

State of New Jersey
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Trenton
September, 1965

A STUDY OF THE PROPOSAL
TO ESTABLISH AND OPERATE
A COUNTY COLLEGE
IN
BERGEN COUNTY

A Report of
The New Jersey State Commissioner of Education
To the State Board of Education
(Pursuant to N.J.S.A. 18:22-101)

A STUDY
OF
THE PROPOSAL
TO ESTABLISH AND OPERATE
A COUNTY COLLEGE
IN
BERGEN COUNTY

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The Commissioner of Education
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Trenton, New Jersey

September, 1965

State Department of Education Committee for the
STUDY OF THE PROPOSAL TO ESTABLISH AND OPERATE
A COUNTY COLLEGE IN BERGEN COUNTY

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F O R E W O R D

This "Study of the Proposal to Establish and Operate a County College in Bergen County" is presented in compliance with the provisions of New Jersey Statutes Annotated 18:22-100 et seq. which direct the following:

When the board of chosen freeholders of one or more counties, after study and investigation, shall deem it advisable for such county or counties to establish a County College, such board or boards of county freeholders may petition the State Board for permission to establish and operate a County College. A report shall be attached to such petition and shall include information of the higher educational needs of the county or counties, a description of the proposed County College, and any other information or data deemed pertinent. (N.J.S.A. 18:22-101)

The Statute further provides:

Upon receipt of such petition by the State Board, it shall be referred to the Commissioner who shall make an independent study as to the higher educational needs of the county or counties, the necessity or advisability of establishing such County College, and whether the county or counties could, with the State aid provided for in this act, financially support such college. The Commissioner shall submit a report containing his conclusions to the State Board and to the petitioning board or boards of chosen freeholders. (N.J.S.A. 18:22-101)

On May 5, 1965, the State Board of Education accepted from the Bergen County Board of Chosen Freeholders a petition requesting permission to establish and operate a County College in that county. The petition was then officially referred to the Commissioner of Education with the request that an independent study be conducted to determine the higher educational needs of Bergen County and the ability of the county to support the proposed County College.

This study report, prepared by a Committee of the State Department of Education duly authorized by the Commissioner of Education, reflects some of the findings presented in the Final Report of the Bergen County

College Study Committee of Bergen County, and includes an analysis of other and new data revealed by the present investigation. The results of several limited surveys, conducted for the purposes of this Study by various members of the Department's Committee, are reported.

This document is submitted for the purpose of providing the State Board of Education with information needed in determining the feasibility of establishing a County College in Bergen County pursuant to the proposal offered by the Bergen County Board of Chosen Freeholders. The conclusions of this study report appear in Chapter VIII.

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CHAPTER I

THE COUNTY COLLEGE CONCEPT

Nowhere is America more the Land of Opportunity than in its educational system. However, change has no conscience and today's population explosion and technological revolution might well have narrowed the opportunity for educational advancement for millions had not educational authorities, wise government planners, and civic-minded individuals and business leaders looked ahead.

Change might have closed the doors of opportunity to countless young people were it not for the development in our century of the two-year college. The two-year college is a uniquely American idea that demonstrates how our system of education can be flexibly responsive to the demands of society while recognizing the worth of the individual.

As the century opened, there were fewer than ten such institutions, only one of them public. Today, there are over 700 two-year colleges, with more than half of them public. Today, they enroll more than 25 per cent of all students going to college for the first time. By 1970, they will be the first college attended by some 75 per cent of the young population.^{1*}

The "County College" is a term which originated in the enabling legislation² which provided the authority for the counties of New Jersey to establish and operate publicly supported two-year colleges. This type of educational institution is nationally identified as the "community college". Throughout this report, frequent reference is made to community colleges and is intended to refer to a collegiate institution which is known as the "County College" in New Jersey.

*All reference notes refer to the citations listed at the end of the report which are numbered successively and grouped according to chapters.

The Role of the County College in New Jersey

The New Jersey State Board of Education, in several of its official publications, has structured the design of community college development in this State. In the State Board's Community College report, which provided the basis for the County College law mentioned above, it is recommended that the primary aims of New Jersey's County Colleges be as follows:

- a. to make two-year college education accessible to able students in their home environment,
- b. to provide regular full-time students with diversified programs of studies leading to appropriately varied educational and vocational goals, including transfer to other institutions,
- c. to provide part-time adult students with diversified programs of studies leading to appropriately varied educational and vocational goals, including transfer to other institutions,
- d. to provide effective programs of scholastic, vocational and personal guidance and flexibility of transfer among programs so that the students may have the opportunity to develop their potentialities to the utmost,
- e. to provide for local as well as State and national needs appropriate to this type of institution, and
- f. to supplement educational opportunities now available in the State.³

In an official newsletter of the State Department of Education it is stated that the community colleges, by being deliberately located within commuting distance of the students they seek to serve, are expected to eliminate some of the major barriers which keep many capable youth from pursuing education beyond high school. The publication explains that:

Living costs represent a substantial portion of the student's expenses in a live-in college; the opportunity to stay at home would offer significant savings in room and board. Studies have revealed

that college attendance is more dependent upon family income than student scholarship. The savings realized on housing, meals, long-distance travel, and unusually low tuition at a community college may make a college education possible for many of our youth who otherwise would be denied the opportunity.

There are still many young people who do not continue their education beyond high school because they do not see the advantages. This is generally due to inadequate information about the kinds of college experiences available. The local community college, by offering broad programs, directly appeals to a wide range of abilities and interests.

The college-age group would not be the sole constituency of the community college; working adults could also find educational opportunities for personal growth, in-service training for occupational improvement, and intellectual satisfaction.⁴

In the legislation governing the establishment and operation of County Colleges, the role of these institutions is indicated by their definition. According to New Jersey law:

'County College' means an educational institution . . . offering programs of instruction, extending not more than 2 years beyond high school, which may include but need not be limited to specialized or comprehensive curriculums, including college credit transfer courses, terminal courses in the liberal arts and sciences, and technical institute type programs.⁵

The Distinctive Characteristics of the Two-Year Community-Oriented County College

The community-oriented County College is a distinctive institution in that it attempts to equalize educational opportunity beyond the high school through its low tuition cost to the student and by its flexible admission policy. These equalization factors become increasingly important as higher education becomes more costly, as four-year colleges become more crowded and selective, and as the national and State welfare

increasingly demand that all youth be developed to their maximum potential.

Another distinctive community college characteristic is its provision for an extensive program of guidance services for the student. The community college, by offering a variety of learning experiences, caters to students representing a wide range of interests, objectives and capacities. Persons uncertain of their educational and career objectives are given the opportunity to sample fields of knowledge and to test their own abilities under the guidance of counselors and teachers with a concern for the "individual" student. Community colleges have been referred to as great distributing agencies; some of their graduates will go on to four-year colleges and universities for advanced work, while others will move directly into a variety of careers and professions.

Furthermore, the two-year community college is distinctive in that it occupies a "middle position" between the high school and the four-year college, industry, or general life activities. No other institution of higher education has such an adaptable structure.

In a 1956 report of the State Board of Education, the unique characteristics and contribution of the community college are summarized as follows:

1. They serve as community centers responsive to the needs of their constituency in post-high school education and in adult education. They bring to the community a center of information and culture which supplements the work of the secondary school. Being flexible institutions they can, if their size permits, offer work in almost any subject field.
2. Community colleges within a community can provide the first two years of the college curriculum, enabling students to prepare for more intensive upper division and graduate work of later years.
3. Community colleges are in an excellent position to stimulate the search for and development of talent.
4. They can give "terminal" two-year courses, emphasizing the skills and techniques important to the development of the community and the State and offering educational

opportunity to all youth.

5. Community colleges can give a basic general education beyond the high school level.
6. Community colleges widely established and well supported would go far toward meeting the increasing demand for facilities. In fact, they would serve the society's need for trained personnel by making college available to many who would not otherwise attend. A comprehensive system of community colleges would probably increase the proportion of New Jersey's young people entering college to almost 50 per cent of the 18 year olds.⁶

Basic Functions of a Two-Year Community-Oriented County College

Basically there are four areas of specific curricular responsibility which are considered community college functions: (1) university-parallel; (2) general education terminal courses; (3) technical-institute type programs; and (4) continuing or adult programs. In a recent report on higher educational needs, the New Jersey State Board of Education describes these functions:

1. "University-Parallel Programs". . . should provide two-year programs equipping students for transfer to the upper division of four-year and five-year colleges, or to universities for the completion of their requirements for a baccalaureate degree in arts or sciences, and for work of the Junior and Senior years leading to professional degrees."⁷

Assuming that the student takes the required pattern of courses and that he achieves the prescribed quality level in work taken, he may transfer to the third year of a four-year college or university program. Transfer is usually accomplished with ease, particularly if the student identifies early in his college career the institution to which he wishes to transfer for completion of the baccalaureate degree program. The student's work at the community college can usually be structured to meet the prerequisites for future work at the college or university of his choice.

2. "General Education Terminal Courses are" . . . offerings closely related to these programs (above) and often identical as to the content of a single course of subject . . . "8

These courses would provide local opportunity for formal education, especially beyond high school level, that will develop the qualities of good family membership, civic responsibility, and personal cultural improvement.

3. "Technical Institute Type Programs provided for" . . . the development of two-year vocational terminal (technical education) programs preparing students to serve the needs of business, industry, agriculture, research institutes, laboratories and other technical assistance related to health services, the practice of medicine and dentistry, and the like. In the development of curriculums in these fields, emphasis must be placed on adaptation to the needs of the locality which the community college serves. Among the many specializations indicated are the programs such as those dealing with electronics, operating engineering, refrigeration and air conditioning, personal or technical services in support of business executives, and the like."9

Training in the areas of technical education usually requires two years of post-high school education in a prescribed curriculum of the technical institute type. The curriculums are designed specifically for the preparation of the technician, not an engineer or scientist. The two-year technical education course of study is rigorous and requires broad preparation in mathematics, science, and applied engineering or scientific technology. A technical education program in a community college is designed to give intellectual breadth and personal enrichment as well as technical proficiency.

4. "Continuing or Adult Education Programs provide for the" . . . education of adults in . . . fields mentioned above; on-the-job training in response to the needs which grow out of technological advances which modify patterns of employment. The community colleges should, as well, offer opportunities to adults which will increase their social competence, and other courses which may contribute to the enrichment of their lives through the appreciation of the cultural opportunities in our society."10

Adults enrolled in a community college may wish to take courses of study which will lead toward a two-year Associate Degree, or they may enroll for courses which do not award college credit but which contribute to creative expression in the arts and the humanities or perhaps toward an appreciation of some field of interest.

There is considerable diversity in programs among community colleges. As a common practice, the community college faculties study their communities to identify the post-high school educational services needed. The staff work closely with resource committees from business, industry, and the professions and make an attempt to provide educational programs appropriate to the character of the community and the objectives of the college. They are deliberately designed to serve regional interests most efficiently.

Students Served by a Community College

A comprehensive community college attempts to accommodate . . .

1. Youth who are high school graduates and who want two, rather than four, years of higher education in the arts and sciences, or in vocational-technical or semi-professional programs.
2. High school graduates eventually bound for a four-year college or university who want to spend their freshman and sophomore years in their own community, living at home.
3. Young adults who have not graduated from high school but, through part-time study, eventually hope to earn a college degree by beginning with special courses at their level and advancing to collegiate level work after meeting the necessary admission requirements of a college-level program.
4. Employed persons who want to improve their skills, prepare for advancement or for change of employment, or to expand their general education.
5. Adult women interested in homemaking, child care, cultural courses or preparation for employment or re-employ-

ment.

6. Any citizen desiring training for community services such as fire science, police science, first aid and rescue work, and sanitation.

Community College Enrollment Trends

The prediction of college enrollments to 1970 has been undertaken by many. And there seems to be a rather uniform agreement concerning the number of young people who will be of college age. The major point of uncertainty in the projection studies concerns the percentage of those of college age who will actually attend college. Financial assistance, availability of needed educational programs, programs of motivation and encouragement, and increase in the percentage of students graduating from high school have been mentioned as factors which might materially increase the percentage of students who will go to college.

The future enrollment picture for the two-year community college is further influenced by the following:

1. The community colleges enroll students from the immediate locality, many of whom would not and could not go to college elsewhere; therefore, the increase in the enrollment will depend to a very great extent on the development of more community colleges.
2. An increase in the percentage of high school graduates undertaking college will probably affect community colleges more than four-year colleges simply because of the influence of the economic factor.
3. The increased emphasis on the community service role of the community colleges may result in program revisions and in the inauguration of new offerings which will greatly increase the attractiveness of community college curriculums for adults of all ages.
4. As the terminal programs of two years or less in length become better known and generally accepted as appropriate training for a wide variety of occupations, youth with the encouragement of their parents are more likely to take advantage of them.

5. Four-year colleges may find enrollments so overwhelming in comparison to resources that students will be encouraged to spend their first year or two in the community colleges.
6. The demands of adults for education are, as yet, largely unfathomed. The extent to which adults will enroll in the future depends largely on the kinds of training available.

As a result of these factors, a significant annual increase in the community college enrollment can be expected by 1970.

College Costs and the Financial Advantages of Community Colleges

College tuition costs have doubled on many college and university campuses in the past 15 or 20 years. Along with the other living costs, the cost of room and board, books, and incidentals reflects the general increase. In addition, there are other major financial items which must be considered by the youths who attend out-of-state colleges and universities. Presently about 51 per cent of New Jersey students, who enter college, enroll in out-of-state institutions.*

Cost data for several publicly supported universities attended by New Jersey students are shown in the chart on page 10. Out-of-state publicly supported institutions of higher education have been popular with many New Jersey students because of the basic tuition costs which are usually much less than comparable private institutions. Shown in the chart are the expenses for room and board and for special fees for students living out of the state in which the institution is located.

Much of the information about the drawing power of community colleges could well be under the heading of costs. The popularity of the community college has been derived to a great extent from its money-saving features.

Although not all public community colleges are tuition free, most of them have low tuition. The big saving, however, is in room and board. The student in the public two-year college ordinarily lives at home. At the four-year college, annual cost for tuition, fees, room and board

* September, 1964

TWO MAJOR EXPENSES (OTHER THAN TUITION) FOR
NEW JERSEY YOUTH ATTENDING OUT-OF-STATE UNIVERSITIES¹¹

College	Room and Board	Tuition Penalty for N.J. Students	Total
University of Vermont, Burlington	\$775	\$784	\$1,559
Pennsylvania State Univ., University Pk.	795	525	1,320
University of Virginia, Charlottesville	750	460	1,210
University of New Hampshire, Durham	590	420	1,010
University of Delaware, Newark	660	335	995

averages about \$2,025. Multiply this figure by two for an Associate Degree or by four for a Baccalaureate Degree. Add a varied amount for books, supplies and miscellaneous expenses and the total cost of college could range from \$5,000 to \$10,000. If the first two years of college are at a community college where the student can live at home, the saving is sizable and may very well make the difference in the choice of a career.

Another financial advantage of the community college is that students are more likely to find part-time work in their own communities where they are acquainted with available work opportunities and are known personally by many.

