

A MASTER PLAN REPORT

for the

TOWNSHIP OF SOUTH BRUNSWICK

PREPARED WITH THE PLANNING BOARD for
THE CITIZENS OF SOUTH BRUNSWICK

by

ROBERT CATLIN and ASSOCIATES
CITY PLANNING CONSULTANTS
ROCKAWAY, NEW JERSEY

1961

Preparation of this report was financed in part through an urban planning grant from the Housing and Home Finance Agency, under the provisions of Section 701 of the Housing Act of 1954, as amended. The remainder was financed by local funds and appropriations of the State of New Jersey as part of the expanded State and Regional Planning Program.

PLANNING BOARD SOUTH BRUNSWICK TOWNSHIP MIDDLESEX COUNTY, NEW JERSEY

December 29, 1961

To The Citizens Of South Brunswick Township:

The Planning Board takes pleasure in submitting to you a comprehensive plan for the orderly growth and development of South Brunswick Township.

Until the advent of Kendall Park in 1957 our Township was primarily a rural agricultural community as yet unaffected by the inherent problems of urban expansion. Thereafter it became clear that South Brunswick could not escape these problems.

Because of the Township's generally favorable location between. Philadelphia and New York its accessibility to main transportation routes and its proximity to recreational, cultural and commercial centers it is inevitable that we can expect a period of accelerated growth.

In order to effectively control this growth the Township Committee in 1960 took advantage of the Urban Planning Assistance Program and received matching funds from the State of New Jersey to develop a master plan. Robert Catlin & Associates, City Planning Consultants, were retained to assist the Planning Board in formulating the master plan.

Throughout the year the consultants and the Planning Board held a series of conferences during which all phases of planning were carefully considered. We believe the master plan which we present herewith embodies the sound and essential proposals and recommendations necessary for the orderly growth of South Brunswick Township and, therefore, recommend its ultimate acceptance.

However, before your acceptance, we sincerely urge you to thoroughly familiarize yourself with the contents of the master plan so that you may afford it the intelligent assessment which it deserves.

Your Township Committee and your Planning Board stand ready to assist you in understanding this master plan and will, in the near future, conduct public hearings for that purpose.

Respectfully Submitted,

Frank Camille

Frank Camilli,

Chairman

South Brunswick Township

Planning Board



robert cation and associates · city planning consultants
2 CHURCH STREET ROCKRUMAN NEW JERSEN. DALWOOD 7-3929

December. 1961

To the Citizens of South Brunswick:

We take great pleasure in submitting this report for your consideration. It represents the first step in what we hope will be a continuous program of planning for South Brunswick.

In a few months the Planning Board will call upon you to express your views of this report. It is our sincere hope that you will study this report and discuss it with your neighbors. Only by personally showing your support for the plan and by offering your comments and suggestions to the Planning Board can the final plans represent your hopes for the coming years.

We wish to thank the many people who gave us their time, effort and guidance in the preparation of this report.

Sincerely,

ROBERT CATLIN AND ASSOCIATES

Robert Catlin

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LOCATION

The Township of South Brunswick is a semi-urban and agricultural community with an area of over 41 square miles and a population of 10,500 persons. It is located midway between the cities of New York and Philadelphia. The Township lies across the main transportation corridor between these two cities and has two Federal four lane divided highways, the New Jersey Turnpike and the main line of the Pennsylvania Railroad passing through it. A new Federal interstate highway is tentatively proposed to cross through the Township in the future.

Intense urban development has taken place in the New Brunswick and Trenton areas during the last fifteen years. Industrial growth in the New Brunswick area has been particularly great. This has resulted in a large demand for residential and commercial facilities in the surrounding communities. South Brunswick and its surrounding neighboring communities contain the last large open land area in New Jersey between the New York and Philadelphia greater metropolitan areas.

LOCATION PARTALED BY ROLERT CATLIN & ASSOCIATES CITY PLANNING CONSULTANTS

INTRODUCTION

Planning is an experience common to everyone. Its value in guiding our personal lives is obvious. Basically, it is an attempt to gain desirable goals by looking ahead and anticipating future events. It is also concerned with predicting and avoiding serious threats to those goals.

In the competitive fields of commerce and industry it is imperative to anticipate future events. An objective analysis of the large number of factors bearing on business must be made to avoid setbacks and to remain competitive. In these fields great care and careful planning are necessary before the millions of dollars required for new buildings and machinery are spent.

Planning for a municipality is even more imperative Anticipating the future of a comand complicated. munity with certainty is exceedingly difficult. the other hand, the consequences of not regulating and maintaining control over the many outside pressures and factors are far more serious and affect more people. The goals of an industry are comparatively simple and the means of achieving them are controlled by a single body over a long period of time. The goals of a community are necessarily In many instances attempts to achieve diverse. long term objectives are hampered by administrative changes or the acceptance of expedient but short sighted solutions.

The purpose of the Master Plan is to set forth general goals which the community as a whole wishes to attain over a long period of time. With these goals in mind it is then possible to anticipate future conditions and to prepare a plan of detailed steps to achieve them. However, it must always be kept in mind that the future will present many unexpected events. Many of these will require a

change in the detailed plans if the overall goals are to be realized. It is the responsibility of the citizens and the Planning Board to insure that these changes are consistent with the long range goals.

In the next 20 years it is likely that South Brunswick will double its population. This will involve a private investment of 50 to 70 million dollars. It will require public expenditures of around 10 million dollars for new facilities. No private investor would embark upon a project of similar magnitude without the most careful planning. In undertaking a public project of this size it is only common sense that the public protect its investment and its future by following a long range plan of development.

PHYSICAL FEATURES

The Township of South Brunswick is located in the transition area between the New Jersey Coastal Plain and the Piedmont Plateau. The eastern half of the Township lies across the relatively level coastal plain with elevations ranging between 75 and 140 feet above sea level. Pigeon Swamp occupies over 750 acres of land in this portion of the Township. Other large areas remain wet for considerable periods of time due to the level nature of the land and the presence of a high water table. The extensive stretch of the Pigeon Swamp can be seen on the accompanying Topography Plate.

The western part of the Township is composed of gently rising hills. Elevations here rise from 55 feet in the southwest corner of the Township to 300 feet in the Sand Hills area. There are only two small areas where slopes exceed 10 percent. This is in the Sand Hills area and surrounding the Kingston Village plateau. The area of swamp shown north of Route 1 is the result of local drainage conditions and could be drained in the future.

SURFACE DRAINAGE

There are four major surface water drainage basins in the Township. The largest includes the Villages of Dayton,

Monmouth Junction and Deans. Its boundaries run roughly from Franklin Park through Sand Hills to Monmouth Junction and then east along the Pennsylvania Railroad line. Water in this basin flows north into Farrington Lake and the Raritan River.

Devil's Brook, which meets the Millstone River near Penn's Neck, drains the southeastern portion of the Township bounded by the two Pennsylvania Railroad lines.



The Kendall Park area drains northwest across Franklin Township into the Millstone River. This area is bounded roughly by Beekman Road, Sand Hills and the southern limits of the Kendall Park development.

The remaining portion of the Township which includes the Village of Kingston, is drained by the Heathcote Brook into the north end of Carnegie Lake.

INTERNAL DRAINAGE The accompanying Internal Drainage Plate illustrates the general internal drainage qualities of soil in

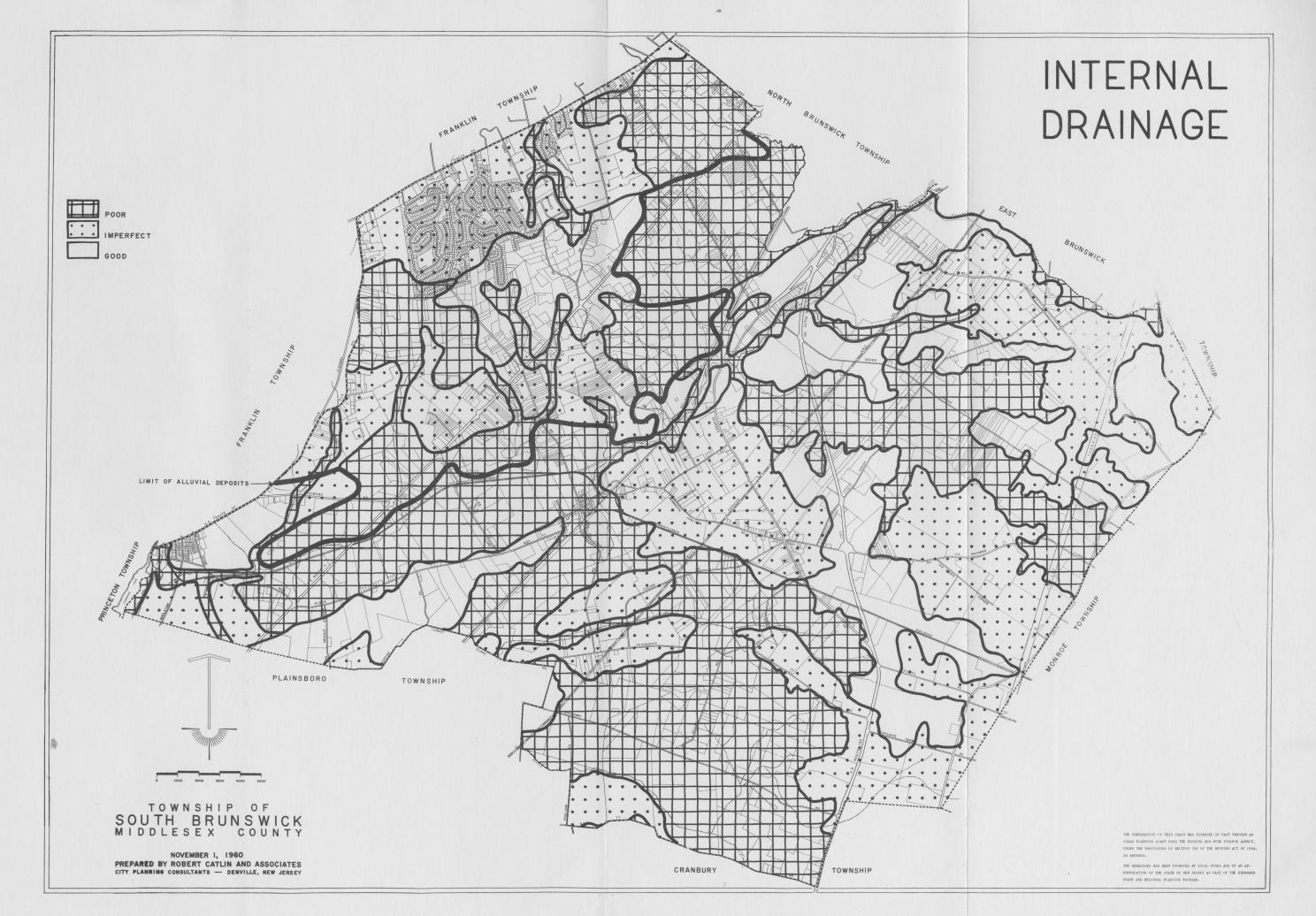
the Township. This study was compiled from the "Engineering Soil Survey of New Jersey" of 1953. It is not the purpose of this study to show the actual drainage conditions on each particular tract of land as there will be variations within each category shown. This study is made primarily to help determine, in connection with other studies, the probable effects from the ultimate development of land at various densities.

All the land south and east of the heavy demarkation line on the plate is composed of alluvial material deposited during the glacial This soil is composed of silt, sand and period. It normally has good internal drainage gravel. where the land is elevated, but, in low or level areas a high water table is common resulting in little or no internal drainage. For this reason much of the land east of the Pennsylvania Railroad main line is shown as having poor or imperfect In the area between Ridge Road internal drainage. and the Kingston Branch of the railroad this soil is less than 10 feet deep, and overlaps dense argillite and shale resulting in poor internal drainage.

The remainder of the land in the Township located northwest of the heavy line is generally composed

of shale, argillite and trap rock. It is covered with various depths of weather produced soils. Drainage is generally retarded by the dense bedrock and by the absence of adequate jointing. large area with good internal drainage, Sand Hills, is composed of sand and some gravel, deposited during the marine and continental formation eras. area south of Kendall Park is composed of laminated clay soils with little or no internal drainage. the northern corner of the Township a large area of shale soil occurs. In addition to poor internal drainage this type of land presents many other engineering problems resulting from any high moisture content in the soil which reduces it to a mud like consistency. A high water table and several streams on the level terrain further aggravate this situation.

This study shows that only five relatively small areas have good or excellent internal drainage characteris-They are unconnected and are largely undeveloped. Most of the land in the Township falls in the poor classification. It would be illogical to encourage future growth at urban densities in these areas of poor or imperfect drainage without considering the eventual installation of public sewer and water systems. Due to the large expanse of these areas the possible location and economic service areas of such facilities This problem is further must be carefully studied. complicated by the numerous drainage basins, the large size of the Township and the lbcation of exiseting development in the areas of poor drainage. Future urban growth should be encouraged to locate where existing or anticipated utility systems are located, or where existing development will demand these services.



EXISTING DEVELOPMENT

The Township of South Brunswick covers a total area of over 41 square miles. Of this area only 18 percent or $7-\frac{1}{2}$ square miles is either privately developed or owned by public or semi-public agencies. In the past, development has been generally scattered throughout the Township with small village concentrations occuring at Kingston in the west and at Monmouth Junction and Dayton in the central part. An extensive urban residentail area has been developed in recent years in the northwestern part of the Township. This development, known as Kendall Park, presently contains over 40 percent of the population of the Township within an area of slightly over one square mile, about 2.4 percent of the Township area.

The "Existing Development" plate and "Land Use Analysis" were prepared from a detailed field survey conducted in October of 1960. At this time there were approximately 100 dwellings under construction in the Kendall Park area which are not included on the map or the analysis. There were also 63 unoccupied dwellings in final stages of construction which have been included.

EXISTING DEVELOPMENT

The accompanying Existing Development plate was drawn to show the approximate location and the use of each principal structure

in the Township. This map clearly illustrates the fact that most of the land in the Township is vacant. Nearly all of the existing development has occurred along old existing roads. Only in Kendall Park, Kingston and Monmouth Junction have a system of minor roads been built to allow a concentrated use of land. Similarly, there are few areas of concentrated industrial or commercial development. Half of the industries are located on or near the combined 13 mile length of highway Routes 1 and 130. Over two-thirds of all commercial development is scattered along highway Routes 1, 27 and 130, a distance of over 19 miles. There are very few general merchandise or household supply

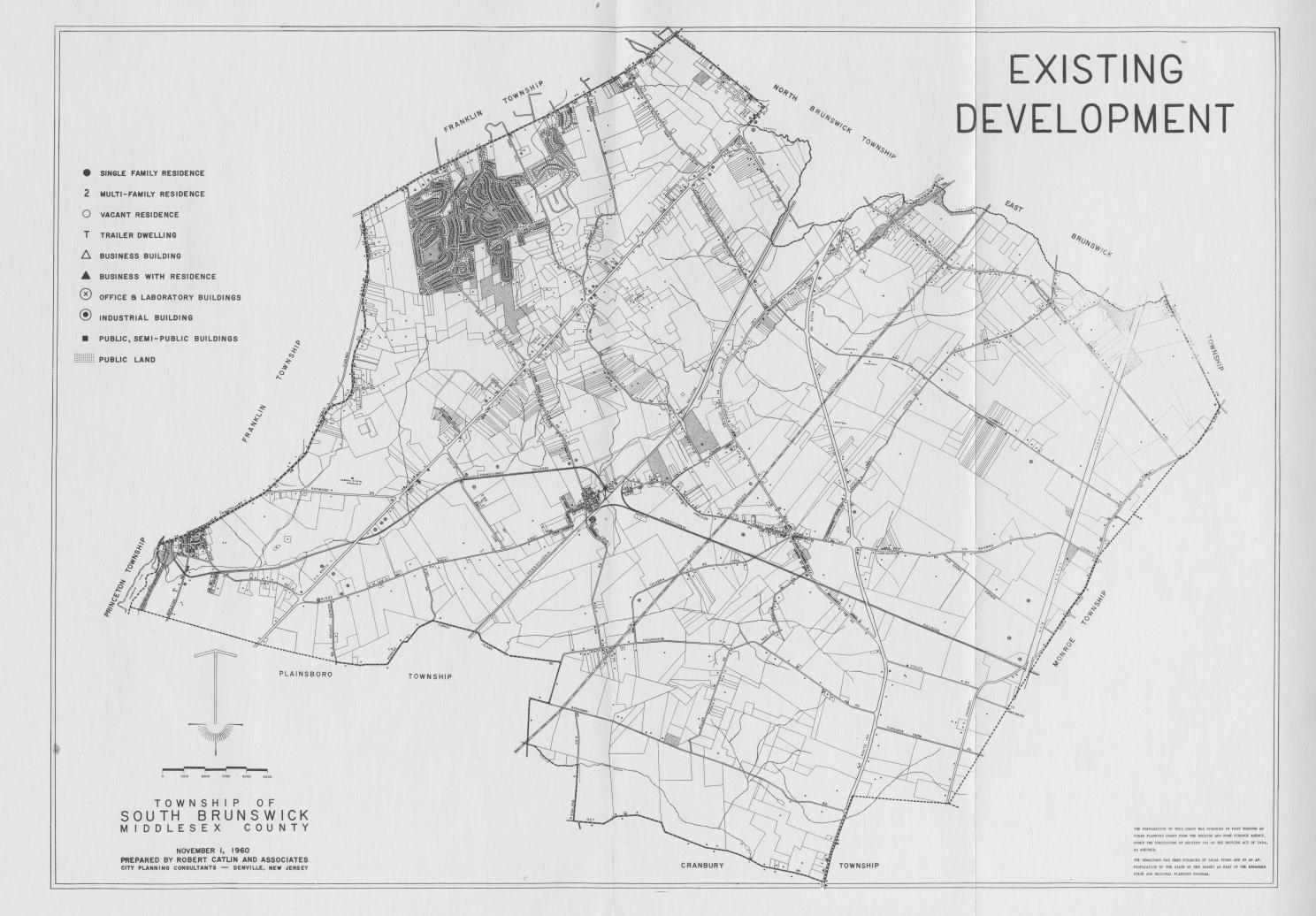
TABLE 1.

