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August 1982

Twp. of Bedminster "Master Plan Program" prepared by R.T. Coppola + Associates.

Notes: very thick file ~~[illegible]~~, 200+ pages

maps included

Township of Bedminster

Somerset County · New Jersey

Master Plan Program

August, 1982

Part I Background Studies

PREPARED BY: Richard Thomas Coppola
and Associates
Princeton Junction, N. J.
License No. 1378

Township of Bedminster

Somerset County · New Jersey

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Foreword

FOREWORD

The Planning Process of Bedminster Township

The planning process of any municipality is a continuing program of study, discussion, coordination and direct action which is intended to provide perspective and understanding to developmental decisions. The planning process is comprehensive in three ways: first, it involves both the short and long range in terms of time; second, though centered on the guidance of physical change, appropriate consideration is given to social and economic factors; and, third, while implemented by local action, there is careful consideration given to county, regional and state recommendations and requirements.

The planning process of Bedminster Township has benefited from a unique experience; viz. the extended zoning litigation with the Allan Deane Corporation. During the eleven (11) year duration of the litigation, the pros and cons of the Township's planning process were scrutinized and debated. The professional goals and policies of the municipality and the factual bases for the planning decisions of the municipality were presented and analyzed in terms of their reasonableness. The litigation culminated in a December 1979 Court Decision and a subsequent March 1980 Court Order which required the municipality to rezone its land in accordance with certain specified directives, including specific guidelines regarding the location and extent of high density residential and intensive non-residential development within the Township's bounds.

The Master Plan of Bedminster Township consists of two (2) principal documents, although numerous other documents and studies are referenced. The Background Studies, which are presented in this document involve research, fact finding, analysis and problem definition. A clear understanding of Bedminster Township's problems and potentials provides a rational basis upon which to predicate judgements and decisions affecting the future development of the municipality. Much of the information contained within the Background Studies is not new to the planning process of Bedminster Township; however, for the first time, the information has been aggragated and presented in textual and graphic form.

The Development Plan, which is presented in a separate document, evolves from the Background Studies and outlines in broad terms the developmental choices which seem logical in the contect of past trends, present conditions and informed assumptions about the future growth of the municipality. The Development Plan coordinates all relevant objectives, proposals and standards felt appropriate in determining and clarifying developmental decisions appropriate at the municipal level of government.

A Master Plan, including both the Background Studies and Development Plan portions, is a guide which is adopted by the Planning Board. The laws to implement the Master Plan, however, are the responsibility of the governing body and ordinarily include the adoption of Zoning and Subdivision Ordinances and may include a Capital Improvements Program and an official Map.

In order for the municipal planning process to remain viable, systematic review and re-evaluation of the Master Plan and the implementing Ordinances is necessary in order to prevent their rapid obsolescence. The rate, location or character of actual growth may require adjustment of basic assumptions in the light of new knowledge and changed conditions. Moreover, the degree of success in implementing certain aspects of the Plan may suggest a shifting in the general approach. The review and re-evaluation procedure is a part of the comprehensive planning process and is necessary in order to keep the municipality attuned to current and future needs which can be more clearly foreseen and dimensioned as time passes. The Municipal Land Use Law requires that such a review and re-evaluation be accomplished no less frequently than once every six (6) years.

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Existing Land Use Analysis

EXISTING LAND USE ANALYSIS

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EXISTING LAND USE ANALYSIS

INTRODUCTION

Bedminster Township is situated in the northwestern corner of Somerset County and contains approximately 26.70 square miles or 17,088 acres of land area. It is traversed north - south by State Routes 202 and 206 and east - west by County Route 512 (Pottersville Road), County Route 523 (Lamington Road) and County Route 620 (Burnt Mill and Washington Valley Roads). Additionally, Interstate Routes 78 and 287 traverse the southernmost portions of the Township, with a major system of traffic interchange in the Pluckemin Village portion of the Township between the Interstate highways themselves and between Interstate 287 and State Route 202/206.

Bedminster Township is bounded on the east by the Borough of Peapack and Gladstone, the Borough of Far Hills and Bernards Township; by Branchburg and Bridgewater Townships to the south; by Readington and Tewksbury Townships to the west and by Chester Township to the north. Significantly, the western and southern municipal boundaries are the Lamington River and Chambers Brook.

The Township is predominantly rural in character, with limited concentrations of development within Bedminster Village around the Lamington Road/State Route 206 and State Route 202/Hillside Avenue intersections and within Pluckemin Village around the intersection of Burnt Mill and Washington Valley Roads with State Routes 202/206. Another Village area known as Pottersville is located in the northwestern corner of Bedminster Township where Somerset County abuts Morris County to the north and Hunterdon County to the west.

An analysis of existing land use documents the current physical development of the municipality and is the fundamental first step in formulating a plan for the allocation of future land uses. Only by mapping the various land uses within a jurisdiction can the underlying relationships between these uses be brought into clear focus. Additionally, an analysis of existing land uses reveals areas in a municipality where current development trends, coupled with other variables which serve to control the physical development of land, may engender future land use related problems, such as destruction of environmental resources, the compounding of traffic and circulation problems or the disruption and degradation of existing neighborhood areas.

METHOD OF PREPARING THE BASE MAP

The Base Map used for the presentation of the graphic material within this report, and throughout the 1981 Master Plan Program of Bedminster Township, has been prepared from Bedminster Township Tax Map information as provided by the Township Engineer. Aerial photographs acquired from the Somerset County Planning Board and maps of the Interstate highway network acquired from the State Department of Transportation were used to refine the drawing of the map. Finally, field observations of the existing improvements to the road surfaces were documented and generally depicted on the map.

The Base Map was originally drawn at a scale of 1" = 800'; however, the map was photographically reduced to a scale of 1" = 3200' to be printed on 11 x 17 sheets. At this scale, one (1) square inch equals approximately 235 acres. The users of the maps, therefore, should be aware of the inherent limitations of portraying graphic material at this scale; while the information is shown as accurately as possible, slight distortions in the drafting and reproduction process will necessarily be magnified several times due to the extreme reduction in the scale of the map.

LAND USE CLASSIFICATIONS AND DISTRIBUTIONS

During the Spring of 1981, a field survey was undertaken to determine the existing land uses throughout Bedminster Township on a lot-by-lot basis. In addition to the field survey, aerial photographs were utilized to ascertain the locations of structures on relatively large tracts of land set back significant distances from the roadways. The findings of the survey are illustrated on Plate. Ex. L. U. -1, "Generalized Existing Land Use". Seven (7) land use categories have been generated from the findings of the field survey to include all lands within Bedminster Township.

As tabulated on Plate Ex. L. U. -2, approximately 13,837 acres, or 80.97% of the Township's land area, are included in the "farmland and vacant" categories. While these lands may be considered the undeveloped lands in Bedminster Township, the lands are not necessarily appropriate for development. The environmental, historic, transportation and community facility limitations imposed upon the undeveloped lands in the Township significantly restricts their availability for future development. Additionally, legitimate policy decisions concerning the preservation of agricultural lands and open space conservation will limit further the amount of lands which may be considered available and appropriate for new development.

Residential Land Use

As noted on Plate Ex. L. U. -2, approximately 2,426 acres or 14.20% of the Township's land area are devoted to single family residential construction.

The existing residential construction in Bedminster Township is of four (4) major types:

First: The Villages of Pluckemin, Bedminster and Pottersville include many old and architecturally significant residential structures situated on relatively small parcels of land. Within Pluckemin and Bedminster Villages, many of the houses front directly on State Routes 202 and 206 and are interspersed among commercial uses sharing the same highway frontage.

Second: A large number of residential structures are situated on large tracts of land set back significant distances from the public road network. These estates, farms,

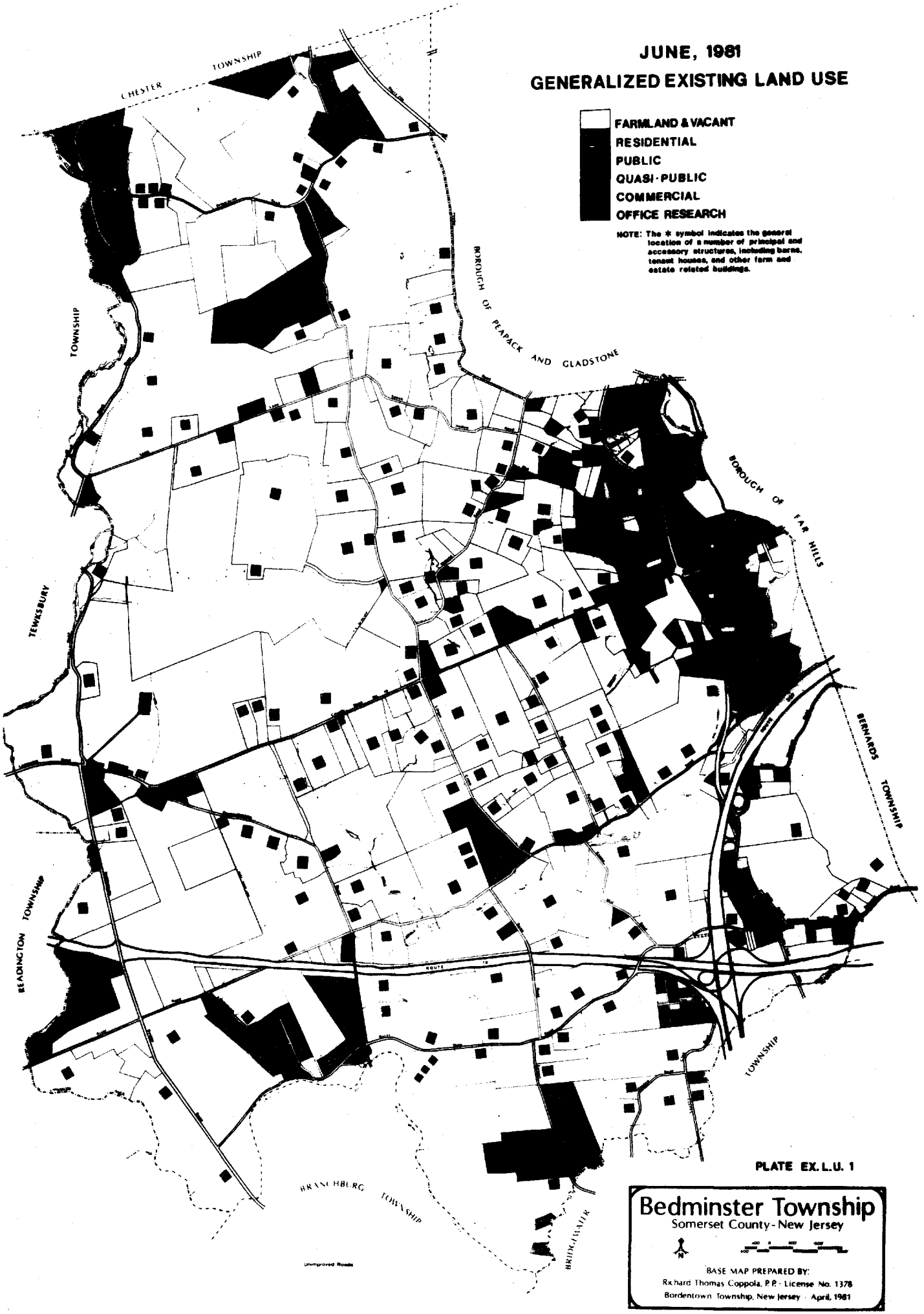
JUNE, 1981
GENERALIZED EXISTING LAND USE
FARMLAND & VACANT
RESIDENTIAL
PUBLIC
QUASI-PUBLIC
COMMERCIAL
OFFICE RESEARCH
NOTE: The * symbol indicates the general location of a number of principal and accessory structures, including barns, tenant houses, and other farm and estate related buildings.
CHESTER TOWNSHIP
TOWNSHIP
BOROUGH OF PEAPACK AND GLADSTONE
BOROUGH OF FAR HILLS
TEWKSBURY
BERNARDS TOWNSHIP
READINGTON TOWNSHIP
ROUTE
TOWNSHIP
BRANCHBURG TOWNSHIP
BRIDGEWATER
Unimproved Roads
PLATE EX. L.U. 1
Bedminster Township
Somerset County - New Jersey
BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey - April, 1981

Plate Ex. L. U. -2

Existing Land Use Acreage Distribution
Bedminster Township, 1981

Land Use Categories	Approximate Acreage	Percentage of Total
Farmland	12,605 acres	73.76 %
Residential	2,426	14.20
Public	352	2.06
Quasi-Public	330	1.93
Commercial	69	0.41
Office Research	74	0.43
Vacant	1,232	7.21
	17,088 acres	100.00 %

NOTES:

- Bedminster Township contains 26.70 square miles or 17,088 acres.
- Yellow square designations for "residential" uses were attributed five (5) acres each.
- "Farmland" category indicates acreage qualified under the Farmland Assessment Act, October 1981.

SOURCE: Richard Thomas Coppola and Associates planimetric measurement of "Generalized Existing Land Use" map dated June 1981 and "Land Under Farm Assessment" map (Plate N.R.I. 12) dated October 1981.

or country homes as they may be called, enjoy the wooded and serene natural setting of the central and western portions of the Township and serve to enhance and solidify the prevailing rural residential character which predominates Bedminster Township.

Third: As is true with most ex-urban land areas, a number of residential lots have been created along the frontage of the existing roadways. While this "ribbon residential" pattern of single family development is not as evident in Bedminster Township as it is in other municipalities with similar densities, a significant number of residences have been constructed on relatively small lots along the existing roadways. Essentially, the "ribbon residential" development pattern exploit the existing frontage of the rural collector road network to permit the maximum number of single family residences without the necessity of new road construction.

Fourth: Relatively recent major subdivision development has occurred, primarily in the northeastern portion of the Township north of Bedminster Village. This type of residential development is more exemplary of the traditional suburban tract development and provides well planned roadways with controlled access points to the major roads in the Township.

Public Land Use

The public land uses in Bedminster Township are illustrated in green on the Generalized Existing Land Use map. Included in this category are the Pottersville Volunteer Fire Company, the Bedminster Municipal Building, the Far Hills/Bedminster First Aid Squad, the Bedminster Elementary School, the Green Acres park known as "The Pond", the Bedminster Township Sewerage Treatment Plant, the Bedminster Public Works Garage, the New Jersey Department of Transportation Maintenance Facility and the Pluckemin Schoolhouse which serves as the Municipal Building Annex and houses the Municipal Court and the Police Department. Together the public lands in Bedminster Township amount to approximately 352 acres or 2.06%.

Quasi-Public Land Use

The quasi-public land uses in Bedminster Township are illustrated in blue on the Generalized Existing Land Use map and include approximately 330 acres or 1.93% of the Township's land area. Included in this category are the Clarence Dillon Library, the Fiddlers Elbow Country Club, the Somerset Airport Facility, Fairview Farm, the Purnell School, and a number of churches, cemetaries and clubs throughout the municipality.

Commercial Land Use

Commercial land uses in Bedminster Township are illustrated in red on the Generalized Existing Land Use map and comprise a total of approximately 69 acres or 0.41% of the Township land area. Almost all of the commercial development which has taken place to date in Bedminster Township is situated within and around the Villages of Pluckemin and Bedminster, along the Route 202/206 corridor of development in the eastern portion of the Township. The array of commercial land uses include a number of gas stations and the small neighborhood shopping center situated at the intersection of Washington Valley Road and State Routes 202/206; however, the predominant commercial land use type in the Township is a small-scale office or merchant shop as opposed to the automobile oriented commercial strip development ordinarily found along the frontages of major highways.

Office Research Land Use

Office research uses in Bedminster Township are illustrated in purple on the Generalized Existing Land Use map and comprise a total of approximately 74 acres or 0.43% of the Township's land area. The physical development of office research uses is limited to the Research-Cottrell facility between Routes 206 and 202 south of Lamington Road and the A.T.& T. Long Lines complex located north of the I-287 and east of State Routes 202/206 and the north branch of the Raritan River.

CONCLUSION

Having individually discussed each of the various land use types within Bedminster Township, it is important to understand the composite of inter-relationship of the various land uses and what effects the various uses have upon one another. Responsible planning for the future dictates that attention be paid both to the avoidance of conflicts between incompatible land uses and to the maintenance and protection of existing neighborhood areas.

Clearly, the distribution of existing land uses in Bedminster Township is heavily oriented to the Route 202/206 corridor in the eastern portion of the Township; every category of land use is well represented, and almost all of the public, commercial and office research uses are located within this portion of the Township.

The Township has been, and will continue to be faced with the choice of continuing to concentrate future development within the Route 202/206 corridor through the Township or, in the alternative, dispersing development in a homogenous fashion throughout the central and western portions of the municipality.

There are distinct planning advantages to concentrating development within the corridor alignment including the economies of scale associated with the construction and delivery of necessary community facilities and services such as water facilities and police, fire and first aid protection. Moreover, there are energy conservation advantages because of the location of job opportunities and consumer retail enterprises in close proximity to the anticipated residential population. Additionally, by channeling the higher density

residential development and more intensive non-residential development to specified areas, other portions of the Township may be appropriately maintained with the existing rural residential character which has emerged.

The decision to concentrate development within a specified area, however, requires attention to potential problems such as traffic congestion, the possible conflict of future development and existing neighborhood areas (including the villages of Bedminster and Pluckemin in Bedminster Township), and environmental problems associated with the degree of concentrated development and the capacity of the environment to absorb the development.

Traffic and Circulation Analysis

TRAFFIC CIRCULATION ANALYSIS

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TRAFFIC AND CIRCULATION ANALYSIS

INTRODUCTION

The purpose of the Traffic and Circulation Analysis is twofold. First, it is a documentation of the characteristics of the existing road network throughout the Township of Bedminster. This element of the report is intended to summarize the operation of the existing roadway network with emphasis given to those situations where the present network appears to be deficient. Second, the Traffic and Circulation Analysis identifies present plans by the Somerset County Planning Board, the State Department of Transportation and the Township itself to modify and improve the road network within the municipality.

The organization of this analysis involves a series of investigative discussions in which several aspects of the transportation network are analyzed.

OVERVIEW

The conversion or redevelopment of land area for productive uses, such as commercial, residential or industrial, depends upon the factor of accessibility. Historically, proximity was the only way to achieve this necessary requirement for urbanization. Homes and business establishments were located so as to require the least amount of travel time between trip destinations. Traveltime, in turn, has been determined by the prevailing level of technology in that period of history. The antecedents of today's scattered nodes of development were strongly influenced by the prevailing transportation modes of the period. The horse and wagon mode of transportation 100 years ago required that the settlements be compact and closely spaced. Other towns had their geneses in the locations of railroad stations. Today, the attenuated growth along many of the state and county roads is attributable to the location preferences of today's automobile era.

It is important to recognize the interrelationships between land use and the generation of vehicular traffic. If we understand this relationship, it will act as another parameter in both the allocation of future land uses and the need for improvements to the traffic and circulation network.

All vehicular trips are made for some purpose, and the best index of this human activity is land use. While one of the chief determinants of residential location is the easy access to employment, an entrepreneur generally prefers locations adjacent to high volumes of traffic, possibly at the intersections of major roads with access to other commercial or industrial locations within the region. Chronologically, the majority of new residential and commercial construction will take place along the existing road networks. As the population continues to grow and the attendant volume level of traffic also increases, increasing conflicts and an overburdening of the existing transportation network is encountered. We often hear a great deal about what is considered to be the transportation "problem". Essentially, it is a summation of all of the aspects of the present highway system about which people don't like.

1. Accidents: These are probably the most dramatic and costly conflicts of the transportation problem. During the twelve (12) month time period between October 1, 1980 and September 31, 1981, a total of 126 accidents occurred within the Township of Bedminster, resulting in one (1) fatality.

2. Congestion: People do not like to waste time. Wasted time results in excessive operating costs for the automobile and is also extremely upsetting. Moreover, slow moving 'stop and go' vehicular traffic emits air pollutants which can significantly diminish air quality.

3. Inefficient Investment: People do not like paying taxes to have roads constructed and maintained. Transportation improvements should carefully be analyzed to insure that the cost of the improvements do not exceed the anticipated benefits.

4. Ugliness: As mentioned above, the very fact that transportation networks act as a catalyst for residential and commercial development has spurred the construction of strip highway commercial development which is often aesthetically unpleasing, detracts from the natural aesthetic beauty of the surrounding area, and, in many instances, is the chief cause of increased traffic accidents.

5. Strain, Discomfort and Noise: Motorists using highways and residences abutting highways are often subjected to the nuisances generally associated with heavily traveled roads. The dust and dirt, the air pollution, the excessive noise and the vibrations of heavy trucks subject travelers and residents alike to excessive strain and discomfort.

All of the above listed elements of a circulation system should be addressed in the formulation of future transportation improvements and in the allocation of future land uses.

There rarely will be one totally satisfying solution to transportation problems since in a balanced community businesses, residences, recreational and other centers must exist together; thus, a certain amount of conflict is inherent. It is the task of those in a planning role to minimize this conflict be segregating certain land uses and densities and planning for a circulation system which, on the whole, will best serve the community for the present time and for the future as well.

LOCATION

Bedminster Township is located in a rural portion of Somerset County. Historically, the Township has been somewhat distant from primary transportation corridors within the State, although State Routes 202 and 206 traverse the eastern portion of the municipality in a northwest direction. However, it was only with the construction of Interstates 287 and 78 that the significance of State Routes 202 and 206 as major traffic carriers became an important factor in the planning process.

Most significant regarding the Interstates in Bedminster Township is the collection of on-off ramps and jughandles which serve to move traffic between Interstates 78 and 287 and between the Interstates and State Routes 202/206.

The location of this interchage system, in the southeastern portion of Bedminster Township near the Village of Pluckemin and the Bridgewater Township boundary, has created dramatic pressures for both residential and non-residential development at densities and intensities far exceeding those previously envisioned and desired by the Township. The resolution of the Bedminster Township v. Allan Deane Corporation litigation during 1980 mandated a zone plan which emphasizes the importance of the Interstate and State highways to handle the expected volumes of traffic. The urgent necessity of planning and constructing modifications and improvements to the existing road network within and around the Village of Pluckemin is recognized by the Township, Somerset County and the State of New Jersey.

JURISDICTION OF ROADS

Plate Tr. & Circ.-1 indicates the jurisdiction of roads within Bedminster Township. Interstates 78 and 287 and State Routes 202 and 206 are the major traffic carriers within the municipality. With the exception of the modest interchange between Interstate Route 78 and Rattlesnake Bridge Road in the southwestern portion of Bedminster Township, the traffic on the Interstate and State highways is oriented to the Route 206 corridor extending north-south in the eastern portion of the Township.

Roads under the jurisdiction of Somerset County include Route 512 (Pottersville Road), Route 523 (Lamington Road), Route 620 (Burnt Mill-Washington Valley Road) and the Route 523 523 Spur (Rattlesnake Bridge Road). With the exception of Rattlesnake Bridge Road, the roadways under Somerset County jurisdiction provide an east-west link to the aforementioned Route 206 corridor.

The remaining roadways in Bedminster Township are under municipal jurisdiction or are privately owned and maintained. As indicated on the Base Map, a large number of these roadways and portions thereof are unimproved; either being totally unpaved or improved with the "country asphalt" of tar and stone. Private roads within the Township, some of which are indicated on the Base Map, include Knox Avenue, Thosmor Road, Hills Drive, Willow Avenue, Washington Place, Victory Road, Preston Terrace, Somerset Terrace, Old Farm Road, Old Farm Lane and White Oaks Lane.

EXISTING ROAD FUNCTIONS

Each of the various roads in Bedminster Township is called upon to perform a different type of function in the overall transportation network. For planning purposes, roads are generally classified into three (3) major types: arterial, collector or local. Each of these types defines a certain functional range.

Local streets should function primarily as access points to abutting properties, both for vehicles and pedestrians. Collector streets, in theory, should gather traffic from the local streets before the design capacity of the local streets is exceeded. This traffic is then funneled to traffic generators or to arterial roads. Depending on the volume, source and composition of the traffic, collector roads may be broken down into major and minor collectors. Major collectors are those roads which run between arterial roads or link major traffic generators with the arterial network. Traffic characteristics

Jurisdiction of Roads

SOURCE: Somerset County Planning Board, 1981.

PLATE TR. & CIRC. 1

of this type of collector tend to have a higher percentage of trucks than secondary collectors. On the other hand, minor collectors tend to carry primarily residential traffic and lower volumes. Becuase of these lower volumes and non-commercial characteristics, minor collectors may be designed with lesser right-of-way widths and surface bearing capacities. Finally, arterial roads have, as their prime function, the transport of regional traffic - - traffic characterized by high volumes, extended destinations or substantial number of commercial vehicles. Ideally, arterial and collector roads should have limited or strictly regulated access points to insure an uninterrupted flow of traffic.

Plate Tr. & Circ.-2 identifies the functional classification for roadways within Bedminster Township as defined by the Somerset County Planning Board during the preparation of their 1978 Transportation Plan. As indicated, with few exceptions, all of the roads classified as performing either an arterial or collector function are under the jurisdiction of either the State of New Jersey or Somerset County.

