REPORT OF THE
MASTER PLAN STUDY

PUBLIC HIGHER EDUCATION IN THE CITY OF NEW YORK

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INTRODUCTION

The Master Plan Study was an investigation of the minimum capital plant needs of New York City for public higher education through the next two decades. The Study was conducted for the Board of Higher Education of the City of New York. It was based upon an intensive examination of the present municipal College plants and programs, and upon present and anticipated needs as revealed by research into vocational, enrolment and population trends.

The approach to the interpretation of the facts of need of the City in this respect was in general conformity with that of the Board of Higher Education whose Chairman declared in his 1946 annual report, "In short, the City has to face the problem of the extent to which it will accept and financially support its legal mandate to provide higher education for an appreciable fraction of its eager young people,—a mandate which under the law we are all bound to acknowledge more fully than at present." The essential facts of need are to be found in the pages of the present Report. These facts clearly indicate to the authors a profound challenge to the City to find ways of providing facilities for the higher education of all who can profit by it and who by virtue of such education can return a ten-fold contribution of service to the community.

For the convenience of the reader, the major recommendations of the Study are summarized in Chapter I. The gist of each chapter or section is set in bold face type at the beginning. More complete discussion and analysis follow in regular type.

This Study would not have been possible without the cooperation of many city, state, and federal agencies. We should be remiss did we not refer especially to the information and suggestions given by the four Municipal Colleges, the Board of Higher Education, the City Planning Commission, the Board of Education, the United States Office of Education, the New York State Department of Education, and the State University of New York. No one of these agencies nor any other is, however, accountable for the recommendations made in this Report.

We wish in particular to express our appreciation of the work and devotion of our architectural consultants, the firm of Chapman, Evans and Delehanty.

DONALD P. COTTRELL
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CHAPTER 1

A Program for the Development of Facilities for Public Higher Education in New York City

The needs of New York City for public higher education are far in excess of present plant facilities and programs. It is urgent to establish additional facilities to help close the gap between needs and currently inadequate plants.

This Chapter presents the recommendations for capital plant and program expansion along with correlative suggestions for meeting New York City's higher educational needs.

Two important facts should be kept in mind when interpreting the recommendations below: (1) The steps listed are the minimum necessary to meet the needs of the youth and adults of New York City for higher education. There is no implication that the expense involved will in all cases be entirely met from the tax funds of the City of New York. (2) Although the recommendations for the most part are concerned with additional facilities and program, it is considered to be just as important to maintain plants more adequately for present students as to accommodate new students; nor does emphasis on unfilled functions, such as two-year college work and new five-year programs, lessen in any way the importance of extending to more students the opportunity to take undergraduate work.

GENERAL RECOMMENDATIONS

The following general recommendations are made:

1. There should be established in the present Hunter Bronx plant a two-year co-educational community college for a maximum of 3,000 students, the present Hunter College Bronx program being discontinued and the students being permitted to attend Hunter College at Park Avenue, City College at 137th Street, or the other City Colleges.
2. There should be established at a new site in Brooklyn a two-year co-educational community college for a maximum of 3,000 students.
3. There should be established at a new site in Queens a two-year co-educational technical institute of the type of the New York State Institute of Applied Arts and Sciences for a maximum of 3,000 students. It is suggested that consideration be given to special emphasis

upon the fields of aviation, communications and automotive technology.

4. There should be established at a new site in Queens a two-year co-educational community college for a maximum of 3,000 students.
5. There should be established in Richmond a two-year co-educational community college for a maximum of 1,000 students.
6. The facilities of the present Hunter College Park Avenue plant should be increased to accommodate an additional enrolment of approximately 500 students. To facilitate this recommendation, the offices of The Board of Higher Education and its agencies should be moved (see Recommendation Number 11 below) and the use of Public School Number 76 should be considered.
7. The present City College 137th Street plant should be expanded to include a suitable adjacent site for buildings required to accommodate more adequately the present program and to provide for anticipated expansion up to 13,000 full-time students over the period of the next 15 years.
8. The present City College 23rd Street plant should be expanded on the adjacent property or at some other suitable site for the purpose of accommodating more adequately the present program and to provide for a minimum enrolment of 5,000 full-time students.
9. The present Brooklyn College plant should be expanded to provide more adequately for present enrolment and to accommodate a minimum of 12,000 students.
10. The present Queens College plant should be expanded to accommodate more adequately the present students and to provide for a minimum enrolment of 5,000 full-time students.
11. Building space should be made available apart from existing College plants for the Board of Higher Education and all of its agencies for administrative, accounting and architectural service, together with the central administration for Teacher Education and any other central administrative services that may be developed in the future.

TABLE 1

Present and Anticipated Near Future Minimum Full-Time Enrolments of Municipal Colleges

College	Present Enrolment	Capacity with Anticipated Expansion in Next Ten Years
City, 137th Street	6,754	13,000
City, 23rd Street	3,721	5,000
Hunter, Bronx Center	1,617	.....
Hunter, Park Avenue	4,454	5,000
Brooklyn	7,727	12,000
Queens	2,985	5,000
Total	27,258	40,000

RELATED RECOMMENDATIONS AND CONSIDERATIONS

I. It will be noted that it is assumed that all of the present seven College centers will continue on their present bases except for the Hunter College Bronx plant which is recommended for use as a two-year community college.

II. It is recommended and assumed throughout the present Report, that the City College Day Session Liberal Arts and Science work will be opened to women students.

III. It is recommended that the two-year community colleges not be on the same sites nor under the same collegiate administration

as the present municipal Colleges. It is also to be noted that if two-year community colleges should be established under the provisions of the present State law, it cannot be assumed that their overall administration will be an exclusive or even a major function of the Board of Higher Education.

IV. It is recommended that the work in adult education be expanded, and that present and future plants be utilized more fully for this purpose.

V. It is recommended that consideration be given to establishing five-year degree programs in the following fields: Social Welfare Administration, Public Administration, Labor-Management Relations, limited aspects of Clinical Psychology, Nursing Education, and Library Work. Possibly 1,000 additional students would initially be included in the total enrolment of the municipal Colleges by virtue of all of these programs.

VI. It is anticipated that the overall increase in full-time enrolment of the present four Colleges, if the recommendations outlined above were implemented, would be about 12,500 students (or approximately 50% of the 1949 full-time enrolment).

RECOMMENDED CAPITAL PROJECTS LISTED IN PRIORITY GROUPS

(NOTE: The order of listing within the priority groups is alphabetical and does not indicate relative urgency.)

GROUP A—OF IMMEDIATE URGENCY

Project	Estimated Cost
Brooklyn College—College Center and Arts Building with Landscaping and Equipment. Convert tennis courts into play field	$ 3,275,000
City College, 137th Street—Reconditioning of Main Building, including Equipment	50,000
City College, 137th Street—Corrections to Distribution System, Including Power Plant; also ground improvements	900,000
City College, 137th Street—New Liberal Arts Building, including cafeteria, to replace existing classrooms of Army Hall, Finley Hall, South Hall and Townsend Harris Hall	3,225,000
Queens College—New Gymnasium and ground improvements, including sports area	3,020,000
Richmond, Two-Year Community College—Entire plant	2,700,000
Total of Group A	$13,170,000

GROUP B—OF URGENCY SECOND ONLY TO GROUP A

Project	Estimated Cost
Board of Higher Education and other central administrative offices, including Committee on Coordination of Teacher Education, Architectural Unit, Bureau of Analysis, and Accounting Unit—a single separate headquarters apart from any present municipal College center	$ 50,000
Brooklyn College—Library Extensions with Landscape and Equipment	1,925,000
Brooklyn, Two-Year Community College—Entire plant	7,275,000
City College, 137th Street—Alterations and Extensions to Townsend Harris Hall, South Hall, Chemistry Building, Technology Building, Compton Hall, and the Main Building	1,575,000
City College, 137th Street—New Library Building	2,075,000

Hunter College, Park Avenue—Removal of Board of Higher Education offices and conversion of area for College use	10,000
Queens College—New Library	1,620,000
Queens, Technical Institute—entire plant	7,700,000
Total of Group B	$22,230,000

GROUP C—IMPORTANT PROJECTS WHICH SHOULD ONLY BE DEFERRED IF NECESSARY TO PERMIT GROUPS A AND B TO BE INITIATED

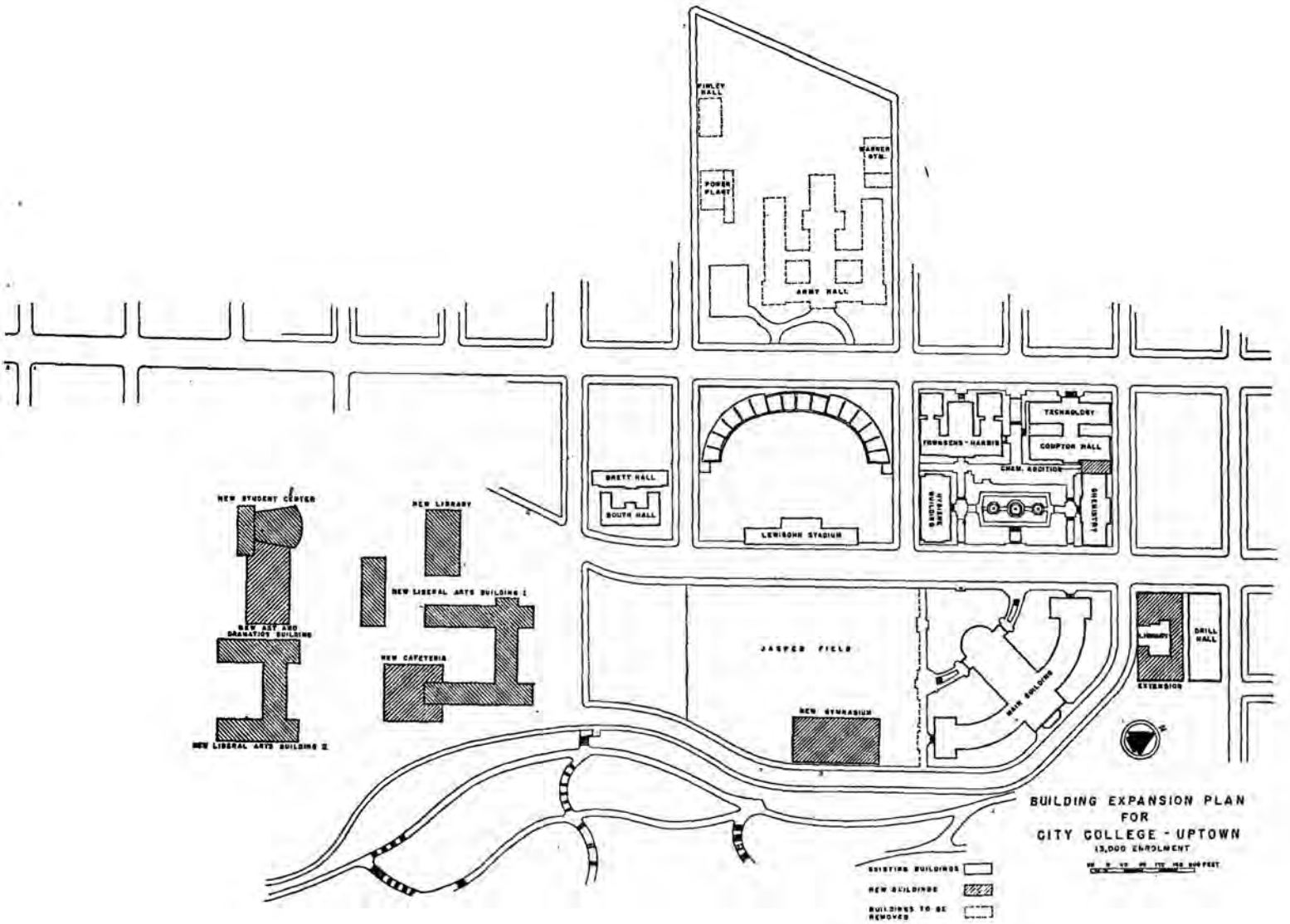
Project	Estimated Cost
Bronx, Two-Year Community College (Present Hunter Bronx Center)—Administration Building	$ 270,000
Bronx, Two-Year Community College—Alterations to Existing Buildings and ground improvements	375,000
Bronx, Two-Year Community College—Library Building	750,000
Brooklyn College—Stadium, including Field House and improvements to Athletic Field and Off-Street Parking	775,000
City College, 23rd Street—New Building	2,750,000
City College, 23rd Street—Alterations to existing building	200,000
City College, 137th Street—New Gymnasium	3,300,000
(Old gymnasium to be used by women students.)	
Queens College—New Academic and Science Building	1,960,000
Queens, Two-Year Community College—Entire Plant	7,275,000
Total of Group C	$ 17,655,000

GROUP D—IMPORTANT PROJECTS OF AN URGENCY SOMEWHAT BELOW GROUP C

Project	Estimated Cost
Brooklyn College — Academic Building to provide additional classrooms and social rooms and alterations to Boylan Hall to provide increased cafeteria facilities	$ 1,600,000
City College, 137th Street—Student Center	1,625,000
City College, 137th Street—Extension of existing Library for engineering	1,625,000
Queens College—Auditorium and Art Center	2,450,000
Total for Group D	$ 7,300,000

GROUP E—PROJECTS WHICH SHOULD BE INITIATED SUBSEQUENTLY TO GROUPS A THROUGH D

Project	Estimated Cost
Bronx, Two-Year Community College—College Center and Art Building	$ 510,000
Brooklyn College—Science Building to provide laboratories and classrooms	1,325,000
Brooklyn College — Gymnasium Extension	1,950,000
City College, 137th Street—Extension of Liberal Arts Building facilities	2,825,000
Hunter College, Park Avenue—Improved Ventilation in Assembly Hall and Cafeteria	75,000
Queens College — Administration Building	450,000
Queens College — Power Plant Addition	80,000
Total of Group E	$ 7,215,000
Grand Total of All Groups	$67,570,000


FINLEY HALL
WARNER SYS.
POWER PLANT
ARMY HALL
BRETT HALL
SOUTH HALL
LEWISOHN STADIUM
TECHNOLOGY
TOWNSEND - HARRIS
COMPTON HALL
CHEM. ADDITION
NURSING
SHEPARD
NEW STUDENT CENTER
NEW LIBRARY
NEW LIBERAL ARTS BUILDING I
NEW ART AND DRAMATICS BUILDING
NEW CAFETERIA
NEW LIBERAL ARTS BUILDING II
JASPER FIELD
NEW GYMNASIUM
MAIN BUILDING
L. HOUSE
EXTENSION
DRILL HALL
EXISTING BUILDINGS
NEW BUILDINGS
BUILDINGS TO BE REMOVED
BUILDING EXPANSION PLAN
FOR
CITY COLLEGE - UPTOWN
13,000 ENROLMENT

CHAPTER 2

Factors Determining The Need for Higher Education in New York City

Substantially expanded facilities are needed in general undergraduate education at the junior and senior college levels, as well as in a number of special fields, including technical, sub-professional, and graduate education.

