

A 12-YEAR COMMUNITY PLAN
FOR
CULVER IN BROOKLYN, NEW YORK

BY
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January 16, 1948

Professor Frederick J. Adams
School of Architecture and Planning
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Dear Professor Adams:

I herewith submit this thesis
entitled "A 12-Year Community Plan for Culver in
Brooklyn, New York" in partial fulfillment of the
requirements for the degree of Master in City
Planning.

Respectfully yours,


Seymour Stillman

Acknowledgements

Many writers of theses present a list of persons to whom they are indebted for contributions. Then it is cutomarily added that all statements are those of the author. In his most recent book, John Gunther devoted 13 double-columned pages to acknowledgements, although "9/10" of the work was the "result of direct evidence picked up by my own eyes and ears". (1)

I am grateful to the entire M.I.T. City Planning staff-Professors Adams, Bender, Greeley, Kelly, McVoy, Rodwin and Shurtluff^e. Studying with them has left a profound impression.

I am grateful to the people of Culver, with whom I have lived for 20 years, who have afforded me an opportunity to know them, their sentiments, needs, and aspirations.

I thank Mr. Israel Stollman, fellow student of planning, a resident of Culver who has given valuable criticism throughout the study.

That which follows is literally mine. The underlying philosophy cannot possible be claimed as a personal monopoly.

(1) John Gunther, Inside U.S.A., (New York and London, 1947), p. 921.

"We, together, can do the work, and take the responsibility. Not we alone -- but we, gathering strength from all who will join us in a great conviction, but always WE....City by city, town by town, the decency of living and the beauty of life remain matters to be solved by the attitude implied by the word We." (*)

(*) Dr. Alan Gregg, "Not 'They' But 'We'", New York Times, (December 14, 1947).

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1.

A. INTRODUCTION: BACKGROUND FOR A PLAN

Old "Breukelen", originally composed of six towns (1), was settled in the early 17th century. The present Culver area, then part of the two Dutch towns of Flatbush (from the Dutch "vlachte bos", or wooded plain) and Niew Utrecht, was colonized because of its fertility and pleasant forest. According to old maps parcels straddling Cortelyou Road and lands in the Foster Avenue vicinity were purchased from the Canarsie Indians in 1635. A boundary dispute, adjusted by arbitration in 1667, placed the northern boundary of Flatbush "along the hills" (2) immediately north of Culver. The cost of obtaining Flatbush from the Rockaway Indians included 4 blankets, 2 pistols, 5 lead bars and one-half barrel of strong beer. By 1834, the towns merged into one city of 24,000 population.

Then, as now, migration was in an eastward direction; as soon as farms and population multiplied, the push was toward the territory now - called Queens. Lands were bought from Indian tribes, woods cleared, and cultivation of virgin lands ensued. The eastern section of Brooklyn, that part called "Newlots", for example, received its name from the process of movement and new subdivision layout.

- (1) Brooklyn Daily Eagle, Brooklyn, (N.Y. 1946)
(2) " " " " , Flatbush, (N.Y. " p.6.

The Culver community was the so-called "Rustengurgh", or resting-place of Flatbush, while the active affairs of commerce and government were carried on in the "dorp" or town, located at the crossroads of Church and Flatbush Avenues. In the area where now stand rows of two-family homes, there were primrose fences, Lombardy poplars shading rural lanes, and wood and brick Dutch farmhouses. From the owners of the farms, men like Ditmas, Caton, and Cortelyou, modern street names are derived.

In the middle of the 19th century, less than 100 years ago, stage coach was the principal means of transportation, and one round trip per day was the schedule out of Flatbush. An inter-village street plan consisted of seven diagonal streets, 4 of which were later completed. The

The road system in Culver consisted of one main through-way plank, with a wide, handsome Ocean Parkway known then as "the boulevard". The boulevard was the quaint scene of horse-trotting and bicycle racing, carriages and leisurely walkers. Where today stretch 6-story apartment dwellings, farms and fields flanked the roadway. Essentially, the parkway, physical road and also intangible flavor has remained. Although the horse and buggy have vanished, one may continue to view horseback riders loping along bridle paths, bicyclists utilizing a recently-constructed path, and on the pedestrian walkways, Sunday

strollers with baby carriages. Even the division of lanes, one for slow-moving traffic, the other for more rapid traffic, has remained: A duality of functions exists in service roads for trucks and central strips for pedestrian cars.

The rurality and wooded beauty which once belonged to Culver, when individual communities like Parville and Kensington possessed a character and sense of independent development, when people organized locally to establish schools and courthouses and meeting places for community religion and representative government, had completely disappeared when the urbanization process took roots. Even in most recent times, were the Brooklyn Dodgers and Ebbets Field, there was in existence a vibrant, community-supported semi-professional baseball team -- strangely (for the moderns) called "The Suburbans" -- which played regularly at an empty field on the corner of Ditmas and McDonald Avenues, "The Suburban Oval"!

A signpost and symptom of urbanization occurred in the waning years of the 19th century, when Andrew R. Culver began operation of a steam line from Prospect Park to Coney Island. Open railway cars, with every seat jammed to capacity and running boards overflowing, with cinders and soot blowing into the faces of both passengers and residents along the route, chugged along what is now McDonald Avenue. For the price of 35 cents, one was able to cut the time of the horse-drawn car and arrive at the

beach on a hot August day. When the smoke-belching Culver car slipped off the tracks, enthused riders leaped out, pushed it onto the rails, and off they went to the ocean. A trolley line and an elevated rapid transit line have since replaced the original, crude mass transportation method, with concomitant improvements in operation and speed.

The omni-present sign, "To the City", located at all Brooklyn transit stations is ironically misrepresentative for a borough which houses a population equal to that of the combined populations of Bombay in India, St. Louis in Missouri, the State of New Hampshire, and 5 cities containing 25,000 persons each! There was an era when "To the City" signified Brooklyn's forest and open spaces. Today, however, Brooklyn is densely populated, and the people have evolved into a mass of "straphangers" riding to the magnets of employment in Manhattan below 59th Street. A rapidity of growth in the last 60 years, with immigration unbridled, a network of bridges spanning the gap between Manhattan, the work center, and Brooklyn, the bedroom center, a highway system still expanding, and a large-scale transit mesh, carried Brooklyn from a cowpasture of 4,400 inhabitants in 1750 to a giant metropolis of almost 3 million.

There are youths today, nonetheless, who can recall vividly that 15 years ago, within a block of any house, there were huge vacant fields in which to play baseball and football. Many of the older gents tell stories about "Farmer Brown's" chickens on the site where now an apartment house looms. Those memories are real.

Today, Culver, and other communities like Culver, cannot hope to return to "the good old days": It may not be desirable to return. However, when housing and business cover all of the land in inharmonious fashion, when blight is seen as evident in certain sections of the community, when there are no longer open fields in which children can run and revel, when there is no place of recreation save the hard pavement of the city streets, when the philosophy of the "community" has disappeared, then it is time for the people of the community to act.

It is the purpose of this thesis to point the way; to suggest how the community can be recaptured while the citizenry continues to maintain a universal approach; to suggest what lines a comprehensive community plan might follow; to assess the costs involved and the benefits to be gained by the people. It must be emphasized at the very start that without other communities acting in a similar manner, there can be no long-range plan for Culver, since there are an infinite number of interrelationships among communities and between an individual

community and the totality. There is the obvious economic dependence, wherein a regional approach becomes the dominant factor for any study. Schools, highways, transportation, recreation, etc. are physical aspects which especially for a long-range study must be on a wider than community level.

In order to allocate public funds for community improvements, there must necessarily be a thorough study of all communities to ascertain the question of priorities. After a further city-wide analysis Culver may not be considered as needy as other areas, like Ridgewood or Williamsburg for example; thus, the timing of public works may not be what is altogether presented in this report. There may be modifications or postponements. On the other hand, a community plan -- as well as similar plans for the future development of other communities -- is vital to arrest incipient decay in a number of places, and to provide the inhabitants urgent recreation, education, and shopping facilities which are either completely lacking or so antiquated and unplanned as to be inefficient. Fortunately, Culver is strategically located in relation to work centers. Swift and efficient mass transit exists. Measures should be taken to make Culver a pleasant community.

There can be two types of plans for Culver. One scheme would be sweeping and bold, and possibly expensive.

It would plan the area as a place for living, and playing, in relation to a comprehensive city plan. The second type of plan would deal with temporary treatment of certain harmful conditions and tendencies until a more thorough examination and a more comprehensive, long-range cure could be applied. It is the latter, emergency design which will be regarded in this thesis, "A 12-year Community Plan for Culver."

If there is no plan, it is felt that a slow process of mounting blight would overtake and destroy Culver just as it has other Brooklyn communities.

THE COMMUNITY

Since this study undertakes to make proposals for a "community", perhaps we ought to discuss what we mean by a community, what we mean by "Culver", and why we selected the community as the planning unit.

A geographic community doesn't signify provincialism. There are services and activities which by their very nature must operate on local levels. Thus, mother buys her foods at the corner grocery, sends her child to the nearby school, borrows a novel from the local library, and talks with her neighbors on the porch of her house on a summer evening. However, politically, religiously, socially, economically, and culturally, the community citizen is "part of the mainland". No amount of geographic segmentation could disintegrate larger loyalties or circumscribe the life of an individual. He is not artificially confined to a physical community by official fiat. He still belongs to the labor union or National Democratic Club. He still is part of a universal Church. He still has college chums in The Bronx and discusses world-wide styles in clothes. He still works in Manhattan or Jersey City, and shops at Macy's. He still roots for "The Dodgers", visits Carnegie Hall and Radio City, and swims off the Long Island shores. It is thus apparent that community-consciousness and larger parti-

cipation can and do co-exist. The geographic community is not as important as the social and planning community, yet is needed as a basis for the latter functions.

The community is difficult, not impossible, to define. Although it is a shifting, elusive structure, it shows evidences of sentiment and tradition which preserve the community. There are local shopping nuclei like 13th Avenue and 18th Avenue. There are churches and schools ~~and~~ which have special community significance. The best criterion is to ask a person who lives in the area! Or, walk along the street, stop any passer-by and ask, "What part of Brooklyn is this?" It may be that a community is an intangible feeling that one belongs to an invisibly defined area. A subdivision couldn't possibly outline a homogeneous community, but a unit which approaches a balance of the physical and spiritual entity can be worked out. Spiritually, the land immediately Southeast of Culver might be considered part of the community, but for effective physical planning it was deemed wiser to omit it. Finally, the community line must be drawn at some point, and in this sense some arbitrary designation must result.

Why "Culver"? Within the area selected, there are slight differences of opinion as to names, ranging from general terms like "Flatbush" or "Boro Park" to more res-

trictive terms like "Midwood", "Kensington", even "Ocean Parkway" and "New Utrecht". Partly because "Culver" will be redeveloped, partly because "Culver" has historical significance, partly because "Culver" is the name of an important elevated line which traverses the area, and partly because "Culver" is offered so as not to offend groups which disagree on terminology, this term was used.

Aristotle had the feeling that size limitation was vital for community association. In his "Utopia", more set up neighborhood units and 54 cities, 20 miles apart. Cooperative colonies containing 500 to 2,000 population were the limits set by Robert Owen. Ebenezer Howard's garden city had a quota of 32,000 "for the full measure of social life". Many have assumed that 2,000 to 5,000 people should serve as the nucleus of a neighborhood, with the elementary school as the geographic and social center. There has been this constant feeling that size of population must be limited if natural social interaction is to be maintained.(3)

Many departments of New York's city government have subdivided the city into convenient districts, for the entire area is too unwieldy and a break-down allocates work and service more efficiently. In Brooklyn alone, there are over 100 administrative and political districts--arbitrary, overlapping, and often without reason. In the

(3) Seymour Stillman, Fill Every Stone Shall Be Articulate, (Cambridge, 1947), p.6.

Culver community, about 25 public and private districts exist, besides further divisions for census-taking, voting, and market studies by some newspapers and business concerns. The Health Department employs "Health Districts" and smaller "Health Areas" approximating population-served areas via census tracts as bases. In this way, statistics can be compared from year to year. A map containing health district lines shows that perhaps there was some regard for community boundaries as well.

Local Improvement Boards in Brooklyn were empowered by Charter to initiate local public works. Reduced in number over the years, these Boards remain today, but do not function.

Under the 1938 Charter, Borough Advisory Planning Boards were instituted, with the recognition that decentralization of planning functions was necessary in a city too large for totally-centralized activities and where localities had a better understanding of their particular problems. These Advisory Boards, like the Improvement Boards, exist in name, but are functionally defunct, in Brooklyn.

Thus, it is seen that a subdivision of the larger city into units for convenience, efficiency, distribution of labor, better service, and more effective translation of local needs and wishes have been the objectives of the past and of the present. It is believed that the rationale of subdivision must be retained in a newly-created "Community Planning" group.