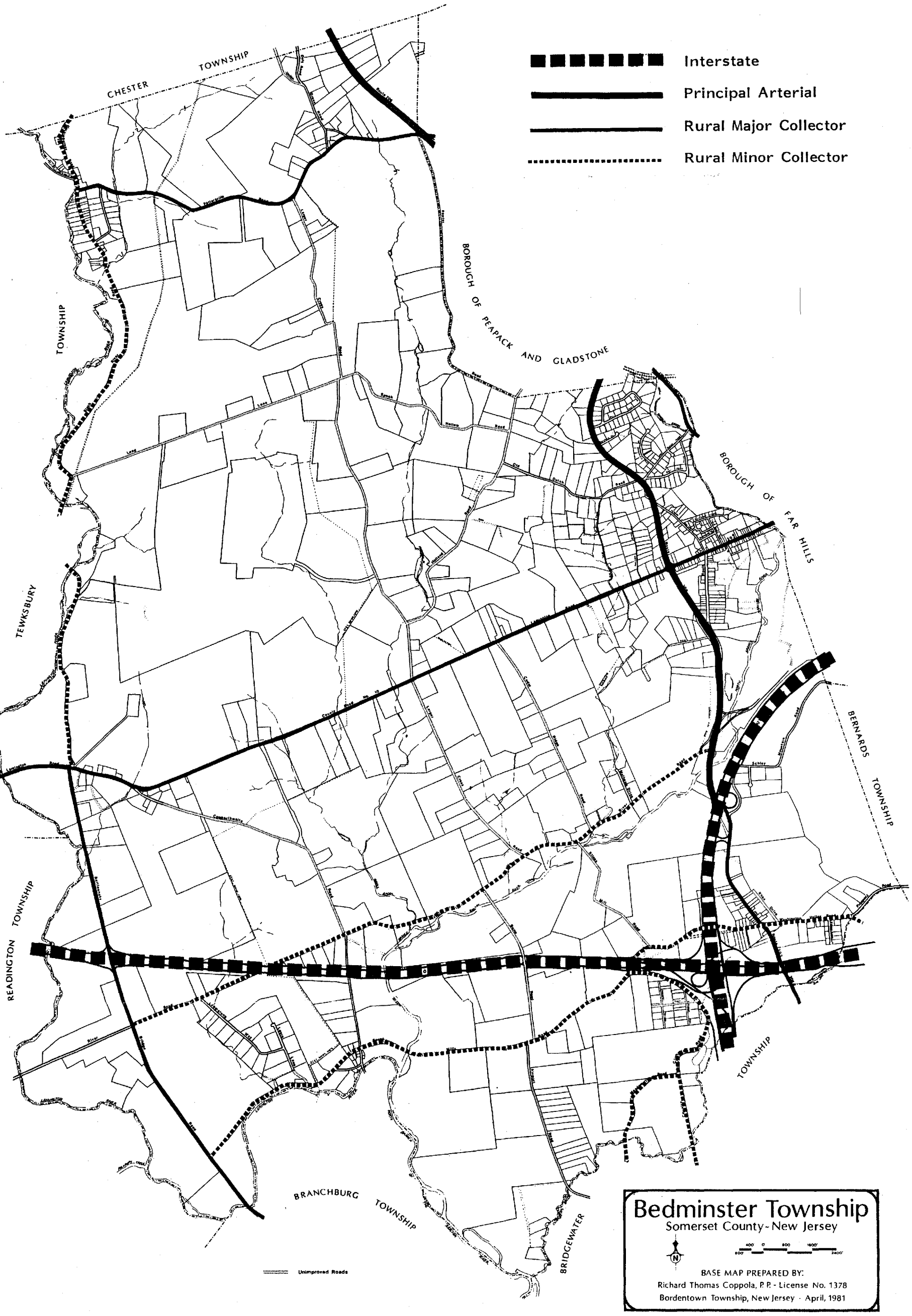
Given the existing and zoned rural character of the central and western portions of Bedminster Township, the rational for the publication of the "1980 Functional Classification" map by the Somerset County Planning Board was questioned by the municipal officials of Bedminster Township. Of particular concern was the designation of Township roads on the functional classification maps, since no Township road is planned to be improved as part of the Somerset County Master Plan of Transportation.

The Somerset County Planning Board responded to the questioning by municipal officials in a letter dated March 16, 1982 a copy of which is attached as an addendum to this report. As explained in the letter, the "1980 Functional Classification" map was drawn in 1976 in order to qualify certain roads for federal highway assistance. Since no federal funding has been provided, it appears that the functional classification map is moot and should not be considered as an input to the future traffic circulation plans of Bedminster Township.

STREET RIGHT-OF-WAY WIDTHS

Shown on Plate Tr. & Circ.-3 are the street right-of-way widths within Bedminster Township as detailed from the Tax Maps of the Township, August 1981. Generally speaking, the right-of-way widths of a roadway should also give an indication of the traffic volumes traversing the road and its functional performance. It should be noted that the right-of-way of a street is not synonymous with the width of the paved portion of the roadway which is referred to as the "cartway width". The right-of-way width includes the paved area, or cartway, the shoulders and the sidewalks, if present.

Existing Road System ~ 1980 Functional Classification



Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey · April, 1981

SOURCE: Transportation Plan, Somerset County, April 1978, Revised October 1978.

PLATE TR. & CIRC. 2

Existing Right-of-Way Widths

SOURCE: Tax Maps of Bedminster Township, August 1982.

PLATE TR. & CIRC. 3

Generally speaking, State and County roadways have the widest right-of-way widths within a municipality. A view of the information presented on Plate Tr. & Circ.-3 substantiates this general tendency to a limited extent. State Routes 202 and 206 have rights-of-way of sixty-six feet (66') and eighty feet (80') along different segments of their distance within the Township. Additionally, County Route 523 (Lamington Road) and County Spur 523 (Rattlesnake Bridge Road) each have a right-of-way width of sixty-six feet (66') or greater. Excepting these three (3) roadways, however, a relationship between roadway jurisdiction and right-of-way width is not apparent in Bedminster Township; a wide array of widths are indicated for both County and Township roads.

As a benchmark for evaluation, there are certain general rules regarding the recommended right-of-way width for "local" and "collector" roadways. No new roadway should have a right-of-way width less than fifty feet (50') and these roadways should be designed to perform basic, local traffic functions. Collector roads should be designed to handle appropriate volumes and types of traffic movement and generally require rights-of-way between fifty-six feet (56') and sixty-six feet (66').

Concerning roadways under Bedminster Township jurisdiction, the road with the widest right-of-way width is Black River Road, which extends along the Lamington River border of the Township with Tewksbury Township between Pottersville and Lamington Road. Although narrowly paved with two (2) lanes, the roadway has a right-of-way width of sixty-six feet (66').

The roadways in recent residential subdivisions within Bedminster Township have been provided with fifty foot (50') rights-of-way. Ski Hill Drive, Berkshire Court, Old Stonehouse Drive, Deer Haven Road, Riverwood Avenue, Tuttle Avenue, Bedminster Terrace, Mathews Drive, Laura Lane, Laomatung Way, and the private roads Somerset Terrace, Victory Road and Preston Terrace all reflect the standard fifty foot (50') right-of-way width for local roads.

Most of the remaining roadways under Bedminster Township jurisdiction have a right-of-way between thirty feet (30') and thirty-five feet (35'). These roadways extend in an east-west direction, with alignments that serve to collect traffic from adjacent land uses, connecting roads and neighboring municipalities. Long Lane, Spook Hollow Road, Old Dutch Road, Larger Cross Road, Cowperthwaite Road, River Road, Bunn Road, Schley Mountain Road, Meadow Road and Airport Road are examples of some of the older roadways in the Township which, excepting intermittent small segments, have relatively narrow rights-of-way.

The most critical discrepancy between the recommended right-of-way widths for "collector" roadways and the existing rights-of-way for such roads is found among those roads under Somerset County jurisdiction. Excepting Rattlesnake Bridge Road, Lamington Road and small segments of Pottersville Road at its intersection with Larger Cross Road and near its intersection with Black River Road, no roadway under Somerset County jurisdiction has a right-of-way more than fifty feet (50') in width. The remaining portions of County Route 512 (Pottersville Road) and the major portion of County Route 620 (Burnt Mill Road and Washington Valley Road) have rights-of-way between thirty and thirty-five feet (30' - 35'). Certain segments of Burnt Mill Road have a fifty foot (50') right-of-way, which ordinarily is considered sufficient only for roads performing strictly local traffic functions.

TRAFFIC ACCIDENTS

An analysis of traffic accidents gives some indication of how well the existing road network performs and points out areas where corrective actions may be necessary. Plate Tr. & Circ. -4 shows the locations of accidents in the Township of Bedminster during the twelve (12) month period between October 1, 1980 and September 31, 1981. The following statistics give some insight into the nature of these accidents.

1. There were a total of 126 reported accidents during the twelve (12) month period. It should be noted that this tabulation does not include accidents investigated by the N. J. State Police such as those occurring on Interstate Routes 78 and 287;

2. The 126 accidents involved 148 vehicles;

3. One (1) death resulted from the accident and forty-four (44) persons were injured. The fatal accident occurred on Rattlesnake Bridge Road;

4. Approximately fifty-two percent (52%) of the accidents (65 in number) occurred along Routes 202 and 206 and their intersections;

5. Approximately forty-eight percent (48%) of the accidents (60 in number) occurred along the roadways under Somerset County jurisdiction;

6. Approximately twenty-four percent (24%) of the accidents (30 in number) involved deer or other animals and the location of such accidents were distributed throughout the Township, including the relatively non-developed segments of State Route 206;

7. There were several locations and segments of roads where traffic accidents frequently occurred. The following list includes certain of these locations with some general comments about each:

   The Intersection of State Route 202/206 and County Route 620 (Burnt Mill and Washington Valley Roads):

   Twelve (12) accidents occurred at or in close proximity to this intersection. Lack of adequate sight distances, numerous driveway access points near the intersection, relatively narrow cartway widths and the lack of a signalized control at the intersection itself are probably contributing causes.

   State Routes 202/206 in the Village of Pluckemin between Interstate 78 to the south and Interstate 287 to the north:

   Twenty-three (23) accidents (more than eighteen percent (18%) of the total) occurred along this relatively short length of roadway. Limited right-of-way and cartway widths, excessive numbers of direct driveway access points to the state highway, sight distance difficulties, relatively heavy volumes of traffic and the non-signalized intersection of Burnt Mill Road/Washington Valley Road and State Routes 202/206 are probably contributing causes.

Traffic Accident Locations - October 1, 1980 to September 31, 1981

- Location of Accident
- ² Accidents (if more than one)

Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey - April, 1981

SOURCE: Bedminster Township Police Department Traffic Accident Reports for Reportable Accidents.

PLATE TR. & CIRC. 4

State Route 206 between its intersection with State Route 202 to the south and Hillside Avenue to the north:

Thirteen (13) accidents (more than ten percent (10%) of the total) occurred along this relatively short length of roadway. Direct driveway access points to the highway, the relatively heavy volumes of traffic at the Lamington Road/Route 206 intersection and uncontrolled access points to properties north of Lamington Road all probably contributed to the total.

In way of summary of the causes of accidents, the following statements were made by the American Association of State Highway Officials, based on an overall analysis of highway design at the national level, to point out where highway design encourages or discourages the number of traffic accidents:

Accidents increase -

- With traffic volume as traffic volume exceeds the original design capacity.
- With increased cross traffic and turning movements at intersections.
- With the frequency of roadside users which have direct access to the highway.
- With inconsistent design standards such as steep grades, sudden sharp turns, limited visibility and varying number of lanes.

Accidents decrease -

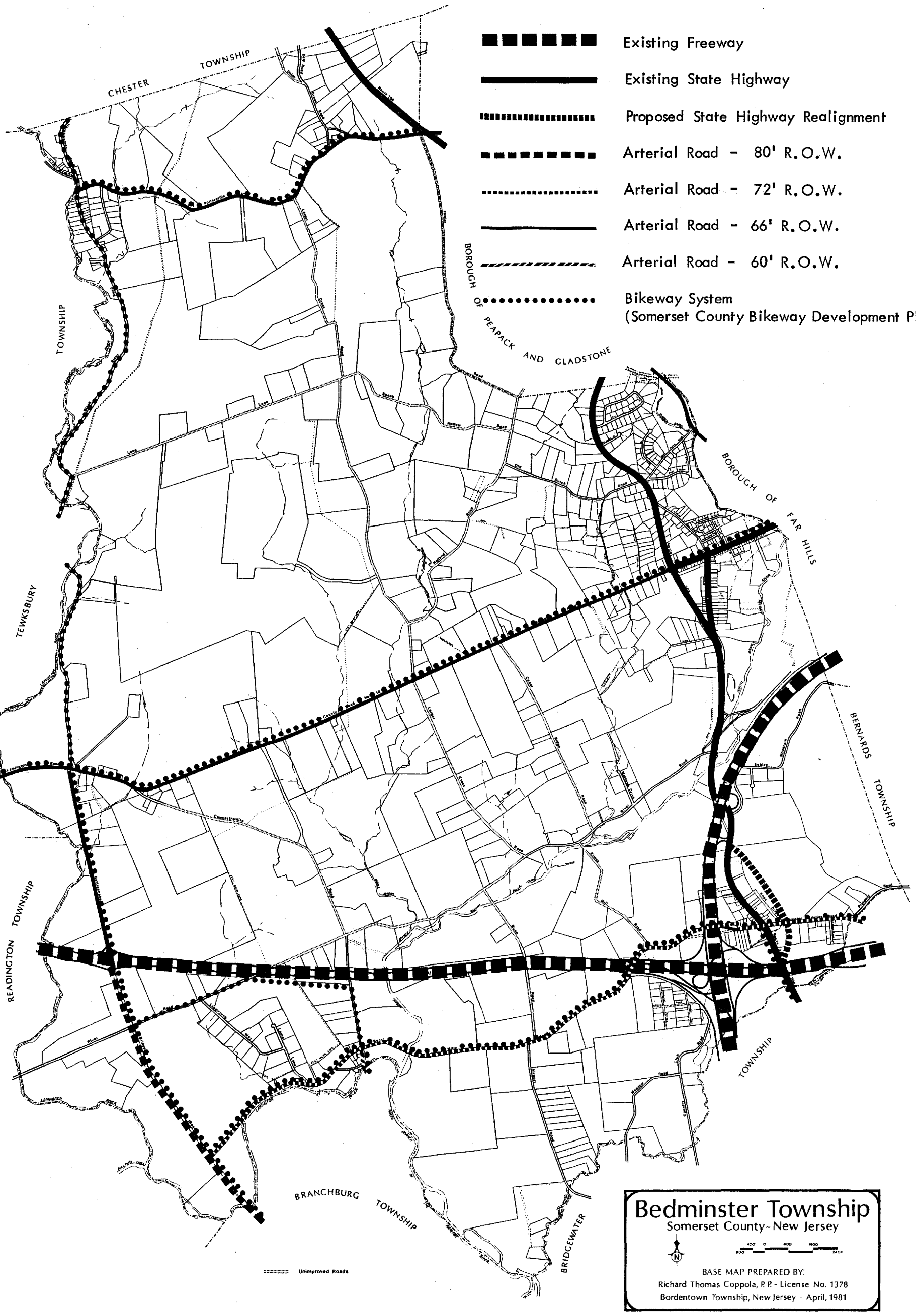
- With an increase in sight distance.
- When access to the highway is limited to controlled access points.
- With improved standards such as wider lanes, shoulders and improved lighting.

SOMERSET COUNTY TRANSPORTATION PLAN

During 1978, the Somerset County Planning Board adopted a Transportation Plan for the future roadwork network within Somerset County. The Plan was based upon the functional classification of the roadways (Plate Tr. & Circ. -2) and an evaluation of municipal proposals.

Plate Tr. & Circ. -5 illustrates the Somersey County Transportation Plan as it relates to Bedminster Township. Roadway designations by classification are as follows:

Transportation Plan of Somerset County



Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey - April, 1981

SOURCE: Somerset County Comprehensive Transportation System, 1978; Somerset County Planning Board.

PLATE TR. & CIRC. 5

Freeways: Existing Interstates 78 and 287 are designated; no new freeways are proposed.

State Highways: Existing State Routes 202 and 206 are designated; an eastern realignment of Routes 202/206 around Pluckemin Village is proposed.

Major Arterial Roads:

- Route 512 (Pottersville Road) with a sixty-six foot (66') right-of-way requirement;
- Route 523 (Lamington Road) with a sixty-six foot (66') right-of-way requirement;
- Route 620 (Burnt Mill and Washington Valley Roads) with a seventy-two foot (72') right-of-way requirement; and,
- Route 523 Spur (Rattlesnake Bridge Road) with a sixty-six foot (66') right-of-way requirement between Lamington Road and I-78 and an eighty foot (80') right-of-way requirement from I-78 to Branchburg Township.

As indicated, with the exception of the Pluckemin Village Route 202/206 by-pass, all roadways included in the Somerset County Transportation Plan exist. With respect to right-of-way requirements, however, only small segments of two (2) roads currently satisfy the County standards including Rattlesnake Bridge Road between Lamington Road and I-78 and Pottersville Road in the immediate area of its intersection with Larger Cross Road,

PROPOSED COUNTY BIKEWAY SYSTEM

The Somerset County Transportation Plan includes a Bikeway Development Plan section which designates a bike route network throughout the County. The proposed bikeway routes within Bedminster Township are indicated on Plate Tr. & Circ. -5 and include the following:

- Pottersville Road (Route 512)from the Peapack-Gladstone border west to Black River Road;
- Hacklebarney and Black River Roads from the Chester Township border (Hacklebarney State Park area) south to Lamington Road (County Route 523);
- Rattlesnake Bridge Road from Lamington Road south to Branchburg Township;
- Lamington Road and Main Street (Route 202) between Tewksbury Township and Far Hills Borough;
- Burnt Mill Road (County Route 620) from Rattlesnake Bridge Road east to Route 206 in Pluckemin Village and continuing east via Washington Valley Road into Bridgewater Township; and,

- River Road from Rattlesnake Bridge Road to the I-78 "frontage" road to Cowperthwaite Road and south over the Lamington River into Bridgewater Township.

Generally speaking, the bikeway system proposed by the Somerset County Planning Board through Bedminster Township utlizes scenic and lightly travelled Township roadways. However, portions of the system are proposed to cross heavily travelled Routes 202/206 both in Bedminster and Pluckemin Villages where, for a number of reasons, a bicycling system utilizing existing roadways may not be appropriate.

PUBLIC TRANSPORTATION

The public transportation facilities servicing Bedminster Township are almost non-existant. Rail service to Newark and New York (via Hoboken) is available from the nearby stations in Far Hills and Peapack and Gladstone. Over 525 riders presently use these stations daily; however, no data is available indicating the number of riders who reside within Bedminster Township.

There are no buslines, either local or regional, serving Bedminster Township. Any resident requiring or desiring bus transportation must travel south to the Route 22 corridor through Bridgewater and Somerville. Moreover, taxi service is available from only two (2) companies, both of which are located in neighboring Bernardsville. Private limousine service is available by appointment.

TRAFFIC VOLUMES

Plate Tr. & Circ. -6 indicates the average annual daily traffic (AADT) volumes at specified locations within Bedminster Township. The volumes were obtained from the New Jersey Department of Transportation based upon traffic counts acquired during the years 1978, 1979 and 1980. Certain interesting observations regarding the distribution of traffic flow within Bedminster Township can be discerned from the data, including the following:

- Route 202/206 carried 8,200 vehicles through the Village of Pluckemin in 1979. At the access to the A.T. & T. complex, the volumes more than doubled to 17,500 vehicles. Further north, near the Lamington Road/Route 202 intersection, the AADT counts dropped to between 11-12,500 vehicles. Finally, near the Chester/Bedminster boundary line, the AADT counts dropped further to between 9-11,000 vehicles. The volumes, both in the northern part of the Township and in the Pluckemin Village area, will obviously increase due to the current construction of the Beneficial Insurance complex in the Borough of Peapack and Gladstone and the anticipated residential and non-residential development within and around the Village of Pluckemin.

- Traffic on Route 202 (Main Street) in Bedminster Village was approximately 7,600 vehicles per day; only 600 cars fewer than on Route 202/206 in Pluckemin Village.

- Interstate 287 had average annual daily traffic volumes of approximately 48,000 vehicles and the AADT count on I-78 is approaching 40,000 vehicles per day. Based on the available 1980 data, I-78 traffic west

Plate Tr. & Circ. -6

Traffic Counts on roads in Beminster Township

Road Name	Location	Average Annual Daily Traffic 1978	1979	1980
I-287	Between I-78 & Rt.202/206	48,900	48,600	47,700
I-78	Between Rattlesnake Br. Rd. and I-287	37,600	39,900	33,500
I-78	W. of Rattlesnake Br. Rd.	36,600	-	37,300
Rt. 202/206	S. of I-287	-	8,200	-
Rt. 202/206	A.T. & T. Access	-	17,500	-
Rt. 202	Between Rt. 206 & Main St.	-	4,600	-
Rt. 202	Near Bedminster School	-	7,550	-
Rt. 206	S. of Lamington Rd.	-	11,000	10,900
Rt. 206	N. of Lamington Rd.	-	-	12,500
Rt. 206	Near Beneficial in Peapack-Gladstone	-	11,500	-
Rt. 206	N. of Pottersville Rd.	-	9,340	-
Rt. 206	N. of Bedminster/Chester Line	-	10,800	-
Lamington Rd.	E. of Rt. 206	-	3,400	3,900
Lamington Rd.	W. of Rt. 206	-	-	3,100
Lamington Rd.	Near Larger Cross Rd.	-	2,200	-
Lamington Rd.	W. of Rattlesnake Br. Rd.	-	3,860	-
Pottersville Rd.	W. of Larger Cross Rd.	-	2,150	-
Rattlesnake Br.Rd.	Between Lamington Rd. and I-87	-	1,230	-
Rattlesnake Br.Rd.	Between River & Burnt Mill Rds.	-	2,830	-
Burnt Mill Rd.	E. of Rattlesnake Br. Rd.	-	770	-
Burnt Mill Rd.	Between I-78 and I-287	-	2,180	-
Burnt Mill Rd.	Between I-287 and Rt. 206	-	2,200	-
River Rd.	Between Cowperthwaite & Larger Cross Rds.	-	80	-

SOURCE: New Jersey Department of Transportation; Division of Comprehensive Planning, Bureau of Data Resources - 1981.

of Rattlesnake Bridge Road is greater than to the east, indicating that Rattlesnake Bridge Road carries approximately 4,000 vehicles per day to and from I-78.

- The east-west Somerset County roadways in Bedminster Township, including Pottersville, Lamington and Burnt Mill Road all had AADT volumes of approximately 2,200 vehicles per day west of Route 206. Traffic volumes along Lamington Road are almost double west of Rattlesnake Bridge Road while the AADT volume on Burnt Mill Road dropped considerably near its intersection with Rattlesnake Bridge Road. This latter observation indicates the possible use of Airport and/or Cowperthwaite Roads as traffic routes between Burnt Mill Road and Branchburg and Bridgewater Townships to the south.

The State Department of Transportation projects an approximate doubling of traffic throughout the Route 206 corridor north of Princeton Township. A June 1982 draft study has been issued by the State Department of Transportation which has recommended methods of limiting and/or managing the traffic growth throughout the corridor in order to maintain a reasonable traffic flow on a design constrained roadway. A key recommendation of the study is that there should be a balance between residential and non-residential development along the State highway. The adopted Zone Plan of Bedminster Township incorporates such a balanced development pattern; nevertheless, both the Township and the State Department of Transportation recognize the constraints of accommodating additional traffic flow along the road's right-of-way within Bedminster Township.

ROADWAY IMPROVEMENT PROPOSALS

Township approval of the Hills Development Planned Unit Development in Pluckemin Village, including up to 1,287 multiple-family dwelling units and 350,000 square feet of office and retail space, has made it necessary to consider methods of increasing the design capacities of the roadways serving the Route 202/206 corridor within the Village area. The zoned possibility of an additional 2,000 dwelling units and 900,000 square feet of office and retail space in Pluckemin Village underscores the urgency for all affected parties, including the land owners and developers, to cooperatively work together on the most satisfactory traffic circulation plan for the area.

While it is generally accepted that major roadway improvements are necessary within and around the Pluckemin Village area of the Township, there are currently varying design alternatives being proposed by the State , the County and the Township and no agreement as to the best solution has been reached to date. Recent designation of Pluckemin Village by the State of New Jersey as an historic district and the acceptance of the area to the Federal Register of Historic Places presents additional considerations regarding the most acceptable roadway improvement solution.

The various Route 202/206 improvement options suggested to date include the following:

- State Proposal: The New Jersey Department of Transportation proposes a widening of the existing two (2) lane Route 202/206 cartway to a four (4) lane roadway

within the existing sixty-six foot (66') right-of-way between I-287 and the I-78 bridge. Additionally, the State proposes that both Burnt Mill and Washington Valley Roads remain as two (2) lane roadways, but be improved with left-hand turning lanes at a signalized intersection with Route 202/206. The State Department of Transportation suggests that these improvements be designed and constructed by the various land owners and developers in the Pluckemin Village area.

The State's proposal will have a significant adverse impact on Pluckemin Village. Some property acquisition will be necessary, including portions of existing buildings, and the existing trees, which reinforce the character of the historic area, will have to be removed.

- Somerset County Proposal: The Somerset County Planning Board proposes the construction of a new four-lane Route 202/206 alignment, by-passing Pluckemin Village to the east and passing through property owned by the Hills Development Company. Additionally, the Somerset County Planning Board proposes the widening of Burnt Mill and Washington Valley Roads to four (4) lanes between the Burnt Mill Road/I-287 bridge to the west and the proposed Hills Drive/Washington Valley Road intersection to the east. In order to accomplish the planned road widening, land acquisition will be necessary to provide a seventy-two foot (72') right-of-way. The Somerset County Planning Board also recommends a movement of the centerline of Burnt Mill and Washington Valley Roads. Moreover, the County suggests that the Burnt Mill Road/Washington Valley Road intersection with Route 202/206 be signalized.

  Although the idea of a by-pass of Pluckemin Village remains a viable consideration in the process of planning for the future traffic movement within and around the Village of Pluckemin, the specific by-pass option suggested by Somerset County will be difficult to accomplish given the Phase I Preliminary Approval given to the Hills Development Planned Unit Development application by the Township Planning Board.

- Township Proposal: During the review of the Phase I Preliminary application for the Hills Development Planned Unit Development, the Township commissioned the firm of Edwards & Kelsey to analyze the projected impact of traffic within the Route 202/206 corridor and Pluckemin Village. The report was issued to the Township Planning Board on April 2, 1981 and five (5) basic alternatives for improving the traffic flow within the Route 202/206 corridor were discussed and analyzed. The alternative designs included the State and County proposals described hereinabove as well as the following three (3) additional alternatives: (1) a westerly aligned four-lane by-pass; (2) the conversion of the existing Route 202/206 two-lane alignment to a one-way route south coupled with a one-way, two-lane alignment situated to the east along the Knox Drive right-of-way northbound traffic; and, (3) a western one-way couplet which would utilize existing State Route 202/206 for traffic moving to the north and a new two-lane roadway for southbound traffic situated between existing Route 202/206 and I-287. It should be noted that the "Planning Master", appointed by the Court to oversee the review process for the Hills Development Planned Unit Development, expressed his support for the western one-way couplet.

Summarily, the Edwards & Kelsey Traffic Impact Study recommended the eastern one-way couplet system, with the existing Route 202/206 alignment functioning as a southbound road. Additionally, the Edwards & Kelsey report suggested that the Township pursue the development of on/off ramps between Route 202/206 and Interstate 78.

In addition to the obvious necessity of designing and constructing a system of traffic movement in and around the Village of Pluckemin, there are other County and State plans for roadway improvements within Bedminster Township, including the following:

- Route 206 Repaving: As part of the overall improvement program to State Route 206 from the Montgomery/Princeton boundary to the intersection of the highway with Route 24 in Chester Township, the New Jersey Department of Transportation will improve a section of Route 206 in Bedminster Township during 1982. The project is limited to the approximate 2500 feet of State Route 206 south of the Chester/Bedminster line and will include a modification of the cartway to include twelve foot (12') traffic lanes and eight foot (8') shoulders instead of the existing ten foot (10') traffic lanes and ten foot (10') shoulders.