LAND USE ANALYSIS
October - 1960

CATEGORY	ACREAGE	SQ.MILES	PERCENT OF TOWNSHIP
Residence	1,745.02	2.73	6.64
Commerce	144.61	0.23	0.55
Industry	1,103.51	1.72	4.20
Public, Semi-Public	717.98	1.12	2.73
Street R.O.W.	802.65	1.25	3.06
Power Line R.O.W.	77.22	0.12	0.29
Railroad R.O.W.	222.85	0.34	0.85
Unusable Vacant Land	858.82	1.34	3.2 7
Usable Vacant Land TOTAL	$\frac{20,599.64}{26,272.30}$	32.20 41.05	78.41 100.00

CATEGORY	STRUCTURES	FAMILIES	PERSONS
One Family	2,761	2,675	9,230
Two Family	17	34	117
Multi-Family	6	21	72
Trailers	260	254	876
Commerce	110	36	125
Industry, Office	40	0	0
Public, Semi-Public	33	0	0
TOTAL	3,227	3,020	10,420

NOTE: One acre of land was computed as developed for dwellings on farms or large tracts. The remainder was counted as vacant land. The entire tract upon which an industrial structure was located was counted as being industrially developed.



establishments in the Township. Most commercial development is of the highway trade and service variety with a large number of restaurant and beverage establishments.

LAND USE ANALYSIS

An analysis of the Existing Development Plate shows that there were 3044 residences in October of 1960 occupying

1745 acres of land. This represented an average density of 25,000 square feet per family. Nearly 91 percent of these were single family permanant homes and another $8-\frac{1}{2}$ percent were single family trailers. There were 110 Commercial establishments using 145 acres of land for an average of 1.3 acres per business. The forty industries averaged nearly 28 acres each, occupying over 1103 acres.

Of the 718 acres in public or semi-public owner-ship, only 195 acres are Township owned. Of this, 77 acres are presently used for school purposes and recreation and 90 acres are unused, the latter consisting of tax foreclosed lands. Street and high-way rights-of-way occupy 46 percent as much land as existing residential development.

Over 81 percent of the land in the Township is vacant, however, over 32 square miles of this land is developable. This is enough area to increase the existing residential, commercial, industrial and public development over 5 times.

LAND USE PROBLEMS

The most apparent and serious problem affecting sound community development in South Brunswick is the 32 square

miles of usable vacant land. If the Township averages 200 new dwellings each year and commercial, industrial and public uses grow proportionately, it would take 70 years to fill up this vacant area. One of the major

objectives of a Township Master Plan must be to insure the logical use and adequate control of this vacant land in the future.

A second major problem is the scattered nature of existing residential, commercial and industrial development. Present population concentrations are separated by large areas of vacant land. dustrial uses are scattered along arterial roads and railroads and are separated by residential and commercial development. Existing commercial development is inadequate in type, variety and convenience to serve the needs of Township residents. The only concentrated commercial area is located on the boundary of the Township in Kendall Park. The Master Plan must encourage development to locate in the most logical places and must protect this development from other uses so that each new addition will enhance the values already established and will provide greater benefits and convenience to Township residents.

A third problem is the large number of highways and railroads which cross through the Township, dividing it into numerous sections. This may be accentuated in the future by the construction of a new Federal Interstate Highway. Although the exact alignment of this roadway will not be established for many years, the Master Plan must consider the effects of it and determine the most advantageous location for the Township.

One final problem is the small amount of public land which is available for Township residents. The development of a park, school and recreation system for the ultimate growth of the Township must be a major consideration of the Master Plan.

HOUSING CONDITIONS

The field inspection of South Brunswick found no evidence of blighted or substandard areas. However, a large number of individual structures were encountered throughout the Township in a delapidated or deteriorating condition. Although most of these structures were substandard from age and/or lack of proper maintenance, many were found to be of shanty construction unfit for human habitation. In many areas these structures obviously had an adverse effect upon the surrounding The overall planning program of the properties. Township should include the adoption and enforcement of a Minimum Housing Standards Ordinance to improve and preserve the values of neighborhoods and the health and safety of the citizens.

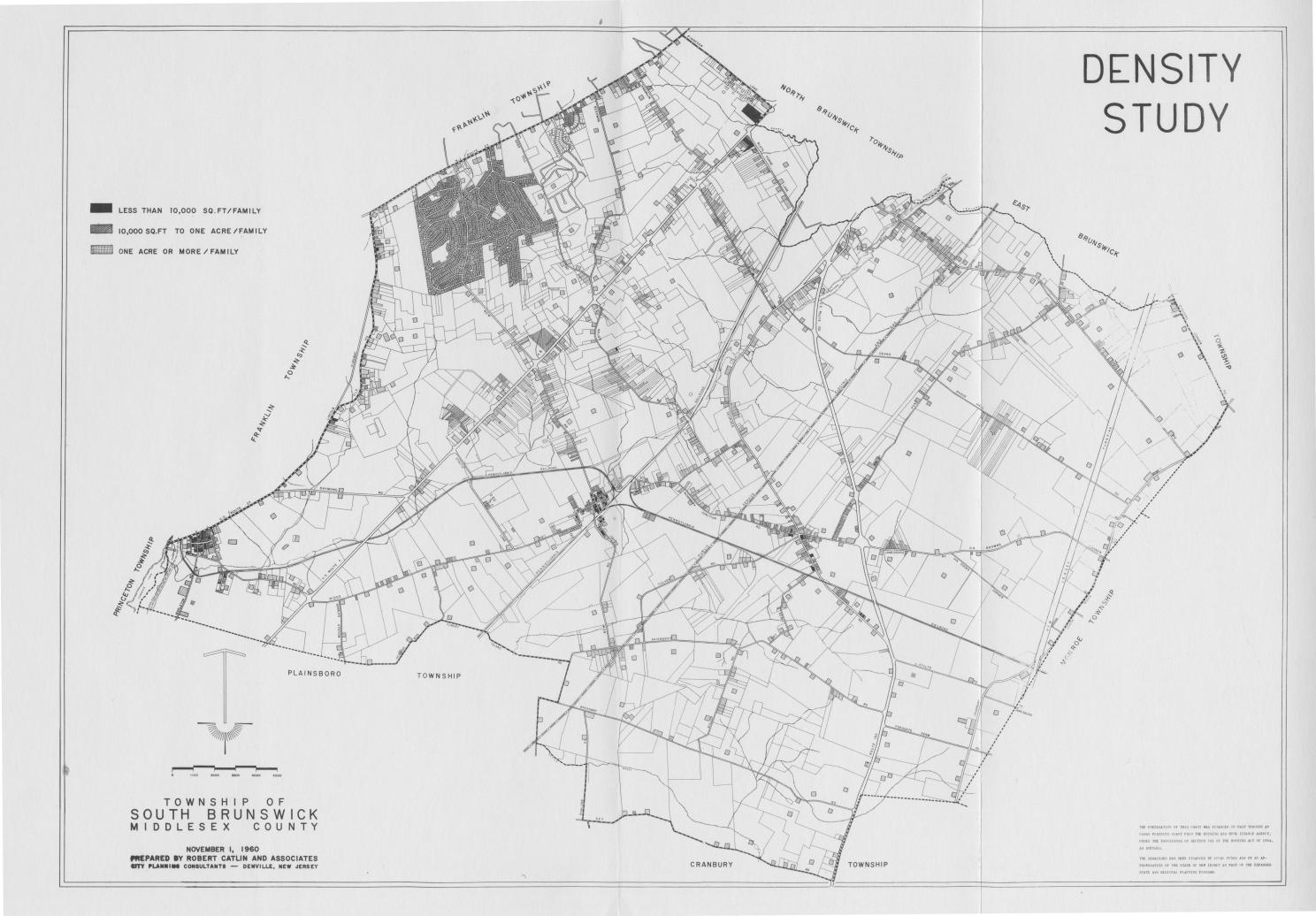
Maintenance of structures in the older sections of the Township will require careful consideration in the future to conserve property values and to prevent the appearance of blight. During the field inspection a large number of dwellings were found on unimproved private or undedicated roads. Although subdivision approvals are no longer granted along such roads the Official Map and Building Permit Act of 1953 should be enforced to control the development of existing lots and to avoid future access, protection and municipal service problems.

DENSITY STUDY A density study was prepared to determine the lot area per family of each residential property in the Township. The

accompanying Density Study plate is a generalized version of the detailed study made due to the small reproduction size necessary in this report. The plate shows that little development has occurred on lots smaller than 10,000 square feet. The older villages and the two trailer camps on highway Route 1 contain nearly all of this small lot development. Development ranging from 10,000 square feet to one acre lots occurs in the villages and in Kendall Park. Another trailer camp also falls into this group.

Development in the rest of the Township has generally been on one acre or larger lots. For presentation

purposes one acre areas are shown on the plate for dwellings located on one or more acres to illustrate the extent of vacant land mentioned previously. Over 35 percent of all dwellings in the Township are located on one acre or more of land. Over 63 percent of all dwellings outside of Kendall Park fall into this classification and three-fourths of the group has a density of two acres of lot area or more per family.



ADMINISTRATION AND PROTECTION

The governing body of the Township is a five man Committee elected from the Township at large. Each member serves a three year term. This Committee adopts and enforces the Codes and ordinances of the community. The Committee's administrative and enforcement powers are delegated in some instances to officers and bodies such as the Police Chief, Planning Board, Building Inspector, Township Engineer and Health Officer. The Committee is also aided by administrative personnel such as the Township Clerk, Tax Collector, Assessor and Treasurer.

ADMINISTRATION

There are five full-time administrative employees of the Township. These

are the Township Clerk, Assessor, Tax Collector, Violations and Administrative Clerk and the Road The part-time staff consists of the Foreman. Building Inspector, Township Engineer, Health Officer and clerical help. During the past few years it has been increasingly difficult for the administrative staff to give proper attention to the many phases of municipal activities. administrative staff for a community of over 10,000 persons normally requires the full-time positions of Tax Assessor, Tax Collector, Township Clerk, Assistant Tax Collector, Building Inspector, Township Engineer and Health Officer. In many growing suburban communities the fulltime position of an Administrative Clerk to serve the Building Inspector, Engineer, Health Officer and Planning Board has also proved very successful.

As South Brunswick continues to grow it will also become increasingly difficult for the elected Committee to effectively coordinate municipal affairs. It is suggested that in the future a study be made to determine the value of an administrative assistant or a professional administrative

manager to aid the Committee, and to coordinate all municipal affairs.

POLICE

The South Brunswick Police Department provides 24 hour protection in the Township.

However, the midnight watch consists only of one man at Police Headquarters. Other patrolmen are on call during this period in case of emergencies. There are three Township patrol cars equipped with two-way radios. Radio equipment is also provided at Police Headquarters, in the road department equipment and in the car of the Police Chief. The police force consists of 27 part-time salaried policemen including the Police Chief and three Sergeants. Watches are scheduled in relation to the availability of the individual patrolmen.

Both from the administrative standpoint and from the standards recommended by the Federal Bureau of Investigation, the size of the present force should be increased to 14 full-time policemen.

FIRE

Fire protection for South Brunswick is provided by four volunteer organizations

located in Monmouth Junction, Kingston, Little Rocky Hill on Route 27 and in Franklin Park, the latter two being located outside the Township. It is difficult for these organizations to provide effective protection throughout the Township due to the Township's large size and to the lack of adequate water supplies. With the exception of Kendall Park and Kingston, water must be carried to the fire or obtained from nearby lakes or Most areas in the Township, including streams. over 65 percent of all structures in the Township are more than three minutes travel time from existing fire stations. This includes the heavily built-up area of Kendall Park. Approximately half of the land area of the Township is more than five minutes travel time from a fire station. The Master Plan for the Township should include the location

of additional fire facilities to serve Kendall Park and the outlying eastern portion of the Township as future growth in these areas occurs.

The certainty of continued urban and industrial growth in the future makes it imperative that a comprehensive study of fire protection in the Township be made. This study should include the problem of obtaining adequate supplies of water and the adoption of fire prevention regulations. It is suggested that the Fire Prevention Code of the National Board of Fire Underwriters be adopted and that a periodic system of building inspection be established in conjunction with it.

DEVELOPMENT CONTROLS

New development in South Brunswick is regulated and controlled through the Subdivision Ordinance, the Zoning Ordinance and the Building Code. The Zoning and Subdivision Ordinances afford adequate protection to the community in most cases. Both of these ordinances should be comprehensively amended as part of the Master Plan program to carry out the goals of the plan

The Building Code controls the issuance of permits for new construction, sets forth certain construction standards and provides for the removal of unsafe structures. The standards of this code are inadequate in their coverage and detail. A study group is presently reviewing the provisions suggested by the State Building Code and those of the Board of Fire Underwriters for adoption by the Township.

It is also suggested that the Township adopt a Street Acceptance Ordinance as soon as possible, specifying the improvement requirements necessary for acceptance of a street or roadway. The governing body should also adopt by resolution, a list of accepted streets in the Township to guide the Planning Board, Building Inspector and Township Engineer in their duties. In addition, the Township should adopt a Street Opening Ordinance requiring permits and inspections for all openings made in Township streets. It should include specifications for closing such openings and a short term maintenance bond or other means of insuring the availability of repair money.

HEALTH CONTROLS Health and sanitation standards in the Township are regulated by a Health Nuisance Code and a Private Water and Sewage

Facility Ordinance. A Trailer Ordinance includes standards for sanitary facilities in trailer camps.

The Board of Health, Health Officer and the Building Inspector enforce these codes and other State It is suggested that a Housing or Health Codes. Human Occupancy Code be adopted by the Township to eliminate the substandard living quarters mentioned previously. This code should give broad powers of inspection and prosecution to an enforcement officer. It should set up minimum standards for the condition of structures, water and sewer facilities, light, ventilation and heating required in any building used for human occupancy. It should provide authority for the Township to repair or demolish any violating structure at the expense of the owner if the owner fails to correct the substandard conditions. also suggested that a Food Handling Ordinance be adopted to regulate the preparation of food in the numerous restaurants in the Township. A separate Board of Health should be appointed to administer all health regulations.

PUBLIC FACILITIES

The South Brunswick Municipal Building was erected in 1958 on a 22 acre site. The building provides a public meeting room, a one room Police Headquarters and offices for the Tax Collector, the Welfare Director and the Violations Bureau Clerk. During the next ten years it will be necessary to enlarge the Municipal Building. Additional offices, storage space and enlarged police facilities should be provided in any addition to the present structure. A central garage and repair shop facility should also be constructed at the rear of this site.

WATER & SEWER FACILITIES

Public water is provided to over 40 percent of the dwellings in South Brunswick by the Kingston Water Company

and the South Brunswick Municipal Utilities Authority. The Kingston Water Company supplies water to the village of Kingston. The Utilities Authority provides both water and sewage treatment services to the Kendall Park area. Structures in the remainder of the Township utilize individual wells and septic systems. Individual sewage treatment plants are used by several industries.