Although in many cases, census tract lines can be used for delineating community boundaries, natural boundaries are not considered by the Bureau of the Census. Although some communities are fluid and nebulous, the study of Culver attempts to confine the community by obvious boundaries: Ocean Parkway, 200 feet wide, to the east; New Utrecht Avenue, with a B.M.T. elevated line, to the west; Ft. Hamilton Parkway and Caton Avenue, major highways, to the north; and the L.I.R.R., with its depressed trackage to the south. Census tracts are convenient for study purposes, but the community outline seems more important for designating local units. If there are to be changes, the natural community should not be reshaped to conform to census lines; rather, the census divisions should be realigned to fit the community pattern. In this way, future data can be collected and compared in conformance to community boundaries.

Political or rigorous geographic units are not satisfactory for economic purposes (4) -- employment, for example, cuts across such lines -- but where there is a community flavor, it seems wise to capitalize on such intangible but real atmosphere for relating planning programs to local needs. After all, the desires of people are foremost considerations in democratic planning, and the vehicle for amalgamating and crystallizing a people's program and for materializing objectives is a welded community organization based on the physical community. Then a community could be planned at the roots. It would slowly acquire distinction suited to its sentiments. Stronger community identity and belonging would be generated from physical development achieved by cooperative endeavor. A symbol and climate for further responsibility would ensue. Local participation and articulation would become the framework of democratic planning, wherein neighbors gather on representative councils to discuss a community program with which they are concerned and by which they are affected. In this process, the sprawling, complex city is replaced by an effective unit which is understood by the individual.

(4) Carter Goodrich, et. al., Migration and Economic Opportunity, (Philadelphia, 1936).p.318.

THE PEOPLE

Within the 1,000 acres of Culver, there lived over 95,000 people in 1940. Females outnumbered males by 1300, a ratio of 1.03 to 1.00. The areas show the place of immigration in Brooklyn history, for 35% of the population was foreign-born. About one-half of them emigrated from Russia and Italy, with a sprinkling of Polish-born persons in the northwest section. Native whites number about 62,000, 65% of the total, while negroes and other races accounted for approximately .3%. About 2/3 of the population was over 21 years of age.

Boys organize social-athletic clubs, wear flashy satin jackets or lettered sweatshirts, hold meetings in basements of homes, vacant stores or auto garages, and play in Macadam Streets. A few fortunate groups have attached themselves to Church and Synagogue activities and therefore are able to meet in gymnasiums, and hold dances in decent halls. Active outdoor recreation, which once took place close to the home in open fields, is vanishing. The lots have been covered with buildings. Vacant land today is too small for games, and has evolved into rubbish grounds and fertile areas for unsightly sprouting weeds.

Sometimes the police close off a street and allow children to play; sometimes the police cruise around in squad cars and chase playing children from the streets. The older boys go to the numerous ballfields of the 40-acre Parade Grounds, which are located about $\frac{1}{4}$ mile north-

east of Culver; on Sundays, families might go to 500-acre Prospect Park, just north of the Parade Grounds.

About once a year, some section of Culver has a "block party". A street is closed. Neighbors supply foods and drinks. People sing, dance, and feast. The local Democratic Club held such parties for the children, and the grand finale was a parade with political ~~place-cards~~ placards.

In addition to purchases in the drugs store, people gather to discuss politics and local gossip. In some parts, it is the corner candy store which fulfills the "general store" function.

Little girls jump rope and play "potsy" on the sidewalks; little boys play games invented for hard-surfaced city streets --- boxball, stickball, punchball. The investment is 5 cents for a rubber ball; the equipment consists of a stick and chalk. Spectators view the games from seats on candy store newsstands or grocery store fruit crates.

Mothers wheel baby carriages along Ocean Parkway's walking lane. Teen-agers spend their evening social hours at the same spot. Horses and bicycles are common along the Parkway.

On the day of rest and worship, the Church-goers are dressed in Sunday clothes, and the children in week-end dress are envious of those who play marbles and "Johnnie on the pony". The quiet holiday atmosphere of Christmas

and Easter, of Rosh Hashonah and Yom Kippur; the humid summer days, when sidewalks steam and the fire department employees allow children to get under the cool fire hose; the seven-fifteen p.m. rush of boys from their homes onto the streets to discuss the local baseball game, the result of which has just been announced; the summer exodus to the Catskill mountains and the beaches along the Atlantic coast; the Saturday night subway trip to Manhattan or downtown Brooklyn to see the latest Hollywood production; the summer evening open-air, free Goldman concerts in Prospect Park; the millions of passenger fares collected on the transit stations within Culver, and the subway riders who spill over to Manhattan's downtown for daytime occupations--all of these ingredients whipped together make Culver.

POPULATION PREDICTION

Population predictions for a community are difficult because of many limiting factors, particularly the lack of past inter-community migration studies and the absence of borough, city, and regional analyses of population movement. Borough and urban trends are important in the consideration of any segment of the whole, since regional trends are more indicative of basic changes in the population pattern and the community is only part of a wider economic base which affects sharply both the totality and the specific smaller area. We, therefore, make certain assumptions both in our predictions and in the use of forecast figures:

(A) The cardinal premise is that short-term predictions are the most functional for approaching any degree of accuracy, while long-term forecasts are vital for the "implications" demonstrating future trends in the characteristics of the population.(5) "In a dynamic world, forces in operation are seldom allowed to work themselves out before other factors make themselves felt. Consequently, any type of mathematical trend may 'work' only for a relatively short period."(6)

(5) National Resources Planning Board, Estimates of Future Population Of The U.S. 1940-p. 36.

(6) Frederick Croxton and Dudley Cowden, Applied General Statistics, (New York, 1941), p. 462

(B) Whatever the estimates be, the planning agency must be flexible both in design and execution of proposals so that variations in the actual populations vis-a-vis estimated population, due to unforeseen factors or error of judgment, can be absorbed.

(C) The 12-year rebuilding or rehabilitation plan presented for Culver has been considered a short-range scheme, to be executed by 1960. Since it is necessary to discover future population as the basis for any planning, we must ferret out the reasonable factors within the community, predominantly, building activity, birth and death rates, and family size and develop some logical pattern for reaching conclusions. In making plans, private or public, for the future development of an urban area, region or community future population must serve as the basis, for the "essence of planning" is to estimate the total numbers and distribution of age groups which will reside in a given space and then to provide the necessary facilities and services needed. (7)

(D) No long-range community plan seems adequate without initial or at least concurrent regional planning. Since the future population of an area depends upon a combination of regional economic factors, aspects of suburban

(7) Regional Plan Association, Inc., The Economic Status Of the New York Metropolitan in 1944, (New York, 1944), p.1.

magnetism, inter- community migration, future public policies in regard to the land, and historical dynamics, other communities must be studied in relation to Culver so that inter-community trends can be analyzed and a system of priorities and allocations established in order that that "first things come first!" Thus a wider area must be considered in terms of long-term influence upon any specific urban unit before forecasts for that unit can have definitely meaning or be properly acted upon. Since such a study would entail undue research, it had to be excluded in determining Culver's population.

(E) It is realized that economics, although more significant ^{than} mere excess of births over deaths in population determination (8), cannot, therefore, be an operational base for estimating future population of an individual community. The less satisfactory method had to be used: for a short-range forecast, however, it might prove adequate.

(F) For birth and death rates, survival ratios, fertility rates, and distribution of the age structure, city and borough trends were evaluated and projected into the future. Thus, for example, those between the ages of 5 and 14 formed 15% of the total Brooklyn population in 1930; in 1940, this age - group decreased numerically and proportionately to 12% of the total. In contrast, the older age groups showed gains in that period. The use of past tendencies in

(8) Regional Plan Association, Inc., Op. Cit.,

the other factors related to population prediction seems reasonable, unless of course radical, indeterminable deviations occur because of increased living standards, advances in medical science and public health, etc..

Since we have in Culver a mere segment of a whole, we had to arrive at future population by some working method. We know the present population, and available vacant land suitable for building, and we can estimate future births and deaths, family size and age distribution. Without ascertaining a migration factor, we assume that once population and available dwelling units have been projected, those who cannot be housed will move elsewhere.

Given the population of Culver in 1940, we can employ a simple formula P_{45} equals P_{40} plus $5(b-d)$, where P_{45} is the population in 1945; P_{40} , the 1940 population; 5 is a 5-year interval; and b and d are the number of annual births and deaths. Of the existing 22.5 acres of vacant lands in the area, only 10 acres are estimated as practical sites for residential construction. Those lots considered unsuitable for house construction are located under elevated lines or along a railroad cut. The fact that only 10 acres are potential residential sites limits the net immigration after 1945 to 2,000 people, or employing 3.7 persons per family as the average household size, an absolute

increase of 405 dwelling units from 1945 to 1950. This conclusion is based partly on the assumption that demolition of dwellings will be a negligible factor, since between 1940 and 1945 only 10 units were abolished despite some 350 units over 40 years of age. However, from 1950 to 1960, it is probable that with 350 units over 60 years of age, and about 9,500 units over 30 years old, there will probably be increased demolition activity over and above new construction, unless the neighborhood environment is amended for the better, or local sentiment be so powerful as to retain families in the section. Following is a numerical picture of how future population was calculated:

BIRTH AND DEATH RATES (9)

Births/1,000	Year	Deaths/1,000
35.0	1900	20.6
28.5	1919	16.0
23.5	1920	13.5
17.5	1930	11.2
14.8	1940	10.5
14.0	1940-1945	10.2
20.0	1945-1950	10.0
12.5	1950-1955	10.0
12.0	1955-1960	10.0
11.0	1960-1965	10.0
10.0	1965-1970	10.0

(9) Statistics from the New York City Health Department.

POPULATION FORECAST

<u>Year</u>	<u>Increase of Births over Deaths</u>	<u>Potential Population</u>
1940	----	95, 167
1940-45	1900	97, 067
1945-50*	4850	101, 917
1950-55	1275	103, 192
1955-60	615	103, 807

<u>Year</u>	<u>Population In New Dwelling Units</u>	<u>Increase Pot. Pop.</u>
1940-45	7504 (10)	265 7, 769
1945-50	9769	490 10, 259
1950-55	10259	125 10, 384
1955-60	10384	105 10, 489

TOTAL POTENTIAL POPULATION IN 1960 (11)...124,298.

* Post-war birth rate estimated at 20/1,000. A slowing down and eventual return to the downward curve is foreseen.

However, since the number of housing units would be:

25, 715 Dwelling Units 1940

1, 500 " " 1940-45
405 " " 1945-50

27, 620 Total D.U. 1950

1, 363 5% Vacancy

26, 257 Total Occupied D.U. 1960

With 3.4 persons per average family, the actual population housed would amount to: 89, 273.

Thus, a migration from Culver would total: 35,025 1940-1960.

Thus, predicated population for 1960 is: 89,273, or a 5, 894 decrease (6%) from 1940. This is a 5% increase over 1930's population of 85, 003.

- (10) 8% increase in the number of families adapted from the 1945 N.Y. Times Census.
(11) Potential population is the number which would naturally accrue from the birth-death difference.

Average Persons Per Family

<u>Year</u>	<u>Number</u>
1900	4.6
1910	4.6
1920	4.4
1930	4.0
1940	3.8
1950	3.6
1960	3.4
1970	3.2

In determining the distribution of population by age-groups, survival ratios and birth rates were employed. For 1950, the 1940 population was projected via survival ratios. The 1960 percentage distribution was calculated from a survival projection of the 1950 population; however, since we calculated the total population for 1960 above, we accepted that figure and merely applied the 1960 percentage distribution adjusted to N.R.P.B estimates for U.S. population,* in order to arrive at the age structure.

* NRPP, Op. Cit., p. 132, Table 20.

An analysis of age distribution in 1960 has great significance in the planning of improvements for Culver. As can be readily seen from the table of distribution, those in the younger age groups will form a smaller proportion of the total population than in 1930 or 1940. Whereas those less than 14 were 25% of the total in 1930, in 1960 it is expected that they will drop to 19% of the total. However, the groups over 45, which amounted to only 21% of the total in 1930, will probably rise to a proportion of 35%. Those in the 15 to 44 age group, perhaps the most productive from point of view of employment and child-bearing, formed 54% of the population in 1930; in 1960, it is estimated that they will decrease to 46% of the total.

Thus, there should be thought applied toward planning for the type of age structure which will be in existence in 1960. The number of school children expected to register in elementary schools will be lower; thus fewer schools, or an equivalent number of schools with fewer pupils per classroom, will be needed. Older people need quiet park areas, social activities in community centers, and smaller apartments in new housing construction.

With immigration laws as they are, a greater number of Culver's people would be native-born in comparison to foreign-born. Whether the effect (of Americans who might seek

better living quarters in the suburbs) would be an exodus from an older Culver community is difficult to answer, but worth considering.

Although further study ^{would} necessarily have to be applied before Culver's distribution of occupations and industries could be ascertained, the accompanying table on page 26 gives Brooklyn's range of employment. It may be assumed that Culver has approximately the pattern shown for the borough. However, rather than translate the pattern, which could not be accurate, we offer it as a clue to Culver's employment source. Over 50% work in Manufacturing, wholesale, and retail industries. Over 50% are in clerical or operative occupations.