- Route 512 Bridge: As a joint project of Somerset and Hunterdon Counties, the Route 512 bridge over the Lamington River in Pottersville is intended to be repaired during 1982. The repair project is needed in order to restore the bridge to safety standards and permit heavy traffic loads, including both the fourteen (14) and nineteen (19) ton vehicles owned and operated by the Pottersville Volunteer Fire Company. The bridge currently has a five (5) ton capacity limit. The repair of the bridge will require an approximate one month time period when the bridge will be closed and the approximately 1000 vehicles per day that cross the bridge will be detoured.

- Rattlesnake Bridge Road: Somerset County is preparing to replace the bridge over the Lamington River on Rattlsnake Bridge Road. The construction will also include a minor realignment of the roadway for a short distance in Bedminster Township. Due to the uncertainty of money commitments, no specific date for the project has been established, although the County Engineer's office indicates that the work probably will be undertaken within four to five (4 - 5) years. The bridge repair project is a part of a long-term Somerset County proposal to develop a major north-south arterial roadway in the western portion of the County, which will extend from Route 518 in Montgomery Township north to Lamington Road in Bedminster Township. However, as indicated in the attached March 16, 1982 letter from the Somerset County Planning Board, the planned north-south arterial roadway (West County Drive) will terminate at I-78 and the segment of Rattlesnake Bridge Road north of I-78 is planned to be improved to a lesser standard.

CONCLUSION

Clearly, there are a number of problems associated with the circulation of vehicular traffic through Bedminster Township, particularly with the Route 202/206 corridor in the eastern

portion of the Township. The focal point of the problem is, and will continue to be, within and around the Village of Pluckemin.

No recommendations to resolve the existing traffic circulation problems are offered within this Background Study; however, it is specifically recommended that the design solution to the Route 202/206 traffic network within and around Pluckemin Village be further evaluated and resolved in a cooperative effort among the Township, the land owners in the area, the Somerset County Planning Board and the State Department of Transportation.

ADDENDUM

SOMERSET COUNTY PLANNING BOARD

P.O. Box 3000
(Bridge & High Streets)
Somerville, New Jersey 08876

William E. Roach, Jr.
Planning Director
(201) 231-7021

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March 16, 1982

Mr. Richard T. Coppola. P.P.
Planning Consultant
16 Ticonderoga Drive
Bordentown, NJ 08505

Dear Mr. Coppola:

RE: Somerset County Master Plan of Transportation
Bedminster Township

Thank you for your letter of March 3, 1982 regarding the above-indicated discussion. Both Art Reuben and I are happy to have the opportunity to work with our municipal constituents in developing mutually compatible development programs. Our meeting with the Master Plan Committee of the Bedminster Township Planning Board last month was very enlightening and we welcomed the opportunity to meet with you.

With respect to the two areas of immediate concern to you and the local Committee, please be advised of the following:

1. In respect to River Road and the "1980 Functional Classification" map, please note that this classification was mapped in 1976 by the County Planning Board in a process that included review with the County and Municipal Engineers. At that time, the Federal Highway Administration indicated townships would qualify for federal highway assistance. This situation is still technically accurate, but the funds have not been forthcoming.

   River Road, designated as a rural minor collector, was one of several township roads in the County included in such a classification because it was (is) rural, was (is) minor, and was (is) a road that collects traffic from the adjacent rural areas. As you indicate, River Road assumes no importance to the County Master Plan of Transportation and is not mapped on the Comprehensive Circulation Plan or the Right-ofWay requirements Master Plan. Even the arterial rural classification in Somerset County has been a moot point because of the lack of funding, and future prospects appear to be equally unrewarding.

At this time, the future of highway assistance programs at the federal level is in such disarray that guidelines for any update of the classification system have not been issued. However, if Bedminster would like to cancel out the eligibility of River Road for what amounts to nonexistant federal funds, we would be happy to transmit such a resolution to the Federal Highway Administration.

2. West County Drive is a "hold over"from the County's 1965 Master Plan of Transportation. The project was reaffirmed in the 1978 version of the County Plan and essentially calls for a county arterial scale road to run in a north-south direction along the western portion of our County.

   Our review of circulation within the County has consistently shown a lack of accessibility within western Somerset County along the north-south axis. Conceptually the County road is to run from Interstate 78 at its northern terminus, southerly through Branchburg and Hillsborough Townships, to a southern tie-in with Great Road also a County arterial in Montgomery Township.

   Over the years, segments of this road have been realized through developer cooperation in the area between Route 22 and 202. It was always expected that this would be a long-range program and one which was implemented as development occurred and through developer cooperation. As key segments of the route come into existence, it is anticipated that the County will then assume responsibility for completing those portions of the road which served practical circulation functions. The County is rapidly approaching this situation in the segment between Routes 22 and 202.

   With respect to that portion of the alignment in Bedminster Township, we would reaffirm that the route is to terminate at I-78. That portion of Rattlesnake Bridge Road north of I-78 is designated as a County arterial road, but is of a lesser road standard (66'R.O.W. vs 80' R.O.W.) than the West County Drive portion to the south.

The County Master Plan of Transportation is indeed somewhat difficult to follow since it involves a couple of different maps and several classifications of road systems. Hopefully this is a matter which we will be able to correct in our next review of the County Plan. You should be advised, however, that with respect to the County's development philosophy pertaining to that area of the County around or adjacent to the I-78 Rattlesnake Bridge Road interchange, we foresee no change in land use policy over that currently called for in the County's Master Plan of Land Use.

Preservation of the headwaters areas of the Raritan River Basin in low density land uses represents a vital component of the County Plan. That policy hs been upheld in the recent Allen-Deane litigation and is one which we are confident will withstand further scrutiny.

The County Master Plan of Land Use was developed in the late 60's and is one which also recognized and accommodates existing transportation corridors. It is these corridor areas where the County has attempted to channel its more intensive growth...thus the infamous "202-206" corridor through Bedminster. The rezoned 202-206 corridor, as we see it, has assumed what we feel amounts to Bedminster Townships obligation with respect to new development. The vast remaining area of the Township is much more directly related to the headwaters of the Raritan River Basin, and since this basin is also a natural water supply resource which has been called upon to perform a much larger scale role, we feel it should not be subjected to any more intense development than currently exists.

As I've indicated to you earlier, the County Planning Board is also hoping to consider an updated or amended Master Plan of Land Use late this year or early next year.

There is no indication from either the data being collected by our staff nor land use activities which have taken place since the 1970 Master Plan which we feel warrants reconsideration of this headwaters issue in the near future. This office recognizes that over time, and especially with the completion of Interstate 78, there will be increasing pressure upon Bedminster to accommodate new and more intense development along the route of that major highway. Obviously the decision to accommodate such development intensities will be with the municipalities. The County Planning Board, however, has not shown any desire to fluctuate from its thinking with respect to our current Rural Settlement districts, and we would urge the Master Plan Committee to weigh such pressures carefully in your current analysis.

I trust the preceding comments have cleared up any misconceptions which may have existed with respect to the County Master Plan of Transportation and Land Use. Thank you again for inviting us to your meeting. Please feel free to call upon us if you have any further questions in this regard.

Very truly yours,

Raymond A. Brown
Administrative Planner

RAB/ag
cc: William E. Roach, Jr.
Arthur L. Reuben; Mayor Gavin
Anne O'Brien; J. William Scher;
Ralph E. Blakeslee, Master Plan Comm. Chairman

Community Facilities Analysis

COMMUNITY FACILITIES ANALYSIS

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COMMUNITY FACILITIES ANALYSIS

INTRODUCTION

An analysis of the existing community facilities within and serving Bedminster Township is an important source of information for the Master Plan process. The documentation of the existing levels of community facilities is a key measure of the Township's current capacities and limitations to absorb future growth and serves as a basis for determining the expansion requirements of the facilities in order to meet the needs of the anticipated Township development. Specifically, an assessment of the extent of existing community facilities within the Township provides an opportunity to relate the short term decisions regarding land use changes to long term goals prescribing the balanced development of community facilities in concert with the Township's physical development.

Plate Com.Fac.-1 maps the existing community facilities within Bedminster Township.

BEDMINSTER TOWNSHIP MUNICIPAL OFFICES

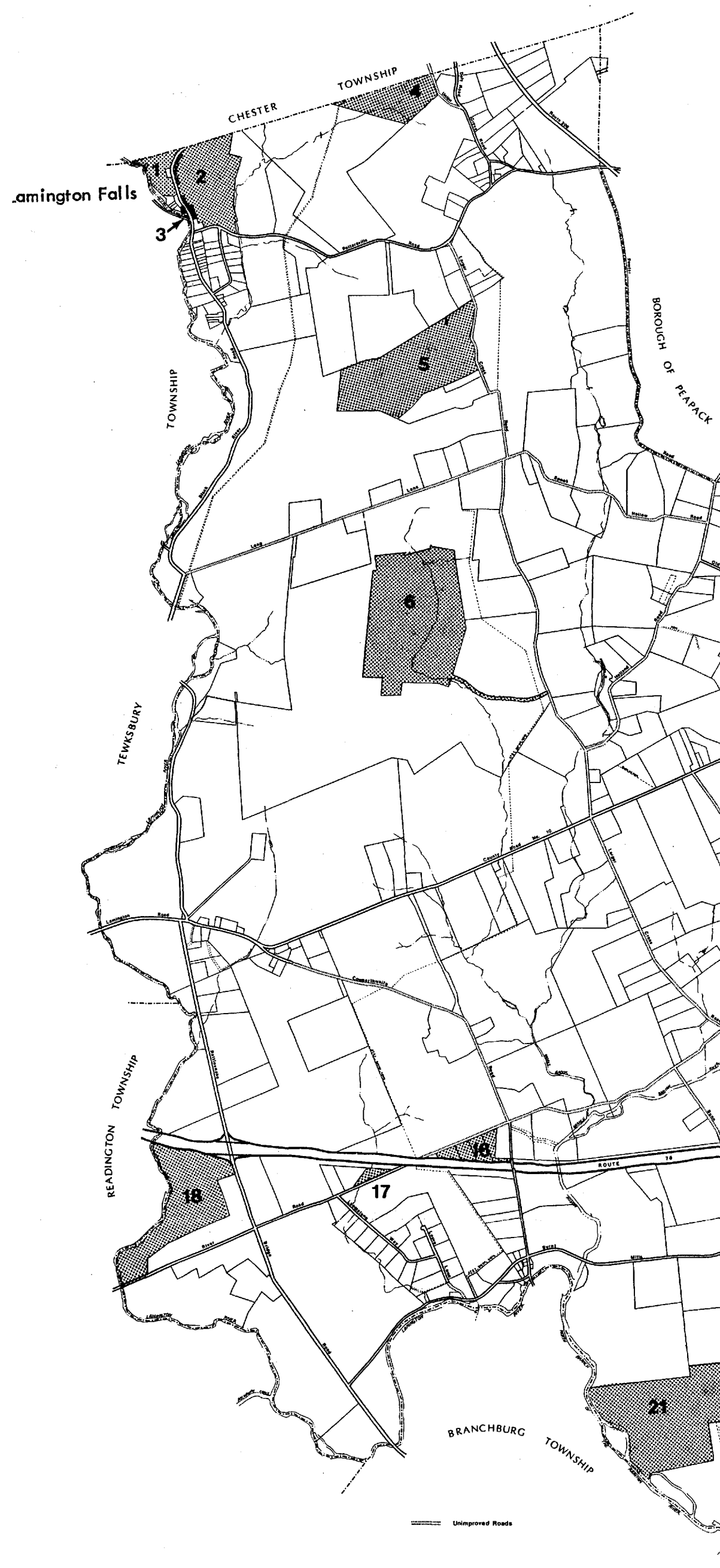
Municipal offices within Bedminster Township are located in the municipal building on Hillside Avenue in Bedminster Village and in the former Pluckemin Schoolhouse building on Burnt Mills Road in Pluckemin Village. Additionally, the offices of the Public Works Clerk and the Township Tax Collector are situated in private residences.

The municipal building on Hillside Avenue is located amidst residential development on a tract of land approximately 0.6 acres (26,136 sq. ft.) in area. The one-floor building contains approximately 4,000 square feet of space which is occupied by the offices of the Township Administrator/Clerk, the Deputy Clerk/Health Department Secretary and the Building Official, the official meeting room for the governing body and appointed boards, and a garage for the housing of a fire truck and public works vehicles.

The Pluckemin Schoolhouse building is situated on a 2.2 acre site west of the Burnt Mill Road/Route 202-206 intersection within Pluckemin Village. The Pluckemin Schoolhouse building is within the designated Historic District which encompasses a major portion of Pluckemin Village and the old school building is one of the most significant structures within the designated area. Built in 1912, the building is a three-story structure containing approximately 6,000 square feet of space. It houses the offices of the Police Department, the Violations Bureau, the Municipal Court and the Township Tax Assessor. The building had been used as a school until 1958.

All of the municipal offices within Bedminster Township are inadequate in terms of space, layout and storage area and the ability to organize a system of service delivery is therefore impeded. Moreover, the separation of municipal offices between the Villages of Bedminster and Pluckemin is inefficient and further impedes the delivery of a high level of public service. The Township Committee has been studying alternative strategies to upgrade the office facilities in order to efficiently improve and expand the level of service to the people of the Township.

Existing Community Facilities



1. State of New Jersey (Green Acres)
2. The Purnell School (Private)
3. Pottersville Volunteer Fire Company
4. Bamboo Brook Unit (Morris Co. Park Commission)
5. Upper Raritan Watershed Association (Wildlife Refuge)
6. Princeton University
7. Bedminster Municipal Building
8. Clarence Dillon Library
9. Far Hills, Bedminster First Aid Squad, Inc.
10. Bedminster Elementary School
11. Bedminster Township Sewerage Treatment Plant
12. Bedminster Public Works Garage
13. Green Acres Park - "The Pond"
14. State of New Jersey
15. Township Open Space (Undeveloped)
16. New Jersey Department of Transportation
17. Township Open Space (Undeveloped)
18. Fiddlers Elbow Country Club
19. Pluckemin Schoolhouse - Municipal Building Annex
20. Somerset Valley Y.M.C.A.
21. Somerset Airport (Private)
22. Peapack Ski Area
23. N.J.D.O.T. Maintenance Facility
24. Environmental Disposal Corporation Sewer Plant

Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey · April, 1981

SOURCE: Field Survey and Tax Map Information 1981.

PLATE COM. FAC. 1

While a key objective of the evaluation is to centralize the municipal offices in one well situated location, no site has yet been selected. As a result, the expansion and upgrading of the municipal offices within the Township is done on an emergency basis and not in accordance with an overall plan. As an example, the Municipal Building on Hillside Avenue is being modified to expand office area into the space currently used as the garage for the fire truck and public works vehicles and the garage is being relocated at the opposite end of the building. Clearly, this incremental approach to remedying the existing office deficiencies within the Township does not address the long-term needs resulting from the residential and non-residential development permitted under the 1980 Land Development Ordinance and may not be the most efficient solution to the problem.

Any feasibility study and any decisions reached regarding the future location and construction of municipal offices within the Township must consider, in addition to cost, site considerations relating to traffic access, the availability of space for on-site parking and building expansion and the land use relationships with adjacent areas.

PUBLIC WORKS

The Bedminster Township Public Works Department provides a variety of services to the people and property of Bedminster Township including the maintenance of roads, municipal facilities, sanitary and storm sewers and recreational facilities, and the disposal of leaves and the monthly pick-up and disposal of bulk solid refuse items.

Located in a rented garage facility on State Route 206 south of Bedminster Village, the Public Works Department consists of nine (9) staff members including a supervisor, five (5) workmen for roads, two (2) technicians at the sewer plant and one (1) part-time secretary. A total of twenty (20) vehicles and large equipment items are used by the Department. Vehicles are garaged at the Route 206 facility but, due to the space limitations of the garage facility, vehicles are also stored in the garage attached to the Municipal Building on Hillside Avenue.

Recently, Bedminster Township selected a site for a new garage facility which will be well located and of sufficient size (approximately 20,000 square feet) to accommodate the garaging and storage requirements of the Department's vehicles and equipment. The new municipal garage facility will be located on the site of the Township's sewer treatment plant and a bond ordinance for approximately $700,000. has been introduced for the facility's construction.

While expansion of the Public Works Department garage facility probably will be required in the future as the development permitted under the 1980 Land Development Ordinance occurs, the future expansion is anticipated to be more incremental in nature than the currently planned new construction, particularly due to the fact that many of the new roads to be constructed within the planned unit developments in the Pluckemin Village area of the Township will be privately owned and maintained.

In addition to the garage facility, another immediate need of the Public Works Department is to locate a suitable dumping site for bulk item disposal. Until recently, the Comb Fill South Landfill Site, located in nearby Chester Township, served this purpose; however, the site was recently

closed by the New Jersey Department of Environmental Protection. Alternatively, no nearby dump site is available to Bedminster Township and the Public Works Department may be forced to transport the bulk items, at increased cost, to the Edgeboro Site in East Brunswick Township, Middlesex County.

Garbage disposal within Bedminster Township is provided by three (3) private scavenger firms under direct contract with individual property owners. Moreover, since 1970, Bedminster Township has sponsored a recycling program which is operated by the Township Environmental Commission with manpower and trucks supplied by the Department of Public Works.

POLICE PROTECTION

Police protection is provided to the people and property within Bedminster Township by the Bedminster Township Police Department, headquartered in the former Pluckemin Schoolhouse building on Burnt Mill Road, west of the Burnt Mill Road/Route 202-206 intersection. The staff of the Police Department consists of eight (8) full-time employees, including the Chief, five (5) patrolmen, one (1) detective, one (1) secretary and one (1) canine unit. The Police Department staff provides twenty-four (24) hour coverage throughout the 26.7 square mile municipality. Police vehicles include two (2) marked cars and one (1) unmarked car. Communication and dispatch service is provided by the Somerset County Park Police Radio System.

Current needs of the Police Department include the upgrading of the current office space, especially regarding detention and interrogation areas. Additionally, of course, anticipating the expected increase in the municipality's population, additional police officers and vehicles will be required.

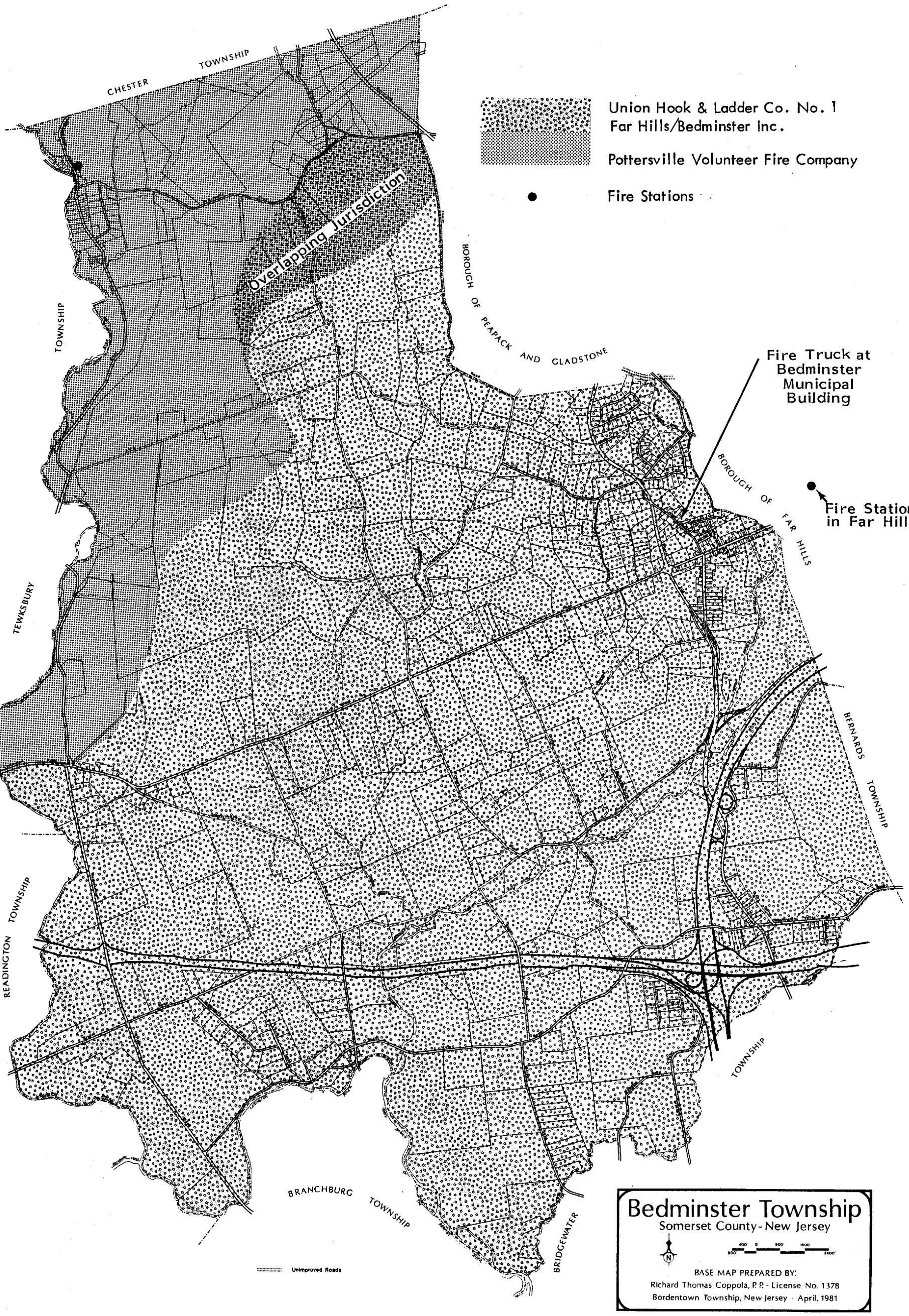
FIRE PROTECTION

People and property within Bedminster Township receive fire fighting protection from two (2) Volunteer Fire Companies: the Union Hook and Ladder Company No. 1 of Bedminster/Far Hills and the Pottersville Volunteer Fire Company situated in the Pottersville section of Bedminster Township. Additionally, mutual aid agreements between the two (2) Volunteer Fire Companies and neighboring jurisdictions provide additional manpower resources, if needed. The coverage areas of the two (2) Volunteer Fire Companies are indicated on Plate Com. Fac.-2.

The Union Hook and Ladder Company No. 1 provides service to the entirety of Far Hills Borough and the eastern and southern portions of Bedminster Township, including the Pluckemin/Bedminster Village Route 202/206 Corridor. The Company's fire house, however, is located within Far Hills Borough. The company owns four (4) vehicles, including two (2) Class A, 1,000 gpm pumpers, one (1) brush truck and one (1) Class B, 750 gpm pumper. Excepting the Class B pumper which is garaged in the Municipal Building on Hillside Avenue, the vehicles and equipment owned by the Union Hook and Ladder Company No. 1 are garaged at the fire station in Far Hills Borough.

The membership of the Union Hook and Ladder Company No. 1 totals approximately forty (40) individuals; usually between fourteen and twenty (14 - 20) members are available for calls during evenings and week-ends but only eight (8) members are available for fire fighting during the day time.

Fire Company Coverage Areas



Union Hook & Ladder Co. No. 1
Far Hills/Bedminster Inc.

Pottersville Volunteer Fire Company

● Fire Stations

Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey · April, 1981

SOURCE: Union, Hook & Ladder Co. No. 1
of Far Hills, Bedminster Inc.,
Pottersville Volunteer Fire Company.

PLATE COM. FAC. 2

An assessment of the needs of the Union Hook and Ladder Company No. 1 indicates the following:

- The fire station in Far Hills Borough is located on the periphery of the Company's coverage area and is therefore not an appropriate location to serve the anticipated development within the Route 202/206 Corridor. Therefore, the fire station within Far Hills Borough must be replaced or augmented with a facility accessible to the Pluckemin-Bedminster Village Corridor area.

- Additional fire fighting equipment is needed in order to adequately serve the projected development within the Company's coverage area. The additional equipment will include the purchase of a 2500 - 3000 gallon tanker truck, a snorkel/ladder truck to serve buildings three (3) stories or higher in elevation and a 1000 gpm Class A pumper to replace the existing Class B pumper.

The Pottersville Volunteer Fire Company provides service from its fire station on Black River Road in the Pottersville section of Bedminster Township. The Company serves the northwestern section of Bedminster Township as well as the northeastern portions of Tewksbury Township and small sections of Chester and Washington Townships to the north.

The Pottersville Volunteer Fire Company owns three (3) vehicles including a 1962 Class A four-wheel drive brush truck with a 250 gpm capacity, a 1972 Class A 1000 gpm pumper and a 1981 Class A 1000 gpm pumper.

Membership in the Pottersville Volunteer Fire Company consists of forty-eight (48) individuals with twenty to twenty-five (20 - 25) members available to fight evening and week-end fires and only seven to ten (7 - 10) members available to answer calls during week-days. The Company's current need is to increase membership.

FIRST AID SERVICES

The Far Hills-Bedminster First Aid Squad provides emergency first aid service to Bedminster Township and Far Hills Borough. The First Aid Squad is headquartered on Main Street in Bedminster Village adjacent to the North Branch of the Raritan River which forms the boundary between the Borough of Far Hills and the Township of Bedminster.

The First Aid Squad has an active membership of approximately twenty to twenty-five (20 - 25) individuals and approximately seven (7) persons are available for service during week-days. Vehicles owned by the First Aid Squad include a 1982 van ambulance and a 1977 modular van. Representatives of the Far Hills-Bedminster First Aid Squad have indicated that their current needs include a 'jaws-of-life' device to extricate trapped people and a crash truck.

LIBRARY FACILITIES

Located in Bedminster Township on Lamington Road west of Route 206, the Clarence Dillon Public Library serves both Bedminster Township and Far Hills Borough. Located on 0.63 acres (approximately 27,443 sq. ft.), the building used by the public library is a remodeled Bell Telephone switching office and houses approximately 26,000 books in its area of 4,000 sq. ft. The Library was an "association library" of Somerset County and was managed by the Board of Trustees of the Crossroads Public Library Association until January 1, 1982. At that time, Bedminster Township and Far Hills Borough withdrew from the Somerset County System and established the "Joint Free Public Library of Bedminster and Far Hills". However, the "Clarence Dillon Public Library" name will be maintained.

The needs of the library facility include the addition of a part-time staff aide for Saturdays and an addition to the building of approximately 1500 square feet. The expansion is considered necessary in order to meet the anticipated needs of the projected development within Bedminster Township. The current site of the Clarence Dillon Public Library has sufficient space available to accommodate both the projected expansion of the building and the commensurate increase in parking area.

SCHOOLS

Public school students within Bedminster Township attend the Bedminster Township Public School System for their elementary education and the Bernardsville Public School System for their secondary education. Additionally, a large number of school age children within Bedminster Township attend private schools.