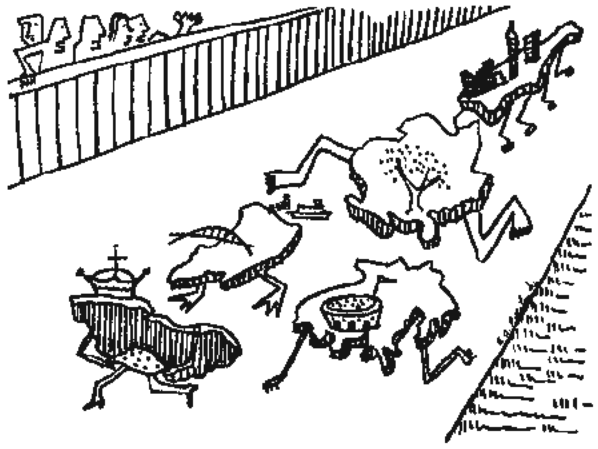
The following three factors bear out this need:

(1) The long-term tendency of enrolments and population to outrun the higher education facilities available in the City as a whole and in the various Boroughs.

(2) Occupational shifts involving the expansion of certain fields, the rise of new industries, and the relative decline of other industries and occupations.

(3) The increasing demands made in the great national and regional center of New York City for both high vocational competence and broad general background and skill in human relationships.

POPULATION TRENDS IN RELATION TO ENROLMENTS IN THE CITY COLLEGES AND IN THE FIVE BOROUGHS



Certain population trends are critical in determining the need for education in New York City. There has been a continuous increase in overall population. Also, during certain periods, the 18 to 21 year age group constitutes an unusually high proportion of the total population. This increase in proportion follows an unusually high birth rate some two decades previously, and obviously enlarges the potential body of college students. Most important of all, a steady increase in the percentage of potential students who are ready, able and willing to take advantage of educational opportunity has been a vital factor in expanding enrolments. The trends in distribution of population among the five Boroughs are important in determining advantageous locations for new facilities.

The total population of New York City is expected to continue to grow during the next twenty years, although at a slower rate than in recent years. For the City as a whole, an increase of about five percent is expected during these two coming decades. Considerable variation in the rate of increase among the Boroughs is also expected to continue. According to the Consolidated Edison Company's estimates, this will probably vary from nearly a 25% increase in the population of Richmond at one extreme to a very slight net decrease in Manhattan at the other.

Shifts occur within boroughs due to housing developments, extension of transportation facilities, and other special neighborhood factors. Though these shifts have caused grave problems for the public schools, they are obviously not so important in determining the location of higher educational facilities used by the relatively mature students.

The great fluctuation in the number of births annually is a complicating factor in long-range planning. A few years ago, the number of births in New York City was in the neighborhood of 100,000 annually. In recent years, the range has been from about 150,000 to almost 175,000 births annually. These wide variations have tended to produce corresponding peaks and valleys as these age groups moved through the school system from the first grade to high school graduation. The effect on higher education has been obscured to a considerable extent by the long-term increase in the percentage of youth attending school beyond the twelfth grade. Nevertheless, a low birth rate in the late 1930's will inevitably cause a reduction of enrolment in the middle 1950's. Likewise, present high birth rates will bring a high point of enrolment in the late 1960's.

Post-war birth rates in New York City continued to hold close to their peaks through 1949 in spite of the sharp drop predicted. Nearly one million and a quarter births occurred between 1946 and 1949. If this unexpected trend should continue, all school and college enrolment forecasts would have to be revised upward.

Enrolments may be expected temporarily to decrease somewhat from post-war peaks. Nevertheless, we may expect more students in attendance than in peak pre-war years. It has seemed to the staff of the Study unreasonable to base long-term planning on either a temporary valley or a temporary peak. Rather, a conservative average need has been taken into consideration.

Post-high school education is being accepted as a "must" by a constantly increasing proportion of students. This is an extension of the trend which has caused a phenomenal increase in high school attendance and graduation. A variety of factors has caused the demand for further schooling: the shift in occupations described in the next section of this Chapter; the increasing complexity of our culture which requires more "know how" and maturity for the individual as a person, as a citizen, and as a worker; the competitive factor which makes higher education, formerly a luxury, become a necessity as more and more people take advanced work; and the imitative factor which causes relatives and friends of students to take advanced work too.

The steadily climbing enrolment trends of the Municipal Colleges do not reveal the full extent of the need for higher education in New York City. A recent study of enrolment trends in the City College refers to this fact: "In the past, the size of incoming classes of the Day Session has been determined largely by the personnel and space

facilities of the College. Personnel and space limitations are in turn caused by operating and capital budget limitations."* Some indication of how these factors limit enrolment may be judged from the fall, 1949, entering class in the day session of the City College. Approximately 4,300 sought admittance. About 1,800 were refused admittance to the day session, of whom about one-third are estimated by the Registrar to have entered the evening session. Doubtlessly, some of the remainder were financially able to enter other colleges. It is a reasonable assumption, however, that the entering class might have been from twenty to forty percent larger if the limitations of personnel and facilities had not excluded many competent students. This does not take into account the very much larger number of competent students who might be candidates for admission were they not discouraged by the well-publicized high academic marks or high entrance test marks necessary for admission.

The facts reviewed above therefore corroborate in large measure the need for increased facilities as envisioned by the four City College presidents in their 1947 Report, *The Scope of Higher Education in New York City*. Dr. Ordway Tead in his *1946–1948 Report of the Chairman of the Board of Higher Education* also pointed out the disparity between needs and resources: "Our knowledge of population trends, of professional needs, of increasing public pressures for higher education, and of the land and building requirements thus implied, stands in sharp contrast to the resources upon which we are now able to draw."

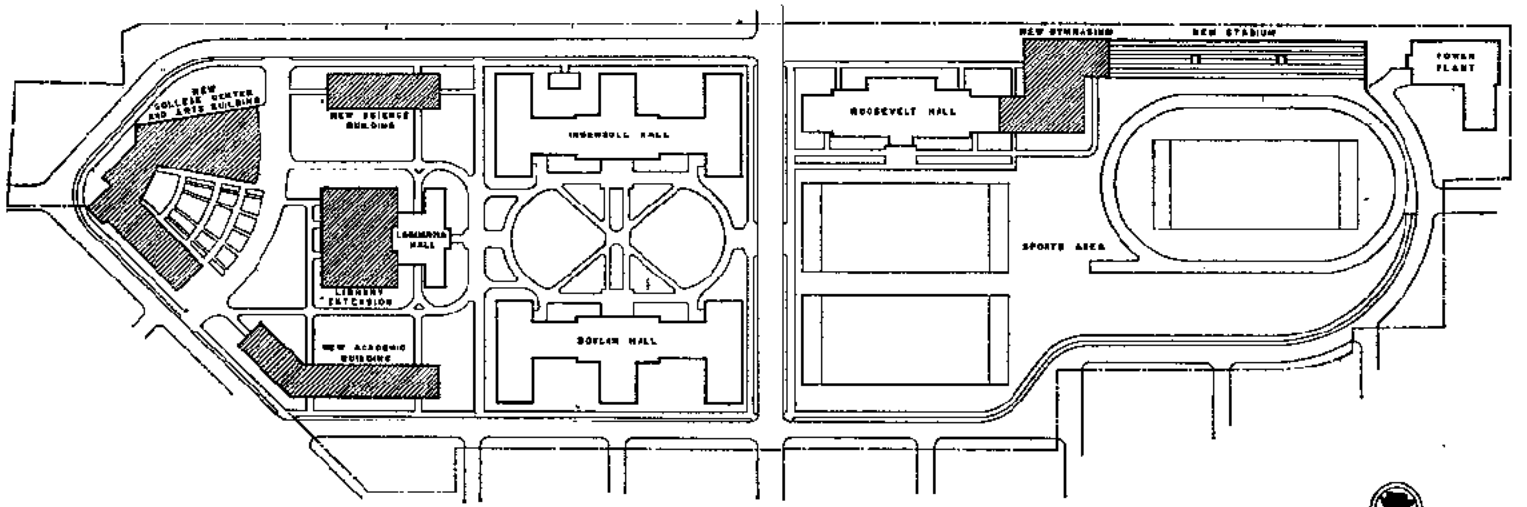
*An *Analysis of Factors Affecting Trends in Enrolments in the City College of New York*—William I. Pearson and Charles F. Reid, 1947.

TABLE 2

TOTAL POPULATION TRENDS, FOR NEW YORK CITY, ITS BOROUGHS, NEW YORK STATE, UP-STATE NEW YORK AND THE NATION, 1890-1940

Year	Manhattan*	Bronx*	Brooklyn*	Richmond*	Queens*	New York City	New York State	Up-State New York	National
1890.....	.....	.....	.....	.....	.....	.....	6,003,174	.....	62,947,714
1900.....	1,850	201	1,167	67	153	3,437,000	7,268,894	3,831,894	75,994,575
1910.....	2,332	431	1,634	86	284	4,767,000	9,113,614	4,346,614	91,972,266
1920.....	2,284	732	2,018	117	469	5,620,000	10,385,227	4,765,227	105,710,620
1930.....	1,867	1,265	2,560	158	1,079	6,930,000	12,588,066	5,658,066	122,775,046
1940.....	1,890	1,395	2,698	174	1,298	7,455,000	13,479,142	6,024,142	131,669,275

* (000).



BUILDING EXPANSION PLAN
FOR
BROOKLYN COLLEGE
22,000 ENROLMENT

EXISTING BUILDINGS
NEW BUILDINGS

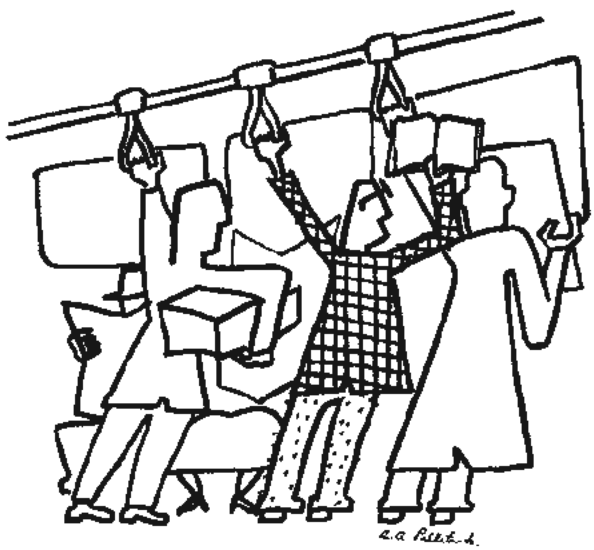
THE CHARACTER OF THE LIFE OF NEW YORK CITY

Every thoughtful citizen recognizes the fact that a more complex world requires more and better education. Social and economic change is occurring at an accelerated tempo. Improved means of transportation and communication increase contacts among far-flung peoples. The job or profession of today requires many abilities in human relations as well as technical skills. Conflict between world powers and ideologies takes place on Main Street as well as on the international scene. Men and women must be able to do more than just earn a living. They must carry their share of the responsibility for our democratic leadership at home and abroad.

All of these factors apply with special force to New York City. It is the largest city in the nation. In many areas, such as finance and the administration of industry, it is a regional and national nerve center. Its citizens are subject to special strains and stresses due to its size, noise, congestion and fast pace which reaches its daily peak during the "rush-hours." There is also pressure of competition with great numbers of able and ambitious persons who have moved to New York to avail themselves of its opportunities.

In planning for education in New York City, therefore, certain special circumstances must be borne in mind. One evident example is the need for understanding and tolerance of those of different backgrounds. This kind of generosity and sympathy, so desirable everywhere, is an absolute necessity in New York. In this great melting-pot, whole cities of men of every race, religion, and national origin live and work side by side.

It is a sociological axiom that tensions and antagonisms are likely to be greatest where there are large groups with divergent backgrounds living close together. The right kind of education teaches young men and women to understand and appreciate people of other faiths, nationalities and color of skin. Furthermore, through courses in the sciences and the social sciences, it teaches them objectivity and insight into their own prejudices. In combatting prejudice, knowledge is indeed power.