EMPLOYMENT DISTRIBUTION IN BROOKLYNOCCUPATION GROUP

Clerical, Sales	277 036	28.1	162 733	114 303
Operatives	237 753	24.2	156 536	81 217
Craftsmen, Foremen	121 571	12.3	117 777	3 794
Service Workers	113 649	11.6	64 060	49 589
Proprietors, Foremen	100 471	10.2	92 305	8 166
Professional & Semi-Prof.	74 918	7.6	47 144	27 774
Laborers	46 708	4.7	45 349	1 359
Other	12 290	1.3	8 186	4 104
Total	948 396	100.0%	694 090	290 306

INDUSTRY GROUP

Manufacturing	315,736	32.1	214,563	101,173
Wholesale & Retail	215,145	21.9	165,495	49,650
Transportation & Public Utilities	84,993	8.6	74,577	10,416
Personal Services	76,960	7.8	30,817	46,143
Professional	75,075	7.6	38,391	36,684
Finance, Real Estate, & Insurance	62,612	6.4	43,885	18,727
Construction	46,373	4.7	45,185	1,188
Government	40,573	4.1	34,481	6,092
Other	66,929	6.8	46,696	20,233
TOTAL	984,396	100.0%	694,090	290,306

EXISTING LAND USE IN CULVER

<u>USE</u>	<u>AREA (IN ACRES)</u>	<u>% OF TOTAL</u>
Residence	509.0	47.0
Commerce	119.6	11.0
Industry	26.9	2.0
Public Bldg. Sites	12.3	1.6
Public Playgrounds	4.8	.4
Semi-Public	47.3	4.0
Streets	349.2	32.0
Vacant	22.5	2.0
<u>Total Area</u>	<u>1,091.6</u>	<u>100.0%</u>

RESIDENTIAL STRUCTURES IN CULVER

<u>TYPE</u>	<u>NUMBER</u>	<u>PERCENT</u>
Single-family Housing	2,363	30
Two-family Housing	3,400	43
3-or-more Family Hsng.	2,124	27
Total Structures	7,887	100 %

LAND USE:

Land use in Culver is characterized by an excessive ratio of gridiron streets and elongated commercial frontage, an utter lack of community cultural, social, and recreational space, antiquated school plants, land crowding, and incongruous land uses. There are blighted areas paralleling elevated lines and surrounding commercial zones.

RESIDENCE:

Culver can be considered as one of the "bedrooms" of Manhattan, for many of Manhattan's workers reside there. Residential land accounts for 49% of Culver's 1,091 acres. About 23 acres, or 2% are in vacant lots. In 1940, (12) of the area's 26,000 dwelling units, 78% were tenant-occupied; 17%, owner-occupied; and 5%, vacant or for sale. Of the 8,000 residential structures, 43% were in two-family housing; 30%, single-family homes; and 27%, 3-or-more-family apartments. Along Ocean Parkway, there is practically a solid line of high rental, modern 6-story apartments. The homogeneous area along 15th, 16th and 17th Avenues contains good single and two-family housing. Desirable homes are located in the area surrounded by 18th, Church, Ocean, and McDonald. The most recent development of homes has occurred South of Ft. Hamilton Parkway and West of McDonald.

(12) Bureau of the Census, Census of Housing, (1940)

A very common category of residence in Brooklyn is the multi-family housing above stores. These are particularly noticeable in Culver, where almost without exception every commercial establishment possesses 2 or 3 higher floors of residential use. Along New Utrecht and McDonald Avenues, hosts of families live above stores within the shadows of elevated transit lines. Unfortunately, census tract or block statistics do not portray the true character of erosion prevalent in these districts. The real darkness, dull housing, and grey atmosphere have been masquerading in optimistic costume under the census housing figures.

There is not alone incoherent use of land side by side, as in some cases wherein a single-family house, an apartment building, a garage, and a dry cleaning plant share the land as neighbors, but within one structure there may be a number of unrelated, inharmonious uses. In business areas, a single unit may consist of a retail outlet, a second story of offices or storage, and a third and/or fourth floor for living.

That Culver's dense settlement is relatively recent is borne out by the age of dwellings. Thirty-five percent of the units were constructed from 1920-1929. (Thirty-

five percent of the units were constructed from 1920-1929.) While the borough of Brooklyn had 10%, Culver had 17% built in the decade between 1930 and 1940. Another 46% were developed between 1900 and 1919; only some 350 units, or 2%, date from 1899 or before, while in the entire borough, $\frac{1}{4}$ of the dwellings were built prior to 1899. It might be noted that although over 50% of the housing units are less than 27 years of age, the average age of schools is 35. Thus, housing enveloped school areas, with an attendant result of covering over open spaces, sans forethought of consequences.

Perhaps the greatest barrier to a general pick-up in depressed areas is the elevated structure. Along these rights-of-way exist the worst housing, and vacant and marginal commercial buildings.

Another deterrent^{to} a general revival of depressed sections is the spread of business frontage given impetus by zoning. The zoning regulations condone ribbon development of business along avenues. The areas surrounding business centers have slowly deteriorated. For example, 13th Avenue, which some 15 years ago was comparatively unrecognized as a magnetic shopping street, is today one of the most thriving in the borough. Paradoxically, as 13th Avenue developed in attraction and wealth

and as older stores assumed more modern facades, the commercial crescendo drowned out the continuous drone of blight on all of the immediate interior streets leading into the Avenue. Increased congestion of automobiles, multitudes of shoppers, bus lines, and occasional movement of business into the side streets contributed to the process. Here again, census figures curtain the scene. One becomes convinced by looking at the site, by watching the evolution over a period of time, that a house by house survey would show the actual conditions.

Still another phenomenon which is perhaps more subtle than factors mentioned is a borough-wide spread of blight which is strikingly evident from census figures on housing conditions, population losses from 1930 to 1940, and rentals. The low, rentals, population decreasing, and poor housing conditions superimposed on a borough map show a definite pattern of overlapping; moreover, they throw into bold relief a snowball of blight which is gathering momentum and gaining territory. The origin is in northern Brooklyn. The path of blight is varied, with pincer-like wedges pushing into the Culver area from the west, south of Greenwood Cemetery. Such a borough picture might have been studied in somewhat more detail.

CIRCULATION

Culver's muddled street system is the result of a series of successive unplanned subdivisions. Thus, when streets terminate in one subdivision, they fail to mesh with any street in an adjacent area, making for a jagged pattern. Adding to the inefficiency, streets account for an unproportionate 32% of the total land area. Streets have over 100,000 linear feet en toto. There is no sense of system, with practically all east-west streets containing 100-foot rights of way. There has been no effort to conserve residential areas by limiting through traffic and by some type of belt circulation. The philosophy of the belt is pursued by the city for Brooklyn, with a Belt Expressway, but not for communities.

Ocean Parkway, with a 200-foot right of way, is the main artery carrying the load of autoists to Manhattan or southward to the Belt Parkway system. In 1940, it was suggested that since it has adequate width and is in a strategic location Ocean Parkway should be converted into a limited access express-way. (13) With the opening of the Brooklyn-Battery Tunnel to Manhattan, and the proposed culmination of a genuine belt system connecting the East River Bridges with the Belt Parkway, another link is needed across the Borough of Brooklyn.

(13) Mayor's Committee on City Planning,
City Wide Studies, project #117.

Mass Transportation: Culver is a subway-using community. The West End transit line runs over New Utrecht Avenue. The Culver elevated operates above McDonald Avenue, cutting across 37th Street. Eventually, both lines reach Coney Island at the Southern end, and stretch into Manhattan's subway network at the northern end.

The Independent Subway Line, which terminates at Church and McDonald Avenues, will soon operate over a connecting ramp along McDonald Avenue between Cortelyou Road and Avenue C, thus intertwining the Independent and B.M.T. systems. Since some \$20,000,000 has been earmarked by the Board of Transportation (14) for the connection, and for rehabilitation of the Culver Line, it is safe to assume that the elevated is fixed for some years to come.

As evidence of the importance of subway travel in Culver and vicinity station fare collections can be tabulated. In 1946, the number of passenger annual fares collected at all Culver stations amounted to over 19 million. Assuming a 6-day work week, this ^{means} 62,000 persons use eleven transit stations daily. This is in addition to the figures (which could not be calculated from totals for entire lines) for all bus and trolley lines which cut across the area and connect with all parts of Brooklyn.

(13) New York City Planning Commission,
1947 Capital Budget.

ANNUAL FARE COLLECTIONS
AT CULVER TRANSIT STATIONS
(12 mo. Ending June 30, 1946) *

WEST END BRANCH

<u>Station</u>	<u>No. Annual Fares</u>
Ft. Hamilton P'Way	3, 031, 548
50th. Street	3, 211, 214
55th. Street	2, 249, 247

CULVER LINE

Ft. Hamilton P'Way	4, 413, 770
13th. Avenue	1, 404, 868
Ditmas Avenue	1, 119, 768
18th. Avenue	1, 1433, 943

INDEPENDENT SUBWAY

Church Avenue	6, 525, 204
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<u>TOTAL</u>	\$19, 388, 557
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(*) N.Y.C. Board of Transportation Records.

Railroad: Bordering Culver on the South is the depressed L.I.R.R. trackage, with auto overpasses traversing the cut at all street inter-sections. A freight line which runs from Brooklyn's coast on the West to Coney Island uses the McDonald trolley tracks. These tracks lie on the street surface, below the Culver Transit. Since the freight line plays a minor role in servicing Culver's industrial section, and since the run is made only three times daily, it is conceivable that the line could be stopped. Trucks could service the fruit produce markets. If someday, also, the trolley line along McDonald could be ended, supplanted by a bus route along Ocean Parkway, then McDonald Avenue would become a local street without hindering trackage. A more adequate neighborhood unit, with P.S. 134 as the nucleus, and without a major crossing for school children, would be effected.

COMMERCE.

Business use is 11% of the total land area. Along New Utrecht and McDonald Avenues, vacant and marginal stores abound. A walk along either of these streets, under the Elevated, would bring this condition into dramatic focus. Both ends of 13th Avenue, from approximately 50th Street westwards and from 39th Street eastwards, are depressed commercial areas. Blighted business

areas are found within interior streets and near industrial sites.

Shopping is strung out along 18th Ave., Ditmas, and Church Avenues. It is spotty along almost every other avenue. In recent years, 13th Avenue has ascended into the dominant shopping position of Culver and surrounding communities. Despite the fact that Manhattan, and other Brooklyn shopping nuclei attract Culverites--Dept. Store areas particularly--still a huge volume of business is done on 13th Avenue. With an efficient, planned arrangement of shops in a real center, with provision for adequate off-street parking, and with the addition of some much-needed amusement facilities, such as a movie theater, bowling alleys, etc., 13th Avenue would attract an even greater trade--if even for the novelty of a planned shopping center in Brooklyn.

PUBLIC LAND

Besides the 9 schools in the area, Culver contains a Police Station on Lawrence Avenue, near Ocean Parkway; a Fire Station on Foster Avenue near McDonald. Rented stores house 2 public libraries, one on McDonald near the Ditmas Avenue transit stop, the other on 13th Avenue off 52nd Street.

A new 66th Precinct Police Station has been suggested by the Capital program of the New York City Planning Commission; the site is yet unselected.

A new library will be constructed to replace the existing one on 13th Avenue; the site, not yet chosen, is suggested for the same general vicinity.

Perhaps wherever efficient and/or desirable, public buildings could be grouped into one pleasant center.

SEMI-PUBLIC LAND

Culver's 47 acres of semi-public, tax-exempt land contain churches and synagogues, a Doctor's Hospital on 15th Avenue, a Hebrew College on 13th Avenue and 50th Street, and a Parochial College in the northeastern corner of Fort Hamilton Parkway.

Some of the synagogues, notably one on Ocean Parkway and Ditmas and one at Ocean and Church, and a few of the churches have indoor recreation facilities and community center activities. Although these are private, they should be considered in any comprehensive plan of indoor community recreation.

INDUSTRY

Accounting for 2% of the total land, industry is rather compact, grouped from 37th to 39th Streets, north of 13th Avenue. Except for loft building storage, and some coal yards, the significant light industry is fruit and grocery produce. The foods are hauled predominately by truck, and redistributed to retail stores in the area. Although there is some freight transportation, which unloads on a railroad siding, this method is insignificant.

There are some cases where industry mingles with residence to the detriment of both land uses.

LIBRARY

The New York City Planning Commission has recommended two new libraries to replace the existing inadequate rented stores in the general areas where they are now located. (14) The following charts taken from the study show the inadequacy of the facilities and plant. Both the Kensington and Boro Park Branches serve more than just Culver. If only a limited number are to be served, perhaps the Boro Park branch might be built in Culver, with the one proposed for Kensington in another community.

(14) New York City Planning Commissions, Program For The Public Libraries of New York City, (1945).