The Utilities Authority water system consists of 5 wells, two water storage tanks and 102,662 feet of water mains. The well pumps have a peak load pumping capacity of 800 gallons per minute. The wells produce a safe normal supply of approximately 425,000 to 500,000 gallons of water per day without The Authority is affecting the water table height. having difficulty meeting water demands which have exceeded this due to the water yield capacity of the ground. A noticeable drop in the water table along with the certainty of continued development in the Kendall Park area will require that additional water sources be found in the near future. new supply should be located in another sector of the Township.

An engineering study conducted in 1959 found an urgent need for a water system in the Monmouth Junction and Deans areas. It is proposed that a comprehensive survey be made to determine the feasibility of a public water system in Monmouth Junction combined with a new well which could be used to supplement the water supply of the Kendall Park area.

The Utilities Authority sewer system has a normal sewage treatment capacity of approximately 750,000 gallons per day. This plant is arranged so that it can be expanded on its present site when the need occurs. Due to the relatively small size of the natural drainage basin in the Kendall Park area extensive enlargement of the plant is unlikely unless the Authority installs force mains to pump sewage from other areas into the Kendall Park system. Present plans of the Utilities Authority call for a second sewage treatment plant to be located near Carnegie Lake. This plant would serve the areas of Dayton, Monmouth Junction and Kingston. Because of the existing need for these facilities in these areas, additional growth should be encouraged to locate there to make this installation economically feasible. Continued urban development in the Kendall Park area outside the natural drainage basin should be discouraged.

PARKS AND PUBLIC LAND

At the present time the only municipally owned public land developed for park and recreational purposes in the

Township is the municipal building site. Play facilities for young children and baseball diamonds have been provided on several school sites. However, these facilities do not meet the present need of family and adult recreation. Two additional areas are presently being developed to meet this recreation need. They are located on Kingsley Road in Kendall Park and on the Dahlenbach tract in the eastern

portion of the Township on Rhode Hall Road. Immediate plans should be formulated for the acquisition of sufficient park land by the Township and the County for future use.

STREETS AND CIRCULATION

There are over 117 miles of public streets in South Bruns-wick, of which 66 miles are Township roads, 29 miles are

County roads and 22 miles are State highways. The Township roads vary from gravel roadways to curbed asphalt streets. It is noteworthy that there are slightly more than 17 miles of streets in Kendall Park serving, eventually,1525 dwellings or 60 feet of street per dwelling. The remaining 49 miles of Township roads serve 711 structures or 364 feet of street per structure. This is primarily due to these roads being connectors between village concentrations, traversing virtually undeveloped areas. Although new development will undoubtedly add new roads to the Township, the present ratio of street per family will decline steadily.

The north-south roads in the Township are generally adequate to carry future traffic volumes with only minor widenings and realignments. However, east-west roads are disconnected, narrow and inadequate for present traffic both in the Township and through-out Middlesex and Somerset Counties. As the Counties become more densely populated, the traffic that will be generated will have a detrimental effect upon all communities unless it is properly routed. This situation must be solved in the near future by the Counties and the communities involved. The Master Plans of all communities should be coordinated with and should guide the County Master Street Plan.

SCHOOLS

With the completion of the Green Brook school in late 1961 the alementary school system of South Brunswick consisted of 70 standard classrooms and six Kindergarten rooms. These facilities provide a normal capacity of 2050 students and an emergency capacity of approximately 2400 students.

TABLE 2

SCH00L	DATE BUILT	STANDARD CLASSROOMS	KINDERGARTEN
Kingston	1871	3	0
Dayton	1929	8	Ö
Deans	1929	9	ĺ
Monmouth Junction	1950-55-61	13	1
Cambridge	1957	12	2
Constable	1959	12	1
Greenbrook	1961	13	1
\mathtt{TOTAL}		70	6

Only 20 rooms of this system were constructed prior to 1950. This means that nearly 75 percent of the system has been provided in an eleven year period, an average of 5 classrooms per year.

The South Brunswick High School was built in 1960 and contains 21 regular classrooms, ten special purpose classrooms, a cafeteria and an auditorium-gymnasium. The school has an emergency capacity of 900 students. The building was designed so that additional special and regular classrooms could be added without a change in basic facilities. A referendum to add 14 new classrooms to the High School was approved in October of 1961, which will increase the emergency capacity to 1325 students. There are 190 parochial students in the Township who are transported to St. Paul's in Princeton. The St. Augustine parish in the Township plans to open an elementary school in the near future to provide educational facilities for these students.

TRANSPORTATION

Bus service between Princeton, New Brunswick and New York via Route 27 is provided by the Suburban Transit Company. Approximately 35 trips each way are provided for the residents of Franklin and Kendall Park and Kingston per day. The line is also used by commuters taking advantage of the early commuter trains available in New Brunswick. Trailway Bus Lines provides 5 trips daily between Philadelphia and New York via Route 1. This service is not scheduled for commuting purposes. Scheduled bus service is also available between New Brunswick and Hightstown using Route 130.

The Pennsylvania Railroad provides 14 trips to New York from the Monmouth Junction station beginning at 5:58 a.m. on week-days. There are 5 scheduled trips to Trenton and 7 scheduled trips to Philadelphia, beginning at 8:11 and 8:01 respectively. There are also 40 daily commuter trains to and from New York at the New Brunswick station utilized by residents of South Brunswick.

HOSPITALS

Saint Peter's General Hospital and the Middlesex General Hospital in New

Brunswick and the Princeton Hospital provide medical facilities for the residents of South Brunswick. Although there is a lack of statistics concerning South Brunswick residents' use of these facilities, due to patients giving postal addresses, national figures would indicate a total use of 29 to 30 beds per day. During the next 20 years this use by South Brunswick residents should approach 80 beds a day, or enough to support a complete hospital and medical facility. Combined with needs from growing local industrial employment and growth in the immediately adjacent area it would indicate that such a facility will be necessary prior to this time.

ECONOMIC COMPARISONS

The economic and financial conditions in a community have a direct effect upon the individual citizen. For this reason one of the major goals of most Master Plan programs is to insure a sound financial structure over the planning period while providing for the inevitable and necessary municipal facilities. High and fluctuating taxes have many detrimental effects upon a community. They discourage the location of industry and reflect in the price of commercial goods and services. They threaten a family's ability to keep and to maintain their home properly often resulting in a general decline of property values in the community. Most serious perhaps is the fact that high taxes greatly affect the "community morale", causing citizens to be suspicious of the intentions of community officials and of other groups. Intra-community beligerence is a tangible factor detrimental to the healthy development of any community. too often sound programs which will provide badly needed facilities are defeated due to this low "financial morale".

During the last 16 years, municipal taxes have risen sharply throughout the State. This has been caused in part by inflation, increased demands for municipal services and the increase in the cost of providing such services. has been especially true of the construction costs where mass production cannot be undertaken to offset the cost of manual labor. In addition, suburban communities such as South Brunswick have completely or partially changed from open land rural development to urban residential areas during this same period. This has meant that all of the normal and necessary services required by such development has had to be furnished at these high costs and over a short period of time. Many suburban communities have had to provide these services without the benefit of the substantial

non-residential tax base found in older more developed towns. The following Tax Base Analysis indicates that South Brunswick is fortunate in having a sizeable non-residential tax base.

TABLE 3

TAX BASE ANALYSIS

Category	Percent of Township Land Area	Percent of Township Tax Base
Residence	7	44
Farm, Vacant	82	18
Commerce	1	10
Industry, R.R.	5	28
Public, Semi-Public	5	0

The 44 percent residential tax base is substantially lower than any community studied during the last five years by the consultants. The 38 percent industrial-commercial tax base also ranks among the highest of the many communities studied, including highly urbanized towns. Applying the tax base shown for residential uses against the 1961 tax levy, it may be seen that residential uses paid a tax of approximately \$675,000 or roughly \$243 per structure. On the other hand, industry and commerce paid approximately \$583,000 or nearly \$4,000 per principal structure in addition to franchise and gross receipt taxes.

FINANCIAL FACTORS

The Financial Factors Table shows that the Net and Assessed Valuation of the Township has more than doubled in the last

four years. This is in keeping with the population growth of 124% during the same period. While sizeable increases are shown for the Total Tax Rate and the Total Tax Levy during this period, the actual cost

TABLE 4
FINANCIAL FACTORS

	$\frac{1957}{}$	$\underline{1961}$	INCREASE
NET VALUATION	\$5,603,666.00	\$11,647,952.00	108%
ASSESSED VALUATION	5,350,738.00	11,395,638.00	113%
3 YEAR AVERAGE	4,346,236.00	8,723,381.00	90%
POPULATION EST.	5,000	11,200	124%
TOWNSHIP TAX RATE	0,000	0.671	
SCHOOL TAX RATE	6,613	10.643	61%
COUNTY TAX RATE	2,156	2.519	2%
TOTAL TAX RATE	8,769	13.833	58%
TOWNSHIP TAX LEVY SCHOOL TAX LEVY COUNTY TAX LEVY TOTAL TAX LEVY	none \$ 370,596.93 \$ 120,841.27 \$ 491,438.20	78,272.22 \$ 1,162,290.00 \$ 293,355.40 \$ 1,533,917.62	214% 143% 212%
TOWNSHIP PART OF \$1 SCHOOL PART OF \$1 COUNTY PART OF \$1	\$.00 \$.75 \$.25	\$.05 \$.76 \$.19	1% -24%
TWP. PER FAMILY LEVY* SCH. PER FAMILY LEVY CTY. PER FAMILY LEVY TOT. PER FAMILY LEVY	\$_00.00	\$ 24.12	
	\$255.71	\$358.04	40%
	\$ 83.39	\$ 90.36	8%
	\$339.10	\$472.52	39%
TOWNSHIP TAX INCOME OTHER TOWNSHIP INCOME TOTAL TOWNSHIP INCOME	none	\$ 78,272.22	
	\$ 253,218.00	\$ 424,040.92	67%
	\$ 253,218.00	\$ 502,313.14	98%
TOWNSHIP OPER'G BUDGET CAP.IMPR.& DEBT SERVICE RES'D UNCOLLECTED TAXES TOTAL TOWNSHIP BUDGET	\$ 132,500.00	\$ 300,165.42	127%
	\$ 70,600.00	\$ 41,352.50	-41%
	\$ 50,118.00	\$ 160,795.22	221%
	\$ 253,218.00	\$ 502,313.14	98%
SCHOOL TAX INCOME	\$ 370,596.93	\$ 1,162,290.00	214%
STATE SCH. BUILDING AID	\$ 14,315.40	\$ 22,938.00	60%
OTHER SCHOOL INCOME	\$ 213,084.67	\$ 132,113.00	-38%
TOTAL SCHOOL INCOME	\$ 597,997.00	\$ 1,317,341.00	120%
SCHOOL OPER'G BUDGET CAP.IMPR.& DEBT SERVICE TOTAL SCHOOL BUDGET	\$ 533,327.00 \$ 64,670.00 \$ 597,997.00	\$ 1,106,663.00 \$ 210,678.00 \$ 1,317,341.00	$107\% \\ 225\% \\ 120\%$
TWP. PER FAMILY COST*	\$176	\$155	-12%
SCH. PER FAMILY COST	\$414	\$407	-2%

^{*} A ficticious basis used only to compare government expenditures to resident population between communities. Actual levies or costs are applied to assessment valuations of both residential and non-residential uses.

of providing government services and facilities for the increased population has actually declined approximately \$8 per person. Both the municipal and school Total Budgets have increased less than the increase of population during the four year period. The 39% increase in the Per Family Tax Levy is due primarily to the fact that other Township income beyond tax income has not kept pace with growth rates. In the case of school income other than tax income, a decrease in revenue of over \$72,000 has been experienced during the 4 year period.

A recently conducted study of the 39 municipalities in Morris County showed a 1960 Per Family Tax Levy Average of \$476, a School Per Family Cost Average of \$417 and a Municipal Per Family Cost Average of \$152. Information obtained from the 7 communities surrounding South Brunswick showed an average School Per Family Cost of \$411. It can be seen from the Financial Factors Table that South Brunswick compares favorably with these averages.

In order to keep South Brunswick a desirable place to live and work in, it is imperative that the costs of government do not become unreasonable. Undoubtedly, the costs of services will increase due to the factors mentioned previously. However, by accurately estimating future needs and planning to meet them in a comprehensive manner, and most importantly, accepting the responsibility of meeting them at the proper time, the Township can be assured of a sound future.

REGIONAL INFLUENCES

The development of a community such as South Brunswick is normally the direct result of external growth pressures and economic trends. The citizens of a community participate in and contribute to these pressures but seldom have direct control over them. For this reason alone it is vital that these pressures and trends be studied when preparing a plan to guide any anticipated future growth.

South Brunswick Township and Middlesex County lie in the outer ring of the New York Metropolitan Region, located only 35 miles from the center of both New York and Philadelphia and 15 miles from Trenton. South Brunswick lies in the direct path of urban development pressures between these two cities. This urbanization has spread to within 4 miles of South Brunswick from New York City, and to the outskirts of Trenton from Philadelphia.

The decentralization of families, industry and commerce from the Metropolitan core areas has been one of the greatest physical and economic pressures in the nation for the last 15 years. Vacant land in these central areas is being used up as reflected in the fact that during 1959 approximately 94 percent of all dwelling building permits in the New York areaswere for multiple family or apartment structures. The "population explosion" from the large cities has resulted in unparalleled growth of the outer surrounding communities. The increased population of these suburban areas has attracted new commercial construction and expansion.

This decentralization has also resulted in tremendous expenditures of private and public funds to provide the necessary facilities to serve the new growth. It has created severe problems of distribution, congestion of transportation and street arteries, health and sanitation and unsightlyness. In most suburban communities this new growth has coincided with a natural peak period of births, resulting in a need for educational facilities far above normal.

CITY OF NEW BRUNSWICK

The City of New Brunswick, together with its nearby densely built up neighboring communities to the

north-east is rapidly becoming a secondary metropolitan area similar to the Newark Metropolitan Area. This trend has already resulted in a shift in work travel patterns from the New York area to Middlesex County itself. It has attracted new industrial. commercial and distribution enterprises which in turn have created a need for new residential ac-These new residential areas are commodations. actually located much farther from the New York Metropolitan Area than other undeveloped portions of Bergen. Passaic and Morris Counties to the This is a further indication that the north. working and living pattern focus has shifted from the New York City metropolitan center to Middlesex County itself. During the next 20 year planning period the New Brunswick "metropolitan area" will exert increasing influence over its suburbs, especially in the way of increased demands for dwelling facilities, both in number and in type. Increasing numbers of industrial and commercial facilities will be attracted to this area of diversified manpower and buying power.

SURROUNDING COMMUNITIES

South Brunswick is bounded on the north by the Townships of North Brunswick and East Brunswick. These communities

are similar to that of South Brunswick with populations of 10,000 and 20,000 respectively. They both have urban concentrations located near the City of New Brunswick. Monroe Township is located to the east of South Brunswick. It has a rural character and a population of approximately 6,000 persons. The Borough of Jamesburg, a small urban community of 2,900 persons, is located within Monroe Township approximately one mile east of the South Brunswick boundary. Jamesburg has a central business area which serves the immediate rural areas.

South Brunswick is bordered on the south by the Townships of Cranbury and Plainsboro, which have populations of 2,000 and 1,200 respectively. These communities are primarily agricultural in character although they both have several industrial concerns. The Borough of Hightstown in Mercer County is located 5 miles south of South Brunswick. This community offers a varied and somewhat congested business center which serves the surrounding area.

The Townships of Princeton and Franklin lie west of South Brunswick. The Borough of Princeton, surrounded by Princeton Township three miles from Kingston, has a population of 12,900 persons. It provides fairly complete commercial and cultural facilities for its surrounding area, including parts of the Trenton suburban area. Princeton Township has a population of 10,400 persons and a character of mixed agricultural and medium lot residential development. Franklin Township, with a population of 20,000 is rural in character adjacent to South Brunswick. It is heavily urbanized near New Brunswick. The villages of Kingston and Franklin Park are located in both Franklin and South Brunswick.

SURROUNDING ZONING

The zoning regulations in all the adjacent communities where they border South Brunswick maintain a residential

density of between 30,000 and 50,000 square feet of lot area per family, with the exception of East Brunswick and the villages of Kingston and Franklin Park. The densities required in these communities range from 10,000 to 22,000 square feet of lot area per family. Industrial zoning abuts the boundary of South Brunswick to the north between highway Route 1 and Route 130 and in Cranbury Township east of highway Route 130. These industrial areas prohibit heavy industrial uses and regulate permitted uses through industrial performance standards.