Some Guiding Principles Governing the Establishment of a County College

The State Board of Education has recommended that the County Colleges be established in an orderly fashion and in keeping with sound planning and practical financing.¹² In its report to the Governor and Legislature in January, 1961, the State Board proposes that these institutions be governed by the following guiding principles:

1. . . . There should be a statement of purpose and objectives. These should be clear, honest and susceptible to attainment and be realistically attuned to the needs of higher education in the county, particularly to those students for whom a two-year college program is appropriate.
2. . . . A County College should have its own physical plant and equipment including parking facilities, consonant with the demands of its purposes and programs. Such plant and equipment should be continually reconsidered in view of changing needs, development and expansion. The County College should operate as a separate and identifiable unit and not be dominated by any other unit of education.
3. . . . The curricula should be designed in light of the needs of the students attending a County College and in harmony with the stated purposes and objectives. The programs of study should be built upon broad flexible course offerings, the objectives of which are to help each student develop his own potentialities.¹³
4. . . . Responsibility for offering technical programs of less than college grade should be vested in the County Board of Vocational Education, and high school graduates may be admitted to such programs. If no County Board of Vocational Education exists in a County, the County College may also offer such programs. In particular, if it is desirable to transfer programs in whole or in part from one institution to the other, the two Boards, subject to approval by the State Board of Education and by the County Board of Chosen Freeholders, might . . . transfer real and personal property from one to the other.¹⁴ Furthermore the County . . . should endeavor to remove and prevent undesirable duplication between their respective programs and agree upon the assignment of programs between the two, subject to the rules and regulations of the State Board of Education.¹⁵

CHAPTER II

POPULATION AND SOCIOLOGICAL CONDITIONS IN BERGEN COUNTY

The Population Trends in Bergen County

Bergen County is the second largest county in population and fifteenth in land area. In 1960, the County had 780,255 residents, representing 7.8 per cent of the State's total population.

Bergen is experiencing a steady and rapid growth. Only two of the State's twenty-one counties registered a faster rate of growth in the 1950's. The population growth pattern of Bergen County, like many other counties studied, reveals an increasing number of college-age youth. Shown in Table 1 (See Appendix A) are the trends in the population for the decades from 1930 to 1960 for the County's total population and for four specific age groupings.

Indicative of Bergen County's steady growth are population increases during the 1940's and 1950's (Table 1). Between 1940 and 1950, the County's population increased 31.5 per cent; in the 1950's, 44.7 per cent. The 1960 population more than doubled the 1930 population (364,977).

The total child population (19 years and under) has grown rapidly in the past two decades. The number of children in Bergen County in this age group increased about 128 per cent between 1940 and 1960 (Table 1). A significant increase, 37 per cent, was observed for the school age population (5-19 years) during the past ten years. In 1950 there were 105,251 school-age children in the County; in 1960, this number increased to 199,667 (Table 2).

In Table 2 (See Appendix A) are the County's numerical and percentage changes in population between 1950 and 1960 by various age groupings. The largest increase took place in the "10-14 years" group, 127.4 per cent; "5-9 years" experienced an 80.4 per cent increase; and the "under five years" group realized an increase of about 46 per cent. The increase in the number of all children under 18 from 1950 to 1960 was 79.2 per cent.

Bergen County is composed of 70 municipalities. The largest one in 1960 was Teaneck with a population of 42,085. The population distribution of Bergen County's municipalities for the past thirty years is shown in

Table 3 (Appendix A). Teaneck, Fair Lawn, Hackensack, Garfield, Bergenfield, Englewood and Ridgewood are the principal municipalities in the County, each having populations greater than 25,000 (Listed by size).

Projected Population Growth in Bergen County

The population of Bergen County in 1980 is expected to be about 94 per cent more than it was in 1960. Table 4 (Appendix A) summarizes the projected population growth for the Nation, the State and the County.

Studies indicate the County's growth will continue to be rapid. Expected to reach one million in 1970, the population will then about double the 1950 population. Projections of population through 1980 show an anticipated population of 1,076,750. Undoubtedly this growth will bring with it an increased demand for educational opportunities and facilities at all levels.

Bergen County Employment Picture

The industrial employment picture of Bergen County (See Table 5, Appendix A) shows "manufacturing" establishments as the largest employers of workers in the County, employing about 107,817. "Electrical Machinery, Equipment and Supplies" employed 10,072 and "Other Durable Goods" employed 12,394 workers. Data from the 1960 U.S. Census and information obtained from County documents provide the basis for description of industrial employment.

Occupational and Social Characteristics of Bergen County

"Clerical and Kindred Workers" constituted the largest classification of workers, 56,117, in Bergen County in 1960. Table 6 (Appendix A), using data published by the New Jersey Division of Employment Security, summarizes the occupations of Bergen County residents. "Operatives and Kindred Workers" ranked number two in order with 51,506 workers employed. "Professional, Technical and Kindred Workers" ranked third with 46,956 employees.

The smallest occupational group, "Farmers and Farm Managers" had only 407 men and women employed.

The chief products produced by County employees are sand and gravel, clay, transportation equipment, paper, instruments, textiles, and miscellaneous machinery.

Bergen County men in the "Professional, Managerial and Kindred Workers" classification earned the highest median salary of all categories. As summarized in Table 7 (Appendix A), the professional group listed a median salary of \$8,538 in 1960, \$1,012 more than the State-wide median for the classification. The second highest median salary was for "Craftsmen, Foremen and Kindred Workers". Earning \$6,204, Bergen men in this category averaged \$546 more than comparable workers throughout the State. The lowest median salary was received by "Farm Laborers", \$2,671--a figure \$725 more than the State median.

The median family income in Bergen County in 1959 was \$7,823. This amount, as indicated in Table 8 (Appendix A), is \$1,037 more than the State median. The median male income of \$5,900 is \$785 more than the New Jersey average. The average personal income in Bergen County is higher than the State median.

About 90 per cent of Bergen County's families earned more than \$4,000 a year in 1959. About 62 per cent earned \$7,000 or more. More individual men and more families in Bergen County have incomes in the \$7,000-\$9,999 bracket than in any other range in Table 8.

Educational Achievements of Bergen County Residents

Almost half (47%) of Bergen County's adults, 25 years or older, have graduated from high school. Included among the high school graduates are 11.6 per cent of the County's population who graduated from college. The percentage of college graduates is three per cent more than the State's average. The percentage of men in Bergen County with four-year college degrees is more than twice that of the women with such degrees.

Table 9 (Appendix A) reveals that in 1960 a total of 66,680 adults (14.3%) had less than an eighth grade education. Less than a high school education was completed by 32 per cent of the County's population. About 78 per cent of Bergen County's adults never attended college.

Bergen County residents would probably make a better showing both educationally and occupationally if increased higher educational opportunities were offered to more County youth and adults. The leadership

role of the County in the future will be largely dependent on the educational opportunity available. If workers must develop skills and competencies to keep up with the demands of expanding technologies, educational services must be available to them.

CHAPTER III

BERGEN COUNTY'S EDUCATIONAL CHARACTERISTICS

Bergen County's School Enrollment

The total number of pupils enrolled in the public secondary schools for the 1964-65 school year in Bergen County was 62,812. This ranks Bergen County first among the twenty-one New Jersey counties. See Table 10 (Appendix A).

Shown in Table 11 (Appendix A) are the projected school enrollments for the public schools in grades Kindergarten through twelve for the different school years to 1970-71. Using a uniform projection technique, Table 11 reveals the number of Bergen County twelfth graders expected to graduate in the next seven years. Estimates of the high school graduates are as follows: 1965--11,935; 1966--11,666; 1967--12,496; 1968--12,393; 1969--11,692; 1970--11,813; and 1971--11,106. The parochial school enrollments are not included in these projections.

Post-High School Educational Institutions and Programs Available in Bergen County

Fairleigh Dickinson University, Archangel College, Immaculate Conception Junior College and Lutheran Collegiate Bible Institute are the institutions of higher education located in Bergen County. Three other New Jersey institutions offer undergraduate extension courses in the County. The number of New Jersey residents attending these institutions of higher education in 1964 were as follows: (a) Fairleigh Dickinson University about 5,500 full-time students, and about 11,300 part-time students; (b) Archangel College, 39 full-time students, and 56 part-time; (c) Immaculate Conception Junior College, 81 full-time students and 20 part-time; and (d) Lutheran Collegiate Bible Institute, 21 full-time students and one part-time. The extension centers were: (a) Rutgers, the State University offering seven extension courses for 308 part-time students; (b) Paterson State College with 14 extension courses and 308 part-time students enrolled; and (c) Jersey City State College, offering four extension courses and 93 part-time students enrolled. These seven colleges and universities are providing higher educational opportunities for about 5,600 full-time and about 12,000 part-time students

who are New Jersey residents. It should be noted, that the curricula available in the above four-year institutions and all other senior colleges and universities, are designed primarily to serve the specific objectives of the baccalaureate degree and advanced programs, and to fulfill the special purposes of a four-year collegiate institution.

Bergen County has seven general hospitals and one mental institution. Of these, Englewood, Hackensack and Holy Name (Teaneck) offer professional nursing programs and Bergen Pines Hospital in Paramus offers a practical nursing training program. At the beginning of the 1964-65 academic year, there were 330 students enrolled in the professional nursing programs and 70 enrolled in the practical nursing training.

There is one county sponsored vocational-technical high school located in Hackensack with an enrollment of about 750 pupils. Vocational courses are offered in several of the district high schools offering programs in the various trades.

There is one private trade school in the County specializing in aeronautical mechanics enrolling about 175 students.

Three private business schools have a total enrollment of about 360 students in their day and evening courses.

Extent of Attendance of Bergen County Residents at Post-High School Institutions

Table 12 (Appendix A) shows the actual enrollment of full and part-time Bergen County students in New Jersey institutions of higher education as of March 1, 1964. The institution enrolling the greatest number of Bergen County residents is Fairleigh Dickinson University, with an enrollment of 6,864 full and part-time students. Second in number is Rutgers, the State University with 2,025 full and part-time students. Paterson State College follows with 1,669 full and part-time students. The total number of Bergen County residents attending all of the New Jersey colleges and universities is 16,029 of which 7,412 are full-time students and 8,617 part-time.

Summarized in Table 13 (Appendix A) are the number and per cent of Bergen County high school graduates attending post-high school institutions of various types. In 1964, 52 per cent (or 5,287) of the 10,160 graduates attended various colleges and universities. In 1964, about 64 per cent (or 6,488) of the 10,160 graduates attended educational institutions beyond the high school.

Types and Extent of Enrollment in Community Adult Education Programs

In Table 14 (Appendix A), is a summary of the course offerings and enrollments in the twenty-four community adult schools sponsored by Bergen County local public school districts. There were 22,596 adults in Bergen County enrolled in numerous non-credit subject-matter areas in the community adult education programs during the 1964-65 school year. The total number enrolled in various avocational courses was approximately 5,300; in commercial and distributive education subjects about 3,000; in arts and crafts courses, about 2,400; and in health, safety and physical education about 1,200.

CHAPTER IV

ESTIMATED ENROLLMENT OF THE PROPOSED COUNTY COLLEGE
IN BERGEN COUNTY

Potential County College Enrollment for Bergen County

There are several methods commonly used to estimate the potential full-time enrollment of a two-year community college. For this report, four formulae have been applied to estimate the potential enrollment for a County College in Bergen County. Although the average age of community college students is about 25 years, the 18 and 19 year-olds are often referred to and considered the two-year college age population in determining potential full-time enrollment figures. Numbers utilized for future years are by necessity statistically projected estimates.

FORMULA I: The potential full-time enrollment of a newly established community college may be estimated by computing 30 per cent of the total number of 18 and 19 year-olds living in the county.¹

Year	Number 18-19 Year Olds*	Potential County College Enrollment, Bergen County (30% of Column 2)
(1)	(2)	(3)
1966	15,822	4,746
1967	16,201	4,860
1968	16,589	4,977
1969	16,977	5,093
1970	17,365	5,210
1971	17,768	5,330

*In arriving at the number of 18 and 19 year-olds for the years 1965 through 1970, figures were obtained from the 1960 U.S. Census, and certain population projections supplied by the Bergen County Planning Board. The percentage of 18 and 19 year-olds in the total Bergen

*(cont.)

County population in 1960 was used to compute the number in the expected total population in the years listed. These estimates are considered conservative since the percentage of 18 and 19 year-olds for the years indicated is probably much greater than the proportion in 1960.

FORMULA II: The potential full-time enrollment of a newly established community college may be estimated by computing 20% of the total high school enrollment.²

School Year	Number in Public High Schools Grades 9-10-11-12	Potential County College Enrollment, Bergen County (20% of Column 2)
(1)	(2)	(3)
1965-66	50,443	10,088
1966-67	51,165	10,233
1967-68	52,852	10,570
1968-69	53,742	10,748
1969-70	54,793	10,958
1970-71	56,470	11,294

FORMULA III: The potential enrollment of a newly established community college may be estimated by computing 40% of the high school graduates in the county for the two preceding years.³

Reference Year	Number of Public High School Graduates In Two Preceding Years	Potential County College Enrollment, Bergen County (40% of Column 2)
(1)	(2)	(3)
1965-66	22,474	8,989
1966-67	22,079	8,831
1967-68	22,156	8,862
1968-69	23,033	9,213
1969-70	24,231	9,692
1970-71	24,026	9,610

FORMULA IV: A questionnaire may be used to survey student interest in attending a County College. Information is obtained from all the 11th and 12th grade pupils. The total number of pupils who indicated they would attend a County College, if one were established, is considered to be the potential second year enrollment of a college.⁴

A study of prospective students' interest in a local community college was made by the local study group in the Fall of 1963. A questionnaire presented to eleventh graders in Bergen County public senior high schools was answered by 7,775 pupils.

The survey showed that 2,519 pupils, or 32.4 per cent of all eleventh graders surveyed, would attend a two-year community college if one were established in Bergen County.⁵

For the purpose of Formula IV, it is necessary to project from the survey data the responses for both the eleventh and twelfth graders and the probable responses for the eleventh and twelfth graders in succeeding projected years. Since the above study limited its survey of student interest to eleventh grade pupils and the formula requires the results of two high school classes, appropriate equated figures had to be determined. According to the findings of a 1961 study made by the State Committee to Study Community Colleges and Technical Institutes, it may be assumed that

the responses of eleventh grade classes surveyed in the Fall, 1963, would closely approximate those of the twelfth graders of the same year.*

This Report, therefore, assumes that the 32.4 per cent would be applicable to both the eleventh and twelfth grade pupils as an index of desire to attend a County College, if one were available in Bergen County. It is considered appropriate to apply this percentage to the current and future projected combined enrollments for eleventh and twelfth grades in the County. The results are considered reliable estimates of the responses that would be received from comparable future high school groups. The computations are summarized below.

School Year	Bergen County 11th and 12th Grade Public School Pupils	Would Attend County College (32.4% of Column 2)
(1)	(2)	(3)
1965-66	23,268	7,538
1966-67	24,167	7,830
1967-68	25,411	8,233
1968-69	25,239	8,177
1969-70	25,667	8,316
1970-71	26,654	8,635

All of the above enrollment estimates are for both years of the two-year college. The opening enrollment would be estimated at a figure less than one-half of the two-year potential, varying with the breadth of program, facilities, status of the new institution, and tuition cost.