EDUCATION AND RECREATION

The inadequacy of the New York City education system to meet modern objectives will not be treated; the Public Education Association in a joint study with the New York State Educational Conference Board issued an extensive report on almost every phase of education in New York City (15). In this section, we are interested in showing trends in enrollment, the status of physical plants, and the amount of recreation area which Culver possess.

The philosophy which underlies the school planning program has been borrowed from Henry Cohen who, in his study of school-community relationships, attaches three vital functions to the school (16):

(a) Education for the "complete child": Culture, supervised play, and health are school responsibilities. For example, a school lunch program has been instituted recognizing that nutrition is an important part of a child's development, but the need for modern lunch-rooms as a functional unit of the school plant has been overlooked.

(b) Adult Education Center: In 1943, when the W.P.A. adult education program ended, only 4% of the Brooklyn schools had such programs. There is need for a wider use

(15) The New York State Educational Conference Board and the Public Education Association of New York City, Fiscal Policy For Public Education In The State Of New York, 1947

(16) Henry Cohen, A Study Of School-Community Relationships In Brooklyn, New York,

(Brooklyn Council for Social Planning), 1944.

of the schools for instruction in cultural and vocational subjects, child care and psychology, and consumer education.

(c) Community Activities Center: The teacher must know the child's social and economic environment, and the family must have closer contact with the teacher and the school's activities. Such an arrangement would stimulate fuller understanding.

A fourth category might be added: "Decentralization" of the school system into community divisions "for more manageable units" (17)

Average Attendance In Culver's Schools:

There is not one public school in Culver which exhibits a rise in attendance. From 1930 to 1945, there was a decline of 35% in the number of children attending elementary schools, and a drop of 26% in those attending the Junior High from 1935-1945. Despite the fact that the population of Culver increased 12% from 1930 to 1940, the downward trend in school enrollment continued. Although the average school plant was designed to contain approximately 45 pupils per classroom, the present average is 25.

The decline in school population is evident throughout New York City. New York reached a peak of 820,000 elementary and junior high pupils in 1931, and declined

(17) Benjamin Fine, "Education in Review", New York Times, (December 14, 1947)

33% to 1945. Manhattan dropped 60% from 1920 to 1945, and Brooklyn 18% in the same period. In the Northern Part of Brooklyn, dozens of schools were abandoned when industry invaded residential areas, and the latter lost population and deteriorated. (18) In Brooklyn there are 11,000 classrooms with 450,000 sittings, yet only 200,000 pupils are enrolled. Thus average classrooms designed for 40 pupils contain 18, an average of 2 seats for every child.

School	Age in Years		Facilities Point Score	Age-Facilities Index
	1947	1960		
P.S. 103	51	64	5.0	.09
P.S.	46	59	4.0	.09
P.S.	46	59	3.1	.07
P.S.	37	50	6.9	.18
P.S.	32	45	7.0	.22
P.S.	22	35	7.0	.32
P.S.	23	35	9.3	.40
P.S.	17	30	10.1	.59
J.H.S.	17	30	37.0	2.18

(18) Information gathered in conversation with Bd. of Education officials.

School Plants and Recreation:

The average and median year of construction of all Culver schools is 1912. One was built 1896; 2 in 1901; 1 in 1910; and only 2 were constructed as late as 1930. Although a weight-system for facilities doesn't indicate size or adequacy of gymnasiums, auditoriums, and special rooms, it does give a comparative picture of facilities. The basis of a "facilities point score" is as follows: playground, 3 points/acre; 1 auditorium, 2 points; 1 library, 2 points; 1 gymnasium, 2 points; 1 lunchroom, 2 points; an assembly room, 1 point; 1 special room, 1 shop, 1 laboratory, 1 point each. A minimum "facilities point score", which contains 1 of each and 8-acre playground (19) would total 35. Despite the high score of J.H.S. 223, it contains only 1 acre of playground, it would need 8 times that amount to serve a neighborhood population of 15,000, using a minimum standard of 1 acre 1,750 people.

Of the total number of 9 schools, 4 have no playgrounds whatsoever, while the 5 which have open space contain a combined total of 3.8 acres to serve the community of 95,000 people; 6 have no assembly rooms; 2 have no auditoriums; 5 have no libraries; 6 have no special rooms or labs or shops; 1 has no gymnasium of any type.

(19) F. Dodd McHugh, Cost Of Public Services In Residential Areas, (New York, 1942), p. 1414.

There is no High School to serve the area. Students of high school age travel by mass transportation to attend schools in other parts of the borough. Some walk to Midwood and New Utrecht High Schools which are over a mile from Culver's boundaries. It is estimated that there are some 3,800 high school pupils who go outside of the area for their education. Assuming that approximately 15-20% of these would attend special vocational, trade, and prep schools, 3,000 could be attending a High School within the area.

It is true that 525 acres of park are located within walking distance of northeastern Culver residents. In addition, there are some 40 acres of active recreation space just south of Prospect Park. Ocean Parkway has a special lane for bicycles, a wide bridle path, and a strip of tree-lined sidewalk for bench-sitters and strollers. However, the Culver community contains only 4.8 acres of local playgrounds. Compare this very low amount with requirements. According to many standards, local playgrounds, playfields, and parks should take up approximately 3-5 acres per 1,000 population served; in a community with about 100,000 population, this would mean a minimum of ^{300 acres of} open recreation and park. In addition to standards of acreage per population, there have been ideas

on how large a minimum playfield or playground should be, and the effective radii of these areas to serve a given population. (20).

Culver missed the opportunity to retain open spaces before the regrettable land crowding. In the middle of the 19th Century, ^{"parkway"} neighborhoods were suggested by landscape architects. (21) In 1916, The City Club of N.Y. issued an unheeded plea that "if we are to have residential districts within our crowded cities, we must have recreation space". (22) The Burnham plan for Brooklyn recommended a comprehensive development of parks, athletic fields, and school playgrounds" (23) in the Culver vicinity.

In a built-up urban area, standards seem difficult to follow. They should, however, be used as yardsticks when thorough studies are made in regard to a long-range recreation plan for the community. In this study, the short-range attitude is to locate new playgrounds adjacent to schools, a policy being started on a larger scale by the Board of Education in conjunction with the Park Department, with an approximate standard size of 5 acres. Wherever possible, land costs are taken into consideration, and existing vacant lots

(20) National Recreation Association, Chicago Plan Commission, Cambridge City Planning Board and Kansas City Planning Commission have pretty well agreed on Minimum Standards.

(21) Olmstead, Vaux & Co. Observations On the Progress Of Improvements In Street Plans (Brooklyn 1868.

and public streets woven into the system where feasible.

It should be recognized that large parks are necessary for borough-wide use. Here, picnic grounds, concert malls, dance pavillions, lake recreation, and generally larger activities, take place. However, the neighborhood park, and the local playground, within reasonable walking distance of home, which people, particularly children, can reach without crossing dangerous roads, without travel via subway or streetcar, are valuable community assets. Thus, although huge amounts of capital expenditures might be warranted for expansive Marine Park or Dyker Park in Brooklyn, it seems that local play areas should receive the attention it deserves and lacks in Culver.

- (22) The City Club of N.Y.C., A Plea For The Preservation Of Our Small Parks As Neighbors Centers, (N.Y. 1916) p. 3.
- (23) Brooklyn Daily Eagle Brooklyn City Plan (January 18, 1914), map.

CITIZEN SUPPORT FOR COMMUNITY PLANNING.

The value of community organization for citizen participation in plans and for securing city funds for local improvements will not be assessed. Public support of planning is a recognized tenet among many City Planners. The following is a method for organizing Culver's groups into a Community Council for Planning Action.

In 1911, Reverend Dr. Newell Dwight Hollis became intensely interested in the consequences of crowded urban living. He delivered a series of addresses in Plymouth Church up in Brooklyn Heights, and received much newspaper support. Reverend Hollis spoke of a "city useful" and a "city convenient", of regional planning for all of Brooklyn, Queens, and Long Island, and of halting the suburban exodus. (24) He stated that "only apoplexy and Greenwood Cemetery" would cure the shortsightedness of our public officials. (25) The Reverend's pleas bore fruit, for in 1912 Borough President Alfred E. Steers appointed a citizen group, called the "Brooklyn Committee On The City Plan." The Committee acted immediately: the illustrious Daniel H. Burnham was invited to study Brooklyn and recommend a comprehensive plan "to cope with and control an orderly development of the borough". (26)

(24) "Planning to Make Brooklyn A City Beautiful,"
New York Times, February 4, 1912.

(25) Brooklyn Daily Eagle, Brooklyn City Plan,
(January 18, 1914, P.4.

(26) Ibid., p. 3

Thus in addition to foresight ere urbanization became an entrenched phenomenon, and proposals many of which have been carried out since and many of which are progressive even for today, we have a precedent for active public participation, participation given government approval and aid.

Since that time, there have been setbacks. In 1930, the Borough President vehemently opposed the creation of a City Planning Board. A Brooklyn Borough Advisory Planning Board was created under the 1938 Charter (26) but failed to function effectively. Since then, however, there have been signs of activity. The fact that citizens turn out to vote on issues which they regard as important proves that objectives must be crystallized by publicity in order that people act together. When the people of Culver were not satisfied with the water supply of a private water corporation, they exerted pressure on their representatives for municipal water, and the old water system was replaced. The Brooklyn Council for Social Planning has recently organized local autonomous civic councils for 8 Brooklyn neighborhoods; however, there is none in Culver.

(26) New York City Charter, (1938), Chapter 8, Section 196.

A local community council similar to the "Committee" of 1912 is needed for Culver to make plans and to make plans felt by action. Such an organization would operate if 5 factors were met:

- (a) The existence of a physical community.
- (b) A place to hold meetings and house the work of the organization.
- (c) A nucleus of associations within the community.
- (d) Government approval and cooperation.
- (e) Publicity.

(a) The physical community has been discussed in preceding chapters, and it is now assumed that it exists.

(b) The present schools which are to be abandoned as educational units will be converted into civic centers, and any one of these buildings could serve as a meeting hall and center of operations for the organization.

(d) By official sanction, we mean that the Borough President through his Advisory Planning Board must recognize and aid the Culver Council. The New York City Planning Commission must also receive the suggestions of the Council, and offer its technical assistance. The Department of Community Education of The Board of Education must play a vital role in public education and community center organization.

(d) Within the Culver community, a wide base of organizations exists. These could be represented in the Council.

Religious: Protestant, like the Prospect Park Babtist, Parkville Congregational-Christian, and Ascension Lutheran Churches.

Jewish, like the Temple Bethel, Temple Emanuel, and Young Israel Synagogue of Boro Park.

Catholic, like the Holy Ghost.

Veterans: Local Chapter of the American Veterans Committee,

Educational: Local Parent-Teachers Associatations in each school.

Business: 13th Avenue Merchants Association.

Social Agencies: Y.M.C.A. and Y.M.H.A; Jewish Welfare Society; various church groups like the Jewish Community Center of the Hebrew Institute.

Civic: Kensington Civic League; Parkville Improvement League; West Midwood Community Association; Boro Park Civic Club; Mapleton Civic League; etc.

Some attempt should be made to represent those people who are not part of any organized group. This might be accomplished by open meeting voting, and by volunteer workers for surveys and investigations.

Borough-wide groups could act as sources of advice and information:

Veterans: A.V.C.; American Legion; V.F.W.; Catholic War Vets. All have offices in Borough Hall.

Religious: Catholic Youth Organization; Church Mission Federation; Jewish Communit Council.

Labor: Borough Branch of the C.I.O.

Business: Flatbush Chamber of Commerce; Flatbush Merchant Association; Flatbush Taxpayers Association.

Education: Parent-Teachers Association. Teachers' Union.

(e) By publicity, we mean both preparatory and post organization drives. Thus the community must be prepared for a Planning Council, and this signifies education in planning. The Brooklyn Council for Social Planning is perhaps the most active in local affairs. Although its function is primarily social service, it could be expanded to include the stimulation of planning interest and planning organization. In Mr. George C. Cheever, secretary of the Committee on Neighborhood Organization, the B.C.S.P. has a man interested in city planning, and well-acquainted with community organization. Leadership and publicity could come from the Brooklyn Daily Eagle, a borough newspaper which has always been alive to principles of city planning. Brooklyn College, which is nearby, could be a very fine source of leadership and community counsel. The College's Sociology and Economics Departments could also offer aid in community studies and plans.

However, most of the organizing and education must come from the base, the community itself. Thus, the schools must educate the pupil, who in turn educates his parents. The present pupil becomes tomorrow's community planning participant, and the more he knows the more effective the future organization. The school can serve as center for exhibits of both children's and Culver Council's ideas for development. The school could give adult education courses, with experts invited to lecture. The community center could also act in this capacity. Local churches must be centers of planning discussion. Local shops could carry posters of meetings information, and small exhibits concerning planning education.

