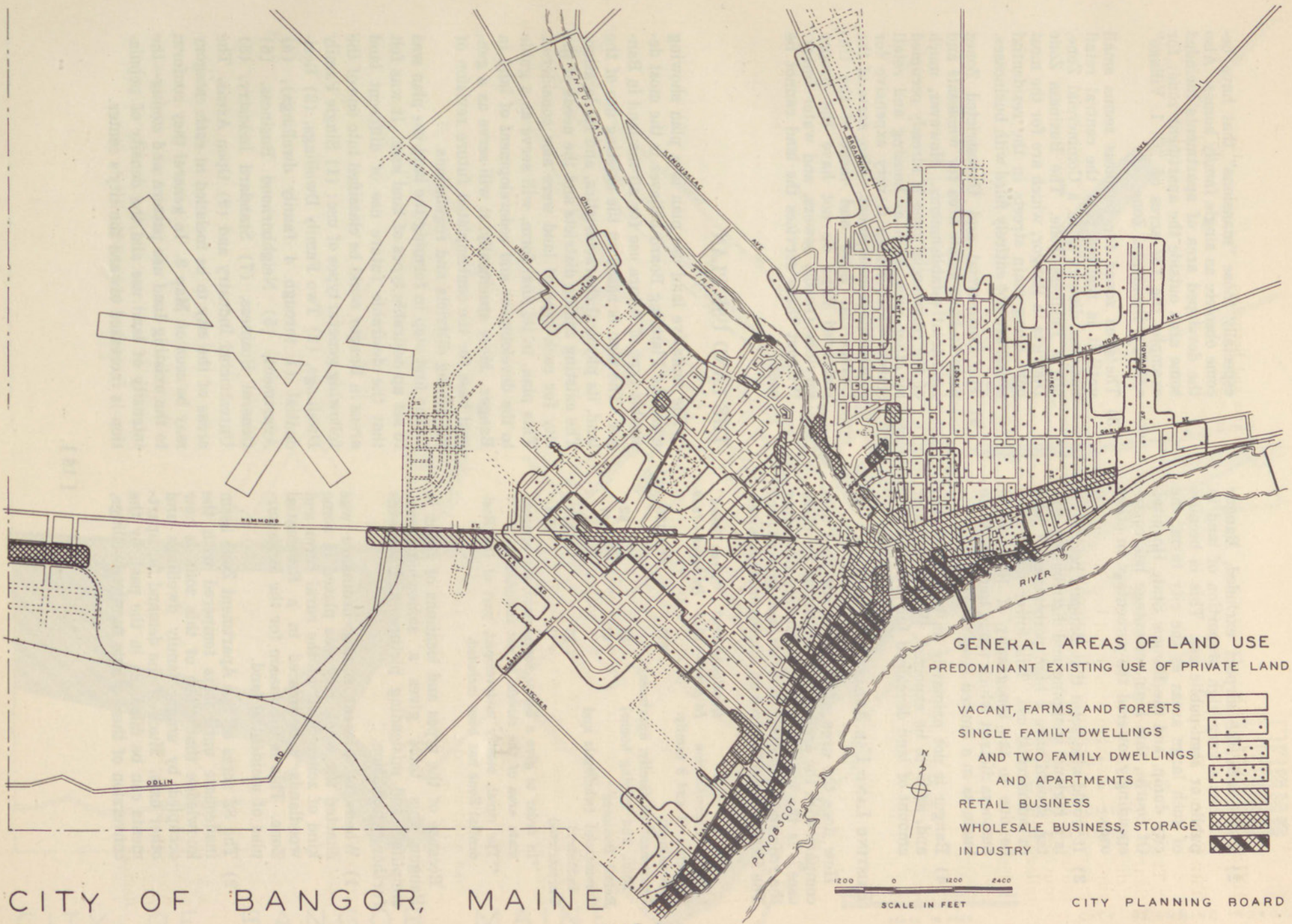


Figure 8.

- 1) The percentage of land used for single family dwellings is somewhat lower than the other cities, which seems strange when it is considered that Bangor has an almost unlimited supply of land suitable for residential development. This lower percentage is probably due to the small size of the average residential lot in Bangor, and to the higher percentage of two-family dwellings.



- 2) Even with the airport excluded, Bangor still has a very high proportion of land in public or semi-public use. This is because of such large areas as the city farm, the city dump, and the Bangor State Hospital. Of course, this high percentage has correspondingly lowered the percentage in other uses.
- 3) It would also seem that Bangor, because it is a regional shopping and distributing center, should have a high percentage of land in commercial use. This lower figure may be due to the topography of the central business district which tends to concentrate business in a limited level area.*
- 4) Bangor is not primarily an industrial city, and, as is to be expected, there is a lesser amount of land developed for industry.

EXISTING LAND USE AREAS AND ZONES

How does the area of the different land uses compare with the area of the land zoned for these uses? Is the present zoning ordinance providing the required amount of land for each type of use? The following table gives an approximate answer.

<i>Land Use Classification</i>	<i>Developed Area In Acres—1949</i>	<i>*Area Zoned In Acres—1949</i>
Residence (1 and 2 family dwellings)	877	**17,170
Apartment (3 family, apartment, hotel, and lodging house)	89	82
Retail Business	47	47
Commercial (wholesale and industry)	95	325
Unrestricted	1	273

*In order to give a better comparison, the approximate area of the streets is not included.

**The rural, mostly undeveloped, part of the Residential Zone has been included.

Because of the types and locations of zones in Bangor this table gives a somewhat oversimplified and misleading picture, and it needs further explanation.

- 1) When the present zoning ordinance was enacted the whole city was placed in some kind of zone. Most of the rural farm and woodlands were placed in a Residential Zone. This is the reason for the large surplus of residential land.
- 2) The 82 acres of the Apartment Zone seem inadequate until it is tempered with the knowledge that much of this zone is now occupied by single family dwellings and other uses. Much of the demand for apartments can be filled, as in the past, by the conversion of these single family dwellings,

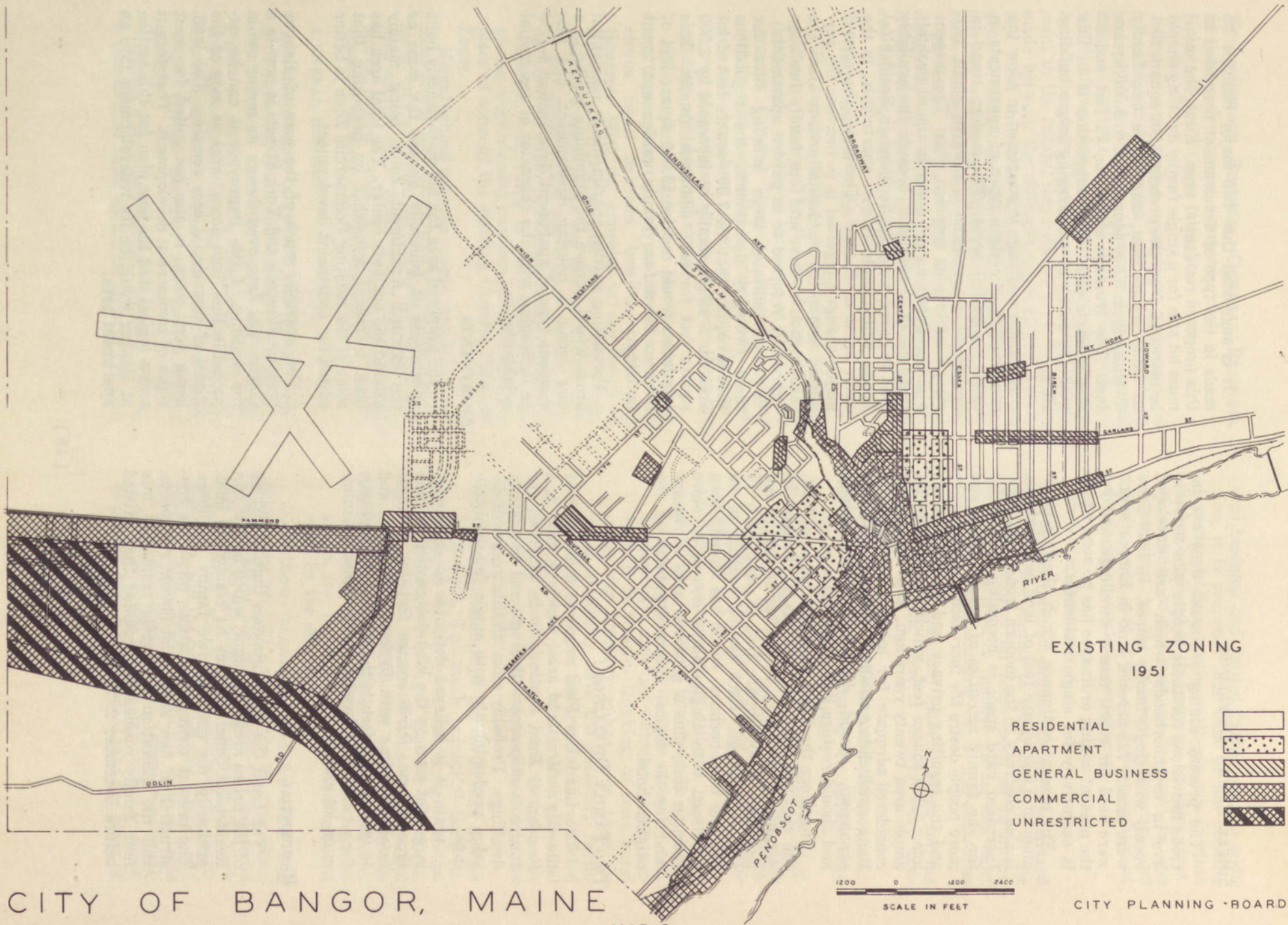
especially those "mansions" that have become obsolete as single family homes. Also the developed area of apartments included some area outside the apartment zone; for example, the 157 acres of "G. I. Village" are in a Residential Zone.

- 3) The area zoned for business seems small until it is realized that the central retail business district is in a Commercial Zone, not a Business Zone. The Business Zone Districts in Bangor, which are for the most part along main streets in the residential areas, are not entirely filled with businesses.
- 4) The Commercial and Unrestricted Zones seem to have ample area for wholesale and industrial establishments. However, much of the commercial zone is already occupied by other uses, such as housing and retail stores, which makes it very expensive for commercial development. Also, some of the Commercial Zone and most of the Unrestricted Zone do not have the proper services (roads, sewers, and water lines). Without these services the land cannot be used.

THE LAND USE PLAN

The tentative land use plan is a plan showing what the Planning Board believes is the most desirable type of future use for all the land in Bangor. The plan is based on the existing use of the land, its physical characteristics, and its location. The existing zoning districts and the needs of the city for each type of land were also considered. This plan, in its final form, will serve as a guide to the development and redevelopment of land in Bangor. More specifically, it will serve as a general base for the contemplated future revision of the zoning districts and regulations.

The first step in forming the land use plan was to set up desirable types of land uses. It was felt that the desirable future use of different land areas in Bangor could be classified into one of the following general types of use: (1) Single Family Dwellings, (2) Two Family Dwellings, (3) Residential (1 through 4 family dwellings), (4) Apartment, (5) Neighborhood Business, (6) General Business, (7) Standard Industry, (8) Unrestricted Industry and (9) Open Areas. The areas of the city to be included in each category may be seen on Map 3. In general they conform to the existing land use pattern and zoning—the intensity of land use and the density of population is increased toward the city's center.



SINGLE FAMILY DWELLINGS

The present zoning ordinance does not include provisions for those people who desire to live in neighborhoods which are developed openly with single family homes. In 1949 there were almost 725 acres of land in Bangor which were used for single family dwellings, and yet the present zoning ordinance has no zone which is exclusively for single residences.

The present ordinance, which allows a minimum of 5,000 square feet of land per dwelling, is also contrary to the modern trend in lot size. Increased yard space is becoming a necessity for the family activities of today. More and more people desire the increased "living" space and the resulting privacy and safety of large lots. 5,000 square feet, which was thought an ample area twenty years ago, is nowadays not considered adequate for modern development. Bangor, which has an almost unlimited area for expansion, should discourage overcrowding, and should require large building lots.

Therefore the Land Use Plan proposes that, for the present, four sections of Bangor be designated for single residences on lots of not less than 7,500 square feet in area with 75 feet of frontage. Each section consists of an existing neighborhood, which has already been developed with single family houses on more spacious lots, plus a generous area of vacant land for the logical future expansion of the neighborhood.

TWO FAMILY DWELLINGS

The Land Use Plan proposes that most of the city's rural land area, which is now in a Residential Zone, continue to be reserved for future development with single and two family dwellings. Probably most of this area will develop predominantly with single family dwellings.

Again it is believed desirable to encourage larger lot sizes on the land designated for this type of use. 7,500 square feet for a single family dwelling with 75 feet of frontage, and 10,000 square feet with 100 feet of frontage for a two family dwelling are proposed as minimum lot areas.

RESIDENTIAL

The Land Use Plan proposes that almost all of the urban area of Bangor, which is now in a Residential Zone, continue as residential land, primarily for one and two family dwellings. The present zoning regulations allow the construction of new single and double residences, and the alteration of double residences into four family residences, provided they existed before December 2, 1940.

It is suggested that two major changes be made in the type of development permitted in this proposed residential area. First, the minimum lot size for a single family dwelling should be increased from the present 5,000 square feet to 7,500 square feet, and for a two family dwelling from 5,000 square feet to 9,000 square feet. The frontage should be 75 feet and 90 feet in each case. This suggestion is in line with the policy of encouraging larger building sites.

Secondly, a change is suggested to allow the construction of certain types of apartments in these residential areas. The modern trend in apartment construction is towards small, two story buildings on spacious sites. The present zoning regulations and districts almost prohibit this type of construction because the available land required can only be found in Residential Zones, which prohibit new apartments, in the outer areas of Bangor. Therefore, the second major change suggested is to increase the permitted uses in the residential area to allow the construction of three and four family dwellings (generally referred to as garden apartments). To assure suitably large building sites for these two-story apartments, the regulations should require that the 7,500 square feet of lot area for a single family be increased by 1,500 square feet for each additional family. This regulation would require 12,000 square feet of lot area for a four family garden apartment building.

Permitting garden apartments in residential areas would remove the stumbling blocks to a new trend in housing development, and this spacious type of apartment development would be in keeping with the character of residential neighborhoods.

APARTMENTS

The proposed area for the more densely built apartments is generally located the same as the existing Apartment Zone, being mainly around the business center. The total area has been increased somewhat by proposing that some of the existing Commercial Zone is better suited for apartment development.

For example, much of the area of Bangor between Hancock and York Streets is now in a Commercial Zone even though its major use is for housing. Little improvement can be expected in this "run down" area as long as the threat of commercial uses remains. The land, being very steep, is also not suited for most types of commercial development. Therefore it seems logical that the best plan for this section of Bangor would be its redevelopment into an apartment area.

NEIGHBORHOOD BUSINESS, GENERAL BUSINESS, STANDARD INDUSTRY, UNRESTRICTED INDUSTRY, AND OPEN AREAS

The present zoning regulations and zones do not distinguish between neighborhood business and city-wide business. Also, the present central business district is zoned for commercial use which allows almost all types of manufacturing. In order to assure the most advantageous development in the future, there should be a distinction made between the different types of retail uses, and most industries should be separated from general businesses. Moreover, the effect on the city, as well as on individual industries, will be more beneficial if heavy industries are segregated.

Therefore, the Land Use Plan proposes four categories of business and industrial land: Neighborhood Business, General Business, Standard Industry, and Unrestricted Industry.

NEIGHBORHOOD BUSINESS

The location of these neighborhood business areas, as proposed by the Land Use Plan, in most cases, are almost the same as some of the present General Business Zones—on major streets near residential neighborhoods. A few new areas have been added, usually at the intersection of important streets, or where there are existing neighborhood stores.

The existing regulations for General Business Zones permit such types of uses as grocery stores, small bakeries, bowling alleys, and theatres. With the approval of the Board of Appeals such uses as coal yards, junk yards, and tar storage tanks are also permitted. Obviously some of the above uses are not compatible with minor business areas in residential neighborhoods, which is the reason for proposing neighborhood business areas to take the place of some of the existing General Business Zones.

Neighborhood business areas are for those local stores and shops which are intended to serve only a limited section of the residential area of the city. Small grocery stores, drug stores, barber shops, and beauty parlors are examples of these local businesses.

GENERAL BUSINESS

In the category of general business are Bangor's principal retail and wholesale businesses, which depend upon the entire city and the region to support them. Examples are retail and wholesale clothing stores, super markets, department stores, automobile sales and show rooms, storage garages, and limited repair garages.

Bangor's shopping district, which is now in a Commercial Zone, should be an area for gen-

eral business and limited to this use. In addition, it is proposed that some of the existing Commercial Zone on the northerly side of Main Street be placed in this general business class. If confined to business use it would be less detrimental to the adjacent residential and public areas, and at the same time its highest development would be encouraged.

STANDARD INDUSTRY

The uses included in the category of standard industry are similar to those included in the present Commercial Zone—such as furniture storage, warehouses, lumber yards, and most types of manufacturing of a non-obnoxious character.

In selecting standard industry areas for the Land Use Plan, several factors were considered:

- 1) The location of existing industries.
- 2) The location of existing or future residential and business areas.
- 3) The space requirements for industry. Modern industrial development requires large amounts of land for one floor buildings, loading space, and parking space for employees.
- 4) Access, and service by utilities. In order to be of use, industrial land must be accessible by good roads, and in some cases, by rail. It must have adequate water and sewer service. It is wishful thinking to zone rural areas for industry unless they have, or could eventually have the necessary facilities. For example, the original Unrestricted Zone on both sides of the Maine Central Railroad track has not been used for ten years, because it is inaccessible and is not served by utilities.
- 5) The total amount of industrial land needed in Bangor. Too much industrial land encourages an inefficient scattering of industries and the spoiling of land for other uses. Not enough industrial land creates land monopoly, and does not offer prospective developers an adequate choice of location. Therefore, in planning the land requirements for industry, an optimum amount must be the objective.

With these factors in mind the Land Use Plan proposes that some of the existing Commercial Zones are not suitable for industrial use. Mention has already been made of the York Street section, which is more suitable for apartment use, and the central business district and parts of Main Street, which are more suitable for business use exclusively. Other areas equally or better suited for industry but not so zoned at present have been found to take the place of

lands proposed to be withdrawn for such use.

On the other hand, at present there is a shortage of accessible vacant industrial land served by water and sewer lines. The Committee to study Zoning reported in 1948 that for all practical purposes Bangor is without a useable Unrestricted Zone. Also, "the Commercial Zone is confined to the business section of the town, primarily along Main Street and the river in a section in which land is the most valuable and in which the houses and buildings are most congested."

The Planning Board has already proposed, and the City Council has adopted, two new areas for Commercial Zoning, the largest of these being on Odlin Road between Hammond Street and the Maine Central tracks. The other is on outer Stillwater Avenue. In general these proposals were in line with the 1948 Zoning Committee's recommendations. All of these areas are accessible by road; and sewer and water service is either present or can eventually be provided. In addition much of the Odlin Road area is served by an existing rail spur track.

The Zoning Committee also proposed that the land west of Thatcher Street, and its possible extension to Odlin Road or Hammond Street, be zoned for industrial purposes. In accordance with the proposals of the street plan and in order to provide adequate protection for existing and prospective residential areas, the Land Use Plan modifies this proposal by suggesting that industries be confined to an area west of a proposed new highway from Main Street to Hammond Street. This plan provides the best of access to commercial sites, yet does not injure Bangor's existing and future development for residential purposes.

UNRESTRICTED INDUSTRY

In the unrestricted industrial class are those industries which may be of a dangerous or nuisance character, detrimental both to other industries and residential uses. Gasoline and oil storage tanks, and certain types of chemical manufacturing are examples of such uses. Most of these types of industries are now permitted only in an Unrestricted Zone located on both sides of the Maine Central Railroad track near the southern boundary of Bangor.

It is not likely that Bangor will ever have a substantial influx of heavy manufacturing, nevertheless certain land should be allocated for that use. The Land Use Plan retains the present Unrestricted Zone and adds part of the riverfront for unrestricted industrial use.

OPEN AREAS

A city in which the land was entirely used for building purposes, whether residences, businesses or industries, would not provide all the necessities of good and healthful living. Certain land should remain as open space for the enjoyment, relaxation and recreation of city people. These types of open areas and their proposed location in Bangor are fully explained in the parks and recreation section of the Master Plan. In addition, lands for large institutions, permanent farms, and forest surround the city in a green belt.