In New York City, the problem of assimilation and Americanization is unique. Though their parents and grandparents came from the four corners of the earth, the children must become Americans in loyalty, language and outlook. Credit for success obtained is in very large part due to our schools and colleges.

Education is likewise an important means of equalizing opportunity in New York City where the language and customs of the home are so often foreign. Although the flood-tides of European immigration have ebbed, great foreign neighborhoods still persist in

New York. Furthermore, the large influx of Porto Ricans has introduced a new variant of an old problem.

Even though educators, social scientists and the general public favor more education for our youth, sometimes there is a fear lest too many people be educated for the better jobs. Unquestionably there must always be "drawers of water and hewers of wood." Will increased higher education mean that there will not be enough persons willing to do the more humble work in the world?

This concern is unwarranted for the following reasons. First, the long-term trend is strongly toward more jobs which require considerable education, and strongly away from jobs which require little education. For example, the Bureau of the Census reports that, in confirmation of the same trend in farm labor, the number of non-farm laborers decreased over a million from 1910 to 1948 while total employment was rising about twenty-three million. On the other hand, as our economy develops, old professional, technical and service occupations expand and new ones develop. That is, although it is possible to have a particular field over-crowded, service, technical and professional occupations as a whole are not likely to become over-crowded with competent persons in the forseeable future.

Secondly, higher education will train many to work better and live more richly no matter what their jobs may be. It is a mistake to assume that all who take some form of higher education should expect a professional or highly technical position. This is an Old World, leisure-class tradition. It has no real basis in our American democratic way of life. As a matter of fact, it has been pointed out that too great a difference in the educational background of different economic and occupational groups is undesirable because they no longer "speak the same language." Communication breaks down for lack of a common background, and what the sociologist calls social disintegration occurs.

Certainly the leadership for the economically poor neighborhood is not likely to come from the well-to-do who do not live there. It must come from within that neighborhood. Here higher education has a critical role to play. It is interesting to observe that so-called "problem neighborhoods"—those which have a high proportion of crime, juvenile delinquency, truancy and other undesirable characteristics—are much below the average of the City in percentage of population who have had some post-high school education. Apparently, a high proportion of neighborhood leadership comes from those who have had some post-secondary education.

In sum, the vocational, physical and psychological factors that exist in New York City require an uncommonly high level of average education to have a healthy, forward-moving industrial, community and neighborhood life. Certainly, American employers are demanding more and more education on the average from prospective employees. This fact may be substantiated by reference to Appendix 6 which gives estimates for 1950 and 1960 of the number of annual replacements and new entrants into various New York City occupations, according to the amount of higher education required.

CHAPTER 3

An Analysis of the Needs for Specific Types of Higher Education in New York City

Even on the most conservative basis of estimating, it is evident that there is a large unmet need in all of the major types of higher education in the City of New York.

Inasmuch as capital expenditures are irrevocable long-term investments, this Study has offered minimum estimates of need with the thought that it might prove necessary to revise them upward in the light of future developments.

It must also be borne in mind that the various estimates assume that the needs for other types of higher education will be met simultaneously. This assumption is not at present in accord with the facts, notably in the case of the insufficiency of community college and technical institute education. Furthermore, the current displacement of college age youth by over-age veterans has been ignored since it is regarded as a temporary factor.

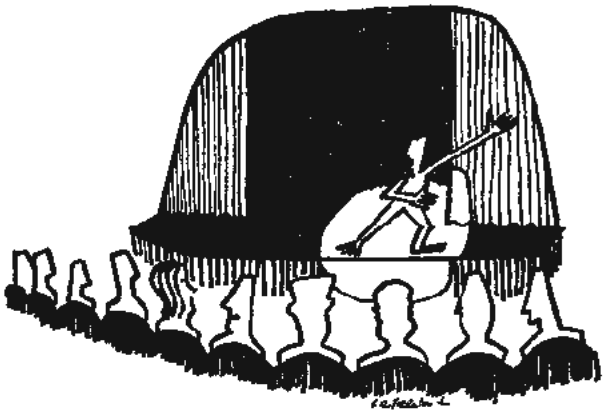
For all of the above reasons, and because of certain local factors in estimates of unaccommodated students, the figures in this Study are likely to be considerably lower in proportion to the population than those of national, state, or other city studies. This obviously reflects the highly conservative basis of the estimates in this Study rather than disagreement with the estimates of other studies.

TWO-YEAR COLLEGE WORK

Education at the level of the thirteenth and fourteenth grades has developed out of the recognition of a number of needs not met by the four-year college. In general, there are two types of these unmet needs. First, there is sub-professional and technical work which requires preparation beyond the high school but of a more specialized and less academic type than the four-year curriculum usually provides. Secondly, there are young men and women who need more opportunity to mature in personal and civic relationships, but who are unable or unwilling to devote four full years to post-high school education. For them, a two-year general education program may be highly desirable.

It cannot be too strongly emphasized that educational leaders do not believe these needs can be met by taking the first two years of a regular four-year program. The reason is simple. The first two years of a four-year

program usually have only one major purpose, namely, to prepare for the second two years of more advanced work. Consequently, the student who takes only two years of the traditional college program has not in any real sense completed a full unit of either general or vocational education. The two-year programs, on the other hand, are designed to be complete units of higher education.

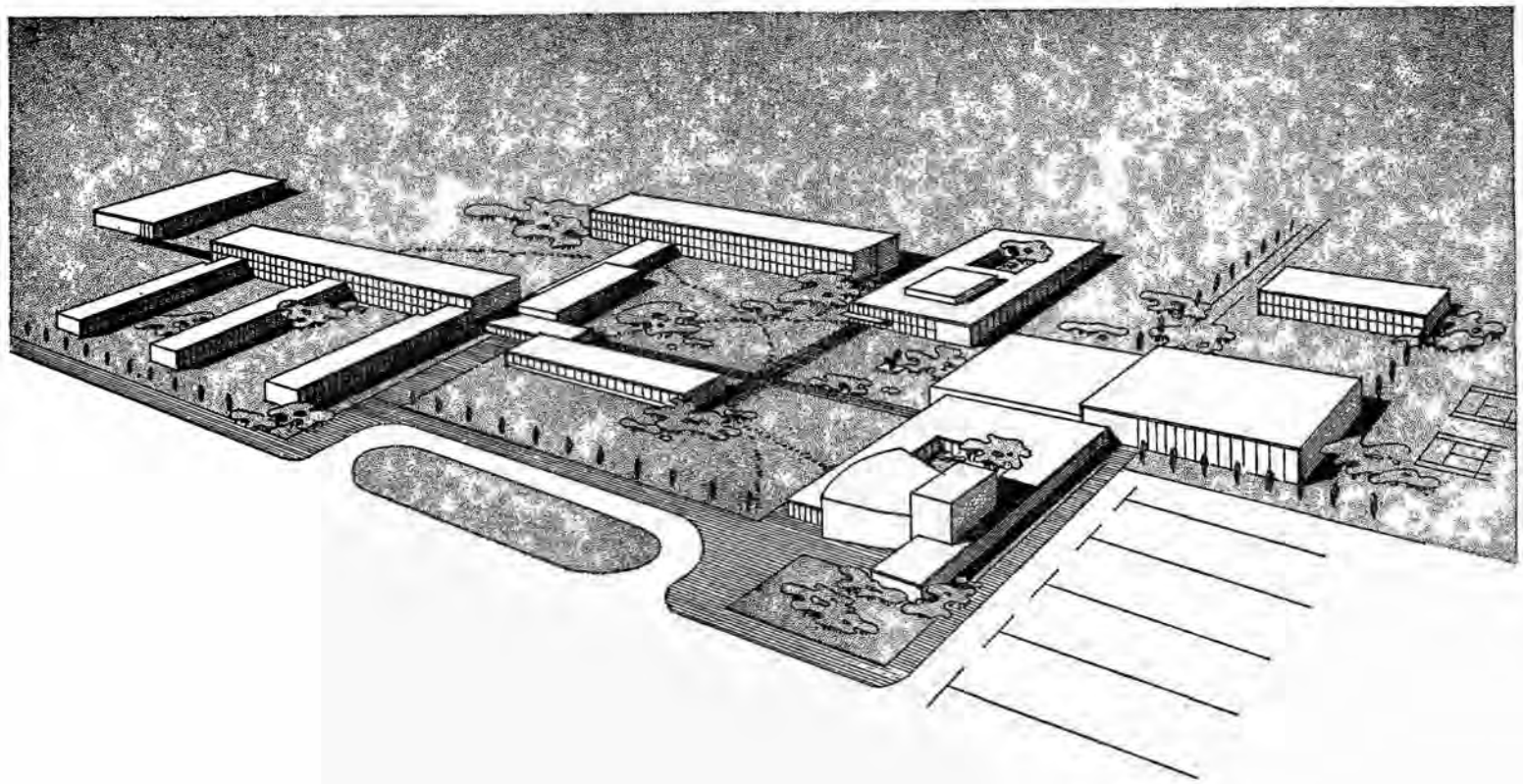


The almost complete absence of this type of education in the great New York metropolis is a noteworthy fact. Some have tried to explain it in part on the theory that New York's evening school work is a kind of counterpart of the highly developed community college programs in other states. This is not a very satisfactory explanation for three reasons. First, because community colleges and technical institutes are designed for full-time students. Secondly, because a city with over eight million population may well be expected to have a very extensive adult education program without drawing on a youth population who need full-time schooling. Thirdly, because a large proportion of the evening college students are matriculated in the regular four-year curriculum, the purposes of which are very different from those of the two-year curriculum.

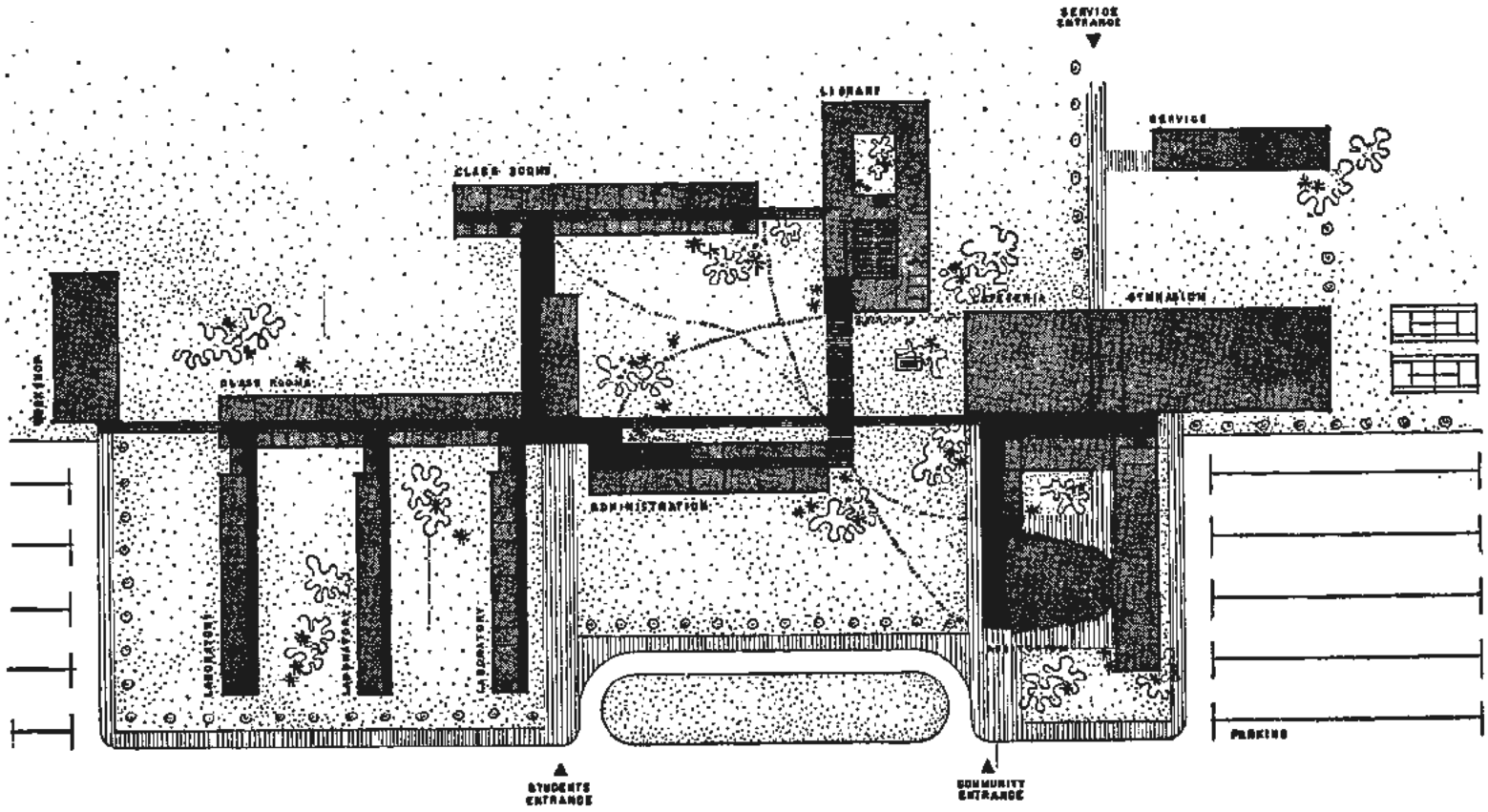
There is a vast unmet need at the two-year level in New York City. The only publicly supported college at this level is the New York State Institute of Applied Arts and Sciences in Brooklyn, with a capacity limited by law to 2,250 students, about 1,750 of whom are currently from New York City. The private junior colleges accommodate an inconsequential number of students.