The most active of local associations would start the ball rolling by cooperating with the Brooklyn Council for Social Agencies, the City Planning Commission, and the Borough President. Perhaps private City Planning adherents could be tapped for aid: the young planners of the Metropolitan Planning Council, the N.Y. Regional Plan Association, the Citizens Housing Council of N.Y., the Citizens Union, and interested individuals like Robert Weinberg and Councilman Isaacs. As the Culver Council for Planning Action becomes active and experienced, it would assume responsibility for planning education and stirring civic in-

terest and support. It would study the desires and needs of the community, taking initiative in planning for the community's development. It would make recommendations to the Borough President, the City Planning Commission, and ultimately make its voice heard in the chambers of the City Council and Board of Estimate.

Whatever the form of a civic group, team-work is needed. The public and the people must work together to accomplish worthwhile objectives.

PROPOSALS AND FINANCING OF IMPROVEMENTS

In 1909, the mayor of Chicago addressed the City Council in reference to the Chicago Plan: this is "not a scheme for spending untold millions of dollars..... (but) a comprehensive suggestion of what may be accomplished in the course of years....by spending in conformity with a well-defined plan the money which we must spend anyway." (28) A survey of the Proposed 1948 Capital Budget and the 1949-1953 Capital Program(29) for New York City shows that over \$150 million may be spent by the Board of Education, and Departments of Health, Parks, Libraries, and by the Office of the President of the Borough of Brooklyn within the next six years. A community plan is necessary to view rationally all projects proposed for Culver and vicinity in the coming years, and additional improvements which could be suggested once a comprehensive plan were accepted by the public. There will be city funds expended for playgrounds, schools, parks, and housing; it is the intention of a financial study to indicate how the money could be allocated. At first glance the figures appear large -- but one must realize these are minimum requirements for facilities that decent living demands, and that just as much, if not more, is spent regardless of a thoughtful scheme. There are

(28) Ladislav Segoe, Local Planning Administration, (Chicago, 1941), p. 9.

(29) New York City Planning Commission, Proposed 1948 Capital Budget And 1949-1953 Capital Program, (October 31, 1947).

amounts wasted on bad investments when public properties are abandoned because of short-sighted location policies. The seemingly large figures, when spread out over the 12-year period, and inserted into successive \$250 million capital budgets of New York City, would be lost completely.

An integral part of a plan, especially in an age of statistics, is the demonstration of cost. It seems difficult to realize that social values must or even can be translated and measured in dollars. It is difficult to imagine that people don't strive for common objectives of human betterment without more than a statement of cost as a mere book value. There are, it seems, some aspects of life which cannot be recorded successfully in a precise, rigorous balance sheet; of course, there can be statistical and financial gymnastics to prove a point, but even then how is it possible to measure the long-range costs, to measure every aspect and ramification of the dollar input? What is the price of a park where mothers, after a morning of housework, wheelbabies carriages? What is the cost of a playfield or a school for boys and girls? What is the value of a tree-lined street in a serene residential neighborhood? On the other hand, how do we assess the human waste of substandard housing, elevated transit lines which grumble past frame flats, robbing inhabitants of air and sunlight, and the lack of safe and

suitable playgrounds for children to cavort? What is the cost of the waste of our important natural resource: Mankind?

There are times, and this is the sad, ironic commentary, when people cooperate to reach common goals. War: Billions are spent. Any price. Any method. Any material. Everbody, everything, everywhere. Disaster: Floods and earthquakes and fire receive prompt energies and ready funds. The emergencies which have occurred after inveterate roots have taken hold: Poverty, flood, slum. The horse has escaped, so we lock the door. What price? Economic justification for a community like Culver, which will go the way of all Brooklyn communities if it is allowed to run its course, is playing with finance. Intuitive justification, that proposals would improve urban living, seems a much better reason for a community plan.

The total cost to the city for a 12-year improvement program for Culver would amount to about \$25,000,000. Annually, it would pay approximately \$1,440,000 in debt service, and maintenance and operation. However, State funds may be forthcoming, in education for example; to defray much of the charges. Federal grants may be more readily available for urban redevelopment, should certain legislation be passed.

The New York City Housing Authority's share would total some \$23,000,000, with a shared Federal - State - City annual subsidy of \$600,000.

It is estimated that private investments in rebuilding the shopping centers would reach approximately \$3,500,000. Public activity in developing Culver would more than likely stimulate other types of private investment, such as apartment housing near shopping.

Schools and Recreation

Since only P.S. 230 and J.H.S. 223 will be adequate in 1960 as far as facilities and plant are concerned, these schools are retained in the proposals. Three elementary schools will be demolished. P.S. 103 will be razed, since it is antiquated and unfit for community center use, and rebuilt on its present site, which is adequate for servicing school population. P.S. 134 will be torn down, since it, too, is old and not conducive to neighborhood center use. Because there is a church and synagogue which attract community use for indoor athletics and social activities, a community center is not vital in the neighborhood. The present site is centrally-located. P.S. 179 will be razed, and a new elementary school constructed at the present central site. A community center is not essential, since a synagogue on the corner of Church and Ocean acts as a nucleus for neighborhood activities.

While P.S. 103 is being rebuilt, 600 of its pupils could attend P.S. 180; 200 could be absorbed into P.S. 164 and 131. While P.S. 134 is in the process of reconstruction, its pupils could attend P.S. 179 and 192. And those going to P.S. 179 could temporarily attend P.S. 230 and 164. There would thus be no problem of school attendance while old schools were being demolished, for although there would be transitory distance inconvenience, the schools mentioned have adequate seats and classrooms for the extra load.

P.S. 131, which will be 59 years old in 1960, could be used as a community center, and a new school built on a new site for more efficient service. P.S. 164 would be employed as a neighborhood activities center, and a new school constructed close to the present location. P.S. 180 would be used for a neighborhood center, and a new school would be located on a more suitable site to serve Culver's children.

P.S. 192, now being used part-time as a high school annex, would be used exclusively for an annex during the day, and as a neighborhood center in the evenings.

A new High School, badly-needed, would be located in a grouping of public buildings on a 20 acre site. These buildings might include a health unit, which has been

suggested by the 1948 Capital Budget for a site generally in Culver. This civic-cultural-health center might bear a relation both in design and function to the proposed 13th Avenue Shopping Center, with its new library, movie theater, and office building.

The seven elementary schools would replace the existing eight, and would serve grades 1-8. In this way, Culver's pupils are not forced to go beyond the community for their elementary school education. The Junior High would be responsible for those in grades 7-9. Those of High School age, who do not attend special schools outside of the district, would be within walking distance of a Senior High; P.S. 192 would be a permanent annex for New Utrecht or Alexander Hamilton, or any other High School in Brooklyn. In this way, there would be some choice of High Schools within the area.

Within each elementary school, there would be provision for nurseries to serve pre-school children of the neighborhoods. Nursery schools were inaugurated in Brooklyn during the war, with the purpose of caring for tots while mothers worked in war industries. After the war, private nursery schools continued to operate. In the Culver area, there are 9 such schools housed in ordinary residential buildings, with 300 pupils aged 2 to 6, paying an average fee of \$62/month. (30) It seems that, pre-

(30) Adapted from data collected by the Brooklyn Council for Social Planning.

school training is a function of the public education system, and should be provided at public expense.

Community centers would serve the increasing adult population, which at present lacks meeting-places. The center might function as the focal point for adult education, democratic civic councils, club meetings, games, canteen, hobby shops, reading rooms, and lectures. The center would be a cultural and social magnet. Many children who have graduated from high school with no intentions to attend college would have a meeting-ground to "bridge the gap between childhood and adult life" (31).

Such centers may help create a physical framework symbolizing the neighborhood, giving the neighborhood a greater unity.

A six-acre park located in the southern section of Culver, although not ideally-situated, serves a population which needs passive recreation. Irregular blocks and poor housing units have been condemned for the green area.

Cost of Elementary School:

Each school will cost about \$700,000 exclusive of the land. The figure came from an average over-all of \$20,000/classroom for a modern school plant. (32) It is

(32) F. Dodd McHugh, Cost Of Public Services In Residential Areas, (New York, 1942), p. 1426.

(31) James Dahir, Community Centers As Living Memorials, (Russell Sage Foundation, 1946), p. 7.

estimated that about 900 pupils will be enrolled in each school, using 10% of the neighborhood population as the elementary school enrollment.⁽³³⁾ Thus, with 3.5 rooms per grade, considering that each school will contain pre-school rooms for tots, under 5, there would be a total of 35 classrooms. The school would cover approximately one acre, employing standards of the U.S. Office of Education:⁽³⁴⁾

Average Elementary School:

18,000 s.f.	Classrooms @ 20s.f./pupil.	
1,800 "	Library @ 20 " / " seated; 10% of total enrolled.	
3,600 "	Lunchroom @ 12 " / " " ; 33% "	
3,150 "	Auditorium @ 7 " / " " ; 50% "	
800 "	Medical & Dental Unit @ 800s.f. (NYC Dept. of Educ.).	
16, 150	Expansion and Lawn	

43, 500 s.f. Total School Plant.

Cost of High School:

The unit cost per seat in high schools is \$1,200 ⁽³⁵⁾. Thus a High School would cost \$3,000,000. An enrollment of 2500 was taken as 4% of the total community population ⁽³⁶⁾ with a 10% estimated reduction for pupils who would attend special schools outside of Culver.

The proposed active recreation system would include about 45 acres, or approximately .7/1,000 population, with

(33) Ibid., p. 1425.

(34) Katherine M. Cook, Planning Schools For Tommorrow, (Washington, 1943), p. 34-35.

(35) F. Dodd McHugh, Op. Cit., p. 1425.

(36) Ibid., p. 1426.

37 acres in either park or landscaped, tree-lined buffer areas. Some parts of the buffers near shopping or rapid transit lines might conceivably be used for parking.

Total open space would thus amount to 82 acres, or approximately 1.2 acres /1,000, as contrasted with the existing .04 acres /1,000.

PLAYGROUND SYSTEM

School	Site	<u>EXISTING</u>		<u>PROPOSED</u>				
		Play Space	Total Area	<u>Acquisition</u>			<u>Acres of Play.</u>	
				Streets	Land	Land & Buildings	Developed	Total
103	.8	0.0	5.5	1.1	---	4.4	4.5	4.5
131	1.2	0.0	5.6	1.6	---	4.0	4.6	4.6
134	1.0	0.7	6.0	0.7	---	4.3	4.3	5.0
164	0.9	0.3	---	---	---	---	---	---
179	0.9	0.0	6.5	1.7	0.4	3.5	5.5	5.5
180	1.7	0.0	5.0	0.6	---	4.4	4.0	4.0
192	1.6	1.1	---	---	---	---	---	---
230	1.4	.7	4.7	0.8	0.7	1.8	3.3	4.0
J.H.S.	1.9	1.0	---	---	---	---	---	---
H.S. J.H.S.		---	20.0	5.0	---	12.2	14.9	14.9
Local Playgrounds		1.0	---	---	---	---	---	2.1
<u>Total Culver</u>	11.4	<u>4.8</u>	53.3	11.5	1.1	34.6	41.1	<u>44.6</u>

COMMERCE

To make an analysis of shopping area needed for any community, one should study purchasing power, local custom or habit of buying, trends in retail store mortality, changes in retail store operations, and a number of other pertinent factors. It would be wise to look into some of the suggestions of the National Committee On Housing (37), which maintains that it is better to stimulate old centers with fewer but better stores, "even if it means tearing down and rebuilding", that today there are a super-abundance of marginal establishments, and that store failures have profound repercussions upon the surrounding neighborhood, land, financial structure of the community, and services to the people. The Committee goes on to state, "Little importance has yet been given to the provision of adequate and well-planned commercial areas which will afford convenience to the shopper, a profitable market to the merchant, and a resultant sound investment to the real estate owner and the municipality." (38)

The attempt in Culver is to retain strategic shopping areas, rezone other business areas which are marginal for future residence, create new shopping centers using existing nuclei of shops in the main shopping areas along 13th Avenue and Church Avenue, and to make provisions for adequate parking spaces. Standards for actual

(37) National Committee On Housing, Inc., Planning Neighborhood Shopping Centers, (New York, 1945), pp. 8-11.

(38) Ibid, p. 25.

shopping space came as a result of calculating purchasing power; standards for parking were based on riding habits within Culver, rather than rules of thumb or practices in other cities. Within the scope of this report, all of the studies mentioned in the above paragraph could not be made, but for any shopping study, these should be included, as well as the use of the questionnaire technique.

Two methods were used to determine the amount of shopping area necessary for Culver. In the first method, an estimate was made of marginal business area and subtracted from the total acreage which exists in commercial use. Thus; the business area needed for adequate service may be determined. Culver has 119.6 acres in business use. Of this amount, 50 acres are estimated as marginal. This leaves 69.6 acres as necessary commerce, or .7 acres 1,000 population. For 70,000 people, Culver would need 49 shopping acres.