The Bedminster Township Public School System consists of a kindergarten through eighth grade situated on a 41.8 acre site south of Route 202 in Bedminster Village. Actually, only approximately four (4) acres of the site are used for the school building and parking area; the balance of the acreage is used for recreational facilities, including a nature trail, and is a land reserve for possible school expansion.

The Bedminster Township Elementary School was originally constructed in 1933 as a two-story structure; single-story additions were completed in 1958 and 1968. The building currently contains seventeen (17) instructional classrooms and functional enrollment capacity of the school is 404 students.

The 1981 enrollment of the Bedminster Township Elementary School was 203 students, accounting for approximately fifty percent (50%) of the functional enrollment capacity of the school. The 203 student enrollment includes 27 students who reside in adjoining Far Hills Borough which is a 'sending' district to the elementary school. The distribution of the 203 students by their grade is indicated on Plate Com. Fac.-3.

It should be noted that the Borough of Far Hills has petitioned the State Commissioner of Education to allow the students from Far Hills to attend the Bernardsville School System for their elementary education instead of the Bedminster Township School System. The Commissioner has

Plate Com.Fac.-3

Distribution of Students by Grade
October 1981
Bedminster Township Elementary School

Grade	Number of Students
K	17
1	22
2	16
3	19
4	22
5	24
6	23
7	24
8	31
Special Education	5
Total:	203

SOURCE: Bedminster Township Public School System

"stayed" the withdrawal request pending an assessment of the increase in enrollment within the Bedminster Township Elementary School as a result of the expected development within Bedminster Township.

The school aged population within a municipality is affected by local birth rates, the migratory movement of families with school age children into and out of the municipality, and the rate of new residential construction. In Bedminster Township, the residential construction over the past several years has been relatively little and migration has also been negligible; as a result, due to significantly declining birth rates, the school age population within Bedminster Township has significantly declined. As an example, the 1971-1972 school enrollment for the Bedminster Township Elementary School System was 416 students; in 1975-1976, the enrollment had declined to 289 students; and in 1981-1982, the enrollment is down to 203 students. Subtracting the 27 students attending Bedminster Township Elementary School from neighboring Far Hills Borough, the 176 elementary school aged children attending the public school from Bedminster Township represents seven percent (7%) of the 1981 Township population of 2,469 individuals. While this percentage is similar to that which existed since the mid-70s, it is significantly less than the twelve percent (12%) ratio prevelant in the earlier part of the decade.

The Bernardsville School System includes the Bernards High School which has a functional capacity for 1,449 students and a current enrollment of 990 students. Of the 990 student enrollment, 117 students (grades 9 - 12) are bused to Bernards High School from Bedminster Township. In addition to Bedminster Township, Bernards High School also received students from Far Hills Borough and Peapack-Gladstone Borough.

A discussion of the schools attended by students residing in Bedminster Township must include reference to private schools. It is estimated that at least twenty-five percent (25%) of the school age children within Bedminster Township attend private schools and at least seventy (70) of these children are of elementary school age. The Far Hills Country Day School in Far Hills Borough educates 39 elementary school age children plus eight ninth grade students, all of whom reside in Bedminster Township.

The Purnell School is the only private school located within Bedminster Township. Situated on a 94 acre site in the Pottersville section of the Township, the Purnell School is for high school girls only. With a current enrollment of 121 students, only one (1) student is a resident of Bedminster Township.

As the occupancy of the new residential development takes place within the Bedminster/Pluckemin Village Corridor area of the Township, a year-by-year monitoring of the live birth and kindergarten enrollments will be necessary in order to accurately access future school needs. Decisions must be made with neighboring jurisdictions regarding the overall system of providing education to the students within Bedminster Township, Bernards Township and Far Hills Borough.

Nevertheless, until the rate of development and a demographic profile of the new residents within the Bedminster/Pluckemin Village Corridor becomes evident, it behooves the Township to reserve lands for the future construction of additional schools, should such schools be needed.

PARKS, RECREATION AND PUBLIC OPEN SPACE

Currently, over 650 acres in Bedminster Township are devoted to park, recreation and/or open space uses; however, the acreage owned and used by Bedminster Township itself is relatively insignificant when compared to the total 650 acres. Township owned land and facilities include the "Pond", a 68 acre parcel located on Route 202/206 in Bedminster Village which was purchased with Green Acres funds, and a baseball field located on the 2.2 acre Pluckemin Schoolhouse site west of the Burnt Mill/Route 202-206 intersection. The "Pond" is being developed as a passive park with facilities for walking, jogging, sitting and fishing.

Other Township owned lands available for recreational use include two (2) undeveloped properties on River Road, including a 6 acre parcel across River Road from Mathews Drive and a 7 acre parcel south of Interstate 78. There are no current plans to use either of these two land parcels for recreational use.

In addition to the recreational and undeveloped land facilities owned by Bedminster Township, other park, recreation and open space lands located within Bedminster Township include the following:

1. The Bedminster Township Public School System property in Bedminster Village which provides approximately thirty (30) acres of land for recreational purposes;

2. An undeveloped eighteen (18) acre parcel of land owned by the New Jersey Department of Environmental Protection adjacent to the Lamington River in Pottersville. This wooded property could offer public viewing of the Lamington River Falls;

3. A forty-four (44) acre parcel of land which is part of the "Bamboo Brook Unit" outdoor education center owned and operated by the Morris County Park Commission. The property within Bedminster Township is part of an overall recreation facility of the Morris County Park Commission located to the north of Bedminster Township in neighboring Chester Township;

4. The one hundred fifty (150) acre "wildlife refuge" owned and maintained by the Upper Raritan Watershed Association. The former Zuhke Estate, the property is located west of Larger Cross Road in the northern portion of Bedminster Township;

5. The two hundred twenty-seven (227) acre "Conference/Retreat Center" owned and maintained by Princeton University. The former estate of Clarence Dillon, the property is set back to the west of Larger Cross Road in the northcentral portion of Bedminster Township;

6. The one hundred fifteen (115) acre Fiddler's Elbow Country Club golf course facility located between Interstate Route 78 and River Road along the Lamington River boundary between Bedminster and Readington Townships;

7. The ten (10) acre portion of the Somerset Valley YMCA Lake Echo facility on Chambers Brook east of Route 202/206 and south of Interstate Route 78. An additional eight (8) acres of property is owned in adjacent Bridgewater Township. The facility has been used for day camp purposes; however, extensive repair requirements have closed the facility to active use and the eight (8) acre portion of the property in Bridgewater Township is up for sale.

Recreational programs in Bedminster Township are sponsored by the Township and the Far Hills/Bedminster Athletic Club. Soccer, little league, and softball programs are offered for youths between the ages of ten and twelve (10 - 12). The school fields and additional facilities at the nearby Far Hills Fairground are used for athletic programs.

As is true with most of the community facilities and services within Bedminster Township, the parks, open space and recreation facilities currently existing will not be adequate to serve the expected population growth within the Township. Concerning the planned developments which are in the process of being reviewed, approved and constructed within the Route 202/206 Corridor, recreational facilities are being included as part of the overall residential developments. However, there are also recreational needs associated with office construction and with adult athletic leagues sponsored by service organizations such as the Volunteer Fire Companies.

The paramount need for the Township at this time regarding the provision of future community services and facilities is the acquisition of land areas designated for such purposes. This need for land is particularly relevant to the provision of recreational facilities and should be accomplished, to the greatest extent possible, simultaneous with the private development of land areas.

AIRPORT

The Somerset Airport is a privately owned, commercially licensed airport located in the south-central portion of the Township where Branchburg and Bridgewater Townships abut Bedminster Township. The Bureau of Aviation Planning of the New Jersey Department of Transportation classifies Somerset as a "basic utility" airport. As indicated in the New Jersey State Airport System Plan, basic utility airports can accommodate almost all single engine aircraft and most twin engine aircraft with less than 8,000 pounds maximum weight. The lengths of the three (3) runways of the Somerset Airport facility range between 1,850' and 2,725', which is within the range specified for runway lengths of a basic utility airport.

The Somerset Airport provides a unique transportation and recreation facility for the residents and workers within and around Bedminster Township. As is recommended by the Bureau of Aviation, care should be taken not to constrain the continued safe operation of the airport facility. One major method of preserving an airport's integrity is to permit only low density residential or low intensity non-residential development surrounding the facility, thereby minimizing the nuisance effects of the airport's operation on adjacent land uses, while, at the same time, allowing improvement modifications to be made to the airport in order to accommodate new technologies and permit the facility's safe operation.

CONCLUSION

The analysis of existing community facilities within and serving Bedminster Township indicates certain existing deficiencies which are currently being addressed by the Township. However, since 1971, the Township's population has declined by approximately 1,000 individuals. Clearly, with a 1980 population of approximately 2,469 individuals, the municipality could be expected to remedy the deficiencies in a relatively slow and deliberate manner. Moreover, were the Township expected to develop in small increments over an extended period of time, long-term needs at any given point in time would be only slightly different than the current needs; however, this is not the case.

Suddenly, as a result of the March 1980 Court Order by Judge Leahy, Bedminster Township is faced with the monumental task of both planning and implementing a program for the provision of community services to thousands of more residences and thousands of more square feet of non-residential space within the next ten (10) years. The reality of the situation is that the development prescribed by the Court and echoed in the Land Development Ordinance of the Township will occur; it is therefore a major burden and responsibility of the Township to find ways to acquire land for the facilities and construct the facilities as necessary in order to meet the needs of the future residents and workers of Bedminster Township.

Utilities Analysis

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INTRODUCTION

An analysis of the utilities within and serving Bedminster Township is an extremely important consideration in the Master Plan process. As noted in the Community Facilities Analysis, a documentation of the existing levels of community facilities, including public sewer and water facilities, is a key measure of the Township's current capacities and limitations to absorb future growth. Because of the importance of sewerage treatment facilities and potable water supplies to the development of Bedminster Township, particularly in the Court defined "corridor" area, an analysis of these community facilities is presented herein as a separate investigatory report.

WASTEWATER TREATMENT FACILITIES: EXISTING

Plate Utility-1 indicates the existing wastewater treatment plants located in Bedminster Township.

Bedminster Township's only public wastewater treatment facility is the municipally owned and operated plant located on a thirteen (13) acre site east of Route 202 in Bedminster Village. Operational since 1975, the plant provides service to the developed portion of Bedminster Village, with 160 connections. Additionally, the plant serves the A.T.& T. Longlines complex (1 connection) and, through agreements, provides service to the Borough of Far Hills (110 connections). The overall system includes approximately 3.3 miles of connector and interceptor sewer lines.

The Bedminster Township Sewerage Treatment Plant provides for tertiary treatment of domestic wastewater. The design capacity of the plant is 203,750 gallons per day (gpd). The average daily flow is approximately 145,000 gpd, equivalent to approximately seventy-five percent (75%) of its average hydraulic design capacity. The treated effluent is discharged into the North Branch of the Raritan River, with a daily discharge limitation of 200,000 gpd imposed by the State of New Jersey. During periods of heavy rainfall, however, the flow through the plant has peaked to 500,000 gpd, at which time only secondary treatment of the wastewater is possible.

The Bedminster Township Sewerage Treatment Plant is operated and maintained by the Bedminster Municipal Public Works Department, under the supervision of a licensed wastewater treatment plant operator and an assistant.

Based upon previously noted service agreements (including Bedminster Village, A.T.& T. Longlines and the Borough of Far Hills), the design capacity of the treatment plant is allocated and currently utilized as follows:

	Service Agreement Allocation	Current Average Daily Flow	Percentage
Far Hills Borough	35,000 gpd.	35,000 gpd.	100%
A.T.& T.	98,750 gpd.	77,000 gpd.	80%
Bedminster Village	68,000 gpd.	52,000 gpd.	76%

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
P. O. BOX CN 029
TRENTON, NEW JERSEY 08625

MAR 05 1982

Township of Bedminster
Hillside Avenue
Bedminster, New Jersey 07921

Attention: Mr. Neil V. Callahan
Wastewater Treatment Plant Manager

Dear Mr. Callahan:

This is in response to your letter of February 8, 1982 and our subsequent telephone discussion concerning approvals for connections into existing sewer systems and sewer extensions.

According to the provisions of N.J.A.C. 7:14A-1 et seq. "Regulations Concerning The New Jersey Pollutant Discharge Elimination System" a treatment works approval is required "before building, installation, modifying or operating any treatment works."

However, the regulations provide that "building, installing, modifying, or operating any sewer connection which links any single building to municipal treatment works and through which less than 2000 gallons per day of waste flows" does not require approval from this Department.

Before this Department will approve a sewer extension project we must have assurance that the treatment facility receiving the flow has adequate capacity to properly treat the wastewater flow that will be generated by the project. Also, the project must conform to applicable facilities, basin and areawide plans before approval may be granted. The above assurances are incorporated with the package that is submitted to the Department.

If you have further questions concerning the above, please contact Mr. Joseph Reitzes of my staff who may be reached by calling (609) 984-4429.

Very truly yours,

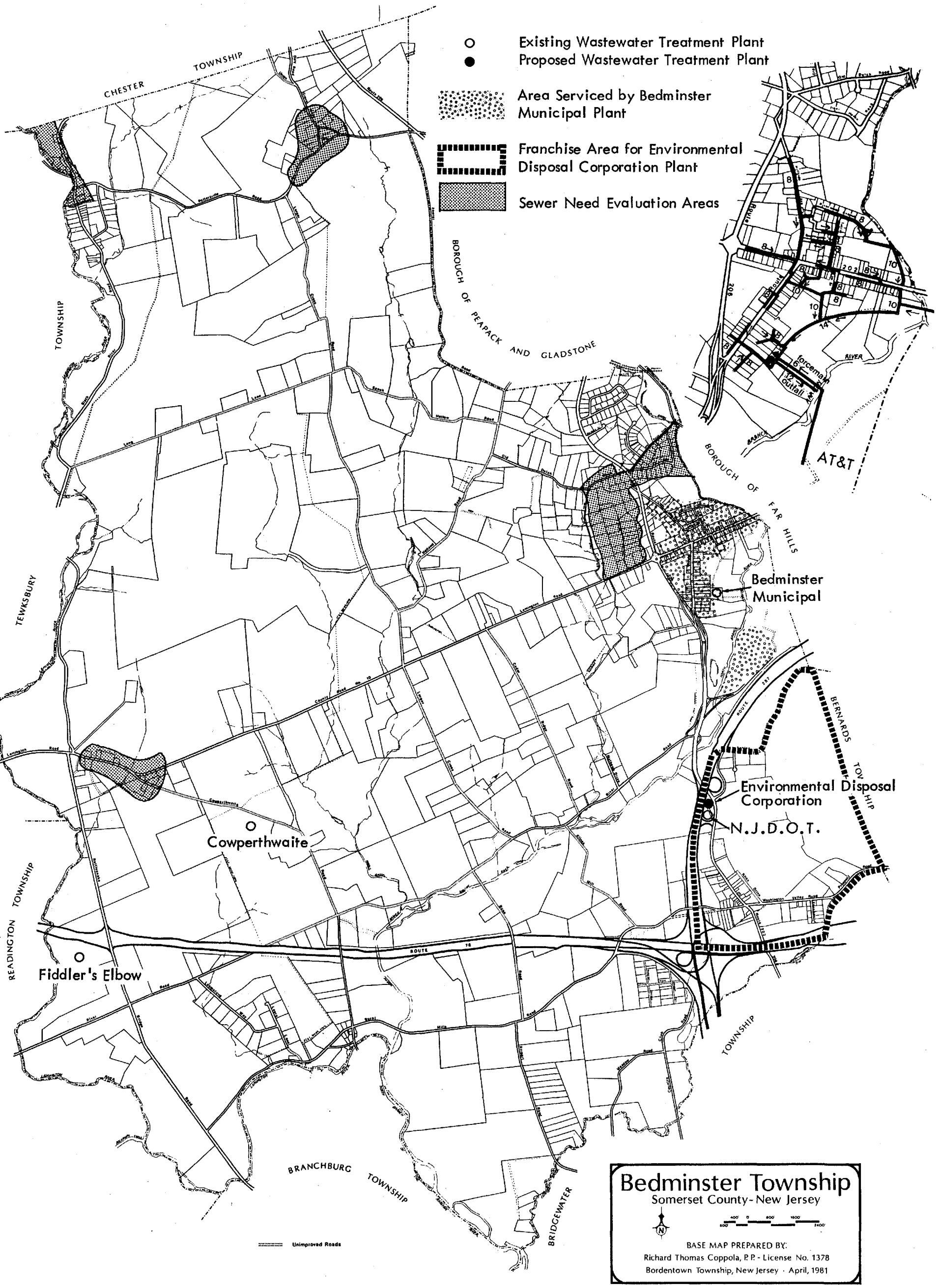
S. T. Giallella

S. T. Giallella, P.E., Chief
Bureau of Municipal Waste Management
Water Quality Management

WQM51:ls

cc: Joe Reitzes, DEP

Wastewater Treatment Facilities and Sewer Needs Evaluation Areas



Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey · April, 1981

SOURCE: Public Works Department, Township of Bedminster;
Upper Raritan Watershed Wastewater Facilites 201 Plan.

UTILITY PLATE 1.

The twenty-four percent (24%) balance of the reserved allocation for Bedminster Village is earmarked to serve future development within the service area indicated on Plate Utility-1. Effectively, therefore, the current facility design capacity restricts the service area of the wastewater treatment plant to the Bedminster Village area east of Route 206.

There are three (3) significant problems affecting the operation of the Bedminster Township Sewerage Treatment Plant. The first of these is the high flow of water from the Far Hills sewers during wet weather. The Borough of Far Hills is attempting to identify the sources of the water inflow and infiltration and has initiated a program of sewer replacement and the raising of manholes. A second problem is the high level of nitrogen and phosphorous remaining in the effluent discharged into the North Branch of the Raritan River. Plant modifications are being considered in order to eliminate this problem and satisfy objections by the New Jersey Department of Environmental Protection. The third problem is that of sludge disposal. Currently, the plant produces an average of approximately 8,000 gallons of sludge per week which must be transported to a sludge disposal facility Prior to 1982, all sludge was accepted for incineration by the Somerset-Raritan Sewage Authority. Currently, however, the Authority is limiting sludge acceptance to only 4,000 gallons per week and the balance of sludge from the municipal plant (an additional 4,000 gallons) is being transported by private hauler to the Stony Brook Regional Sewage Authority in Rocky Hill for disposal. As an alternative to sludge hauling and incineration, consultants to Bedminster Township have suggested a consideration of a spray irrigation facility within the municipality. This recommendation is pending and no action yet has been taken by the municipal officials.

As indicated on Plate Utility-1, there are three (3) privately owned and operated wastewater treatment systems in the Township. Each of these treatment plants are small in size and have very limited capacities:

Cowperthwaite

The Cowperthwaite treatment plant provides service to an apartment house of four (4) dwelling units with approximately ten (10) persons. The plant consists of a septic tank and sand filter and provides secondary treatment. The average daily flow is approximately 1,000 gpd which is also the design capacity of the plant. Based upon the recently completed Upper Raritan Watershed Wastewater 201 Facility Plan Study, effluent from the Cowperthwaite plant satisfies the recommended standards. Although some upgrading and expansion of the plant may be possible, expansion possibilities are limited due to the intermittent flow of the receiving waterway.

Fiddler's Elbow

The Reynwood Corporation owns the treatment plant which provides service to the Fiddler's Elbow Country Club in Bedminster and neighboring Readington Townships. The plant consists of a package activated sludge plant and sand filter and provides advanced treatment. The design capacity of the plant is

16,500 gpd, while the average daily flow during the summer months is estimated to be approximately 7,000 gpd. The effluent is discharged into the Lamington River.

Based upon the Upper Raritan Watershed Wastewater 201 Facility Plan Study, the discharge effluent does not satisfy State standards, although the plant itself is considered capable of satisfying the standards. The operator of the plant indicates that the prescribed effluent standards are now being met and that no problems currently exist.

While upgrading and expansion of the facility is possible, none is contemplated at this time. However, certain equipment upgrading and/or replacement may be necessary in the forseeable future. Daily attention to the plant is required in order to ensure its proper operation.

N. J. D. O. T. Maintenance Garage

The New Jersey Department of Transportation owns and operates a treatment plant servicing its maintenance garage and State Police facility located on Route 202/206 directly north of Pluckemin Village proper. The plant, constructed in 1972, provides for tertiary treatment of wastewater. The design capacity of the treatment plant is 3,000 gpd and an average daily flow of 1,000 gpd currently is experienced. The Upper Raritan Watershed Wastewater 201 Facility Plan Study concluded that the recommended effluent quality standards are being satisfied. The 201 Facility Study also recommended that this plant, due to a relatively short life of the plant equipment, be abandoned in the foreseeable future and that wastewater be treated at the privately owned facility being constructed by the Environmental Disposal Corporation adjacent to the N.J.D.O.T. property.

WASTEWATER TREATMENT FACILITIES: RECOMMENDED and PROPOSED

All newly planned and constructed wastewater treatment facilities within Bedminster Township must be designed and operated in accordance with the newly completed Upper Raritan Watershed Wastewater 201 Facility Plan; without such compliance, a stream discharge permit will not be issued by the New Jersey Department of Environmental Protection. The 201 Facility Plan has been prepared to provide an analytic basis for the evaluation of new wastewater treatment facilities which are projected as necessary in order to meet anticipated growth within Bedminster Township during the next twenty (20) years.

Correspondence included within the Addendum to this report verifies the importance of the Upper Raritan Watershed Wastewater 201 Facility Plan. The New Jersey State Department of Environmental Protection stipulated in a March 15, 1982 letter to the Wastewater Treatment Plant Manager of Bedminster Township that before the Department of Environmental

Protection will approve a sewer extension project, the project must be deemed to conform to applicable area-wide plans, including, of course, the 201 Facility Plan. The Somerset County Planning Board, in a review of a submitted application in the vicinity of the Bedminster Village portion of the Township, expressed its opinion and concern that any plans for sewerage treatment facilities be accomplished in concert with the 201 Facility Plan. Also included is a Memorandum to the Township Committee from the Township Attorney summarizing a meeting with the Division of Water Resources of the State Department of Environmental Protection held July 13, 1982. The meeting verified that the Department of Environmental Protection will not approve any sewerage treatment facility which is not in compliance with the area-wide sewerage facility plans, regardless of how the sewer improvement is funded.

Specifically, the 201 Facility Plan estimates an increase of approximately 6,500 persons in Bedminster Township by the year 2000 and, generally, anticipates the growth to occur within the Route 202/206 Corridor which was specifically designated by the Somerset County Superior Court.

In order to meet the sewer needs of this growth, the 201 Facility Plan recommends that Bedminster Township's existing wastewater treatment plant be expanded by approximately 50,000 gpd (a 25% capacity increase) between the years 1990-2000 in order to accomodate the expected growth within Bedminster Village. Moreover, the 201 Facility Plan recommends that the Pluckemin Village area be served by the Environmental Disposal Plant currently under construction.

The expansion of the Bedminster Township Sewerage Treatment Plant is intended to accommodate the wastewater flow from anticipated development on those sites within and immediately adjoining the plant's existing service area. However, the water quality standards for the North Branch of the Raritan River promulgated by the 201 Facility Plan may limit effluent discharge volumes. Specifically, the 201 Facility Plan recommends that Bedminster Township consider land application techniques for the liquid effluent.

It should be noted that the 50,000 gpd suggested increase in the treatment plant's capacity would limit treatment to an estimated 204 additional dwelling units within the Bedminster Village/Route 206 corridor area. This estimate is based upon a per capita flow of 70 gpd and an average household size of 3.5 persons. The 201 Facility Plan further assumes that lots of one (1) acre or greater in size can and will be developed with individual on-site septic systems.

The new wastewater treatment facility being constructed to serve the Pluckemin Village area will be operated by the Environmental Disposal Corporation, a subsidiary of Johns Manville Corporation. The plant is to be operated under a franchise agreement with Bedminster Township and will serve the entire Pluckemin Village area north of I-78 and east and south of I-287. (See Plate Utility-1 for specific delineation of the franchise area).

The treatment plant is to be located on lands adjacent to Route 202/206, just south of I-287. In accordance with the 201 Facility Plan, the plant is being constructed to operate at an 850,000 gpd capacity; however, the design of the plant could permit a capacity expansion to 1,250,000 gpd.

Regarding the new development that can be served by the 850,000 gpd facility being constructed, it is anticipated that approximately 21,000 gpd of flow will be utilized by the proposed City Federal Savings and Loan office development and an additional 50,000 gpd of flow will be utilized by the commercial uses within the Hills Development Corporation PUD. Therefore, an estimated 779,000 gpd of flow will remain to serve the other existing uses within Pluckemin Village and the new housing proposed to be developed in accordance with the adopted Land Development Ordinance requirements. Using a standard 240 gpd of flow per dwelling unit, the 779,000 gpd balance may satisfy the needs of approximately 3,245 housing units. Considering that approximately 1,000 housing units proposed by the Hills Development Corporation to be served by the Environmental Disposal Corporation treatment plant are to be physically located in the adjoining Bernards Township, approximately 2,245 housing units can be expected to be located within Bedminster Township and served by the wastewater treatment facility.

SEPTIC SYSTEMS

Private septic systems have been the primary method of treating domestic wastewater within Bedminster Township and will continue to be the primary method, as sewerage treatment plant facilities will be restricted to providing service to high density and high intensity development within the Court defined Route 202/206 'Corridor' area, encompassing both Pluckemin and Bedminster Villages.

The proper operation of septic systems within Bedminster Township requires care and attention. Generally, the soil conditions within the Township are not favorable to operating septic systems due to percolation limitations, bedrock levels and high water tables. According to the Township Health Officer, septic systems have to be over-designed and, generally speaking, require building lots between three and five (3 - 5) acres in area in order to assure proper operation. The Township Board of Health reviews each application on a case-by-case basis and consults with professional experts, when necessary, in order to insure that any approved system will adequately perform.

While there is no on-going monitoring program of septic systems within Bedminster Township, the Township Health Officer indicates there have been many incidences of septic system failures. In this regard, the Upper Raritan Watershed Wastewater 201 Facility Plan has recommended that Bedminster Township prepare a septic system management plan. The 201 Facility Plan also recommends that a 'sewer needs study' be undertaken for the four (4) areas of the Township identified on Plate Utility-1. It should be noted that the designated Pottersville study area includes undeveloped lands along Hacklebarney Road south of Chester Township but, interestingly, does not include the built-up areas of Pottersville along Black River Road. This apparent discrepancy requires clarification, since this portion of the Township has certain unique conditions, including the following:

- The age and historical significance of the dwellings located within the Pottersville area;

- The low-lying lands adjacent to the Lamington River;

- The fact that many of the existing septic systems flow directly to the Lamington River; and,

- The small lot sizes and the existence of non-residential uses such as the church, the two (2) nursery schools, the boarding school and the bank.

In addition to the Pottersville area along Black River Road, the Township Health Officer has identified the Ski Hill neighborhood, north of Bedminster Village proper, as another area with improperly operating septic systems.