REGIONAL DEVELOPMENT As the New Brunswick Princeton and Middlesex region develops, South Brunswick must be ready to

take advantage of beneficial influences and trends. Its close proximity and ideal access to the urbanized areas of New Brunswick, Somerset County and Union County and its location on the main transportation arteries between New York and Philadelphia, means that South Brunswick can plan for and realize desirable industrial uses.

The continued industrialization of the Middlesex region will further increase the demand for dwellings of all types throughout the area, both high and low income dwellings and rental units. demand for rental apartments and high density residential development can and should be met in close proximity to the New Brunswick area with its existing urban services, transportation and commercial facilities. The equal demand for medium and high priced homes can and should be met in the outer communities such as East and South Brunswick, Monroe, and Franklin Townships. By taking advantage of these influences in its Master Plan program. South Brunswick can enhance its attractiveness to the most desirable types of development in the future.

FUTURE GROWTH

During the last 30 years South Brunswick has been growing at a steadily increasing rate. From 1930 to 1957 the population grew from 2,758 persons to an estimated 5,000 persons an 81 percent increase during this period. This represented an average growth of 83 persons or approximately 25 new families per year. Three years later the 1960 Census showed the population of the Township to be 10,278 persons, a 105 percent increase over 1957. This is an average of 147 persons or nearly 45 families moving into the Township each month over this three year period.

The U.S Census Bureau estimates that by 1980 the population of the country will exceed 260 million persons, 50% more than the present population. An increasing proportion of this increase will occur in the suburban areas surrounding metropolitan areas. The construction of the Interstate High-way system will accelerate this growth in the New York suburban areas. The present external growth pressures toward Middlesex County and out toward Long Island will tend to shift to the Somerset and Morris County regions of New Jersey following the path of the new highways. However, internal growth pressures in the county should lessen this effect somewhat.

For the purpose of this report, independent population studies were made which indicated that it would be reasonable to expect an increase in population of 10 to 11 thousand persons during the next 20 years in South Brunswick Township. In order to estimate the needs of the community during this period, a "target" population for 1981 of 6,000 families or 20,500 persons has been determined as a reasonable figure. There is little doubt that this population will be reached at some time in the future. The only uncertainty is the exact year that this will occur. For this reason, the planning

program proposed for the Township is geared to estimate and provide the necessary services for this target population. Flexibility as to the actual timing of the program can then be obtained by speeding up or slowing down the schedule as the actual population growth exceeds or falls below the planning estimate. A population of 4,800 families or 16,300 persons is expected by 1971. This is an increase of over 6,000 persons over the 1960 population. This increase is similar in size to the 1957-60 increase but it will spread over a longer period.

SCHOOL ENROLLMENTS

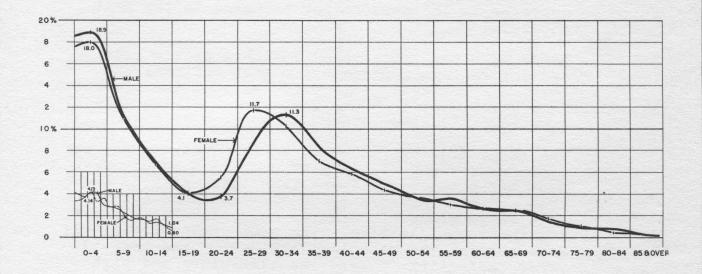
The increase in school enrollments throughout the country today is primarily the result of two major

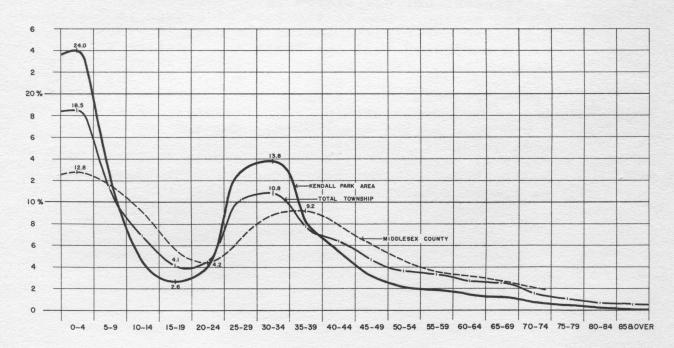
factors. These are population growth and a fluctuating national birth rate. The latter factor results in different numbers of persons in the various age groups at the same time. Communities which have undergone great increases in population during the last 15 years have had to provide new school facilities to keep pace with new growth. Simultaneously, they have had to provide for a natural increase in enrollments due to increases in the birth rate. These communities would have had to increase their classroom capacity to accommodate the number of children resulting from the birth rate increase even if no population influx had occurred.

In fast growing suburban communities most growth consists of young families with young children. In analyzing future school needs the birth rate has become a dominant factor in school enrollment increases. The accompanying "Age Distribution" chart shows the age distribution in the country, and the variation of this distribution which has occurred in South Brunswick. This chart clearly shows that if all building activity in the Township

AGE DISTRIBUTION

APRIL 1960





TOWNSHIP OF SOUTH BRUNSWICK THE PERPARATION OF THIS CHAFT WAS FINANCED IN PART THROUGH AN URRAN PLANNING CRAST FROM THE HOUSING AND HOME FINANCE ACENCY, UNKER THE PROVISIONS OF SECTION TOL OF THE HOUSING ACT OF 1954, AS AMENDED.

THE REMAINDER HAS BEEN FINANCED BY LOCAL FUNDS AND BY AN AP-PROPRIATION OF THE STATE OF NEW JERSEY AS PART OF THE EXPANDED STATE AND REGIONAL PLANNING PROGRAM. were immediately stopped and the number of families remained static the 15 to 19 year old age group which presently has 41 persons per thousand would increase to 185 persons per thousand in the next 15 years.

Based upon the anticipated Township growth rate and taking into consideration both national and local birth rates, it is expected that the present K-12 enrollment in South Brunswick will increase from 2578 students to 8400 by the end of 1974.

The large fluctuation shown in the under 4 year age group represents the peak of the birth rate. Present birth rates are lower than those of 1957 and This downward trend will continue until this large group of children marry and begin raising their own families. The peak group will slowly move through the school system during the next 12 years, affecting in turn the elementary and high school facilities. The impact of this group upon the present college system is of serious concern to the nation. Due to the rate of growth in South Brunswick anticipated during the next 20 years. it is estimated that the birth rate decline will be more than offset by the population growth of the This will result in a leveling out Township. of enrollments but not in an actual decline. 1980 enrollments should again increase, reaching a new peak in the mid 1900's. For the purpose of this report it has been assumed that the present ratio of parochial students to public students will remain constant and that parochial facilities will be provided to serve these students.

SUMMARY OF CONCLUSIONS

The following conclusions and suggestions have been drawn from the foregoing studies of existing conditions.

- 1. Future small lot growth should be encouraged to locate either where existing utilities are available or where existing development indicates their eventual installation. A comprehensive water study and plan should be prepared.
- 2. New growth should be directed and regulated so as to enhance the value of existing development. Highway business uses should be grouped logically rather than permitted to spread over the entire 38 miles of highway frontage available.
- 3. The greatest problem facing the Township is the proper regulation of the 32 square miles of usable vacant land in the future. The acquisition of public land reserves should be started immediately and encouraged in every way possible.
- 4. The following regulations should be adopted to regulate existing and future development; a Housing Code, a Fire Prevention Code, a new Building Code, a Street Acceptance Code, a Street Opening Code, and a Food Handling Code. The Official Map and Building Permit Act of 1953 should be utilized. The Zoning and Subdivision regulations should be amended to carry out the Master Plan and to insure sound development of the community.
- 5. A study should be made on the feasibility and timing of utilizing a Township administrator. The full-time administrative staff of the Township should be increased substantially and the police force should be enlarged to conform to accepted standards recommended by the F.B.I.

- 6. A public library should be created, preferably in conjunction with expanded municipal building facilities.
- 7. The Township should take advantage of and plan for the need for substantial low density housing in the growing New Brunswick area and should discourage the use of land for high density or multiple family housing.
- 8. New adequate east-west arterial roads must be provided for future Township and inter-county traffic.
- 9. It is expected that by 1981 the Township will have 6000 families. School facilities for approximately 8500 students must be provided by 1975.

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PLANNING POLICIES AND GOALS

After analyzing all existing trends and conditions in the Township, general planning goals must be established. Once these goals have been arrived at, specific recommendations can be made to guide future development toward these goals. General procedural and administrative policies must be established to insure that all functions of the Township aid in the achievement of these goals. The following policies and goals have been determined to be desirable and reasonable guides for a Master Plan for future development of South Brunswick.

- 1. Future residential growth should be encouraged to locate in those sections of the Township where municipal and educational services and facilities can be most economically supplied or where existing development indicates the eventual provision of these services and facilities.
- 2. All regulations controlling new residential construction should be directed toward making each new home a financial asset to the Township.
- 3. Areas should be set aside through zoning for non-residential use; the inter-mixing of various types of uses should be discouraged.
- 4. Future development of the Township must provide for open space or land reserves for the use of future generations.
- 5. The development and improvement of streets, drainage, public facilities and utilities should be consistent with the ultimate development of the Township.
- 6. The need for public expenditures should be determined in advance of demand to insure that sound long range fiscal programs are carried out

by means of a stable tax rate charge. The annual capital improvement program should be expanded and made an integral part of the planning program.

- 7. Regulations or policies adopted by any official body should be examined to insure that they will not be detrimental but will compliment the long range goals of the Master Plan.
- 8. The Official Map, Zoning Ordinance, Land Subdivision Ordinance and all other regulations governing the future development of the Township should be coordinated and designed to carry out the goals of the Master Plan.

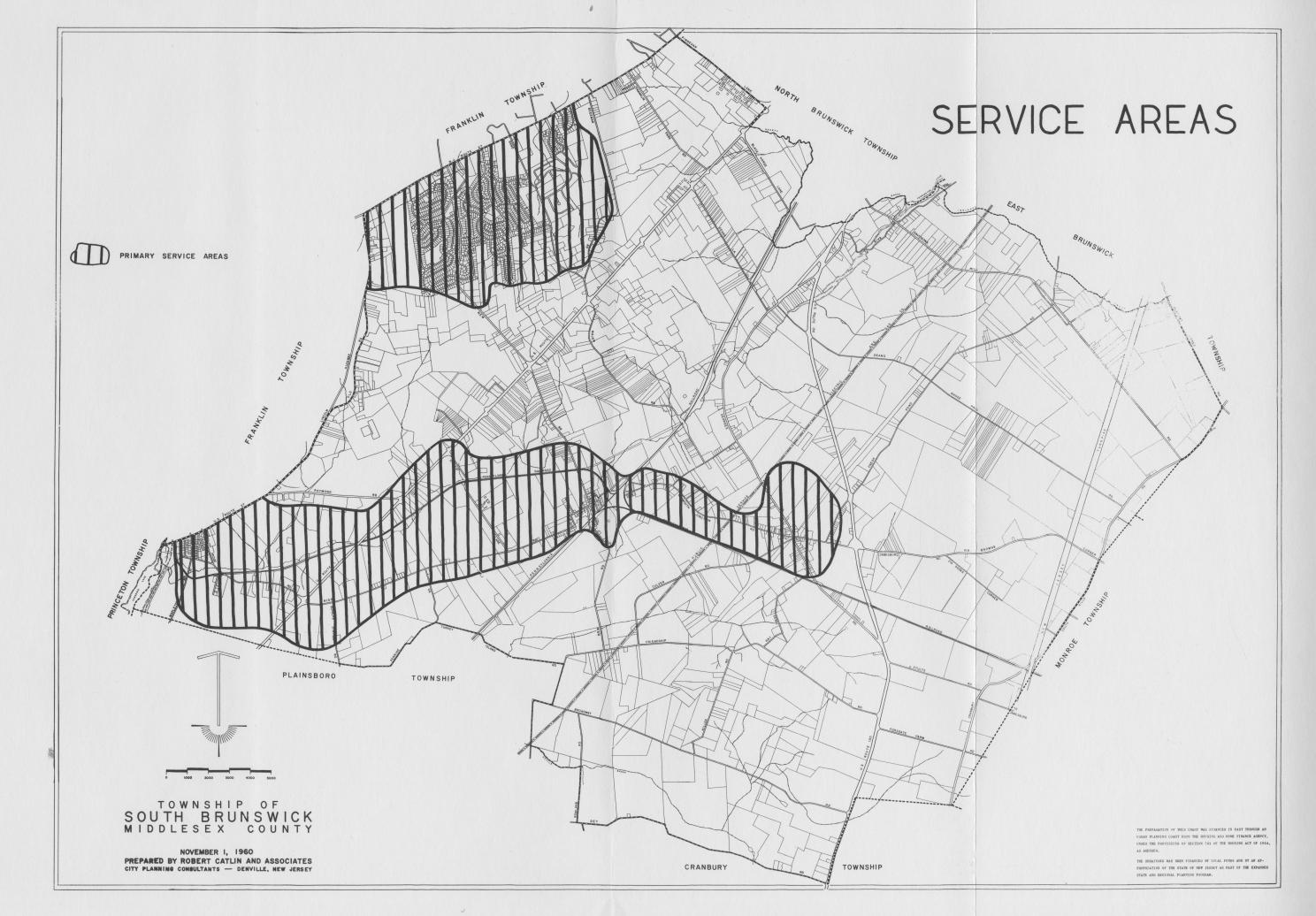
THE SERVICE AREAS

One of the largest problems facing suburban and rural communities throughout the country today is the economic dilemma of being forced to provide expensive urban services and facilities in areas of scattered urban development. Present day economic factors and the decentralization of built up cities brought about by the increasing use of the automobile encourage developers to locate subdivisions in undeveloped areas instead of adjacent to existing developments. In a community the size of South Brunswick, this type of scattered development can lead to serious consequences.

Future growth must be encouraged to locate in areas that will supplement existing areas of development rather than to add new areas of population concentrations in illogical uneconomical locations. To accomplish this, it is recommended that a Service Area policy be adopted as the primary basis of the Master Plan.

The Service Area policy is simply the recognition of the fact that certain developed areas of the community will eventually require full or partial urban services and facilities. By determining the logical ultimate size and location of these areas it is possible to rather accurately plan to serve the needs of the population which will locate there.

Families moving into the community who desire to live on small lots will be guided into areas the Township has planned to serve, by means of development regulations. These families will then help to pay the cost of these already determined necessary services. Families wishing to locate outside these service areas will be required to do so at a density that will minimize the need and the cost of municipal services.



The accompanying plate shows the service areas which are recommended for South Brunswick. One service area includes the Kendall Park development and adjoining lands which lie in the same sewer utility basin. The second service area includes the villages of Kingston, Monmouth Junction and Dayton as well as land between these concentrations.