Another method employed was to calculate commercial area based on the consumption pattern in Culver^{and} retail sales/store for the entire borough. In 1939, Brooklyn had 38,745 retail stores with sales of \$769,000,000. The food store which seem to be the most stable type of business, the one in which practically 100% of a commun-

city's food expenditures are spent locally, and the large proportion of retail stores, is ^{calculated} separately. Thus, Brooklyn's 18,801 food stores, with \$289,000,000 sales, had an average of \$24,000/store. Since a food store is usually 20' x 60', or 1200 square feet (9), Culver would need 36 acres of food stores, considering that its annual expenditures total \$20,661,655. Taking the other retail stores in Brooklyn, with \$24,000 sales/store, using an average of 1750 square feet per store (4), and estimating that 60% of the tobacco sales 20% clothing, 20% recreation, 80% autos, 10% of house furnishings would be purchased locally, an additional 8 acres are needed. The grand total of shopping area needed amounts to 44 acres, or .5 acres/1000 population.

We can detect a .2 acres/1000 difference between the two methods. Of course, the determination of the number of marginal stores is difficult without studies of turnovers, rentals, and actual sales necessary to maintain stores of various categories. The estimate was based on observation, on sampling business along McDonald Avenue, New Utrecht Avenue, 13th Avenue's extremities, and the interior streets. Those stores which were vacant, used for storage or boys' clubs, and in other than intended commercial use were considered marginal. There is a very slight discrepancy, but yet

- (39) Adapted from standards in: National Committee on Housing, Inc., Planning Neighborhood Shopping Centers, (New York, 1945).
- (40) Ibid.

the lower standard of .5 acre/1,000 will be used. Food stores, which formed about 50% of Brooklyn's retail stores in 1939, are being reduced in number and intensified in sales volume.⁽⁴¹⁾ This trend is not difficult to understand, for chain stores are increasingly getting the business while independents are diminishing. Even the large chains are changing operations for they too are reducing their number of outlets and thereby increasing average store^{SALES}.⁽⁴²⁾ Consequently, the A.P. company decreased its stores from 13,000 in 1937 to 5,000 in 1946, but the average store volume rose from \$64,000 to \$331,000. The very same tendencies are noted for First National Stores, Kroger, and other self-service food chains, which do 40% of all retail food business.⁽⁴³⁾

In Brooklyn, food sales increased six times greater than families, while the number of supermarkets and grocery stores declined 26% from 1940 to 1945.⁽⁴⁴⁾ In New York City, grocery stores declined 22% from over 16,000 in 1940 to 13,000 in 1945. In high-class districts of Brooklyn, the number of families/food store rose from 155 in 1940 to 200 in 1945, with a 14% decrease in stores; in the poor localities, this percen-

⁽⁴¹⁾ Adapted from: New York Times, 1945 Census.

⁽⁴²⁾ "Trend To Buying In Food Chains Found Still -On", New York Herald Tribune, (October 30, 1947).

⁽⁴³⁾ Ibid.

⁽⁴⁴⁾ Calculated from: New York Times, 1945 Census.

tage was 32. Also in Brooklyn, 1700 food chain stores closed, principally in the poorer districts.

It is such a trend which leads one to accept the lower standard for planned rehabilitation of Culver's business areas.

Church Ave. Sub-Shopping Center.

Church Avenue's shopping area can easily be developed into a sub-center. Two sides exist already. It would need an additional area for parking. A triangular plot of 3 acres south of the present area could be purchased for \$423,500. Construction of 60,000 square feet of stores would cost private developers approximately \$600,000, at \$10/square foot of floor space. Parking for 200 cars would cost the city \$7,000 for bituminous surface cover, at \$1/square yard. The total shopping area would cover 6.5 acres.

13th Avenue Shopping Center.

To find out what acreage is needed for a central shopping center, a service area was estimated at four times Culver's size. Purchasing power for 4 communities was calculated, assumed to be four times that of Culver's. Food expenditures to be spent in a central business area amounted to \$800,000 (1% of the total food expenditures of four communities); other retail

store expenditures were \$1,146,000, assuming that 2% of the clothing, 2% of home furnishings, and 2% of recreation expenditures would be allotted to 13th Avenue.

Thus:

Food stores	@ \$15,400/store;	equals 50 stores @ 1200
	s.f. store	
Other stores	@ \$24,000/store;	equals 50 stores @ 1750
	s.f. store	

Total shopping space: 4.5 acres

Expansion: 1.0 acres

Adding the areas of two surrounding local shopping areas, for those neighborhoods are nearby and can use the central district, we get a total of 6.5 acres of store space for 13th Avenue.

Parking was not based on rules of thumb or standards for other cities. Instead, automobile registration was taken for Brooklyn in 1940--300,308. This yielded an average of 1 auto/3 families. Thus Culver would have 8,500 cars; four communities, 35,000 cars. However, the riding habit in the section is mass transportation. Estimating that 3% of the cars should be provided parking spaces, a standard of about 1% of the families, we arrive at 1,000 parking spaces needed. Thus, 7 acres were provided. The effect of an increased transit fare on the riding habit is difficult to weigh. Mass transit may continue as the popular shopping

method, with a consequent reduction in the number of trips but with a greater amount of good purchased each trip.

The main shopping district is envisioned as an open development, with about 13 acres of landscaping, walks, service areas, and other buildings, with pedestrian and auto movement separated.

A main road will pass in front of the center, with provision for easy auto access to two flanking parking areas. Truck access to service stores, will also be separated from customer activities. No traffic will pass through the center; thus tree-lined walks would serve pedestrians walking from one shop to another. Since most of the shops exist, these would be used as a nucleus for the center. It would merely need the addition of a few stores; a 6-story office building straddling parallel lines of stores at right angles to the street, allowing pedestrians to move under it and into the shop area; a library, located here to take full advantage of crowds and also to be convenient for borrowers of books; a new theater, sorely needed in Culver to seat at least 2,500, which could jointly employ the parking facilities in the evenings when the shops are closed. An imposing central shopping center, so

convenient to transportation facilities, could eventually become the amusement center for a number of communities.

Shopping Center Costs: Private Investment Capital.

While the city would purchase and develop the parking area needed, private investors, would build the office building, theater, and new shops. They would also take the responsibility of demolition of old stores and construction of new ones if so desired. Net demolition cost of the two stories above stores along a 200' block of 100' frontage would be approximately \$2,000, with a demolition cost of 20¢ / cu.yd. less 30% for sale of materials. Additional stores would amount to \$20,000/store or \$10/square foot.

If the entire shopping area were to be built a new, it would cost \$2,000,000, not including the land. Net demolition costs would add \$30,000.

A six-story office building, 60' x 120' in dimensions, would cost \$1.50/cu. yd., or a total of about \$650,000, excluding land acquisition.

Culver:

119.6 acres (existing business area)

50.0 acres Estimated Marginal Business

Thus: 69.6 acres estimated necessary Business

Or: .7 acres/ 1,000 population standard

49.0 acres needed for 70,000 total population.

Culver:

Amount Spent On Various Categories Of Consumption

	<u>TOTAL</u>	<u>PER CAPITA</u>
Housing.....	\$13, 832,828.....	\$137
Household Oper.....	6, 633,203.....	68
House Furnish.....	2, 070,117.....	20
Food.....	20, 661,655.....	220
Clothing.....	6, 526,217.....	70
Auto.....	3, 551,005.....	37
Transportation.....	1, 443,933.....	15
Recreation.....	2, 189,557.....	22
Tobacco.....	1, 324,793.....	14

Brooklyn: 1939	<u>Retail Stores</u>	<u>Sales</u>	<u>sales Store</u>
	38, 745	\$769M.	\$19, 000.
	<u>Food Stores</u>		
	18, 801	\$289 M.	\$15, 400.
Retail Total Minus Food	19, 944	\$479 M.	\$24, 000.

CIRCULATION

In order to carry out the community principle, extra-community traffic should be diverted on perimeter roadways, with the internal circulation system rigidly-employed for local access.

A new limited-access cross-Brooklyn expressway to parallel the Long Island Railroad, proposed by the old Mayor's Committee on City Planning in its 18-year highway program (project #32), and indicated by The Master Plan of 1941 (report # 1,974), would completely surround Culver with major streets. Access would be allowed at Ocean Parkway and New Utrecht Avenue; 18th Avenue, linking up with southwestern Brooklyn, and McDonald Avenue reaching the southern part, would cross but with the 200' expressway. Since the 9-mile long highway would connect the borough belt system, Brooklyn-Battery Tunnel, a proposed Narrows crossing to Richmond, and eventually Manhattan's arterial system with the parkways of Queens and Long Island, it will not be considered a community improvement. It was estimated in 1940 that such a road would cost \$7,000,000 for land acquisition, and \$9,000,000 for construction. The total of \$16,000,000 would be split, the municipality sustaining land costs and approximately one-third of the development price, with the Federal and State governments providing \$6,000,000 for construction purposes. It would probably be of modern design, six

lanes of 72', 20' median strip, and 100 or more feet of landscaped buffer.

Church Avenue and 13th Avenue are principal roads which have been, logically linked in the proposed street system. At present, Church Avenue is checked at 36th Street, with a branch meeting 14th Avenue. Seven hundred feet from Church Avenue's terminus, 13th Avenue ends at 36th Street. Since the two Avenues are vital East-West links, they should be connected to avoid the existing confusion and to provide direct, efficient access from other communities into the main shopping center.

Trucks servicing 13th Avenue shops or industry would use 36th Street exclusively, thus escaping conflict with passenger cars. A buffer between industry and residence would act as a shock-absorber against inharmonious land uses.

Access to the community would flow along a few strategic arteries, leading from the four belt roads. Although McDonald and 18th Avenue provide ingress from the southern side, it is hoped that in the long-range scheme, both might be transformed into local streets. Bus routes would run along the new expressway, thereby destroying the need for 18th Avenue as a mass carrier. A bus route along Ocean Parkway would convert McDonald Avenue into a

minor street and its tramway trackage could be removed. Church Avenue's tracks would also be useless if Ocean Parkway's bus were to connect with bus lines running eastward and westward, possibly at Church Avenue and Caton Avenue.

The use of a through or by-pass street system is a technique for efficient traffic - handling; simultaneously, neighborhood boundaries can be maintained, wherein local activities can be conducted safely. Occasional loop streets and cul-de-sacs aid in retaining purely-residential traffic.

PUBLIC BUILDINGS.

A library and police station have been provided in this year's Capital Budget. However, no locations have been selected. It is proposed that the library serve the entire community from an advantageous central site near the main shopping center. A police station could be placed in the twenty-acre site grouped with other public buildings in a modest civic center.

A health center has been designated by the Master Plan of Health Districts to be situated generally in the Culver vicinity. It is proposed that it be located in the civic grouping, centrally-located, and close to the High School. The duties of the health unit would be prevention of ills and conservation of health, in addition to health education programs.

PUBLIC HOUSING.

The land north of 13th. Avenue had been chosen as the primary rehabilitation area, suitable for public housing, in addition to a new elementary school and 13th Avenue shopping center. P.S. 103 would serve as a neighborhood center, and the existing New Utrecht Avenue stores as local commercial use. A new grammar school, slightly larger than the other community schools, would serve about 10,000 people.

Since this section has shown evidences of evolving into future slum, it might be important for the city to attack the roots. Population in census tracts 220 and 222 have increased only 1-5% between 1930 and 1940; tracts 224 and 226, also in the redevelopment area, decreased 1-10% in the ten-year period. These figures are more graphically-portrayed in accompanying thesis maps showing overlays of "Net Densities", "Population Change, 1930-1940," and "Dwellings Without Mechanical Refrigeration." In all three cases, the darkest colors indicating worst conditions fall generally in these tracts. Thus, the falling-off of population coincides with high net densities of almost 200 people/acre, high percentages, 40-60%, of dwellings without mechanical refrigerators. On three of the blocks dwelling units were constructed before 1899; the great percentage of blocks has houses dating from the years 1900-1919.

On five of the blocks over 60% of the apartments is in need of major repairs. And on six blocks, over 19% of the units have 1.5 or more persons per room.

Furthermore, it is just this area which lies directly in the borough-wide path of blight. The fire can spread to satisfactory parts of Culver, if it isn't blocked.

In Culver, there are 2,961 families paying rentals of less than \$30 per month. Since these families come within the income limits set by the New York Public Housing Authority in its projects, they are to be rehoused on 75 acres of land north of 13th Avenue. The area today is deteriorating, losing population, and in need of aid. The 3,000 low-rent families are in need of decent housing with adequate surrounding open space. It is intended that the local Housing Authority assume the responsibility for clearing the land, and disposing the new apartment units in such a way as to take full advantage of the utilities which are beneath the present streets. In this way, the subterranean facilities are not wasted, and the surfaces representing 32% of the total land area, are transformed into informal green space. The project would have another beneficial effect in that the community, being invaded by the spread of blight from the northwest, would possess a buffer of open-plan housing and recreation and park area.

The Annual Reports of the New York City Housing Authority were used to assemble post-war data on all phases of project construction and financing.(45). Wherever possible, Brooklyn projects were employed as guides in ascertaining density standards, construction and development costs, etc. in current practice.

Standards and averages used were:

Average Monthly Rent: \$26/dwelling unit(including utilities).