STORMWATER DRAINAGE

A stormwater drainage system exists within Bedminster Township, including manmade facilities of pipes, swales, and ditches as well as natural water courses. The storm drainage system is shown on Plate Utility-2.

POTABLE WATER SUPPLIES

Potable water for Bedminster Township is provided by a combination of sources, including the Elizabethtown and Commonwealth Water Companies as well as individual private wells. As indicated on Plate Utility-3, the public water facilities generally are confined to the Route 202/206 corridor, including Bedminster and Pluckemin Villages, and the northernmost portion of the Township between Pottersville to the west and State Route 206 to the east in the Borough of Peapack and Gladstone. Private water wells provide potable water supply throughout the balance of the municipality.

The Commonwealth Water Company currently supplies water service to approximately 376 residential and commercial customers located almost entirely within Bedminster Village. Daily water usage is 197,000 gallons. The Commonwealth Water Company's supply of potable water is purchased from the Elizabethtown Water Company and the Peapack Water Company, which, in turn, also secures its water from the Elizabethtown Water Company. The Elizabethtown Water Company proper provides service to sixty-eight (68) customers within the Pottersville-Pottersville Road portion of the Township, with a daily consumption of approximately 30,000 gallons.

The Elizabethtown Water Company estimates that the total water available to serve Bedminster Township is approximately 1.5-million gpd, i.e., six times (6x) the current water consumption. This estimate is an optimum capability evaluation based upon water from three (3) sources, including the Raritan River, Spruce Run Reservoir and the Round Valley Reservoir.

Water storage facilities in Bedminster Township include a 1,000,000 gallon tank of the Elizabethtown Water Company situated on "Hamilton Farms" in the northern portion of the municipality. A 250,000 gallon water storage tank for the Commonwealth Water Company is proposed for construction in the Pluckemin Village area on lands owned by the Hills Development Company adjacent to Washington Valley Road. The water tank is necessary to provide potable water to the Hills Planned Unit Development under construction.

Water Facilities

Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey · April, 1981

PLATE UTILITY-3

SOURCE: Elizabethtown Water Company
and Commonwealth Water Company

Storm Drainage System

SOURCE: Tax Maps, Township of Bedminster; Supervisor, Public Works Department, Township of Bedminster; Sanitary Sewer Record Plans, Contract I, Elson T. Killam

NOTE:

Storm drainage facilities for State Highway 206, I-78 and I-287 exist but are not shown. Refer to N.J.DOT sources. All secondary roads have surface drainage facilities and cross-pipes as

Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey - April, 1981

PLATE UTILITY-2

Certain back-up systems are existant to provide water supplies to Bedminster Township including 150,000 gpd from a well owned by the Elizabethtown Water Company in nearby Tewksbury Township (formerly owned by the Pottersville Water Company) and 280,000 gpd from wells owned by the Peapack Water Company. The Peapack Water Company wells are currently inoperative and the Elizabethtown Water Company well operates only occasionally to maintain the system's pressure, particularly during the summer months during peak water usage periods.

The State of New Jersey has recently adopted a statewide Water Supply Master Plan, which among numerous proposals, recommends the construction of a water pipeline to transfer water from the Round Valley Reservoir in the Raritan River Basin to lands in the northern portion of New Jersey within the Passaic River Basin. As proposed, the pipeline would start at the confluence of the North Branch of the Raritan River and Chambers Brook (the municipal border between Bedminster and Bridgewater Townships) where it would draw from water discharged into the Round Valley Reservoir. The pipe would then proceed underground through Bridgewater and Bernards Township for an ultimate discharge into the Dead River. It is not expected that the construction of the pipeline will have any effect on the water supply within Bedminster Township.

No firm time schedule for the construction of the pipeline has been agreed upon and the construction of the facility is opposed by both the Somerset County and Morris County Planning Boards.

GAS LINES

Plate Utility-4 indicates the natural gas facilities within Bedminster Township. As noted, such gas facilities are limited to the Pottersville Road area and portions of Pluckemin Village. While the Public Service Electric and Gas Company maintains that expansion of gas service to Bedminster Township is no problem, the only expansion being considered at this time is for the Hills Development Company PUD in Pluckemin Village.

GETTY OIL PIPELINE

The Getty Pipe Company owns a transmission pipeline which passes through Bedminster Township. The pipeline is one of the oldest in the nation. Shown within Bedminster Township on Plate Utility-4, the pipeline originates in Linden, New Jersey and terminates at Pennsdale, Pennsylvania.

The pipeline consists of two (2) six inch (6") diameter pipes located at varying depths up to three feet (3') deep. The pipeline was last used for transmission of No. 2 Fuel Oil. The Getty Pipe Company has indicated that the "pipeline operations have been temporarily suspended for a period of time pending a review of various economic alternatives." There is conjecture that the pipeline is in need of repair and that there have been instances of localized oil seepage.

Existing Gas Lines

PLATE UTILITY-4

SOURCE: Getty Pipe Company and Public Service Electric & Gas Company

CONCLUSION

The analysis of utility service within Bedminster Township indicates an orientation of utility service within the Pluckemin-Bedminster Village-Route 202/206 corridor portion of the Township, which has been recognized both by the County of Somerset and the Superior Court of New Jersey as the area of Bedminster Township which is uniquely appropriate to receive and accommodate the bulk of the Township's future development. Therefore, there appears to be no question of the potential ability to provide public water and sewage facilities to the dense residential and intense non-residential development earmarked for this corridor area. However, certain caveats to this conclusion must be clearly indicated.

First, regarding wastewater treatment, the capacity of such treatment facilities must be evaluated in terms of the ability of the environment to support such facilities. The quality of effluent discharge into the waterways must be continuously monitored and evaluated. In this regard, the Township has a regional obligation to adhere to the recommendations of the Upper Raritan Watershed Wastewater 201 Facility Plan. Secondly, regarding the provision of an adequate potable water supply, the overall capacity of the Raritan River Basin must be considered in the context not only of the parochial needs of Bedminster Township but also in light of regional demands. Finally, regarding septic effluent discharge, consideration not only must be given to the individual capacity of a parcel of land to support a private septic system, but also the interrelationship of septic effluent discharge to the possible contamination of potable water supplies, both from individual wells and from public water company systems which also derive water from the ground.

ADDENDUM

SOMERSET COUNTY PLANNING BOARD

County Administration Building
Somerville, New Jersey 08876

William E. Roach Jr.
Planning Director
Phone (201) 725-4700
Ext. 272

John J. Seresy, Chairman
Frank S. Fagundus, Jr., Vice Chairman
Vernon A. Noble, Freeholder & Secretary
Carolann Auger
Otto Kaufman
Henry O. Mottern
Kenneth D. Schmidt
Thomas E. Decker, County Engineer
Warren G. Nevins, Freeholder

RECEIVED
FEB 4 A.M.

TO: J. William Scher, Chairman
Bedminster Township Planning Board
FROM: Somerset County Planning Board
DATE: February 1, 1982
RE: Bedminster Riding/Lots 16Q, 19 & 20, Block 41
(BM38:1-82SP)

This Office and the Office of the County Engineer have reviewed the above-referenced preliminary site plan, dated December 3, 1981, proposing 401 dwelling units on a +/- 71 acre parcel of land located along Lamington Road and Route 206.

Previously, this office reviewed a conceptual plan and made several recommendations regarding access, utilities and open space. We are pleased that the plan has been revised in order to provide a sewer connection into the municipal sewage plant and to limit direct access onto Route 206. Also, we think that the acquisition of the additional lands connecting with Thosmor Road is reasonable, since it provides an alternative point of access for both ingress and egress and emergency uses.

Again, we would like to note that we are pleased that the plan has been modified to provide for a "tie-in" to the Township's existing sewer treatment plant, rather than to propose a totally new and separate facility. As reported by this office previously, the recently completed Upper Raritan Watershed Wastewater Facilities Plan calls for a single treatment facility for the Bedminster Village area of the Township. The Facilities Plan suggests that the local treatment plant should be expanded from its present 0.204 MGD capacity to 0.253 MGD. The "tying-in" of the proposed new development with the local plant will probably necessitate a plant capacity which somewhat exceeds the 0.253 MGD called for in the "201" Plan.

The applicant has indicated, however, that he will seek a plant expansion which would accommodate a new plant capacity of .400 MGD. This figure is considerably higher than that discussed in the Upper Raritan 201 Plan, and seems to provide for capacities in excess of the demand for the village area. This office recognizes that the plant capacity will also have to accommodate a service area within neighboring Far Hills Borough. In as much as the applicant also has a development proposal before that community, it is suggested that any authorized plant expansion in Bedminster be coordinated with Far Hills. This office is concerned about plant expansions which may stimulate development beyond that envisioned in the County's duly adopted Master Plan of Land Use.

It is recommended that the New Jersey Department of Environmental Protection be requested to consider the proposed plant expansion and that their comments be forwarded to this Office as they become available. In addition to the affect expansion of the local treatment plant has on growth policies, we are equally concerned about the plant's affect upon the assimulative capacity of the receiving stream and thus water quality; and about further encroachment upon the floodway of the North Branch of the Raritan River. These are specific concerns that should be addressed by the Department of Environmental Protection.

Two other areas of direct County interest mentioned in our February 2, 1981 report were drainage and road improvements along Lamington Road. At this time, we would like to reiterate that the site is draining to a downstream County structure, so drainage review will come under County jurisdiction. In order that we might review the proposed detention basin for consistency with County requirements, the applicant is requested to submit the design calculations for routing the emergency spillway storm and freeboard storm per the "Somerset County Handbook." Other drainage requirements and comments are included in the attached supplemental report.

In regard to road improvements along Lamington Road, we have reviewed the applicant's traffic report and field inspected the site. It is recommended that four (4) lanes of roadway be constructed from the Westerly access drive (Road A) to Route 206. Our records indicate an existing 66' right-of-way for Lamington Road. However, the applicant is to verify this from the County records and indicate the existing R.O.W. dimension on the plans. A properly designed acceleration lane is also to be provided for the West bound lane back to existing edge of pavement. Traffic delineators are to be installed along the transition. A deceleration transition should also be provided into the site. Finally, curbing and storm drains are to be constructed along the aforementioned road improvements, excluding the westerly transition back to normal pavement width. Additional engineering requirements are attached.

We would also like to take this opportunity to offer some informal design comments. Perhaps one of the more important design aspects of the plan is the distribution of open space within the overall layout, and the grouping of buildings and streets. There was an attempt to provide a larger open space area in the center of the site, but not to tie thevarious clusters into a continuous network of open space and interconnecting pathways. There is also no hierarchy of roadways within the project. The major collection road, which connects the two public roads, appears to be the same width and design as internal loop roads. Both types of road appear to allow parking. Also many of the visitor parking spaces throughout the townhouse sections bear no close relationship to the units they intend to serve and in some cases blocks important open space views.

Other design issues which should be considered in more detail are solar orientation and landscaping. It is not readily evident that solar access was considered in the layout, since most building clusters are not oriented for maximum solar gain and a large number of interior units lack any southern exposure. We would also strongly suggest that the landscaping element be reexamined to create more of a natural effect. For example, the applicant is proposing a 1,800' long evergreen row along Route 206. A landscaping buffer is needed along the highway, but it is our feeling that it can be done more imaginatively with berming and landscape clustering or mixing evergreens and deciduoos trees. Also similar to the Hills Development proposal, it may be desirable to have the applicant submit typical parking/building entry landscaping details.

In conclusion, further County Planning Board action is being withheld pending receipt of revised plans consistent with the above drainage and road improvement requirements including the attached supplemental report. The plan should be forwarded to the State, so that the issue of sewage plant expansion can be fully explored, and any authorized expansion coordinated with Far Hills. We would encourage that the overall site layout be reexamined in order to provide a main collector road, which contains a minimum of parking along its course and helps separate the units into smaller building clusters with connecting open space and pathways. The design should also deemphasize the "lined up" appearance of units along interior roads.

Hopefully, these preliminary comments will be of assistance to the Board in reviewing the application. Should there be any qustions, please do not hesitate to contact this Office.

Very truly yours,

Robert Bzik

Robert Bzik
Principal Planner

RB/ag
cc: Bedminster Twp. Eng. ✓
Charlie Agle, 10 Nassau St.,
Princeton,NJ 08540
Marshall Frost, Assoc.,
Chairman, Far Hills Borough Planning Board
Gilligan Bubnowski, 431 No. Wood Avenue,
Linden, NJ 07036
Killam Assoc. Inc., 27 Bleeker St., Millburn, NJ 07041
Attn: Richard Jeske, P.E.
Raymond Trombadore, Esq., w/copy for Timberline Properties

TO: Township Committee and Messrs. Callahan, Schoenberg and Coppola

FROM: Edward D. Bowlby

RE: Sewer Planning - meeting with Division of Water Resources July 13, 1982

DATE: July 23, 1982

On July 13, 1982, we (Schoenberg, Merck, Callahan and Bowlby) met in Trenton at the office of Sam Giallella, who is the Chief of the Bureau of Municipal Waste Management of the Division of Water Resources, DEP, to discuss with him and his staff the current status of our sewer plant operation and the procedure for developing expanded sewer facilities. Those who attended are listed on the attached meeting attendance sheet. Prior to the meeting we had received a memorandum from John Cilo's office regarding the amount of sewer plant expansion which might be needed; Neil had written to me as to the questions to be presented at the meeting; and I had written to Mr. Giallella to inform him of the purpose of our visit. Copies of all of these writings are also attached.

One of the first subjects discussed was the question of infiltration from Far Hills and the overflow that it causes in the plant. We discussed the condition of the Far Hills sewer collector system and spoke briefly of the measures that had been taken by the Borough to cure the infiltration problem. Neil said that these corrective steps have probably reduced the peak flow from several hundred thousand gallons to perhaps 125,000 gallons per day on the problem days of the year. Although by comparison this is small, it is still regarded as a considerable overflow which must be corrected. The DEP people indicated that they would look to the Township as the entity responsible for the correction of this condition, since the Township holds the license and owns the plant. Mr. Delgado, who is the person with whom we must deal in programming ways for correcting the deficiencies in our plant, suggested that in our dealings with the Far Hills representatives we might (a) inform them that we are going to charge for the inflow on an escalating scale, with the price per gallon increasing with the flow, and (b) inform them that we are thinking of plant expansion and that in such case the design will have to cover the

actual flow, including infiltration, with the cost of any increased plant capacity to be charged to Far Hills.

The most important information gained at the meeting concerned the effect of the Federal 201 and 208 Plans upon any sewer construction program. Mr. Giallella emphasized that despite a widespread notion to the contrary, the DEP will not approve any sewer planning which is not in compliance with both 201 and 208 plans, regardless of whether the sewer improvement is funded wholly or in part with Federal money. That is to say, even though a proposed developer might offer to build a plant or system which is entirely privately funded, he would have to comply with the restrictions and constraints of the local (201) and regional (208) plans which were sponsored by the Federal Government to control the water quality in the Raritan River. Although we did not check the text of these plans at the meeting, everyone seemed sure that in the segment of the North Branch which is in the area of the Township's sewer plant, the inflow allocation of the Township's sewer plant, as prescribed by the 201-208 program, is in the neighborhood of an additional 50,000 gallons per day. This is in comparison to the approximate 500,000 gallons projected by the attached memo from John Cilo's office. Apparently this allocation can be changed with proper documentation, although the standards for change were not detailed at the meeting. Should such a change be required in respect to a particular project or development, the supporting data must be submitted to Giallella's bureau, which contains a group that decides on a proper allocation for the particular project involved. A general request for an increase in the allocation could also be made by the Township, in which case the applicant's supporting data is submitted to a DEP group headed by Douglas Clark - I believe this group is known as the Water Quality Management and Planning Section. While the 208 plan was authored by the DEP, the 201 plan affecting the Township's segment of the North Branch was prepared by the Somerset County Planning Board, which is where, it seems, any discussion as to Bedminster's allocation should be initiated.

We spoke briefly about the fact that the Bedminster sewer plant is still not performing satisfactorily to the DEP, and inquired as to the effect of this situation on any

proposal for expansion of the plant. Although there seemed to be no definite rule, it appeared that the expansion of the plant could be accomplished simultaneously with the correction of the present deficiencies, with the plant expansion being dependent upon the Township's complying with a DEP schedule of corrections.

Natural Resources Inventory

NATURAL RESOURCES INVENTORY

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NATURAL RESOURCES INVENTORY

INTRODUCTION

This section of the Background Studies updates and summarizes for planning purposes the information compiled by the Township's Environmental Commission in 1974 and presented in the Bedminster Township Resource Inventory. As the foreword to the Resource Inventory indicates, an environmental inventory is ongoing in nature and must be continuously refined and updated as more and better information becomes available. Additionally, it is only as good as the use to which it is put. A natural resources inventory has value to a municipality only if the data acquired can be used to assist in formulating policies regarding the locations of various land uses and the intensity of land development.

The physical characteristics of a community are only some of many factors which must be considered in formulating a rational plan. The pattern of existing development and regional growth pressures must also be weighed. Additionally, public utilities can augment the natural capacities and limitations of the land to absorb development and must also be evaluated. However, sewerage treatment capacity and potable water supply are not only reliant upon local environmental conditions, but, ultimately, are subject to the environmental limitations of a larger area. Because the capacity of land to absorb additional development is so closely related to its physical attributes, a comprehensive understanding of the physical environment is a critical step in determining future land use policies.

Much of the information presented in this section was originally compiled and mapped by the Township's Environmental Commission and is merely reproduced within this document on small scale maps. Where the Township's Resource Inventory did not include certain information, that data has been obtained and is included herein. Soils data was checked against the Soil Survey of Somerset County published in December 1976 by the U.S.D.A. Soil Conservation Service.

TOPOGRAPHY

Bedminster Township lies within two physiographic provinces. The area generally north of Pottersville Road lies within the Highlands division of the Appalachian province. The remainder of the Township lies within the Piedmont plateau. The Highlands area consists of gently sloping to steep uplands undelain by gneiss, quartzite and limestone. Its broad ridges rise some 400 feet above the lowland areas to the south. The plateau, on the other hand, is characterized by gentle hills and wide valleys with some conspicuous ridges.

Plate 1, entitled Topographic Slope, illustrates the general topography of Bedminster Township using 20 foot contours. In addition, areas of slope ranging from 15 to 25 percent and slopes in excess of 25 percent are delineated. Elevations within the Township range from a high of 487 feet in the Union Grove section of the municipality to only 100 feet above sea level in the Burnt Mill area. Most of the Township is gently rolling. The steepest slopes are found on the traprock ridges of Schley Mountain east of Route 206 and in the area north of Pottersville Road. Other areas of steep slopes are found along streams throughout the Township.

Topographic Slope

25% or greater

15% - 25%

less than 15%

Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey · April, 1981

SOURCE: U. S. Geological Survey Maps; Raritan, Gladstone and Bernardsville Quadrangles, 1970 Revision With Slope Overlay of Same.

N.R.I. Plate 1.

GEOLOGY AND GROUNDWATER HYDROLOGY

Plate 2 presents the underlying geologic formations within Bedminster Township. As indicated by the Plate, most of the Township is underlain by Brunswick Shale. However, there are portions of the Township which are underlain by Triassic Border Conglomerates and Basalt. The northwesternmost corner of the Township is underlain by Precambrian formations.

Brunswick Shale has little primary porousity. However, it is a well-fractured rock and groundwater travels between the joints and fractures within it. The Brunswick Shale is generally considered to be a good aquifer (source of potable water supply). The highest well yields tend to be in areas near streams or where the shale is overlain by course sand and gravel. Plate 3 graphically rates the water supply characteristics of various areas of the Township. As indicated, the best aquifer is found along the North Branch of the Raritan River.

Plate 2 also illustrates the approximate location of the Ramapo Fault line as it runs through Bedminster Township. The Ramapo section of the Triassic Border Fault is perhaps the longest system of faults in New Jersey extending southwest from Stoney Point, New York toward Reading, Pennsylvania, and beyond.

SOILS

Plate 4 represents the locations of the various types of soils within the Township of Bedminster as identified by the Soil Conservation Service and Plate 5 describes the limitations of each soil type for various forms of development. Generally, such characteristics as steep slopes, high water table, shallow depth to bedrock, flooding or stream overflow hazard, and impermeability create severe limitations for most forms of development. These characteristics are associated with certain soil types. A knowledge of the soils which exist within a municipality is thus useful in determining areas where development should or should not occur.

Plate 6 illustrates areas of high water table within Bedminster Township. Shown are areas where water lies within three (3) feet of the surface and areas where water lies between three (3) and five (5) feet of the surface. As indicated by the plate, much of Bedminster Township is subject to the limitations of a high water table. In some portions of the municipality, the soil is saturated by a water table that rises and falls seasonally. In other areas of the Township, water is perched over relatively impermeable layers of clay and shale. A high water table can result in frost action on roadways, groundwater pollution, and septic system malfunction.

Plate 7 indicates the depth to bedrock of the soils in Bedminster Township. Most of the municipality is contstrained by bedrock which lies within five (5) feet of the surface. The most serious problems for development arise when the depth to bedrock is shallower than three and a half ($3\frac{1}{2}$)

Geology

TRIASSIC

- Trb – Brunswick Formation
- Trc – Border Conglomerate
- Trbs – Basalt Flow

PRECAMBRIAN

- Msk – Marble and Skarn
- Hqa – Hypersthene-Quartz-Andesine-Gneiss

..... Approximate Location of Ramapo Fault Line

Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey · April, 1981

N.R.I. Plate 2.

SOURCE: Geologic Sheet Overlay #25, New Jersey Department of Environmental Protection.

Ground Water Resources

SOURCE: Upper Raritan Watershed Association, Natural Resources Inventory, New Jersey Bureau of Geology, New Jersey Department of Environmental Protection, Bedminster Environmental Commission Survey.

N.R.I. Plate 3.

Soils

SOURCE: Soil Survey of Somerset County, U. S. Department of Agriculture
Soil Conservation Service, December 1976.

N.R.I. Plate 4.

PLATE 5

DEGREE AND KIND OF SOIL LIMITATION FOR COMMUNITY DEVELOPMENT

DESIGNATION OF PLATE 4	U.S.D.A. SYMBOL	SOIL SERIES	LAND USE				PROBLEMS
			BUILDING FOUNDATIONS w/Basements	BUILDING FOUNDATIONS w/out Basements	SEPTIC SYSTEMS	LOCAL ROADS	
1	AbB	Abbottstown	C	C	C	C	1,2,3,4
2	ArB, ArC	Arendtsville	A	B	A	B	2,5
3	AmB, AnB, AnC	Amwell	C	C	C	C	1,2,3,4
4	BdB	Birdsboro	A	B	A	B	2,5
5	BdC	Birdsboro	B	B	B	B	2,5,6
6	Bt, RbA, Ph	Bowmansville, Raritan and Parsippany	C	C	C	C	1,7
7	CaB	Califon	C	C	C	C	1,2
8	CrA, CpB	Croton, Cokesbury	C	C	C	C	1
9	EdD	Edneyville	C	C	C	C	6
10	Dw	Dunellen Variant	C	C	C	C	1
11	DnB, DnC	Dunellen	A	B	A	B	2
12	KIC, KID	Klinesville	B	B	C	C	4,6
13	La	Lamington	C	C	C	C	1
14	LbA, LbB	Lansdowne	C	C	C	C	1,2
15	MeB, MeC	Meckesville	C	B	C	B	1,2,6
16	MuB	Mount Lucas	C	C	C	C	1,4
17	NKC, NKD	Neshaminy	C	C	C	C	1,6
18	NoA, NoB	Norton	A	B	C	B	2,3
19	NoC, NoC_2	Norton	B	B	C	B	2,3,6
20	PIC	Pattenburg	B	B	B	B	2,5,6
21	PID	Pattenburg	B	B	C	C	4,5,6
22	PmB, PnB	Penn	B	B	C	B	2,4
23	PmC, PnC	Penn	B	B	C	B	2,4,6
24	ReA, ReB	Reaville	C	C	C	C	1,2,4
25	Ro, UD	Rowland, Udifluvents and Ochrepts	C	C	C	C	7

LIMITATIONS

A SLIGHT ratings mean little or no limitation or limitations easily corrected by the use of normal equipment and design techniques.

B MODERATE ratings mean presence of some limitation which normally can be overcome by careful design and management at somewhat greater costs. Kinds of limitations are listed.

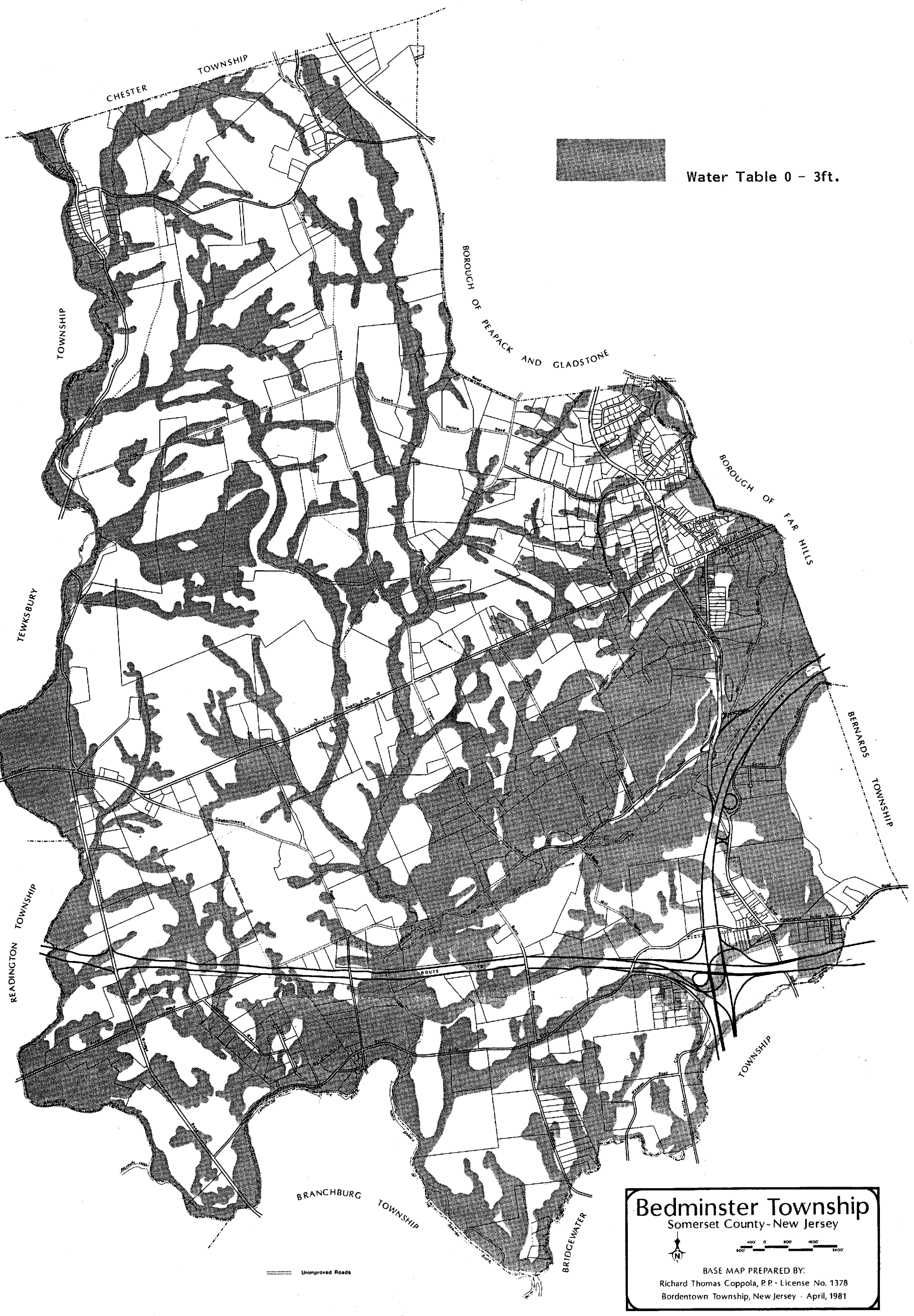
C SEVERE limitations are those which normally cannot be overcome without exceptional, complex or c ostly measures. Kinds of limitations are listed.