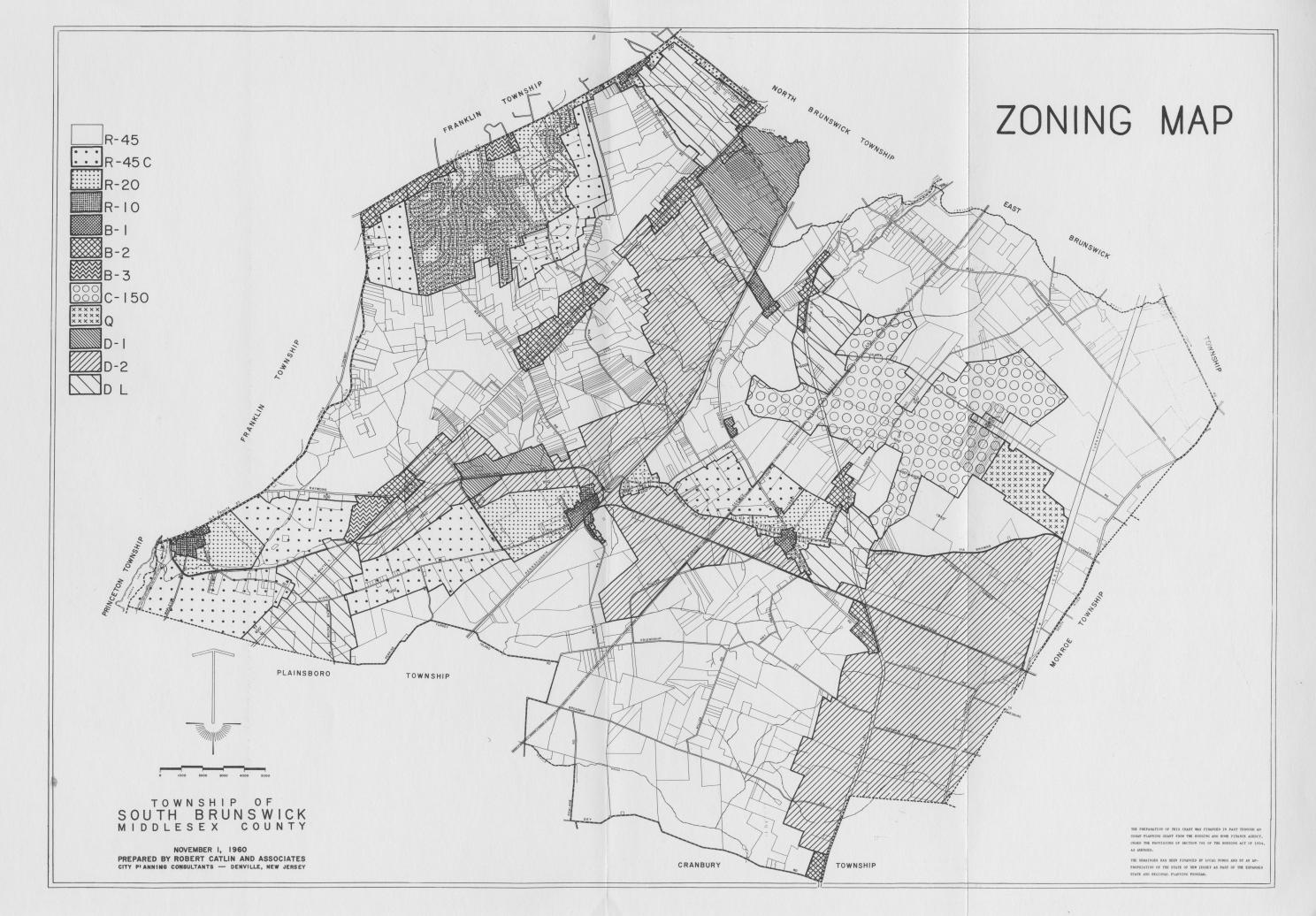
With the service area policy established and carried out by adequate regulations, the Township can plan the timing, location and ultimate needs for municipal services, facilities and utilities. Perhaps more important, new families will locate in these areas and will share in the cost of services which will have to be provided whether additional growth occurs or not. With this guidance, new growth can become an asset which will result in a sounder and more economical Township in the future.

ZONING PLAN AND DEVELOPMENT REGULATIONS

Zoning is a broad power to regulate the use of land within a community. It is a very useful tool to carry out land use concepts and the goals of the Master Plan.

The zoning map on the accompanying page reflects the concepts of the service area policy by setting aside land for small and medium lots around the developed areas of Kingston, Monmouth Junction and Dayton. These areas are shown as R-10 and R-20 on the Zoning Map. The density requirements of these zones are 10,000 and 20,000 square feet of lot area per family, the same as the existing zoning ordinance. However, the zone boundaries have been changed to carry out the service area policy and to conform to property lines since the existing zoning pattern was prepared on a general basis. The largest change proposed involves the area between Deans and Franklin Park which is presently zoned for 20,000 square foot residential lots. As shown on the Zoning Map plate, most of this area is proposed for industrial and research uses. These nonresidential uses should not present the Township with the future problems mentioned in the analysis of existing conditions.

The remaining portions of the Township shown for residential use are proposed to have a density of 45,000 square feet of lot area per family, the same density presently called for in most of the Township. It is important to realize that all future residential development will require public lands for schools and recreation. Even at a density of 45,000 square feet per family there will be over 550 homes in each square mile. This number of homes will require and support a 20 room elementary school. In order to reserve land for future public use, as called for in the goals of the Master Plan, it is proposed that "density control" zoning be adopted.



Density control zoning, as its name implies, places emphasis on maintaining a certain density of development throughout a zone instead of upon a fixed lot size. Where the Planning Board and the developer mutually agree the developer may reduce the actual area of his lots to below the minimum lot size requirement of the zone provided this results in no additional lots. In return, the developer must deed land to the community at sizes and locations specified by the Planning Board. this manner the overall density of the development remains the same as required by the zone, the community receives desirable public land at no expense and total street lengths are re-This latter item results in substantial duced. monetary savings to both the developer who installs the streets and to the Township which must maintain them.

It is proposed that in the R-45 zone, the developer may reduce his lots by 17% and in return deed to the Township for public use 17% or more of his land in a place designated by the Planning Board.

Because there will be a greater need for public land around the built up service areas, an intermediate residential zone is shown on the zoning This zone, the R-45C zone, requires an over-all density of 45,000 square feet of lot area per family. Where public sewer and water are available, the lot sizes may be reduced to 20,000 square feet, a 57% reduction. will be permitted where the same amount of land is deeded to the Township for public use and where public sewer and water are installed by the developer. By encouraging subdividers to participate in this program, most of the open space, parks and school sites needed in the distant future can be obtained and set aside without cost to the Township. Desirable tracts

can be obtained in this manner which would not be available after development had occurred.

The Zoning Map proposes three types of business zones. The B-1 Neighborhood Business zones are located in or adjacent to the service areas. The B-2 Highway Business zones have been placed at logical points along the several highways in the Township where existing development of this type has occurred. A planned business area has been set aside on Route 1 and Route 27 for a planned shopping center development of the subregional type. It is also proposed that a third area on Route 130 be zoned for this use at some time in the future after development trends are established. It is proposed that no uses other than business, sales and service establishments be permitted in the commercial zones.

There are three types of industrial or laboratory zones proposed. The least restrictive of these, the D-l zone, is located on Black Horse Lane and along the Kingston branch of the Pennsylvania Railroad between Route 1 and Ridge Road. Performance standards must be upheld by each industry locating in this zone. These standards will regulate the amount of noise, smoke and other objectionable features of this type of development which are unregulated in the existing zoning ordinance.

The D-2 industrial district is proposed in the southeastern portion of the Township and along the main line of the Pennsylvania Railroad. In this zone the performance standards prohibit the dissemination of any smoke, noise and other objectionable effects. Lot sizes and yard requirements are more restrictive than in the D-1 zone.

The D-L zone is designed for research and specified limited manufacturing uses. The performance standards in this zone prohibit any visual evidence

of a manufacturing process and the dissemination of smoke, noise or other objectionable effects. Lot sizes and yard requirements are designed to provide landscaped areas commonly associated with laboratory zones.

In all of the industrial zones, residential and retail sales and service uses are prohibited as well as detrimental or obnoxious industrial uses. All yards must be landscaped and all storage areas must be fenced or screened from sight of any street or residential zone. Basic changes from the existing zoning pattern are proposed in the area between Deans and Franklin Park, previously mentioned, the area between Dayton and Monmouth Junction along the Pennsylvania Railroad, the area between Route 1 and the Pennsylvania Railroad south of Deans Lane and the area abutting the New Jersey Turnpike.

Two other non-residential areas are proposed in the eastern part of the Township. One is a quarry zone established to regulate the existing Dahlenbach quarry operation. The other is a conservation area which encompasses the Pigeon Swamp and adjoining marginal lands. Residential construction will only be permitted in this zone as accessory to agricultural or other open space land uses on three acres of land or more.

As part of the master plan study a new comprehensive zoning ordinance has been prepared. This ordinance which is a supplemental report has been designed to carry out the objectives of the master plan as contained herein.

SUBDIVISION REGULATIONS

The Land Subdivision Ordinance of South Brunswick, sets forth the procedures and requirements for the

subdivision of land in the Township. The processing of subdivisions represents the more crucial

period of development for a community. The decisions and final disposition of all subdivisions become a concrete part of the future community. For this reason it is very important that this ordinance be geared to the overall concepts of the Master Plan.

It is proposed that the Subdivision Ordinance be amended to specify separate improvement requirements for the different lot size develop-Full sewer and water utilities, street ments. lighting, curbs and sidewalks should be required in all subdivisions where the lots are less than Sewer, water three-fourths of an acre in size. utilities and sidewalks would not have to be provided in subdivisions where the minimum lot size is greater than three-fourths of an acre, provided proper drainage was provided. In the conservation zone a twenty foot paved roadway with five foot penetrated shoulders would suffice for minor streets serving the permitted uses.

ZONING ANALYSIS The accompanying Zoning Analysis table shows the overall effect of the proposed zoning changes.

The total area set aside for residential purposes has increased by approximately two square miles. Although the C-150 conservation zone is not primarily for residence, it has been included in the residential category and occupies over two square miles. The small lot residence areas have been decreased by over two square miles or by approximately one half. The 1,703 acres proposed for small lots, will permit an ultimate population of 3,180 families or 11,000 persons. This is more than the present total population of South Brunswick, and represents a doubling of existing development of this type. The two R-45 zones will permit an ultimate population of 12,500 families or 43,000 persons. The combined ultimate population of 54,000 persons is more than $2-\frac{1}{2}$ times

TABLE 5
ZONING ANALYSIS
TOWNSHIP OF SOUTH BRUNSWICK

EXISTING ZONING PROPOSED ZONING SOUARE PERCENT SOUARE PERCENT ZONE ACRES TOWNSHIP MILES TOWNSHIP ZONE ACRES MILES R-45.00014,471 22.6 55.1 R-45,000 13,853 21.7 52.7 R-20.0003,068 4.8 11.7 R-20,000 2.6 1,662 6.3 R-10,000117 0.2 R-10.0000.1 0.2 0.4 43 1,946 ____ R-45C 3.1 7.4 C - 1501,369 2.1 5.2 TOT. RES. 17,656 27.6 67.2 18,873 29.6 71.8 NEIGH. BUS. 182 0.3 0.7 B-1113 0.2 0.4HIGHWAY BUS. 0.1 0.3 516 0.8 2.0 71 B-2HIGHWAY DEV. 1013* 1.6 B-386 0.1 0.33.9 TOT. COMMERCE 1.266 2.0 4.9 715 1.1 2.7 2.1 INDUSTRY 6,338 9.9 D-1561 0.9 24.1 4,632 7.2 17.7 D-21.012* 2.0 4.9 HIGH. DEV. 1.6 3.8 D-L1,292 199 0.3 $\begin{smallmatrix}0.8\\25.5\end{smallmatrix}$ Q 6,684 TOT. INDUS. 7,350 11.5 27.9 10.4

^{*}The highway development zone permits both commerce and industry. For this analysis this area has been divided evenly between these two categories.

the estimated target population anticipated by 1981.

It should always be kept in mind that a zoning ordinance or a Master Plan must be continuously reviewed and brought up to date as new conditions appear. For example it is conceivable that the land set aside for smaller lot development may unexpectedly develop fully during the next fifteen years. Further consideration would have to be given at that time to either creating logical extensions of these areas or maintaining their existing size. It is a proposal of this report that if such extensions are decided upon that only lands within the service areas be considered. There is enough land included in the proposed service areas alone for approximately 24,000 persons at a density of 20,000 square feet of lot area per family.

STREET PLAN

The arterial street plan must be designed for the ultimate development of a community. Once an area has developed, a necessary realignment or a needed new road is either an impossibility or at least prohibitively expensive. An undeveloped community has the opportunity to guide its growth so that streets in a proper location and alignment are provided as growth occurs.

The Street Plan shown on the accompanying plate shows the street system which will be necessary to adequately serve the future residents of both South Brunswick and the surrounding region. Just as the Township will not grow overnight, many portions of this street system will not be needed until development occurs. Most of the streets of the Township are presently satisfactory in both construction and location. ever, many of these streets will become inadequate with only a doubling of present traffic volumes. As new sections of the Township are developed, new access roads will be needed and adequate interconnecting systems of secondary arterial streets must be provided. By determining these future needs at this time. most of the system can be provided by the subdivider who is, in effect, creating the need. The cost of these improvements are passed on to the new residents who create the need for them. requiring each developer to provide portions of the overall comprehensive plan, the Township will eventually have an adequate, safe and convenient network of streets at a minimum Township expense.

TURNPIKE INTERCHANGE

It is proposed that an interchange be constructed in the future at the intersection of County Road Turnika Such an access

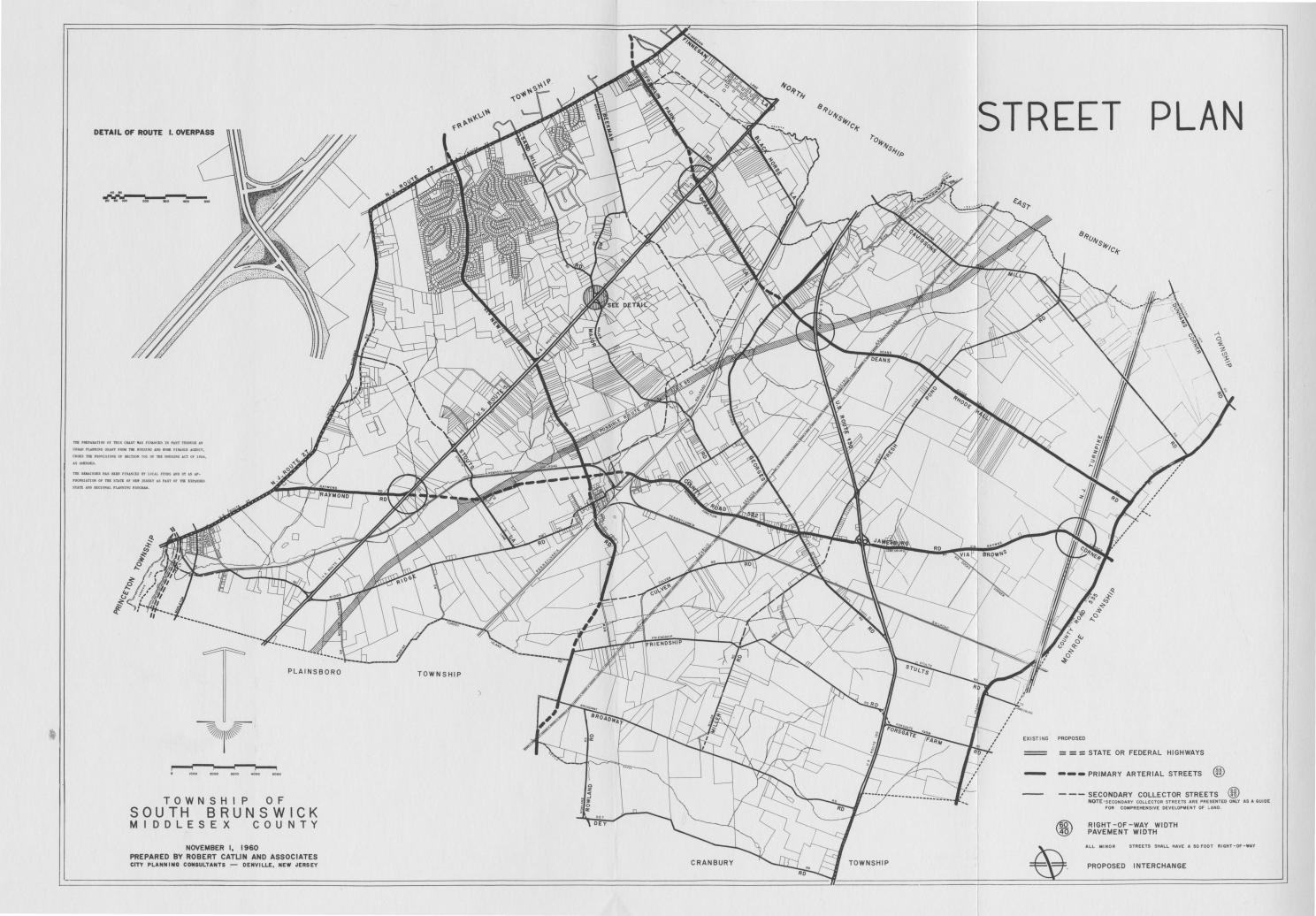
522 and the New Jersey Turnpike. Such an access would best serve South Brunswick Township. At

the time the Turnpike was constructed, an interchange with its corresponding number was planned for this section of the Turnpike, but was never constructed awaiting such time as a need developed. County Road 522 is located approximately half way between the Hightstown interchange to the south and the New Brunswick interchange to the north. These two interchanges are approximately $15-\frac{1}{2}$ miles apart. A new interchange at Route 522 would provide direct access to the Jamesburg-Monroe and South Brunswick area and to the industrial complex which these communities hope to encourage. Investigations and meetings held by the Township Committee and other interested groups indicate that this interchange can become a reality in the near future. The municipal officials, business groups and the citizens of South Brunswick and their immediate surrounding communities should continue to press for the construction of this vital facility.