Coverage: 20%

Construction Cost: \$4,000/dwelling unit. ✓

Development of Park, Landscaping, and Recreation: \$125,000/acre.

60 families/6-story apartment.

5 6-story buildings/acre.

Thus, there would be 1500 families housed in 25 6-story elevated apartments, and 1461 families in 48 3-story walk-ups. Seventy-three buildings would cover about 15 acres, and the remainder would be open space. Piece-meal demolition with concurrent family displacement is recommended. Thus the displaced persons would be rehoused in some city-wide plan, while gradual public housing construction was effected.

(45) N.Y.C. Housing Authority, Annual Report, (1944 to 1947)

A. DEVELOPMENT COST:

Construction.....\$11,844,000
 Site Acquisition
 (assessed value plus 15%).....5,278,500
 Park, playground, landscape Devel.. 6,250,000
 Total Development Cost.....\$23, 372,500

B. FINANCING:

23,372 Bank loan.
 2 $\frac{1}{4}$ % interest rate; 45-year amortization; 3.40%
 level payments.

Annual Debt Service Required.....\$794,665
 Available annually for bond redemption
 from rentals.....177,660

 \$617,005

Required annual subsidy from Federal, State,
 and City. (\$208/family/annum).

C. PROJECT BALANCE SHEET:

INCOME

Item	Per Apartment/month	Per Project/yea
Dwelling Unit Rentals	\$26.00	\$
Other Income	3.20	
Less Vacancies	.20	
Total Income	29.00	1,030,428.00

EXPENSES

Operating Services	3.00
Management	3.00
Operating Services	2.00
Dwelling Utilities	6.00
Maintenance and Repairs	5.00
Insurance	..70

Other Expenses:

Reserves for Repairs, Replacements, vacancy and collection losses	2.80
Bond Service chargeable to operations	1.00
Other reserves and expenses	.20

Total Expenses	20.00 ✓	710,640.00
NET EXCESS OF INCOME OVER EXPENSES	9.00	319,788.00

DISPOSITION OF NET INCOME

Debt Service	5.00 ✓
Payments in Lieu of Taxes	1.50
Voluntary Additional Tax Payments	1.00
Operating Improvements	1.40
Project Working Capital	.10

TIMING OF IMPROVEMENTS

<u>YEAR</u>	<u>ACQUISITION</u>	<u>PLANS</u>	<u>CONSTRUCTION</u>
1948	100' strips along McDonald & N.U. Avenues. Sites for Schools, re-creation, pub.blds.	Zoning in conformance with Plan. P.S. 103. P.S. 104.	Demolish P.S. 103, Playground for P.S. 164 & J.H.S.
1949	Land for 13th Church connection, Library.	P.S. 131 LIBRARY	P.S. 103 & Play gr. P.S. 164 Buffers/along McDon.& N.U. Avenues Pedest. Overpass-18 Ave.
1950	Public Housing Site, 13 Ave. Shopping Center	P.S. 134 Public Hous- ing, 13th. Av. Shopping.	Library P.S. 131 & Playground Demolish P.S. 134 Church-13th Avenue Connection.
1951		P.S. 180 Health Build- ing	P.S. 134 & Playground Public Housing 13th Shopping.
1952		P.S. 179 High School	P.S. 180 & Playground Health Building Demolish P.S. 179.
1953	Park Site	Police Station	P.S. 179 High School
1954	Rights of Way for Loops & Cul-de-sacs in 1 neighborhood.		Police Station Park.
1955	"		Close Streets. Loops and Cul-de- sacs in Neighborhood
1956	"		"
1957	"		"
1958	"		"
1959	New Highway. Neighborhood streets. Church Ave. Shopping Buffer along Industry	New Highway Shopping Avenue	Church New Highway.
1960			Neighborhood Streets. Buffer strip. Church Ave. Shopping.

ESTIMATE OF PUBLIC COSTS (*).A. LAND ACQUISITION

<u>Description</u>	<u>Acres</u>	<u>Cost</u>	<u>Annual Debt Service</u>
Buffers			
100' strip along N.U. Ave.	5.5	\$552,000	
100' strip along McDon. Ave.	16.0	704,375	
strip along 36-37 St.	9.0	795,800	
Total	30.5	2,103,925	189,070
Park	5.2	524,400	47,196
Public Sites	35.7	5,207,200	26,250 (a) 451,148 (b)
Local Loop Streets	3.0	200,000	18,000
13th.--Church Connection	3.5	145,000	13,050
Church Ave. Shopping	2.9	423,000	38,070
13th. Ave. Shopping	13.0	1,584,000	18,550(c) 77,760(d)
<hr/>			
TOTAL LAND ACQUISITION -----		\$ 10,187,525	\$879,094
<hr/>			

(*) Compilation of all costs based on Departmental data;
Public Works Department; Capital Budget; Dodd McHugh;
Prof. A. J. Bone

- (1) Assessed Valuation plus 15%.
(a) \$750,000 for 30 years @ .035 level payments.
(b) \$4,457,200 for 10 years @ .090 level payments.
(c) \$ 530,000 for 30 years @ .035 level payments.
(d) \$ 854,000 for 10 years @ .090 level payments.

ESTIMATE OF PUBLIC COSTSB. CONSTRUCTION

Description	Period Of Amortization	Development Cost	Debt Service	Maintenance Operation
Library	30	\$ 957,000	35,400	26,400
Health Center	30	873,000	31,700	49,000
Police Station	30	260,250	9,200	4,500
High School	30	3,000,000	105,000	27,000
6 Elementary Schools	30	4,200,000	147,000	72,000
Sub-total	30	\$9,290,250	\$328,300	\$178,900
41.1 acres Play	10	4,110,000	369,900	36,900
6.5 acres	10	65,000	5,850	1,300
Park	10			
Buffers	10	305,000	27,450	6,100
Local Streets	10	126,000	11,340	----
13th-Church Connection	10	52,500	4,625	----
Pedestrian Overpass	10	15,00	1,350	----
Parking & Landscaping	10	65,000	5,850	25,000
Sub-total	10	\$4,738,500	\$426,365	\$69,300
Total Development		\$14,028,750	\$754, 6 65	\$248,200

ESTIMATE OF PUBLIC COSTSC. DEMOLOTION

<u>Description</u>	<u>Demolition Cost(*)</u>	<u>Net Cost (**)</u>
P.S. 103	\$ 4300	\$ 3010
P.S. 134	2200	1540
P.S. 179	6650	4555
Shopping Areas	\$ 106,000	74,200
Buildings in proposed Streets, Buffers, Parks, Play areas	\$ 800,000	560,000
<hr/>		
<u>Total Demolition</u>		\$ 643,305

(*) 20¢/cubic yard (brick building).

(**) 30% reduction on sale of materials.

D. SUMMARY: ESTIMATE OF PUBLIC COST.

<u>Description</u>	<u>Cost</u>	<u>Annual Debt Service</u>	<u>Maintenance & Operation</u>
Land Acquisition	\$10,187,525	879,094	-----
Construction	14,028,750	754,665	248,200
Demolition	643,305	-----	-----
Total	\$ 24,859,580	\$1,633,759	\$248,200

E. ANNUAL CHARGES

Debt Service	\$1,633,759	
Maintenance & Operation	<u>248,200</u>	
		1,881,959
Annual Savings on		
Street Maintenance (*)	440,000	
MUNICIPAL TOTAL ANNUAL COST		\$1,441,959

* \$1/cubic yard for surface maintenance, snow removal, sanding, street cleaning on difference between existing and proposed street area.

POPULATION AFTER 12-YEAR COMMUNITY PLAN

	Population	Families
DISPLACED BY:		
Recreation and Public Buildings	5 250	
Park and Buffers	2 800	
Highway & Connecting Road	1 700	
Neighborhood Loop Streets	2 900	
Shopping	3 550	
Public Housing	9 000	
TOTAL DISPLACED	25 200	7 200
Rehoused in Public Housing		2 961
Net Displaced		4 239
1960 Population Before Plan		26,000
1960 Population After Plan	73 980	21,761

PROPOSED LAND USE

	<u>ACRES</u>	<u>% of TOTAL</u>
Residence	618.3	57.0 %
Commerce	56.3	5.0
Industry	17.0	1.0
Playgrounds	44.6	
Park	6.5	
Buffer	30.5	
Other	11.1	
Public Land	92.7	9.0
Semi-Public Land	47.3	4.0
Streets	260.0	24.0
 TOTAL LAND AREA	 1091.6	 100.0 %

STANDARDS OF COST

Debt. Service	10 years: 90% of Development 30 years: 3½% of Development
Maintenance Operation	usually 2% of Development. (Playgrounds: \$900/acre; Parking: 30¢/s.y.)
Streets & Parking	Construction: \$3/square yard for bituminous concrete. \$1.50/s.y. for bituminous surfacing Maintenance: 30¢/s.y. surface 40¢/s.y. snow removal 30¢/s.y. street cleaning Landscaping: 10¢/s.y.
Parks	Development: \$10,000/acre
Playground	Development: \$100,000/acre
Elementary School	Development: \$20,000/room
High School	Development: \$ 1,200/seat.
Public Buildings	New York City Capital Budgets.

CULVER: FAMILY EXPENDITURES OF INCOME (*)

Monthly Rental	Percentage of Total	Percentage Spent For:		
		All Items	Food	Housing
Under	12 %	102%	40%	25%
\$30 - \$39	31	98	35	23
\$40 - \$49	26	93	31	20
\$50 - \$74	24	89	28	18
\$75 - \$99	24.6	82	20	17
\$100 - \$149	2.0	82	20	17
\$150 - Up	0.4	82	20	17

Household	Furnishings	Clothing	Auto	Transportation	Medical Care
10	2	8	2	3	4
9	3	9	4	2	4
9	3	10	6	2	4
9	3	10	5	2	4
11	3	9	6	2	5
11	3	9	6	2	5
11	3	9	6	2	5

Recreation	Education	Tobacco	Other Items
2	--	3	3
3	--	2	2
3	1	2	2
3	1	2	3
4	2	1	2
4	2	1	2
4	2	1	2

Average Annual Income Group	Number of Families	Total	Amount Spent For:		
			Food	Housing	Household
\$ 1300	2 961	\$ 3,849,300	1 539 720	962 322	384 930
1800	7 649	13,768,200	4 818 870	3 166 686	1-239 138
2500	6 415	17,037,500	5 281 625	3 409 500	11563 375
4000	5 922	23,688,000	6 632 640	4 263 840	2 131 920
6000	1 135	6,810,000	1 362 000	1 157 700	749 100
8000	493	4,144,000	828 800	704 480	455 840
1 0000	99	990,000	198 000	168 300	108 900
TOTALS	24, 674	\$ 70,287,000	\$20 661 655	13 832 828	6 633 203

Furnishings	Clothing	Auto	Transportation	Recreation	Tobacc
76 986	3 307 944	76 986	115 479	76 986	115 47
413 046	1 239 138	550 728	275 364	413 046	275 36
511 125	1 533 375	1 022 250	340 750	511 125	340 75
710 640	2 131 920	1 184 400	473 760	710 640	473 76
204 300	749 100	480 600	136 200	272 400	68 10
124 320	455 840	248 640	82 880	165 760	41 44
29 700	108 900	59 400	19 800	39600	9 90
2 070 117	6 526 217	3 551 004	1 443 933	2 189 557	1 324 79

() Adapted from: National Resources Planning Board, Family Expenditures In The United States, (Washington, 1941), p. 68, Table 202 on Metropolises.