Summarized on the following page are the data obtained from the various formulae used in estimating the full-time enrollment potential of a Bergen County College.

*. . . there are several aspects of the student responses that warrant particular mention; perhaps the most striking is the close parallel between the responses of the Seniors and Juniors . . . This parallel runs throughout the survey results. . .⁶

In 1966, Bergen County could expect the enrollment potential, or possibility, for a County College to be about 7,800 full-time students for both years. However, in spite of the large potential, the initial building program to accommodate 2,000 students seems to be a most reasonable beginning.

SUMMARY OF POTENTIAL FULL-TIME STUDENTS
FOR THE PROPOSED
BERGEN COUNTY COLLEGE

Formula	YEAR					
	1966	1967	1968	1969	1970	1971
I	4,746	4,860	4,977	5,093	5,210	5,330
II	10,088	10,233	10,570	10,748	10,958	11,294
III	8,989	8,831	8,862	9,213	9,692	9,610
IV	7,538	7,830	8,233	8,177	8,316	8,635
Mean	7,841	7,939	8,161	8,308	8,545	8,718

It is important to note that the enrollment estimates of a new college are subject to many variables such as publicity given the college, the entrance and tuition policies of the institution, curricula offered, quality of leadership and faculty obtained and the facilities provided. Of considerable importance would be the number of youth attracted from adjacent areas outside the County if the County College becomes a "receiving institution". This particular factor has not been considered in the foregoing enrollment estimates.

Based on the experiences of other states with a community college program, the part-time (evening session) enrollment may be expected to be about twice that of the full-time day session.

Number of Bergen County Youths Pursuing Their Education After High School Graduation

In June, 1963, 46 per cent (5,660) of the Bergen County public school graduates entered a four-year college. Bergen County high school Guidance Directors reported that 60 per cent (7,252) of this entire Graduating Class of 1963 (12,088) pursued a program of higher education. The findings of a questionnaire survey showed that 75.4 per cent (6,116) of the Class of 1964 planned to enroll in some kind of higher education institution.⁷

In 1963, 31 per cent of the Junior Class (2,519), indicated an interest in attending a County College. Almost one half of this group were in the top half of their class and about 80 per cent were in the top three-quarters.⁸

It should be taken into account in the planning of County College programs that the post-high school educational activities of those students studied are naturally limited by the availability of particular programs and are not necessarily indicative of the primary choices or desires of the high school graduates.

Major Factors Which Act as Barriers to College Education

Financial barriers seem to be the main obstacles preventing many students from attending college. Results of the local study group's survey substantiate this finding revealed in all other local studies so far reported.

In a study of activities of high school graduates, a Bergen County local study committee found that about 350 (21 per cent) high school Juniors indicated that they would not continue their education beyond high school because of financial reasons.⁹

In a study reported in Education Beyond High School: The Two-Year Community College, a publication of the State Board of Education, the significance of the financial barrier to college education is further substantiated.

Attitude of Parents Toward A County College in Bergen County

Most eleventh and twelfth grade pupils in Bergen County plan to continue their formal education after high school graduation, surveys show.

As stated in previous County College feasibility study reports of the State Department of Education, it is reasonable to assume that the parents of these youth, as well as many of those not included in this group, are typical of those surveyed in other counties in New Jersey and in other states. An overwhelming majority of parents surveyed in a number of out-of-state studies want a college education for their children, if financial attainable. Parents everywhere desire the best educational opportunities for their children.

The College Needs Committee, a citizen's group in Bergen County, has given continuous support to the establishment of a County College. The following statement is typical of many which the Committee has released during the past five years.

"The need for a tax-supported 2-year Community College is clear and pressing. Local, state and national surveys all point to a 50% increase in the number of young people heading for college during the next five to ten years.

"Some families can afford to send their sons and daughters out-of-state to college, provided those states can take them. Some families can afford the \$10,000 required to send a student to a private college away from home for four years. Many families, however, cannot afford such an outlay of funds, especially if there are two or more college hopefuls in the home.

"The obvious solution is a local public Community College, offering a 2-year multi-purpose curriculum, similar to those established on a broad scale in California, New York and many other states.

"Legislative action by the New Jersey Assembly for the creation of these imperatively needed local educational facilities is an urgent necessity."

Summary

It should be taken into account in the planning of County College programs that the post-high school educational activities of individuals are naturally limited by the availability of particular programs and are not necessarily indicative of the primary choices or desires of the high school graduates. Also, the potential enrollment of a County College does not mean the actual enrollment to be expected at any particular date since many factors may have a negative effect on the total enrollment. Potential enrollment estimates assume that the County College would be in full operation, with adequate facilities, and providing the programs and services that the better community colleges are providing.

CHAPTER V

CURRICULAR NEEDS TO BE MET BY THE PROPOSED BERGEN COUNTY COLLEGE

Major Programs and Curricula of Interest to Prospective Students

The findings of the local Bergen County study committee and data revealed by the surveys conducted for this Study have provided the basis for predicting the types of curricular programs which seem appropriate for the proposed Bergen County College. The five major programs and curricula needed to meet the needs of the students of the proposed County College as revealed by surveys of high school pupils' interests and industrial personnel needs are:

- A. A two-year Liberal Arts-Sciences (university-parallel) program: represents the interest of about 31 per cent of the prospective County College students.
- B. A two-year Business Occupations program: would be of interest to about 27 per cent of the prospective students.
- C. A two-year Technical (engineering-science) Education program: would be of interest to about 22 per cent of the prospective students.
- D. Health Services program: represents the interest of about 13 per cent of the prospective students.
- E. A two-year General Studies (terminal) program: interest of about 3 per cent of the prospective students.
- F. Other: interest by about 8 per cent of the prospective students.¹

The foregoing percentage breakdown is consistent with the findings revealed for Bergen County in a 1961 State study. The results of this Study showed 31 per cent business education; 28 per cent for liberal arts-sciences (transfer); 20 per cent technical education; and 11 per cent for health science programs.²

A. A Two-Year Liberal Arts-Sciences (university parallel) Program

Whether a student has plans to enter a career immediately after two years of college work, or intends to pursue a four or five-year baccalaureate degree program, his community college program of studies should be designed to include courses in the humanities, social sciences and natural sciences. Selection of courses, in addition to the general education requirements, should be dictated by the need to provide the foundation for a possible major at a four-year college, or the need for desirable intellectual experiences useful in the student's personal life.

It is desirable that the student be given a thorough introduction into the primary areas of education in a liberal arts-sciences (university-parallel) program. Many of these transfer students will be preparing for ultimate entrance into a wide variety of professions, such as dentistry, optometry, teaching, anthropology and the like. It would be impractical to develop courses and facilities that would specifically prepare each student for all such specialized areas. When a two-year college emphasizes collegiate-level subject matter, insists on adequate academic preparation and grades appropriately, no difficulty should be expected in the transfer of students' credits to another institution of higher education.

B. A Two-Year Business Occupations Program

In the development of a business occupations program in the proposed County College, consideration should be given to the needs of those who would want to specialize in such areas as general business administration, accounting, salesmanship, insurance, business machine technology, banking, or secretarial science. These subject-matter areas have been found to relate to the needs of the business and industrial firms in the area. The various curricula in the business occupations program should provide a high degree of technical competence leading to a responsible position in a specialized area of business.

C. Two-Year Technical (engineering-science) Education Program

The worth of technical education has been truly recognized in the past decade. Specifically, it has been established that engineering teamwork, rather than brilliance of individual effort alone, is making possible the unprecedented technological progress we are experiencing. Several individuals of widely diverse abilities and skills make up the engineering team which consists of:

The ENGINEER and the SCIENTIST, who formulate ideas to create new products and services,

The ENGINEERING TECHNICIAN, who utilizes his broad semi-professional abilities and skills to help develop, and apply these ideas and creations,

The INDUSTRIAL TECHNICIAN, whose highly specialized abilities and skills are used to supervise and control the manufacturing and service processes,

The CRAFTSMAN, who applies his high-order manipulative skills to shape the components and fabricate the needed structures and appurtenances needed for progress,

The SEMI-SKILLED AIDE, who performs the several lower order tasks which are in direct support of other members of the team.

The technical educational curricula should offer students opportunities to acquire sound basic training for immediate employment upon completion of the two-year County College program. Generally, the preparation is in the technical and scientific subject matter areas which are considered aids to the professional and supervisory occupations in such fields as engineering and science research. Specific courses in technical skills, e.g., basic drafting and manufacturing processes, and in technical specialities are essential to all of the various technologies.

This Study Committee, in surveying industry, found an expressed need for the preparation of engineering technicians to work on a semi-professional level. Industrial leaders feel a two-year training program of a post-high school nature would best effect this.

The importance of general education (that part of a student's education which looks first of all to his life as a responsible human being and citizen) is recognized by educational leaders in occupational education. The kinds of courses which should be classified as general education in a technical education curriculum are those which have the best chance of fulfilling the following student aims: (1) to draw the student into vital new areas of intellectual experiences; (2) to increase the student's participation in his cultural heritage; and (3) to prepare the student to make sound judgments outside his field of specialized occupational preparation.³

A graphic illustration of the need and design of technical education for New Jersey is presented in the chart on the following page.

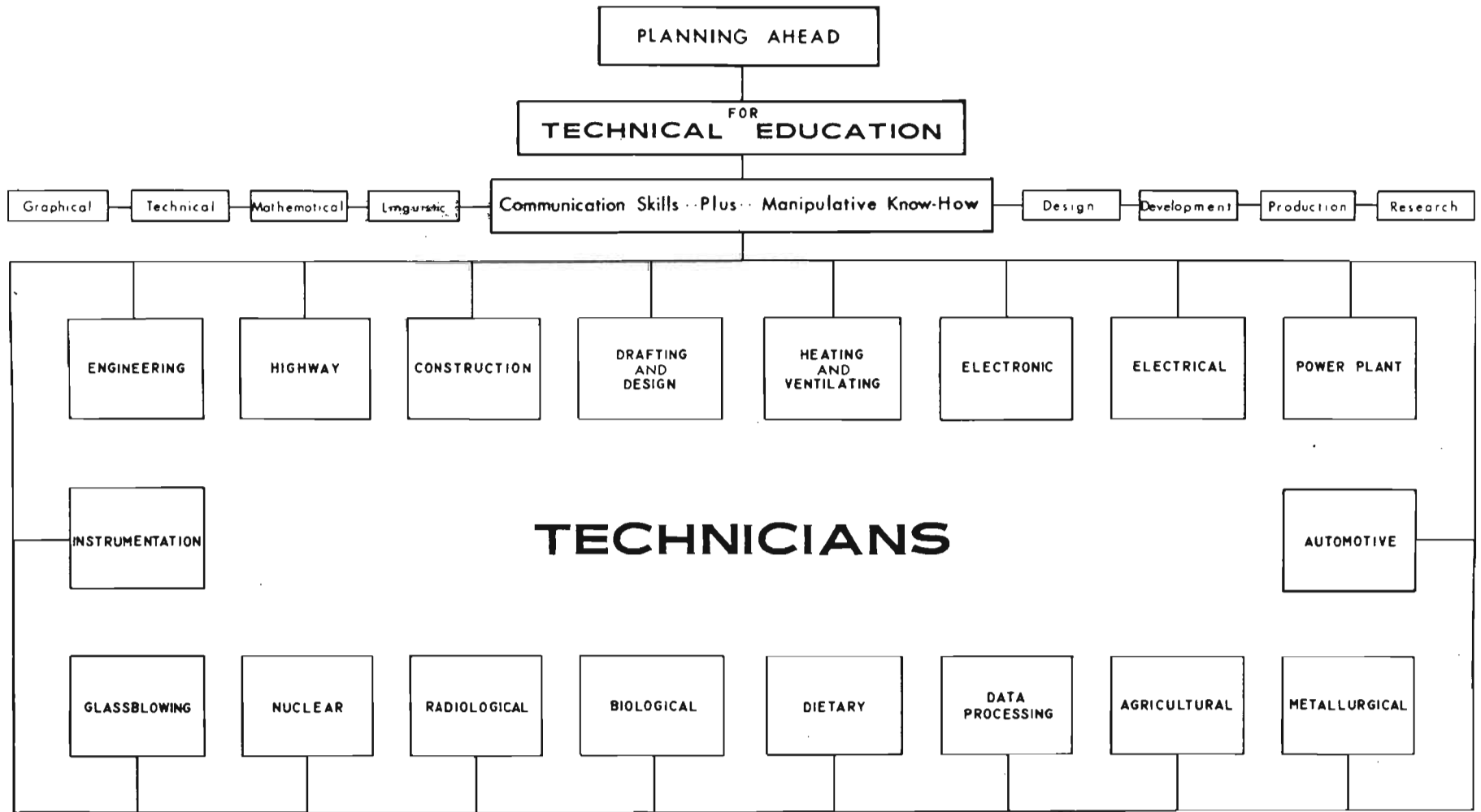
The two-year technical education curricula in a County College would most likely be structured as follows:

- (a) 15-20 per cent of the entire curriculum devoted to general education subjects which would be pertinent to the technology. These may include such courses as economics, management, human relations, English composition, public speaking, and technical report writing. The amount of time devoted to general educational subjects should be in proportion to the place that the general education of the individual occupies in the college's statement of objectives as well as the student's educational and vocational goals.
- (b) 20-25 per cent of the curriculum allotted to mathematics and science principles and concepts, with appropriate applications to the major field of technical specialization.
- (c) 30-40 per cent of the curriculum allocated to the development of laboratory techniques, instrument operation, and project work appropriate to the student's major field of specialization.
- (d) 5-10 per cent of the curriculum allotted to the opportunity for acquiring manipulative skills (e.g., hand-tools, auxiliary machines, other intricate equipment.)
- (e) 5-10 per cent of the curriculum allowed for library research and/or elective courses.

D. Health Services Program

The health services of the proposed County College should probably be designed to prepare students for such health services or related curricula as professional and practical nursing, medical laboratory technology, dietetics and X-ray technology.

It is recommended that where individual courses, such as X-ray, hematology, blood bank techniques, or bacteriology are needed, and in which highly specialized instruction is required, the cooperation of outside



Graphic Overview
OF
MAJOR TECHNICAL EDUCATION NEEDS

STATE OF NEW JERSEY
DEPARTMENT OF EDUCATION
VOCATIONAL DIVISION

agencies such as hospitals, industrial laboratories, and industrial firms be sought to provide the specialized teaching personnel and the laboratory facilities in off-campus locations.

E. A Two-Year General Studies (terminal) Program

Terminal programs in general studies (basic and survey courses in the liberal arts and sciences) appeal to the student who wishes to complete his formal schooling in a two-year college. The student's program of studies would be designed to meet his own personal needs and interests.

F. Other (Terminal Occupational Training)

The community college does not necessarily need to limit its curricular offerings to a level which requires advanced mathematical and scientific preparation. By design and intent, this institution stands ready to offer to adults any occupation-centered curriculum for which there is a demand sufficient to warrant the offering of post-high school training. Preparation in any particular area may not be available in every community college; individual County Colleges might ultimately serve the needs of the entire State in specific occupational programs.

Courses below college-grade at the craftsman-clerical level may meet the needs of both the out-of-school youth who need preparation to provide them with skills needed to enter employment and older persons who require additional education to enable them to advance in present jobs or change to an entirely new type of work.