KEY TO PROBLEMS

1 high water table
2 frost action potential
3 slow permeability
4 shallow depth to bedrock
5 hazard of groundwater pollution
6 strongly sloping
7 stream overflow hazard

SOURCE: Soil Survey of Somerset County, New Jersey, U.S.D.A., Soil Conservation Service, 1976.

Areas of High Water Table



Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey · April, 1981

N.R.I. Plate 6.

SOURCE: United States Department of Agriculture, Soil Conservation Service.

Depth to Bedrock

Bedrock 0' - 3'

Bedrock 3' - 5'

Bedrock greater than 5'

Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey · April, 1981

SOURCE: United States Department of Agriculture, Soil Conservation Service.

N.R.I. Plate 7.

feet. A shallow depth to bedrock impairs the development of building foundations, roads, and infrastructure.

Plate 8 illustrates the limitations for septic effluent disposal systems of the soils found in Bedminster Township. As indicated, the bulk of the Township consists of soils which are severely limited for on-site septic systems. Soil suitability for septic systems is a function of the relative permeability of the soil, the depth of the seasonal high water table and the depth to bedrock. Where rapidly permeable soils overlay fractured bedrock, such as Brunswick Shale, a septic system will often appear to function efficiently, but groundwater contamination can occur from the movement of improperly filtered septic effluent into the aquifer. Areas which are subject to the possibility of this occurrence are not mapped.

SURFACE WATER

Bedminster Township is located in the upper reaches of the North Branch of the Raritan Watershed. This river is a major source of potable water for urban areas to the east, including the City of Newark. Within the Township's boundaries are all or a portion of five (5) subwatersheds which are tributary to the North Branch of the Raritan River. These include the watersheds of the Peapack Brook, Clucas Brook, Middle Brook, the Lamington River and Chambers Brook. The maintenance of water quality and the quantity of stream flow in these tributaries, particularly in times of drought, directly affects the quality and quantity of the water in the North Branch of the Raritan. The nature of the soils and geology within Bedminster Township makes these streams prone to exaggerated extremes of high or low flows and sensitive to the effects of development within their vicinities.

The New Jersey Department of Environmental Protection has classified the North Branch of the Raritan River as an "FW2" stream, indicating the level of water quality (Fresh Water-2) which must be maintained. "FW2" streams are approved as sources of public water supply after treatment. In addition, "FW2" streams are considered to be suitable for the "maintenance, migration and propogation of the natural and established biota; and for primary contact recreation". Discharges into the North Branch are governed by the State and are regulated according to the level of water quality which must be maintained. Plate 9 illustrates the water quality classifications established by the State for the North Branch of the Raritan and Lamington Rivers.

The Lamington River, which forms the Township's western border, has been determined by the Department of Environmental Protection of the State of New Jersey to be eligible for designation as a Wild and Scenic River. To that end, funding was provided to the Upper Raritan Watershed Association for a survey of the area within one-half mile of either side of the stream. The actual survey area was not as strictly delineated but was drawn to incorporate the full line of sight from the stream. Studies of the physical characteristics and extent of development within the survey area have been completed, and the Watershed Association is now awaiting funding for a Management Plan to be developed with the affected communities. The survey area is shown on Plate 9.

Septic System Suitability

Soils Suitable for Conventional Septic Systems

Soils Suitable for Alternative Septic Systems

Soils Unsuitable for Septic Systems

Bedminster Township
Somerset County - New Jersey

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SOURCE: Somerset County Board of Freeholders; Somerset County, New Jersey Upper Raritan Watershed Wastewater Facilities Plan.

NOTE: Soils unmapped in Bedminster Village area, where sewers are provided.

PLATE: N.R.I.-8

Surface Water Quality

SOURCE: Upper Raritan Watershed Association;
Lamington and Black River Wild and Scenic Designation Study, 1981;
New Jersey Conservation Foundation.

N.R.I. Plate 9.

Plate 10 illustrates the five hundred (500) year flood boundary and floodway within Bedminster Township based upon Flood Insurance Rate Maps prepared for the U. S. Department of Housing and Urban Development by Anderson-Nichols Company, Inc. The Flood Insurance Rate Maps are useful for general planning purposes. However, detailed designations of the one hundred (100) year floodway and floodway fringe by the New Jersey Department of Environmental Protection have yet to be undertaken; these directly relate to State regulations concerning development in the flood plain.

WOODED AREAS

Plate 11 generally illustrates the concentrated wooded areas within Bedminster Township. The information was discerned from aerial photographs flown during 1980. Wooded areas are an important natural resource for soil stabilization, drainage control, air quality and aesthetic purposes and should be preserved to the greatest extent possible.

AGRICULTURAL AREAS

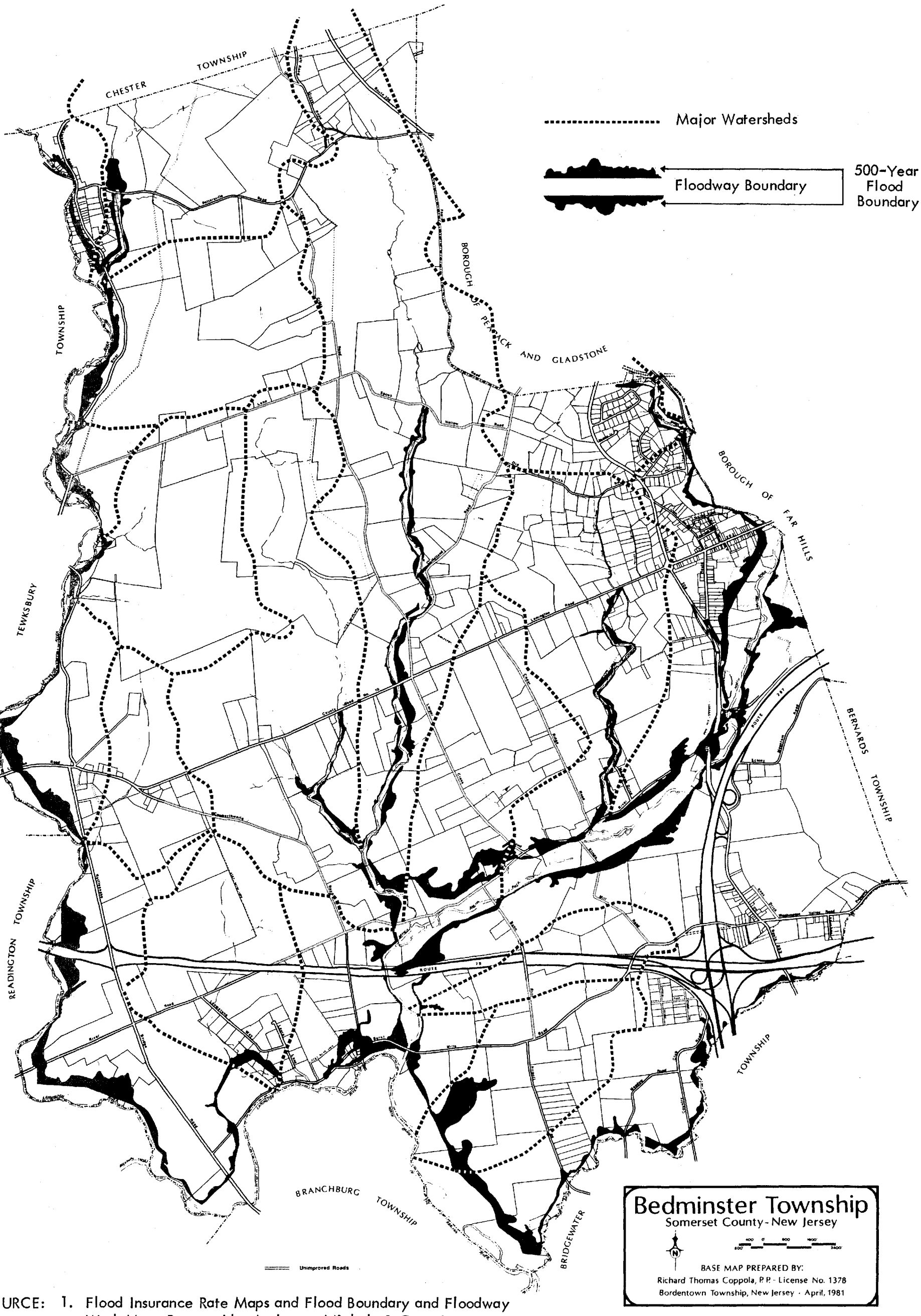
A significant natural resource of Bedminster Township is its agricultural land. Plate N.R.I.-12 indicates the land under farm assessment in Bedminster Township as of October 1981. A planimetric measurement of the mapped information indicates that approximately 12,605 acres or 73.76% of the Township's total acreage is being used for agricultural purposes.

Plate N.R.I.-13 maps the soils suitable for agricultural use within Bedminster Township. The information was drafted from Soil Conservation Data provided by the U. S. Department of Agriculture. As indicated, most of Bedminster Township's soils are rated "Class II" or "Class III", which classifications are considered appropriate for a wide range of agricultural activities, including crop growth.

SUMMARY

This section of the background reports for the Master Plan program has recapitulated and updated the information contained in the Resource Inventory prepared for the Township by its Environmental Commission in 1974. As evidenced by the data, there exists in Bedminster Township numerous "critical areas" including streams and stream corridors, floodplain areas, slopes of fifteen percent (15%) or greater and areas of high water table. In addition, most of the soils which are found throughout Bedminster Township are not suited for on-site septic systems due to permeability and wetness. To render significant portions of the Township developable, the natural limitations of the land to absorb development must be offset by public sewerage. In general, most of the Township's land is best suited, by virtue of its physical characteristics, for low-density residential development or agricultural use.

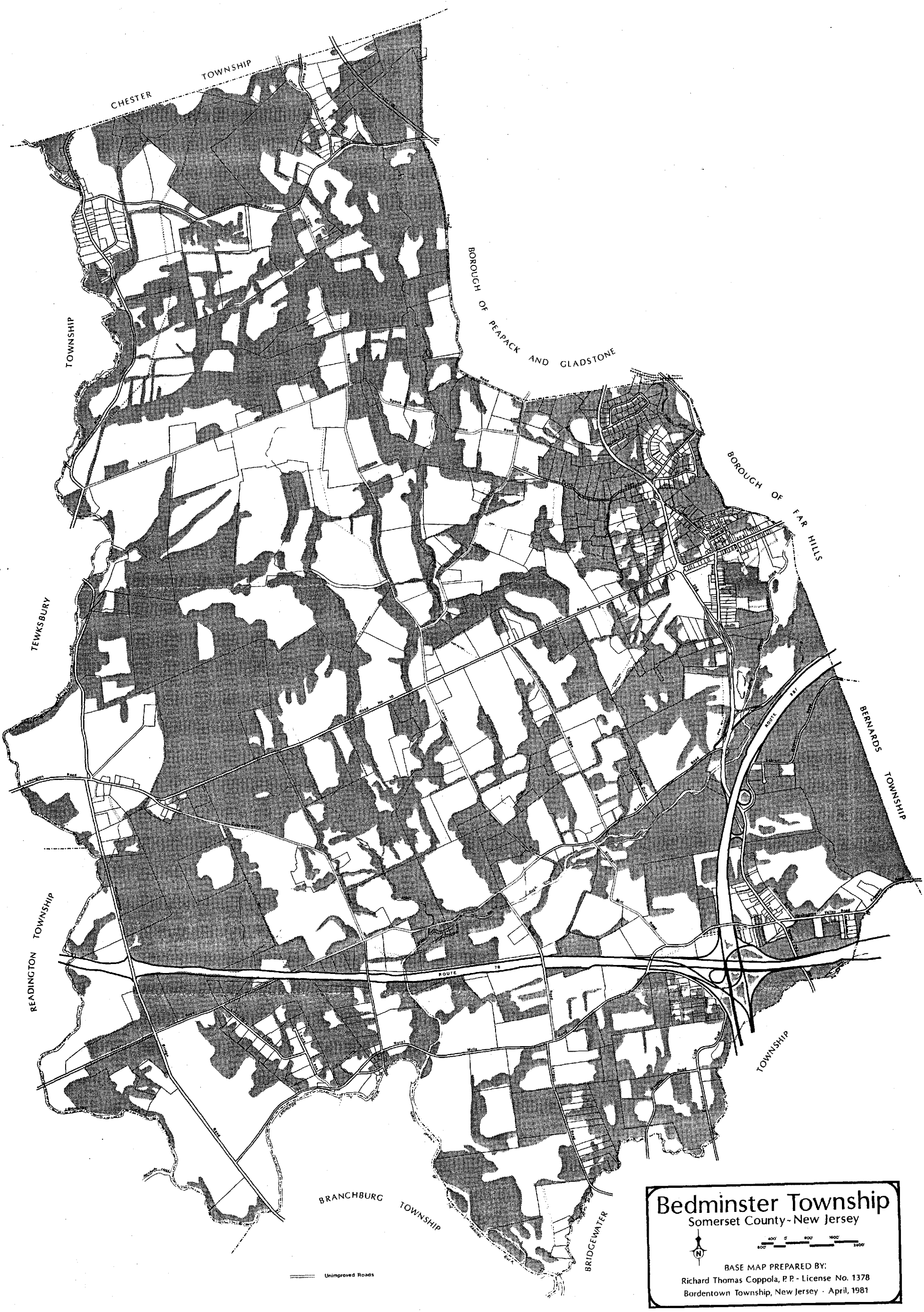
Watersheds and Flood Hazard Areas



SOURCE: 1. Flood Insurance Rate Maps and Flood Boundary and Floodway Work Maps Prepared by Anderson-Nichols & Co., Inc.
2. Delineation of watershed Areas by Bedminster Township Environmental Commission.

N.R.I. Plate 10.

Wooded Areas



Bedminster Township
Somerset County - New Jersey

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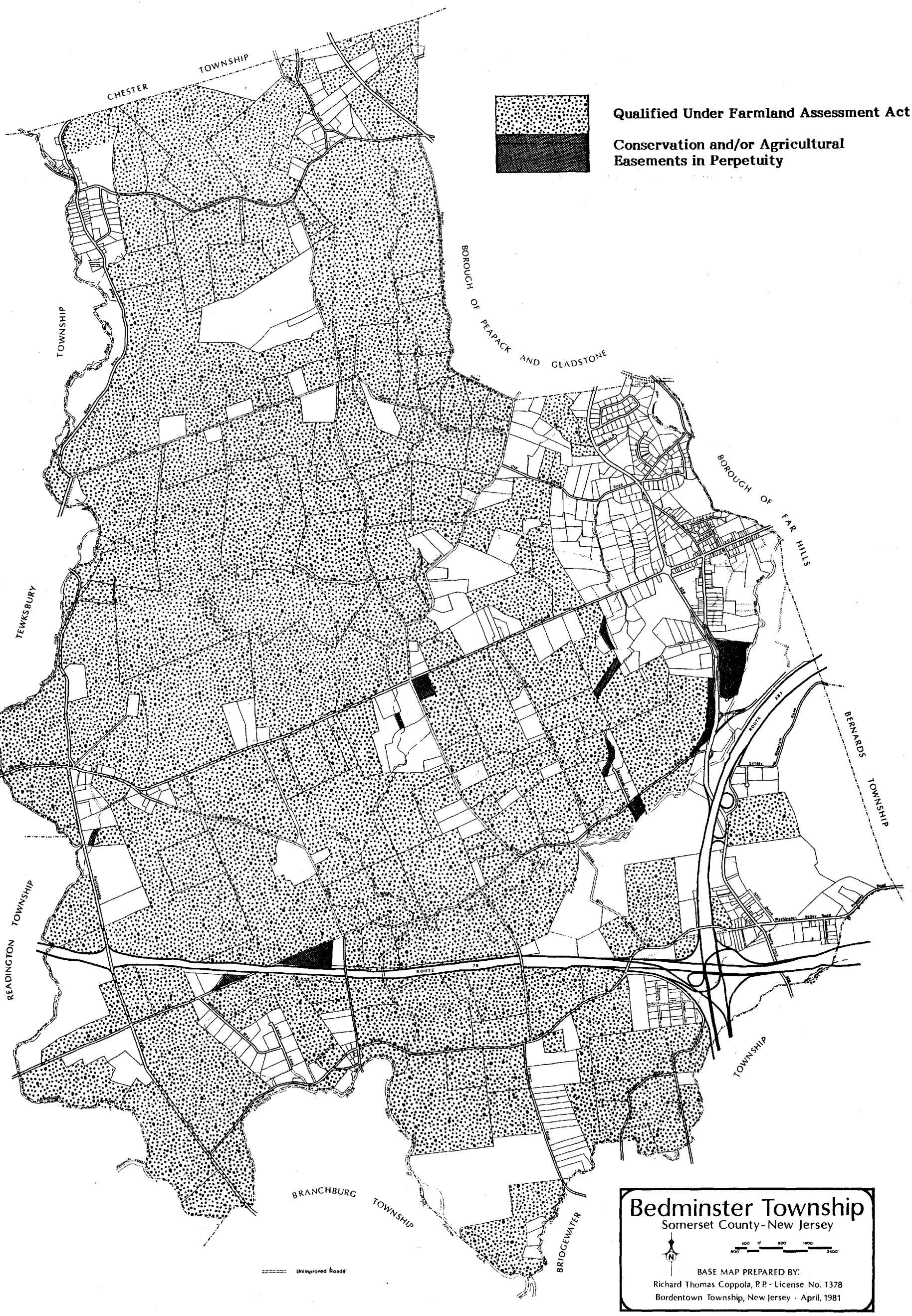
Bordentown Township, New Jersey · April, 1981

N.R.I. Plate 11

SOURCE: Aerials prepared by Keystone Aerial Surveys, 1980.

Land Under Farm Assessment October, 1981



Qualified Under Farmland Assessment Act

Conservation and/or Agricultural Easements in Perpetuity

Bedminster Township
Somerset County - New Jersey

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Bordentown Township, New Jersey · April, 1981

N.R.I. Plate 12

SOURCE: Bedminster Township Environmental Commission

Soil Suitability for Agricultural Use

Bedminster Township
Somerset County - New Jersey

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Bordentown Township, New Jersey · April, 1981

SOURCE: United States Department of Agriculture,
Soil Conservation Service

N.R.I. Plate 13

Historic Resources Inventory

HISTORIC RESOURCES

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HISTORIC RESOURCES

INTRODUCTION

The Municipal Land Use Law (N.J.S.A.40:55D-4) defines an "Historic Site" as "any building, structure, area or property that is significant in the history, architecture, archeology or culture of the State, its communities or the nation and has been so designated pursuant to this act". N.J.S.A.40:55D-28 further stipulates that in order for a municipality to specify historic sites in accordance with the above definition, the municipality must indicate the location and type of the sites within its jurisdictional bounds and include such information as part of the Community Facilities Plan element of its Master Plan.

Bedminster Township contains an impressive display of historic resources which provides modern day evidence of a past way of life in northcentral New Jersey. It is the purpose of the Historic Resources Background Study to designate the historic sites within Bedminster Township and indicate their significance to the history, architecture, archeology and culture of New Jersey.

The wealth of historic resources within Bedminster Township highlights the importance of this particular part of its Master Plan. After the historic resources of the Township are formally recognized in the Master Plan, the effort to protect and conserve the resources may continue in a comprehensive manner, including the formulation of appropriate Ordinance regulations.

HISTORICAL BACKGROUND [1]

The Township of Bedminster, located in the Somerset Hills of New Jersey, was chartered in 1749 by King George II and settled by Dutch, German and Scotch-Irish immigrants.

The lands of the Township are the greater part of the Peapack Patent, the original grant from the Lord Proprietors of East New Jersey to George Willocks and John Johnstone, two 18th century land speculators. In the Patent, the area is described as follows:

> "Beginning on a mountain at the head of a small brook that emptieth itself into the North Branch about half a mile or less above where the house of John Chambers stood, and from thence running on a straight line to the uppermost end of an old Indian field on the easternmost rivulet of the North Branch, and so running over the land to the land of the Machcopaickon, and from thence along said Machopoickon's land north west up to the mountains above the Pechpeck Towne and from thence along the top of the mountain easterly to the ridge of mountains called the Blew Hills, and so along the top of said Blew Hills to the place where it began."

---

1 The "Historical Background" section of this report is taken directly from a monograph entitled 'From Primitive Man to Planning Master - - A Tale Of the Township Bedminster', authored by Anne O'Brien, Bedminster Township Committeewoman and Local Historian, dated September 1981.

In years unnumbered, the Lenni-Lenape (the Original People) passed through the Township in their migrations between the Delaware River and the shore. The Narraticongs (hence Raritan) and other sub-tribes of the Delaware Indians found their way through the First and Second Watchung (the high hills) Mountains, then north along the Alametunck (Lamington) River to its falls. Another trail followed the Peapack River through the rift valley of the Ramapo fault.

Seventeenth Century Dutch and Germans tracked the Indian paths. They cleared the fields for their crops and built their mills by the streams. Footpaths became country lanes. After 1800 the English Colonial government laid out proper roads. Where two roads crossed, a village formed.

Pluckemin was an early trading center at the junction of the roads from Bound Brook, Peapack and Bullion's Tavern (Liberty Corner). There was a German Lutheran Church on Pigtail Mountain east of Pluckemin as early as 1720, and a tavern in the village by 1750.

The Scots and Irish settled Lamington. A Presbyterian Meeting House was built in 1740. Farmers and millers came to worship here where four roads met.

Another settlement was at Greater Crossroads, where the road from Vealtown (Bernardsville) met Larger Cross Road. The village of Lesser Crossroads (Bedminster) did not develop until years later.

By the time of the American Revolution, the road network of Bedminster Township was in place. There were no significant additions for 150 years.

During the Revolutionary War, Somerset County was corridor and crossroads for Washington's Army. After the Battle of Princeton in 1777, the Continental Army marched to Pluckemin and camped overnight. A British spy map shows the rebels close by Chamber's Brook. Several hundred captured British soldiers were quartered in the Pluckemin Church, which had been damaged by British raids in 1776. A British officer, Captail William Leslie, is buried in the Pluckemin churchyard.

During the winter of 1778 - 1779, General Henry Knox and the Continental Artillery encamped for six months on the slope of the Second Watchung Mountain northeast of Pluckemin village. Here Knox constructed what was intended to be a permanent installation for the training of artillerists.

On February 8, 1779, Knox and his officers played host at a gala ball and fireworks display celebrating the first anniversary of the alliance between the French government and the American colonies. More than 300 persons attended, including General and Mrs. Washington.

The focus of the war after 1779 shifted away from New Jersey but local militia continued to train at Pluckemin. The Knox camp became a military hospital and was in use through 1780. The Continental Army marched near Pluckemin again in 1781 enroute to the Battle of Yorktown.

Eighty-three men from the Lamington Church congregation fought in the Revolution and fourteen are buried in the Church's cemetery. Among them is John Honeyman, Washington's spy who assured victory at the Battle of Trenton.

Township records in 1782 provide a profile of rural Bedminster in the young republic: 18,817 acres of improved land, 461 horses, 638 horned attle, 372 hogs, 56 householders and 37 slaves. Also, six merchants in trade, two sawmills, seven grist mills, eight taverns, two tanyards, 10 single men with horse, 23 single men and 13 riding chairs and sulkies.

19th century Bedminster was an agrarian community, beyond the pale of the metropolitan area. The fertile land yielded wheat, oats, corn and hay. Beef and dairy cattle, hogs and sheep grazed the fields. Orchards were everywhere -- this was peach country.

Attempts to bring rail transportation to the area failed. Farmers made the journey to markets in Somerville and Morristown on washboard roads more than a century old. Churches vied among the sparse population for their congregation. The town sent its sons to fight in the War of 1812 and in the Civil War. Growth was indiscernible.

Population of the Township in 1830 was 1453. The Village of Lesser Crossroads counted a hotel, a store and a score of houses.

Gordon's Gazetteer of New Jersey described Pluckemin in 1843 as having one tavern, two stores and 20 or 25 buildings; Pottersville with a store, a tavern and some dwellings; and Lamington with a Presbyterian Church, a tavern and three or four dwellings . . . descriptions not inaccurate today.

By 1880, the Township's population had inched up to 1812 persons; 728 were schoolage children. The average daily enrollment at the twelve public schools was only 255 - - - most of the young people were kept out of school to work the family farm.

Events near the turn of the century were the seeds of future growth and change. The Rockaway Valley Railroad, providing freight and passenger service from Whitehouse to Pottersville, began operating in 1889. The Passaic and Delaware line from Hoboken to Bernardsville was extended to Gladstone in 1890.

The Kenilworth Inn in Pluckemin invited city people out to take the country air. The "hotels" at the crossroads in Pottersville, Gladstone, Peapack and Lesser Crossroads were simple inns offering a respite from the heat and hurry of the city.

Bedminster was becoming accessible. The sprawling green Township with its farmland and pasture, trout streams, and villages with ascending church spires lured new people with money generated from utilities, railroads, pharmaceuticals, finance, and manufacturing.

In the decades between 1890 and 'Black Friday', the Township donned a new mantle. Wealthy men purchased thousands of acres of land in Bedminster. Grant B. Schley was the first. In 1889 he bought 1500 acres which he intended to divide and sell as country estates for his city

friends. He died before the plan was realized. Today, his second Watchung Mountain property is owned by The Hills Development Company.