AVERAGE ATTENDANCE IN CULVER SCHOOLS

<u>Elementary</u>	1917	1918	1919	1920	1921	1925	1930	1935	1938	1941	1945
P.S. 103	1441	1502	1665	1774	2011	1771	1156	1303	1244	1159	796
P.S. 131	1288	1258	1310	1282	1364	1813	1937	1673	1508	1426	1160
P.S. 134	942	828	1007	1208	1439	1241	1029	923	815	670	610
P.S. 164	2325	2208	2408	2416	2606	2688	2044	1820	1502	1334	1104
P.S. 179	1799	1814	1971	2006	2203	2489	2088	1834	1732	1635	1519
P.S. 180	372	361	384	389	418	1363	1541	1345	1199	1075	1012
P.S. 192	---	---	---	---	---	632	584	846	772	682	635
							651	1033	967	783	628
Total	8,167	7,971	8,745	9,075	10,041	11,997	11,030	10,777	9,739	8,764	7,464
<u>J.H.S.</u>											
P.S. 192	---	---	---	---	---	1476	2709	---	---	---	---
P.S. 223	---	---	---	---	---	---	2895	2760	2503	2210	2038
Total	---	---	---	---	---	1476	5604	2760	2503	2210	2038

DATA FOR SCHOOLS IN CULVER

A. ELEMENTARY:

School	Grades	Site (Sq.Ft.)	Bldg. (Sq. Ft.)	Floor Area	Year Built	Stories	Classrooms	Sittings	Average Attendance	
103	K-6	36,060	14,527	51,500	1896	4	27	1171	796	
131	K-6	54,425	24,092	82,500	1901	3	44	2130	1160	
134	K-6	45,383	9,866	35,250	1901	3	19	898	610	
164	K-6	40,071	18,678	74,250	1910	5	46	1921	1104	
179	K-6	40,000	18,298	73,300	1915	5	49	2009	1519	
180	K-6	74,130	23,754	108,500	1925	5	60	2918	1012	
192	K-6	70,140	13,754	76,000	1924	5	20	932	635	
230	K-6	60,000	13,308	66,500	1930	4	32	1428	628	
All Elementary Schools							297	13,407	74,464	

B. JUNIOR HIGH

223	7-9	84,143	29,480	121,000	1930	4	70	3027	2038
-----	-----	--------	--------	---------	------	---	----	------	------

Gym	Assembly Room	Kinder garten	Audi torium	Library	Play ground Out	Labs	Shops	Misc. Spec. Rooms
1	1	2		1				
1		2	1					
	1	1			.7 acres			
1		1			.3 acres	1	1	1
1		2				1	1	1
3		2	1	1				
1		1	1		.1 acres			2
1		1	1	1	.7 acres	2	2	4
9	2	12	6	3	28 acres	2	2	4

All Elementary Schools

B. JUNIOR HIGH

	2		1	1	.1 acre	6	10	10
--	---	--	---	---	---------	---	----	----

Name	Location	Plant	Square Feet Area	Lib. Area (Populat. Served)	Popul. 5 - 14	Popul. 15 Over	Popul. 5 Over	Square Feet Per.Cap	Readers' Seats 1,000	Seats Over 5
Kensington	McDonald & Ditmas	Rented Stores	3,068	56,614	7,496	43,730	51,226	.06	.46	.90
Boro Park	13th.Ave. & 52 Street	Rented Stores	3,389	86,713	13,274	68,262	81,536	.04	45	.55
Totals			6,457	143,327	20,770	111,992	132,762	.05	91	.68

	Registration			% of Population Reg.			Circulation (Vol.)	
	Total	Adult	Juv.	Total	Adult	Juv.	Total	Adult
Kensington	15,098	9,112	5,986	27.6	20.8	79.9	177,803	132,203
Boro Park	19,287	11,730	7,557	12.2	17.2	56.9	238,714	142,054
Totals	34,385	20,842	13,543	15.0	19.9	68.0	416,517	274,257

Name	B O O K S T O C K			V O L U M E S / C A P I T A		
	Total	Adult	Juv.	Total	Adult	Juv.
Kensington	17,996	13,958	4,038	.35	.32	.54
Boro Park	16,690	12,880	3,810	.21	.19	.29
Totals	34,686	26,838	7,848	.26	.24	.38

	Circ./Capita		Staff		
	Juv.	Total	Adult	Juv.	(Prof)
Kensington	45,600	3.26	3.02	6.08	6
Boro Park	96,660	2.75	2.08	7.28	7
Totals	142,260	3.1	2.4	6.8	13

LIBRARY STUDY II.

DEGREE TO WHICH PRESENT FACILITIES MEET MINIMUM STANDARDS

	<u>BOOK STOCK</u>		<u>BUILDING FACILITIES</u>		<u>STAFF</u>
	<u>Adult</u>	<u>Juvenile</u>	<u>Floor Space</u>	<u>Seats</u>	
Min. Standard	.6Vol./cap.	1.5vol./cap.	233Q.Ft./Pers. Served	1.5/1,000pers. 5 yrs. & Over	1/4560 pop. 5 yrs & Over
Kensington	53%	36%	24%	60%	54%
Boro Park	32%	19%	16%	37%	39%
TOTAL	40%	25%	20%	48%	45%

	<u>REGISTRATION</u>		<u>CIRCULATION</u>	
	<u>Adult</u>	<u>Juven.</u>	<u>Adult</u>	<u>Juven.</u>
Min. Standard	30% of Adult Pop.	55% of Juv. Pop.	6.5 vol./cap.	20 vol/cap.
Kensington	69%	145%	47%	30%
Boro Park	57%	104%	32%	36%
TOTAL	60%	117%	37%	34%

NET DENSITIES IN CULVER BY CENSUS TRACT

<u>Tract</u>	<u>Net Resid. Acres</u>	<u>Population/net acre</u>
218	1.6	268
220	10.1	238
222	25.0	130
224	32.0	170
226	16.3	155
228	18.5	224
230	26.1	215
232	41.3	198
234	29.0	145
236	29.0	180
238	29.0	142
240	25.7	160
242	17.0	127
462	12.2	89
470	13.4	100
472	20.2	110
474	28.0	111
476	34.5	106
478	38.3	124
480	27.5	120
484	23.4	178
486	27.8	248
488	24.3	140
490	11.5	123
494	11.0	234
496	32.6	135
498	34.8	91
500	11.0	92

1 9 4 0 H O U S I N G C E N S U S *

Totals	7887	25715	4502	20173	1017	24
O C C U P A N C Y A N D T E N U R E						
Census Tract	Total Structures	Total Dwellings	Owner Occupied	Tenant Occupied	Vacant For Sale	Vacant Other
218	29	99	1	88	10	----
220	124	515	37	460	17	----
222	266	814	134	651	29	----
224	442	1346	280	1012	54	----
226	235	655	145	496	14	----
228	311	1045	181	824	40	----
230	388	1390	229	1134	27	----
232	602	2063	354	1652	57	-----
234	260	1138	135	964	39	----
236	254	1458	142	1279	63	--1--
238	308	1132	178	911	43	----
240	281	1187	144	944	48	--1--
242	210	545	112	400	25	--8--
462	108	307	265	234	7	--1--

470	227	420	110	295	14	1
472	202	631	130	448	48	5
474	361	745	211	489	45	---
476	477	1217	253	884	80	---
478	468	1338	272	982	84	---
480	302	917	170	711	34	-2-
484	266	1106	153	928	25	---
486	324	1020	181	803	33	-3-
488	321	911	222	673	15	-1-
490	135	457	72	362	23	---
494	104	740	59	660	21	---
496	477	1217	253	884	80	---
498	276	881	176	678	27	---
Totals	500	394	102	277	15	---

* Source: U.S. Bureau of the Census, 1946 Census.

** Does not include entire tract where blocks fall outside community boundaries

1 9 4 0 H O U S I N G C E N S U S *

	20639	3450	7375	9458	355	\$ 45.33
D W E L L I N G U N I T S B Y Y E A R B U I L T						
Number Reporting	1930 1940	1920 1929	1900 1919	1899 Earlier	Average Monthly Rent	
99	----	28	71	---	\$ 31.67	
80	8	36	34	---	44.00	
203	65	43	82	13	45.00	
802	6	88	619	89	35.95	
653	---	8	636	9	29.08	
863	1	480	380	2	36.62	
759	1	150	603	5	36.02	
1556	54	176	1326	---	35.66	
954	206	326	403	7	57.21	
1362	638	468	247	9	56.39	
674	250	168	249	7	51.49	
1040	422	316	275	27	46.00	
538	22	221	280	15	49.72	

359	49	251	59	---	41.64	
302	11	227	63	1	47.66	
595	68	415	110	2	56.00	
1196	135	591	469	---	25.87	
1129	97	423	587	22	40.91	
738	65	397	210	66	46.82	
902	145	521	205	31	48.00	
981	7	194	774	6	36.64	
640	2	310	317	11	47.80	
455	197	4	252	2	44.90	
724	327	233	163	1	55.20	
1196	135	591	469	1	45.87	
878	280	412	170	16	47.17	
Totals-----	393	164	47	182	---	55.05

1940 POPULATION CENSUS *

Census * *

Tract	Total	Male	Female	Native White	Foreign Born	Other Races	Under 5	5-14	15-24	25-34	35-44	45-54	55-64	65 and Over	21 and Over
218	430	214	216	270	160	---	20	70	89	80	60	56	35	20	285
220	2405	1170	1235	1485	915	5	120	310	475	500	360	310	205	125	1720
222	3265	1580	1685	2012	1240	13	158	406	626	679	496	392	328	180	2344
224	5422	2776	2646	3356	2060	6	323	865	1117	964	774	654	452	273	3569
226	2523	1290	1233	1752	771	---	196	442	537	470	324	270	195	89	1561
228	4184	2116	2068	2636	1545	3	195	714	889	731	635	511	327	182	2728
230	5609	2790	2819	3247	2361	1	324	981	1118	973	889	664	409	251	3598
232	8166	4120	4046	4749	3394	23	387	1425	1425	1250	1265	1063	662	406	5248
234	4193	1984	2209	2589	1572	32	296	528	705	978	689	472	356	169	2997
236	5218	2554	2664	3384	1790	44	363	730	831	1319	905	522	360	188	3688
238	4139	2025	2114	2546	1578	15	262	557	699	937	673	499	329	183	2938
240	4122	2005	2117	2674	1434	14	271	613	703	901	685	459	298	192	2830
242	2170	1030	1140	1402	767	1	135	330	405	441	326	261	156	146	2045
462	1086	531	555	779	298	9	81	138	171	255	171	120	78	74	1289
470	1338	660	678	870	468	---	80	202	242	269	205	162	109	69	937
472	2214	1106	1108	1475	722	17	129	336	414	465	357	255	165	93	1524
474	3115	1554	1561	1988	1106	21	163	450	569	604	506	402	277	144	2115

476	3650	1824	1826	2362	1271	17	172	520	681	726	593	429	329	200	2550
478	4739	2320	2419	3336	1389	14	318	687	839	1012	737	553	376	217	3245
480	3260	1630	1630	2294	963	3	194	496	541	617	581	415	227	189	2251
484	4166	2015	2151	2905	1229	32	262	596	690	877	741	480	322	198	2902
486	3779	1881	1898	2510	1263	6	203	611	752	606	615	534	277	181	2451
488	3418	1674	1744	2430	968	20	183	477	598	658	635	414	287	166	2424
490	1411	667	744	1049	357	5	94	150	224	324	258	159	117	85	1051
494	2575	1213	1362	1916	643	16	162	274	390	650	450	293	224	132	1940
496	4395	2179	2216	2881	1505	9	232	631	781	826	716	565	403	241	3080
498	3175	1575	1600	2190	975	10	205	438	519	769	536	342	228	138	2259
500	1000	460	540	800	200	--	70	130	160	220	160	130	80	50	550
<hr/>															
<u>TOTALS</u>															
	46,943		61,887		32,944		5,598		17,473		15,342		7,611		66,119
95,167		46,943		61,887		336		14,107		19,071		11,386		4,579	
<hr/>															

* Source: U. S. Bureau Of The Census, Census Of Population, (1940).

** Does Not Include Entire Tract Where Blocks Fall Outside Community Boundaries.

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BIBLIOGRAPHY:

- Brooklyn Daily Eagle. Brooklyn City Plan. January 18, 1914.
 _____ Brooklyn. New York. 1946.
 _____ Flatbush. New York. 1946.
- Brooklyn Edison Company. Brooklyn Market Survey. 1936.
- Bureau of the Census. U.S. Department of Commerce.
 16th Census of the United States. 1940. Housing Brooklyn
 Borough.
 _____ Population New York City.
 _____ Retail Trade New York City.
- Cohen, Henry. A Study of School-Community Relation-
 ships in Brooklyn, New York. Brooklyn
 Council for Social Planning. 1944.
- Consolidated Edison Company of New York. Survey of the New
 York City Market. 1945.
 _____ New York's Population 1790-1970. 1946.
- Cook, Catherine M. Planning Schools for Tomorrow.
 Washington. 1943.
- Mayor's Committee on City Planning. New York. 1940.
Basic Factors in the Planning of the
 City of New York. (Volume I).
 _____ The Planning of Public Services for the
 City of New York. (Volume II).
 _____ Programming Public Improvements in the
 City of New York.
- McHugh, F. Dodd. Cost of Public Service In Residen-
 tial Areas. New York. 1942.

- Municipal Club of Brooklyn. Brooklyn, The Home Borough of New York City. 1912.
- National Committee on Housing. Planning Neighborhood Shopping Centers. New York. 1945.
- National Recreation Association. Standards for Neighborhood Recreation Areas And Facilities. New York. 1943.
- National Resources Planning Board. Estimates of Future Population of the United States 1940-2000. Washington. 1940.
- _____ Family Expenditures In The United States. Washington. 1941.
- New York City Departments. Interview information.
- New York City Board of Education. Annual Financial and Statistical Report. 1944-1945.
- _____ Annual Financial and Statistical Report. (Each year from 1917 to 1943).
- New York City Charter. Adopted January 1, 1938.
- New York City Housing Authority. 13th Annual Report. 1947.
- _____ 10th Annual Report. 1944.
- New York City Planning Commission. Program for the Public Libraries of New York City. 1945.
- _____ Proposed 1948 Capital Budget and 1949-1953 Capital Program. October, 1947.
- New York Times. 1945 Census: An Interim Report. 1945.
- Regional Plan Association, Inc. The Economic Status of the New York Metropolitan Region. New York. 1944.