An analysis of the occupational opportunities of most counties in New Jersey reveals the need for workers with various levels of vocational-technical training. The levels of preparation needed vary in the range of technical content, the amount and quality of underlying science and mathematics required for the occupation and the length of study appropriate to attain competency. Some occupational opportunities available in the industries and businesses of the County are technical in character, yet require little background and short periods of preparation (e.g., machine maintenance, business machine operation or technical sales). In planning formal training programs of this type, it is essential to keep in mind the variations found in the occupations and to set entrance standards and competency requirements at realistic levels. Such programs would be designed and classified at an achievement level lower than that required for programs leading to the two-year Associate Degree. A "certificate of com-

pletion" is the award generally given to those who satisfactorily complete programs of this type.

The fact that certain courses included in a certificate program may have "transfer value" is incidental. The intent of such programs is to prepare the student to enter directly into employment after the program offered by the community college has been completed.

Many occupational training programs for adults will carry no college recognition whatsoever and will take only a few weeks or months to complete. Such programs may enroll both adults and out-of-school youth (including 16-year-old dropouts) in day and evening sessions.

A graphic orientation of the proposed role of the County College and other institutions of learning is presented in the chart on the following page. The relationship of curricula leading to the associate degrees and to "certificates of completion" may be seen by carefully studying the chart. A need for continuing programs for up-grading and retraining of adults is indicated for all counties. The increasing demand for skilled labor and the competition in the labor market demand a higher level of educational achievement for the worker.

Programs and Curricula Necessary to Fulfill Cultural and Personal Aspirations of Adults Pursuing Studies on a Part-Time Basis

The County College should play a significant role in the development of continuing, or adult education, in the county. That portion of the college's program generally referred to as "non-credit program" should be organized in close cooperation with existing community adult education programs in the county. A County College facility and its personnel would probably add prestige to the overall adult education program. Public school districts located in close proximity to the college should have the opportunity to call on the college's faculty for consultative services. Conversely, the County College should be able to use the local facilities and personnel for the purpose of promoting their program whenever appropriate and practical. The County College, working in conjunction with adult education specialists, might well take the initiative in developing a cooperative approach to adult education for the county.

The self-improvement aim of adults should not be overlooked. Relatively few of the total number of individuals in need of and capable of benefiting from formal adult educational programs of the vocational preparation type are

presently obtaining such instruction. The increasing demands for trained manpower, current economic and social developments, changes in the various occupational fields, advancements in science and technology, and other developments indicate the necessity for extending adult vocational preparation programs and for modifying existing programs. All persons sixteen years or older, not enrolled in a high school program, who desire vocational instruction, should have an opportunity to enroll for such education. High school graduates with or without a high school background in vocational education should have an opportunity to continue or enter this important field. Furthermore, there is great need for this type of education for the handicapped, the aging, the migrant from rural areas to cities, migrant farm workers, displaced and unemployed workers and individuals who drop out of school.

A review of the non-credit course offerings in the community adult schools of the County (Table 14, Appendix A) indicates a strong interest in the avocational and commercial and distributive education courses.

Student Guidance and Counseling Functions of a County College

Traditionally, the guidance and counseling functions of the community college have been significantly emphasized, resulting in these institutions being referred to as "guidance oriented colleges." The objectives of the college's student personnel program are synonymous with the instructional program. Instruction and guidance are interwoven and interrelated functions, each vitally important to the individuals' overall educational growth.

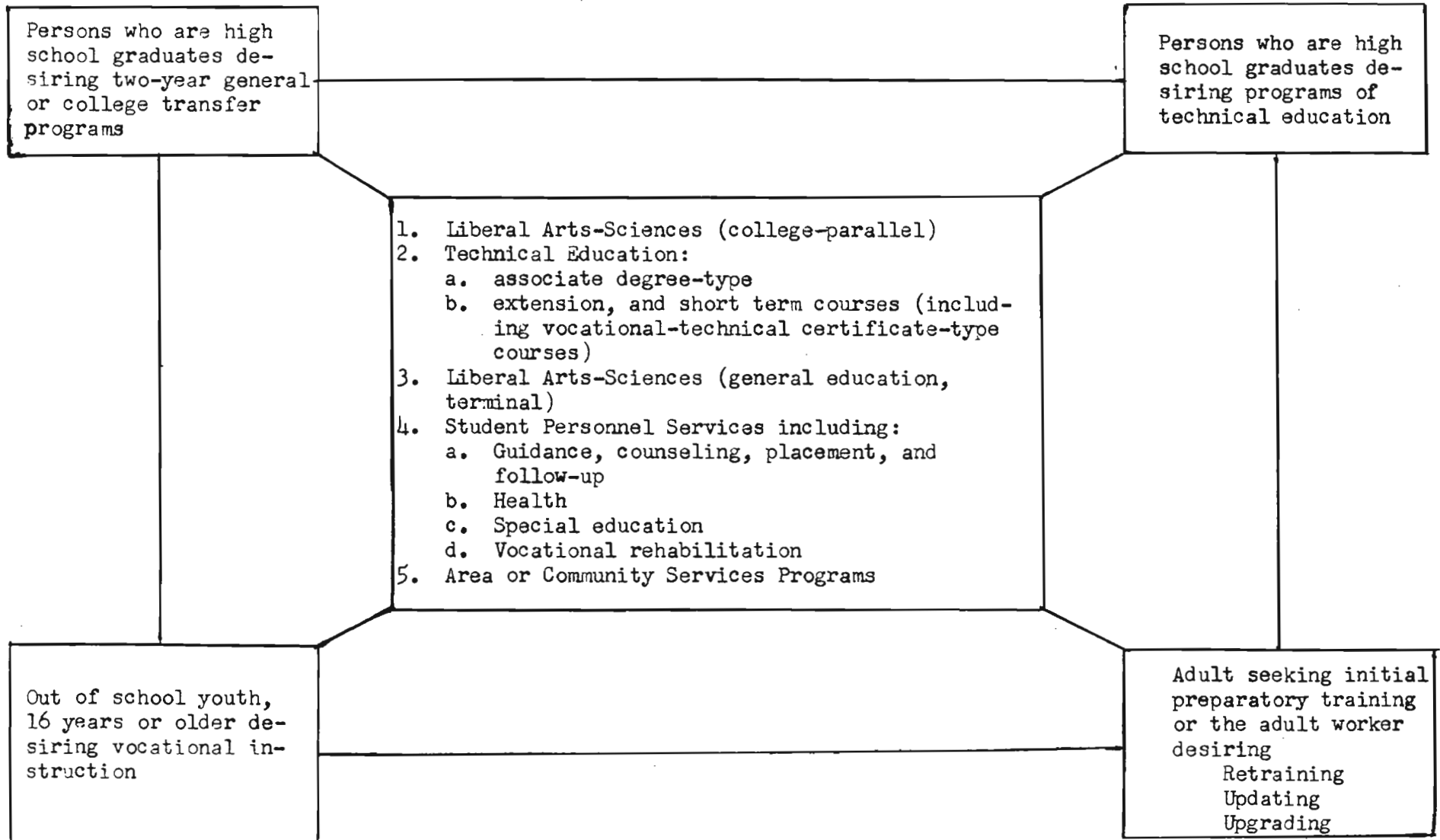
The multifold character of community colleges and the heterogeneous backgrounds and aptitudes of students who attend them, require that student counseling in this type of institution be emphasized, with quality a fundamental essential. Only if its importance is fully recognized can the counseling program discharge its responsibility adequately to the individual students and to the community college in which it functions.

On the following page is a graphic description of the relationship of program and services of a community college and the personnel it serves.

The commuting student and his diverse needs pose special counseling responsibilities for the County College. The objectives of the student activities program should, therefore, include provision for meaningful educational experience in social and organizational situations and the maintenance of a desirable balance between curricular and co-curricular programs.

THE MULTIPLE PURPOSE COMMUNITY COLLEGE

The center rectangle represents programs and services performed by a community college. The small outside rectangles represent the people that would be served by such an institution.



Specific Curricula to Meet County Employment Needs

Two extensive survey-type studies were made in recent years to determine the extent of the County's industrial-technical personnel needs and whether the training programs in the County were adequate. In addition, an interview survey of limited scope was conducted for this Study to assess the present technical educational needs of the County. It is believed that the selected firms in the latter study are representative of the major industrial activities of the County. (See Appendix B).

The findings of the above study and other pertinent data indicated that the following curricula are in demand.

1. Accounting Technology
2. Automotive Technology
3. Biological Technology
4. Chemical Technology
5. Data Processing Technology
6. Drafting and Design Technology
7. Electrical Technology
8. Electronics Technology
9. Metallurgical Technology
10. Instrumentation Technology
11. Industrial Laboratory Technology
12. Mechanical Technology
13. Quality Control Technology
14. Nursing
15. Secretarial Science

In addition, courses in business management and supervision and printing and publishing would prove most helpful for many of the in-service technical personnel and employees in supporting areas.

The industries and businesses in New Jersey need a continuing supply of highly qualified, professional, technical and skilled workers to maintain and improve services and production. When considering a County College program of vocational-technical education, primary attention must be given to needs of existing industries of the sponsoring county. However, in addition to local employment opportunities, county residents should be provided with the opportunity to qualify, by preparation, for job openings available outside the boundaries of any one county.

In planning the curricular offerings in the proposed County College, it is strongly recommended that a careful study be made to evaluate all programs now available in institutions located in the County. Evening programs as well as the full-time day curricula should be examined to ascertain if any serious conflicts may develop. Most noteworthy, however, is the fact that the spectrum of technical education is sufficiently wide and varied of purpose so as to permit much latitude in course offerings thereby avoiding undesirable duplication.

The firms included in the survey conducted for this Study indicated that a major educational objective of the proposed County College should be to offer two years of rigorous, college-level technical education and training that is thoroughly occupationally oriented. It was the expressed hopes of those interviewed that such preparatory instruction would provide the needed technicians and would: (a) offer the associate degree upon successful completion of a prescribed program of instruction; (b) provide the graduates with marketable technical abilities and acumen; and (c) establish an excellent foundation for those planning to continue their education in pursuit of a higher degree at a four-year college or university. Highly specialized technical curricula were suggested for adults who may select to pursue a certificate curriculum for upgrading or retraining purposes.

Anticipated Community Cooperation

Throughout the County, in interviews, public discussions, and individual group meetings, representatives of the State Department of Education have found strong support for the establishment of a County College. Real support is evident for programs to up-grade the skills of persons already in industry and to improve the training of those people seeking employment. Existing facilities cannot be expected to satisfy the requirements of the growing population of the County.

CHAPTER VI

THE PHYSICAL PLANT NEEDS OF THE PROPOSED COUNTY COLLEGE IN BERGEN COUNTY: THE SITE AND BUILDINGS

Planning Overview

An index to good County College planning lies in an awareness of what the future may bring. A campus plan should be flexible enough to satisfy those foreseeable needs and provide accommodations for the unpredictable future.

There are certain fundamentals important in the study of the physical plant needs of a community college. These colleges are not scaled-down universities, or modified high schools; they are institutions with their own identity and with individual objectives aimed at serving particular local higher educational needs. The special space requirements of many occupational-type programs offered by community colleges stress the importance for planning flexibility beyond that of the high school or the four-year college.

There are many common characteristics of community colleges that may be observed in the planning of an institution of comparable purpose. Appraisals of community college campus plans developed in other states have revealed that the variety of educational programs generally offered frequently demands more space than had been initially anticipated by the planners.

At this stage of the development, there are no established and tested building guides for community colleges. Nevertheless, any planning that goes into the creation of such an institution must take into account how this college's own unique purposes may be best implemented.

The Site Needs of a County College

After considering the experiences of existing community colleges throughout the United States, the consensus of specialists in the field is that a site of approximately 100 acres is needed for a comprehensive

community college program. One New Jersey county is now preparing to use a site in excess of 200 acres for its County College and another is developing a campus on a tract containing more than 400 acres. Although the New Jersey State Board of Education's criteria for the establishment of County Colleges indicate that an area as small as 45 acres would be acceptable, it is understood that a desired pattern of flexibility may dictate a need far beyond this minimum requirement.

It is evident, of course, that some counties in New Jersey will find sites of sizable acreage difficult to obtain. It is important, however, that for the proper development of a community college program every effort be made at the outset to provide sufficient land to accommodate the desired program.

There are many variables that have to be considered in developing a college--such as the curricular needs, the probable enrollment in future years, the changing concepts in educational philosophy and the changing educational needs of the geographical area. It is important for a county to take these influences into consideration when planning the location and site for the County College campus.

Several factors which are of primary importance in the selection of a County College site are:

- A. The area should provide adequate space for the college's immediate and long term requirements as defined in a "master plan" for its future growth and expansion;
- B. Environmental surroundings should be appropriate to an institution of higher learning. The site should provide aesthetic surroundings removed from commercial-industrial areas;
- C. The topography should permit economical construction of buildings and provide maximum utilization of land;
- D. The college should be accessible by established routes of travel and, to a lesser degree, convenient to public transportation;
- E. It should be geographically located near the center of the county rather than near the present center of population;

- F. The quality of the soil conditions should be appropriate to campus needs;
- G. The college should be accessible to needed utilities.

Probable Costs for Plant and Equipment

The Bergen County local study group, which has explored the need for a County College, has suggested that facilities be provided to accommodate 5,000 full-time students.¹ The findings of the present Study show a greater need for community college services in this County with a potential enrollment figure of about 7,800 full-time students. However, because of the difficulty of predicting the specific curricula needed and because of the many unforeseeable problems connected with the organization of a new college and a building construction program, it is recommended that a County College "Master Plan" be developed for serving 7,800 full-time students and that the first stage of construction be planned to serve about 2,000 full-time students. (Between 1,500 and 2,000 full-time students is considered a good workable size for an effective community college program.) The second, or third, building phase could then be designed to take care of the remainder of the estimated 7,800 possible enrollment. After further study of need and some experience of operating such a college, the County may decide to expand facilities on the initial site or to construct a second campus at a different location. There are many factors which need consideration (such as, construction cost, maximum educational service, population centers) before a final decision is reached in master planning the County College program to serve the needs of the several thousands students in Bergen County.

It has been proposed by the County that in order to provide the physical facilities needed to house the desired program, approximately 175 square feet per student should be allocated. Findings of this Committee substantiate this estimate of plant area. The initial construction should approximate 350,000 square feet. (175 square feet x 2,000 students contemplated.)

The unit cost of construction for the proposed college has been estimated by the local study committee at \$23.00 per square foot. This seems to be a reasonable estimate for the Northeastern area of New Jersey.

Using the figures indicated above, the basic construction cost for the proposed Bergen County College would be \$8,050,000 (2,000 students x 175 sq. ft./student x \$23/sq. ft.).

Using a 15 per cent estimate for furniture and equipment (15 per cent of basic construction cost), the result is \$1,207,500 for furnishings. The total estimated cost for building construction plus furnishings is \$9,257,500.

In predicting the overall costs for a County College plant, there are additional items for which capital allotment should be made to insure sufficient funds for a complete capital program. These are costs for architect's fees, bonding and legal fees, site development, land acquisition and contingency.