Charles Pfizer, the pharmaceutical magnate, brought the hounds of the Essex County Hunt to Gladstone, where he purchased a 200-acre farm on Old Chester Road. The farm barns were converted into stables and kennels. In 1913 the Essex Fox Hounds were formed and a farm near Peapack was fixed up as a Club House.

Financier James Cox Brady began to buy up farmland in 1911. His Hamilton Farm extended across 3000 acres in Bedminster and another 2000 acres in adjoining Townships. During the 1920s, investment banker Clarence Dillon assembled a 1000-acre estate adjoining Brady's.

The super-imposition of the rich and powerful transformed the Township. The farmer became the tenant on his own land. There was an immeasurable boost to the local economy. Employment was provided for all in constructing palatial homes or working on the estates. Local merchants prospered through endless orders for materials and supplies.

The paternal benevolence of the estate owners was so all-persuasive that the community was nurtured through the lean years of the 1930s and the hard war years of the 1940s.

The coming of the automobile precipitated improvements to the ancient road system. The dirt track from Somerville to Morristown was paved during the 1920s. A new hard surface highway, now Route 206, was constructed in 1930, linking Andover on the north to Princeton. The new artery merged with Route 206 below Bedminster village.

Merchants in Peapack and Gladstone vainly protested the alignment. Highways should go through villages to foster business, they declared; not bypass them. The new road cut through Hamilton Farm and severed Brady's farm road to the Peapack Station. The State highway department built him one of the few private bridges in New Jersey that spanned a public road. The bridge was taken down by Beneficial Management Corporation in 1980.

The country roads were next to be upgraded. Pottersville Road was paved during the 1930s; then Lamington, Burnt Mill and Black River Roads during the 1940s.

The Township's own roads remained unpaved: a deterrent to through traffic on country lanes leading only to a scattering of houses; and easier on horses' hooves. Today in Bedminster, where there are blacktop private drives a mile or more in length, 20 of the 40 miles of public roads are still stone and dirt.

The Township population in 1940 was 1600 - a gain of 11 persons in 100 years. The Township had shrunk by six square miles when the Borough of Peapack and Gladstone seceded in 1912. Village dwellers had objected to paying the high taxes required to maintain and patrol the long miles of rural roads.

During World War II, a new term appeared in the local lexicon - - "sub-division". A farm west of Pluckemin was sliced up and sold off in 50-foot lots. It was rumored that one of the estates would be subdivided too. Time for a local zoning ordinance, decided the Town fathers.

The first Ordinance, adopted in 1946, mirrored the existing land use. Large lot zoning in most of the Township - - a five acre minimum. Half-acre zoning in the corridor from Bedminster to Pluckemin Villages and a business district in each village. No industry; no apartments.

Within three years, the Township was taken to Court over the Ordinance. From litigation that was appealed to the New Jersey Supreme Court for a final ruling, the Fischer v. Township of Bedminster case emerged as the benchmark ruling on the validity of five acre zoning. The high court heard the Fischer case in 1952, and found in favor of the Township.

The decision was written by Chief Justice Arthur T. Vanderbilt and issued December 22, 1952. His concluding statement was "it must, of course, be borne in mind that an ordinance which is reasonable today may at some future time and by reason of changed conditions provide to be unreasonable. If so, it may then be set aside."

Even as Vanderbilt wrote, the changed conditions to which he referred were taking shape. The Federal Highway Act of 1960, launched a modern interstate highway system, and paved a new future for the Somerset Hills.

Rights-of-way were aquired for construction of I-287 and I-78 with a monster interchange at Pluckemin. The alignment was the crossbow which would catapult Bedminster into the metropolitan region. I-287 opened through the Township in 1966 and I-78 in 1970. The interchange lured development. A.T.&T. Long Lines built its corporate headquarters along the North Branch bringing 3000 daytime residents to Bedminster.

Currently, the Township of Bedminster is facing a new era of development - - the suburbanization of the Route 202/206 corridor dictated by the Superior Court of New Jersey as an outcome of the Allan-Deane v. Township of Bedminster litigation. However, the rich historical legacy of Bedminster remains, and can be seen throughout the municipality.

HISTORIC RESOURCES IN BEDMINSTER TOWNSHIP

This historical and architectural survey of the Township of Bedminster, an abstract from a larger work in progress, was compiled by Anne O'Brien, designated Local Historian with the professional advice of James S. Jones, A.I.A., and the collective personal recollections of the following long-time residents of the area:

Ethel Anderson
Leslie and Martha McLaughlin Apgar
Henry Beekman
Malcolm Belcher
Alfred and Viola Burd
John K. Cowperthwaite, Jr.
Lida Orts Eastman
Col. Fred H. L. Field
Anderson Fowler
Arthur Hall
Ben Henderson
Vernon Hoffman
Charles Howard
Fred Huyler
Harry Lisk
James and Dorothy Metzler
Mildred Harsell Rowe
Raymond Schapley
Reeve Schley
R. Earl Smith
Mabel Duyckinck Eick Stryker
Carrie Metzler Sullivan
Abram and Irva G. Ten Eyck
Albert Winkler
Nelson Wortman

Other Sources were:

- "Historic Sites Inventory", Somerset County Planning Board, 1977;
- "Inventory of Historic Sites for the New Jersey Department of Environmental Protection, Office of Historic Preservation", Upper Raritan Watershed Association, 1981;
- Architectural and Historic Inventories of Pluckemin Village (1981) and Lamington (1982), Heritage Studies, Inc., for the Bedminster Township Planning Board;
- The Story of an Old Farm, Andrew D. Mellick, Jr., 1889, reprinted by the Rutgers University Press, 1948;
- History of Hunterdon and Somerset Counties, James P. Snell, 1881;
- The Wyckoff Family in America, Tuttle Publishing Co., Rutland, Vermont;
- "Recollections of the Essex Hunt", Frederick W. Jones, Jr., 1967;
- Somerset County Historical Quarterlies, 1914 - 1919;
- Lane family papers;
- Frederick Walter's papers and personal research;

- Histories of the Bedminster Reformed Church, the Lamington Presbyterian Church, the Pottersville Reformed Church, and the Pluckemin Presbyterian Church;

- "The Rock-A-Bye-Baby", Thomas T. Taber, III., undated;

- 1914 Farm and Business Directory of Hunterdon and Somerset Counties;

- 1850 Map of Somerset County.

- 1873 Atlas of Somerset County;

- 1919 Somerset Bridle Path Association Map; and,

- 1925 Map of Hamilton Farm.

As indicated on Plates Historic-1 and Historic-2, the distribution of the approximately one hundred fifty-one (151) historic buildings, structures and areas within Bedminster Township pervades the municipality. Except for the Pluckemin Historic District, none of the designated historic resources are included on either the New Jersey State or National Register of Historic Places. However, this inventory provides the basis for continued efforts to preserve the visible evidence of Bedminster Township's historic past, so that the historic resources of the municipality may be maintained for all of the residents of New Jersey.

HISTORIC DISTRICTS

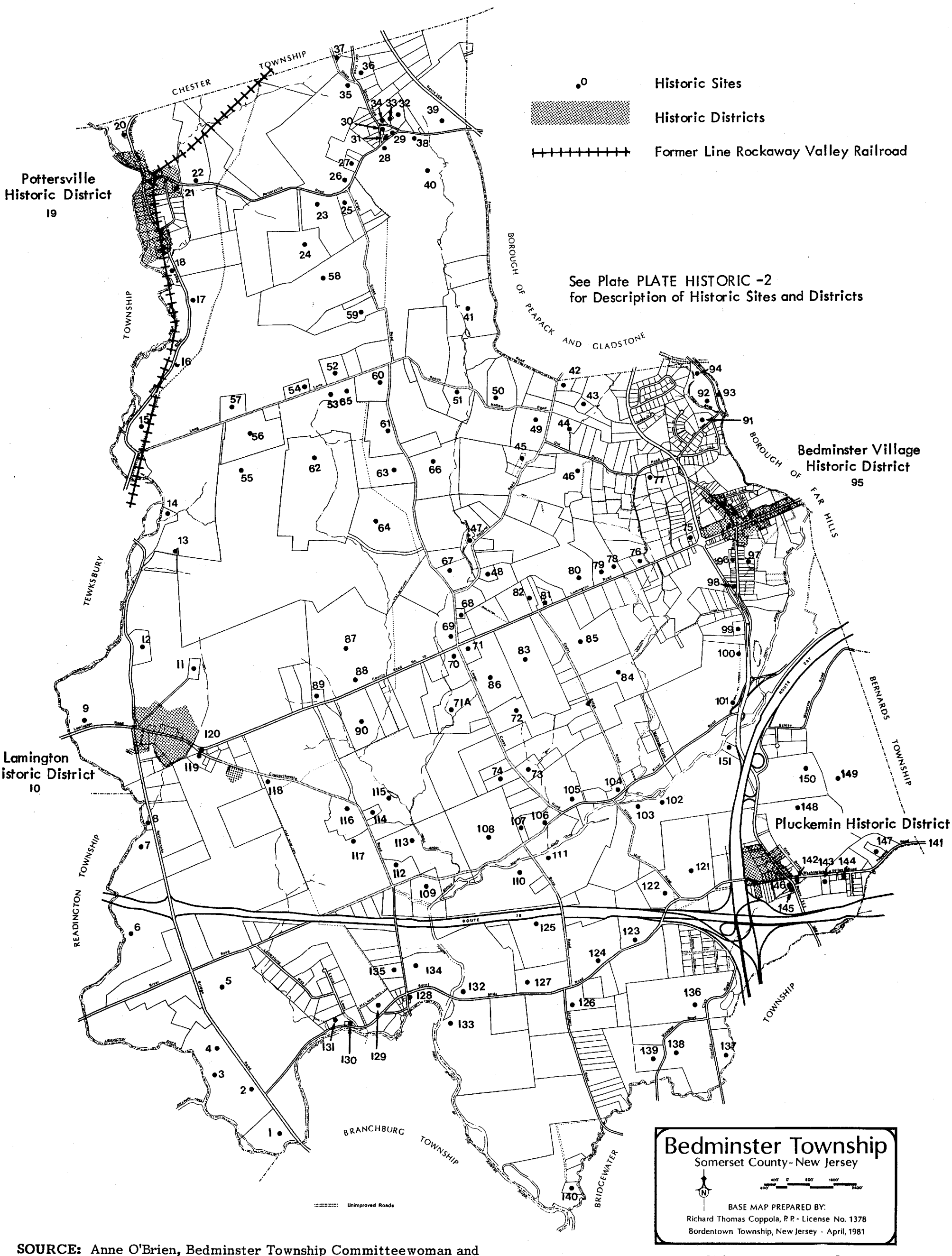
The villages which have emerged at the major crossroads within Bedminster Township continue to be historically and culturally significant places. Currently, Bedminster Township is supporting studies of four (4) village areas by Heritage Studies, Inc., with the goal to have them each designated on the State and National Registers of Historic Places. It is intended that these village areas will be preserved, protected and aesthetically enhanced as special places within Bedminster Township.

- Pluckemin Historic District

  The Pluckemin Historic District has been identified as an early rural center in New Jersey. The district area contains approximately thirty-three (33) buildings reflective of the area's architectural and historical past including the Pluckemin Presbyterian Church, the Burd House, the Boylan House, the Teeple House, and the former manse.

  The Pluckemin Historic District was placed on the New Jersey Register of Historic Places on February 22, 1982 and on the National Register of Historic Places on July 26, 1982. The National Register is the Federal Government's official list of

Location of Historic Resources



See Plate PLATE HISTORIC -2
for Description of Historic Sites and Districts

Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey · April, 1981

PLATE HISTORIC -1

SOURCE: Anne O'Brien, Bedminster Township Committeewoman and Designated Local Historian, in cooperation with James S. Johnson - June 1982.

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
1.	44/2-2	John Lane Farm	Three bay renovated New Jersey Farmhouse, circa 1800. Numerous farm buildings of the same period.	SCPB 1 URWA 122
2.	44/2-1	Richard Field Farm	Large 19th cnetury New Jersey Farmhouse with additions and alterations. Numerous farm buildings of the same period. Avenue of symmetrical trees. Richard Field settled along the Lamington River on a 400-acre farm at Rattlesnake Bridge before the American Revolution. He raised cattle, crops and fruit, which were shipped down the river to the Delaware and Raritan Canal and on to New Brunswick and Perth Amboy. The farm was sold out of the family after the Civil War by his grandsons Longstreet and Depue Field. The farm was purchased in 1935 by Kenneth B. Schley. Now the Lana Lobell horse breeding farm.	SCPB 2 URWA 121
3.	44/2-1	K. B. Schley Mansion	Georgian Colonial Mansion, brick with slate roof, built in 1937 for Kenneth B. Schley by architect John Cross.	SCPB 5 URWA 120
4.	44/2-1	William D. Field Farm House	Small 1½-storey 18th century New Jersey Farmhouse.	SCPB 6
5.	45/1	Sering Bunn House	18th century 1½-storey New Jersey Farmhouse. Few changes. Farm buildings remain. 1850 map shows the Widow Field. 1873 map shows Sering Bunn.	SCPB 7 URWA 119

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
6.	37/A-1	Fiddler's Elbow	American Country House built circa 1937 for Mr. and Mrs. Frederick S. Moseley. Field stone, slate roof. Architect, John Cross. The field stone came from stone rows purchased from farmers in the hills of Hunterdon County, and hauled down by horse and wagon. Now Fiddler's Elbow Golf Club.	SCPB 8
7.	37/3	Meadowview	American Country House, built circa 1937 for Mr. and Mrs. Ogden White. Brick with slate roof. Architect, John Cross. Stable and outbuildings conform with the design of the house.	URWA 73
8.	37/3-A	River House	New Jersey Farmhouse, circa 1800, with alterations and additions. Homestead of Richard C. Todd, and his descendants, circa 1800-1880. Todd owned 168 acres of farmland with the house. Owned by Julius Miller; and his daughter and son-in-law, Luke and Bertha Miller Schapley from 1880 to 1932 when the farm was sold to Clarence Dillon. Later owned by Ogden White. Smokehouse, outhouse, barn and slave buildings have been removed. Simple farmhouse transformed into country home.	URWA 74 SCPB 9
9.	11/1	Bishop Farm	Renovated mid-19th century New Jersey Farmhouse. Farm buildings exemplify farm culture and building techniques. The John Vanderbeak Farm in 19th century. The Reggie Bishop Farm in this century. Bishop ran James Cox Brady's Sheep Farm on Long Lane. Part of Hamilton Farm.	URWA 72 SCPB 11
10.	multiple	Lamington Historic District	Historic and Architectural Survey completed in 1981 by Heritage Studies. Lamington Historic District nomination submitted to N.J.D.E.P. for consideration for State and National registers.	URWA 69 SCPB 12-18 & 91-1

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
11.	12/1-1	Van Nest Farm	Early 19th century 5-bay New Jersey Farmhouse, with alterations and additions. The Aaron Longstreet Farm until his death in 1856. He was the Township Clerk. All the early Township records were destroyed in a fire here in 1846. John Van Nest owned the farm in 2nd half of 19th century. Edwin Willets owned the farm until 1925, when he sold to James Cox Brady. Part of Hamilton Farm. 1925 map shows 12 farm outbuildings. All now removed.	URWA 70 SCPB 19
12.	12/1-2	Charlie Todd Farm	Renovated New Jersey Farmhouse with Federal influence. 1850 and 1873 maps show C. Wyckoff. Later the Charlie Todd farm. Puchased in 1917 by James Cox Brady. Part of Hamilton Farm.	URWA 71 SCPB 20
13.	12/2	The Burying Ground at Foot of the Lane	Matthais Lane, who settled nearby in 1748, his children, descendants, and family slaves are among the 60 persons buried here in the Lane family cemetery. The Lanes once owned and farmed hundreds of acres surrounding the cemetery. The earliest legible stone is 1778 Peter Demund, a son-in-law of Matthais Lane.	SCPB 21
14.	12/1-3	Mill House at Vliettown	New Jersey Farmhouse with additions and alterations. Vestige of an early settlement. 1850 and 1873 maps show R. S. Vliet's grist mill, saw mill, blacksmith shop, store, and house. Later owned by George Moore, who owned and farmed the land from Pottersville to Vliettown along the river. Part of Hamilton Farm.	URWA 30 SCPB 12
15.	8/24-3	The Pony Farm	Once the farm of John Honeyman, Washington's spy who assured victory at the Battle of Trenton. Later the William Rinehart farm. The present house, built by Rinehart, is one of the original Sears, Roebuck mail-	URWA 26 SCPB 25

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
15. (cont'd)	8/24-3	The Pony Farm	Foundation of the Foot of the Lane School is at the northeast corner of Long Lane and Black River Road. The John Honeyman house was east of the school. The Rockaway Valley Railroad ran between the school and the Honeyman house. The farm was purchased in 1915 by James Cox Brady, who used it as a breeding and training farm for Shetland Ponies. Creamery, ice house, barns, stables, tenant house, etc., all removed. Part of Hamilton Farm.	
16.	8/24-4	Enoch Fritts House	A tenant house on the Hagaman Farm. Later part of Hamilton Farm.	URWA 25 SCPB 26
17.	8/24-5	Hagaman House	Mid-19th century New Jersey Farmhouse and farm buildings. The Hagaman Farm. 1850 maps shows C. Hagerman. 1873 map shows C. B. Hagaman. Later part of Hamilton Farm.	URWA 27 SCPB 27
18.	7/21	Potter House	Early 20th century Country House. Once the William Latourette Farm, later Henry Amerman. Amerman farmed the land and ran the sausage mill where the Potter house is now. The sausage mill burned in 1918.	URWA 23 SCPB 29
19.	multiple	Pottersville Historic District	Historic inventory by Dorothy Metzler and Anne O'Brien completed in 1982. Architectural inventory and National Register nomination scheduled for 1983. Boundaries to be determined.	URWA 22 SCPB 30-47
20.	1/1-1	George Thurston House	Built by George Thurston, a Union Army soldier, on his return from the Civil War. Used as a school circa 1900.	URWA 21

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
21.	8/13	William Moore House	L-shaped early Queen Anne frame two-storey house. Stick style porch. Cutout fan-shaped barge board in gable. Built by William and Susan Moore circa 1870-1880. He was a son of George Moore, a farmer who owned most of the land in Pottersville village today, and down along the river.	SCPB 47
22.	2/5	Herzog Farm	19th century New Jersey Farmhouse and farm buildings. Shows on 1850 map as Philhower house. Margaret Philhower married Anton Herzog. Shows on 1873 map as Anton Herzog. The Herzogs have been farming this land for more than 100 years. Still do.	URWA 20 SCPB 48
23.	8/17	DeCoursey Fales House	American Country House. Extensive alterations and additions in the 1920s by architects Delano and Aldrich of New York City.	URWA 18 SCPB
24.	8/17	Martin Rinehart Farm	18th or 19th century New Jersey Farmhouse and wagon house. Long the Rinehart farm. Sold to DeCoursey Fales in 1920 by Martin Rinehart.	URWA 17 SCPB 49

PLATE HISTORIC:-2 Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
25.	8/18	Dr. Knight's Corner	19th century New Jersey Farmhouse. 1873 map shows F. K. Lamerson. House was bought circa 1920 by Dr. Augustus Knight. Dr. Knight's Corner was a traditional meeting place of the Essex Fox Hounds. Dr. Knight was a member of the Township Committee 1930 - 1948. The house was owned circa 1945 - 1965 by Marguerite and William Wiles Elder, breeders and exhibitors of English Springer Spaniels under the Maquam Kennel name.	URWA 16 SCPB 50
26.	2/8	William Miller House	High Victorian farmhouse and wagon house. Shows on 1873 map as William Miller, a peach farmer who owned 150 acres surrounding the house.	URWA 15 SCPB 51
27.	2/14	Frank Miller House	Early 20th century hip roof house built by Frank Miller, a farmer, circa 1910.	URWA 14
28.	9/1	Union Grove Schoolhouse	Built on land conveyed to the Trustees of School District #12 by David C. Gaston in 1861. Closed as a school in 1930.	URWA 10
29.	4/4	William Lisk House	Built by John Bodine in 1910. There's a duplicate of this house on Bodine Avenue in Gladstone.	URWA 9 SCPB 54
30.	4/1	Harry Lisk House	1873 map shows W. Van Doren. His son-in-law William Lisk moved into the house in 1899. Harry Lisk, a son of William, lived here until his death in 1981.	URWA 8
31.	4/3	Boyd House	18th century saltbox with additions and alterations.	

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
32.	5/4	O'Keefe House	Built circa 1900 by Thomas O'Keefe, a farmer. During the 19s, Ben and Gertrude Henderson lived here. He was a mason and helped pour the foundation for the first Brady big house. Mrs. Henderson was the nanny for Elizabeth Ballentine Stevens.	URWA 7
33.	5/3	Henderson House	Built in 1905 by Albert Henderson, a mason and one-time engineer on the Rockaway Valley Railroad. Henderson was employed in constructing some of the estate homes in the area.	URWA 6 SCPB 58
34.	5/2	Conroy House	Mid 19th century New Jersey Farmhouse with extensive alterations.	URWA 5
35.	2/8	Charlie Miller Farm	New Jersey Farmhouse with alterations and additions, and outbuildings. 1873 map shows N. Todd. Later Charlie Miller Farm until purchased by DeCoursey Fales in the 19s.	URWA 4 SCPB 61
36.	5/1	Ballentine	Mid 19th century Federal-style House with unusually formal symmetrical cut stone exterior. Greek Doric portico. 1873 map shows J. Opdycke. Extensive alterations and additions for Francis K. Stevens circa 1910. Later occupied by his daughter Elizabeth and her husband, Peter Ballentine (of Ballentine Brewery). Farm barns and well house of tile brick with a witches' cap peak.	URWA 3

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
37.	3/1	Emmons House	Mid-19th century stone Farmhouse. The house straddles the Morris-Somerset County line. "The owner of this house sleeps in Chester and eats in Bedminster". 1873 map shows J. Emmons. Later part of the Ballentine Farm.	URWA 1
38.	9/1	Feller House	Post Civil War New Jersey Farmhouse. Built by Daniel Feller, a Union Army soldier, on his return from the Civil War. Later owned by John Hurd. Sold to James Cox Brady in 1913. Part of Hamilton Farm.	URWA 11
39.	5/8	Upper Kennels Farm	Mid-19th century New Jersey Farmhouse, farm barns and outbuildings. 1873 map shows Morris P. Crater. Purchased by Charles Pfizer circa 1890 when he brought the horses and hounds of the Essex Hunt to Gladstone. Part of Hamilton Farm. There once was a still up behind the barns, and a pesthouse for people with infantile paralysis. People would leave food outside.	URWA 12 SCPB 56

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
40.	9/1	Hamilton Farm	American Country House, farm barns, outbuildings, and stable on 5000-acre farm assembled by James Cox Brady between 1911 and 1927. At one time Hamilton Farm was the largest working farm in New Jersey. The brick residence was built in 1924 on the foundation of the 1914 Brady house which burned in 1923. The architect was Montague Flagg. The house ws restored by the present owner, Beneficial Management Corp., after fire destroyed the interior in 1978. Beneficial owns 500 acres of the farm, and uses the house as a corporate guest house. The stable, brick with a stucco facade, was built in 1916 for Mr. Brady's hunters and show horses. The brick and tile interior has 41 box stalls and a galleried trophy room. The architect was William Weissenberger, Jr., of New York. The stable has been the headquarters of the U. S. Equestrian Team since 1961.	URWA 13 SCPB 52 and 53
41.	9/6	Glenelg	The Arthur A. Fowler House. A Country House of English derivation built around a small hunting lodge in 1907. Edward S. Hewitt, brother-in-law to Mr. Fowler, was the architect. Extensive alerations in the 1930s by architect Mott B. Schmidt of New York City.	
42.	14/1	October House	Tudor Country House built circa 1910 for an Englishman, Harry Lance, a member of the Essex Hunt. Purchased by W. Thorn Kissel in 1918. Property originally included 500 acres and the sites of several newer houses. Kissel constructed a small polo field here and brought polo to this area. 1850 and 1873 maps show schoolhouse here.	URWA 42 SCPB 78-1

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
43.	14-9	Mr. Kissel's Carriage House	Early 20th century carriage house converted to a residence.	URWA 43
44.	14/10-11	Timberfield	1850 and 1873 maps show P. Honeyman. Early New Jersey Farmhouse, +/- 1800. Extensive alterations and additions for David Hunter McAlpin Pyle in the 1920s by architect A. Musgrave Hyde.	URWA 44 SCPB 78
45.	13/10	Red Barns	Mid-19th century New Jersey Farmhouse and farm and farm barns. 1850 map shows P. Messler. 1873 map shows W. Heath. Once the Michael Shay Farm. Later Stuyvesant Pierrepont. He would buy it and sell it and buy it back again. Many occupants including Richard Gambrill (before he built Vernon Manor), also LeRoy Whitney, F. E. Johnson, Frederick S. Jones and others.	URWA 41 SCPB 80
46.	21/3	Francis Kinnicut House	English Tudor House built in the 1920s for Francis Kinnicut. Architect Nelson Breed.	URWA 48 SCPB 79
47.	13/12	Latourette House	19th century New Jersey Farmhouse renovated to an American Country House. Shows on 1850 and 1873 map. Extensive renovations in 1920s for Shelton Martin by architect, Henry Sedgewick of New York City. Martin was a member of the Township Committee for many years, and Master of the Essex Drag Hounds. Mrs. Martin was one of the first women to ride with the Essex Drag and later the Essex Fox Hounds.	URWA 59 SCPB 81

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
48.	21/7	David Bird House	Renovated New Jersey Farmhouse. 1850 and 1873 maps show David Bird. House sits between two tributaries of Middlebrook. Original house was a four-room two-storey farmhouse. Many occupants including William Clelland, Alfred Borden, Howell Forbes, W. A. K. Ryan, and others.	URWA 58 SCPB 82
49.	13/6	William Griffin House	New Jersey Farmhouse transformed to a Country House by extensive alterations and additions. 1850 and 1873 maps show G. Biggs.	URWA 39 SCPB 76
50.	9/9	Spook Hollow Farm	Built circa 1910 by Frederick Bull, member of the Essex Hunt. Stucco house with Dutch gambrel roof. Stuccoed stable courtyard and cottages generally match the main house. Later owned by William V. Griffin, business manager for James Cox Brady. Extensive renovations in 1920s by architect F. Burrell Hoffman, for Griffin.	URWA 39 SCPB 75
51.	13/4	Spook Gallery The Pig Farm	18th century stone and frame house, wood shingle roof. One of few stone houses in Township. Bake oven. Purchased by James Cox Brady in the 19s. He used it as his Pig Farm, where he raised Duroc-Jersey swine. Part of Hamilton Farm. Road once went south of the house, re-routed to north side. Once there were A-shaped pig houses all around the house.	URWA 38 SCPB 74
52.	8/23-3	The Sheep Farm	19th century New Jersey Farmhouse with extensive alterations and additions. 1850 map shows J. Vleet and smithy shop of S. J. Vleet. 1873 map shows J. H. Linabery house and blacksmith shop. Later the William McCatherin Farm. Purchased in 1914 by James Cox Brady, who raised Dorset Sheep at the farm. Part of Hamilton Farm.	URWA 35 SCPB 64