The figures in Table 3 indicate the estimated number of students who would attend two-year colleges if facilities were available. (Small deductions—about five per cent—may be made from these figures to allow for those now accommodated.) They are based on the assumption that New York students are as capable and as interested in education as those in California. In California, the number attending community colleges is slightly over eighteen per cent of the number of eighteen and nineteen year old youth in the State, and this percentage has been used in estimating for New York City.

The Study's recommendations for community colleges and technical post-high school facilities are very conservative in comparison with the indicated needs. This conservative, minimum approach affords an opportunity for revision of estimates in the light of experience, and should not be considered as necessarily an ultimate goal.



AERIAL PERSPECTIVE OF A COMMUNITY COLLEGE FOR 3000 ENROLMENT



SCALE :

SUGGESTED PLAN FOR A COMMUNITY COLLEGE

FOR 3000 ENROLLMENT

FOUR-YEAR UNDERGRADUATE WORK

An examination of Table 3 shows that, at the present time, there are approximately twelve thousand additional youth who would attend the Municipal Colleges for four years, if facilities were available. During the 1960's this number might be expected to increase to somewhere between twenty and forty thousand.

It is indispensable to bear in mind two facts in interpreting this table. First, the influence of over-age veterans has not been taken into account since it is a temporary, and at the present time, a rapidly diminishing phenomenon. In other words, if the number of veterans who are beyond the usual college age were calculated, it would be evident that they are displacing several thousand students annually in addition to the number of unaccommodated students shown in Table 3 for the decade of the 1950's.

Secondly, Table 3 shows the number of four-year students who would need to be accommodated if two-year college facilities were available to meet the needs as indicated. But potential two-year college students are virtually unaccommodated at the present time in New York City. It is evident, therefore, that a considerable but indeterminable number of potential two-year college students are likewise displacing bona fide four-year students. That is, those interested in only one or two years of tuition-free collegiate education are to some extent compelled to enter the four-year course even though it is quite unsuited to their needs.

There is some question as to how profitable it is to speculate as to the long-term distribution of enrolments among the various undergraduate colleges and fields of specialization. Enrolments in such fields as the traditional professions and engineering, business administration and the like are, in the long run, primarily subject to vocational supply and demand factors. On the other hand, not only occupational factors, but circumstances of student psychology seem to be involved in swings back and forth between the liberal arts degree and other degrees. Similar forces seem to cause swings of the pendulum of student interest from the humanities to the sciences and vice versa.

Variations in enrolments among the various special fields can hardly be predicted with confidence far ahead, and program and staff adjustments can readily be made as vocational and student demand warrants.

Whatever may be the variation in demand among particular curricula, there is no doubt that there is a large number of potential four-year students.

TABLE 3

ESTIMATED NUMBER OF STUDENTS UNACCOMMODATED BY THE MUNICIPAL COLLEGES AND BY TWO-YEAR COLLEGES, IN NEW YORK CITY, BY BOROUGH AND BY YEAR, 1950-1970

(This table disregards veterans over normal college age, since that group appears to be of rapidly decreasing numerical importance. The columns for 4-year colleges contain estimates based upon the assumption that students not desiring or not competent to complete 4-year courses are cared for in other institutions, such as 2-year colleges, adult education programs, etc. The columns for 2-year colleges contain estimates based upon the assumption that students competent and desirous to attend 2-year colleges do not instead enroll in 4-year colleges, for the lack of 2-year college facilities, as some students do at present, only to withdraw or be dismissed after two years or less of residence.)

	Manhattan		Bronx		Brooklyn		Queens		Richmond		Total	
	4 Year	2 Year	4 Year	2 Year	4 Year	2 Year	4 Year	2 Year	4 Year	2 Year	4 Year	2 Year*
1950	4570	7441	48	7046	3719	13932	2755	6650	897	996	11989	36065
1951	4030	7191	—417	6835	2770	13487	2357	6485	837	972	9577	34970
1952	3065	6755	—1317	6444	1055	12691	1587	6146	721	920	5155	32956
1953	2448	6508	—1818	6232	—39	12249	1102	5975	648	844	2341	31808
1954	2046	6524	—2167	6271	—747	12300	798	6042	602	904	532	32401
1955	1731	6429	—2439	6202	—1301	12141	564	6007	567	898	—878	31677
1956	1839	6518	—2319	6313	—1086	12332	703	6145	587	918	—276	32226
1957	2072	6755	—2082	6567	—645	12802	957	6424	625	960	927	33508
1958	2471	6991	—1688	6822	100	13271	1365	6707	686	1002	2934	34793
1959	3160	7371	—1020	7220	1376	14017	2044	7134	787	1065	6347	36807
1960	3500	8187	—674	8050	2020	15597	2413	7993	841	1193	8100	41020
1961	3856	8823	—327	8690	2691	16834	2786	8668	904	1303	9910	44318
1962	5285	8510	1038	8396	5333	16262	4165	8413	1120	1207	16941	42788
1963	5840	8308	1579	8211	6377	15899	4740	8264	1217	1259	19753	41941
1964	6558	9300	2276	9208	7724	17826	5475	9309	1340	1429	23373	47072
1965	7970	10685	3635	10597	10353	20512	6880	10761	1567	1663	30405	54218
1966	9292	10802	4914	10732	12826	20769	8215	10947	1786	1703	37033	54953
1967	9955	9986	5568	9938	14087	19228	8933	10181	1910	1594	40453	50927
1968	9228	9280	4896	9251	12780	17896	8308	9520	1827	1501	37039	47448
1969	7610	8649	3369	8638	9820	16705	6806	8928	1601	1416	29206	44336
1970	6162	8021	1999	8025	7165	15517	5453	8331	1396	1330	22175	41224

*From the Grand Total of the number of students unaccommodated by the Two-Year Colleges, deduct 2000, each year, since that is the approximate number of New York City students accommodated by the Institute of Applied Arts and Sciences.

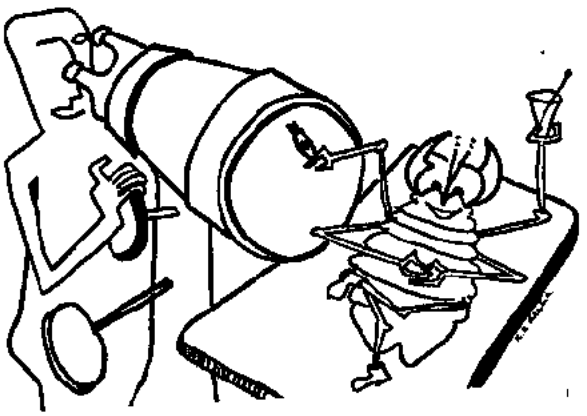
GRADUATE STUDY

One of the major occupational characteristics of the American scene is the increased need for personnel in various professional and service fields, who have had certain graduate training. There is, of course, an unusually heavy concentration of such need in any large city.

In addition to possible expansion of the general Master's Degree work in the liberal arts and science fields, there are several other special graduate fields in which there seems to be a clear need for new or additional educational offerings. These are Public Administration, Social Work, Labor-Management Relations, Clinical Psychology, Nursing Education and Library Service.

With the possible exception of Clinical Psychology, large new capital facilities would not be required for these programs. They would, to be sure, compete for available space with other offerings.

In this connection, there are two important qualifications to bear in mind: (1) Such competition would obtain only insofar as the students were additional graduate students and not simply diverted from other graduate work. (2) The time during which the programs are offered is important, inasmuch as the utilization of the College centers varies during the day, afternoon and evening sessions.



It has not proved possible to secure reliable estimates of the number of students who would be likely to take advantage of facilities in the fields of graduate work herein discussed. However, it would seem improbable that if all of these fields were developed simultaneously more than 1,000 additional students would be enrolled initially.

ADULT EDUCATION

The need for adult education is almost unlimited. The possible offerings in this field are determined by the resources and facilities which may be made available. According to the Handbook of Adult Education in the United States, "Estimates based on national, State and local surveys indicate that up to 40 million adults are interested in continuing their education in some form." On a prorated basis, there would be some two and a half million New York City adults who could be reached with the appropriate type of organized education.

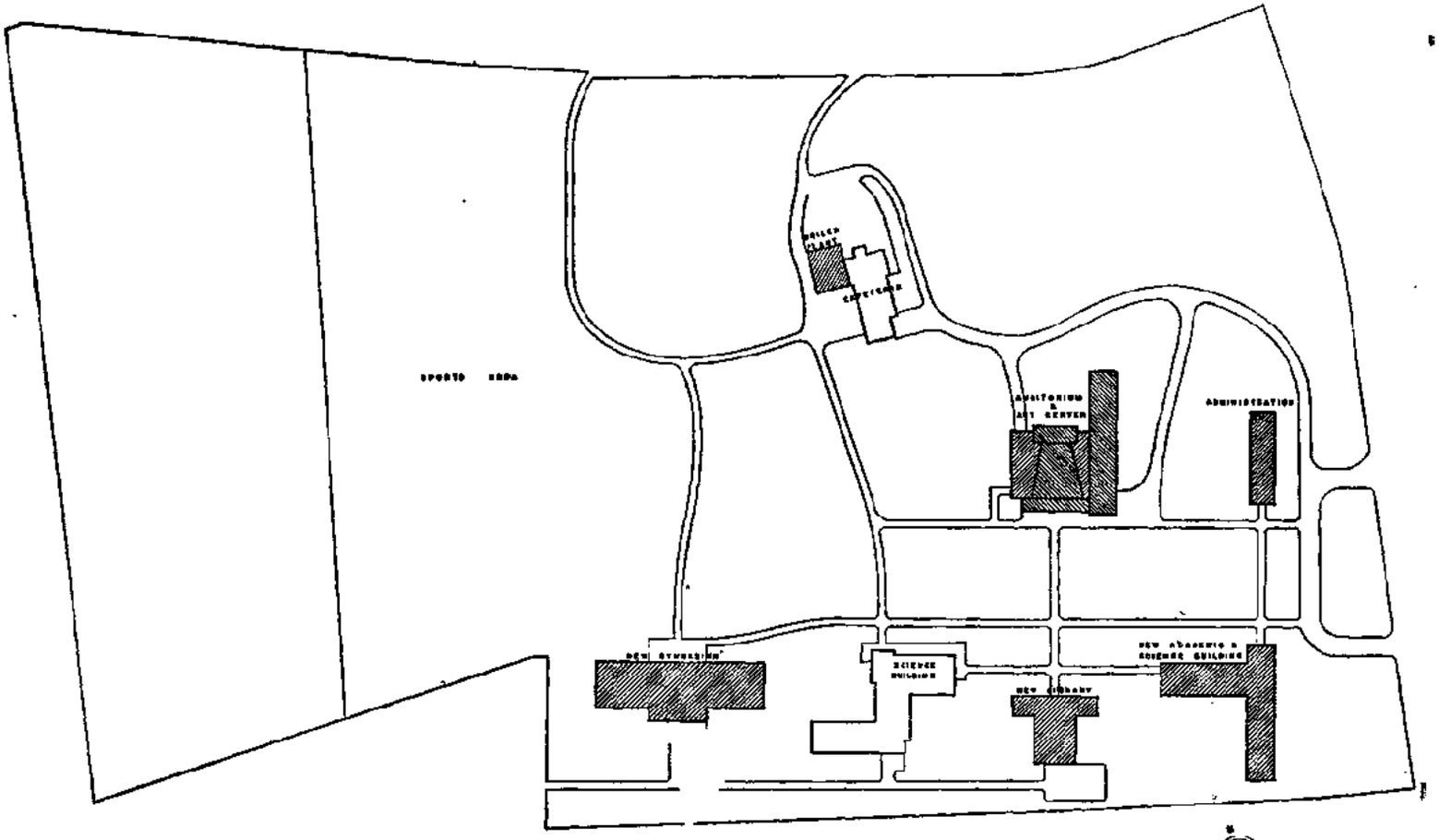
One would not expect the colleges or any other single type of community agency to bear the full responsibility for adult education. For example, among the special groups very active in certain aspects of adult education have been the League of Women Voters, the American Association of University Women, the American Library Association, privately and publicly sponsored forum organizations and the Agricultural Extension Service of the U. S. Department of Agriculture. The public schools of the country, in particular, have conducted a variety of adult education activities, sometimes independently and sometimes in conjunction with colleges and other agencies.

The City Colleges offer an extensive program of adult education. On the other hand, it is evident that the need far exceeds facilities made available especially at Queens College and on the Hunter College Bronx campus. It would require careful study to determine to what extent this is caused by general fiscal stringency and to what extent by the relatively subordinate place of adult education in the total program of the Colleges.

At present the adult education program is primarily in the Evening Sessions which generally conduct programs parallel to those of the Day Sessions as well as other work for students interested in degrees and diplomas. A report of a Board of Higher Education committee has recommended that the adult education program be handled on a different administrative basis than the other work of the Evening Sessions. Whether this is done or not, it is clear that careful consideration should be given to ways and means of initiating and expanding work in adult education to meet some portion of the still large needs in this area.

It would seem as unwise not to utilize buildings fully during the evening for adult education as it would be to have unused space in the daytime, so long as there are willing and able students to be accommodated. The value and importance to the City is such that available capital facilities should be used for this purpose even if additional operating costs are entailed.