THE LAND USE PLAN AND FUTURE ZONING

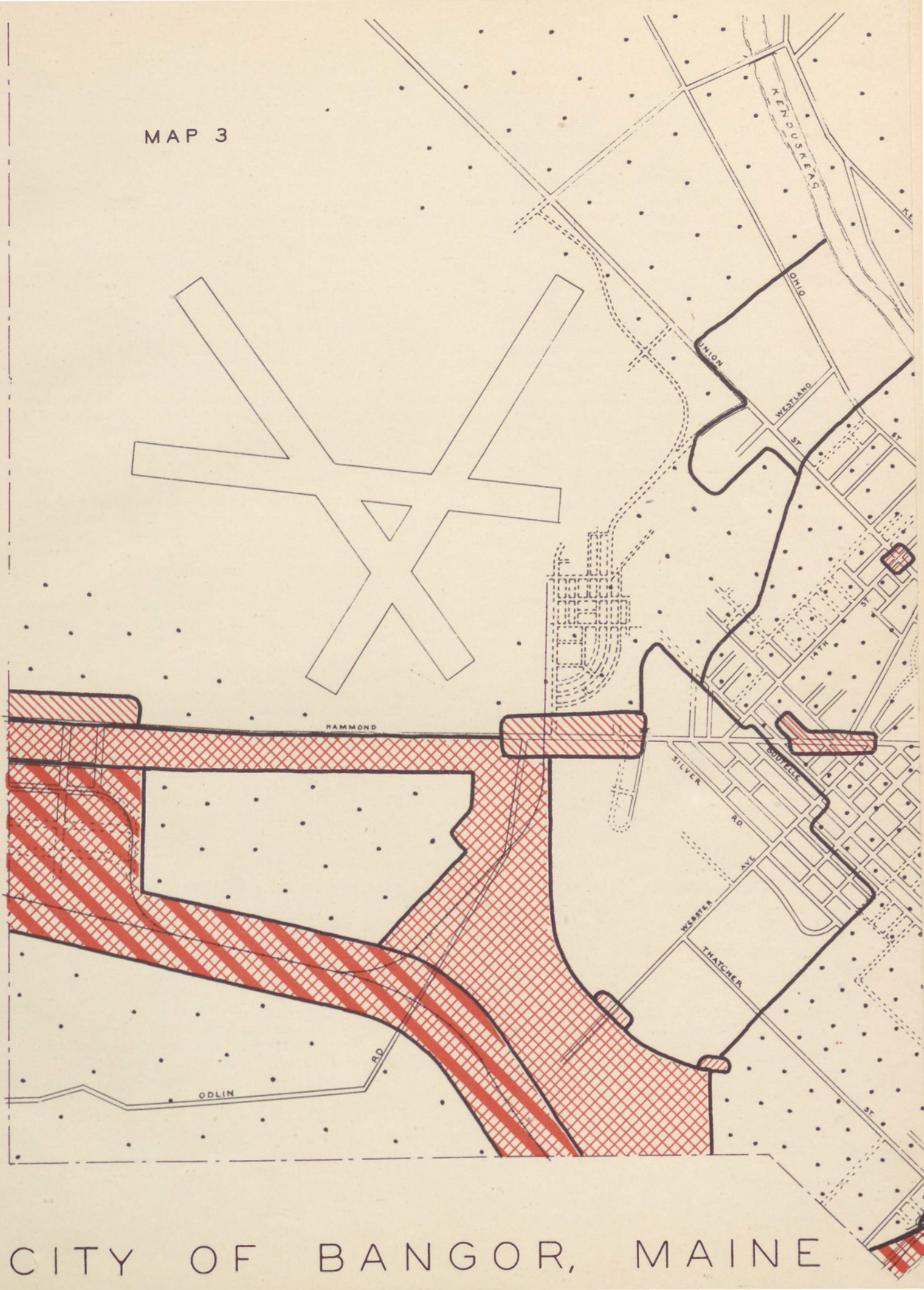
The Land Use Plan is general in scope and is primarily an aid to the Planning Board as a long term objective. A zoning plan is the official, detailed plan for regulating the use of land and the density of its use, the height and bulk of buildings, and the number of families per acre. A zoning plan, which is adopted by the City Council, effectuates the general ideas of the Land Use Plan. Zoning district boundaries are more carefully and precisely drawn, and the regulations assuring the best use of land in each district are detailed and exact. Because of practical difficulties in some small areas, owing to present mixed development or proximity to other uses, zoning districts may vary somewhat from the general Land Use Plan.

Briefly: the Land Use Plan is the first step toward planning the organization of a city into areas most suitable for working, living, and playing; a zoning plan and ordinance are its logical immediate conclusions.

It is obvious that the Land Use Plan as described in this report, differs on several points from the present zoning ordinance and its districts. If the ideas expressed here are accepted by the people of Bangor and adopted by the Planning Board, then it is evident that a complete re-zoning scheme is needed. A new zoning map should be adopted by the Planning Board and the City Council.

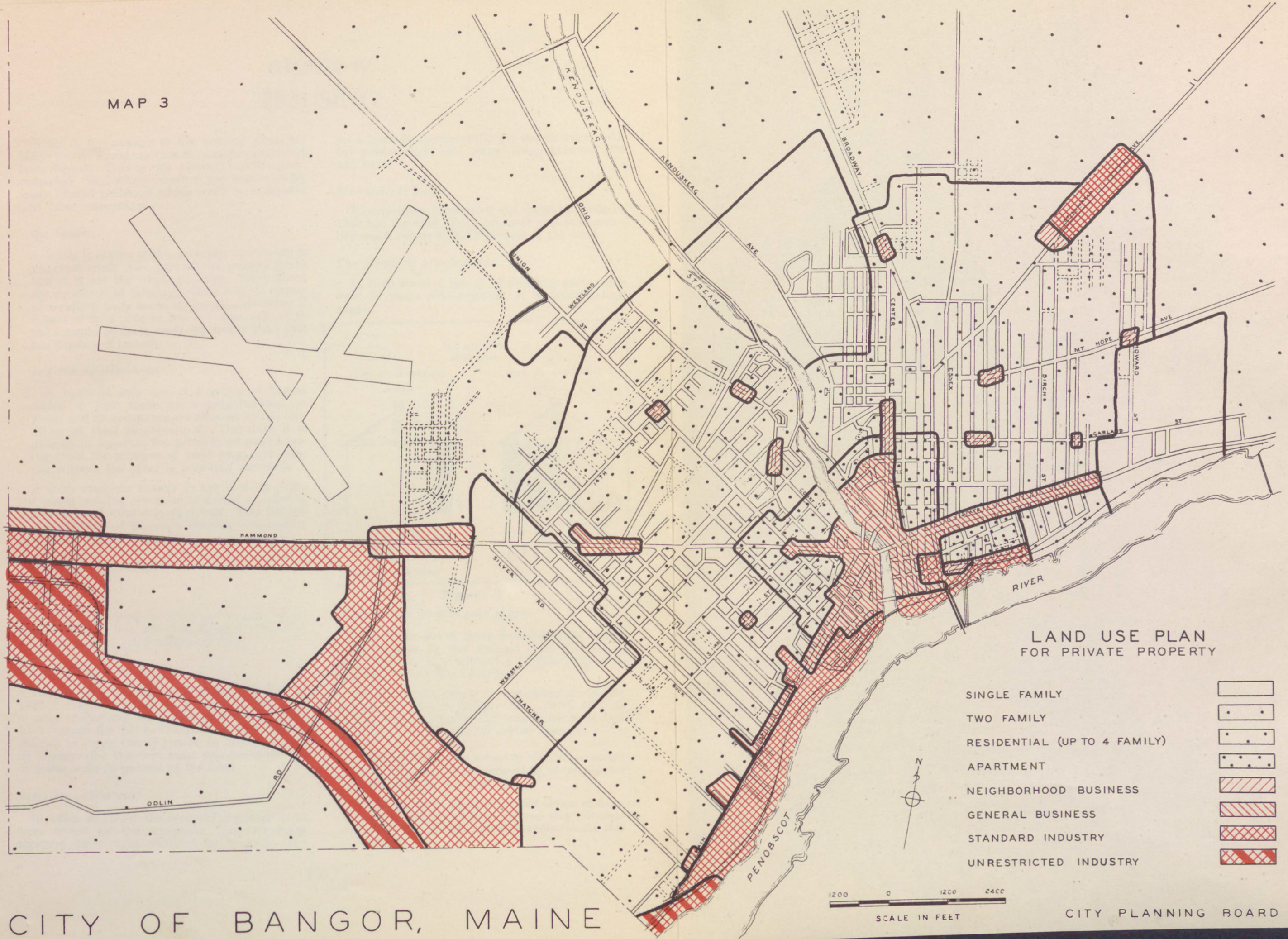
A re-writing or extensive amendments to the present ordinance is also a necessary part of the re-zoning scheme. Not only is, a re-writing necessary to support the proposed new types of zones, but it is also necessary to bring the ordinance up to date and "streamline" it. The present ordinance for the most part is based on an ordinance which was drawn up in 1928. Since its adoption in 1940 there have been 28 amendments to it. As a result the present ordinance is a "hodge podge" of revisions and amendments attached to an outmoded ordinance. To compare it to a modern ordinance is like comparing a Model "T" to a Ford "V8"

MAP 3



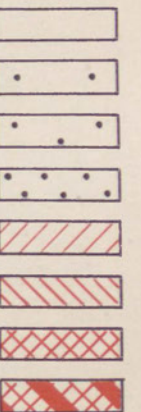
CITY OF BANGOR, MAINE

MAP 3



LAND USE PLAN
FOR PRIVATE PROPERTY

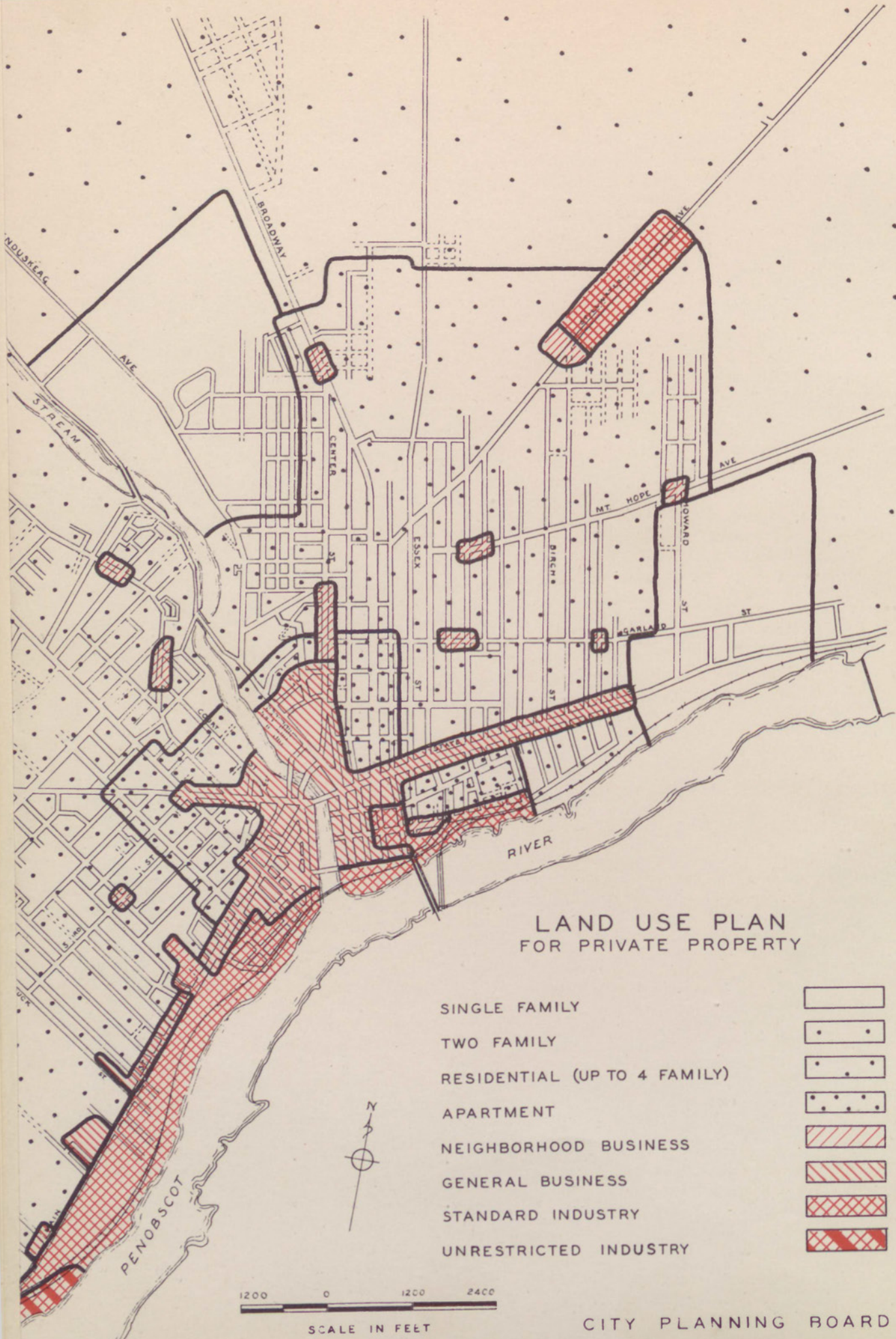
- SINGLE FAMILY
- TWO FAMILY
- RESIDENTIAL (UP TO 4 FAMILY)
- APARTMENT
- NEIGHBORHOOD BUSINESS
- GENERAL BUSINESS
- STANDARD INDUSTRY
- UNRESTRICTED INDUSTRY



1200 0 1200 2400
SCALE IN FEET

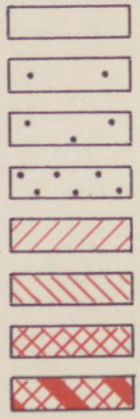
CITY PLANNING BOARD

CITY OF BANGOR, MAINE



LAND USE PLAN
FOR PRIVATE PROPERTY

- SINGLE FAMILY
- TWO FAMILY
- RESIDENTIAL (UP TO 4 FAMILY)
- APARTMENT
- NEIGHBORHOOD BUSINESS
- GENERAL BUSINESS
- STANDARD INDUSTRY
- UNRESTRICTED INDUSTRY



SCALE IN FEET

CITY PLANNING BOARD

CHAPTER IV.

HOUSING

What is the answer to the housing problem? Many people would say that the answer is to build more houses. This is one answer, but it's oversimplified. The whole housing problem includes many related problems which could be separated into those concerning—

the house

While it is true that a shortage of housing is the most easily seen part of the housing problem it is not the whole problem. What about the condition of housing? Does a large supply of dwelling units solve the housing problem if a part of it is unfit to live in? Any answer to the housing problem must dig deeper than just the number of houses.

and the neighborhood

A house is only one of a group of houses which in turn make up a neighborhood. A house and its occupants are effected by the condition of their neighborhood. Therefore it is difficult to separate the problem of good housing from the problem of good neighborhoods; one without the other is only half complete.

A more complete answer to the housing problem might be—the provision of decent housing in desirable residential neighborhoods. This answer is the objective of Bangor's Housing Program, a part of the Master Plan.

EXISTING HOUSING

How many?

In 1950, according to the U. S. Census, there were 8,883 dwelling units* in Bangor. This was a net increase of 1,195 units over 1940.

Many single family homes.

Bangor is a city of single family houses, in 1940** they comprised 53 percent of the total number of dwelling units. New construction since 1940, except for "G. I. Village," has been almost entirely in single family homes. In 1940 two family homes were the next most predominant type of house, with 26 percent of the total.

Some buy, some rent.

In 1940, 45.1% of the occupied dwelling units were owned by the occupants. The remaining occupied units were occupied by tenants, who

paid from \$5 to over \$100 per month rent, with the predominant rent range being between \$30 and \$39.

Six rooms to a unit.

Twenty-three percent of the dwelling units in 1940 had 6 rooms. The next most prevalent number was 5 rooms with 19 percent of the total.

The supply is growing older.

In 1940 about 4 out of 10 dwelling units were over 50 years old—evidence of a deteriorating supply.

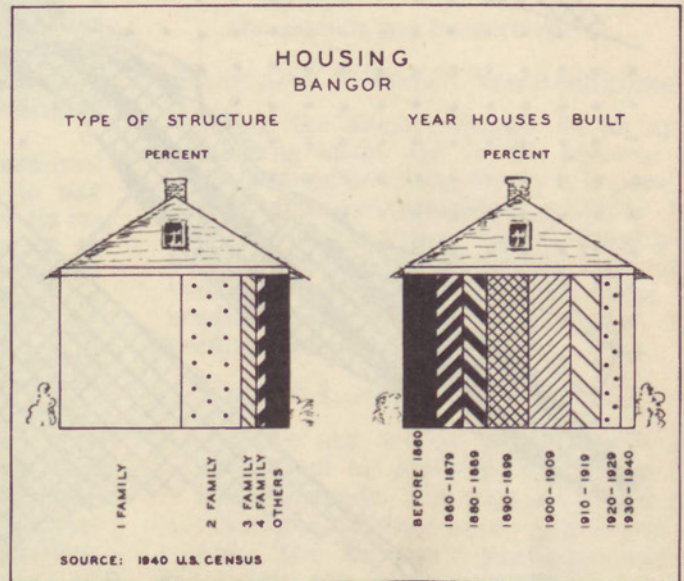


Figure 9.

Many houses were in poor shape.

In 1940 one out of three dwelling units needed major repairs, or was without a private indoor flush toilet, or was without a private bath—evidence of sub-standard housing.

The important points to remember about the existing housing in Bangor are: *much of it is getting beyond a useful age, and much of it does not meet the standards for decent housing.*

*Dwelling units were defined by the Census Bureau as the "living quarters occupied by, or intended for occupancy by, one household."

**Unfortunately, details of the 1950 Census of Housing are not yet available, however they will probably reveal the same general patterns as the 1940 Census.

DWELLING UNITS NEEDING MAJOR REPAIR
OR HAVING NO PRIVATE BATH

U. S. Census - 1940

DOW FIELD

HAMMOND

ODDIN

WEBSTER

THATCHER

MAIN

BUCK

IRAN

UNION

OHIO

VALLEY

BROADWAY

CENTER

FOREST

GARLAND

STATE

HANCOCK

RIVER

MT. HOPE

HOWARD

STILLWATER



PERCENT

- 15 And Under
- 16 - 25
- 26 - 35
- 36 - 45
- 46 And Over



SCALE ~ 1 INCH = 1/2 MILE

CITY PLANNING BOARD

BANGOR, MAINE

HOUSING SUPPLY AND DEMAND

What is the relationship between the supply and the need for housing in Bangor?

The supply of "shelter" is adequate in normal times.

In 1950 Bangor had 8,883 dwelling units. At the 1940 figure of 4.02 persons per family these units could house 35,710 people. However there were only 31,473 people in 1950. This means that either the number of persons per family had decreased since 1940 or that there were a number of vacant units in the city. Probably a combination of both is the correct answer. Apparently then, in normal times there is no shortage of housing in Bangor. Or perhaps it would be better to say that there is a surplus of some kind of "shelter" for the normal population.

Is "shelter" enough?

However, as has been mentioned before, the total supply of housing is only one side of the problem. What about the quality of the housing and the closely related question of the ability to pay for it?

The ability to pay for housing is determined by family income. A family can afford to pay only approximately a certain percentage of its income for shelter, either as monthly rent or in monthly payments for ownership. No factual statistics on family incomes in Bangor are now available. However it is known that in 1940, 2,246 dwelling units were considered sub-standard, and it may be safely assumed that most of the occupying families could afford nothing better. It is also known that in one area of poor housing in Bangor the average 1949 monthly base rent for 130 units was \$13.18 each. It is extremely unlikely that \$13.18 will pay for decent housing for all average or near average sized families, and we may again assume that the incomes of many of those families would not allow a much larger share for better housing.

Therefore, even though there is an apparent surplus of some kind of housing during normal times this does not necessarily mean that Bangor has no housing problem.

Looking into the future.

The reactivation of Dow Field as an active Air Force Base has again thrown a strain on the housing supply of the Bangor region, which will have to find housing space for 700 to 800 additional families.

If it were not for this unpredictable "off and on" activity at Dow Field, Bangor would probably never be faced with the problem of housing construction lagging behind a demand created by a rapidly expanding population. Bangor's population does not increase rapidly and the housing industry can easily keep up with it.