COUNTY ROADS One of the most serious potential traffic bottle-necks in the Township to-day is the disconnected

and narrow right-of-way of County Road 522 as it passes through the Monmouth Junction and Kingston area. Future increased traffic volumes will aggravate this situation and will have an adverse effect upon the property values of these communities.

It is proposed that a major realignment be undertaken to carry this future traffic around Monmouth Junction and Kingston. This realignment could start at the present railroad overpass on the Monmouth Junction road, pass north of Monmouth Junction and connect with Raymond Road. With the related widening of other portions of this roadway this direct east-west roadway could carry



both inter-county and intra-county traffic through South Brunswick with a minimum of inconvenience to the residents. This proposed road would also open up new potential industrial land along the Kingston branch of the Pennsylvania Railroad. At Route 27 Raymond Road will connect to a by-pass around Kingston proposed in the Franklin Township Master Plan. In conjunction with this project, a realignment of New Road is proposed which is designed to carry north and south traffic movements directly through Monmouth Junction without the hazardous turns necessary at the present time.

The ultimate development of an adequate County Road system in both Somerset and Middlesex counties require that a road system be developed which will carry traffic in a north-west and south-east direction. The logical location for such a road-way, in relation to the proposed belt lines around New Brunswick in the County Master Plan, would be in the vicinity of present County Road 4R7, the Deans Lane-Rhode Hall Road. Such a system is also proposed in the Franklin Township Master Plan.

It is proposed that the existing right-of-way of County Road 4R7 be widened to 66 feet. New alignments should be established as shown at the intersection of this roadway with Route 27, Route 1 and Georges Road. Traffic on this County Road and County Road 522 would ultimately join at South River Road, passing through Jamesburg to the eastern portion of the county. Both of these County Roads should eventually provide interchanges at their intersections with Route 1, at the time of improvement.

It is also proposed that the illogical system of existing County Roads in the Township be analized. In order to encourage County action of the proposed 522 alignment, it is suggested that the

Township agree to take over all County Roads in the Township with the exception of 522, South River Road and the Deans Lane-Rhode Hall Road 4R7. This would reduce the County Road system in South Brunswick from 29 to 19 miles.

ROUTE 1 AND MAJOR ROAD OVERPASS U.S. Highway Route 1 presents a serious safety hazard to east-west movement in the Township. The Village of Kingston and

the Kendall Park area are divided from the Monmouth Junction-Dayton area by this highway. Normal intra-community traffic generated by necessary daily traveling, school transportation and convenience trips normally cross this highway. As the residential areas of the Township further develop and as highway traffic on Route 1 increases, the safety hazard to the residents of the Township will increase considerably.

It is proposed that an overpass be built across Route 1 at the intersection of Major Road and Route 1 in addition to the County Road interchanges proposed above. The natural topographic features of the present intersection lend themselves to the construction of such a facility. Its construction would provide a direct connection between the Kendall Park area and the present high The detail on the Street Plan shows that school. this overpass should provide access from Route 1 but would prohibit entrance to Route 1. would eliminate one intersection on this busy highway and would encourage the use of the proposed County Roads for inter-county traffic, reserving Major Road for the use of Township residents.

PRINCETON BY-PASS

For the past several years, the County of Mercer, Borough of Princeton and Princeton Township, working in conjunction with the State Highway Department, have been developing plans for a State Highway by-pass around the Borough of Princeton to provide for the heavy traffic demands between Route 206 and State Route 33, in Hightstown. In the Kingston area the arterial street plan shows a portion of this proposed by-pass, paralleling the old Canal bed around Carnegie Lake. Completion of this roadway system will do much to alleviate the hazardous traffic conditions in Kingston Village. The proposed 522 realignment will connect with this by-pass in Franklin Township. The preliminary investigations made by the Township Committee should be continued and the completion of plans should be encouraged by the Township.

OTHER PROPOSALS

It is proposed that all County arterial streets shown on the Master Plan ultimately have a 66

foot right-of-way and a 44 foot paved roadway. All Township arterial streets should eventually have a 60 foot right-of-way and a 40 foot paved roadway. Secondary Township arterial streets and collector streets should have a 60 foot right-of-way and a 36 foot paved roadway. The realignments of proposed secondary arterial Township roads shown on the Street Plan have been designed to provide improved traffic circulation through the Township and to provide new accesses to presently undeveloped land. In most cases these roadways will be constructed by subdividers as the abutting lands are developed.

INTERSTATE ROUTE 95

As part of the authorizing act under which the New Jersey Trunpike was built there was a provision for

the construction of a connection between the Turnpike and the Trenton Metropolitan area at such time as the Turnpike bonds were amortized.

At that time the tentative plans for this limited access roadway indicated that it should leave the Turnpike in the vicinity of East Brunswick Township and proceed to Trenton, passing through the Township of South Brunswick. This roadway was later incorporated into the Federal Interstate Highway System Plans. The actual location for this road has been under study during the past year by the State Highway Department, the County Road Departments of Somerset and Middlesex Counties and various Federal Agencies.

At the time of this report, possible locations for this roadway ranged between alignments in Franklin Township. South Brunswick and portions of Mercer County. Because of the uncertainty of the location of this large and influential highway facility and the impact that it could have on any community through which it passed. this problem was studied from the view point of where it should be located if it passed through South Brunswick Township. Such an alignment is shown on the accompanying Street Plan, passing from north-east to south-west on the northern side of Monmouth Junction. alignment cannot be a proposal of the Master Plan at this time due to this uncertainty. ever, it is shown as a guide in the event it runs through South Brunswick. As this is a Federal project, the Street Plan carries a stipulation that the roadway shown is not to be considered part of the Master Plan in applying the statutory powers of the Master Plan to future developers until its exact location is established.

PUBLIC FACILITIES PLAN

One of the most important considerations in planning the future development of a community is the acquisition of land needed for public uses. Far too often a community permits considerable development to take place only to find that the new growth has created a need for public playgrounds and schools. Provision of these public lands then must be obtained outside of the built up areas or at high cost on still vacant and often undesirable land within it. In open suburban rural communities, citizens often fail to recognize the lack of public land and the great future demand. It is because they are surrounded on all sides by vast amounts of undeveloped land. After a community develops a need for public lands. it must begin the costly process of acquiring the remaining vacant parcels at high costs and often times in illogical locations. possible for South Brunswick to avoid this problem by planning its future system of parks and public land now, by making sure, through sensible development controls and public action, that the plan is carried out in the future.

SCHOOLS

As indicated by the previous studies, one of the largest problems facing South Brunswick during the

next 10 years is that of providing adequate school facilities to meet a rapidly increasing enrollment. These studies show that the enrollment should increase from the present 2578 students to over 8400 by the 1974-75 school year. This would mean that the 107 classrooms which presently exist, must be expanded to approximately 310 by the middle 1970's.

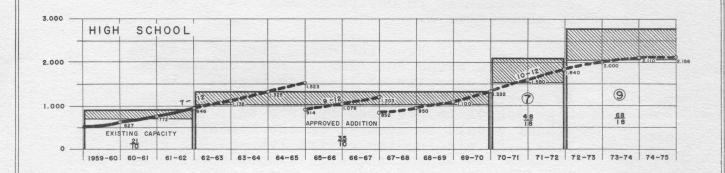
The enrollment study indicated that to continue the present 6 year high school system the Township would have to provide a system which would

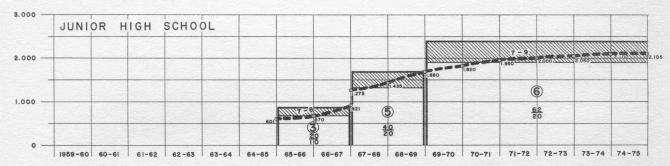
contain 2 large high schools with capacities of over 2000 students each. If the elementary system were changed from its present K-6 to a K-8 system there would still be a need for 2 four year high school facilities. Such an arrangement would create a need for several additional elementary schools in the Kendall Park area, whereas the present K-6 schools with minor expansion will meet the future demands of that area. Because this arrangement would also present several other undesirable problems, it is proposed that the present secondary system be gradually converted to a junior-senior high school system. This system should ultimately contain a three grade senior high school with a capacity of from 2 to 3 thousand students and two three-grade junior-high schools with a capacity of 1000 to 1500 students each. program would also gradually enlarge all K-6 elementary schools to 18-20 rooms each, with the exception of the Cambridge and Dayton schools.

The accompanying School Enrollments and Needs chart graphically relate the anticipated enrollment growth and the school facilities which will be needed to accommodate this growth. chart shows the existing K-6 facilities, including the new Green Brook school opened in 1961, and the existing high school capacity. recently approved high school addition referendum will add to the high school capacity in the 1962-63 school year as shown on the chart. following year elementary enrollments will require a substantial increase in school facilities. meet this need it is proposed that the Constable and Deans elementary schools be enlarged to 20 rooms by 1963-64, an increase of 17 classrooms, shown by the number 1 on the plate.

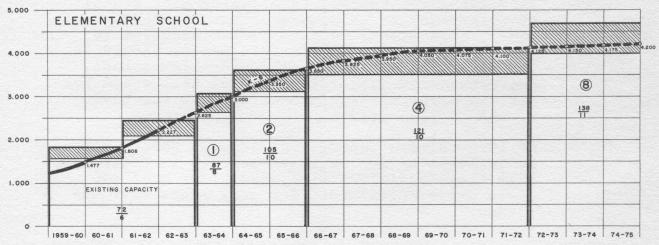
Because elementary enrollments will be increasing rapidly during this period, it will be necessary to provide additional facilities the following

SCHOOL ENROLLMENTS AND NEEDS





UNDER THE PROVISIONS OF SECTION 701 OF THE HOUSING ACT OF 1954



NOTE ENROLLMENT FIGURES ARE FOR SEPTEMBER OF EACH SCHOOL YEAR

35 NUMBER OF REGULAR CLASSROOMS
12 NUMBER OF KINDERGARTEN OR SPECIAL CLASSROOMS

year. It is proposed that a new 20 room school be constructed in Dayton. Shown on the plate by the number 2.

It may be seen from the chart that by 1964-65 the 7-12th grade enrollments will exceed the emergency capacity of the high school. It is therefore proposed that a 30 room junior-high school be provided by 1965-66. This school should be located in the Kendall Park area. By placing the entire 7th and 8th grade in this new school the high school enrollment would be adequately met for two to three more years.

By 1966-67 a new elementary facility will be needed. It is proposed that the Monmouth and Green Brook schools be enlarged to 20 class-rooms at this time, shown as number 4 on the plate. At this time declining birth rates should be reflected in a leveling out of the elementary enrollment growth rate. The proposed elementary system capacity should be adequate to handle enrollments into the early 1970's.

By 1967 the upper grade enrollment growth will be reflecting the rapid growth of the elementary system of several years before. Instead of increasing the Kendall Park junior high school at this time, it is proposed that a second junior high school be constructed adjacent to the present high school. This school should be the same size as the first junior high school. The second new junior high school will again permit the existing high school to meet the needs of the 11-12th grades.

By 1970 the two junior high schools should both be enlarged by adding 10 rooms. It is anticipated that these additions will adequately meet the 7-9th grade enrollments for many years into the future.

TABLE 6

SCHOOL CONSTRUCTION PROGRAM
TOWNSHIP OF SOUTH BRUNSWICK - 1961

(room capacities shown are for standard classrooms and special or kindergarten rooms)

PRIORITY	SCHOOL	TYPE	PRESENT	PROPOSEDĮ NEW	TOTAL
- 1 1 2 4 4 8	Cambridge 1 Constable 2 Deans 2 Dayton 2 Monmouth 2 Greenbrook 2	8 room K-3 6 room K-6 0 room K-6	8-0 12-2 12-1 9-1 - 13-1 13-1 3-0	- 6-1 9-1 18-2 5-1 5-1	8-0 12-2 18-2 18-2 18-2 18-2 18-2 19-1*
	TOTAL ELEMENT	ARY	70-6	62-7	129-13*
3 5 6	Kendall Jr. Central Jr. Jr. High Add	High itions	- - -	20-10 20-10 22-0 62-20	20-10 20-10 22-0 62-20
7 9	High School New Addition New Addition TOTAL HIGH SCHOOL		21-10 - - 21-10	14-0+ 13-8 20-0 47-8	35-10 13-8 20-0 68-18
	TOTAL SCHOOL S		93-16 107	171-35 206	259-51 310*

⁺ Approved by referendum 1961.

^{*} Present 3 room school to be sold.

By 1970 the growth surge should enter the senior high grades requiring substantial additions to the high school. It is proposed that a 21 room addition be made by the 1970-71 school year and that 20 additional rooms be available by 1973 or 1974. This last addition should complete the high school construction program.

During this same period, it may be necessary to provide a new elementary school. It is proposed that a 20 room school be built in Kingston at this time and that the present 3 room facility be sold. This new school should complete the school construction program. The completed system will provide great flexibility and should adequately house the anticipated school enrollments up until the new birth increases of the 1990's mentioned previously are reflected in the school enrollments.

Many factors which influence both Township growth and enrollments can change during the next twenty Considering present trends and by assuming the adoption of the land use and development control proposals of this report, it has been estimated that the Township growth rate will slowly drop from the approximate annual rate of over 200 families in the late 1950's and in 1960 to near 100 families per year by 1965. If growth does not drop off, the school program presented here will be at least a minimum necessity. the other hand, changed factors or a lower growth rate may reduce actual enrollments after the peak years of the early 1970's. It should be noted, however, that even if enrollments are 20 percent lower than anticipated, by 1971, elementary enrollments would total 3300, and secondary enrollments by 1975 would total over 3400 students. This would also represent a very large construction By carefully comparing actual enrollments to the projected enrollments each year, South Brunswick can determine whether to speed up or slow down the construction program presented.

PARKS AND PUBLIC LANDS

To accommodate the school construction program and to supply the amount of park land which will be

needed in the future, the accompanying Public Facilities map indicates proposed locations for school sites and park lands. Immediate investigation should be made of the feasibility of purchasing many of the proposed park and schoolpark sites under the newly approved Green Acres program, which has won national acclaim.

New elementary school sites are shown in the Kingston and Dayton area. It is proposed that the Monmouth Junction, Dayton and Deans school sites be expanded as shown.

In conjunction with the junior high school site shown in Kendall Park, a Townsip Park should be developed to serve the needs for adult recreation activities. Most of the area shown is presently owned by the Township and would require very little additional land acquisition. The park proposed next to the high school and proposed junior high school site should be developed as a secondary primary adult recreation area for the central portion of the Township. This land could be utilized in the distant future for expanded high school facilities or recreation as needed.

Due to the large size of the Township, many additional school facilities will be needed in the far distant future. Even at the density of 45,000 square feet of lot area per family proposed by the land use and zoning plan, one twenty room elementary facility will be required for each square mile of residential use. By applying the park reduction provisions of the proposed zoning ordinance, many of these sites will be provided ahead of actual need by the developers of the land. These sites are shown for park purposes

on the Public Facilities map and are of sufficient size to permit the construction of a school when the need arises. The locations chosen on the map for these sites are shown primarily to indicate a future need. They can be changed from time to time as the need arises.