*Adult Education Activities of the Public Schools—Report of a Survey 1947–48, Homer Kempfer; Federal Security Agency Office of Education Pamphlet No. 107.



BUILDING EXPANSION PLAN
FOR
QUEENS COLLEGE

EXISTING BUILDINGS
NEW BUILDINGS

CHAPTER 4

Educational Program and Board Policy in Relation to Capital Planning

THE EDUCATIONAL PROGRAM OF THE CITY COLLEGES TODAY

Certain of the higher educational needs can be met by expanding the present offerings of the Municipal Colleges. Other needs should be accommodated outside of the existing City College centers.

There is considerable variation in the offerings of the various Colleges. Some of this diversity is appropriate, and is derived from overall planning, presumably in terms of the total New York City situation. On the other hand, some of the differences in degrees and programs appear to be caused by other factors.

The educational program of the City Colleges is exceedingly complex as indicated in Chart I. This chart is based on an analysis of current catalogs supplemented by other materials and by interviews. It will be noted that, in addition to a variety of Bachelors and Master's Degrees, there are a number of special diplomas and certificates and certain non-credit adult education courses.

In interpreting the chart which is somewhat over-simplified for readability, reference should be made to the notes in Appendix 9.

In general, it may be said that there is a considerable range of opportunity for collegiate training available to the student who is able to meet the strict competitive requirements. On the other hand, if the courses offered are compared with the needs as outlined in the preceding Chapter, certain large gaps are discernable both in the types of offerings and in the numbers of students accommodated.

These unmet higher educational needs are of two kinds. First, there are those which should not be primarily the responsibility of the existing Colleges. In this category is two-year college work of both the general and technical types.

Secondly, there are those needs which should be met by an expansion of existing facilities or by the inauguration of new programs. Such, for example, are the expansion of undergraduate and adult education facilities and the introduction of the five-year programs recommended in Chapter III.

Two general observations may be made about the relation of the present educational program to those additions and expansions recommended in the preceding Chapter. In the first place, a faculty versatile enough to teach the courses now offered, could with the help of certain new specialists, teach most of the additional courses.

In the second place, there is considerable variation in the degrees and courses offered

by the different centers. Some of this seems to be due to careful long-term planning in terms of student and community needs on the one hand, and in terms of suitable facilities on the other. There is, for example, the specialization of City College in Technology and Business Administration, and of Hunter College in Nursing Education. The reason for other differences is not so clear. Why, for example, is there such a wide difference among the various Colleges in the courses and degrees offered in the liberal arts field both at the undergraduate and graduate levels? Or why are there so many names employed to describe identical or similar degrees and diplomas?

CHART I

DEGREES, CERTIFICATES AND OTHER PROGRAMS AVAILABLE AT THE MUNICIPAL COLLEGES — SEPTEMBER, 1949

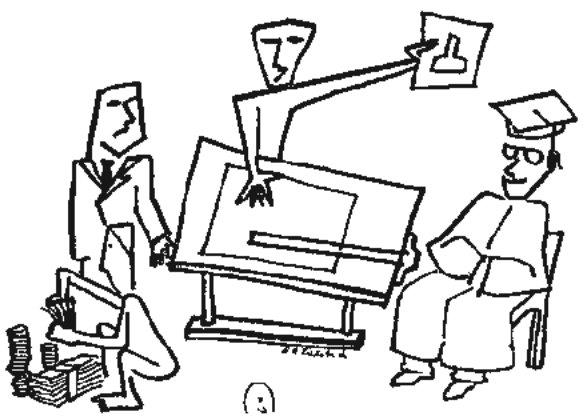
	CITY		HUNTER		BROOKLYN		QUEENS	
	DAY	EVENING	DAY	EVENING	DAY	EVENING	DAY	EVENING
I. BACHELORS								
Liberal Arts (Arts)—B.A.	x	x	x	x	x	x	x	.....
Liberal Arts (Science)—B.S.	x	x	.....	.....	x	x	x	.....
Liberal Arts (Social Science)—B.S.S.	x	x	.....	.....	.....	.....	.....	.....
Business—B.B.A.	x	x	.....	.....	.....	.....	.....	.....
Engineering—B.C.E., B.M.E., B.E.E.								
B.C.E. (Civil, Mech., Elect., Chem.)	x	x	.....	.....	.....	.....	.....	.....
Education—B.A. (Regular Liberal Arts work under Teacher Education Program)	Also B.S. and B.S.S. x	Also B.S. and B.S.S. x	x	x	Also B.S. x	Also B.S. x	Also B.S. x	.....
Specialized Education Degrees:								
B.S. in Physical Education	.....	.....	.....	.....	x	x	.....	.....
B.S. in Nursing Education	.....	.....	x	x	.....	.....	.....	.....
B.S. in Health Education	.....	.....	.....	.....	x	x	.....	.....
B.S. in Education	x	x	.....	.....	.....	.....	.....	.....
B.S. in Music Education	.....	.....	x	.....	.....	.....	.....	.....
B.S. in Home Ec. (See Home Ec. below)								
Home Ec.—B.S. in Home Ec. (Clothing, Nutrition & Education)	.....	.....	x	.....	x	x	.....	.....
Music—Bachelor of Music	.....	.....	x	.....	.....	.....	.....	.....
II. MASTERS:		(In Psychology only)						
Liberal Arts—M.A. (Arts, Sciences, and Social Sciences)	.....	x	.....	x	.....	x	.....	.....
Education:								
M.S. in Education	.....	x	.....	x	.....	.....	.....	.....
M.A. in Education	x	x	x	x	x	x	x	x
Business—M.B.A.	.....	x	.....	.....	.....	.....	.....	.....
III. PRE-DEGREE:								
Pre-Engineering	.....	x	.....	.....	x	x	x	.....
IV. DIPLOMAS AND CERTIFICATES:								
Associate in Arts	.....	.....	.....	.....	.....	x	.....	.....
Diploma in Accountancy	.....	x	.....	.....	.....	.....	.....	.....
Diplomas in other Business Fields	.....	.....	.....	.....	.....	x	.....	.....
Diploma in General Studies	.....	.....	.....	.....	.....	x	.....	.....
Intensive Business Training Program	.....	(50th St. Center) x	.....	.....	.....	.....	.....	.....
Certificates in Engineering (Civil, Mech., Elect., Chem.)	.....	x	.....	.....	.....	.....	.....	.....
Pre-Engineering Certificate	.....	x	.....	.....	.....	.....	.....	.....
Certificate in Clinical Psychology	.....	x	.....	.....	.....	.....	.....	.....
V. ADULT EDUCATION	.....	x	.....	x	.....	x	.....	x

THE POLICY OF THE BOARD OF HIGHER EDUCATION IN PLANNING FOR IMPROVEMENTS IN THE EDUCATIONAL PROGRAM AND FACILITIES

Continuous long-range planning is essential to intelligent policy about New York City's educational facilities and programs. This fact has been recognized for many years by the Board of Higher Education as well as by others who have studied the situation. Unfortunately, in carrying out this purpose, surveys have been spasmodic, and committees temporary and part-time in their efforts. This particular problem should be seen in its proper perspective as one of a series with which the Board of Higher Education has dealt successfully over the years.

Because of its size, its fiscal circumstances, and its special history in higher education, New York City has problems which are unique as well as those which it shares with the nation and the State. A great variety of changing factors must be taken into account. Hence, research into problems faced by the Board must be up-to-date and liaison must be continuous to enlist the full support of interested City, State and Federal agencies. In particular, the Board of Higher Education has recognized the creation of the new State University as a momentous event in the history of the education of New York City youth. Important research and liaison activities are necessary to carry forward a realistic program of constant improvement in the higher education facilities offered to the people of New York City. Consideration should be given to the appointment of a full-time staff officer with these research and liaison functions.

The Board of Higher Education faces extraordinarily difficult and complex problems in planning for the nation's largest municipality. Higher education is only one of the many urgent demands upon the overtaxed fiscal resources of the City. In common with other agencies of higher education, the Board must estimate the effect of such factors as local occupational, population and enrolment trends and shifts. In addition the amount and type of demand for higher education upon the City of New York is profoundly influenced by the programs and policies of many other institutions, and especially by those of private colleges and



universities within the Metropolitan area. Also important are the policies and practices of the local schools with regard to graduation and the encouragement of further schooling. The policies of the State Department of Education and of the State University are most significant in their local implications.

There is a clear-cut need for continuous coordination and liaison with the various agencies mentioned above as well as with others if the City is to plan intelligently, and if it is to receive its proper share of funds and other resources made available, directly

or indirectly, by the Federal Government and by the State of New York.

Such continuous planning would take into account not only local factors on the various campuses and within the municipal system of higher education as a whole, but also the total situation within the City and the State. It would naturally strengthen the Board's position, therefore, when making capital and other requests of the appropriate city agencies and officials. Otherwise, requests for funds are likely to be discounted or ignored as "piece-meal" or "special interest." This is especially true in New York City because of the fact that the four Municipal Colleges historically have developed largely unrelated to one another. It is also true because of the increasing importance of central administrative agencies for special programs, such as the Committee on Coordination of Teacher Education.

Fully a decade ago the Board of Higher Education recognized this need in so far as the internal problems of the Colleges were concerned. The biennial report of the Chairman of the Board for 1938–1940 declares: "As we look into the future, there are still an important group of administrative problems for which the Board must in the first instance assume initial responsibility, although any intelligent solving of them requires the closest collaboration with the administrative officers and the faculty groups. Realization of the existence of these problems resulted in the passing of a resolution calling for a Committee on Long Term Planning."

Of great significance in this connection are any decisions the new State University may make about increasing facilities available to City residents. Formerly, the City's program of higher education in large measure developed independently of the State of New York. But Dr. Ordway Tead clearly points out a milestone in the history of local education. His report to the Board of Higher Education is emphatic in its recognition of a changed situation: "I repeat that the year 1948 is destined to mark a turning point in the career of our city colleges. And the basic reason for this is that in varying ways the city colleges of the future will have to become in this locality the core of a splendidly conceived and generously developed New York State University system."

This research and liaison function is indispensable, for the Board of Higher Education needs to know all the facts and trends in making its decisions. Yet it is evident that this function has not been, and apparently could not be, discharged under the prevailing circumstances. At an early date, the Board of Higher Education might well give consideration to the addition to its staff of a full-time specialist to fulfill these responsibilities.

APPENDIX 1

PURPOSE, INCEPTION AND METHOD OF THE STUDY

The purpose of the Study has been to indicate plant facilities required to meet New York City's higher educational needs. The urgency of such a study was apparent from the manifest inadequacies in the existing College plants, as well as from the changing pattern of occupations, the mounting enrolments, and the special local problems of population shifts within the City. The method of the Study has provided for field trips and interviews with specialists and other informed persons and for the review of available studies and other pertinent written materials. It was also necessary to conduct certain original studies.

This Study was conducted to formulate an overall plan for the additional facilities required to meet the higher educational needs in New York City at present and during the next fifteen to twenty years. The importance of such a study was clearly supported by four principal factors. First, successive generations of students and teachers have been aware of the greatly over-crowded conditions and the increasing obsolescence of certain of the facilities of the Colleges. Secondly, the number of students interested in higher education has steadily been mounting, both because of population increase and because of the relatively greater percentage of the population interested in post-secondary education. Thirdly, large shifts in the relative concentration of population among the five boroughs raises the question of equitable distribution of accessible facilities.

Most important of all, a notable alteration in the pattern of occupations has created a need for much more training at the sub-professional, technical, graduate and professional levels. It was imperative to answer the following questions: What new programs of study should be inaugurated? What old ones expanded? What additional plant facilities are needed? Should they be expansions of existing centers or new plants? Where should proposed new plants be located?

The Director of the Study has understood that its authorization by the Board of Higher Education followed a specific recommendation from the City Planning Commission. The approved practice of the City of New York in transmitting all departmental requests for capital expenditures to the City Planning Commission made this recommendation especially significant, inasmuch as it emphasized the cooperative relationship of the two agencies in building a City program of higher education.

The general method of the Study was to analyze pertinent basic data about vocational, population, and enrolment trends; to study the present offerings of the Colleges in the light of present and future needs; and to compare present and contemplated facilities with those needed. To be as realistic and practical as possible, many interviews and discussions were held with specialists in various areas and the judgment of officers of the Board of Higher Education and of the Colleges was solicited. Also, field trips were made to the seven present Municipal College centers as well as to sites and site areas under consideration.

APPENDIX 2

ADEQUACY OF PRESENT PLANTS

This appendix contains data and interpretative comments relating to the evaluation of capacity of the four City Colleges, and an explanation of the method of calculating the capacity of each College. Table 4 shows the utilization of present classrooms and laboratories and the calculated present plant capacity of each College center. Table 4 was developed from data submitted by each of the Colleges in accordance with the procedure outlined below.

Explanation of each column of Table 4 is as follows:

Column No. 1—This indicates the number of classrooms in each College.

Column No. 2—This indicates the actual average weekly use in hours of each classroom and was determined from cards submitted by each College showing hourly use of classrooms. The total weekly hours of use in each College was divided by the number of classrooms to obtain the average.

Column No. 3—This indicates the hourly use which is considered as reasonable to expect in the regular Day Session. It is based upon 65% of the total hours available weekly which was taken as 43. Sixty-five percent (65%) is accepted by most administrators throughout the country as a reasonable average percentage of hours of occupancy of classrooms in the Day Session of a college.