The problem in Bangor will continue to be that caused by the fact that many of the existing houses are over 50 years old and that in 1940 almost 1 out of 3 dwelling units was considered to be substandard.

The problem is primarily one of quality within the ability to pay, not quantity.

EXISTING NEIGHBORHOODS

NEIGHBORHOOD STANDARDS

In a good residential neighborhood—

the yards and buildings are attractively and decently maintained.

there are adequate municipal facilities, such as utilities, streets, street trees, parks, play areas, and conveniently located schools.

there isn't a mixture of several types of houses, businesses, junk yards, and factories.

the land is not overcrowded.

MEASURING BANGOR'S NEIGHBORHOODS

Using the above example as an approximate measuring stick, and in the absence of a complete detailed housing survey, it is possible to only loosely classify residential property in Bangor into one of five types: vacant areas suitable for housing; good areas of existing housing; areas of housing needing modernization; areas of housing needing rehabilitation; and areas of housing needing redevelopment.

VACANT LAND

There are several vacant areas in Bangor which will be desirable for future residential neighborhoods. The land is suitable for proper drainage, building sites, and exposure to the sun. The necessary municipal facilities and services can be provided without undue cost, and places of employment are within a reasonable distance. The area north of 14th Street, between Hammond Street and Union Street is such a vacant area of potential residential value.

GOOD AREAS OF EXISTING HOUSING

Bangor has a number of residential areas which have been developed into good neighborhoods. The houses are modern and well spaced, and proper maintenance has kept up the appearance of yards and buildings. The areas have at least a minimum of parks and other community facilities. The character of these neighborhoods has been preserved by a uniformity of land uses; no stores or other business uses have intruded into the areas. Several examples of good areas, such as the Fairmount Park section and the Little City section readily come to mind.

AREAS OF HOUSING NEEDING MODERNIZATION

Some residential areas need modernization. Most of the houses are depreciating rapidly and need painting, minor repairs, and general modernizing. Yards need picking up and bare areas grassed over or otherwise surfaced. Streets may be poorly paved and lacking good shade trees. Small businesses are creeping in, and dwellings are being cut up into too many small apartments. The area between State, Spruce, Hancock, and Birch Streets is one example of a residential area which appears to need modernization.

AREAS OF HOUSING NEEDING REHABILITATION

In practically all cities some of the older sections have broken down beyond the stage needing modernization, and need rehabilitation. Houses are often crowded together on narrow lots on land that is not suitable for intensive housing. There may be no parks or playgrounds to make up for lack of yards. The houses generally need major repairs and plumbing, and some of them, being past the stage of practical repair need to be torn down, thereby creating more light and green spaces for the rest. Some businesses and shops have made deep inroads on the residential character of many of these areas. Community facilities are few and in poor repair.

Rehabilitating such areas means taking positive steps to bring them up to minimum standards. Building regulations should be vigorously enforced to remove or close those buildings which are unfit for housing. Other buildings should be repaired and modernized. Open space, achieved through the demolition of buildings, should be preserved, in some cases for public parks or playgrounds. In such ways areas in this category can regain a satisfactory useful life for years to come. An example of such an area is the section between State, Newbury, York and Pine Streets.

AREAS OF HOUSING NEEDING REDEVELOPMENT

At the bottom of the neighborhood ladder are those areas which are suffering from acute "blight" and need redevelopment—that is, complete or almost complete clearing and rebuilding. These blighted areas are characterized by a high percentage of substandard housing in substandard surroundings. Land values are usually high and land is used intensively, with a mixture of crowded dwellings, stores, garages, and small factories. Because of the high cost of land, adequate parks and playgrounds are usually lacking.

These blighted areas constitute one of the most difficult problems in the development of

good neighborhoods. As difficult problems they call for drastic and complete solutions, and redevelopment seems usually to be most effective. By redevelopment is meant assembling the small parcels of land, the clearance of all or all but the best of the existing buildings, and preparing a new plan for the development of the whole area, perhaps including a new street system.

Does Bangor have any such areas? There are no "big city slums," with high brick tenements overcrowding block after block. However, Bangor does have areas that approach extreme blight—as an example, the area between Pine, York, Boyd, Frazier Streets, Church Lane, and the railroad. Here is some of the evidence:

- 1) In 1940 the U. S. Census found that from 50% to 55% of the dwellings in this area needed major repairs or were without a private bath.
- 2) 33% of the substandard dwellings in Bangor as listed by two Bangor Welfare Agencies, were concentrated in this comparatively small area.
- 3) From the records of the Bangor Assessors in 1949:
 - a) 65% of the dwellings had no central heating.
 - b) The average rent for 130 dwelling units out of the total of 283 units was \$13.18 per month.
 - c) Out of 202 dwelling units which lacked bathrooms or central heating, none were classified as above fair condition; 38% were classified as in fair condition; 52% were in poor condition; and 10% were in very poor condition.
- 4) The buildings cover about 38% of the land, which is not excessively high unless it is considered that in an "average" residential area in Bangor the buildings cover only about 20% of the land.
- 5) Even though there are 283 dwelling units in this area, it is zoned completely for "Commercial" use. As a consequence of this and previous lack of controls there is a haphazard development of land uses. In the area there are:
 - a) 41 single family houses
 - b) 30 two family houses
 - c) 6 three family houses
 - d) 15 four or more family houses
 - e) 21 retail businesses, for the most part in structures including dwelling units
 - f) 1 wholesale business
 - g) 3 industrial uses, including junk yards
 - h) 2 churches or synagogues
 - i) No parks, playgrounds, or school yards

- 6) There is considerable traffic on the streets bounding and entering the area, and some of the streets have excessive grades. There were 23 traffic accidents on these streets during 1948, including 7 pedestrian accidents, one of which was fatal.

From the above evidence it would seem that this area certainly is not an ideal residential neighborhood. Even though in appearance it does not completely resemble the common concept of the worst areas of large cities, it is evident that it does have the essential poor qualities for classifying it as an area needing redevelopment. It is also almost certain that this area does not yield in taxes its fair proportion of the cost of the city's government and services.

THE HOUSING PROGRAM

The brief descriptions of the existing conditions of housing and neighborhoods in Bangor points up the problem—the problem of assuring decent housing in desirable residential neighborhoods. The Housing Program provides some of the answers to, “What can we do about it?”. The following are parts of the program:

“An ounce of prevention”—Subdivision regulations

The seeds of a good neighborhood should be sown early while the area is still vacant—the future quality is largely determined by the initial type of development. The Planning Board, according to law, must recommend the plans for new land developments. In this way the Board can assure a well designed system of residential streets and the provision of at least a minimum standard of facilities for a good neighborhood. To provide standards in carrying out its work, the Board has drawn up a set of regulations (subdivision regulations) for the design and improvement of new streets. Under the statute no subdivision can be platted without municipal approval.

The best use of the land—Zoning

Much of the residential character of a neighborhood is determined by the pattern of land uses. A good neighborhood is one which is fully protected by zoning against overcrowding and unplanned uses of incompatible types. Proper zoning of vacant areas will help in preserving them for future development as good residential sections. The chief benefit of good zoning to areas of good housing will be to protect them from the inroads of blighting influences, and the best

zoning for areas of poor housing will help assure the holding of any gains made through their improvement.

Setting up standards for good housing—Codes

The Bangor Building Code covers the basic needs for regulating new construction. Under this code are regulations governing the structural safety of buildings as well as the safety from fire. Bangor has also enacted some of the necessary regulations which can be used to cause removal or remedying of unsafe housing. Because of these regulations 16 unsafe houses have been demolished, and 5 repaired, between 1946 and 1950. These regulations are good, as far as they go, and their continued vigorous enforcement will aid in the rehabilitation of substandard houses and neighborhoods.

However, the weak link is the lack of any effective regulations covering the maintenance and operation of housing to assure the health of the occupants. Baltimore, Maryland provides an example of a city which has made a strong approach to the problems of unhealthy housing and blighted neighborhoods, through the use of added regulations. The Baltimore Health Department, with the backing of a strong “Housing Code,” and the cooperation of property owners and tenants, has been quite successful in improving the appearance and living conditions of slums. Their “Rules and Regulations Governing the Hygiene of Housing” cover such items as heating, dampness, lighting and ventilation, sleeping rooms, overcrowding, water supply and sinks, toilet facilities, plumbing, rodent control, and garbage, rubbish, and ash receptacles. These Baltimore regulations serve to point out the weakness of Bangor's building and health regulations, and the need for increasing the effectiveness of regulations relating to housing.

Private Action—Civic Organizations

The cause of good housing and neighborhoods cannot succeed without active citizen participation. Civic groups such as Neighborhood Associations can take part in improving neighborhoods by:

- 1) Keeping the neighborhood at a high level of appearance.
- 2) Assisting in stimulating private action such as modernization.
- 3) Cooperating in the housing program.

Suggestions as to zoning and other regulations and any other ideas for the improvement of housing and neighborhoods will be welcomed by the Planning Board.

Provision of Municipal Facilities— The Master Plan

The adequacy and location of municipal facilities play an important part in the value and livability of housing areas. Adequate sewer and water lines must be present. Paved streets in good repair with their sidewalks and trees improve neighborhood conditions. Accessible parks and schools are necessary adjuncts for urban living.

Some of these facilities have been considered in other sections of the Master Plan. Others will be considered in other phases of planning.

"A pound of cure"—Redevelopment

Good zoning ordinances and building regulations cannot help the worst residential areas. The deeply entrenched blighted areas need a more drastic approach; a clean sweep and a fresh start is needed if any lasting improvement is to be made.

However the clearance of slums and their redevelopment as useful parts of the city are expensive propositions and the city alone will never be in a position to bear the entire costs. For this reason Congress passed the Federal Housing Act of 1949, a part of which was designed to aid cities in slum clearance.

Under Title I of this act a city which wants to get rid of an undesirable slum area may establish a local redevelopment agency. This agency may secure an advance loan from the Federal Housing and Home Finance Agency to finance surveys of its slum areas and the preparation of plans for a specific project. The funds needed to acquire, clear and prepare the land will be loaned by the Federal Government if the project is approved. The prepared land may then be sold or leased for private or public development according to the redevelopment plans. Any loss incurred will be shared $\frac{2}{3}$ by the Federal Government and $\frac{1}{3}$ by the city. The city, however may substitute donations of land or services for its share.

The State of Maine must enact permissive legislation before Federal funds will be available for redevelopment under the above process. The "Maine Housing Authorities Act" of 1949 in-

cludes no provisions for redevelopment, but it does permit public housing for those whom private enterprise will not help.

The Planning Board's part in the redevelopment process is two-fold. According to the Federal Act, a redevelopment project must conform to a general plan (Master Plan) for the development of the whole city. The Master Plan is clearly the job of the Planning Board and one of its basic objectives. The Planning Board must also have in mind those areas of the city which, in its opinion, need redevelopment, and the general pattern of proposed land uses in the redevelopment areas.

SUMMARY

The housing problem in Bangor, in normal times, is not simply a shortage of "shelter". The problem involves the condition of housing as well as the amount. And the problem is not complete unless neighborhood conditions are also included.

A housing program to attack the twofold problem for good housing in good neighborhoods involves several lines of action:

- 1) Areas to be developed for new housing must be planned according to good modern standards for residential neighborhoods.
- 2) Zoning regulations must assure suitable standards and protection for residential areas, and must be continually enforced.
- 3) Building and housing regulations, requiring minimum standards for housing, must be made strong and effective.
- 4) Civic and neighborhood groups must be encouraged to take an active part in the housing program, especially in the modernization and protection of housing and neighborhoods.
- 5) Municipal services for good residential living must be provided.
- 6) Steps should be taken to get the necessary State enabling legislation to permit slum clearance and redevelopment where and when decided upon.

CHAPTER V.

STREETS AND TRAFFIC

STREET PLANNING

WHY PLAN STREETS?

Times have changed.

In the early days of Bangor's growth, making a new street was no problem at all. Survey a couple of straight lines over any kind of land, uphill or downhill; scrape out between the lines; perhaps throw back a little gravel, and the street was ready for business. As the city grew, more streets were laid out in the same way. It was a mechanical process, and the result was a mechanical system of straight streets intersected at right angles by other straight streets. Except for a period of Spring mud, this expanding, gridiron street system provided pretty decent roadways for the surreys, buckboards, and Bangor Buggies.

Times have changed. The leisurely pace of the surrey has given way to the speed and pounding of the automobile. The old street system just isn't built for the onrush of "traffic". Streets, which are natural traffic arteries, are in many cases too narrow to carry traffic efficiently. Too many intersections cut the efficiency still further, and cause too many accidents. More accidents are caused by the slippery grades of "up and down" streets.

"NO THRU TRAFFIC" signs are ineffective—ly trying to protect neighborhoods from speeding cars and trucks, which their old street systems encourage.

The same streets are sometimes wasteful; too much street space for too little useable land area. This surplus street space means money wasted on a gravel base, a hard surface, curbs, and catch-basins. It means more money for repairing, sweeping, tarring and plowing.

Planning has the best known remedies for these ills of a sickly street system. Street planning provides these prescriptions:

- 1) *A Street Plan to serve as a long range guide to modernizing the overall street pattern.*

The plan may prescribe major operations, such as widening, for the existing street arteries, which will help relieve the congested flow of traffic. New arteries may be planned for additional traffic relief or to stop the flow of unnecessary traffic in residential parts of the city.

- 2) *The use of an Official Map by the City Council.*

In order to be effective the Street Plan must be backed up by the authority given by the State Statutes to the Official Map. The Official Map may be used to reserve land for future streets or street widening until the city is ready to undertake the projects.

- 3) *The planned addition of new streets to fill in the framework of the Street Plan.*

Before a new street is laid out by a private owner, it should be designed as a functional part of the street system—either as a traffic street, or as a service street. Before a new street is constructed it should definitely be needed for city growth; the general taxpayers should not be asked to finance new street construction and maintenance if there are existing streets "going begging". The planned addition of new streets is, by State Statutes, the responsibility of the Planning Board. The Planning Board will adopt rules and regulations (Subdivision Regulations) to aid in this responsibility.

Our horse and buggy street system needs doctoring. New streets need preventative medicine. That's why we plan streets.

THE IDEAL STREET SYSTEM

We can't wipe the slate completely clean, and start over again. For the most part Bangor's streets are here to stay, and any practical street plan cannot cling too closely to ideal solutions.

However, in drawing up a street plan, we should have in mind the objectives and design of an ideal street system. An ideal provides a goal, a yardstick to measure the value of proposed changes and additions to the old street pattern.

There are two objectives to any ideal street system:

- 1) *Heavy traffic should be confined to a few streets (Major Streets), which should provide convenient routes to all parts of the city. Major streets should be designed and constructed as "heavy duty" streets: wide rights of way, smooth curves, few intersections, easy grades and solid foundations and pavements.*

- 2) *The remaining streets (Minor Streets) should discourage non-essential traffic.* They should be designed for the best access to good building sites.

A RADIAL PATTERN OF MAJOR STREETS

A radial pattern best meets the requirements for a system of major streets. Basically, the pattern resembles a wheel. The hub is the city's business center, the spokes are radial streets, and the several rims are circumferential or "cross-town" streets. Traffic, while confined to these streets, can easily reach all sections of the city and the main highway exits. If it so desires it can bypass the bottleneck of the central business district.

MINOR STREETS

The radial pattern of major streets divides the city into segments. Within these segments the minor streets provide the access to residential or business property.

Perhaps, the word that best describes the ideal minor street system is "scrambled". Minor streets, designed to fit the land, may curve and wander; they may be narrow, even discontinuous. Scrambled streets discourage through traffic and make poor speedways. Throw away the T Square and Triangle and you have a better chance for a good minor street system.

BANGOR AND THE IDEAL

There's one obvious defect in Bangor's minor street system. The spokes of the wheel are there, but the rims are missing. Radial streets, such as Main, Hammond and State, are not connected by suitable crosstown streets. Another defect is the lack of adequate widths. Most of our major streets simply are not wide enough to handle the increasing traffic loads.

Most of the defects in our minor street system can be traced to "straight street phobia". For instance in the area between Howard Street and Grove street there are seven straight streets connecting State Street with Mount Hope Avenue. An area which could have been planned with natural, curving streets is monotonously developed with a mechanical street system. A residential area which should be protected from outside traffic is pierced by seven inviting, through streets.

Bangor like most American cities, needs extensive planning and replanning before it can match an ideal street system.

THE STREET PLAN

The tentative street plan is a long range plan for bettering Bangor's street system. The follow-

ing out of this plan will be a tremendous stride toward the ideal goal.

The proposals made by this plan may be considered under four headings: (1) New Streets, (2) Inadequate Street Widths, (3) Other Methods of Improving the Street System and (4) Parking.

NEW STREETS

Bangor's street system, which "just grew", has some missing links. These were pointed out by the ideal street system. To fill some of the gaps, the street plan proposes the following new streets:

A BY-PASS ROUTE BETWEEN HAMMOND AND MAIN STREETS

There is a need for a major traffic connection between these two radials. Without such a street, through traffic, especially trucks, is forced over residential streets. The Planning Board has chosen a route for this missing circumferential street, which offers these advantages:

It's convenient for traffic, with smooth curves and easy grades.

It avoids residential neighborhoods, and allows for their expansion.

It connects directly with Dow Field, and, by way of the Field's streets, with Union Street. It can provide access to additional commercial land.

As planned, this route would have a right-of-way width of 100 feet, which would allow space for an uninterrupted traffic roadway plus a local service road for commercial development on its southwestern side. It is also planned as a "semi-limited access highway" by having a 50 foot park strip along the northern side of the road. Such a park strip will not only limit the number of minor street intersections (and thereby the interference with traffic movement), but will be an effective buffer between the proposed commercial district and the existing residential neighborhood, including its logical expansion.

Of course, a similar by-pass route between Hammond Street and State Street would also be desirable. However, the topography, the Kenduskeag Stream, and the distance, rule out this possibility, at least in the "practical" future.

EXTENSION OF HANCOCK STREET TO STATE STREET

The extension of Hancock Street to State Street in a smooth curve, at almost level grades, would complete the route around the business center from Main to State Streets.