QUARRY PARK The quarry operation conducted by the Dahlenbach Company in the eastern portion of the Township

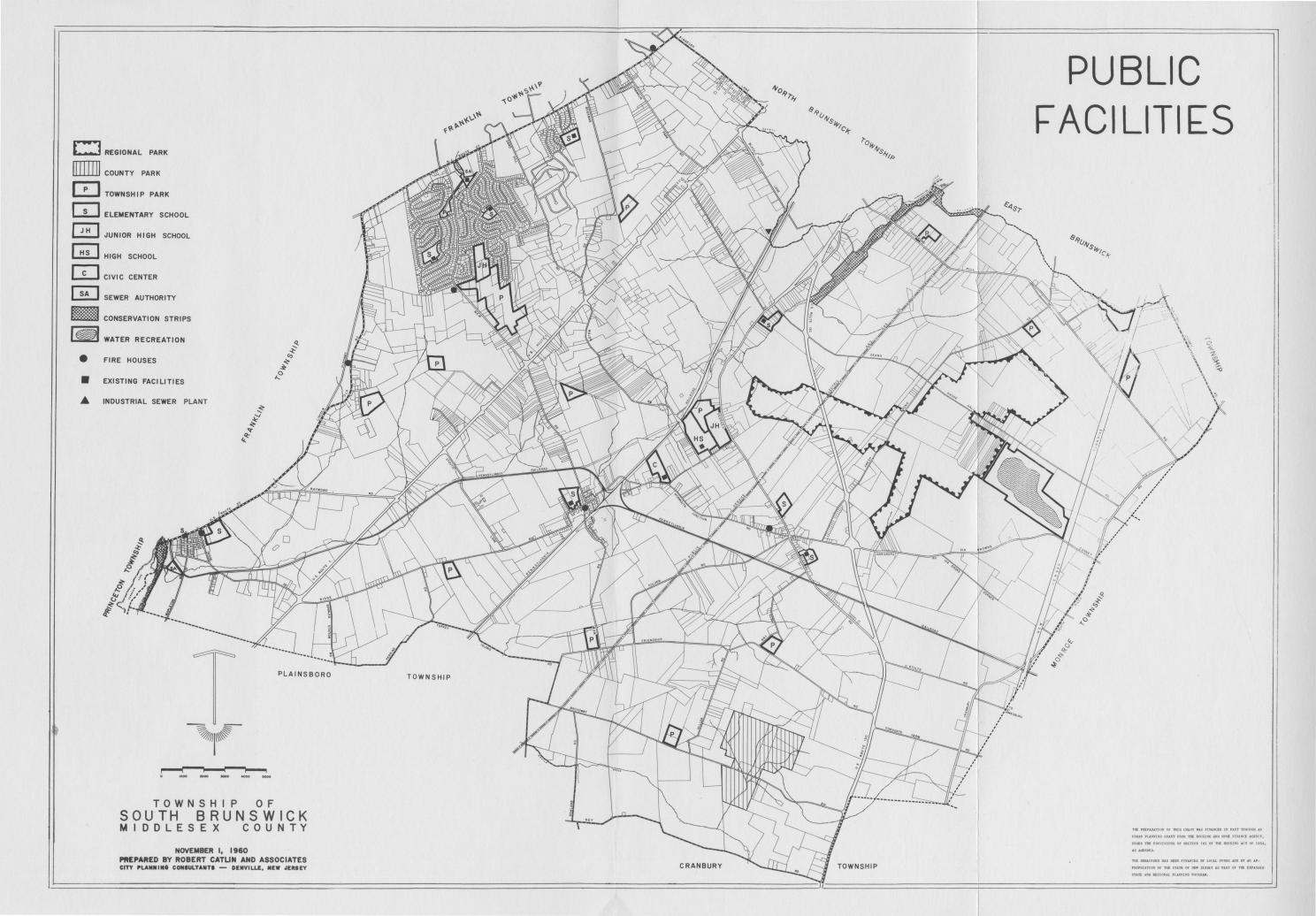
will result in a large fresh water lake. The Township has recently made arrangements to lease and develop part of this land for recreation purposes. It is proposed that this entire tract be purchased and utilized for a third major Township recreation area when the quarry operations have ceased.

CIVIC CENTER Because of its central location, it is proposed that the future administrative needs and expanded

facilities be provided on the 22 acre site presently used for the municipal building. Township garages, an enlarged meeting hall and a public library should be provided in addition to the expanded municipal facilities previously mentioned.

FIRE HOUSES Existing and proposed fire houses are shown on the Public Facilities map.
These stations are shown

generally in the areas which should be served. Actual site locations and construction dates should be left for the future, as the needs occur. It is proposed that primary consideration be given to the location of a firehouse near the Kendall Park area and to the location of water sources in portions of the Township not served by pressure water systems.



COUNTY AND REGIONAL PARKS

The County Master Park Plan indicates a need for County and large park facilities in the

South Brunswick and Monroe Township area. It is proposed that the marginal land on Broadway Road and portions of the Pigeon Swamp be acquired and developed by the County and/or the State of New Jersey in the future. It is also proposed that the land along the banks of Davidsons Mill and Carnegie Lake be purchased by the respective water utility systems to protect against encroachment on these water supplies and to protect the Township from future development problems.

SEWAGE TREATMENT The Public Facilities plate also shows the location of three sewage treatment plants which

will be desirable in the distant future. The Kendall Park and Lake Carnegie plants previously mentioned will serve the residential Service Areas. This plan differs somewhat from the present plans of the sewage authority to install a major pumping facility in the vicinity of Route 1 and Black Horse Lane. This pumping facility was designed to collect sewage from residential development between Franklin Park Road and Finnegan Lane. This present plan does not make provisions to treat industrial sewage resulting from future industrial development along Black Horse Lane.

In view of the Zoning proposal to rezone the previously mentioned residential zone to a non-residential use, it is proposed that a third sewage treatment plant be constructed in the future. Such a plant could serve all the proposed industrial and laboratory zones north

and east of Major Road and would provide good incentive for developing these lands. This plant could be developed either by a public authority or by private capital. It is proposed that the sewage authority proceed with its second stage plans to construct the Carnegie Lake treatment plant instead of the previously mentioned pumping station plans.

THE MASTER PLAN

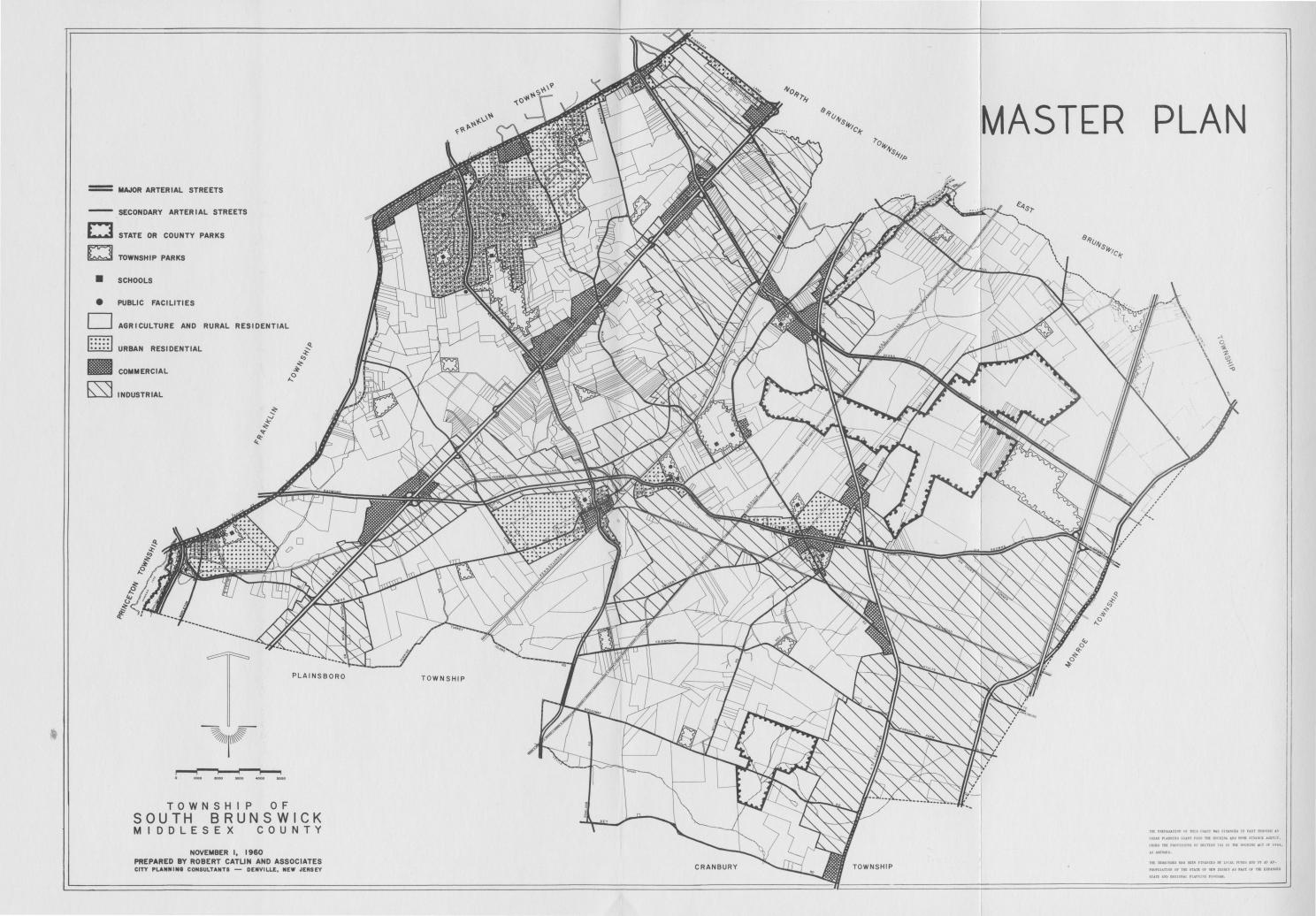
The Master Plan Map is a composite of all the proposals shown on the other plans previously discussed. It is a graphic presentation of the policy decisions made by the Planning Board during its master plan studies. Being a composite, it is generally less specific concerning the details of each individual section of the However, in some instances it must develop beyond the detailed plans by showing a proposed use of land which may be feasible at some time in the future. This is particularily true concerning the land use proposals of the Zoning Map. For example, a large area in Dayton has been shown on the Master Plan map for commercial use. At some time in the future the population of the surrounding area will require and support such facilities. The proposed connection of Fresh Ponds Road and Hay Press Road would provide circulation, access and additional frontage for However, to restrict this land to such uses. commercial development at the present time would be an unreasonable imposition upon the owners of land in the area. When the above mentioned conditions exist or are closer to reality the Zoning Ordinance should be changed to conform to the Master Plan. This illustrates the use of the Master Plan as a guide for future development.

EFFECT OF ADOPTING THE MASTER PLAN The Master Plan is adopted by a resolution of the Planning Board, after a public hearing or hearings have been held. Once the

plan is adopted, the community can use additional powers granted by State Statute to carry out the plan. Proposed streets must be provided and improved as shown on the Master Plan, by any subdivider before receiving final subdivision approval.

School and park lands shown on the plan cannot be built upon for one year after the final approval of the subdivision which gives the community an opportunity to acquire the land. If the Planning Board decides to amend the plan, a public hearing must be held, thus assuring that no action will be taken until all of the Township's citizens have had an opportunity to be heard. In this manner, a continuous and flexible control of the future growth in South Brunswick can be realized.

Adopting the Master Plan also confers a new power of capital improvement or expenditure review to the Planning Board. Public agencies such as an Authority, Board of Education or governing body, must refer contemplated capital improvement expenditures to the Planning Board for study and report. If the Planning Board rejects the expenditure, the referring agency may over-ride the decisions by a full majority vote. Municipal agencies may over-ride the decision by a full majority vote of both the agency and the governing body. This power establishes the Planning Board as a coordinating agency for all community improvements.



THE OFFICIAL MAP

Once a community has decided on a plan for its future growth, there are several provisions in the State Statutes granting powers to carry out the plan. The zoning power discussed previously, regulates the use of land throughout the Township.

The Official Map is a legal document that sets both exact and conclusive locations for existing and proposed parks, drainage rights-of-way and streets in the community. It is adopted by ordinance of the governing body, like the zoning ordinance and prohibits the building of a structure on any street or drainage right-of-way shown on the map. Its purpose is to set forth in exact detail and location, the more general proposals of the Master Plan through actual survey and engineering studies.

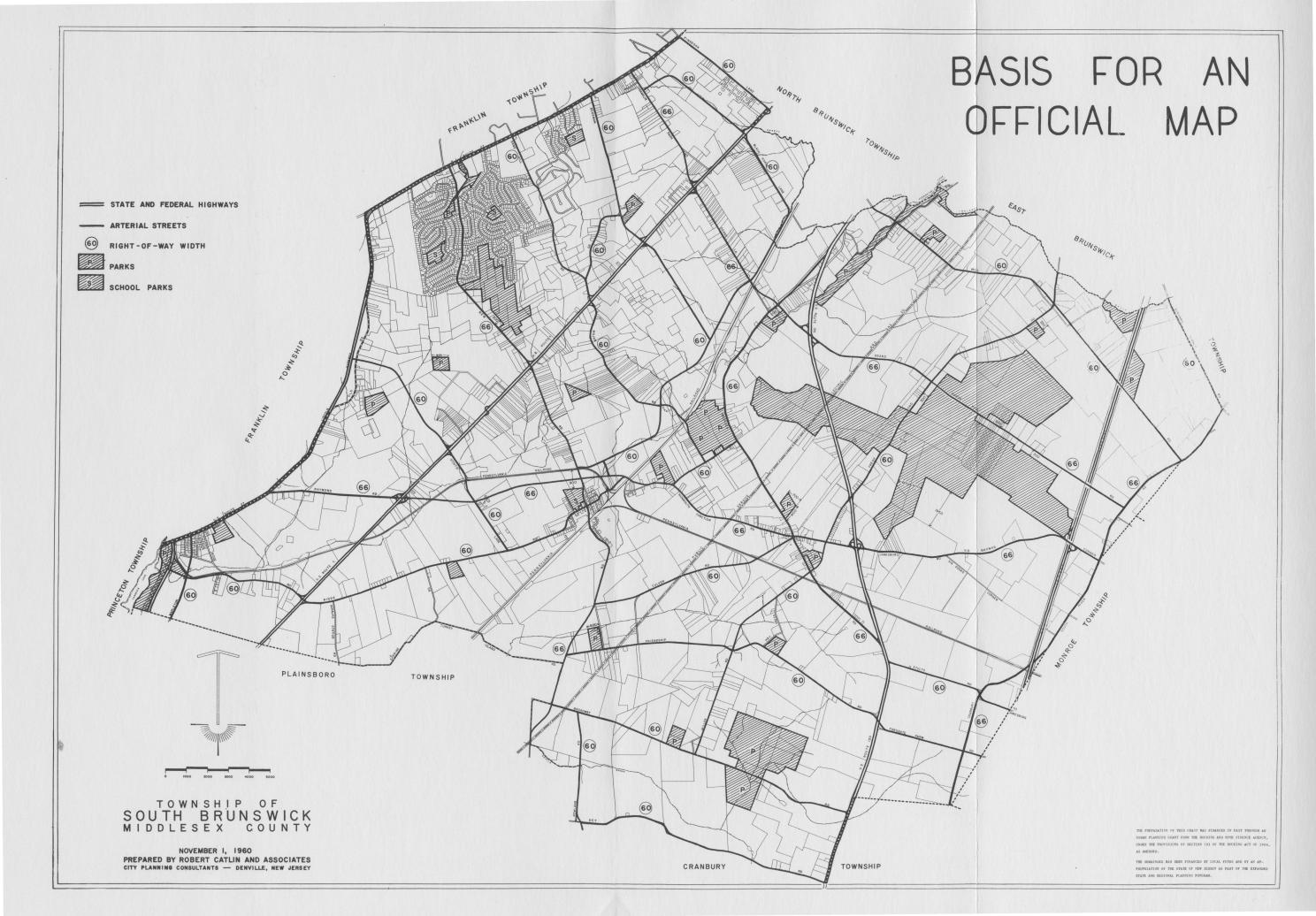
The Official Map also grants the community the power to withhold building permits on any land shown for park or playground purposes, for a period up to one year after final approval of This one year period enables the a subdivision. community to make arrangements for the acquisition of the land. If there is doubt at the time of the request for a subdivision that such a site may no longer be desirable, the land may be removed from the Official Map by amending the ordinance. Every amendment requires a public hearing and referral to the Planning Board. this way, the public and the appointed and elected officials all have an opportunity to review the needs and voice their opinions.

BASIS FOR AN OFFICIAL MAP

The accompanying plate entitled "Basis for an Official Map" is the Planning Board's re-

commendation to the Township Committee for their

consideration in adopting an Official Map. On this map are shown the rights-of-way of existing and proposed arterial streets as well as public park-areas which have been proposed in the Master Plan. The Committee should have a professional engineer prepare a detailed map after establishing exact locations for rights-of-way. The "Basis for an Official Map" shows the type of information that should be included on the Official Map. The Official Map can be adopted in whole or a part at a time.



FINANCIAL PLANNING

One of the most important aspects of any planning program, whether it be family, business or community planning, is an objective analysis of future finances. Expenditures necessary to accomplish the planned for goals must be carefully weighed against the financial demands of the future.

As indicated previously the largest impending financial demand for South Brunswick Township is the need for additional school facilities. Long range financial planning is essential to determine how both these and other needs can best be met without resorting to widely fluctuating or unreasonable tax charges.