Architectural fees represent an expense item in practically all construction programs. The prevailing rate in New Jersey is approximately six per cent of the basic construction cost which in this particular case would amount to \$483,000.

Bonding and legal fees are also an integral part of any construction program and these will ordinarily not exceed two per cent. In many cases, this may be established as a flat fee or may be at a lower percentage, but for reasons of precaution against under-estimating, a safe figure is indicated here. For the proposed Bergen County College a two per cent fee for bonding and legal services would amount to \$161,000.

Site development is generally listed as a separate capital item beyond the basic five contracts for construction. This would include grading and paving, the provision for walks and driveways, parking and recreational areas, landscaping, and other outdoor facilities necessary for the implementation of the program. Most qualified estimators consider the site development expense to be between five and 10 per cent of the basic construction cost. Using the minimum percentage (5%), this item would be about \$402,500.

Planning should allow for minor changes that will emerge as the proposal is refined. The most careful planning is subject to change through developments that occur between the time of the original concept and the finalization of the construction drawings. These changes may involve design, materials, finishes, techniques, or built-in equipment. These usually increase the costs beyond the basic construction estimates. Even after the final drawings have been developed and approved, other physical changes may be wanted, possibly adding to the cost of the project. For these reasons, some provision should be made for contingencies that will arise whether from changes in philosophy, proposed purposes of areas, curricular revisions, general upgrading of

the planned facilities, or any other developments beyond the control of the participants doing the initial planning. No concrete figure can be established for these variables, but an acceptable practice provides at least five (5) per cent of the construction cost as a reasonable contingency fund. Based on the basic construction cost estimate, about \$402,500 should be estimated for contingencies.

The question of land acquisition is very difficult to evaluate. Many factors are involved in this consideration and at the time of this Study there is little basis for estimating this cost. Although several counties have received land gifts for County College sites, Bergen County should be aware of this possible cost and be prepared to set aside some reasonable amount for site purchase. The amount would be based on local conditions, availability of land, and specific needs of the proposed County College. The determination of how large the site would be, its location and its accessibility to utilities, will have a significant bearing on the eventual cost.

To recapitulate, the possible capital costs for the proposed 2,000 student County College for Bergen County are as follows:

A. Basic Construction	\$ 8,050,000
B. Furniture and Equipment (15%)	1,207,500
C. Architect's Fees (6%)	<u>483,000</u>
Sub-total	\$ 9,740,500
D. Bonding and Legal Fees (2%)	161,000
E. Site Development (5%)	402,500
F. Contingency (5%)	402,500
Grand Total	\$10,706,500 (Plus site acquisition if necessary)

Some Guides for Science Laboratory Facilities

Consideration of specifications available for college science

laboratories may be helpful in the initial planning. The floor areas of the laboratories for the biological and physical sciences should be planned on the basis of about 40 square feet per student exclusive of storage areas. The average total floor area of recently constructed laboratory rooms is about 900 square feet which accommodates a maximum of 24 students at one time. Adjacent to each laboratory room, there should be a preparation room of about 500 square feet. It is recommended that all laboratory rooms be designed to serve no more than 32 students at any one time. Consideration should be given to inclusion of demonstration tables in all classrooms which may be used for science instruction. "Tote rooms" might be utilized to expand the use of laboratories by providing more storage space than that available in laboratory tables.

While costs vary widely, average overall costs for science laboratory furnishings and equipment would range from \$10,000 to \$15,000 per room, with the biology laboratory being on the low side and the chemistry laboratory being on the high side. The average costs of laboratory apparatus and supplies to initially equip the same rooms would range between \$7,500 and \$12,000. These average costs do not include construction costs.

Instructional Facilities Needed to Provide a Quality Educational Program in a County College

Since County Colleges must house an extremely wide range of activities and will frequently vary considerably in enrollments, the planning presents a great challenge. In spite of the potential differences, certain common characteristics among them exist. The most common to all are the basic curricular programs (university-parallel and technical education programs) and the needed facilities related to these programs.

A 1962 report of the New Jersey State Board of Education pointed out that education of youth in colleges requires more than buildings for classrooms. The report outlined the following needs:

Education of youth in colleges and universities today requires more than classroom buildings. The necessary complex of coordinate and supporting facilities includes:

A. Instructional Facilities

--Classrooms, general and specialized laboratories,

music and art studios, shops, conference, lecture and study rooms, administrative and faculty offices, research and experimental installations such as clinical facilities offering services to the handicapped, mathematics and statistics computing center, laboratory schools, field experiment stations, research center for the study of governmental administration and of labor and management problems and the like.

--Libraries

--Physical Education Facilities—gymnasiums and playfields

B. Student Life Facilities

--Food Services, Bookstore, Student Organizations' Offices, Social and Recreational Facilities. . .

--Parking Facilities

--Auditoriums and Little Theaters

C. Faculty Offices and Conference Rooms

. . . In planning classroom buildings, provision should always be made for faculty offices and conference rooms . . . A faculty office is related to the service which the faculty member makes. It is only when there is a possibility of conference with an individual or with a small group of students that the best teaching can be done. Classroom work alone does not measure the faculty load.

D. Study Rooms for Commuting Students

. . . There is a very great lack of spaces for study in the publicly supported colleges. Students go to class and then have one or more vacant periods. For those who commute, and that is the great majority of the student body, the spaces now provided in student centers are crowded and study is all but impossible. In every college that serves a commuting population, the opportunity

for study should be just as available to commuting students as it is for those who live in dormitories. Rooms equipped for study, in addition to those equipped for recitation purposes, should be established in each of the publicly supported institutions.

E. Facilities for Physical Education

. . . Physical well-being is essential in the growth and development of youth. Gymnasiums and playfields to accommodate the total population should be considered a necessity.²

The State Board of Education also recommended in January, 1961 that: such plant and equipment [Community colleges] should be continually re-considered in view of changing needs, development and expansion.³ This degree of flexibility should be built into a "master plan". Various stages of campus and plant development should evolve from it. A master, or developmental, plan provides a valuable force which can help bridge the time between present and future. Such a plan may never be realized as it exists at any given time because it is a dynamic, evolving idea . . . not a final, crystalized set of plans.

There are five keys to plant planning, not often expressed, which may be useful to those who will be involved in the development of the specifications for a County College. Cognizance of these should add another dimension to sound planning of educational facilities.

- (1) The plant, itself, can teach an appreciation of beauty, the orderly usefulness of space, the possible interrelationships of parts and the spirit of harmonious living. Aesthetics of the building, itself, can help in establishing an environment for learning;
- (2) The building should not only serve the students and faculty of the college but also should be designed to cooperate in meeting certain community needs which a college campus can provide;
- (3) All parts of the building, especially the instructional areas, should be designed and equipped to provide conditions under which the students would learn best. An environment and equipment which tends to motivate both the student and the teacher

will do much toward providing a better program;

- (4) A County College of the type proposed for Bergen must provide areas for work, relaxation and student activities since there will be many hours during the week when the student remains on campus with hours intervening between classes. To provide the stimulus necessary for maximum effort, it would be desirable to provide many non-instructional areas as an integral part of the facilities;
- (5) Most important is a master plan for the future expansion of the college. This should indicate where additions would go, what they are to house, how they would be located on the site, what their relationship would be to the existing structure and how this future expansion could be accomplished at minimum cost.

Recent Trends in Community College Planning and Construction

Each year finds new innovations in educational plant facilities. Some are tested experimentally until time and practice develop acceptance and then they become a part of improved planning. Only with change can upgrading occur. As the planners for a Bergen County College explore the probable solutions to the physical plant needs, there are certain to be items of more recent development that will be taken into consideration. Since the basic estimations for capital cost are generally founded on traditional approaches, any acceptance of variations can encompass additional costs. But, on the other hand, it is also possible that they may effect material savings as well as improved educational environment. The extent to which these innovations may become a part of the County College plan should be decided before the preparation of the educational specifications.

Some recent trends are described below:

- A. Increased use is being made of free span construction with easily moved partition walls planned in modules.
- B. More consideration is being given to the overall maintenance costs of college buildings. Masonry material is being used for both the exterior and interior of buildings.

- C. Tile floor covering is being used in many areas and carpeting has been found to be very practical for the library and offices.
- D. The college is being planned for year-round operation and for use from 12 to 15 hours per day. This extensive use requires that the plant be adequately air-conditioned.
- E. Provisions for radio and TV transmission and receiving are being included in construction.
- F. Study carrels are being provided in classroom and laboratory buildings as well as in the library area.
- G. Multi-purpose science laboratories are being used and large laboratories to accommodate 50 to 75 students have been designed.
- H. More emphasis is being placed on individualized developmental programs of physical education rather than intercollegiate athletics. This practice would cut down on spectators' seating area in the gymnasium. Outdoor sports areas are being used to decrease the use-time of gymnasiums.
- I. Computers and data-processing machines are being increasingly used for such purposes as fiscal accounting, student accounting and book store inventories.
- J. Individual classrooms and laboratories are being provided with film projectors and other audio-visual aids at the time of initial construction.
- K. More vending machines are used to provide food services.

CHAPTER VII

FINANCIAL ABILITY OF BERGEN COUNTY
TO ESTABLISH AND OPERATE A COUNTY COLLEGE

The net debt of Bergen County was \$33,764,670 as of June 30, 1965. This amount is 0.602 per cent of the average equalized valuations of \$5,605,218,827.33.

The legal borrowing capacity of the County (2 per cent of the average equalized valuations of the last three preceding years) is \$112,000,000. The present available unused borrowing capacity is \$8,200,000.

The school law (N.J.S.A. 18:22-101) provides that no county shall issue bonds for County College purposes in excess of one-half of one per cent of equalized valuation of property. Since the average equalized valuation of property in Bergen County is \$5,605,218,827.33, this amount would provide a County College borrowing capacity of \$28,026,094.14. A bond issue of \$5,355,000* estimated for the capital outlay program (County's share equals one-half of total cost of capital program in multiples of \$5,000) is well within the limits of the County's capacity.

Using a 20-year retirement period for a County College bond issue, assuming this would be acceptable, the annual maturities (based on a \$5,355,000 issue) may be estimated at \$268,000 for 19 years and \$263,000 for the 20th year.

Assuming that the County's bonds would carry at an interest rate of 3 per cent, the interest cost would be approximately \$160,650 a year. The initial total debt service expense for a County College would be \$428,650 (\$268,000 + \$160,650) annually. If the County chooses not to make a payment on the principal of the first year of the loan, the debt service expense would include only the \$160,650 for interest.

*See Chapter VI for details of capital outlay expense

With an annual debt service of \$428,650 for the proposed County College, the County's tax rate would be increased .0068 for each \$100 of equalized valuation of property.* Since county taxes are apportioned to each municipality within the County according to the equalized valuations, the increased tax on a home, the true value of which is \$10,000 would be \$.68 for a \$428,650 debt service and may be expected to be the same for each municipality.

Cost of Operation for a County College in Bergen County

The findings of various studies indicate that emphasis should be placed on curricula both in the liberal arts and sciences and in vocational-technical education. The County's overall economic conditions further verify the need to promote occupational type programs in the proposed college, on the college degree level and on the craftsman-clerical level.

The need for technical and scientific curricula is significant in considering operational costs of the proposed County College since the teaching staff for these fields would most likely be employed at the upper levels of the salary scale in order to compete with salaries of industry. In consideration of these variables and the rising cost factor, an operating cost of \$750 per student per year is considered a reasonable cost estimate at the present time. The present per capita cost of the New Jersey State Colleges (four-year colleges) is about \$750, excluding auxiliary services. Generally the operational cost of a two-year college program is about 20 per cent less than the cost of a similar four-year program.

The following is a summary of possible resources for current operation based on 1,200 full-time students and a \$750 per capita operational cost.** It is presented as a supposition only, since the amount of

*A debt service expense of \$160,650, assuming no payment on the principal of the loan, for the first year of operation would add .0026 to the tax rate for each \$100 of equalized valuation.

**With an initial building program to accommodate 2,000 full-time students, it is recommended that about 1,200 students be considered for the first year of operation. The remainder of the 2,000 would be enrolled in the second year after the college is better organized and educational programs further developed.

student tuition would actually be determined by a County College Board of Trustees subject to the approval of the State Board of Education.

Summary of Possible Income Sources
for the First Year's Current Operation
(1,200 full-time students, estimated minimum enrollment)

<u>Source of Funds</u>	<u>Amount per Student</u>	<u>Full-time Students</u>	<u>Total Amount</u>
BERGEN COUNTY	\$275	1,200	\$330,000
STATE	\$200	1,200	240,000
STUDENT	<u>\$275</u>	<u>1,200</u>	<u>330,000</u>
TOTAL	\$750	(1,200)	\$900,000

It should be noted that the sources of income for current operations listed above show only the first year's revenue for full-time students. In addition to the tuition fees from full-time students, the college would charge tuition fees for part-time students who take courses during the late afternoon and evening. It is reasonable to expect that for the programs offered to part-time students the initial operating costs would be somewhat less than the total amount of student tuition which would be received. In effect, the resources from full-time students would not be needed to support the part-time program. For State aid purposes, students enrolled in part-time programs will be proportionally equated to full-time students with the appropriate payments being made to the institution.

If the County's share of the first year's current operating costs were \$330,000 (assuming 1,200 students and \$275 per capita, summarized above), this would add .0052 to Bergen County's tax rate for each \$100 of equalized valuation of property.

Summarizing, the findings of this Study show that Bergen County's share of the first year's cost for establishing a 2,000-student County College and operating it to serve 1,200 full-time students the first year would amount to \$758,650 (\$428,650 debt service + \$330,000 current operation), representing a .0120 county tax rate increase per \$100 of

equalized property valuation.*

There seems to be sufficient and valid evidence which indicates that Bergen County could afford to finance the proposed County College without undue tax burden to the local taxpayer.

Planning the County College Budget

Although it is impracticable at this time to develop an operating budget for the proposed County College, information relevant to how the resources may be distributed through the major expenditure categories for a program to be offered to the full-time students may be important for planning purposes. Summarized on the following page are percentage distributions of current expenditures for community colleges in three selected states.

The classification of expenditures will vary not only by state, but from institution to institution according to the organization, size and special interests. Such data, however, may serve as a basis for understanding the overall distribution of expense for a two-year college operation.

*If no payment is made on the principal of the loan for the capital program, the County's share of the first year costs would be approximately \$490,650. (\$160,650 debt service + \$330,000 current operation), representing a .0078 county tax rate increase per \$100 of equalized property valuation.

[All tax rate increases are based on 1965 net valuation on which county taxes are apportioned. All tax data were obtained from the offices of the Bergen County Treasurer and the Board of Taxation.]

Per Cent of Total Expenditures For
Current Operation Expense Items For Community Colleges
In Three Selected States

<u>Type of Expense</u>	<u>Colorado¹</u> <u>1961-62</u>	<u>Texas²</u> <u>1961-62</u>	<u>Florida³</u> <u>1960-61</u>
A. General Admin.	8.5%	7.9%	---%
B. General Expense: (Student Services, Staff Benefits, Gen. Institutional)	17.5	5.7	0.2
C. Instruction and Related Activities	55.1	69.4	68.4
D. Libraries	5.4	2.4	4.5
E. Operation and Maint. of Plant	12.4	14.2	7.2
F. Fixed Charges	1.2	---	0.5
G. Other Items: (Public Services Reserve)	---	---	20.2

The following are estimated budget distributions of expenditures for the operation of the proposed Bergen County College based on \$900,000 operational fund source for 1,200 first year full-time students; allocations are flexible and submitted as a guide only.