A BETTER ROUTE

DOW FIELD



ODLIN

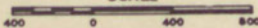
CITY FARM BOUNDARY

CITY FARM BOUNDARY

A SKETCH OF A
BY-PASS DEVELOPMENT
BANGOR, MAINE

CITY PLANNING BOARD

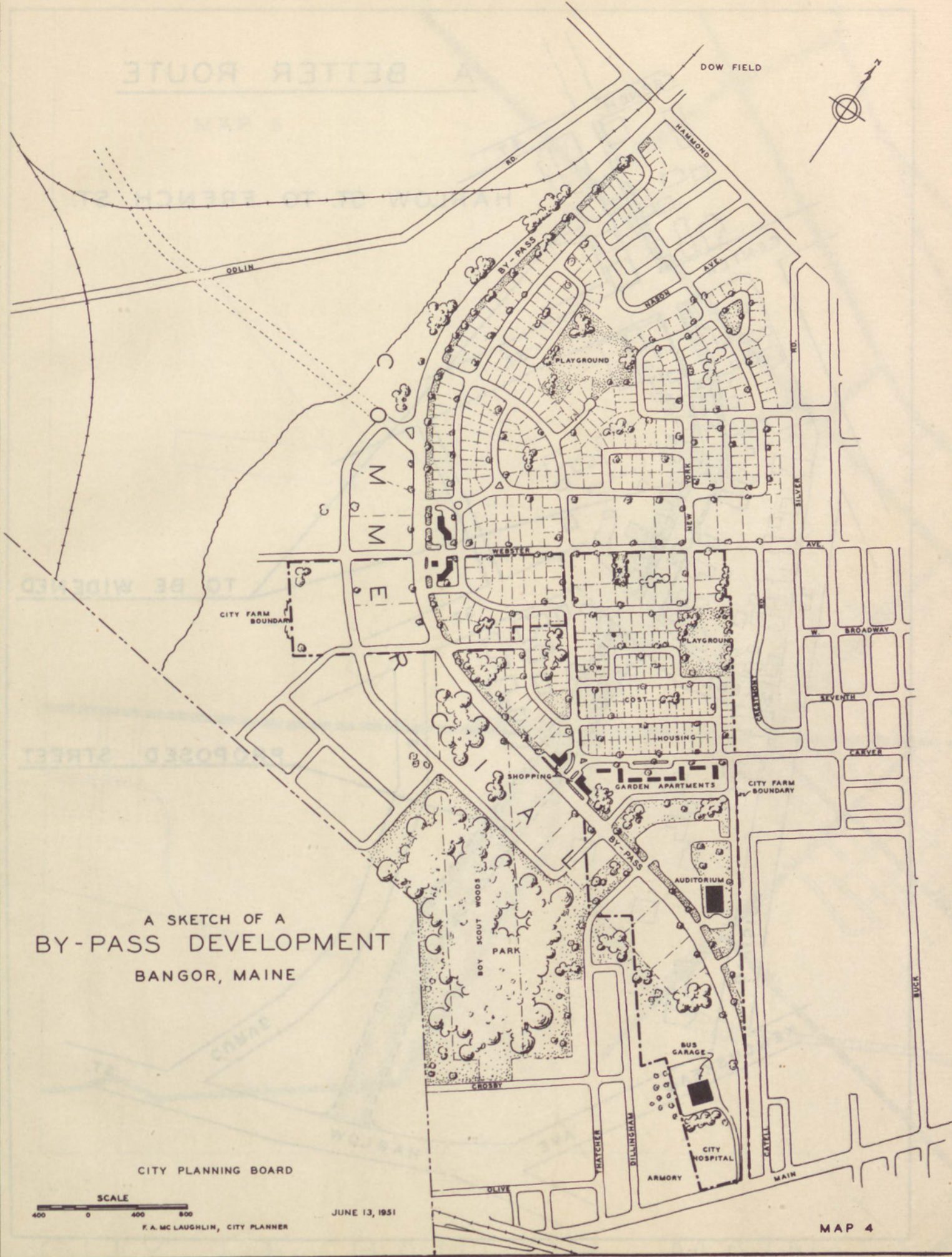
SCALE



F. A. MC LAUGHLIN, CITY PLANNER

JUNE 13, 1951

MAP 4

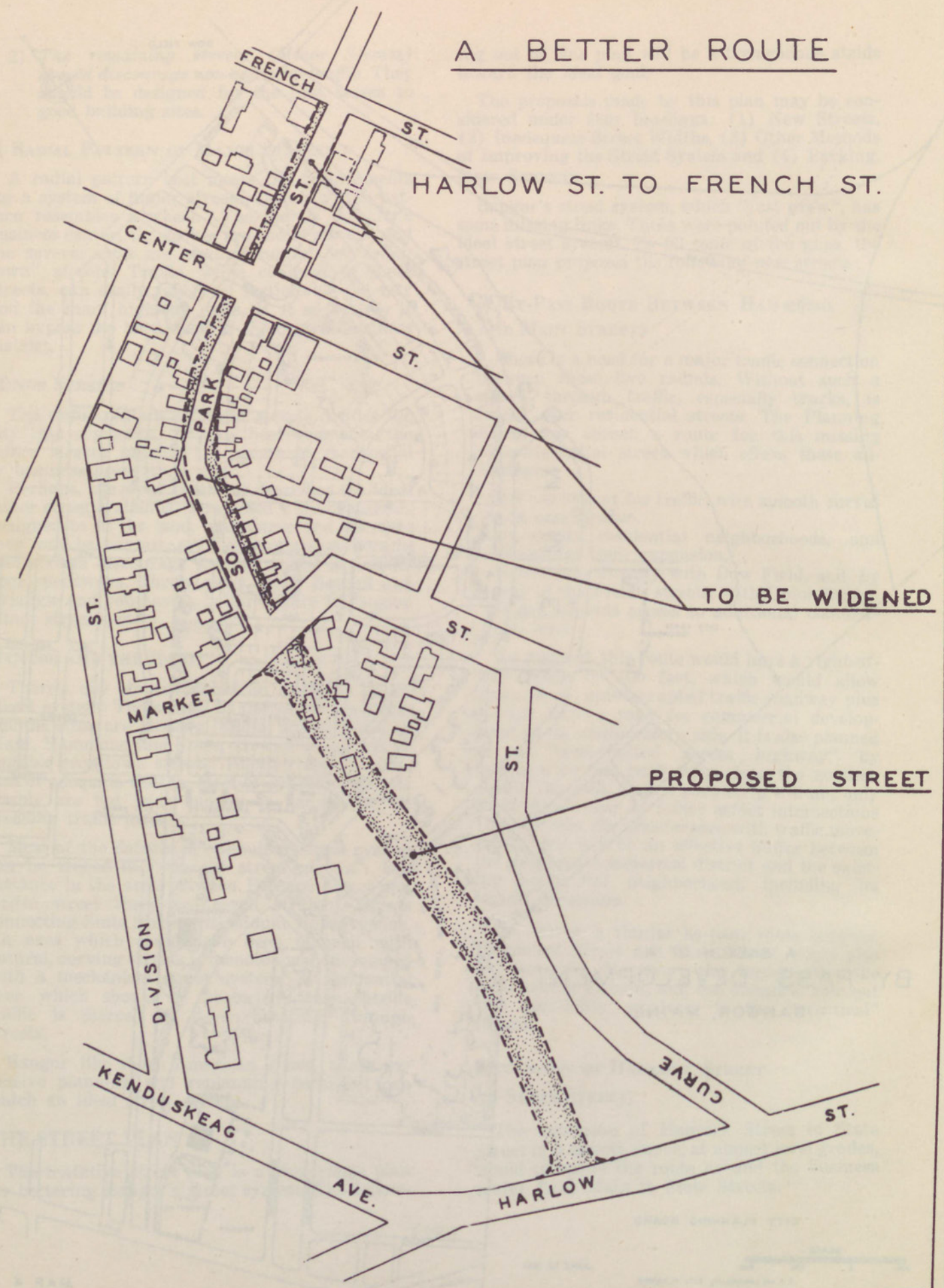


A BETTER ROUTE

HARLOW ST. TO FRENCH ST.

TO BE WIDENED

PROPOSED STREET



MAP 5

DOW FIELD

GRiffin

Westland

Hammond

Odlin

Webster

Thatcher

Silver

Bouteille

Buck

Fourteenth St

City of Bangor, Maine

MAP 5

DOW FIELD

GRiffin

Westland

Hammond

Odlin

Webster

Thatcher

Silver

Bouteille

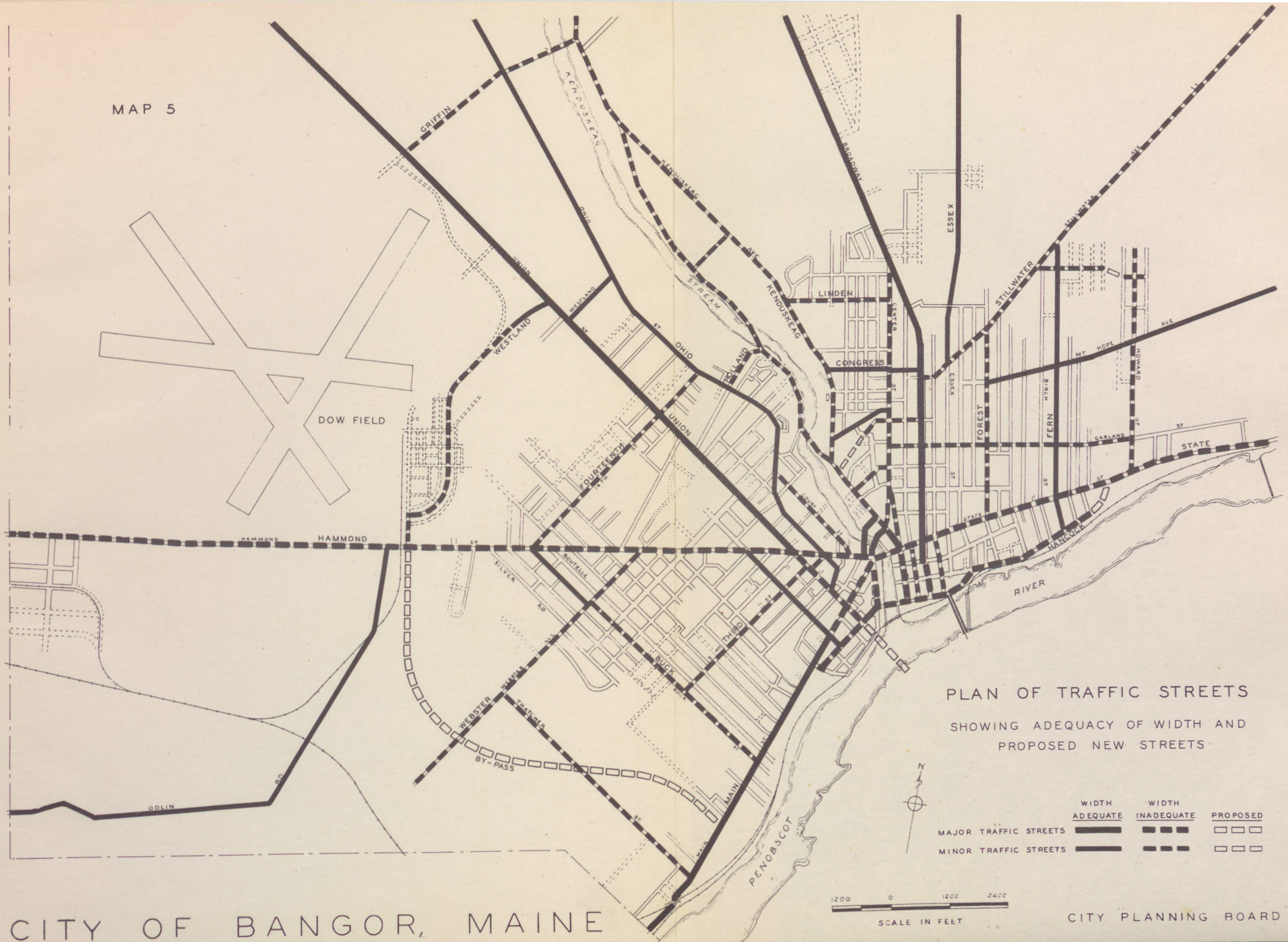
Buck

Fourteenth St

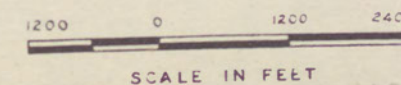
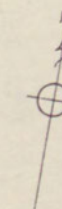
BY-PASS

CITY OF BANGOR, MAINE

MAP 5



PLAN OF TRAFFIC STREETS
SHOWING ADEQUACY OF WIDTH AND
PROPOSED NEW STREETS



	WIDTH ADEQUATE	WIDTH INADEQUATE	PROPOSED
MAJOR TRAFFIC STREETS			
MINOR TRAFFIC STREETS			

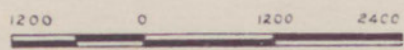
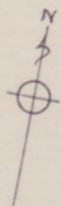
CITY OF BANGOR, MAINE

CITY PLANNING BOARD



PLAN OF TRAFFIC STREETS

SHOWING ADEQUACY OF WIDTH AND
PROPOSED NEW STREETS

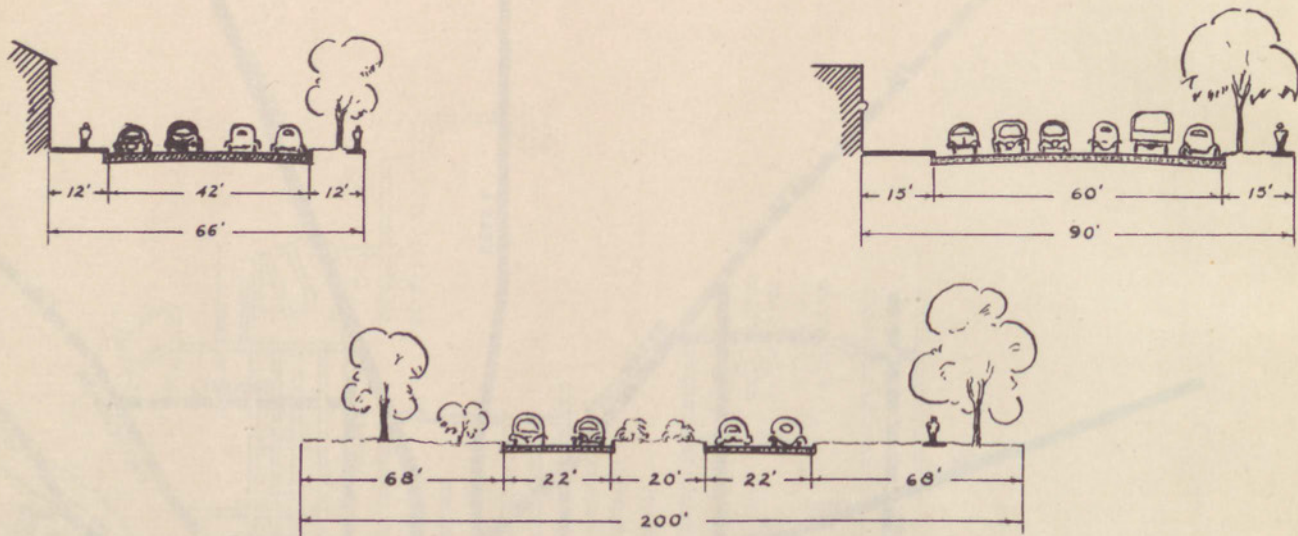


SCALE IN FEET

	WIDTH ADEQUATE	WIDTH INADEQUATE	PROPOSED
MAJOR TRAFFIC STREETS			
MINOR TRAFFIC STREETS			

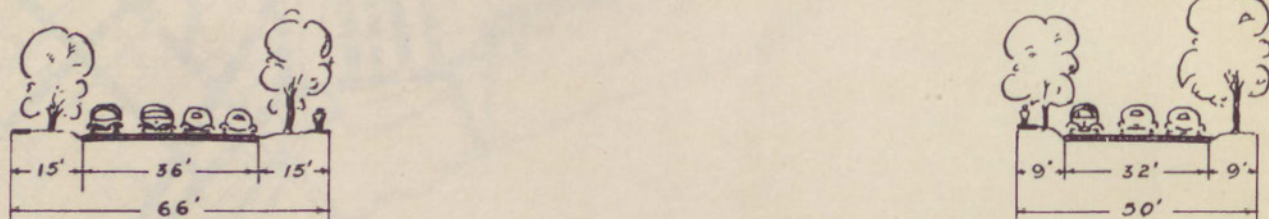
CITY PLANNING BOARD

MAJOR STREETS



LIMITED ACCESS HIGHWAY

MINOR STREETS



TYPICAL STREET CROSS SECTIONS

CITY PLANNING BOARD

BANGOR, MAINE

Figure 12.

A NEW STREET TO THE EAST SIDE

There is no convenient route from downtown Bangor to the East Side which does not include a "mountain goat" hill. State Street has an 11% grade (an 11 foot rise in a distance of 100 feet), Cumberland Street an 8% grade, and Kenduskeag Avenue a 14% grade.

A new street connecting South Park Street with Harlow Street would not only be a more direct route to the heart of the East Side, but it would have grades of about 4%. To be effective, South Park Street would have to be widened, which would require the removal or movement of several existing houses. This new route would be a difficult project, but is worth consideration in the street plan. The idea is good; but carrying out the idea won't be easy.

A NEW BANGOR-BREWER BRIDGE

On September 10, 1951 the people of Maine will decide in a referendum whether a new Bangor-Brewer toll bridge over the Penobscot River should be constructed. The bridge, as planned, would connect Union Street in Bangor with Wilson Street in Brewer. A determination of the need for the bridge and its proposed location were the result of a two year survey and study by the State Highway Commission.

The proposed bridge would take the peak hour pressure off the present bridge and help relieve unnecessary traffic congestion in Bangor's business center. It would also prove invaluable in case the present bridge was destroyed by floods or other catastrophe. Many people living on one side of the river are employed on the other side, and two cities whose daily economic life is so closely bound together should not have to rely on one lifeline between them.

INADEQUATE STREET WIDTHS

One of the major objectives of the street plan is to point out those streets which are not wide enough for modern traffic conditions. Map 5, "Plan of Traffic Streets," shows those streets in Bangor which were considered for adequacy of width.

The adequacy of width of each street depended primarily on its position in the general street pattern. Streets were classified as either "Major Traffic Streets," which included all major streets, or "Minor Traffic Streets," which included those minor streets that were important to local traffic movement. Figure 12 entitled "Typical Street Cross Sections" shows the recommended widths for these two classes of streets.

As example of the types of streets:

- 1) Main, Hammond, and State Streets are major traffic streets, and they should have a right-of-way width of approximately 90 feet. Only Main Street has this required width.
- 2) Most of Union Street and Broadway are also major streets, but, because of lesser traffic loads, require an approximate width of only 66 feet.
- 3) Minor traffic streets such as Fourteenth Street, Webster Avenue, and Garland Street also need a 66 foot right-of-way.
- 4) Other minor traffic streets such as Division Street, and Pine Street need at least a 50 foot width.

It would not be practical to ask for the widening of all those streets which have inadequate widths. In some cases the streets are intensively built up. In other cases the streets are only slightly narrower than the recommended widths so that widening is not imperative. However, there are streets in Bangor where the benefits of widening would outweigh the costs, especially with the use of the Official Map.

OTHER METHODS OF IMPROVING THE STREET SYSTEM

New streets and widened streets are the main concern of the planner. However, some problems must be solved, at least temporarily, by making the best use of existing streets. Detailed traffic engineering solutions are not strictly in the realm of master planning except when these proposals influence other aspects of the street plan or the master plan. On the other hand it would be unusual if the general street plan studies did not point to some of these minor improvements. At any rate, for the plan to be comprehensive, they are mentioned in this report.