DETERMINING THE NEEDS The only logical way to determine the proper course of financial action for the next few

years is to take a long range comprehensive look at all future needs. It is impossible to know in advance exactly all the answers required. However, completely detailed information is not needed to plan for the future. For example, a family faced with providing a college education for a child in five years is able to determine that it will cost approximately \$1500 each year and can readily determine that this approximate cost may represent a large portion of its annual By making plans today to meet this approximate future cost, the family assures itself that when the day comes the goal can be carried out. At the time of the expenditure if the cost is higher than anticipated only minor adjustments will have to be made.

Many of the proposals and needs outlined in the Master Plan studies will be required in the next five years if we plan or not. Others will be

TABLE 7
25 YEAR CAPITAL IMPROVEMENT PROGRAM

SOUTH BRUNSWICK - 1961 (figures in thousands of dollars)

ITEM	URGENT 1962-66	NECESSARY 1967-71	DESIRABLE 1972-86	TOWN	SCH00L	OTHER	
SCH00LS	1902-00	1907-71	1972-00				
Elementary Jr. High High-school	1350 1200 575*	300 1700 500	1200 - 500	- - -	2850 2900 1575	- - -	
MUNICIPAL							
School & Park sites Site Improvement Mun.Bldg. Exp. Beekman Ext. Rt. 1 Overpass Deans La.Realign Monmouth Jct.Rea New St. Realign. Ridge Rd. Realign Ridge Rd.to Bypa Fire House Gen.Roads & Equi Sidewalks (arter Roads, Drains, Sidwal	- - - 1 n ss - p. 200+ ial) 30+	15+ - - - - - - - 50+ 200+ 30+	45+ 200 30 250 60 400 30 10 55 50 600+ 90+	110 75 200 30 100 30 200 30 10 55 50 1000 75		110 - - 150 30 200 - - 50 - 75 50	
TOTAL SCHOOL	3125	2500	1700	-	7325	_	
TOTAL MUNICIPAL	340	455	1370	2115	-	-	
TOTAL OTHER	125	40	450	· -	-	665	
TOTAL	3590	2995	3520			10,105	

⁺ Budget Item

^{*} Allocated

necessary but can be delayed until more urgent matters are resolved. A large number of these proposals for services and improvements which will be desirable or necessary when the Township reaches its "target" population of 20,500 persons. The accompanying 25 Year Capital Improvement Program, shows this breakdown of major improvements and provides a three stage schedule of needs for more detailed study later.

It is evident from this study, that future needs will require large expenditures of public funds for both school and municipal facilities. \$10,105,000 total figures appear extremely large when first examined, as do all accumulative figures over a long period of time. For example. any Township family which spends \$30 each week for food will expend \$39,000 for this purpose The total public during the same 25 year period. expenditure is small when compared to the private investment necessary to bring about the anticipated By 1981 it is estimated that approximately 50 to 60 million dollars will be spent for new homes and that an additional \$17,000,000 will be invested in new commercial, industrial and service facilities alone. This new investment will bring an additional \$1,800,000 in tax revenue a year, based upon the present tax rate. This ever increasing revenue will help buy and pay for the new services and facilities which will be required.

The 25 Year Capital Improvement Program, indicates that an expenditure of \$3,125,000 can be expected for school purposes in the next five years. Municipal expenditures of \$235,000 are proposed for park acquisition and development, of which \$110,000 would be paid for by the Green Acres program. An additional \$46,000 annually is anticipated for road improvement, sidewalks, equipment, drainage and other related items. This expenditure is a normal budget item and is similar to past expenditures.

From 1967 to 1971 it is estimated that \$2,500,000 will be necessary for school purposes. From 1972 to 1986 the program indicates a need for expenditures of approximately \$3,520,000. This figure is similar to the anticipated expenditure of 1962 to 1966. This indicates that there will be enough funds available at that time for other purposes which are not possible to foresee at this time.

PROPOSED IMPROVEMENT PROGRAM After the long range needs have been outlined, a Bonding Program can be drawn up to determine their timing

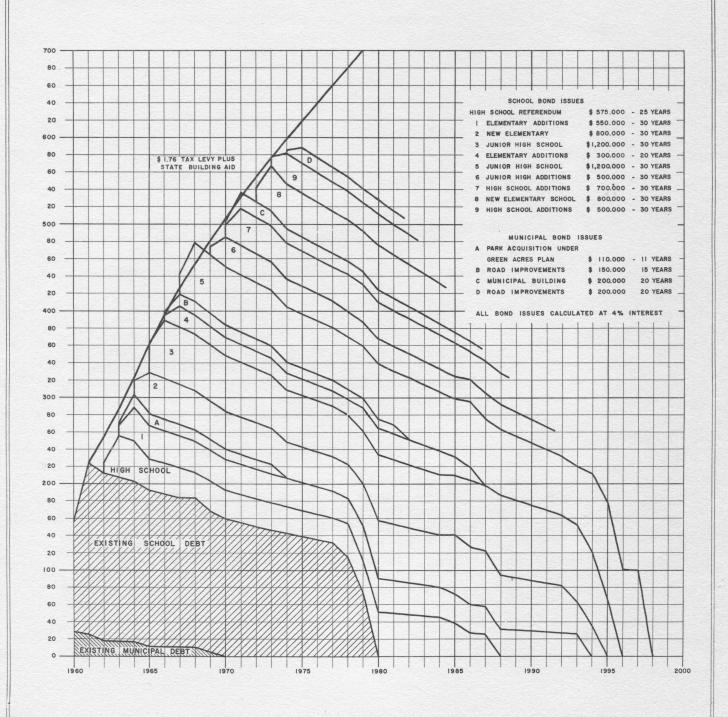
and cost. Based upon the anticipated growth rate, the resulting increase in tax ratables and school building aid funds it is possible to project the annual revenue from any given The Bonding Program plate tax rate charge. shows the projection of a combined \$1.76 tax charge and school building aid. This represents the charge necessary to pay outstanding bonded debt in 1961. This outstanding debt appears in the lower corner of the plate and shows the annual payments necessary to retire this debt. The annual payments necessary to amortize the new proposed bond issues are shown added to that of the existing debt.

The tax and school income curve also points out a significant difference between public financing and private or family financing. A community, unlike a family, has a guaranteed increase in income to compensate for increased growth. In addition, the major facilities provided by a community are built in such a manner so as to be normally used for a 30 to 60 year period. They are used not only by the present residents, but by future residents as well. It is unfair and illogical to place the burden of high debt payments

BONDING PROGRAM

THE PERPARATION OF THIS CHART WAS FINANCE IN PART THROUGH AN URBAN PLANNING CRAFT FROM THE HOUSING AND HOME FINANCE ACENCY, UNDER THE PROVISIONS OF SECTION 701 OF THE HOUSING ACT OF 1954. AS AMERICAD.

THE REMAINDER HAS BEEN FINANCED BY LOCAL FUNDS AND BY AN AP-PROPRIATION OF THE STATE OF NEW JERSEY AS PART OF THE EXPANDED STATE AND REGIONAL PLANNING FROGRAM.



on only half of the population of a community, while the other future half utilizes the facilities provided at no cost. This is especially true when these payments represent a financial burden in the present, but will only represent a small proportion of the total capital debt payments twenty years hence.

Very often a community will finance a large expenditure over a short period of time to "save interest money". This all to often results in unusually high payments, the delay of other needed projects or improvements and undesirable expedients of cost shaving. all of which are economically unsound and cost more in the long run.

For example, the new High School referendum of \$575,000 if amortized over the anticipated 17 year period, will cost approximately \$807,400 with principle payments of 30 and 40 thousand dollars annually plus interest payments. If this same bond issue was amortized over a 28 year period with annual principal payments of only \$20,000 plus interest, the total cost will increase to \$944,000 or \$136,600 more than the 17 year issue due to accumulated interest. However, by the end of the seventeenth year, the short term issue has cost \$807,400 including interest while only \$633,700 has been paid on the 28 year issue including interest payments, a difference of \$173,700.

If the costs of these issues are applied on a cost per family basis predicated upon the anticipated growth rate for South Brunswick, the per family cost of the 17 year issue is \$173 and the cost of the 28 year issue is \$179. In other words, if the debt is amortized over a 17 year period the annual cost per family is \$10.17. If the same debt is amortized over a 28 year period

the annual cost per family would be \$6.39. It should be pointed out that this is a hypothetical situation used only for comparative purposes. The actual cost is applied to the assessed valuation taxable in the community which includes non-residential However, the same conclusions apply ratables. to the effect upon tax levies. For the 28 year issue the annual cost per family is substantially lower due to smaller principle pay-The overall cost per family is almost ments. the same due to increasing numbers of families to share the cost.

The Bonding Program plate clearly illustrates the past policy of the Township in issuing short term bond issues. This has resulted in high annual payments which abruptly terminate in 1979 leaving an inadequate reserve of annual funds available until that time.

In order to meet the needs which are anticipated during the next ten years, it will be necessary to either increase the tax rate charge or issue long term bonds. The Bonding Program has been designed to show that the latter course can be followed. It can be seen that the annual payments either exceed or are below the revenue brought in by the \$1.76 tax charge and State building aid. As these excesses balance out to a minimum, it would appear that a small increase to \$1.80 in the tax rate charge would provide a more suitable margin for unexpected needs and to allow for the speeding up of the program in the later years.

Carrying out the Bonding Program is dependent upon the Township rate of growth, school building aid and the tax-ratable increase. By comparing these inter-related factors each year with the Bonding Program plate, the community officials and the Planning Board can predetermine trends and changes to be taken into consideration. This type of annual review will result in a stable tax rate charge and will most economically fulfill the needs of the community.

CARRYING OUT THE PLAN

Since its' creation, the Planning Board has been an administrative body concerned with the regulations of the Zoning Ordinance and the Land Subdivision Ordinance. This function. though important and time consuming, is not the primary function of the Board. Its' principal duty is that of preparing and adopting a plan for the future development of the Township and of coordinating both public and private development toward the goals of the plan. During the last eighteen months, the Planning Board with their consultants have developed this Master Plan Report as the first step in establishing a plan to guide the future development of South Brunswick.

During the next few months the Planning Board will collect and analize the many suggestions, opinions and proposals which will come from the residents of South Brunswick, by letter, conversations and public hearings. Only then will the Board be in a position to make final determinations upon the many proposals placed before the public in this report. After making any necessary changes the Planning Board can adopt the Master Plan as its guide for the future development of South Brunswick.

The Planning Board is aware of the fact that its real proof of accomplishment will be the actual physical development of the Township following the proposals of the Master Plan. Once this plan is officially adopted, the responsibility of coordinating both private and public development on a comprehensive basis will rest upon the Board.

ANNUAL CAPITAL IMPROVEMENT REVIEW

In order to effectively coordinate the efforts of the many public agencies involved with the ex-

penditure of public funds, the Planning Board

must continually review the actual needs and growth of the Township. The most effective method to accomplish this is through a 5 or 6 year Capital Improvement Program. Essentially, the Capital Improvement Program sets forth the projects and improvements which the Planning Board feels should be undertaken during the next 6 years. In order to prepare such a program, the Planning Board must look into the activities and needs of the various public agencies as well as the needs of the Township in general. This initial study and its conclusions are necessarily incomplete. will be numerous items of community improvement overlooked in such a study. Conversely, the purpose of making this study is to present items, expenditures and policy to the various public agencies which may be overlooked by them

An example of a Capital Improvement Program is shown on the accompanying plate. This example is not meant to be accurate in determining the actual needs of South Brunswick for the next It has been prepared to show the type of information which the Planning Board should prepare and make available so that the public agencies concerned with such items can compare their own studies to the suggestions of the Planning Board. By reviewing the Capital Improvement Program presented by the Board, each agency is provided with an overall picture of community expenditures allowing them to prepare their own budgets on a more comprehensive basis.

The accompanying plate also illustrates the effects of a stable tax rate charge discussed in the previous chapter. It can be seen how the surplus funds of some years are used to balance out deficits in other years for major capital improvements.

TABLE 8
TOWNSHIP OF SOUTH BRUNSWICK

SIX YEAR CAPITAL IMPROVEMENT PROGRAM

December - 1961

ITEM	ALLOCATED	1961	1962	1963	1964	1965	1966	1967
BOND ISSUES Outstanding Municipal Outstanding School Authorized High School Elementary Priority #2 Elementary Priority #2 Junior High Priority #4 Junior High Priority #4 Junior High Priority #4 Green Acres Land Acqui Road, Walk and Drainag	2 2 4 4 4 5 Lsition	25,550 198,618 	17,925 194,301 11,500 	17,437 190,116 48,000 12,000 2,200	16,950 185,890 47,000 39,000 16,000 14,400	11,463 181,566 36,000 38,400 47,000 24,000 14,000	11,128 177,441 35,400 37,800 46,400 68,000 6,000 13,600 3,000	10,800 173,114 34,800 37,200 45,800 67,200 22,000 24,000 13,200 16,000
TOTAL BOND PAYMENTS		224,168	223,726	269,753	319,240	352,429	398,769	444,114
Est. income from \$1.76 to charge and State Aid	ıx	224,200	253,000	287,000	322,500	361,000	395,500	424,000
SURPLUS FUNDS + INTEREST			29,274	47,692	52,859	63,544	62,817	45,216
BUDGET ITEMS Road repair & improvent Road Equipment Park & Recreation Impact Capital Improvement Fu		37,000 10,000 4,000 5,000	35,000 10,000 3,000 5,000	35,000 10,000 3,000 5,000	35,000 10,000 3,000 5,000	35,000 10,000 3,000 5,000	35,000 10,000 3,000 5,000	35,000 10,000 3,000 5,000
TOTAL ANNUAL APPROPRIATIO	N	280,200	309,000	343,000	378,500	417,000	451,500	480,000

This procedure has proved of great benefit to the governing bodies and Boards of Education in communities throughout the country, enabling them to see what the future holds in the way of major expenditures. This allows them to prepare their annual budgets on a comprehensive basis and provides adequate warning of impending needs so that thorough studies can be made to determine the most economical and responsible method of meeting these needs.

By being a source of constant reminder to the citizens and officials, the Capital Improvement Program has resulted in carrying out many aspects of a Master Plan program, which would otherwise not have been accomplished. Finally, it is an effective tool to insure that the large capital needs determined in the previous studies, will not impose undue or unanticipated tax burdens on the residents of South Brunswick.

COORDINATING DEVELOPMENT

By adopting the Master Plan, the Planning Board's control of private development is greatly increased.

The proposals of the Master Plan also deal with most aspects of community government. In its annual review of population growth and of the six year capital budget, the Planning Board will make recommendations to the various public bodies to initiate certain improvements of the plan. this manner, both private and public development are coordinated by the Planning Board and are guided toward the goals of the Plan. It is proposed that the Planning Board be enlarged to seven or nine persons as provided by law. additional members will enable the Board to carry out its new duties and responsibilities created by the adoption of a Master Plan.

PLANNING IS CONTINUOUS

There is no such thing as a plan that provides for all possible future events. Any plan must

be continually reviewed and altered as conditions change. If it is not continuously reviewed, it soon becomes impractical. A plan can also be well devised and practical but if it is not implimented and carried out, its goals cannot be realized.

In order to impliment the many Master Plans which have been developed in recent years with State and Federal funds, the State of New Jersey, has created a Continued Planning Assistance Program. It is designed to encourage communities with Master Plans, to continue the review and implimentation of their plans by paying part of the cost of retaining professional planning consultants or employing a planning director. This points out the new role of the Planning Board, whether assisted or not, in the development of the future community.

During the next twenty years the membership of the Planning Board, Township Committee, Board of Education and administrative personnel will change many times. The main purpose of the Master Plan is to guide these many individuals toward a common goal and the sound development of South Brunswick. In the final analysis it is up to the Planning Board and the residents of South Brunswick to make sure that each new individual study, understands and carries out the basic goals and objectives of the plan.

Changing trends, personnel and goals are inevitable and it is essential that the Planning Board and the Township keep abreast of these changes with a continuing flexible planning program. The alternative is uncontrolled growth, unattractive and detrimental development and unnecessary community expense.

THE PLANNING BOARD TOWNSHIP OF SOUTH BRUNSWICK

1961

FRANK CAMILLI - Chairman
ABRAHAM DOBIN - Mayor
WARREN PARMENTER
WILLIAM BIERNE, JR.
HENRY VON THUN

JOHN FOUNTAIN - Secretary

1962

JACK STEIN - Chairman RICHARD CASEY - Mayor HERBERT WRIGHT FRANK CAM JOHN FOUNTAIN

CONSULTANTS

ROBERT CATLIN and ASSOCIATES

STATE SB P71 .2/P