Column No. 4—Indicates the actual average section size of classrooms obtained by dividing total student station use per week by total class hours per week used. All data were obtained from cards furnished by each College.

Column No. 5—Indicates average optimum classroom seating of each College. This was determined by laying out optimum seating for different classroom sizes. The number of square feet allowed each student varied from 21.5 square feet for smaller rooms to 16 square feet for larger rooms. It was not used in the formula.

Column No. 6—Indicates the weekly hours per student use of classrooms. This was obtained from the individual College data by dividing total student station use in hours per week by number of students.

Column No. 7—Indicates capacity based upon formula as follows (Where C.R. equals classroom):

$$\text{Capacity} = \frac{\text{No. C.R. x wkly use of C.R. in hrs. x avg. section size}}{\text{weekly hours per student}}$$

For example, in case of Hunter, Park Avenue:

$$\frac{80 \times 28 \times 23.5}{11.6} = 4538$$

CLASSROOMS

In all cases the weekly classroom use in hours (column 3) of each College was used as 28. It is to be noted that, with the exception of Hunter Bronx, this figure is approached and there seems no reason why it could not be met. The average section size (column 4) as now maintained by all Colleges, except City College, 23rd Street, was used in the formula, since evaluation was predicated upon no change in present administration of curricula. In the case of City College, 23rd Street, the section size was lowered to 24 because of the low optimum average classroom size of that center. Again, the average actual classroom weekly hours per student (column 6) except for City College, 137th Street, as obtained from each College, was used. In the case of City College, 137th Street, a weighted average of 14.9 was used because of differences in use by Liberal Arts and Engineering students.

It should be noted that the average optimum classroom size of all but City College, 23rd Street, is larger than the average section size in use. Excepting for City College, 23rd Street, there are more large classroom sizes than needed for the section sizes actually enroled. In general, there is considerable misfit between the size of rooms and the size of sections which does not permit full utilization of plant potential capacity. Granted that this is difficult to control because of curricular changes and other variables, nonetheless it demonstrates clearly the need for more flexibility and changeability of classroom sizes.

A review of the different College units indicates that changing of classroom sizes to decrease the misfit is not recommended due to the physical conditions of the different buildings, such as lighting, heating and fenestration. The Board of Higher Education should, in its future buildings, require

that space be designed to allow for the maximum of flexibility in room size changes. Its spaces should not be governed by standardization of bays, if the results lead to a similarity in classroom sizes, thereby resulting in misfit between section sizes and classroom sizes.

LABORATORIES

Explanation of this part of the table is similar to that for classrooms, and the formula used in determining capacity is also similar. In the case of City College, 137th Street, since use is made by both Engineering and Liberal Arts students who make different use of laboratories (as well as classrooms), a weighted average of 4 weekly hours per student was established and used.

In the case of possible use of laboratories in hours per week, a figure of 20 was used as a reasonable expectation. In the case of City College, this is met, and Hunter College, Park Avenue, approaches this assumed reasonable usage. The average section size as now used in each College as well as weekly student use in hours as now used was also included, so no change in curricula was assumed.

TABLE 4

DATA USED IN EVALUATION OF CAPACITY OF PLANTS

I. Class Rooms. College	1. Class Rms.	2. Actual Wkly. Class Rm. use in Hours	3. Possible Wkly. C.R. use in Hrs.	4. Average Section Size	5. Average Opt. C.R. Seating	6. Wkly. Hrs. Per Student	7. Capacity
City, 137th Street	143	26.3	28	23.5	38.1	*13.1	6,315
City, 23rd Street	78	28.4	28	**26.7	26	15.9	3,296
Hunter, Bronx	53	18.56	28	21.8	27	13.3	2,432
Hunter, Park Avenue ...	80	27.74	28	23.5	34.5	11.6	4,538
Brooklyn	134	27.98	28	25.6	34.8	12.4	7,746
Queens	76	27.35	28	21.8	36	15.2	3,052
Totals and Avgs	564	.....	(28)	(23.7)	.....	(13.6)	27–379

Note: * Since Liberal Arts and Engineering students use classrooms, weighted average of 14.9 was used in determining Capacity.
** Since Average Section Size is in excess of Average Optimum Seating, 24 was taken in determining Capacity.

II. Laboratories College	1. Class Rms.	2. Actual Wkly. Class Rm. use in Hours	3. Possible Wkly. C.R. use in Hrs.	4. Average Section Size	5. Average Opt. C.R. Seating	6. Wkly. Hrs. Per Student	7. Capacity
City, 137th Street	48	20.4	20	20	20	*2.8	4,800
City, 23rd Street	13	21	20	22	26	1.6	3,570
Hunter, Bronx	27	14	20	19.4	26	4.5	2,328
Hunter, Park Avenue ...	46	18.8	20	19	26	3.7	4,724
Brooklyn	63	15.5	20	17.9	24	2.3	9,800
Queens	26	13.5	20	16.7	20	2	4,300
	223						

Note: * Since Liberal Arts and Engineering students use labs, weighted average of 4 was assumed in determining Capacity.

Formula:

$$\text{Capacity} = \frac{1 \times 3 \times 4}{6}$$

APPENDIX 3

TABLE 5

DISTRIBUTION OF STUDENTS IN THE MUNICIPAL COLLEGES BY DIVISION, SEX AND BOROUGH OF RESIDENCE, SPRING, 1949

DAY SESSION

	MAN-HATTAN	BRONX	BROOK-LYN	QUEENS	RICH-MOND	OUT OF CITY	TOTAL
CITY COLLEGE 137th Street	1294 MEN 1152 WOMEN 142	2678 MEN 2220 WOMEN 458	2138 MEN 2021 WOMEN 117	605 MEN 583 WOMEN 22	39 MEN 39 WOMEN	none	6754 MEN 6015 WOMEN 739
CITY COLLEGE 23rd Street	413 MEN 325 WOMEN 88	1348 MEN 1082 WOMEN 266	1632 MEN 1292 WOMEN 340	307 MEN 253 WOMEN 54	21 MEN 17 WOMEN 4	none	3721 MEN 2969 WOMEN 752
HUNTER COLLEGE Park Avenue	1041 (66) MEN 141 (12) WOMEN 900 (54)	1518 (44) MEN 205 (7) WOMEN 1313 (37)	1170 (26) MEN 76 (8) WOMEN 1094 (18)	618 (20) MEN 52 (1) WOMEN 566 (19)	62 MEN .... WOMEN 62	45 (10) MEN 31 (2) WOMEN 14 (8)	4454 (166) MEN 505 (30) WOMEN 3949 (136)
HUNTER COLLEGE Bronx Center	427 MEN 15 WOMEN 412	1135 MEN 50 WOMEN 1085	15 MEN 10 WOMEN 5	25 MEN 25 WOMEN	15 MEN 5 WOMEN 10	none	1617 MEN 105 WOMEN 1512
BROOKLYN	525 MEN 205 (5) WOMEN 320	634 (5) MEN 259 WOMEN 375 (5)	6325 (205) MEN 3373 (150) WOMEN 2952 (55)	227 (10) MEN 117 (10) WOMEN 110	16 MEN 1 WOMEN 15	none	7727 (225) MEN 3955 (165) WOMEN 3772 (60)
QUEENS COLLEGE	90 (1) MEN 32 (1) WOMEN 58	216 MEN 59 WOMEN 157	125 (1) MEN 49 WOMEN 76 (1)	2527 (30) MEN 1156 (11) WOMEN 1371 (19)	.... MEN .... WOMEN	27 (1) MEN 15 WOMEN 12 (1)	2985 (33) MEN 1311 (12) WOMEN 1674 (21)
TOTAL	3790 (72) MEN 1870 (18) WOMEN 1920 (54)	7529 (49) MEN 3875 (7) WOMEN 3654 (42)	11405 (232) MEN 6821 (158) WOMEN 4584 (74)	4309 (60) MEN 2186 (22) WOMEN 2123 (38)	153 MEN 62 WOMEN 91	72 (11) MEN 46 (2) WOMEN 26 (9)	27258 (424) MEN 14860 (207) WOMEN 12398 (217)

Numbers in parenthesis represent Limited and Specials and are included in the totals.
Total full time matriculated students: 26834.
Total full time matriculated students from New York City alone: 26773.

EVENING SESSION

	MAN-HATTAN	BRONX	BROOK-LYN	QUEENS	RICH-MOND	OUT OF CITY	TOTAL
CITY COLLEGE 137th Street	2104 (612) MEN 1671 (447) WOMEN 433 (165)	2097 (531) MEN 1774 (413) WOMEN 323 (118)	927 (173) MEN 841 (156) WOMEN 86 (17)	693 (196) MEN 614 (145) WOMEN 79 (51)	13 MEN 13 WOMEN	none	5834 (1512) MEN 4913 (1161) WOMEN 921 (351)
CITY COLLEGE 23rd Street	2152 (1664) MEN 1432 (1056) WOMEN 720 (608)	3042 (1600) MEN 2318 (1083) WOMEN 724 (517)	4108 (2196) MEN 3185 (1627) WOMEN 923 (569)	1214 (751) MEN 950 (543) WOMEN 264 (208)	54 (46) MEN 39 (35) WOMEN 15 (11)	none	10570(6257) MEN 7924 (4344) WOMEN 2646 (1913)
HUNTER COLLEGE Park Avenue	1991 (1517) MEN 259 (253) WOMEN 1732 (1264)	1527 (1154) MEN 179 (168) WOMEN 1348 (986)	830 (603) MEN 96 (95) WOMEN 734 (508)	856 (642) MEN 87 (82) WOMEN 769 (560)	59 (37) MEN 2 (2) WOMEN 57 (35)	253 (253) MEN 61 (61) WOMEN 192 (192)	5516 (4206) MEN 684 (661) WOMEN 4832 (3545)
HUNTER COLLEGE Bronx Center	none	.....	.....	.....	.....	.....	.....
BROOKLYN COLLEGE	275 (40) MEN 180 (25) WOMEN 95 (15)	150 (45) MEN 100 (35) WOMEN 50 (10)	5600 (1720) MEN 3301 (996) WOMEN 2299 (724)	311 (95) MEN 210 (75) WOMEN 101 (20)	25 MEN 25 WOMEN	none	6361 (1900) MEN 3816 (1131) WOMEN 2545 (769)
QUEENS COLLEGE	none	.....	.....	.....	.....	.....	.....
TOTAL	6522 (3833) MEN 3542 (1781) WOMEN 2980 (2052)	6816 (3330) MEN 4371 (1699) WOMEN 2445 (1631)	11465(4692) MEN 7423 (2874) WOMEN 4042 (1818)	3074 (1684) MEN 1861 (845) WOMEN 1213 (839)	151 (83) MEN 79 (37) WOMEN 72 (46)	253 (253) MEN 61 (61) WOMEN 192 (192)	28281(13875) MEN 17337(7297) WOMEN 10944(6578)

Numbers in parenthesis represent graduates and non-matriculated students and are included in the totals.
Total candidates for degrees: 14406.

GRADUATE DIVISION

	MAN-HATTAN	BRONX	BROOK-LYN	QUEENS	RICH-MOND	OUT OF CITY	TOTAL
CITY COLLEGE	329 MEN 114 WOMEN 215	417 MEN 135 WOMEN 282	392 MEN 193 WOMEN 199	128 MEN 46 WOMEN 82	13 MEN 6 WOMEN 7	66 MEN 21 WOMEN 45	1345 MEN 515 WOMEN 830
HUNTER COLLEGE	123 MEN 2 WOMEN 121	173 MEN 5 WOMEN 168	92 MEN 1 WOMEN 91	78 MEN 3 WOMEN 75	9 MEN 0 WOMEN 9	17 MEN 2 WOMEN 15	492 MEN 13 WOMEN 479
BROOKLYN	44 MEN 28 WOMEN 16	51 MEN 43 WOMEN 8	955 MEN 382 WOMEN 573	40 MEN 26 WOMEN 14	9 MEN 3 WOMEN 6	none	1099 MEN 482 WOMEN 617
QUEENS COLLEGE	4 MEN 1 WOMEN 3	6 MEN 2 WOMEN 4	7 MEN 0 WOMEN 7	100 MEN 14 WOMEN 86	none	45 MEN 9 WOMEN 36	162 MEN 26 WOMEN 136
TOTAL	500 MEN 145 WOMEN 355	647 MEN 185 WOMEN 462	1446 MEN 576 WOMEN 870	346 MEN 89 WOMEN 257	31 MEN 9 WOMEN 22	128 MEN 32 WOMEN 96	3098 MEN 1036 WOMEN 2062

ADULT EDUCATION AND EXTENSION

	MAN-HATTAN	BRONX	BROOK-LYN	QUEENS	RICH-MOND	OUT OF CITY	TOTAL
CITY COLLEGE	2476 MEN 862 WOMEN 1614	875 MEN 299 WOMEN 576	811 MEN 271 WOMEN 540	640 MEN 278 WOMEN 362	32 MEN 14 WOMEN 18	none	4834 MEN 1724 WOMEN 3110
HUNTER COLLEGE	401 MEN 111 WOMEN 290	209 MEN 44 WOMEN 165	170 MEN 44 WOMEN 126	165 MEN 39 WOMEN 126	20 MEN 5 WOMEN 15	44 MEN 0 WOMEN 44	1009 MEN 243 WOMEN 766
BROOKLYN COLLEGE	30 MEN 10 WOMEN 20	20 MEN 15 WOMEN 5	2543 MEN 833 WOMEN 1710	50 MEN 20 WOMEN 30	none	none	2643 MEN 878 WOMEN 1765
QUEENS COLLEGE	7 MEN 5 WOMEN 2	3 MEN 3 WOMEN 0	26 MEN 17 WOMEN 9	1042 MEN 429 WOMEN 613	none	58 MEN 27 WOMEN 31	1136 MEN 481 WOMEN 655
TOTAL	2914 MEN 988 WOMEN 1926	1107 MEN 361 WOMEN 746	3550 MEN 1165 WOMEN 2385	1897 MEN 766 WOMEN 1131	52 MEN 19 WOMEN 33	102 MEN 27 WOMEN 75	9622 MEN 3326 WOMEN 6296

APPENDIX 4

TRANSPORTATION-TIME STUDY

A complete study of optimum transportation time to each of the City Colleges from all points in New York City was made and estimates of population residing in the various time zones were calculated. A map and a chart illustrative of the findings of the study are included in this Appendix.