Summary of Operational Expenditures

Academic Salaries

Includes all academic personnel, administrators and teachers; about 60 per cent of total budget. \$540,000

Non-Academic Salaries

Includes secretarial, clerical, business office staff and maintenance employees; allocation about 20 per cent of total budget. 180,000

Maintenance and Supplies

Includes fuel, utilities, consumable supplies, office, printing, household items, educational supplies for classroom use, purchasing of books for annual college library needs after the initial establishment of the library; about 10 per cent of the total budget. 90,000

Services Other Than Personal

Includes travel expenses, telephone, insurance, household expenses paid to service agencies, membership in professional organizations, postage, entertainment, consultation services, etc.; about 3 per cent of the total budget. 27,000

Maintenance and Replacements

Includes funds for maintenance of buildings and grounds, office equipment, educational equipment, etc. (salaries for maintenance personnel not included); about 3 per cent of the total budget. 27,000

Additions and Improvements

Includes all equipment used for maintenance purposes, office or instructional departments; (Not to be confused with funds being allocated for equipment purposes from local bond issue proposal. It is not a duplicate of that item.) about 4 per cent of the operating budget. 36,000

Total Expenditure \$900,000

Since instructional expense is the major item in an operating budget, professional personnel salaries are an important consideration. Shown on the following page are summary data on salaries paid to the faculty and to certain selected members of the administration in public

two-year colleges. The information concerning average salaries obtained in a national survey seems significant, particularly since all institutions of higher education are now or soon will be faced with the problem of securing and holding qualified personnel. Adequate financial provisions must be made in order to solve this problem. Data contained below are presented as information only and not as a proposal. In general, the salaries in the metropolitan areas near New York and Philadelphia can be expected to be among the highest.

National Annual Salaries Paid To Public
Two-Year Colleges Faculty And Administration
1963-64⁴

<u>Position</u>	<u>Median Salary</u>	<u>Range of Salaries</u>	<u>Third Quartile Point (Lowest salary of top 25%)</u>
Faculty (9 mos.)	\$ 7,828	\$3,000 to \$14,750	\$ 9,337
President	13,517	7,000 to 26,999	16,688
Dean of Instr.	11,688	5,500 to 21,499	14,215
Dir., Voc.-Tec. Ed.	10,062	5,000 to 17,999	12,250
Dir., Adult Ed.	10,083	4,500 to 17,499	12,249
Librarian	7,989	4,000 to 16,999	9,641
Registrar	8,625	3,000 to 16,999	10,249
Business Manager	9,115	4,000 to 21,499	11,749

The median salary of public two-year college teachers in 1963-64 was \$7,828. Two years previous, this figure was \$7,212. In 1963-64, 1.2 per cent of the full-time teachers earned \$12,000 or more, and about 16 per cent earned \$10,000 or above.⁵

The use of a formal salary schedule by public two-year colleges

is a common practice. Over 80 per cent of these institutions maintain a formal salary guide. A typical public two-year college salary schedule provides for minimum and maximum amounts, designates from 12 to 15 steps from minimum to maximum, applies the same schedule to men and women, recognizes different levels of professional preparation and provides for an annual increase of about \$250 (plus).⁶

One question frequently asked is "Can the County Colleges compete in the open manpower market for the number and the quality of personnel needed to staff their programs?" The leadership in every type of college will need to extend the effort to make greater use of the available instructional staff. Without doubt, the college student-teacher ratio will be increased. However, the evidence is encouraging that systematic efforts to prepare college teachers are being sharpened.

The intangible rewards—satisfactions beyond dollar compensation—are being pointed up to attract the interest of scholarly minded students to the profession of college teaching. Recruitment is beginning to command serious attention. If the future obligations of higher education to society are to be met, however, the task should be viewed in new dimensions. Few in the public are alert to the already present implications. The leadership in higher education needs to be equipped with facts—hard, undeniable, up-to-date facts—concerning the quality of instruction in the classroom and the competition in the open market for the limited number of persons of the required competence to go forward with higher education in the State and in the Nation.

Funds to compete successfully with other professions for qualified and competent personnel seem to be available to a limited number of colleges and universities. These conditions will have immediate and long range effects on the financial program of a County College.

CHAPTER VIII

SUMMARIES AND CONCLUSIONS

SUMMARIES

- I. The County College Concept
 - A. A locally controlled public institution of higher education designed to serve the post-high school needs of youth and adults.
 - B. A two-year college, adaptable to the needs and interests of a heterogeneous student body, offering university-parallel, terminal general education, technical institute type, and continuing adult education programs.
 - C. A community-oriented college with reasonable student tuition rates and accessible to qualified students in their home environment.
 - D. An institution which is earning increased recognition as a strong and important link in the educational chain which supplements and strengthens the programs of four-year institutions and professional schools.
 - E. A rapidly growing collegiate institution which is exceptionally attractive to students because of the distinctive characteristics named above.
- II. Population and Sociological Conditions in Bergen County
 - A. The population of Bergen County increased 44.7 per cent between 1950 and 1960 to reach a total of 780,255. The County's population is expected to reach 1,076,750 in 1980, approximately one and a half times as large as the 1960 population.

- B. Bergen County is composed of 70 municipalities. The largest one in 1960 was Teaneck with a population of 42,085. Other leading municipalities in the County with population in excess of 25,000 are Fairlawn, Hackensack, Garfield, Bergenfield, Englewood and Ridgewood.
- C. Between 1950 and 1960, the number of children "under 18" increased about 79 per cent. The number of children in the County between ages 10 and 14 increased about 127 per cent.
- D. "Manufacturing", which employs about 107,800 people, is the principal economic activity. "Electrical Machinery, Equipment and Supplies" is the largest type of manufacturing, employing about 10,000 people.
- E. About 87 per cent of the County's labor force (about 264,277 in 1960) is concentrated in seven major categories: clerical, operatives, professional, technical, craftsmen, sales and service workers.
- F. The County's median family income in 1959 was \$7,823; the State's average was \$6,786. About 62 per cent of Bergen County's families earned \$7,000 or more a year in 1959.
- G. In 1960, about 47 per cent of the County's adult residents, 25 or older, had graduated from high school and about 12 per cent from college. The proportion of college graduates in the total population of Bergen County is three per cent more than the percentage of college graduates in the adult population of the State.
- H. About three of every four Bergen County adults have never attended college.

III. Bergen County Educational Characteristics

- A. The County's public secondary schools enroll about 63,000. About 11,650 are expected to graduate from the public secondary schools in June, 1966.

- B. Post-high school institutions in the County include one university and three Junior colleges; three other institutions of higher learning offering college level extension courses; three hospital schools of nursing; one hospital practical nursing training program; three private trade schools; and three private business schools.
 - C. About sixty-four per cent (6,488) of the 1964 public high school graduates attended some institution of advanced study after graduation.
 - D. A total of 16,029 Bergen County residents were enrolled as full and part-time students in New Jersey institutions of higher learning in 1964.
 - E. Community adult programs in Bergen County enrolled 22,596 students in 1964.
- IV. Estimated Enrollment of the Proposed County College in Bergen County
- A. The average enrollment potential, or possibility, (both years) of the proposed Bergen County College is 7,800 full-time students for the year 1966-67. This potential increases to 8,300 during the following three years. The enrollment potential for part-time students is about twice the number of full-time students. The number of students on a single campus considered maximum for an effective community college program is 1,500 to 2,000.
 - B. About 75 per cent of the County's eleventh grade pupils expressed plans to continue formal education after high school in response to a questionnaire. Presently about 60 per cent of the County's graduates continue their formal education. About 31 per cent, or 2,519, of the Juniors in the County's public high school reported that they would attend a local community college if one were available.
 - C. The expressed interests of potential County College students indicate a need for a comprehensive community college program.

V. Curricular Needs To Be Met by the Proposed Bergen County College

- A. The needs of about 80 per cent of the prospective County College students would be met by a two-year program in technical-education fields, a two-year university-parallel program in Liberal Arts and a two-year Business Occupations program. Each of these three programs has attracted between 20 and 30 per cent of the potential students. About 13 per cent would be interested in a health services program.
- B. Technical education and scientific curricula in chemical, biological, electronics, instrumentation, metallurgical, industrial laboratory, quality control, accounting, drafting and design, mechanical, electrical, automotive and data processing; plus business management, secretarial science and clinical nursing are in demand in Bergen County to accommodate employment needs of local industries, businesses and hospitals.
- C. Bergen County's industries, businesses and hospitals are in need of properly trained personnel and have indicated an extremely favorable attitude toward a County College program in the County.

VI. The Physical Plant Needs of the Proposed County College in Bergen County: The Site and Buildings

- A. The needs in 1966-67 for post-high school educational opportunities in Bergen County would require County College facilities to serve about 7,800 students.
- B. This Committee recommends that the initial phase of the proposed County College be planned to accommodate 2,000 full-time students. This number represents about 25 per cent of the total possible enrollment, according to enrollment predictions.
- C. Selection of a site and the planning of physical facilities for a Bergen County College should place special emphasis upon plant needs for: adequate instruction space, area for student life activities, faculty offices and conference rooms, study rooms for commuting students and facilities for physical education.

- D. To accommodate 2,000 students, the estimated plant area is 350,000 square feet (2,000 x 175 square feet). At \$23 a square foot, the basic physical plant of the proposed size would cost \$8,050,000. Adding to this sum the cost of furniture and equipment, architect's fees, bonding and legal fees, site development cost and a five per cent contingency fee would bring the overall cost to \$10,706,500. No cost estimates for site acquisition have been made.

VII. Financial Ability of Bergen County to Establish and Operate a County College

- A. The outstanding debt of Bergen County (June 30, 1965) was \$33,764,670. The present available unused borrowing capacity is \$8,200,000.
- B. The County College law provides that no county shall issue County College bonds in excess of one-half of one per cent of the equalized valuation of all property within the county. The average equalized valuation of property in Bergen County is \$5,605,218,827. This sum provides a maximum borrowing capacity for County College purposes of \$28,026,094.
- C. The construction cost of the proposed Bergen County College is estimated at \$10,706,500. A County bond issue (one-half of total) would probably be set at a figure of \$5,355,000. This amount is well within the borrowing capacity of the County.
- D. The annual debt service for capital outlay may be planned to not exceed \$428,650 with a proposed 20-year amortization program. The total debt service (principal plus 3 per cent interest) would add .0068 to the County's tax rate for each \$100 of equalized valuation.
- E. Evidence indicates that the per capita cost for current operations will be about \$750. . . to be shared by the State (not to exceed \$200 per equated student), the County and the student. The County's share of current operations for the first year enrollment of 1,200 full-time students may be estimated at \$330,000. This would add .0052 to the County's tax rate for each \$100 equalized valuation of property.

CONCLUSIONS

- A. There is sufficient and reliable evidence of a need for a County College in Bergen County.
- B. A County College in Bergen County should provide curricular programs in:
 - 1. Two-Year Liberal Arts-Sciences (university-parallel).
 - 2. Two-Year Business and Technical (engineering and science) Education. Both collegiate level and non-credit type courses are needed. Broad offerings in general business and health services should be considered.
 - 3. Continuing (Adult) Education, with particular emphasis on the first two programs above.
- C. Physical plant facilities should be planned to accommodate a possible enrollment of about 7,800 full-time students. It is recommended that the first stage of campus construction provide facilities to serve about 2,000 full-time students.
- D. Bergen County is financially able to construct and operate the proposed County College.

¹⁴Ibid., p. 6.

¹⁵What is it Worth and What Does it Cost? Fidelity Mutual Life Insurance Company, (Philadelphia, Pennsylvania, 1963), pp. 18, 32, 36, 46.

CHAPTER II

CHAPTER III

CHAPTER IV

¹Michigan State University, Iona County Community College Study (East Lansing, Michigan: Office of Community College Cooperation, Michigan State University, 1962).

²Iowa State Department of Public Instruction, Education Beyond High School Age: The Community College (Des Moines, Iowa: The Department, 1956).

³H. H. Semans, T. C. Holly and others, A Study of the Need for Additional Centers of Public Higher Education in California (Sacramento, California: California State Department of Education, 1957).

⁴A method developed by the New Jersey State Department of Education, Division of Higher Education, 1962.

⁵The Need for a Two-Year County College in Bergen County, Final Report, October, 1963, p. 12.

⁶Education Beyond High School, op. cit., p. 47.

⁷The Need for a Two-Year County College in Bergen County, op. cit., p. 12.

⁸Ibid., p. 13

⁹Ibid., p. 17.

CHAPTER V

¹The Need for a Two-Year County College in Bergen County, Report of the Bergen County Study Committee authorized by the Bergen County Board of Chosen Freeholders (Hackensack, New Jersey: February, 1965).

²Education Beyond High School, op. cit.

³Middle States Association of Colleges and Secondary Schools, Junior Colleges, and Community Colleges, Document No. 4.60 (New York: Middle States Association, 1958), p. 2.

⁴A Survey of Educational Needs of Industry in Bergen County, September 17, 1963, p. 3.

⁵Ibid., pp. 2-3.

CHAPTER VI

¹The Need for a Two-Year County College in Bergen County, op. cit., p. 2.

²George D. Strayer, op. cit., pp. 60-63.

³Education Beyond High School, op. cit., p. 9.

CHAPTER VII

¹Colorado State Department of Education, Community Junior Colleges, Enrollments, Staffs, Finances, 1958-59 through 1961-62 (Denver, Colorado: Division of Research and Statistics, June, 1963).

²Texas Education Agency, The Public Junior Colleges of Texas, A General Report for the Academic Year 1961-1962 (Austin, Texas: The Agency, February, 1963).

³Florida State Department of Education "Analysis of Expenditures," Junior College Report for 1960-61, p. 11. (Mimeographed)

⁴National Education Association, Salaries Paid and Salary Practices in Universities, Colleges, and Junior Colleges, 1963-64, (Washington, D.C.: Research Division Research Report 1964 R3, February, 1964), pp. 46, 56.

⁵Ibid.

⁶Ibid.

A P P E N D I X

A

TABLE 1
BERGEN COUNTY
POPULATION TRENDS BY MAJOR AGE GROUPS
1930-1960^a

Age Group	1930	1940	1950	1960
TOTAL POPULATION	364,977	409,646	539,139	780,255
19 and Under	132,751	122,202	159,595	279,243
20-44 Years	150,303	172,582	215,704	259,272
45-64 Years	65,192	88,820	123,580	178,035
Over 65	16,731	26,042	40,260	63,705

^aNew Jersey Dept. of Cons. and Eco. Dev., Pop. Age Groups in N.J.: (Trenton, N.J.: The Dept., March, 1963), pp. 20-21.