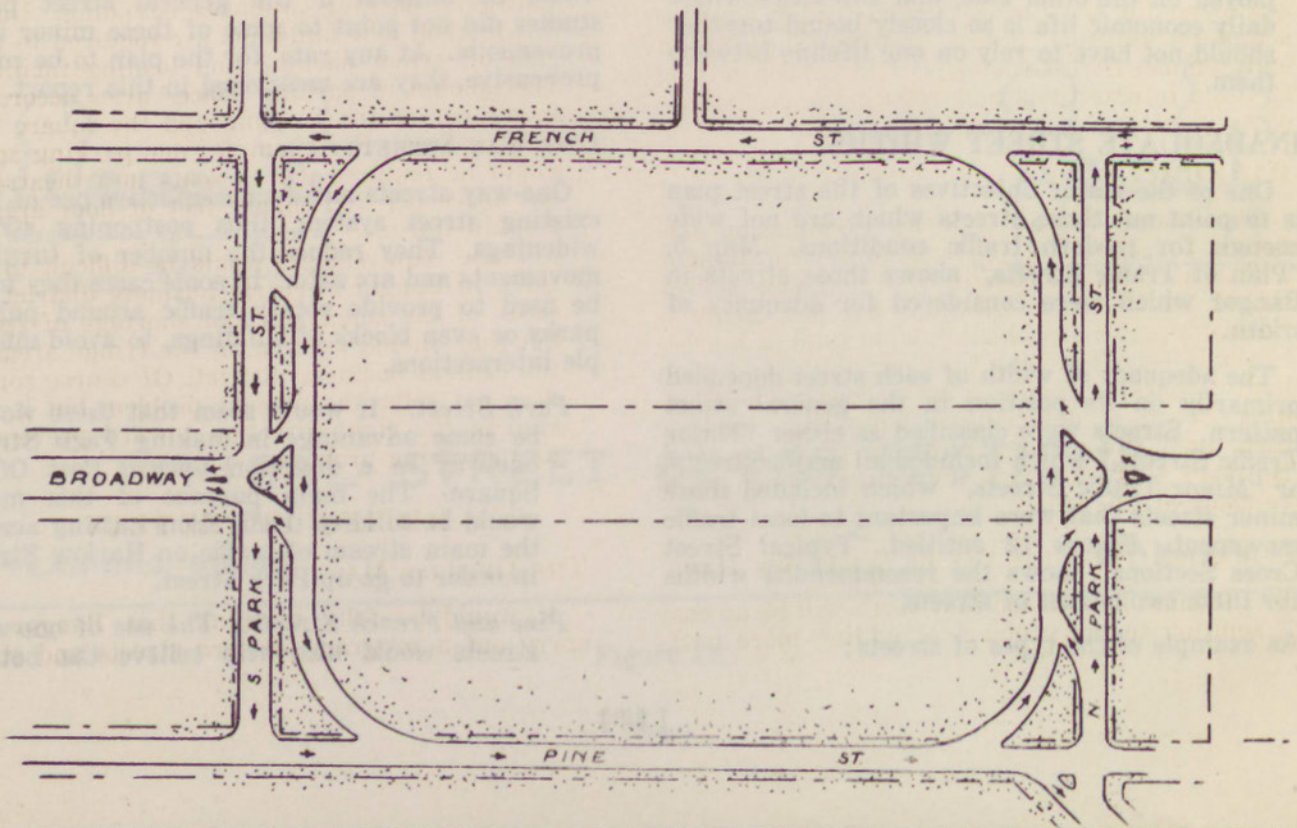
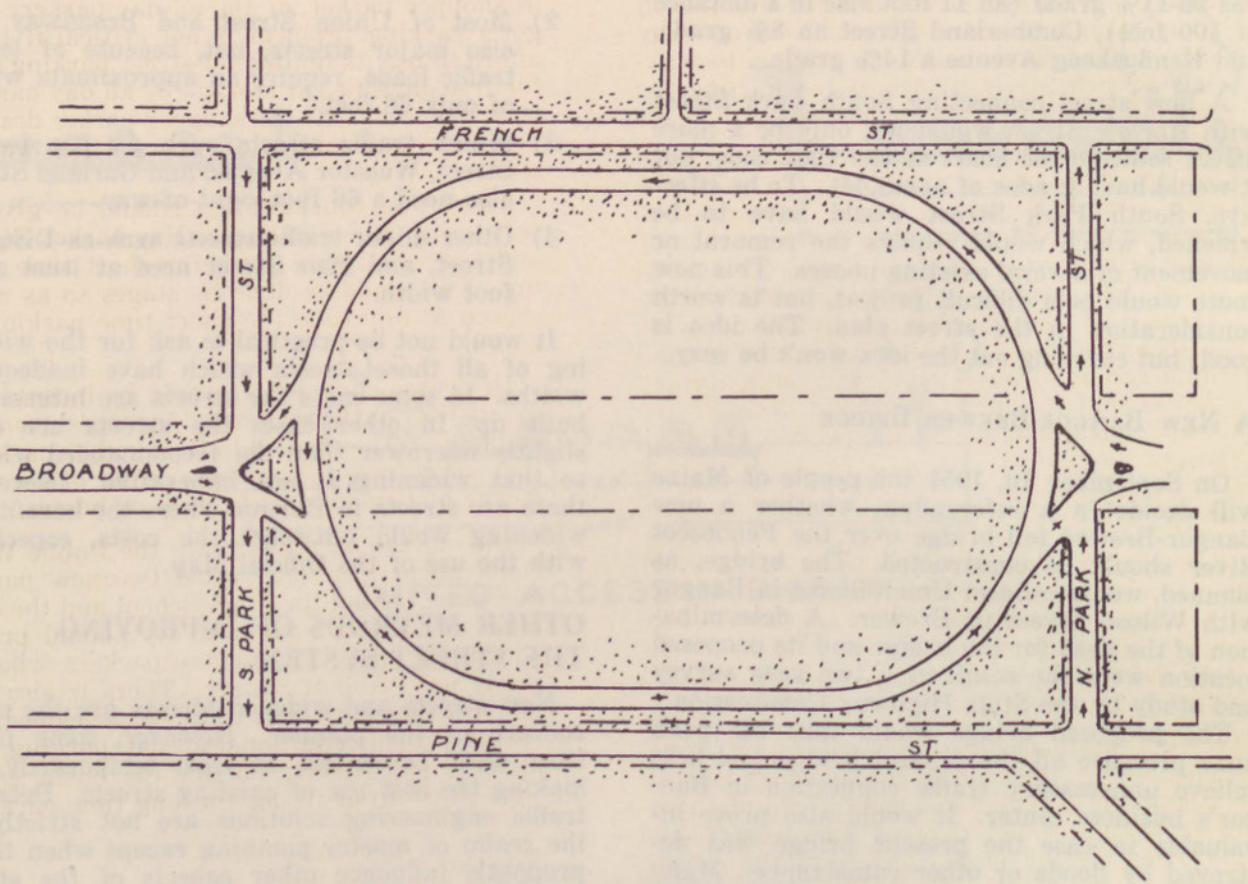
ONE WAY STREETS

One-way streets make more effective use of the existing street system, thus postponing street widenings. They reduce the number of turning movements and are safer. In some cases they may be used to provide rotary traffic around public parks or even blocks of buildings, to avoid multiple intersections.

Park Street. It would seem that there would be some advantage in making Park Street one-way in a direction toward Post Office Square. The main purpose of this move would be to keep traffic from cutting across the main stream of traffic on Harlow Street in order to go up Park Street.

Pine and French Streets. The use of one-way streets would also help relieve the bottle-

ALTERNATE DESIGNS FOR
ONE-WAY TRAFFIC AT BROADWAY PARK



neck on the Washington Street approach to the Bangor-Brewer bridge. If Pine Street were made a one-way street from Washington Street north there would be less interruption in the main flow of traffic. Pine Street is a narrow street, and for this reason alone would be more efficient as a one-way street. The same reasoning applies to making French Street, which is too narrow for smooth two-way traffic, one-way south.

Broadway Park. For another purpose it is proposed to establish a rotary or split system around Broadway Park. The park at present is divided into two parts neither of which is large enough for some recreational uses. The utility of the park would be increased if this section of Broadway were discontinued and traffic were routed around on a system of one-way streets. It is also believed that this proposal would decrease the traffic hazards to persons, especially children, using the park.

ISLANDS

Channelizing islands, which separate lanes of traffic, are intended to reduce the amount of conflict between opposing lines of traffic and reduce accidents and their severity. By keeping traffic in well defined lanes at intersections, a smooth, safe flow of traffic will be promoted.

Two intersections have been noted that would be benefited by the use of channelizing islands. An island on the Bangor end of the Bangor-Brewer bridge would prevent the west bound traffic from cutting on the inside of the corner. An island here would afford protection to east bound traffic on Washington Street and keep a lane open for the Brewer bound traffic. Another island on Railroad Street between Main Street and Summer Street would prevent corner cutting at these intersections and reduce the occurrence of accidents.

PARKING

The Maine State Highway Commission has agreed to conduct a parking survey in Bangor within a reasonable length of time. This survey should answer such questions as: how acute is Bangor's parking problem?; what kind of a problem is it—short or long time parking?; and what kind of parking facilities are needed? The Planning Board is deferring a long-range parking plan until this survey provides these answers. However there are two suggestions which could be made at this time.

MAKING THE BEST USE OF WHAT WE HAVE

It must be realized that there will be no easy solution to the problem of adding more park-

ing areas to the existing areas. Convenient parking spaces cannot be provided in the foreseeable future for all people. Therefore a choice must be made as to which types of parker should be accommodated first—the short time or shopper parker, or the all day parker. Bangor's parking problem is not critical if it can afford to use its limited off-street parking space for free daytime car storage by all day parkers. It would seem that the shopper parker deserves first consideration for the space which we have now.

Therefore, consideration should be given to restricting Abbott Square, Haymarket Square, and possibly Union Park for short time parking. This could be done by stages so as not to exceed at any time the short time parking demand.

Of course such action would be inconvenient to all day parkers, mostly business men and employees. They would have to either park further away from the business center or use other means of transportation, such as busses.

During the past two years the Public Works Department has constructed two new parking lots—one behind the High School and the other north of Abbott Square. They should provide additional space for all day parkers who formerly used Abbott Square. There is also a lot on May Street which is to be developed, and should provide additional all day parking. Unmetered side streets outside the business center will continue in use for long time parking.

ZONING

A long range method of preventing future additional parking problems is zoning. Under this method new buildings are required to provide off street parking and loading facilities. The amount of parking space varies according to the use of the building and the square feet of floor area. For example: one parking space might be required per 10 seats in a theatre or one space per 200 square feet of floor area in a retail store.

These requirements would be difficult to enforce in Bangor's central business district because of the small lots and shortage of space, but they should succeed on the fringe areas of the central business district. Of course zoning does not solve the present problem but it is a step in the right direction toward preventing an increasing problem.

BACKING UP THE PLAN

THE OFFICIAL MAP

It would be folly to think that Bangor can carry out a program for new streets and street

widenings in a short period of time. The city cannot even acquire in advance all the land which is needed for these future street improvements. How then can we make sure that this land will remain free of buildings until the city is in a position to make the improvements? The Official Map is the answer.

Using a proposed new street as an example, here is how it works:

- 1) The City Council has already adopted an Official Map for the City of Bangor. This map is nothing more than an "as is" map of the existing streets.
- 2) The Planning Board, using the Street Plan as a guide, recommends that the proposed street lines be added to the Official Map by the Council.
- 3) From the time when the future street lines are established on the Official Map until the city actually carries out the taking of land and physical construction, no new building may be built in the right of way of the proposed street, except on special approval of the Zoning Board of Appeals.
- 4) When the city is ready to actually construct the new street, it may acquire the land through gift, purchase, or condemnation proceedings.
- 5) With the needed property acquired, the city can construct the new street.

The same process can be used for street widenings.

If the ideas of a planned system of major streets are to be more than just ideas then we need this effective legal tool—the Official Map.

SUBDIVISION CONTROL

The Street Plan is mainly concerned with major streets. What about minor streets? Are we to allow their haphazard growth within the framework of planned major streets?

The State Planning Statute says not. Under this statute the City Council must approve all new "subdivision plats" which show new streets. The Bangor Planning Ordinance requires the

Planning Board's report and recommendation on all plats. These laws give the Planning Board a chance to make suggestions to private developers of new streets. They give the Board a chance to coordinate the interests of the developer with those of the city.

The Board has drawn up a tentative set of "Subdivision Regulations" which will govern their decision on approving plats and will serve as a guide to the developer in conforming to acceptable standards. The following are some of the major points in these regulations:

- 1) The developer will submit a preliminary plat to the Planning Board. On the basis of this plat all important aspects of layout can be considered and agreed upon.
- 2) In general the proposed subdivision shall conform to the Official Map of Bangor and the Master Plan.
- 3) The street grades, widths, and intersections shall conform to acceptable standards.
- 4) A final plat shall be drawn upon tracing cloth. It shall contain sufficient data to determine readily the location, angles, and length of every street line, the length of every lot line and boundary line, and natural drainage courses.

The City Council is required by ordinance to approve subdivision plats only after the developer has made or has agreed to make certain improvements at his own expense:

- 1) Roadways shall be graded to a subgrade of not less than 18-24 inches as specified by the City Engineer.
- 2) One-half the gravel required for the roadway shall be furnished and put in place at the expense of the developer.

Whenever the general public interests so requires, these requirements may be waived by the Council.

In the short run these regulations will stop the addition of muddy, muddled cart tracks to Bangor's street system. In the long run they will bring about the planned expansion of Bangor's undeveloped land.

SCHOOLS, PARKS AND RECREATION

Schools, parks and recreation spaces form a considerable part of the public land in a community and they should be closely coordinated in planning. School buildings and their playgrounds should not be limited to educational use but should also be used for the social and recreational activity of the community's adults and children. For this reason these elements of the Master Plan are presented in one chapter.

SCHOOLS

SCHOOL PLANNING

A planner is not particularly concerned with educational methods or systems. He is concerned with school buildings and their grounds because of their influence upon the appearance and organization of the community. He is concerned with coordinating schools with other elements of the Master Plan such as streets and playgrounds.

Briefly, the City Planning Board is interested in two things about schools: their location and their site.

How do we plan schools? The method is similar in all planning. The first move is to inventory and study the things that we have now. The second step is to determine the needs. If what we have is not enough then the third step is to plan for what we need.

THE WILSON REPORT

Fortunately most of the Planning Board's work on schools has already been done. In 1947, Mr. W. K. Wilson, of the New York State Education Department, surveyed Bangor's schools and made a long range plan for its expansion and improvement. Before deciding what the city needed to bring its school plant up to modern standards, Mr. Wilson made two necessary studies—a study of the existing school buildings and a study of school enrollments.

Out-dated Schools—

In the opinion of this educational expert some of our elementary schools were beyond any hope of ever meeting today's educational requirements. "Outmoded, unsafe, flimsy, and smelly" are words that were frequently used to describe the condition of these schools. "They were good in their day, but like the Model T Ford, the wall telephone with its batteries and crank, and the wood burning locomotive, their day has passed." The schools which were considered as hopelessly outdated and which should eventually be abandoned were:

Hannibal Hamlin, Valentine, Larkin, Elm and Longfellow. Lincoln School presented a slightly better impression, but a complete renovation was recommended. The other two elementary schools—Fairmount and Mary Snow—were considered basically sound and with some improvements could continue to serve the city.

This survey, then, disclosed that out of eight elementary schools only three were capable of meeting modern standards; the remaining five were substandard and should be eventually abandoned.

And More Children—

How many new elementary schools do we need in the future to replace these antiquated buildings?

Before he could answer this question Mr. Wilson had to know the size of future school enrollments. After studying past trends in yearly birth rates and school enrollments he predicted: the elementary school enrollments of 2,625 children in 1947 would increase to 4,500 children in 1958, and the enrollment would finally level off at about 3,100 children by 1968.

Dr. Wilson revised these estimates in 1950 to account for a smaller total population than originally estimated. However, the general future enrollment picture was little changed because of a continuing higher birth rate than was forecast. The return of military families to Dow Field in 1951 will also add to the total enrollment.

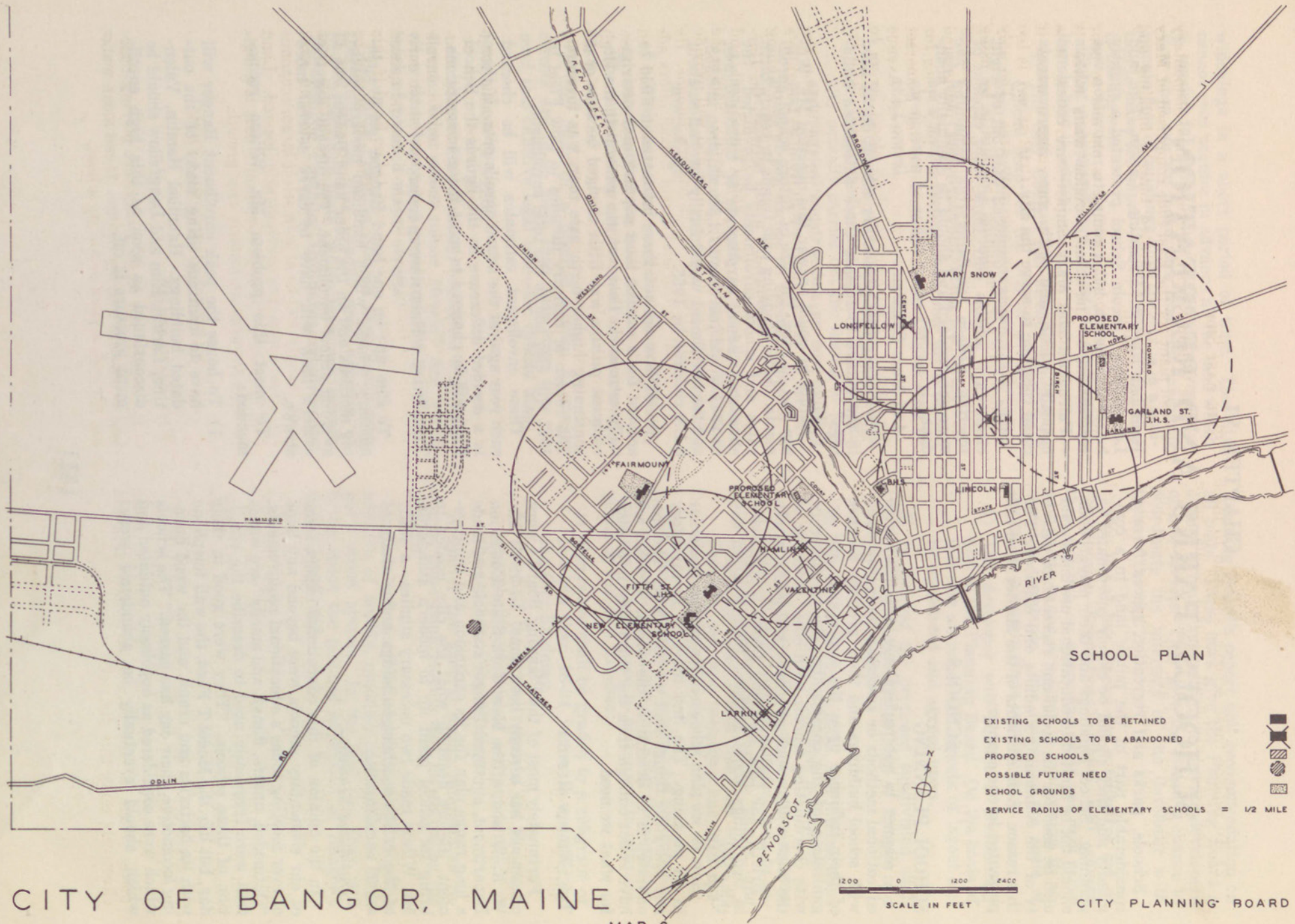
These enrollment estimates will be checked each year against the actual enrollments. If there is a decided difference in the figures the School Plan will be changed to meet the new conditions.

THE WILSON RECOMMENDATIONS

To sum up: on one hand Bangor has five elementary schools which handicap modern teaching methods and on the other hand Bangor has a swelling school enrollment. The already sagging camel's back will have to carry several more straws.

To meet this problem Mr. Wilson recommended:

- 1) To house the peak enrollment Bangor will have to continue using many of the out-dated buildings. Hannibal Hamlin, Valentine, Larkin, Elm and Longfellow should be discontinued as soon as this high enrollment pressure is off.



2) To replace these schools, and also to meet the peak enrollment, Bangor should have three new 20-room elementary schools, two on the West Side and one on the East Side. The final future elementary school plant would be: Fairmount and two new schools on the West Side; Mary Snow, a remodeled Lincoln and one new school on the East Side.

3) The secondary school plant of two junior high schools and one senior high school will not need additional schools to house the normal future enrollments.

THE SCHOOL PLAN

These recommendations are the basis for the school section of the Master Plan. The Planning Board has supplemented the Wilson Report with a more detailed analysis of elementary school locations and sites, and a coordination of schools and recreation spaces.

An elementary school should be conveniently reached by a majority of its pupils; if possible no child should have to walk further than $\frac{1}{2}$ mile. The location should encourage the school's use as a neighborhood center for social and recreational activity by all age groups. The school should be related to the major traffic streets in such a way that few children are endangered by street crossings. Sufficient land should be available for a school site of 5 acres, which will provide space for a building and a playground to be used throughout the year.

Map 6 shows the location of existing and proposed schools.

THE WEST SIDE

Mr. Wilson recommended that an expanded Fairmount School and two new schools comprise the final elementary plant for the West Side. The city has almost completed construction of a new school on approximately 3.03 acres of land next to the 5th Street Junior High School. The Planning Board recommends Coe Park as the site for the other new school. The 2.30 acres of Coe Park between Ohio Street and Court Street is the only remaining open land in this vicinity which has possibilities for development as a school site. This site is not ideal but is the only available one that can effectively serve this west central section. Because 2.39 acres is too small for an adequate school site it is strongly recommended that more land be acquired before the school is built.

This three building elementary school plant should serve the West Side for many years. However it may not be too early to point out that a site for a school should be reserved in the section between Webster Avenue and Odlin Road before any extensive residential development takes place. None of the future three schools could effectively serve this district.

THE EAST SIDE

The Wilson Report proposed a final elementary school plant for the East Side comprised of Mary Snow School, a renovated Lincoln building and one new school.

While the Lincoln building is old and in poor condition, its plan and outside walls make it worth keeping after a complete renovation. It is well located in relation to the children whom it must serve. However its site (0.92 acres) is too small for adequate outside play area. The only opportunity for expanding this site is by using Chapin Park. It is recommended that a part of the park be used as a year-round playground which could provide the necessary play space for the school. It is also recommended that Somerset Street between Palm Street and Forest Avenue be closed. This would not deny street access to any private property, and would cause little inconvenience to traffic.

The third East Side School in the Wilson Report was proposed in the vicinity of O'Loughlin's Greenhouses on Mt. Hope Avenue. The Planning Board has recommended a site between the Garland Street Athletic Field and Fruit Street, and the land has been purchased by the city. This is the best possible site in the vicinity and will provide the most effective service to eastern Bangor. Its location next to Garland Street School offers administrative advantages, and Garland Field can be used for some of the necessary play activities. However as the field is now used by both the High School and the Junior High School the site for the new school should be large enough to accommodate its own playground.