A City Planning Commission map, on the scale of one mile to the inch, was used as a base map. This scale was selected because the principal streets, highways, parks and other orientation points could be readily identified.

This base map was used for an accurate layout of all the City Rapid Transit Systems—subways and elevated trains. The table of running time, from station to station, for each line was obtained from the Superintendent of the Rapid Transit Lines. Using this table with the system layout, and taking one of the Colleges as an origin point, each transit line was followed from this origin to its terminal station. It was decided to have time zones plotted in ten-minute intervals.

Assumptions were made with regard to the walking time required by an individual from the College to the transit lines, changing of trains on one system, and connection with other transit systems. This accumulated time plus actual travel time determined points for plotting ten minute interval time zones along rapid transit lines.

If the College was in close proximity to a transit line station, it was assumed to take an individual five minutes to make the connection between the College and the subway. Where the College was relatively remote from the subway, the walking distance was measured on the "Sectional Map of City Owned Facilities" (scale 1″ = 1,000′), obtained from the City Planning Commission. Assuming a walking rate of three miles per hour, the time needed to reach the line was computed. Upon reaching the transit line, a three-minute wait for a train was allowed.

When changing from a local to an express train, or to a train taking a different route or having a different terminal station, a waiting time of three minutes was assumed if this change was made on the same transit line. If, however, a change meant leaving one transit system and making connections with another, a time of five to ten minutes was allowed.

In the case of Staten Island, transportation to that Borough involved taking a ferry from Battery Park, Manhattan, or 69th Street, Brooklyn. The former was used because of scheduled connections with the Staten Island Rapid Transit Railway. Here again the same procedure for plotting the ten minute intervals was followed, using current time-tables. Inasmuch as all residents of Staten Island must go to St. George in order to reach any of the City Colleges, the time zone contours for Staten Island remain the same for all six origins.

After all the subway lines were plotted for ten minute intervals, the bus and trolley lines were considered, wherever they made connections with the transit lines. The Hagstrom maps of New York City provided information as to the routes of the City busses. Both the Public Service Commission and the Superintendent of the City owned bus lines furnished additional information. The latter stated that the surface lines could be assumed to travel at a rate of ten miles per hour; this speed included stops for passenger pick up and discharge. Five minutes were allowed to transfer to the surface line from the transit line. The routes of these surface lines were then followed out and again the ten minute intervals were plotted. The ten mile per hour speed allowed a distance of 1⅔ miles to be traveled in ten minutes, and this distance was scaled off directly on the base map.

When all of the ten minute interval points were plotted, contours were developed connecting equal time interval points plotted on both Rapid Transit and Surface lines. These contours were modified by interpolating walking distances between various lines of transportation assuming three miles per hour.

The quickest routes known were used and the traveling was figured during rush hours when travel time is at its highest efficiency.

On these contour maps, certain characteristics which are similar to all may be found. The express transit lines may be readily seen by the parabolic extension of the contours. These lines take this shape because of the ability of an express line to travel a greater distance in a given time, than the distance an individual can travel from the local stations along that line. If connections are made with a surface line, the shape of the contour does change,

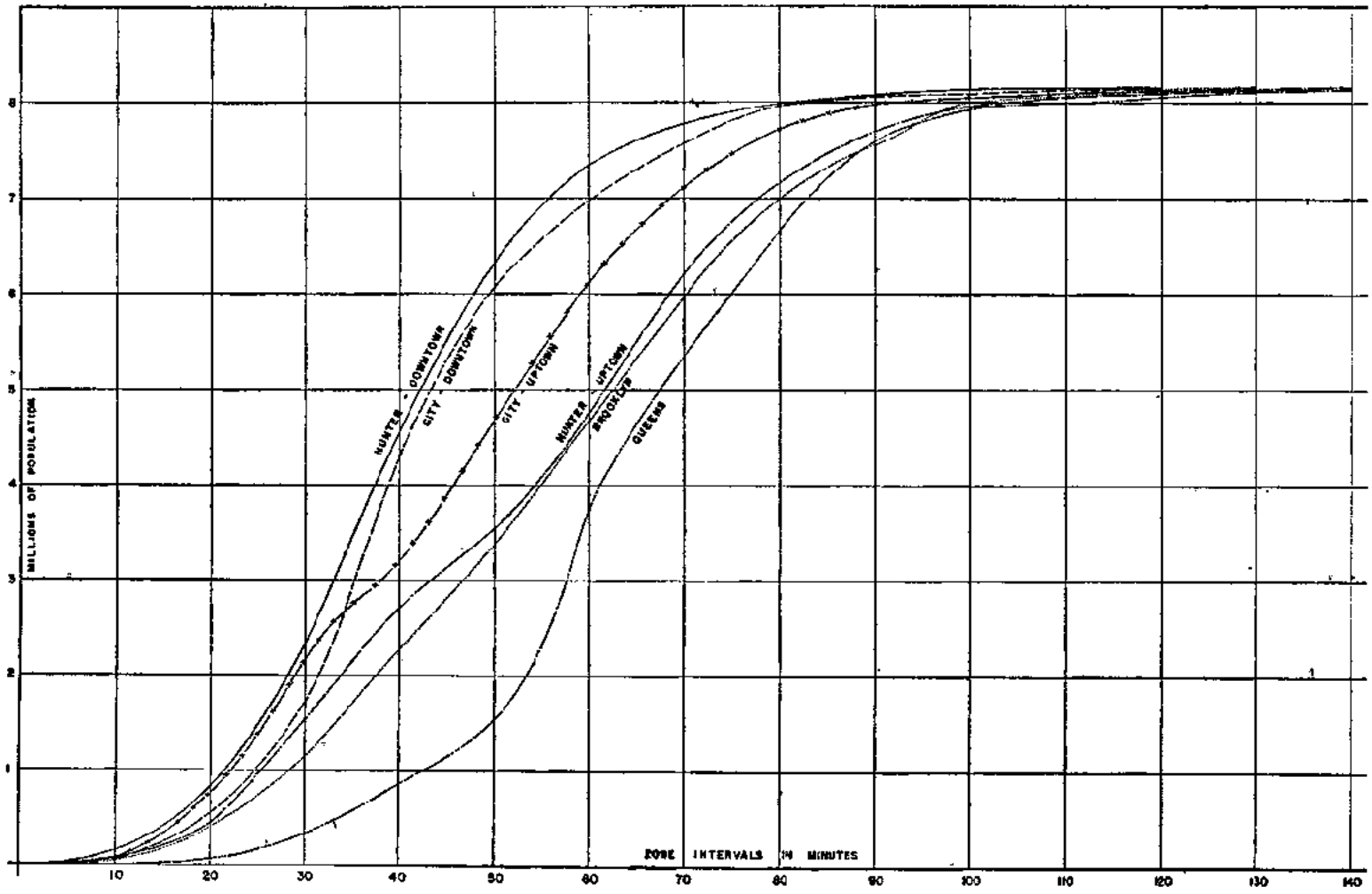
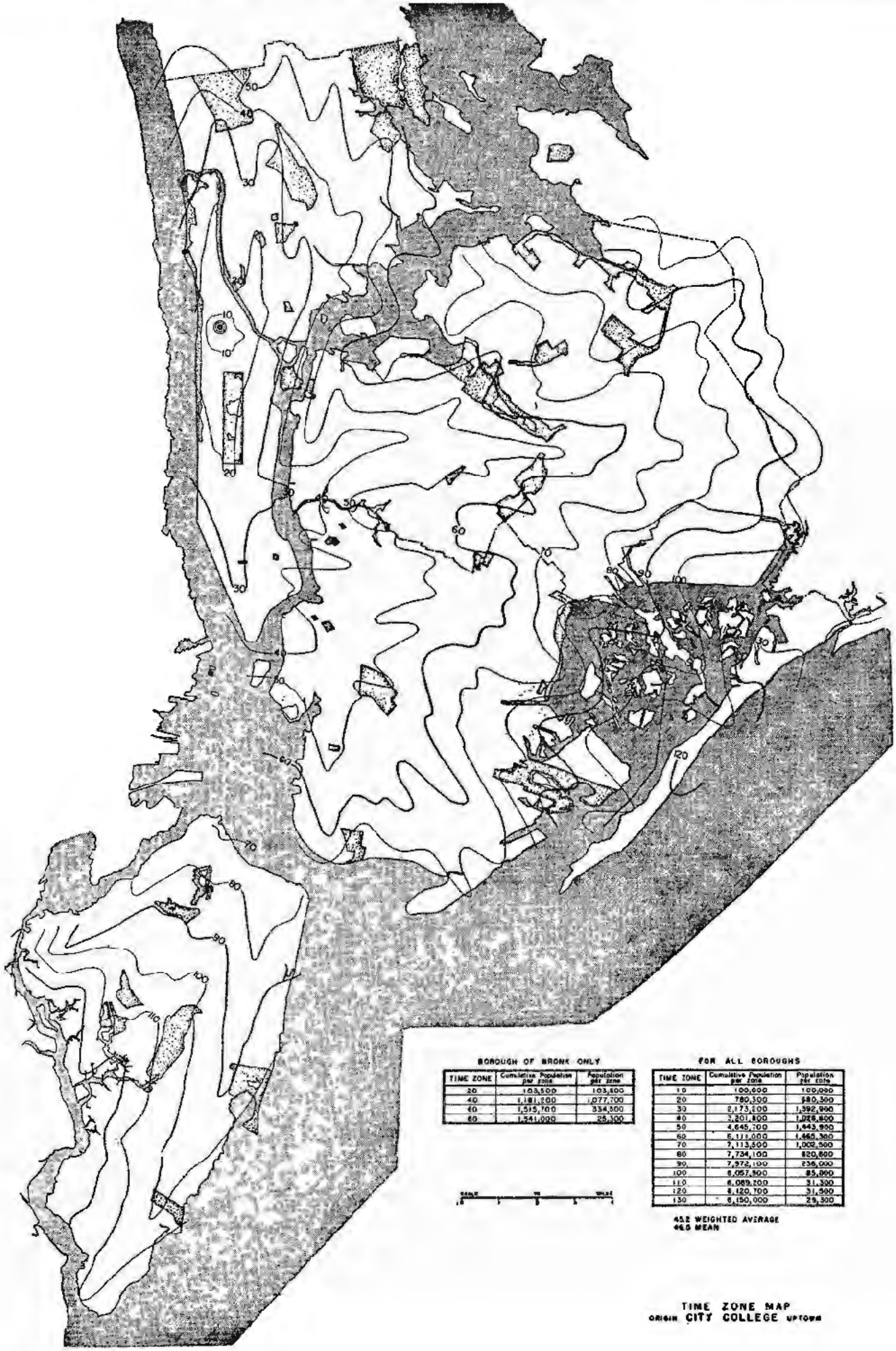


CHART II. THE RELATIVE ACCESSIBILITY, VIA PUBLIC TRANSPORTATION, OF THE SIX MUNICIPAL COLLEGE ORIGIN POINTS TO THE TOTAL POPULATION OF NEW YORK CITY.



BOROUGH OF BRONX ONLY

TIME ZONE	Cumulative Population per zone	Population per zone
20	103,500	103,500
40	1,181,200	1,077,700
60	1,515,700	334,500
80	1,541,000	25,300

FOR ALL BOROUGHS

TIME ZONE	Cumulative Population per zone	Population per zone
10	100,000	100,000
20	780,300	680,300
30	2,173,200	1,392,900
40	3,201,800	1,028,600
50	4,645,700	1,443,900
60	5,111,000	1,465,300
70	7,113,500	1,002,500
80	7,734,100	820,600
90	7,972,100	238,000
100	8,057,500	85,000
110	8,089,200	31,300
120	8,120,700	31,500
130	8,150,000	29,300

43.2 WEIGHTED AVERAGE
46.6 MEAN

TIME ZONE MAP
ORIGIN CITY COLLEGE UPTOWN

but not considerably during the first interval, since time must be allotted for the transfer.

Where contours follow regular concentric curves, the Rapid Transit Lines have no influence. These curves are formed by either the distance covered by surface lines or by the walking rate of an individual.

In cases where the contours include bodies of water, the lines are not held to be accurate, but are merely a means of making a connection between the boroughs to prevent confusion.

The Long Island Railroad was considered as a means of transportation. Although it was found to reduce travel time in some cases, it was not used in setting up the time zones for the following reasons:

a) Because of the infrequent runs of the Railroad, the time saved might well be lost in connecting time.

b) The time zones include only the City of New York and the people within the City limits. The City Transit Lines are much more convenient for these people, whereas the Long Island Railroad serves mainly the populace outside the City boundaries.

c) Economy considered, the commutation charges for the Long Island Railroad are considerably higher than the fares of the Rapid Transit System of New York City.