TABLE 2
BERGEN COUNTY
POPULATION CHANGE BY AGE GROUPS
1950-1960^a

Age Groups (Years)	Population Totals			
	Year		Increase or Decrease	
	1950	1960	Number	Percent
ALL AGES	539,139	780,255	+241,116	44.7%
Under 5	54,344	79,576	+ 25,232	46.4
5-9	43,907	79,208	+ 35,301	80.4
10-14	31,749	72,200	+ 40,451	127.4
15-19	29,595	48,259	+ 18,664	63.1
20-24	34,651	32,672	- 1,979	- 5.7
25-29	43,500	41,751	- 1,749	- 4.0
30-34	46,537	56,392	+ 9,855	21.2
35-39	46,847	65,297	+ 18,450	39.4
40-44	44,169	63,160	+ 18,991	43.0
45-49	38,122	56,999	+ 18,877	49.5
Under 18	148,077	265,361	+117,284	79.2
Over 50	125,718	184,714	+ 58,996	46.9

^aNew Jersey Dept. of Cons. and Eco. Dev., Pop. Age Groups in N.J.: (Trenton, N.J.: The Dept., March, 1963), p. 70.

TABLE 5

BERGEN COUNTY
MUNICIPALITIES' POPULATION DATA
1930-1960^a

Municipalities	Area In Sq. Miles	1930	1940	1950	1960
<u>City</u>					
Englewood City	4.90	17,805	18,966	23,145	26,057
Fairview	0.90	9,067	8,770	8,661	9,399
Garfield City	2.10	29,739	28,044	27,550	29,253
Hackensack City	4.00	24,568	26,279	29,219	30,521
<u>Township</u>					
Lyndhurst	4.70	17,362	17,454	19,980	21,867
Mahwah	25.70	3,536	3,908	4,880	7,376
Ridgefield Park	2.00	10,764	11,277	11,993	12,701
Ridgewood	5.90	12,188	14,948	17,481	25,391
River Vale	4.40	871	1,112	1,699	5,616
Rochelle Park	1.10	1,768	2,511	4,483	6,119
Saddle Brook	2.70	2,424	3,169	7,955	13,834
Teaneck	5.90	16,513	25,275	33,772	42,085
Washington	2.87	402	491	1,208	6,654
Wyckoff	7.51	3,001	3,847	5,590	11,205
<u>Borough</u>					
Allendale	2.80	1,730	2,058	2,409	4,092
Alpine	5.30	521	626	644	921
Bergenfield	3.00	8,816	10,275	17,647	27,203
Bogota	0.70	7,341	7,346	7,662	7,965
Carlstadt	4.20	5,425	5,644	5,591	6,042
Cliffside Park	1.00	15,267	16,892	17,116	17,642
Closter	3.17	2,502	2,603	3,376	7,767
Cresskill	2.00	1,924	2,246	3,534	7,290
Demarest	2.10	1,013	1,165	1,786	4,231
Dumont	1.80	5,861	7,556	13,013	18,882
East Paterson	2.50	4,779	4,937	15,386	19,344
East Rutherford	3.70	7,080	7,268	7,438	7,769
Edgewater	0.70	4,089	4,028	3,952	4,113
Emerson	2.35	1,394	1,487	1,744	6,849
Englewood Cliffs	1.80	809	888	966	2,913
Fairlawn	5.30	5,990	9,017	23,885	36,421
Fort Lee	2.50	8,759	9,468	11,648	21,815
Franklin Lakes	9.40	893	1,203	2,021	3,316
Glen Rock	2.80	4,369	5,177	7,145	12,896
Harrington Park	2.04	1,251	1,389	1,634	3,581
Hasbrouck Heights	1.50	5,658	6,716	9,181	13,046
Haworth	1.97	1,042	1,419	1,612	3,215

Table 3 (continued)

Municipalities	Area In Sq. Miles	1930	1940	1950	1960
Hillsdale	2.90	2,959	3,438	4,127	8,734
Hohokus	1.80	925	1,626	2,254	3,988
Leonia	1.50	5,350	5,763	7,378	8,384
Little Ferry	1.50	4,155	4,545	4,955	6,175
Lodi	2.20	11,549	11,552	15,392	23,502
Maywood	1.30	3,398	4,052	8,667	11,460
Midland Park	1.69	3,638	4,525	5,164	7,543
Montvale	4.00	1,243	1,342	1,856	3,699
Moonachie	1.60	1,465	1,554	1,775	3,052
New Milford	2.20	2,556	3,215	6,006	18,810
North Arlington	2.50	8,263	9,904	15,970	17,477
Northvale	1.30	1,144	1,159	1,455	2,892
Norwood	2.90	1,356	1,512	1,792	2,852
Oakland	9.40	735	932	1,817	9,446
Old Tappan	3.90	600	609	828	2,330
Oradell	2.55	2,360	2,802	3,665	7,487
Palisades Park	1.30	7,065	8,141	9,635	11,943
Paramus	10.20	2,649	3,688	6,268	23,238
Park Ridge	2.58	2,229	2,519	3,189	6,389
Ramsey	5.90	3,258	3,566	4,670	9,527
Ridgefield	2.60	4,671	5,271	8,312	10,788
River Edge	1.90	2,210	3,287	9,204	13,264
Rockleigh	1.00	86	79	110	430
Rutherford	2.60	14,915	15,466	17,411	20,473
Saddle River	4.90	657	816	1,003	1,776
Tenafly	4.40	5,669	7,413	9,651	14,264
Teterboro	1.20	26	40	28	22
Upper Saddle River	5.10	347	510	706	3,570
Waldwick	2.40	1,728	2,475	3,963	10,495
Wallington	1.00	9,063	8,981	8,910	9,261
Westwood	2.40	4,861	5,388	6,766	9,046
Woodcliff Lake	3.75	871	1,037	1,420	2,742
Wood Ridge	1.10	5,159	5,739	6,283	7,964
COUNTY TOTAL	235.08	364,977	409,646	539,139	780,255

^aNew Jersey Department of Conservation and Economic Development, Population Trends in New Jersey (Trenton, New Jersey: The Department, July, 1961), p. 21-22.

TABLE 4
 BERGEN COUNTY
 POPULATION GROWTH AND PROJECTIONS
 1940-1980^a

Locality	Population (By Decades)				
	1940	1950	1960	Estimated	
				1970	1980
U.S.A.	131,669,275	151,325,298	179,323,175	214,222,000	259,584,000
New Jersey	4,160,165	4,835,329	6,066,782	7,431,370	8,491,780
BERGEN COUNTY	409,646	539,139	780,255	950,000	1,077,000

^aNew Jersey Department of Conservation and Economic Development, Research and Statistics Section, "New Jersey Estimated Population Projections", (Trenton, New Jersey: The Department, April, 1964), (mimeographed).

TABLE 5

BERGEN COUNTY
INDUSTRIES AND NUMBER OF EMPLOYEES
(1960 U.S. CENSUS)^a

Industry Group	Men and Women Employed	
	Number	Rank Order
Agriculture	1,771	37
Forestry and Fisheries	20	40
Mining	323	39
Construction	17,656	4
Manufacturing	107,817	1
Furniture, Lumber and Wood Products	1,617	38
Primary Metal Industries	3,538	32
Fabricated Metal Industries	5,444	26
Machinery, Except Electrical	8,243	17
Electrical Machinery, Equip., and Supplies	10,072	13
Motor Vehicles and Motor Vehicle Equipment	1,916	36
Transportation Equip., Exc. Motor Vehicle	6,689	21
Other Durable Goods	12,394	7
Food and Kindred Products	7,964	18
Textile Mill Products	6,494	23
Apparel & Other Fabric'd Textile Products	10,802	11
Printing, Publishing, and Allied Products	11,357	8
Chemical and Allied Products	9,974	14
Other Nondur. Goods	11,313	10
Railroad and Railway Express Service	2,761	35
Trucking Service and Warehousing	5,308	27
Other Transportation	6,425	24
Communications	7,127	20
Utilities and Sanitary Service	3,736	30
Wholesale Trade	15,316	5
Food and Dairy Products Stores	8,500	16
Eating and Drinking Places	6,636	22
Other Retail Trade (excludes all others listed)	27,612	2
Finance, Insurance, and Real Estate	19,780	3
Business Services	7,318	19
Repair Services	3,585	31
Private Households	4,961	28
Other Personal Services	6,279	25
Entertainment and Recreation Services	3,245	33
Hospitals	4,732	29
Educational Services: Government and Private	13,938	6
Welf., Relig., & Nonprofit Membership Orgns.	3,218	34
Other Professional and Related Services	11,353	9
Public Administration	9,634	15
Industry Not Reported	10,635	12

^aUnited States Bureau of the Census, United States Census of Population: 1960. General Social and Economic Characteristics, New Jersey, Final Report PC (1)-32C (Washington, D.C.: U.S. Government Printing Office, 1962), p. 305.

TABLE 6

OCCUPATIONS IN WHICH RESIDENTS ARE EMPLOYED IN
BERGEN COUNTY
(1960 U.S. CENSUS)^a

Occupational Group	Number Employed*			
	Men	Women	Total	
			Number	Rank Order
Profsnl., Technl., & Kndrd. Wkrs.	33,811	13,145	46,956	3
Farmers and Farm Managers	383	24	407	12
Mgrs. Off'cls, & Propr's, Exc. Farm	34,473	3,686	38,159	5
Clerical & Kindred Workers	19,155	36,962	56,117	1
Sales Workers	20,015	7,967	27,972	6
Craftsmen, Foremen & Kndrd. Wkrs.	45,065	1,101	46,166	4
Operatives & Kindred Workers	35,385	16,121	51,506	2
Private Household Workers	200	4,295	4,495	10
Service Workers, Exc. Pvt. Hsld.	10,465	6,836	17,301	7
Farm Laborers & Farm Foremen	446	101	547	11
Laborers, Exc. Farm and Mine	7,235	278	7,513	9
Occupations Not Reported	8,062	4,475	12,537	8
.....
All Occupations	214,695	94,991	309,676	

*All civilians 14 years old or older.

^aUnited States Bureau of the Census, United States Census of Population: 1960. General Social and Economic Characteristics, New Jersey, Final Report PC (1)-32C (Washington, D.C.: U.S. Government Printing Office, 1962), p. 305.

TABLE 7
 MEDIAN EARNINGS OF MEN AND WOMEN OF
 BERGEN COUNTY
 BY SELECTED OCCUPATIONAL GROUPS
 COMPARED TO NEW JERSEY^a

Occupational Group	Median Earnings (dollars)			
	County		New Jersey	
	Men	Women	Men	Women
MEN				
All Occupations	\$6,143		\$5,350	
Professional, Managerial and Kindred Workers	8,538		7,526	
Farmers and Farm Managers	4,571		2,867	
Craftsmen, Foremen, and Kindred Workers	6,204		5,658	
Operatives and Kindred Workers	5,268		4,850	
Farm Laborers	2,671		1,946	
Laborers, Except Farm and Mine	4,197		3,824	
WOMEN				
All Occupations		\$2,838		\$2,650
Clerical and Kindred Workers		3,329		3,240
Operatives and Kindred Workers		2,486		2,480

^aUnited States Bureau of the Census, United States Census of Population: 1960. General Social and Economic Characteristics, New Jersey, Final Report PC (1)-32C (Washington, D.C.: U.S. Government Printing Office, 1962), p. 309.

TABLE 8
 INCOME OF INDIVIDUALS AND FAMILIES OF
 BERGEN COUNTY
 IN 1959^a

Amount of Income (dollars)	Number Earning the Amount of Income		
	Individuals		Families
	Men	Women	
\$ 1 to 499	9,918	27,757	3,329
500 to 999	8,007	25,596	
1,000 to 1,999	14,097	25,056	4,282
2,000 to 2,999	12,484	21,579	5,843
3,000 to 3,999	17,117	21,858	8,223
4,000 to 4,999	27,409	14,633	13,774
5,000 to 5,999	37,668	7,411	22,681
6,000 to 6,999	29,649	3,734	24,073
7,000 to 9,999	49,603	3,477	70,846
10,000 and Over	40,006	1,461	67,478
----- Median Income	\$5,901	\$1,899	\$7,823

^aUnited States Bureau of the Census, United States Census of Population: 1960. General Social and Economic Characteristics, New Jersey, Final Report PC (1)-32C (Washington, D.C.: U.S. Government Printing Office, 1962), p. 309.

TABLE 9
 EDUCATIONAL ACHIEVEMENTS OF ADULTS 25 YEARS AND OLDER IN
 BERGEN COUNTY^a

Years of Schooling Completed	County's Adults						New Jersey Adults
	Male		Female		Total		
	No.	Per Cent	No.	Per Cent	No.	Per Cent	Per Cent
ELEMENTARY							
None	3,304	1.5%	4,506	1.8%	7,810	1.7%	2.5%
1-4	6,083	2.7	6,817	2.8	12,900	2.8	4.5
5-6	10,629	4.8	11,297	4.6	21,926	4.7	7.1
7	12,014	5.4	12,030	4.9	24,044	5.1	6.5
8	35,777	16.1	45,334	18.4	81,111	17.3	18.4
HIGH SCHOOL							
1-3	44,306	19.9	46,483	18.9	90,789	19.4	20.4
4	48,262	21.7	79,092	32.1	127,354	27.2	24.5
COLLEGE							
1-3	25,420	11.4	22,683	9.2	48,103	10.3	7.7
4 or More	36,312	16.3	18,037	7.3	54,349	11.6	8.4

^aUnited States Bureau of the Census, United States Census of Population: 1960. General Social and Economic Characteristics, New Jersey, Final Report PC (1)-32C (Washington, D.C.: U.S. Government Printing Office, 1962), p. 303.