SUMMARY

We have accepted Mr. Wilson's proposals for a future six building elementary school plant because it was based on the need for adequate, modern buildings to serve a swelling school enrollment. We also feel that it may not be too early to point out that a seventh school may be needed between Webster Avenue and Odlin Road if this area develops in the future. The city should be preparing to carry out these proposals. One of the best preparations is to acquire suitable sites well in advance of the need. By choosing sites early the city will be able to select large, economical sites which are conveniently located. Land held in reserve for such community uses is a logical step towards an orderly city growth.

PARKS AND RECREATION

WHY RECREATION?

Recreation can mean youngsters playing baseball or oldsters playing bridge. It can mean walking through a park or sailing a boat.

We all need some type of play! We all need a change from the daily work routine!

The case for recreation has been proven time and time again—recreation is a must in the normal and healthful life of every person.

Furthermore we have an increasing amount of leisure time available for recreation. Working hours are becoming shorter and shorter. Modern machinery and “gadgets” have eliminated or shortened many of our daily drudgeries. Daylight saving time and the wonders of electric lighting have extended the length of the active day. Recreation can help fill these spare hours with wholesome fun.

We all know what can happen to our children during their spare hours unless we provide constructive activities. Juvenile delinquency has often pointed out the need for recreational opportunities to keep the children off the streets and out of trouble. The children more than anything else have quickened the public's interest in recreation facilities. Because of this public interest cities are assuming more and more responsibility for many types of recreation areas.

WHAT DOES BANGOR HAVE?

For outdoor recreation Bangor has approximately 156 acres of public park and playground space. Only about 50 acres are partly developed. Some of these acres are used for quiet, relaxing types of recreation areas such as the Kenduskeag Mall, Pierce Memorial Park and Davenport Park. Some are in active play areas such as Newbury Street Playground and Garland Street Athletic Field. Some, such as Chapin Park and Fairmount Park, were originally designed as informal parks, but now are partly used for playgrounds.

Indoor recreation has been provided by the city, semi-public organizations and commercial enterprises. Gymnasiums of the Fifth Street School, Garland Street School, Fairmount School and Mary Snow School and the City Auditorium are used by the community as well as the schools. The Bangor Public Library provides entertainment and learning for a great number of people. The Y.M.C.A. has many facilities for a complete recreation and social program; game rooms, club rooms, a library, a gymnasium, a small indoor swimming pool, and an indoor rifle range. The Columbia Street Community Center, the Hebrew Center and other organization buildings are used for social gatherings. Motion Picture Theatres and bowling alleys fill their places in Bangor's indoor recreation facilities.

These recreation areas and facilities plus the surrounding mountains, lakes, and sea coast help Bangorians relax, an essential part of today's living.

Do we need more recreation areas and facilities? Perhaps a better question is—does Bangor have enough of the right types of recreation areas in the right places?

WHAT DOES BANGOR NEED?

The Young People Speak. A survey was made in the Bangor schools in the spring of 1949. One of the questions was, “what would you like to do if you had a chance?” 779 boys in the senior and junior high schools answered this question. Here are the answers:

- 360 wanted more swimming
- 280 wanted more baseball
- 250 wanted more winter sports
- 248 wanted more basketball
- 210 wanted more football
- 129 wanted co-ed canteens
- 95 wanted more crafts
- 87 wanted more tennis

The same boys were asked where they frequently played. 200 listed “streets” and 282 listed “vacant lots.” We don't want our children playing in the streets, and we have no guarantee that the vacant lots will always be vacant.

The Experts Say. The National Park Service and the National Recreation Association have set a standard of 10 acres of park and recreation space for each 1,000 people in a city. According to these standards Bangor needs about 350 acres of municipal park land at the present time. Our existing 150 acres is less than one-half of this standard.

However quantity isn't enough. We need the right kind of recreation space in the right place. A formal park on Outer Hammond Street isn't going to help the kids play baseball near 2nd Street. A playground isn't going to help older people who want a restful park.

As city recreation programs have expanded so has the demand for several types of recreation areas. They can be classified into four general groups:

ACTIVE AREAS

Playfields are needed for older youths and adults. Playfields provide space for such games as baseball, football, field hockey, tennis, and horseshoes. Parts of them may be used for playgrounds, lawn areas, and landscape park areas. The site should be at least 10 acres in size, and it should be within ½ mile of every home.

Playgrounds provide active recreation space for children under 14 years of age. They should offer such sports as softball, tennis, handball, and roller skating. One corner may have playground apparatus and a wading pool. Playgrounds should preferably be located at elementary schools. If

possible they should be 5 acres in size and be within 1/4 mile of every home. (Three out of every four children attending Bangor's summer playground program came from within 1/4 mile of the playgrounds.)

PASSIVE AREAS

A city needs green space for quiet relaxation. Small parks and malls make the city more attractive and can be used as quiet resting places. Larger neighborhood parks provide passive recreation for all sections of the city. They should be well landscaped and include such facilities as benches, walks, and little children's play space. Still larger parks and landscape strips provide a variety of recreational activities for all age groups. Parts of these parks should be in various types of woodland, open lawn, meadow, and stream valley. A day camp, bird sanctuary, botanical garden and shelters are often desirable features.

SPECIAL AREAS

Some activities, such as golf, swimming, and indoor sports, need special areas or facilities.

REGIONAL AREAS

Regional recreation areas are found outside the city limits. They include State and National Parks, lakes, mountains, and points of scenic interest.

The above paragraphs indicate the types, amounts, and locations of the recreational needs of a city plan.

THE PARK AND RECREATION PLAN

Using the above standards as a guide the City Planning Board has drawn up a plan for parks and recreation areas. The plan is not a standardized ideal plan but is a tailor made plan to fit Bangor. Because of rough, hilly land or restricted space some playgrounds will not provide all the normal game area and will require supporting play areas elsewhere. In congested sections of the city a neighborhood park may have to provide active recreation space. In this connection it should be stressed that the inclusion of a playground in a park if properly landscaped should not seriously detract from the value of the park. A playground or playfield with landscaping can be and should be an attractive asset to its neighborhood.

The following is a summary of the recommendations of the Park and Recreation Plan. Many of the proposals relate to the use of parks and other land already owned by the city. Other proposals are for new areas to be acquired by the city. Some school areas have been included because of the belief that they should be part of a year-round recreation plan.

Again, this plan cannot be carried out tomorrow, but will take a period of years to achieve. It's a plan showing a system of parks and recreation areas properly distributed which the Planning Board believes is desirable to work towards in future years.

Map 7 is the complete Plan for Parks and Recreation Areas.

ACTIVE AREAS

Playfields—Bangor should have four playfields: Bass Park, Fairmount School, Mary Snow School and Garland Street Athletic Field. 3 of the 4 are already of sufficient size. Additional land needs to be acquired to enlarge the Fairmount School property to playfield size.

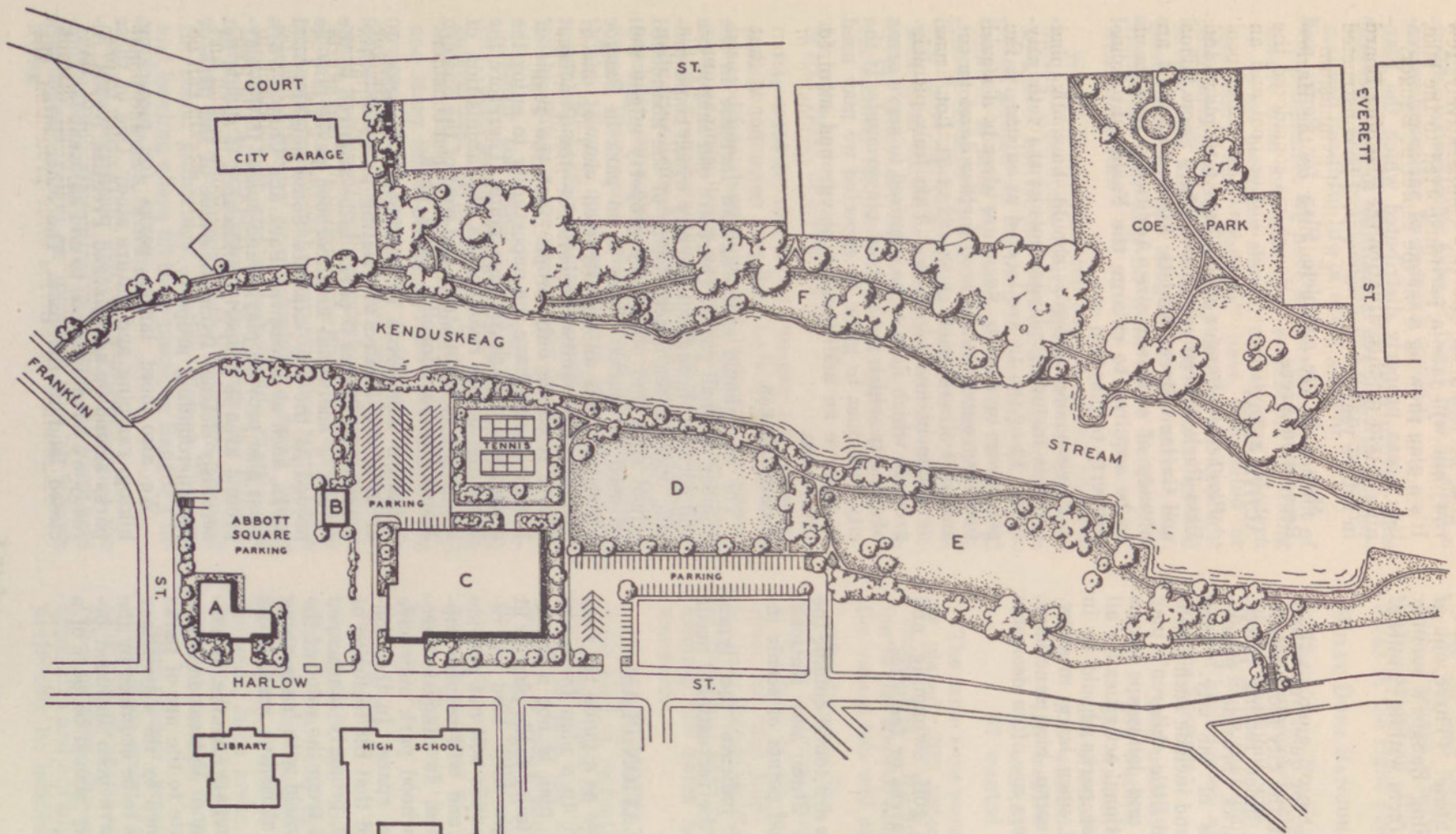
Playgrounds—Bangor should have 15 playgrounds including playgrounds at the four playfields. 12 of the 15 are located at existing parks, play areas or schools. Some are already designed for playgrounds, others need further development, and still others, such as the "2nd St. Lot," need development and expansion. This leaves 3 playgrounds which need to be acquired to serve areas of the city which are without playgrounds. If the city continues to grow as expected we may need to reserve an additional 4 playground sites for future use.

PASSIVE AREAS

The city should encourage an increase in the number of small parks. There are odd shaped lots and corners throughout the city which could provide open, green spaces. Some of the abandoned school sites and other city property might well be used for parks. There is no park in Bangor which provides an unobstructed view of one of our principal recreational assets—the Penobscot River. It seems only proper that the people of Bangor should have the opportunity to enjoy the river from a park vantage point. Therefore the Planning Board recommends the acquisition of land south of State Street and west of the Eastern Maine General Hospital for a park.

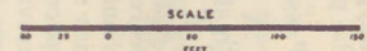
Bangor also needs 13 neighborhood parks. 10 of these are located at existing parks or school areas which leaves 3 parks to be acquired in the future. 2 additional neighborhood parks may be needed as the city expands. Some neighborhood parks, such as Broadway Park and Chapin Park must also provide playground space. If the playground area is properly landscaped it should not seriously detract from the value of the park or the surrounding property.

We also need larger parks for picnicking, hiking, camping and nature study. One of these parks should be an enlarged Prentiss Woods. Already we have a chance to add adjacent tax foreclosed land to the park. The other large park



A PROPOSED FUTURE DEVELOPMENT
OF THE LOWER
KENDUSKEAG STREAM VALLEY

- | | |
|--|---|
| City Hall (Possible Site) | A |
| Existing Heating Plant | B |
| High School Gymnasium and
Community Recreation Building | C |
| Playground and Drill Field | D |
| Informal Park, Picnic Area | E |
| Stream Valley Park Strip | F |



CITY PLANNING BOARD

should be formed around the 44 acres of Crosby Woods now owned by the Boy Scouts. A plan should be worked out with the Boy Scouts so that the part open to the public will be suitably located.

A SPECIAL PARK FOR BANGOR—

The Kenduskeag Stream Valley is one of Bangor's greatest natural features. A stream running through the heart of a city is a unique asset and deserves to be developed and protected for its aesthetic and recreational value.

The Bangor "Civic Improvement Committee" had this to say about the Kenduskeag Stream Valley in 1912—"Public grounds extensions should go up this valley to include the splendid wooded bluffs with connections to such an existing reservation as Summit Park, or up such a valley as passes through the Prentiss Estate to Broadway Park."

The city is indeed fortunate that most of the natural beauty of this valley has been preserved for so many years. In order to protect and encourage the recreational development of this stream valley we recommend that the city acquire for park use strips of land bordering on both sides of the stream from Franklin Street to a point well beyond the built-up section of Bangor. The width of this strip would vary according to the topography and existing buildings. Much of this land is too steep for any building use and it is a logical step to place it in park use.

Little needs to be done to improve the valley for a park. There is a need for a footpath along the stream on one side or the other for its entire length. This would provide the opportunity to walk in a park from Hammond Street to the Maxfield Bridge and beyond. Benches could be provided at points of interest such as the covered bridge, the gorge and Lovers Leap. The park could serve as a "laboratory" for school science and nature classes and local bird groups. One or two areas could be developed with picnic tables and fireplaces. Skating could be enjoyed at several points on the stream. Developed in such a way the Kenduskeag Valley Park would provide many sources of quiet recreation for the people of Bangor.

SPECIAL AREAS

Swimming

One of Bangor's greatest recreational needs is for a safe, sanitary and convenient place to swim. Both the Penobscot River and the Kenduskeag Stream are heavily polluted and unsafe for swimming. To make the best of a bad situation, the City Recreation Department has established a beach at Green Lake for use in its swimming program. However their program

has been limited to the comparatively few children that could be transported to the lake, which is 19 miles from the center of Bangor.

To remedy this situation the Planning Board recommends that an indoor pool be constructed as part of a proposed high school gymnasium—community recreation building on the Harlow Street property. The Board has considered the relative advantages of an indoor pool and an outdoor pool and believes that the indoor pool would be of greater advantage to the city, and should therefore be constructed first. This belief is based primarily on the fact that an indoor pool could be used for twelve months of the year as against 2½ months use of an outdoor pool.

However if circumstances should change and an outdoor pool is being considered for the city then the Board would recommend one of the four playfields as a site. An outdoor pool would need considerable space and should also be coordinated with other playfield recreation areas such as baseball, tennis, and possibly picnicking.

Indoor Recreation

Over a period of years the city has acquired approximately 3 acres of land (exclusive of Abbott Square) on Harlow Street across from the High School. The Board recommends that some of this land and additional land be used as a site for a future high school gymnasium—community recreation building. A part of this same site should be used for a small recreation area and drill field for the high school and the neighborhood children.

More will be said about the high school gymnasium-community recreation building in the Public Buildings section of the Master Plan.

OTHER SPECIAL AREAS—a few notes.

Some of the other activities that need consideration in the recreation plan are:

Fishing and boating—the people of Bangor should support the efforts of the Atlantic Sea-Run Salmon Commission in their efforts to restore salmon to the Penobscot River. The proposed park south of the hospital could be used as a boat dock and as an approach to the salmon pool. If the pollution in the Kenduskeag Stream is reduced more fishing and other recreational use of this stream can be made.

Scenic interest—Summit Park is an additional point which needs protection in order to preserve the view of the urban section of Bangor as well as Katahdin and other distant mountains. To provide some protection, the

bird sanctuary north of the park should remain in its present use.

Historical interest—in the past many sites and buildings of historical significance have been neglected in the march of city expansion. The city should aid in any effort to preserve historical sites for the education and recreation of future generations.

Although Jacob Buswell, the first settler of Bangor, chose a site for his cabin near the Kenduskeag Stream, the first settlement village of Bangor was at the mouth of Penjejawock Stream, now Meadow Brook, near the eastern edge of the city. In order to commemorate this site, a small area should be made into an historical park. With a small amount of landscaping, the area between the brook, Meadow Brook Road and State Street could serve this purpose.

REGIONAL RECREATION

Our recreation is not confined to the City of Bangor but must be supplemented by recreation elsewhere in the region. This is a region of unusually charming seacoast, lakes and mountains. Plans for developing these resources are important to the citizens of Bangor, not only for their own recreation but because much of their income is derived from the money brought into the region by outside visitors.

In 1935 the Maine State Planning Board made several recommendations concerning recreation

areas in Maine which would effect Bangor's region:

"Maine needs a better system of state and national parks." Even today state and national parks are chiefly localized in comparatively few areas."

"To connect the parts of this park system Maine should have a system of parkways and freeways. These roads would open vast areas to recreational use, and give better access to a number of state parks and historic forts."

"Maine needs to promote highway beautification and roadside improvement."

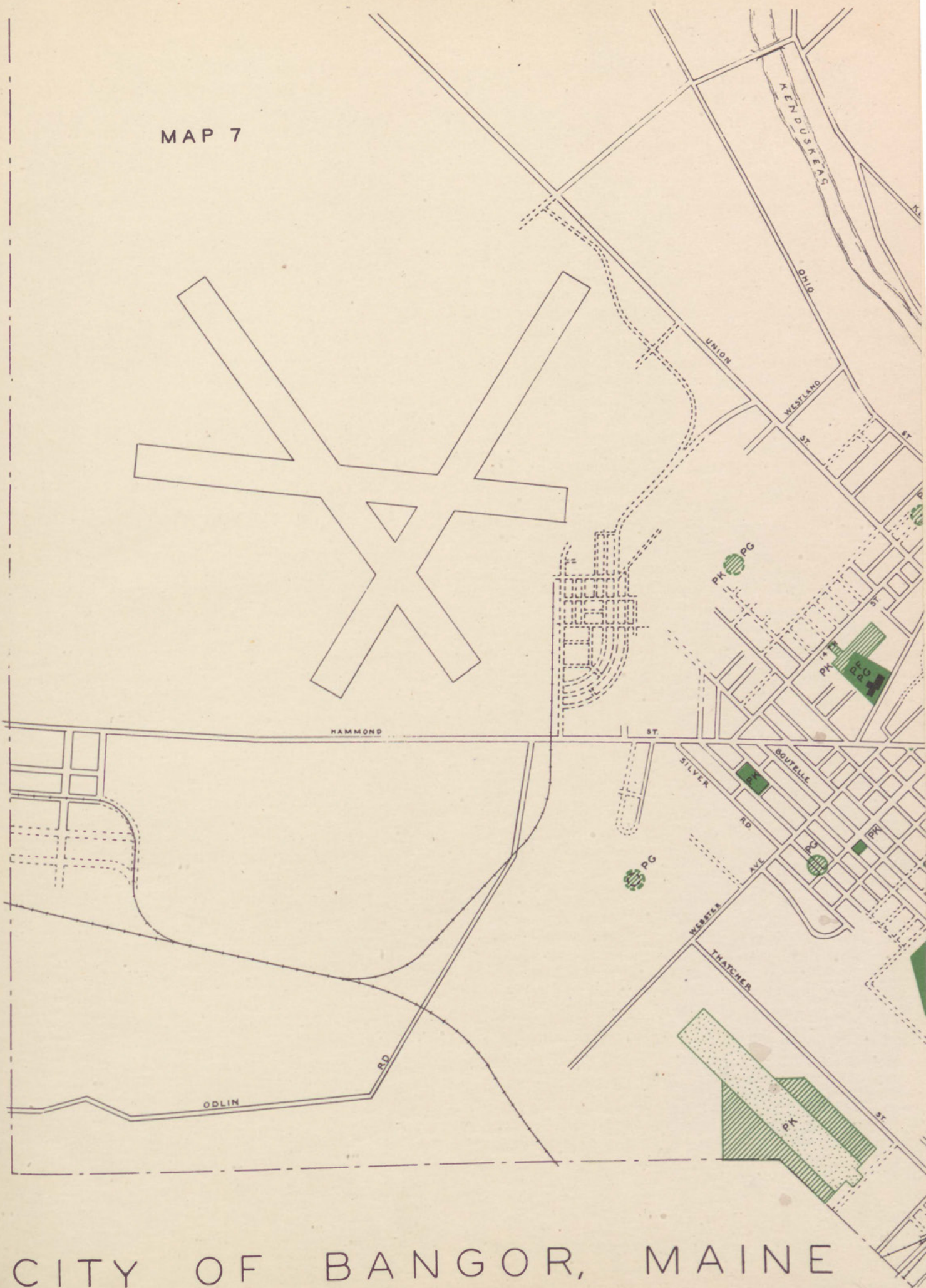
"We should have more public camping and picnicking grounds." (Today, in 1951, the nearest State picnic ground is 30 miles from Bangor. The nearest state camp site is 50 miles away.)