GENERAL ASSUMPTIONS

1—Walking rate = 3 miles per hour.

2—Surface line rate = 10 m.p.h.

3—Connection between college and transit system = 5 to 10 minutes (depending on existing conditions).

4—Transferring within same transit system (local to express, etc.) = 3 minutes.

5—Transferring from one transit system to another = 5 to 10 minutes (depending on existing conditions).

6—Waiting time between transit system and surface line = 5 minutes.

Because smooth contour curves were desired in order to simplify the reading of the maps, minor variations which undoubtedly occur have been ignored. For this reason, a factor of plus or minus five minutes should be considered for outlying locations.

APPENDIX 5

METHOD OF ESTIMATING APPROXIMATE 1950 POPULATION FOR NEW YORK CITY

Using the 1940 Population Distribution Map the City was divided into approximately 150 small sections containing a varying number of census tracts. The average section size is 1½ sq. mi. These sections were defined in general by main thoroughfares, parks and other geographic limitations. For accuracy an effort was made to maintain a uniform population density within these sections. Then knowing the population of each of the census tracts a total for each of the 150 sections was compiled.

In order to obtain figures for the expected 1950 population two steps were necessary. One, to correct the 1940 figures to those for 1948. The other, to change the 1948 figures to those for 1950. The reason that these two steps were taken is that the figures for the 1948 population are more accurate and detailed than those for 1950.

The 1948 figures were arrived at by the use of the Consolidated Edison Report, which was found to be the most accurate and the best information available. The base map was divided into the 25 irregular areas which represented the various increases or decreases shown in the Report. Each individual section used in the 1940 population map was corrected according to the percent of change in the particular area in which it was situated. Interpolation and estimates were used for sections lying in two or more percentage change areas. The population was then correct to 1948 figures.

To arrive at the 1950 distribution of population, Consolidated Edison's estimate of 1950 population by boroughs was used as a base for increase of population.

For proper distribution of this increase the following factors were used:

1—Research into the known areas of large public and private housing developments. The Board of Education's publication on large scale housing was used extensively. Interviews with public and private housing developers were also had.

2—The rate of percentage change from 1940 to 1948.

3—Consideration of the effect of the above on undeveloped areas and saturated areas.

* * *

In compiling the total population within the several time zones extensive use was made of the planimeter. This instrument measures the area of irregular shapes in a simple, swift, and accurate manner.

First, the area of each of the 150 odd sections was measured and tabulated. Then the map with the time contours was superimposed on the sectioned map showing the 1950 population. In general, the population sections were divided into two or more smaller divisions by the contours. The population in these small divisions was obtained by a simple proportion. The ratio of the area of the small division to the total area of the section times the population of the section yielded the population of the small division. Here again it was necessary to measure an irregular shaped area, namely, that of the small division. Totals for the population within each time zone were then compiled and tabulated.

Bar graphs were made for cross information. One set of these graphs shows the population of the individual time zones relative to the six (6) College campuses. The other set shows the relation of population in each time zone for each campus.

A line graph was prepared showing six (6) curves in a single frame of reference. The horizontal axis denotes the time zones in ten minute intervals. The vertical axis denotes the population in millions. The curve represents the accumulated population at each time interval. It shows the time rate at which each College acquires the total population of the City.

APPENDIX 6

VOCATIONAL TRENDS IN RELATION TO HIGHER EDUCATION

Predictions with reference to the demand in particular occupations cannot be very precise. Hence the estimates given later in this Appendix about numbers of persons needed annually in various types of work will be understood to be rough approximations. Nevertheless, it will be apparent after allowing for a reasonable margin of error, that they bear out one of the principal theses of this Report, namely, that there will be increasing demand in industry and the professions for youth with higher educational training.

The following assumptions have been made in arriving at estimates:*

1) That there will be high employment rather than high unemployment.
2) That although New York City both imports and exports workers, it is reasonable to expect that it will very largely train for its own needs.
3) That, in view of constant shifts in the relative importance of industries, employment by type of occupation can be more reliably predicted than employment by industry.
4) That, even though the actual employment situation pattern may not be ideal, it is a realistic base from which to make predictions.

The following broad categories of need in New York City in relation to annual requirements for expansion and replacement are anticipated:

1) For all professional and semi-professional workers, the following annual demand may be expected in 1950: about 7,500 male college graduates will be needed and about 2,300 men with some college training. This may be expected to drop upwards of 10% in 1960. In this classification, about 2,350 women college graduates will be needed in 1950, and about 3,000 women with some college training. This need is expected to be about rhe same in 1960.
2) For proprietors, managers and officials, the following annual demand may be expected in 1950: about 4,000 male college graduates and about 3,500 men with some college training. A small decrease may be expected in 1960. In this classification, only about 100 women college graduates, and about the same number of women with some college training will be needed in 1950. Possibly these annual needs will be about 50 each for both women college graduates and for those women with some college training by 1960.
3) For clerical, sales and kindred workers, the following annual demand may be expected in 1950: about 3,400 male college graduates will be needed and about 5,600 men with some college training. By 1960, the demand for male college graduates may be expected to increase to about 4,200 although the demand for men with some college training may drop slightly to about 5,500. In this classification, about 4,000 women college graduates will be needed, and about 6,700 women with some college training. Possibly a 15% to 20% drop in the annual need may be expected by 1960.
4) In all other fields not covered in the above three categories, the following annual demand may be expected in 1950: about 1,700 male college graduates, and about 9,500 men with some college training. This may be expected to drop very slightly by 1960 to about 1,600 male college graduates and about 8,500 men with some college training. In this classification, about 1,200 women college graduates and about 1,600 women with some college training will be needed in 1950. These needs may be expected to drop between 5% and 10% by 1960.
5) The total annual needs for expansion and replacement as outlined in items 1 through 4 above may be summarized as follows: about 16,600 male college graduates and about 20,900 men with some college training will be needed in 1950. By 1960, the annual need is expected to be about 16,100 for male college graduates and about 19,300 for men with some college training. The total of women college graduates to be needed in 1950 is estimated at about 8,500; the demand for women with some college training is estimated at about 11,400. By 1960, about 7,600 women college graduates and about 8,600 women with some college training will be needed.

*These estimates are based primarily upon *The Need for Higher Education in New York State*, Armstrong, Charles M., Bulletin No. 1350, University of the State of New York, Albany, New York: 1948 and also upon a forthcoming study by the same author and agency. The national trends may be verified in such documents as the *Occupational Outlook Handbook*, Bulletin No. 940, Bureau of Labor Statistics, United States Department of Labor, Washington, D. C., 1948 and *Industrial and Occupational Trends in National Employment*, Research Report No. 11, Industrial Research Department, Wharton School of Finance and Commerce, University of Pennsylvania, Philadelphia: 1949.

APPENDIX 7

EVALUATIVE CRITERIA FOR TYPE, LOCATION AND PRIORITY OF CAPITAL IMPROVEMENTS

I. Extension of program into new areas, or expansion of old areas.
   1. What would be the probable capital cost of erecting the facilities?
      a. Compare cost of new facilities with expansion of old?
      b. Influence on cost of day or evening attendance?
      c. What effect on competing capital proposals?
   2. What evidence that the new area is educationally productive?
      a. Vocational marketability?
      b. Cultural desirability (non-vocational values)?
   3. What would be the probable operating cost of work in this area?
      a. Comparative costs of new facilities and expansion of old?
      b. Influence of day or evening attendance?
      c. Effect on current educational programs?

II. Types of facilities, among possible alternatives, to be provided.
   1. Which types represent greatest educational demands?
   2. Which types offer most favorable general educational opportunities?
   3. What are the relative costs of the various types in terms of capital and current funds? Use of existing facilities?
   4. Which types offer the greatest opportunities in related fields of endeavot?
   5. Which types offer the best foundation for possible advanced study?

III. Where to locate the new facilities.
   1. What does the transportation time factor indicate as to location?
   2. What does the geographic distribution of potential students indicate as to location?
   3. What does the factor of available supplementary facilities indicate as to location?
      a. Teaching services and administration?
      b. Facilities for observation and participation?
   4. What influence does the factor of land values have in this connection?
   5. Is there land available in existing properties of the Colleges to meet the need?

IV. Shifts of location of present programs.
   Same as III, especially noting pros and cons of present vs. proposed locations.

V. When should new ventures be undertaken?
   1. Size of population to be served?
   2. Urgency of demands in the fields concerned?
   3. Relative costs involved?
   4. Probable length of time required for completion?

APPENDIX 8

PROJECTS IN ORDER OF PRIORITY FOR EACH CENTER, CLASSIFIED BY PRESENT CENTERS AND RECOMMENDED NEW CENTERS

New Two-Year College Plants

Priority Borough	Group		Estimated Cost
1	A	Richmond, Community	$ 2,700,000
2	B	Queens, Technical	7,700,000
3	B	Brooklyn, Community	7,275,000
4	C	Queens, Community	7,275,000
		Total	$24,950,000

Offices of Board of Higher Education

College	Group		Estimated Cost
1	B	New space to include Board Administrative Offices, Architectural unit, Accounting unit, Teacher Education and Bureau of Analysis	$ 50,000

Hunter College Priority List

1	B	Removal of Board of Higher Education Offices to separate quarters and reconversion of space	$ 10,000
2	E	Improved ventilation in Assembly Hall and Cafeteria	75,000
		Total	$ 85,000

Brooklyn College Priority List

1	A	College Center and Arts Building with landscaping and equipment. Convert tennis courts into play field	$ 3,275,000
2	B	Library extensions with landscaping and equipment	1,925,000
3	C	Stadium, including Field House and improvements to Athletic Field and Off-street Parking	775,000
4	D	Academic Building to provide additional classrooms and social rooms and alterations to Boylan Hall to provide increase in cafeteria facilities	1,600,000
5	E	Science Building to provide laboratory and classrooms	1,325,000
6	E	Gymnasium Extension	1,950,000
		Total	$10,850,000

City College, 137th Street, Priority List

1	A	Reconditioning of Main Building, including equipment	$ 50,000
2	A	Corrections to distribution system including Power Plant; also ground improvements	900,000
3	A	New Liberal Arts Building, including cafeteria, to replace existing classrooms of Army Hall, Finley, South Hall and Townsend-Harris	3,225,000
4	B	Alterations and extensions covering Townsend Harris, South Hall, Chemistry Building, Technology Building, Compton Hall and Main Building	1,575,000
5	B	New Library Building	2,075,000
6	C	New Gymnasium	3,300,000
7	D	Student Center	1,625,000
8	D	Extension to existing Library for engineering	1,625,000
9	E	Liberal Arts Extension	2,825,000
		Total	$17,200,000

College	Group		Estimated Cost
		City College, 23rd Street, Priority List	
1	C	New Building	$ 2,750,000
2	C	Alterations to Existing Building	200,000
		Total	$ 2,950,000
		Queens College Priority List	
1	A	New Gymnasium and ground improvements, including sports area	$ 3,020,000
2	B	New Library	1,620,000
3	C	New Academic and Science Building	1,960,000
4	D	Auditorium and Art Center	2,450,000
5	E	Administration Building	450,000
6	E	Power Plant Addition. Additional Power will be determined by needs as construction develops. Survey of needs for Electrical Distribution system should be made	80,000
		Total	$ 9,580,000
		Bronx Two-Year Community College (Present Hunter Bronx Center)	
1	C	Administration Building	$ 270,000
2	C	Alterations to Existing Buildings and ground improvements	375,000
3	C	Library Building	750,000
4	E	College Center and Art Building	510,000
		Total	$ 1,905,000

APPENDIX 9

NOTES ON DEGREES, CERTIFICATES AND OTHER PROGRAMS AVAILABLE AT THE MUNICIPAL COLLEGES — SEPTEMBER, 1949

1. The terms Day Session and Evening Session in the undergraduate Colleges pertain both to the hours when courses of study are offered at the City Colleges and to distinctive administrative units. In graduate work, however, both day and evening studies at a particular College are administered as a single unit.

2. At Brooklyn College and at Queens College, the B.S. is optional for students. At the former College, students majoring in any of the sciences or in mathematics may have the B.S conferred in place of the B.A. with no difference in requirements. At Queens College, the B.S. is optional for students majoring in mathematics or psychology, also without difference in requirements.

3. The B.S. in Education at City College may be awarded to those students who specialize in Industrial Arts.

4. Students in the Evening Session who are preparing to teach are required to attend the Day Session at least their final semester and are advised preferably to attend one year prior to graduation.

5. At Brooklyn College, the Diplomas are awarded to students in any one of the following business fields: Secretarial Studies, Small Business, Merchandising and Sales Training.

6. At City College, the M.A. is offered at present only to those students who specialize in Psychology.

7. Each of the Colleges maintains a separately administered adult education division. Enrolment in Adult Education at any of the four City Colleges is open to any person who believes he can carry the work with profit to himself. There are no formal requirements for registration in any of the courses. Courses taken in this division are all non-credit and hence are not transferable for academic credit to any of the other programs.

8. A student who does not meet matriculation requirements for enrolment for a Bachelor's Degree or for a diploma or a certificate may, under specific conditions, take courses in the evening without credit. In the event that he fulfills certain requirements and maintains certain scholarship standards, he may apply for matriculation for a degree, a diploma or a certificate. Courses taken as a non-matriculated student may then be transferred to count towards his course of study. Where such a course of study is offered during the day, the student may then take courses in the day session.