TABLE 10

BERGEN COUNTY'S
PUBLIC SECONDARY SCHOOLS ENROLLMENT, 1964-65

Public Secondary School	Type	Enrollment
Bergen County Voc. & Tech. H.S.	4 year	770
Bergenfield Public Schools		
Bergenfield Senior H.S.	3 year	1,365
Roy W. Brown Junior H.S.	3 year	1,275
Bogota H.S.	4 year	853
Cliffside Park Public Schools		
Cliffside Park Senior H.S.	3 year	1,187
Cliffside Park Junior H.S.	3 year	530
Cresskill H.S.	6 year	875
Dumont H.S.	4 year	1,280
East Paterson, Memorial H.S.	6 year	1,675
East Rutherford H.S.	4 year	685
Edgewater Junior H.S.	3 year	143
Emerson H.S.	6 year	720
Englewood Public Schools		
Dwight Morrow H.S.	3 year	810
Englewood Junior H.S.	3 year	829
Fair Lawn Public Schools		
Fair Lawn Senior H.S.	3 year	2,049
Thomas Jefferson Junior H.S.	3 year	1,130
Memorial Junior H.S.	3 year	840
Fairview Junior H.S.	3 year	369
Fort Lee H.S.	4 year	1,104
Garfield H.S.	4 year	1,350
Glen Rock Public Schools		
Glen Rock Senior H.S.	3 year	809
Glen Rock Junior H.S.	3 year	823
Hackensack Public Schools		
Hackensack Senior H.S.	3 year	1,398
Hackensack Junior H.S.	3 year	1,265
Hasbrouck Heights H.S.	4 year	690
Leonia H.S.	4 year	594
Lodi H.S.	4 year	1,177

Table 10 (continued)

Public Secondary School	Type	Enrollment
Lyndhurst H.S.	4 year	1,259
Mahwah H.S.	6 year	1,438
Maywood Junior H.S.	3 year	480
Midland Park H.S.	6 year	798
New Milford H.S.	6 year	1,682
North Arlington H.S.	6 year	808
Northern Valley Reg. H.S. District		
Demarest	4 year	1,049
Old Tappan	4 year	1,208
Palisades Park Junior H.S.	3 year	374
Paramus Public Schools		
Paramus Senior H.S.	3 year	1,303
East Brook Junior H.S.	3 year	700
West Brook Junior H.S.	3 year	850
Park Ridge H.S.	6 year	633
Pascack Valley Reg. H.S. District		
Pascack Hills H.S.	4 year	736
Pascack Valley H.S.	4 year	1,040
Ramapo Reg. H.S. District		
Ramapo Reg. H.S.	4 year	1,450
Indian Hills H.S.	4 year	550
Ramsey H.S.	4 year	870
Ridgefield, Memorial H.S.	4 year	535
Ridgefield Park H.S.	4 year	987
Ridgewood Public Schools		
Ridgewood Senior H.S.	3 year	1,800
B. Franklin Junior H.S.	3 year	891
G. Washington Junior H.S.	3 year	733
River Dell Reg. H.S. District		
River Dell Senior H.S.	3 year	1,152
River Dell Junior H.S.	3 year	1,070
Rutherford Public Schools		
Rutherford Senior H.S.	3 year	596
Rutherford Junior H.S.	3 year	583

Table 10 (continued)

Public Secondary School	Type	Enrollment
Saddle Brook H.S.	4 year	1,040
Teaneck Public Schools		
Teaneck Senior H.S.	3 year	2,073
B. Franklin Junior H.S.	3 year	935
T. Jefferson Junior H.S.	3 year	1,170
Tenafly Public Schools		
Tenafly Senior H.S.	3 year	746
Tenafly Junior H.S.	3 year	697
Waldwick H.S.	6 year	955
Wallington H.S.	6 year	655
Westwood Public Schools		
Westwood Senior H.S.	3 year	750
Westwood Junior H.S.	3 year	789
Wood-Ridge H.S.	6 year	832
ALL PUBLIC SECONDARY SCHOOLS		62,812

TABLE 11

PROJECTION OF PUBLIC SCHOOL ENROLLMENTS FOR
BERGEN COUNTY
1964-65 to 1970-71

Grade	Enrollment						
	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
K	13,584	13,584	13,584	13,584	13,584	13,584	13,584
1	12,016	13,584	13,584	13,584	13,584	13,584	13,584
2	11,717	12,016	13,584	13,584	13,584	13,584	13,584
3	11,631	11,717	12,016	13,584	13,584	13,584	13,584
4	11,620	11,631	11,717	12,016	13,584	13,584	13,584
5	11,638	11,620	11,631	11,717	12,016	13,584	13,584
6	11,106	11,638	11,620	11,631	11,717	12,016	13,584
7	11,813	11,106	11,638	11,620	11,631	11,717	12,016
8	11,692	11,813	11,106	11,638	11,620	11,631	11,717
9	12,393	11,692	11,813	11,106	11,638	11,620	11,631
10	12,496	12,393	11,692	11,813	11,106	11,638	11,620
11	11,666	12,496	12,393	11,692	11,813	11,106	11,638
12	11,935	11,666	12,496	12,393	11,692	11,813	11,106
TOTAL	155,307	156,956	158,874	159,962	161,153	163,045	164,816

Note: Projections of enrollments as used in this Table are developed by advancing the enrollments one grade each year. No adjustments are made for drop-outs or new enrollees.

TABLE 12

BERGEN COUNTY
STUDENTS IN NEW JERSEY INSTITUTIONS OF HIGHER EDUCATION
(March 1, 1964)

New Jersey College or University	County Students Enrolled		Total
	Full-Time	Part-Time	
UNIVERSITIES			
Drew	41	15	56
Fairleigh Dickinson	1,814	5,050	6,864
Princeton	--	--	--
Rutgers	1,411	614	2,025
Seton Hall	447	565	1,012
LIBERAL ARTS COLLEGES			
Alma White	3	--	3
Bloomfield	55	28	83
Caldwell	79	12	91
Saint Elizabeth	46	21	67
Don Bosco	2	--	2
Georgian Court	25	--	25
Monmouth	98	42	140
Rider	131	3	134
Saint Peters	267	76	343
Shelton	6	5	11
Upsala	161	31	192
STATE COLLEGES			
Glassboro	180	10	190
Jersey City	223	288	511
Montclair	605	556	1,161
Newark	66	--	66
Paterson	767	902	1,669
Trenton	253	9	262
PROFESSIONAL AND TECHNOLOGICAL			
Immaculate Conception Seminary	43	--	43
Newark College of Engineering	383	225	608
New Brunswick Theological Seminary	--	--	--
Northeastern Collegiate Bible Inst.	4	8	12
Princeton Theological Seminary	4	1	5
Saint Michael's Monastery	--	--	--
Stevens Institute of Technology	198	134	332
Westminster Choir College	6	--	6
JUNIOR COLLEGES			
Archangel	15	11	26
Assumption	--	--	--
Centenary	39	--	39
Immaculate Conception	21	3	24
Lutheran	4	--	4
Monmouth (Junior College Division)	--	--	--
Saint Josephs	--	--	--
Tombrock	1	--	1
Trenton	--	--	--
Union	15	4	19
Villa Walsh	--	3	3
ALL INSTITUTIONS	7,412	8,617	16,029

TABLE 13
BERGEN COUNTY
PUBLIC HIGH SCHOOL GRADUATES ATTENDING POST-HIGH SCHOOL INSTITUTIONS
(1962-1964)

Type of Post-High School Institutions	1962		1963		1964	
	No.	%	No.	%	No.	%
College of Arts-Sciences	2,054	26.5%	2,424	28.5%	2,851	28.1%
State Colleges	450	5.8	564	6.6	694	6.8
Engineering Colleges	279	3.6	273	3.2	370	3.6
Other Colleges	750	9.7	878	10.3	1,372	13.5
Sub-Total	3,533	45.6	4,139	48.7	5,287	52.0
Nursing Schools	215	2.8	211	2.5	237	2.3
Technical Schools	216	2.8	270	3.2	315	3.1
Business Schools	312	4.0	333	3.9	384	3.8
Others	211	2.7	146	1.7	245	2.4
All Institutions Total	4,540	58.5	5,094	59.9	6,488	63.9
TOTAL GRADUATES	7,756		8,499		10,160	

TABLE 14

ENROLLMENTS AND COURSE AREAS OF ADULT EDUCATION PROGRAMS
BERGEN COUNTY PUBLIC HIGH SCHOOLS--SCHOOL YEAR, 1964-65

Course Areas	Number Enrolled by School													
	Bergenfield Junior H.S.	Cliffside Park, Sch. #5	East Pater- son	Englewood	Fairlawn	Franklin Lakes	Garfield	Glen Rock	Hackensack	Hasbrouck Heights	Lyndhurst	Matwah	Northern Valley Reg.	Palisades Park
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Americanization	--	102	--	--	31	--	58	--	364	14	--	5	30	43
Arts and Crafts	72	--	36	244	230	99	--	56	--	101	37	74	182	38
Avocational	198	--	79	353	583	180	--	219	--	147	49	56	479	--
Civic and Public Affairs	--	--	--	24	29	--	--	--	--	--	--	--	--	--
Commercial and Distrib- utive Education	139	--	65	241	416	61	--	19	151	152	61	44	192	35
Driver Education	--	--	--	100	20	--	--	--	--	36	10	12	14	--
Elementary and Remedial Education	--	--	--	107	46	--	--	--	--	--	16	--	--	--
English and Literature	--	--	--	44	85	10	--	29	20	22	69	18	86	8
Foreign Languages	49	--	9	163	173	36	--	48	50	54	--	--	122	14
Health, Safety and Physical Education	64	--	11	317	110	16	--	--	--	76	--	--	186	42
Homemaking and Family Education	131	--	24	164	281	43	--	35	21	102	30	44	184	22
Leadership Training	20	--	21	167	44	--	--	--	--	--	--	--	--	--
Music and Drama	92	--	44	66	178	--	--	18	--	35	85	39	88	--
Secondary and High School Equivalency	76	--	--	258	65	--	--	11	733	23	40	--	--	42
Vocational and Tech- nical	33	--	10	12	15	39	--	21	--	--	--	14	32	--
Totals	874	102	299	2,315	2,306	484	58	456	1,339	762	397	306	1,595	244

Table 14 (continued)

Course Areas	Number Enrolled by School										Totals
	Paramus	Pascack Valley Reg. High School	Ramsey	Ridgefield	Ridgewood	River Edge-Oradell	Rutherford	Teaneck	Tenafly	Westwood	
	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
Americanization	--	--	--	6	75	--	29	35	55	29	931
Arts and Crafts	73	50	99	44	184	203	122	277	127	50	2,398
Avocational	113	199	266	76	629	397	231	532	352	214	5,352
Civic and Public Affairs	--	--	57	--	18	24	--	--	--	--	152
Commercial and Distributive Education	138	46	203	60	209	153	236	301	153	106	3,181
Driver Education	12	--	24	--	17	--	56	56	--	26	383
Elementary and Remedial Education	--	--	--	--	--	--	--	--	--	--	169
English and Literature	34	31	17	14	118	43	14	172	20	30	884
Foreign Languages	44	98	59	24	215	65	42	166	182	45	1,658
Health, Safety and Physical Education	--	60	120	--	54	30	24	70	44	--	1,224
Homemaking and Family Education	79	54	266	30	261	137	50	192	96	59	2,305
Leadership Training	10	--	6	--	69	51	--	66	10	--	424
Music and Drama	34	16	113	34	171	250	69	91	124	18	1,565
Secondary and High School Equivalency	39	--	--	--	--	--	42	246	--	--	1,575
Vocational and Technical	38	11	30	--	15	57	28	40	--	--	395
Totals	614	565	1,260	288	1,995	1,410	943	2,244	1,163	577	22,596

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A P P E N D I X

B

INDUSTRIAL FIRMS INCLUDED

PERSONNEL NEEDS SURVEY CONDUCTED FOR THIS STUDY

by: Nicholas F. Frigiola

<u>Firm</u>	<u>Person(s) Interviewed</u>
1. Aetna Chemical Corporation East Paterson, New Jersey	Miss Williams Office Manager
2. ACF Electronics Division Paramus, New Jersey	Mr. Tom McKavitt Supervisor of Industrial Re- lations
3. Becton & Dickinson Company East Rutherford, New Jersey	Mr. James Tobin Personnel Director
4. Benedict-Miller Incorporated Lyndhurst, New Jersey	Mr. Fred Rimmele Treasurer
5. Bergen Iron & Engineering Company Carlstadt, New Jersey	Miss Capriotti Corporation Secretary
6. Berlin & Jones East Rutherford, New Jersey	(Receptionist)
7. CIBA Chemical & Dye Company Fair Lawn, New Jersey	Miss Carlton Assistant Personnel Director
8. Communications Systems Incorporated Paramus, New Jersey	Mr. H. A. Frye Administrator of Employment
9. Computer Diode Corporation Fair Lawn, New Jersey	Miss Sweek Personnel Administrator
10. Concrete Plank Company Lyndhurst, New Jersey	Mr. Ghook Head of Drafting Department
11. Curtis-Wright Corporation Aeronautical Division Wood Ridge, New Jersey	Mr. S. Bogaczyk Director of Industrial Relations

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| 12. A. J. Desmonds Plastics
East Paterson, New Jersey | Mr. J. J. O'Riely
Corporation Secretary |
| 13. Dynamics American Company
North Arlington, New Jersey | Mr. Huslman
President |
| 14. Eclipse-Pioneer Division
Bendix Aviation Corporation
Teterboro, New Jersey | Mr. Wayne Morrison
Supervisor of Professional
Placement |
| 15. Electro-Ministurer Corporation
Teterboro, New Jersey | Mr. John Atanasio
Director of Material |
| 16. Fairbank-Morse Company
Fair Lawn, New Jersey | Mr. John Antonak
Industrial Relations Re-
presentative |
| 17. Federal Electric Corporation
Paramus, New Jersey | Mr. R. J. Saletta
Director of Industrial Re-
lations |
| 18. Fisher Scientific Company
Fair Lawn, New Jersey | Miss Head
Personnel Manager |
| 19. General Electric Company
Service & Maintenance
North Bergen, New Jersey | Mr. Rymer
Plant Superintendent |
| 20. Heyden Division
Tenneco Chemicals Incorporated
Garfield, New Jersey | Dr. Roy Gottesman
Director of Research Laboratory
Mr. Lasher
Director of Control Laboratory
Mr. William Williams
Director of Maintenance |
| 21. Kodak Processing Laboratory
Fair Lawn, New Jersey | Mr. G. Perrin
Staff Assistant Personnel Man-
ager |
| 22. Kreisler Industrial Corporation
East Paterson, New Jersey | Mr. A. M. Kluepfel
Office Manager |

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| 23. Lea Perrins Incorporated
Fair Lawn, New Jersey | Mr. Hartman
Treasurer |
| 24. Leslie Company
Lyndhurst, New Jersey | Mr. D. Konouse
Assistant Personnel Manager |
| 25. Marcal Paper Mills Incorporated
East Paterson, New Jersey | Mr. C. H. Buis
Personnel Director |
| 26. Matheson Company Incorporated
Carlstadt, New Jersey | Mr. Kretzmer
Payroll Supervisor |
| 27. Motorola Communications &
Electronics Incorporated
Fair Lawn, New Jersey | (Secretary to Personnel Ad-
ministrator) |
| 28. National Biscuit Company
Fair Lawn, New Jersey | Mr. R. Albrecht
Assistant Director of Develop-
ment |
| 29. Pioneer Fireproof Door Company
Carlstadt, New Jersey | Mr. Katz
Personnel Manager |
| 30. Roger Precision Industries In-
corporated
North Arlington, New Jersey | Mr. E. E. Lopata
Personnel Manager |
| 31. Royce Chemical Company
East Rutherford, New Jersey | Mr. Nelson
Chief of Research |
| 32. Scandia Packaging Machinery Com-
pany
North Arlington, New Jersey | Mr. A. Goldenbaun
Comptroller |
| 33. Sandvik Steel Incorporated
Fair Lawn, New Jersey | Mr. R. A. Whitley
Chief Accountant-Personnel |
| 34. Scott, Foresman & Company
Fair Lawn, New Jersey | Miss R. Anorato
Personnel Manager |
| 35. Standard Tool & Manufacturing
Company
Lyndhurst, New Jersey | Mr. T. A. Mulligan
Personnel Manager |

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| 36. | Seeman Brothers Incorporated
Carlstadt, New Jersey | Mr. Clark
Personnel Manager |
| 37. | Star Glo Plastics
East Rutherford, New Jersey | Mr. J. Startis
President |
| 38. | Sylvania Electric Company
Teterboro, New Jersey | Mr. Charles McCoig
Office Manager |
| 39. | Union Carbide
Fair Lawn, New Jersey | Mr. Roy Damino
Office Manager |
| 40. | U. O. P. Company
Division of Trubek Chemical Com-
pany
East Rutherford, New Jersey | Mr. Tom Bartram
Personnel Director |
| 41. | E. A. Williams & Son
Carlstadt, New Jersey | (Office Manager) |