These recommendations indicate the type of recreation planning which Bangor needs on a regional basis. Bangor should support any moves to develop regional recreation plans.

SUMMARY

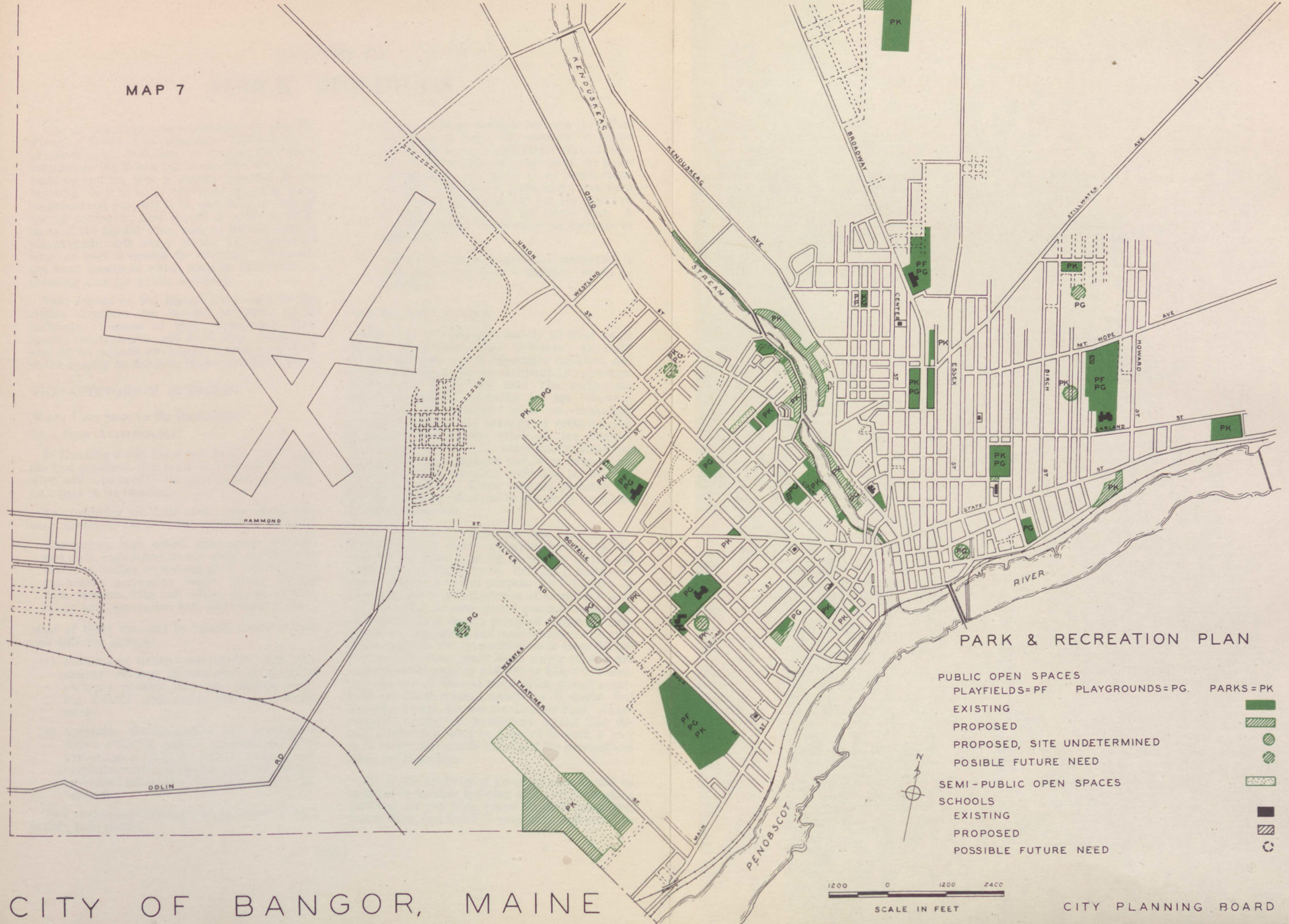
The provision of certain types of recreation areas is a municipal responsibility. Playfields, playgrounds, parks and special areas are needed to provide well balanced recreation opportunities for all the citizens of Bangor. The Park and Recreation plan is a plan for providing these areas—where they are needed. It is a plan which has been coordinated with other elements of the City Master Plan.

MAP 7











CITY OF BANGOR, MAINE

MAP 7



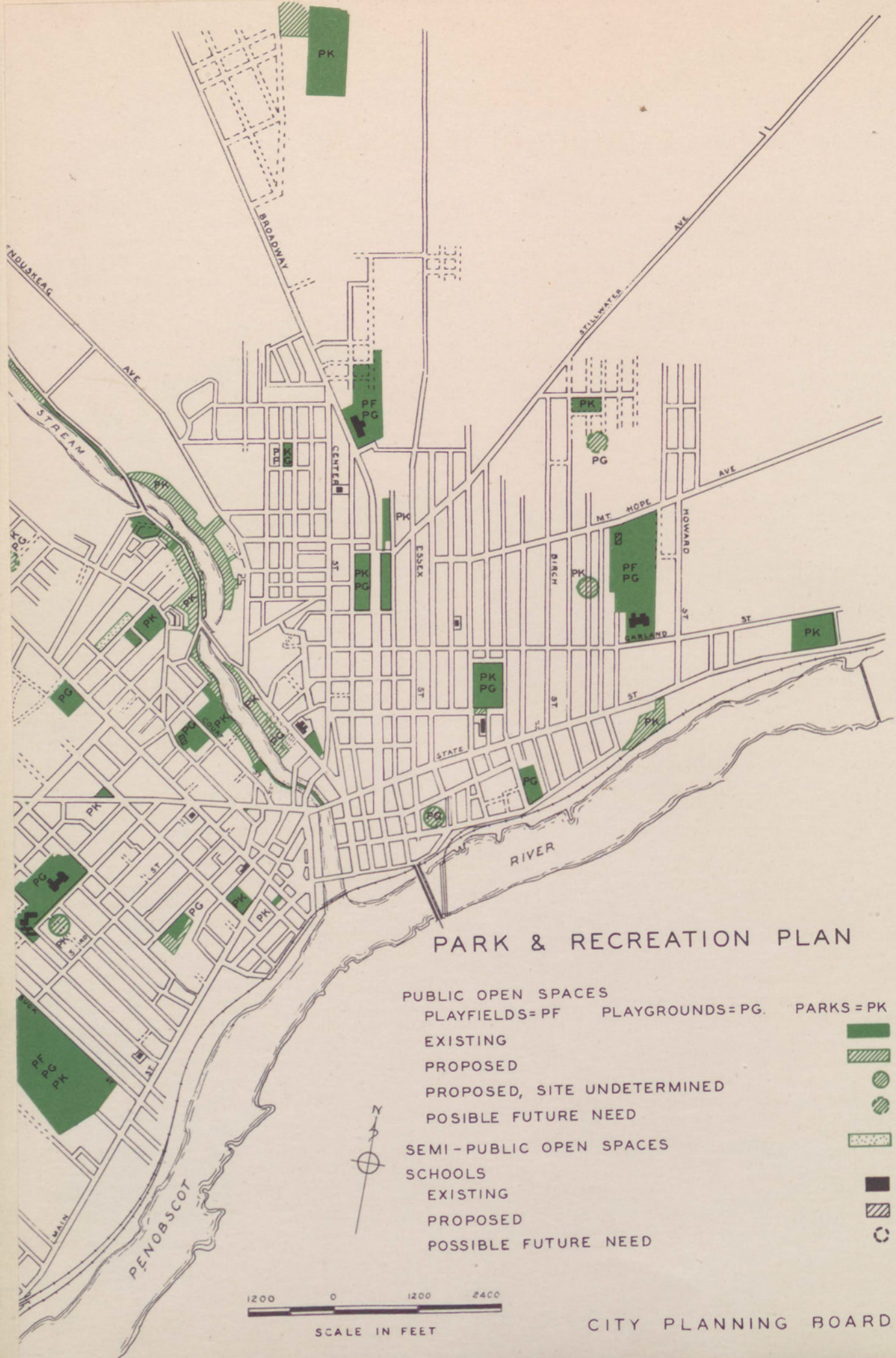
PARK & RECREATION PLAN

- PUBLIC OPEN SPACES
PLAYFIELDS=PF PLAYGROUNDS=PG. PARKS=PK
- EXISTING 
PROPOSED 
PROPOSED, SITE UNDETERMINED 
POSSIBLE FUTURE NEED 
- SEMI-PUBLIC OPEN SPACES 
SCHOOLS
EXISTING 
PROPOSED 
POSSIBLE FUTURE NEED 

1200 0 1200 2400
SCALE IN FEET

CITY OF BANGOR, MAINE

CITY PLANNING BOARD



CHAPTER VII.

PUBLIC BUILDINGS

One of the direct responsibilities of the City Planning Board is to recommend the location of proposed public buildings. In making the recommendations the Board has to consider the type of building and the type of service provided by the building. Is it to be of city-wide use or is it for neighborhood use; will it be used daily or only on special occasions; how should it relate to other parts of the Master Plan, such as streets, schools, playgrounds, and other public buildings; how large an area is needed for the site? These are the basic questions which must be considered in choosing sites for public buildings.

This section of the Master Plan suggests desirable locations for several proposed public buildings. Because of their importance, their special requirements, and their close relation to play areas, schools have been treated separately in the chapter on Schools, Parks, and Recreation.

THE AUDITORIUM QUESTION

WHAT USES SHOULD BE INCLUDED IN A NEW AUDITORIUM?

In choosing a site for a new auditorium one of the first questions that must be answered is, "For what will it be used?" Its use will play an important part in its location.

The following are some of the uses which have been mentioned for the new auditorium building:

Auditorium, high school gymnasium for boys and girls, high school music, shop, and R.O.T.C. facilities, indoor swimming pool, youth center, community recreation rooms, indoor skating rink, museum, city hall offices, arena, theatre, music hall, convention hall, and rental stores.

Most of these uses can be loosely classified into two different groups:

- 1) *Participant Group*—recreational and educational use such as recreation programs of all types, physical education, manual training, R.O.T.C. instruction, and indoor swimming.
- 2) *Spectator Group*—public and commercial shows, concerts, athletic contests, and large gatherings such as ice shows, stage shows, musical concerts, sportsmen's shows, varsity basketball games and tournaments, and conventions.

Two results are inevitable if one building must satisfy both groups.

- 1) There would be conflicts between the different types of uses. For example, it would be difficult to run a continuous physical education and recreation program if the gymnasium must also serve as an auditorium. In 1949, the present auditorium was used for 39 evening events and for 3½ weeks of all day events during the school year. A new auditorium would show an increase in such uses.
- 2) The second result of all this combination is that the cost of such a building would be too high.

TWO BUILDINGS NEEDED

Therefore, to adequately satisfy all these needs Bangor really needs two buildings: an auditorium, primarily for the spectator facilities, and a high school gymnasium—community recreation building for participant use. The auditorium should be planned primarily for the following uses—athletic contests (such as basketball games) with a seating capacity of around 5,000, expositions and shows (such as Ice Vogues, Sportsmen's Show, etc.) conventions, theatrical and musical performances, and large dances. Ice skating and roller skating could also be included in such a building. These uses are probably the maximum number that can be efficiently combined at the optimum cost.

The inclusion of theatrical and musical performances in a new auditorium brings up the question of what is going to happen to the old auditorium on Main Street. Perhaps it could continue to serve a useful purpose for a number of years, but from the standpoint of economy it does not seem that the city should continue to operate two auditoriums for an extended length of time. The cost of operating and maintaining (with only minor repairs) the old auditorium is about \$5,000 per year. In those years when major repairs are made the cost rises to \$10,000 or \$15,000. Therefore the use of the old auditorium should eventually be discontinued, except as it might find limited summer use for the Bangor Fair. Abandonment of the old auditorium means that the new auditorium must be planned in such a way as to eventually satisfy the needs for musical and stage performances.

All of the participant group of uses should be included in another building which could combine facilities for the high school physical education, music, shop, and R.O.T.C. programs, and facilities

for active community recreation, including an indoor swimming pool.

This two-building recommendation does not solve the question as to which of the buildings should be constructed first. If the recommendation is accepted by the City Council and the people of Bangor, then a decision must be reached as to which building is the most important to the welfare of the city, and therefore is needed first.

WHAT FACTORS INFLUENCE THE LOCATION OF EACH OF THE TWO BUILDINGS?

THE AUDITORIUM

The following are some of the things to think about in the location of an auditorium planned for the recommended uses.

1) *Location in respect to the community.*

A central location is desirable. However, if the auditorium is used primarily for special crowd drawing attractions, a central location is not of primary importance. Basketball games, and the Ice Vogues will draw the same crowds whether the auditorium is on Main Street, Harlow Street, or in Hampden.

2) *Available land—amount and cost.*

A large, inexpensive site of perhaps 10-12 acres would be ideal. Such conditions exist only on the fringe of the built-up area of the city.

3) *Parking*

The need for a large site is primarily for parking. Using a recommended standard of 1 parking space for every 4 seats, an auditorium seating 5,000 persons would need 1,250 parking spaces, or a parking lot of about 8½ acres in size.

4) *Street network*

An auditorium generates a large amount of traffic, but only when in use, perhaps two or three times a week. Therefore, while a street network which allows the most efficient dispersion of traffic away from the building would be valuable, it is not absolutely essential. There is bound to be some delay in getting away from a crowded affair. However, traffic going to and from an auditorium should not be required to use minor residential streets.

THE HIGH SCHOOL GYMNASIUM— COMMUNITY RECREATION BUILDING

The predominant factor in choosing a site for this building is the high school. The provision of high school facilities in the building automatically means that, to be of any real

value, it must be located near the present centrally located high school. Fortunately a central location is also a considerable advantage to a community recreation building, which would be in daily use by the people of Bangor. This is especially important to young people who cannot depend upon automobile transportation. Parking space for such a building is not of great importance.

THE PROPOSED LOCATION FOR THE AUDITORIUM

Based on the above uses for the auditorium and the location factors the proposed site is on the lower end of the City Farm next to the proposed by-pass (Map 4). The following are the principal advantages to this location:

- 1) A large amount of land for the building site and parking area; space is almost unlimited. Parking will not usurp space needed for other types of parking.
- 2) No land cost. The city already owns the land, which could amount to savings of from \$50,000 to \$100,000 in the total cost of the building. Ownership of the land is especially important if the building authority cannot use the power of eminent domain, and even the use of this power may not be satisfactory.
- 3) A good road network. The by-pass road will provide easy access to Hammond and Main Streets.
- 4) Adjacent to Bass Park. The auditorium could eventually be connected to Bass Park which serves as the outdoor area for spectator shows.

THE HARLOW STREET SITE FOR THE HIGH SCHOOL GYMNASIUM—COMMUNITY RECREATION BUILDING

The chief advantage of the Harlow Street site is its central location, which as already has been pointed out, is not of primary importance to an auditorium for crowd gathering, spectator shows, but is of considerable importance to the high school gymnasium—community recreation building (Figure 14). Certainly to be of practical use to the high school its gymnasium and other facilities must be close to it, and the Harlow Street site satisfies this requirement. The same site also answers the central location needs of the community recreation facilities, particularly for young people.

This type of building would require only a small amount of parking for its own use. Therefore the Abbott Square parking lot and any future parking area could be used, without interruption, to satisfy the daily needs of Bangor's "down town" business center. Also, because the build-

ing would be adding little to the central parking needs, a part of the site could be developed into a small outdoor recreation space and R.O.T.C. Drill Field.

ALTERNATE SITES

The Planning Board has also considered other sites for the auditorium. The following sites were the most seriously considered.

- 1) Hammond Street near Dow Field.

The glide angle of the airport restricts the location of the building. Much of the needed property is part of Dow Field.

- 2) City farm land at the intersection of the proposed by-pass and Webster Avenue.

Webster Avenue, a residential street, would probably bear the brunt of the traffic.

- 3) The present site on Main Street.

This would automatically mean the destruction of the present auditorium.

- 4) Part of the proposed school site on Mount Hope Avenue and Fruit Street.

This might take land which ought to be used for the new school. Also on a minor street system.

SUMMARY

Bangor cannot put all its eggs in one building. One building cannot be used as an auditorium for commercial and public crowd drawing events and also satisfy the need for additional high school space and active indoor recreation space. With this in mind the Planning Board recommends that a part of the city farm property be used for an auditorium site, and that the Harlow Street property be used as a site for a high school gymnasium-community recreation building.

A CIVIC CENTER

Bangor already has a two building start (the high school and the library) on a civic center. The construction of a high school gymnasium-community recreation building across from the high school would be an additional step toward such a central group of public buildings.

A NEW CITY HALL

It is suggested that a small part of Abbott Square across from the library be considered as a site for any new city hall of the future. A report on the physical condition of the present city hall in 1945 pointed out some of the faults of the building. The whole heating system was considered inefficient and in need of general overhauling. Considerable pointing of the exterior brickwork was believed needed together with new

gutters and flashing. A major remodeling job was recommended to bring the building up to standards of the National Fire Protection Association. Included as parts of this remodeling job were the construction of three new stairways to the auditorium, which would require a number of costly alterations and rearrangement of the rooms in city hall. These apparent faults of the existing city hall plus the expense of maintaining and operating a building of the "high ceiling age," are arguments in favor of an eventual new city hall.

A new city hall on the proposed site would complete a civic center for Bangor. Such a group of buildings has some advantage in providing more convenient service to the using public and in providing closer coordination between public offices. A civic center, as an architecturally harmonious group of buildings, can also be a source of civic pride.

THE LIBRARY NEEDS

Mr. L. Felix Ranlett, Librarian, has outlined for the Planning Board the future needs of the library, as they have been discussed by the Library Board of Managers. The present storage stacks will reach their capacity by 1953. To provide additional space the Library Board has considered adding to the rear of the building and extending the present stacks into this addition. They have also had tentative plans drawn for adding area to the public reference room, the children's room, the catalog room working space, and providing a consultation office for the librarian adjacent to the present office. These expansion needs of the Bangor Public Library should be considered in the program of capital improvements.

FIRE STATIONS

EXISTING STATIONS

At the present time Bangor has three fire stations, the Central station, the State Street station (No. 5), and the Center Street station (No. 6). The equipment in each station is as follows:

Central station

4 pumpers, 2 ladder trucks, 1 rescue truck, and 1 ambulance.

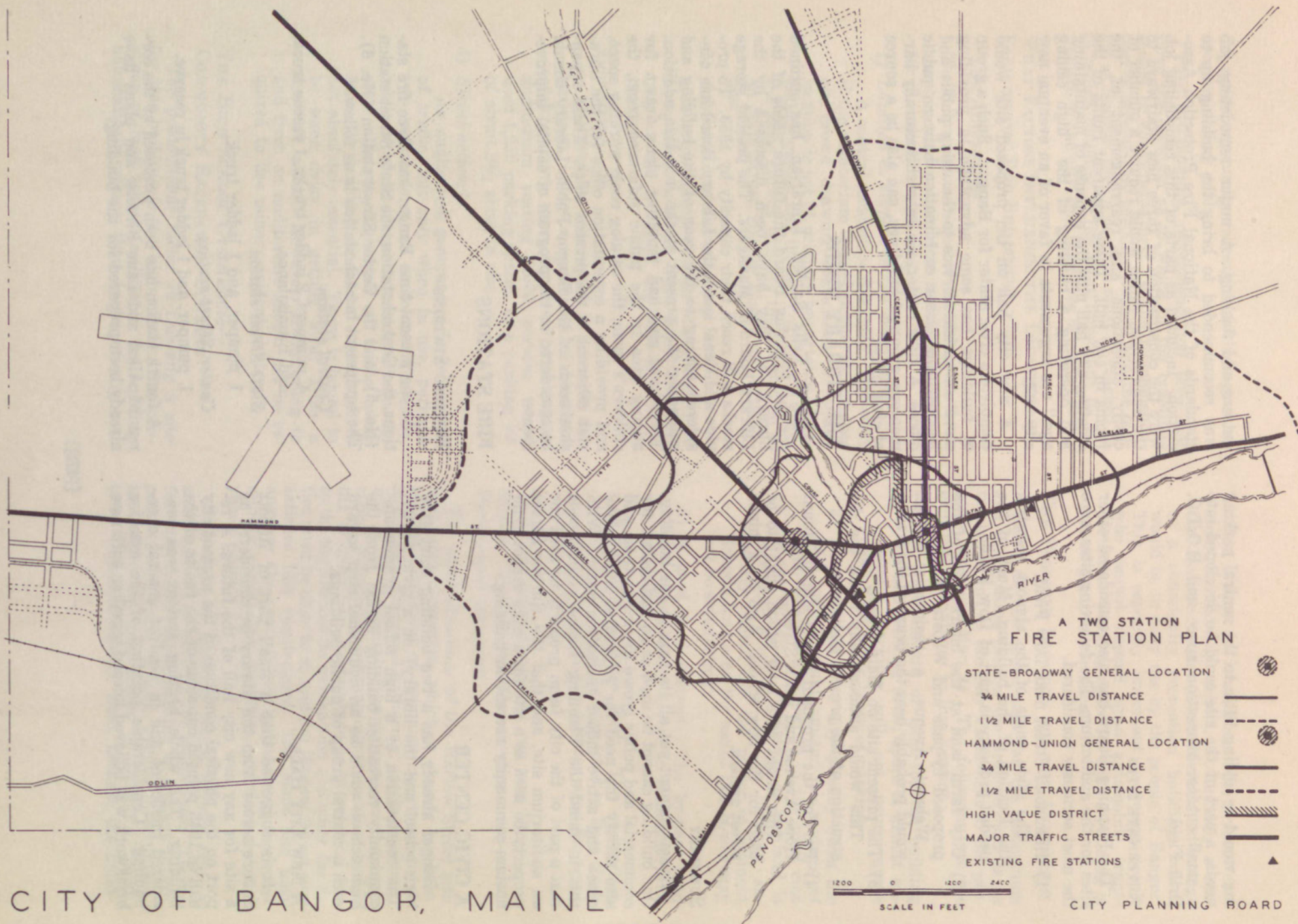
State Street station

1 pumper, and 1 ladder truck.

Center Street station

1 pumper, and 1 ladder truck in reserve.

A fourth station has been proposed at the corner of Allen and Lane Streets, and plans have already been prepared for the building.



CITY OF BANGOR, MAINE

MAP 8

RECOMMENDED STANDARDS

The National Board of Fire Underwriters recommends that a pumper company (one pumper and 6 men) be within $\frac{3}{4}$ mile travel distance from all points in the high value district, within $1\frac{1}{2}$ miles of all points in a closely built residential district, and 3 miles of all points in areas of scattered development. Ladder truck standards are 1 mile, 2 miles, and 3 miles respectively.

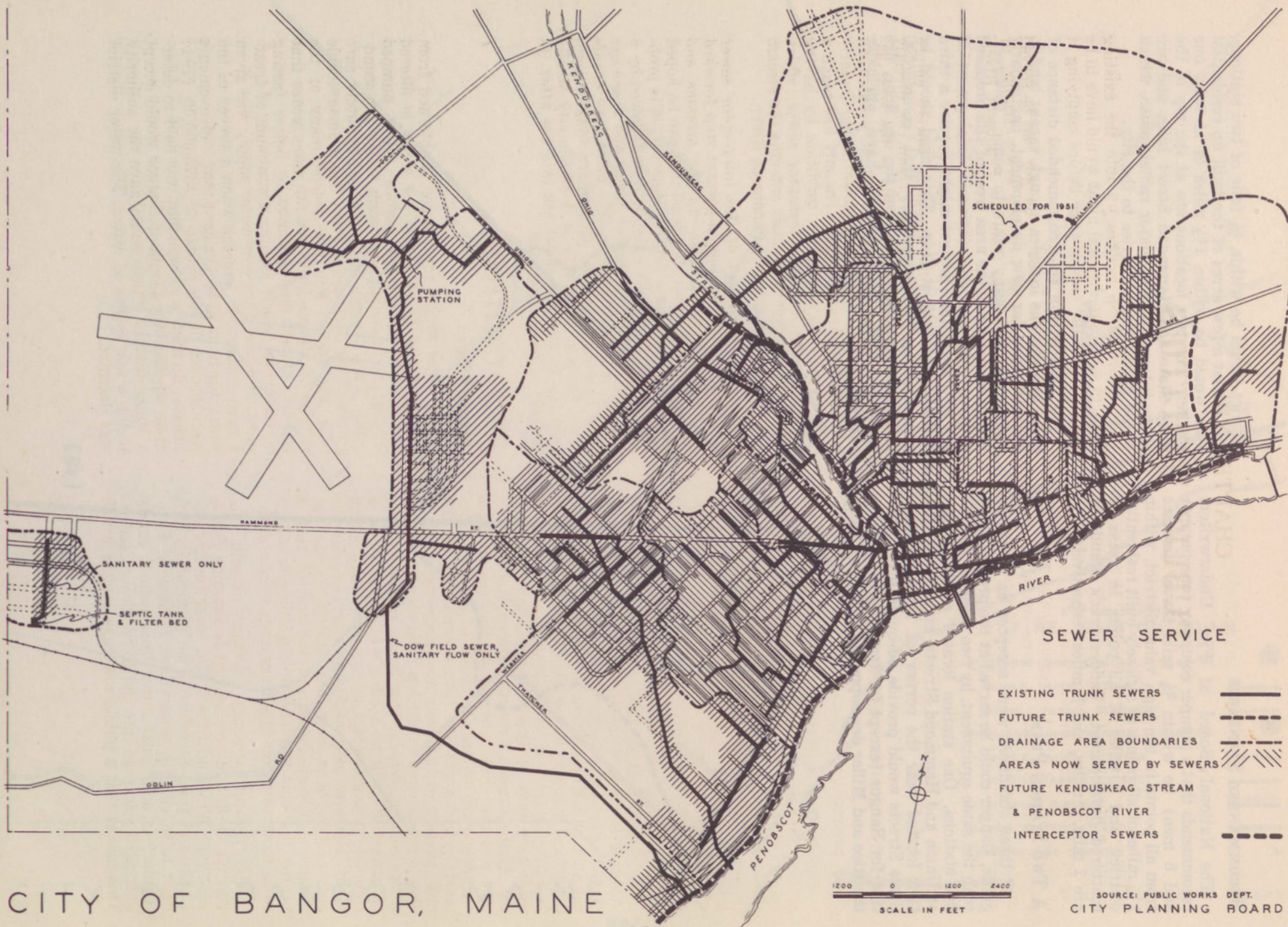
A TWO STATION PLAN

If these standards were accepted as a general guide, Bangor could be served at the present time, with the same equipment, by two properly located fire stations. One station located at the corner of Union and Hammond Streets, and another station located near the corner of Broadway and State Streets would provide adequate fire protection for Bangor (except for remote areas such as the Rice and Miller development). The high value

district would be within $\frac{3}{4}$ mile of two stations, and all but a few acres of the built up residential area would be within $1\frac{1}{2}$ miles of at least one station. The two locations are at the top of the steep State and Hammond Street hills, and are at the intersections of major radial routes, which would aid in better service to the city.

A THIRD STATION

The area within the recommended distance of these two stations includes enough vacant land to provide space for new development, particularly residential, for many years to come. However, the development of the area west of the proposed by-pass route and the continued development of the Rice and Miller project might require a third station on the West Side. This need should be tempered by the knowledge that commercial buildings today are usually of the one floor, fire resistant type, and usually have sprinkler systems.



CHAPTER VIII.

PUBLIC UTILITIES

The detailed planning of public utility systems is not primarily a function of city planning. However, the planner must have an understanding of utility problems and plans. The designing of future streets and the regulation of new subdivision plats depends to some extent on the utility systems. The utility systems must be considered in planning and zoning the type of development for each part of the city. The sewerage and water systems for Bangor, which are of great importance in the growth and development of the city, are briefly discussed in this report.

THE SEWERAGE SYSTEM

AREA SERVED

The Bangor sewerage system is a combined system: storm water and sanitary sewage are combined in the same pipes. A glance at Map 9 shows that most of the built-up area of Bangor is served by lines in this combined system. The largest unserved built-up area is around Stillwater Park, and the Meadowbrook sewer will be extended into this area in 1951.

The plate also shows that an extensive, mostly undeveloped, part of Bangor, generally west of Webster Avenue to the westerly city line, is not served by sewers, except for a limited area around the Rice and Miller development, which is served by a local sanitary sewer. The Dow Field sewer is located in part of this extensive area, but it is a sanitary sewer only and it has a limited capacity. At the present time it is improbable that the city will ever have the use of this sewer. This westerly part of Bangor seems to be one of the most logical areas for future expansion of the city, particularly for commercial development. It should receive one of the top priorities for future sewer service. Where, how large, and what kind of sewer line will be needed will depend upon a complete topographical survey and engineering study. However most of the area will require the construction of a new line starting from the Penobscot River. Because of the cost of such a project it should be planned, if possible, in stages so as to serve successive areas as it is extended.

The present sewerage system extends out Union and Ohio Streets to include Dunning Boulevard and Westland Street. The area further out Union and Ohio Streets will be particularly difficult to serve with sewer lines. Because of State regulations additional sewer lines cannot empty untreated sewerage into the Kenduskeag Stream. This means that a public sewerage system would

have either pump sewage up into the existing lines, or a sewage disposal plant would have to be built to treat the raw sewage before emptying it into the Kenduskeag.

Other unserved areas in Bangor can be served by either extending existing sewer trunks, or building short trunks from the Penobscot River.

SEWAGE DISPOSAL

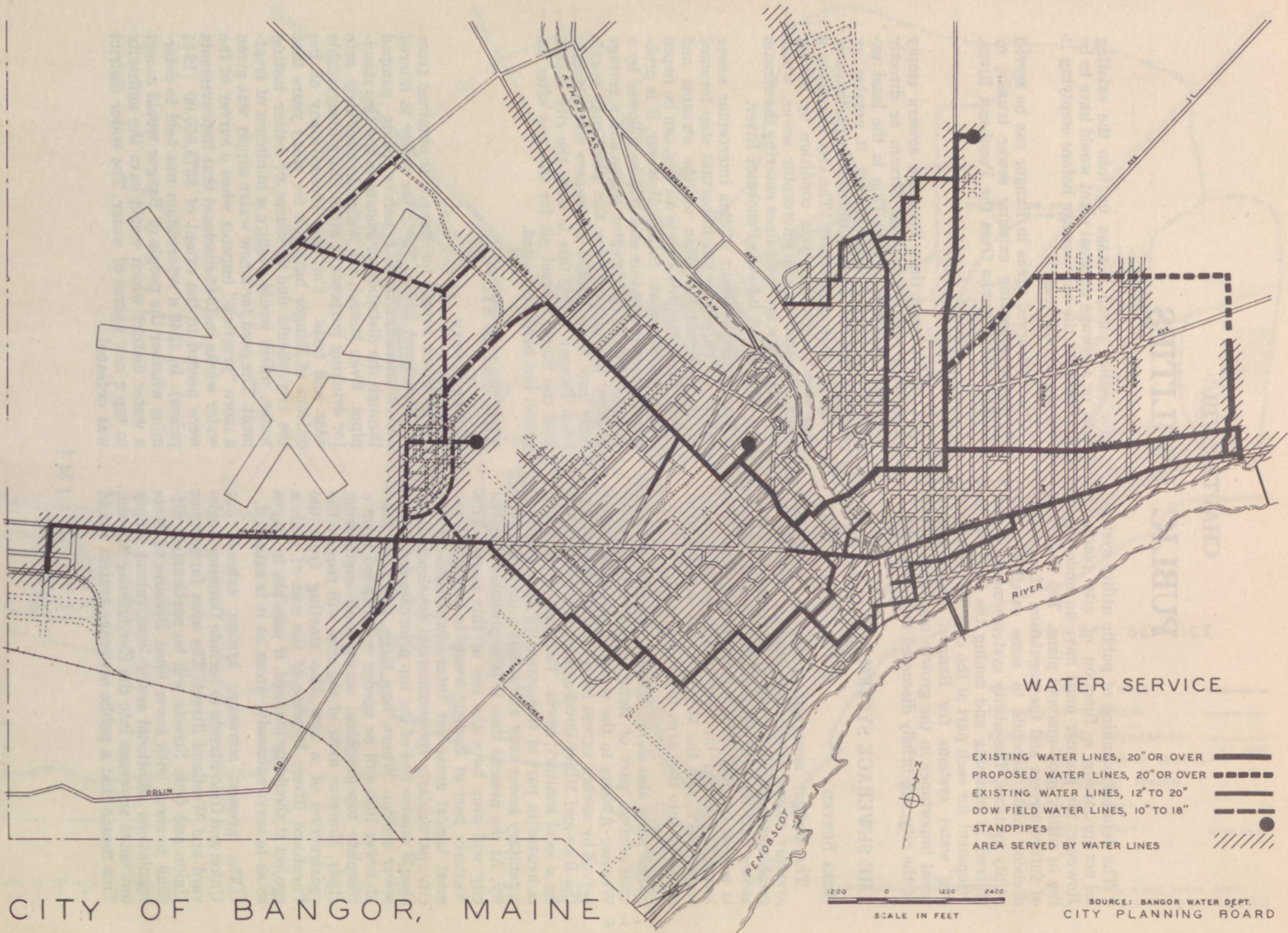
At the present time Bangor's sewers empty either into the Kenduskeag Stream or directly into the Penobscot River. This is the least expensive method of disposal, but it creates an offensive nuisance and health hazards, particularly in the Kenduskeag Stream. The city has taken a first step to eliminate this condition by having plans prepared for an interceptor sewer, which will collect sewage from lines entering the stream and carry it out into the Penobscot River.

The accomplishment of this interceptor sewer will be an expensive but important step forward in the program to clean up the streams and rivers. Probably this step is all that can be hoped for in the immediate future. However, it is probable that some day this step will be followed by a Penobscot River interceptor sewer and a sewage disposal plant. A site for this plant may eventually have to be located somewhere down stream from Bangor. Until this is done the city should hold the Sterns gravel pit for this use after its gravel has been exhausted.

THE WATER SYSTEM

WATER SUPPLY

The water supply for Bangor is obtained from the Penobscot River. The river water is filtered and chemically treated before being pumped through the distribution system to the two standpipes. Even though the water is absolutely safe for drinking purposes it often has a disagreeable odor and taste. For this reason many of the citizens of Bangor have felt for many years that the city should find a source of better tasting water, which would require a minimum of treatment. The need for a new water supply was given a more "practical" impetus when a survey of the water works in 1944 disclosed that improvements were needed to the extent of \$375,000.00 (1944 prices). In 1949 a referendum was held to determine whether the people of Bangor would accept a water district which would have the authority to tap a new source of water. The water district was defeated.



CITY OF BANGOR, MAINE

MAP 10

Shortly after this defeat the City Council appointed a citizen's committee to investigate and report on the various systems for a better quality of water—The Ranney System, the Ozone System, and the Upland System. They have recently asked for the assistance of a qualified water engineer to provide the necessary technical help. In the meantime another bill for a Bangor water district has been introduced into the State Legislature, and will be voted on at a referendum in 1951.

AREA SERVED

Of particular concern to the Planning Board is the area of Bangor which is served by the water

distribution system. This area is shown on map 10. The area served by the public water system is somewhat more extensive than that served by the sewerage system. This is due primarily to the fact that water lines are under pressure and do not necessarily have to conform to topography, while sewers normally have to follow natural drainage courses.

As in the case of sewers, the largest built-up area in Bangor which is not served by water lines, is in the vicinity of Stillwater Park. However, the Water Department has plans for the extension of water service into this area. The large westerly area of Bangor also lacks water service, which will be required for its expected development.

CHAPTER IX.

PLANNING ADMINISTRATION

THE MASTER PLAN

The preceeding chapters have briefly described the ideas and recommendations of the Planning Board for the future development of Bangor. These interrelated recommendations, which have been illustrated on separate maps in each chapter, added together constitute the Master Plan. Unfortunately, the scale of the maps in this condensed report does not allow the inclusion of a Master Plan map, which would bring together most of the recommendations on one map.

These are the present considered thoughts of the Planning Board for a Master Plan. They are open for discussion and criticism of the people of Bangor, both informally and at a public hearing. After a public hearing, and possible revision, the plan may be adopted by the Board as the Official Master Plan for Bangor.

This does not mean

Adoption by the Board does not mean that the Master Plan becomes a binding plan which must be followed to the letter. Actually the plan is, in most cases, more of a broad outline which will serve as a guide to the Planning Board in the years to come in recommending future improvements. The plan is a recommendation only. Some of the recommendations can be carried out in the near future, some perhaps not for many years.

This does not mean that the Master Plan is finished and cannot be changed. Times change, situations change, ideas change, and plans must change. The Master Plan must be kept fluid; it must be continually revised, added to, and kept up with changing conditions. It can never be set aside as "finished". This does not mean that the Planning Board's work is completed. The Board must not only keep the Master Plan up to date but it must aid in the continuous effort to carry out the plan and other planning functions. The Planning Board's work is not completed; rather it's off to a good beginning.

PLANNING ADMINISTRATION

There are several continuing planning functions which are the responsibility of the Planning Board because of its overall knowledge of the needs for the development of the city as expressed in the Master Plan.

ZONING

Mention has already been made of the need for a new zoning plan and ordinance in Bangor. A new ordinance is needed to provide better protection of residential areas, to better provide for the different classes of business and commercial areas, to replace the present antiquated ordinance, and to carry out the ideas of the land use section of the Master Plan. This project is scheduled for the earliest attention of the Board. The adoption of a Master Plan will give them the basic foundation for a re-zoning project.

After a new ordinance has been adopted by the City Council, then any future changes in the ordinance or in the zoning districts must be recommended by the Planning Board. Changes will undoubtedly become necessary, just as they are in the Master Plan.

SUBDIVISION DESIGN

One of the continuing administrative functions of the Board is to approve the design of proposed streets and lots in new subdivisions. In studying a subdivision plan the requirements of the city and the best use of the land being subdivided will be considered. Particular attention will be given to width, arrangement and location of streets, drainage, lot sizes and arrangement. The Board will consider how the proposed streets fit in with the street section of the Master Plan. With its approval of subdivisions the Board can assure that the city grows in a logical planned manner.

THE OFFICIAL MAP

The City Council has already adopted an Official Map for Bangor, which will be a valuable aid in carrying out the street plan. From time to time, after more detailed study, the Planning Board may recommend that proposed street lines and street widening lines be made a part of the official map by the City Council. This action reserves the land for street purposes, and prevents the erection of buildings which would obstruct future streets and widenings. The official map is an important tool for the Planning Board's and City Council's use and will aid in accomplishing a better street system as outlined by the Master Plan.

A CAPITAL BUDGET

One of the continuing projects of the Plan-

ning Board is to work with the City Manager and Department heads in preparing a year by year schedule of public improvements for a 5 or 6 year period—a capital budget. A capital budget is a financial plan which matches the city's most needed improvements against the city's available funds. It presents those projects recommended by the City Departments and the Master Plan in order of their priority and according to the city's ability to pay for them rather than according to immediate "popularity."

Each year the first year section of the capital budget should serve as a guide in budgeting the city's capital expenses for that year. Each year the capital budget may be revised and a new 5 or 6 year plan prepared. In this way the city adds public improvements in a systemized way, year by year. In this way the Master Plan projects become a reality.

SPECIAL PROBLEMS

In its work of "master planning" the Planning Board has accumulated knowledge and data on practically all points of Bangor's physical plant. The planning office is a storehouse of information which will be continually increased. The Board can well serve the city in applying this knowledge and data to special municipal problems and making recommendations for their solution. The Board is in the best position to aid the city as a "fact finding" group.

The completion of a Master Plan does not end the planning job. The Planning Board must continue to study the plan, revise it as conditions change, and work out its details. In the Board's continuing administrative functions in zoning, subdivision design, the official map, and the capital budget, it must help to accomplish the ideas in the plan. Planning is not a "one shot" operation; it's a continuous process.