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
53.	12/3	Mr. Dillon's Farm on Long Lane	Early Victorian Farmhouse and many outbuildings. 1850 map shows S. Sutphen. 1873 map shows P. C. Sutphen. Owned in the 1920s by a New York attorney, Joseph Larocque of Bernardsville, who ran a big farm operation here with sheep, pigs and draft horses. Later part of Dunwalke Farm.	URWA 34 SCPB 65
54.	8/24-2	Crater Farm	Federal Farmhouse in two sections. Earliest section circa 1810. 1850 map shows Lemuel F. Crater. 1873 map shows Lemuel F. L. Crater. Part of Hamilton Farm. Many occupants including Mr. and Mrs. Herman Bowker, Mrs. E. W. Clucas and Mr. and Mrs. Philip Smith.	URWA 33 SCPB 66
55.	12/3	Hoy Farm	New Jersey Farmhouse built in three sections. 1873 map shows J. A. Welsh. Later the Hoy Farm. Purchased in the 1920s by Clarence Dillon. Part of Dunwalke Farm. House was moved in the 1920s. Once occupied by Douglas Robinson and later Richard Whitney.	SCPB 69
56.	12/3-B	Brookfield Farm	Georgian Colonial House built circa 1960 for Mr. and Mrs. Mark Collins. Architect, Ellsworth Giles of Bernardsville.	URWA 32 SCPB 68
57.	8/24-1	Windmill Farm	New Jersey Farmhouse with extensive alterations and additions. 1850 map shows William W. Vliet. 1873 map shows William H. Vliet. Later the Charles McMurtry Farm. Purchased by James Cox Brady in 1916. Part of Hamilton Farm.	URWA 31 SCPB 67

LATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
58.	8/20	Fairview Farm	18th century New Jersey Farmhouse with additions and alterations. 1850 map shows W. Cortelyou. 1873 map shows J. H. Vliet. Later Phil Frank's Farm. Frank sold to Paul and Roberta Zuhlke circa 1910. The Zuhlke's deeded the farm to the Upper Raritan Watershed Association as a wildlife preserve. Newer brick house is offices of URWA.	URWA 28 SCPB 194
59.	8/22	Little Lane Lodge	19th century New Jersey Farmhouse with extensive alterations and additions. 1873 map shows R. S. Vliet. Later the Jonathan Potter Farm. Purchased in 1902 by Frederick and Florence Jones. Mr. Jones was the author of "Recollections of the Essex Hunt". The house was later owned by Mr. and Mrs. Philip Smith, Sr., and Senator and Mrs. John H. Ewing.	URWA 29 SCPB 63
60.	12/4	Cornerhouse	Built in 1958 for Mr. and Mrs. Sidney Spivak in the manner of an 18th century French Country House. Architect, Mott B. Schmidt of New York City.	
61.	12/5	Hez Eick Farm	New Jersey Farmhouse with alterations and additions. Many owners. 1850 map shows M. and E. Cortelyou. 1873 map shows G. Hoffman. Later the Hezekiah Eick farm until 1924 when sold to William Phillips. Owned more recently by William Vandeventer until 1981.	URWA 36

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation of Other Surveys
62.	12/3-A	Dunwalke Farm	Georgian House built in 1928 for Clarence Dillon, who assembled a 1000 acre estate and working farm. Architect, John Cross. The handsome oversize red brick was brought to Virginia as ballast in a ship circa 1680 to construct a house that later burned. The brick was purchased by Mr. Dillon and brought to New Jersey to construct Dunwalke. The garage and indoor tennis court are in the style of the house and built at about the same time. Now owned by Princeton University and used as an academic conference center.	URWA 62
63.	12/6	Douglas Dillon House	Georgian Colonial House built in 1936 on the site of a 1900 house built and occupied by Leon Israel. Architect, Mott B. Schmidt.	URWA 63
64.	12/3	Lane House	18th century New Jersey Farmhouse. Part of Dunwalke Farm. Stone ice house. The farm drive is the old Vliettown Road, vacated when Clarence Dillon purchased all the surrounding land.	URWA 61
65.	12/3	Sutphen House	1½-storey Dutch Colonial farmhouse. Part of Dunwalke Farm.	URWA 60 SCPB 71-1
66.	13/8	Peapacton Farm	American Country House circa 1914 for Mr. and Mrs. Stuyvesant Pierrepont. Architect, Montague Flagg. Part of the landholdings of the Sutphen family. Guisbert Sutphen came to Bedminster about 1743, travelling with a yoke of oxen and a cart on which were his family, household goods, and a chest of carpenters tools. He made many land purchases. His son, Guisbert 2nd bought land along Middlebrook.	URWA 37 SCPB 71

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
66. cont'd	13/8	Peapacton Farm	On the farm is an early New Jersey Farmhouse, probably built by one of the Sutphens and later owned by Zachariah Smith, a farmer. After a fire circa 1933, the house was extensively renovated for Hovey C. Clark.	
67.	13/13	Meadowbrook Farm	Early New Jersey Farmhouse with extensive alterations and additions. Part of the Sutphen landholdings. The 1766 Hills map shows a house on this site. 1850 map shows G. Sutphen. 1873 map shows A. C. Sutphen. Extensive renovations in the 1920s for James McAlpin Pyle by architect, A. Musgrave Hyde. The barn was moved to the site by Mr. Pyle from his farm at McAlpin's Corner on Jockey Hollow Road in Morris Township.	URWA 57 SCPB 73
68.	21/9	Larger Crossroad School	19th century country schoolhouse. Shows on 1850 and 1873 maps. Closed as a school in 1923. The schoolteacher was paid $1000 a year.	
69.	12/14	David Dunham House	New Jersey Farmhouse. Shows on 1873 map. Several smaller houses on property. Also large 7-storey barn with Dutch roof and cupola. Later owned by A. Filmore Hyde, and used as a home for George Brice and his family. Mr. Brice was huntsman to the Essex Fox Hounds, 1913 - 1935. The barn was the stable for Mr. Hyde's hunting horses.	URWA 55 SCPB 83
70.	39/20	Dunham Farmhouse	Early 19th-century New Jersey Farmhouse with alterations and additions. 1850 and 1873 maps show R. Dunham. Subsequent owners include Rodger Mellick, Robert Locke, David Klipstein, and Malcolm S. Forbes, Jr.	SCPB 87

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
71.	40/1	Ashmun House	Square Greek Revival house moved from 40/2.	URWA 55 SCPB 86
71-A.	39/21-A	Middlebrook	Georgian Colonial House built in the 1920s for Mr. and Mrs. Rodger Mellick. Architect, A. Musgrave Hyde of New York. Partial stone exterior and courtyard. The living room wing was detached in the 1930s and moved to 39/21 to become part of a newer house.	
72.	40/2-1	Caper Hill Farm	Colonial Revival House. Brick with hip roof. Built in 1960s for Samuel and Nancy Martin. Farm barns and stables across the road.	URWA 86 SCPB 121
73.	40/9	Petty House	New Jersey Farmhouse. 1873 map shows P. S. Petty. Later owned by R. Stuyvesant Pierrepont.	
74.	39/25	Isaac Newton Voorhees House	Early 19th century New Jersey Farmhouse. 1873 map shows I. Voorhees. Voorhees was the proprietor of the original Pluckemin store, which burned in 1892. He raced trotting horses, and was 100 years old in 1962.	URWA 95
75.	22/42	Elias Woods House	New Jersey Farmhouse built circa 1905 for Elias Woods, a farmer.	URWA 49 SCPB 129
76.	21/33	Clucas Cottage	Built in the 1920s by E. W. Clucas for his gardener on the site of the Clucas house, White Oaks, which was moved to 22/9. Extensive alterations and additions circa 1975.	

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
77.	22/9	White Oaks Farm	The David Nevius Farm. House originally sat at 21/33. Said to have been a stage coach stop on Lamington Road. Owned by Frank Stoutenberg, a Newark clothier, circa 1900. Purchased by Edward W. Clucas circa 1917. Skidded up the hill into the oak grove by means of horses and a capstan circa 1917. Alterations and additions including a ship's room, round brick water tower, stables and kennels. Later owned by Dr. John Kurrence, an arthritis specialist, who sub-divided the farm circa 1948.	URWA SCPB 131
78.	21/17	J. G. Schomp House	Mid-19th century New Jersey Farmhouse. Shown on 1873 map. Later the Aaron Beers Farm. Circa 1920 - 1975, owned by Emily Stevens, who built Redfields Stable.	URWA 51 SCPB
79.	21/17	Redfields Stable	Elaborate courtyard stable in the Federal Style. Built circa 1920 for Emily Stevens. Notable for its arches, quoins, rustication and columns. Architect was a Mr. Courtingly, mayor of Mendham, who also designed St. John the Baptist School and Convent on Route 24 in Mendham. House behind stable built at the same time for Miss Stevens, and designed by Mr. Courtingly.	URWA 52 SCPB 126
80.	21/16	Cornelius Layton Farm	New Jersey Farmhouse with alterations and additions. Wood frame with stucco. Shows on 1873 map. Once the Barry Farm and later owned by R. Stuyvesant Pierrepont.	URWA 53 SCPB 125
81.	21/14	Blacksmith Shop	Old blacksmith shop expanded and converted to residence.	

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
82.	21/12	Jefferson House	Hip roofed house built 1912. Home of Arthur Jefferson, the saddle maker, whose saddlery was in Bedminster village at 34/4.	
83.	41/1	Cedar Ridge Farm	Early 19th century New Jersey Farmhouse transformed to Country House by alterations and additions. Farm buildings and brick smokehouse. Isaiah "Zebbie" Mullen's farm circa 1873 - 1900. He sold the farm, retired from farming, and built a house at 32/4, next to Bedminster Reformed Church.	URWA 88 SCPB 84
84.	41/25	Wortman Farm	19th century New Jersey Farmhouse. 1850 and 1873 maps show I. Wortman.	
85.	40/3	Windy Hill Farm	Early New Jersey Farmhouse with many alterations and additions. Several outbuildings and cottages. Silo. Many owners including Larned, Borland, Prentice, Vogel, Lonegran, Vila, Bryan and Spohler.	URWA 87 SCPB 85
86.	40/2	Charles Scribner House	Georgian Colonial Mansion by architect A. Musgrave Hyde for Charles Scribner of the book publishing company. Built 1924. Harmonizing courtyard stable group by Mr. Hyde built at the same time.	URWA 85 SCPB
87.	12/13	The Farm	New Jersey Farmhouse built in 1952 by some members of the Sutphen family. Owned by succeeding generations of Sutphens until sold to Harold Freeman in 1914 by Anna W. Sutphen, unmarried daughter of Peter and Sophia Van Doren Wyckoff Sutphen. Alterations and additions for Mr. Freeman.	

PLATE HISTORIC-2: Descrption of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
88.	12/13	Freeman Tenant House	New Jersey Farmhouse, farm barns, and outbuildings. Identical to the house described in the foregoing No. 87, but without the alterations and additions. There once was an open well in the kitchen.	
89.	12/12	The Game Warden's Cottage	Stone cottage built in the 1950s for Leo Schurr, the game warden.	
90.	30/13-14	Southfield	Renovated 19th century New Jersey Farmhouse. 1850 map shows Martin Bunn. 1873 map shows Ephriam Eick.	URWA 66
91.	19/3	The Old Stone House	Built in 1752 by Johannes Moelich, an early German settler. Made famous by The Story of an Old Farm (and its abridged version, Lesser Crossroads), written by his descendant, Andrew D. Mellick, Jr., in 1889. The original landholding was 367 acres. Four generations of Mellicks were farmers, tanners of leather and grinders of bark.	URWA 47 SCPB 130
92.	19/2	Elm Cottage Schomp's Mill and House	An early mill here was owned by Robert Allen, later Robert Gaston who sold to Stephen Hunt in 1766. Hunt sold to Nicholas Arrowsmith. House and mill purchased from estate of Judge Arrowsmith in 1845 by Cornelius Wyckoff Schomp. House and mill rebuilt in 1845. Later owned and operated by his son, William A. Schomp. At one time there were both a grist mill and a sawmill here. Owned by the Kate Macy Ladd Fund.	URWA 46 SCPB 190
93.	20/2	Schomp House	1873 map shows as tenant house for Schomp's Mill across the road. Mid-19th century farmhouse. Now owned by Kate Macy Ladd Fund. Addition to rear circa 1965.	URWA 45

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
94.	19/2	The Hogback and Hunt's Folly	The high spine of land between Peapack Brook and the North Branch of the Raritan is traditionally known as the Hogback. In 1766, Stephen Hunt, owner of the mill on 20/2 tunneled the Hogback and built a dam across the North Branch to increase the flow of water to his mill and the Mellick mills. The tunnel was 100 yards long, 4 feet across, and 6 feet high. The project ruined him financially and he was forced to sell his mill. Hence Hunt's Folly. The old road to Peapack climbed the ridge of the Hogback. In 1869 a new road was built around the Hogback.	
95.	multiple	Lesser Crossroads-Bedminster Village	The Lesser Crossroads-Bedminster Village Historic District study is underway now by Heritage Studies. Boundaries to be determined.	SCPB 132 - 151
96.	33/15-1	Nevius Homestead	Built in 1772 on the 235 acre Nevius Farm, and lived in by seven generations of Nevius' until 1971 when it was sold out of the family. Originally a 1½ storey New Jersey Farmhouse, the roof was raised and it was Victorianized when A. Layton Nevius married Henrietta Van Dorn circa 1900. The Bedminster Township Library was in the house from 1971 - 1977. Surviving farm buildings include barns, smoke house, outhouse, wagon shed, chicken house and well sweep.	SCPB 153
97.	36/8	Wyckoff Homestead	New Jersey Farmhouse built in 1928 by Cornelius Martin Wyckoff on a farm of 150 acres given him by his father, Martin Wyckoff. The farm was the southeast quadrant of Bedminster village today. The farm was broken up and lots sold off between 1900 and 1950. The house was sold out of the family circa 1975. See The Wyckoff Family in America, published by the Wyckoff Association in America.	SCPB 152

PLATE HISTORIC-2: Description of Historic Resources

Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
33/25	Beekman House	Built circa 1841 on three acres purchased from David Nevius by the Bedminster Reformed Church. It was the church parsonage from 1841 - 1902. Domine James McNair conducted a college preparatory school for boys in the house 1877 - 1902. Originally, a square Greek Revival House with a hip roof. Purchased in 1902 by Dr. John Beekman, longtime country doctor in the area. Major alterations and additions in 1902, raising the roof to a full 2-storey house with a third floor attic. When Route 206 was built in 1928 - 1930 it took an acre out of the center of the property. When Route 206 was dualized in 1965, another acre became the highway.	SCPB 154
41/31	Bedminster Cemetary	Four acre cemetery and site of the first (1758) and second (1818) sanctuaries of the Bedminster Reformed Church. Given to the church by Jacobus Vandeveer. The earliest stone is 1759, Phebe Ditmars Vanderveer, wife of Jacobus. When the third sactuary was built in Bedminster village in 1898, the old building was sold to Thomas Moore. It fell in on itself in a windstorm before he could move it away.	SCPB 155
41/34	Jacobus Vanderveer House	Built circa 1754 by Jacobus Vanderveer, an early Dutch settler who gave the land for the Bedminster Cemetery and the first and second sanctuaries of the Bedminster Reformed Church. Vanderveer had extensive landholdings. General Henry Knox and his wife, Lucy, stayed here in the winter of 1778 - 1779 when the Continental Artillery was encamped in Pluckemin.	URWA 90 SCPB 156

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
106.	39/32	McDowell Farm	18th century Dutch house with many alterations and additions. Matthew and Elizabeth Anderson McDowell settled here as early as 1767. The McDowell landholdings were extensive. Two sons, William and John, were educated at Princeton and became Presbyterian ministers. A grandson, Augustus W. McDowell, was the local country doctor and a Union Army surgeon in the Civil War. Owned early in the 20th century by Miss Agnes Fowler and her brother Oswald. Extensive alterations and additions for the Fowlers by architect Edward S. Hewitt, their brother-in-law. The intersection of ... Larger Cross Road and River Road is known as Hickory Corner because of the Hickory trees.	URWA 98 SCPB 117
107.	39/31	Hickory Cottage	Early 19th century New Jersey Farmhouse with additions and alterations. Part of the McDowell Farm. 1850 map shows R. McDowell. 1873 map shows J. M. McDowell. Renovated in the 1920s by architect Edward S. Hewitt for his sister-in-law, Miss Millie Fowler.	URWA 97 SCPB 118

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
108.	39/29	River Edge Farm	19th century New Jersey Farmhouse with major alterations and additions. Once part of the McDowell Farm. Alterations and additions in the 1920s for Mr. and Mrs. Charles Newcombe by architect Arthur Holden of Holden & McLaughlin, New York City. Owned in the 1940s and 1950s by Mr. and Mrs. William W. Brainard, who bred and exhibited wire-haired fox terriers. Brainard was an eminent dog show judge, and one of the early proponents of zoning in the Township. Owned in 1960s by Samuel and Nancy Martin, who maintained a pony breeding farm there. When the first Township zoning ordinance was adopted in 1946, Building Permit #1 was issued to the Brainards for alterations. Example of changing uses of farmland.	URWA 96 SCPB 119
109.	48/1&2	Cutting Corner	New Jersey Farmhouse, circa 1760, with additions and alterations. 1850 map shows H. Teneyck. 1973 map shows W. Kitchen. Many outbuildings. Farmhouse transformed to country house. Later owned by Mrs. Leslie Hyde and Mrs. Heyward Cutting.	URWA 80 SCPB 97
110.	50/2	Shale	French Provincial Mansion built in the 1920s for Mr. and Mrs. H. Rivington Pyne by architect William Adams Delano. Delano was a cousin to FDR. Frame house and farm barns at or near present site of house were said to be original Lamington Church glebe.	URWA 99 SCPB 193
111.	52/1	C. Maury Jones House	An early New Jersey Farmhouse with extensive alterations and additions for C. Maury Jones in the 1930s by architects, Polhemus and Coffin of New York City. The driveway was Kline's Mill Road before the road was relocated. House shows on 1873 map as Mr. G. I. Vanderwort. 1925 map and 1935 map shows Richard Whitney.	URWA 100 SCPB 192

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
112.	39/26	Albert Layout Farm	19th century New Jersey Farmhouse separated into two houses. Owned in the 1920s by John Balfour Clark.	URWA 78 SCPB 100
113.	39/27	The Fields	A brick Tudor house by Roger Bullard, architect. Built in 1927 for John Balfour Clark of the Clark Thread Company. Reduced to one-third of its original size in 1947.	URWA 81 SCPB 96
114.	39/12-A	Mullen House	Small early 19th century New Jersey Farmhouse expanded to a five-bay two-storey house in the 1930s by builder Joseph Kouflie. For many years it was a two-family house for farm workers. Unusual corn crib/wagon shed. East part of house is the oldest.	URWA 82 SCPB 98
115.	39/12	High Time Farm	Fieldstone Colonial House by architect Henry Sedgewick for Harold and Thyrza Fowler, built 1929-1930. Stables and kennels. Middlebrook and Hoopstick Brook converge on the farm.	URWA 83 SCPB 99
116.	38/14	Lamington House	Georgian Colonial House and brick farm courtyard and tower. A house built in 1917 was designed to resemble the north portico of the White House. In 1939 the house was rebuilt of brick on the same foundation by architect Mott B. Schmidt of New York City for John K. Cowperthwaite. Farm barns and outbuildings designed for his father, Morgan Cowperthwaite, by architect James C. McKenzie of New York, and built in 1928.	URWA 77 SCPB 93, 94 & 95

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
117.	38/13	Duyckinck House	19th century New Jersey Farmhouse renovated in 1938 by architect A. Musgrave Hyde. 1873 map shows William Duyckinck, a farmer and descendant of John Duyckinck who in 1787 owned 200 acres "on the east side of High Road that leads from Lamington to Piscataqua".	URWA 76 SCPB 92
118.	38/13	Hurling House	Mid-19th century New Jersey Farmhouse, now divided into two houses. 1873 map shows G. Hurling. The Hurlings were slaves and, later free blacks, and members of the Lamington Church.	URWA 75 SCPB
119.	38/6	Hollingsworth House	New Jersey Farmhouse with additions and alterations. Earliest part is circa 1820.	SCPB 91
120.	12/2	Stout House	Mid-19th century New Jersey Farmhouse. Shows on 1850 map as G. Simonson and 1873 map as T. N. Stout.	URWA 67
121.	54/4	Frederick Crego House	18th century New Jersey Farmhouse, built in two parts of equal size. 3 chimneys and 2 entries. Large barn of same vintage. Small tenant house and barn.	URWA 101 SCPB 113
122.	52/6	Kean House	Early 19th century New Jersey Farmhouse, with additions and Greek Revival front entry. Extensive renovations circa 1950 by architect Eldredge Snyder. 1850 and 1873 maps show Van Arsdale.	URWA 102 SCPB 112
123.	52-A/3	Tall Oaks Farm	Early 19th century New Jersey Farmhouse with extensive alterations and additions. For many years the home of Township Committeeman Screven Lorillard.	URWA 108 SCPB 111

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
124.	52-A/2	Southdown	The Harry McMurtry Farm. Early 19th century New Jersey Farmhouse. Purchased in the 1920s by Arthur R. Jones. Extensive alterations and additions for Mr. Jones by architect A. Musgrave Hyde.	URWA 109 SCPB 110
125.	50-A/3	Bunn Farm	Early 19th century New Jersey Farmhouse. Owned and remodelled in the 1930s by Harold Tappin.	URWA 110
126.	62/1	J. W. Annin House	Early 19th century New Jersey Farmhouse. Italiante porch added later. Chimneys gone.	URWA 111 SCPB 109
127.	50-A/4	Hedgerow	Large early 19th century New Jersey Farmhouse with additions and alterations. Well in front of house.	URWA 112 SCPB 108
128.	49/1	Burnt Mill School	One room country schoolhouse from 1893-1927. Additions and alterations circa 1971. Land acquired in 1893 from John B. Spears. The school house was built by an itinerant carpenter.	
129.	45-5/4	Vanderwort Farm	Early New Jersey Farmhouse built in three stages. 1850 map shows P. Vanderwort.	URWA 117 SCPB 103
130.	45-2/12	Craig Cottage	Built in the 1930s as a summer cottage on the river by Dr. Henry A. Craig, a Somerville doctor.	
131.	45-2/11	John J. Powlson House	New Jersey Farmhouse with Victorian alterations and additions. 1873 map shows J. Powlson.	URWA 118 SCPB 102

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation of Other Surveys
132.	50-A/2	Powellson Farm	Mid-19th century New Jersey Farmhouse. 1873 map shows W. Paulison. The greenhouse is built on the foundation of an old summer hotel circa 1910, later the first home of the Matheny School.	URWA 113 SCPB 107
133.	61/2	Four Furlongs Farm	Two early New Jersey Farmhouses with additions and alterations. The greensward was the playing field of the Burnt Mill Polo Club circa 1930 to World War II, a private landing field from 1946-1970, and again the base of the Burnt Mill Polo Club 1973 to the present time.	URWA 114 SCPB 105, 106
134.	48-A/1	Deerfield	Mid-19th century New Jersey Farmhouse, built in two stages. Victorian cornice, low pitched metal hip roof with railing. 1850 and 1873 maps show Dr. T. Blackwell. Later owned by Heyward Cutting.	URWA 115 SCPB 101
135.	45-5/9	William Milnor House	19th century New Jersey Farmhouse.	
136.	62/10	Mellick Farm	Mid-19th century high Victorian Farmhouse, barn and wagonhouse. Farmed by the Mellick family circa 1860-1940. The homestead of Tunis Mellick, a great bear of a man with a voice like a fog horn. Described as the most grotesque and bizzare figure in attendance at the 1912 Republican Convention. "Tune" Mellick, known as the "Mayor of Pluckemin" drove around in a buggy dressed in black like a Boer farmer, often following the Essex Drag and encouraging the riders. A descendant, Clarence Mellick sold the 147-acre farm to John Stephenson in 1940.	URWA 103 SCPB 184
137.	7/2	Dow Farmhouse	Mid-19th century New Jersey Farmhouse with renovations and alterations.	URWA 104 SCPB 193

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
138.	63/1	Gerofsky House	Early 19th century New Jersey Farmhouse. Longtime home of the late Superior Court Judge, Leon Gerofsky. Before his appointment to the bench, Gerofsky was Township Attorney for many years.	URWA 105 SCPB 185
139.	62/12	Elm Hill	18th century New Jersey Farmhouse. Said to have been built in 1734, and may be the oldest house in the Township.	URWA 106 SCPB 186
140.	61/8	Lovejoy House	1850 and 1873 maps show Wilson. Later Silleman. Gaston Farm in the 1930s. Purchased by Mr. and Mrs. Winslow Lovejoy in 1936. Extensive alterations and additions for Lovejoy by architect Frank Nelson. Large barns have been removed. One had a beam marked "1836".	URWA 107
141.	multiple	Pluckemin Historic District	Pluckemin Historic District is listed on both the N. J. Register of Historic Places and the National Register of Historic Places. See "An Architectural and Historical Inventory of the Village of Pluckemin", by Heritage Studies for the Bedminster Township Planning Board, 1981.	URWA 158-175 180-183
142.	72/1	McEowen House	18th century Dutch house with additions and alterations. James McEowen kept a store here which was raided by the British during the American Revolution. The house stood originally at the corner, and was moved in the 1940s when the gas station was built. British prisoners who were kept here, cut their initials into the window glass. In 1890, James Brown, owner of the Kenilworth Inn, owned the house. There was a nine-hole golf course south of the house, and a mill by the brook. The house was used as the village school several years before the schoolhouse was built in 1912.	

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
143.	72/4	Pluckemin Church Cemetery	2.43 acre cemetery with stone wall all around and early wrought-iron gates, built in 1896. Part of cemetery land was acquired in 1851, additional land in 1896 from James Brown, Jr.	SCPB 179-C
144.	72/7	Lewis Wood House	18th century three bay, two-storey Half House.	SCPB 178
145.	71/15	J. B. Vanderveer House	Village house and former store of J. B. Vanderveer, "Dealer in Gen. Merchandise and Clothing", in the mid-19th century. House built in three sections: real ell 1830-1840; right side circa 1845; left side circa 1865.	SCPB 188
146.	71/14	Hoffman House	Queen Anne house, gabled slate roof, wood and shingles. Built by Tom Hoffman, circa 1890.	
147.	59/13-A	Cromwell House	19th century New Jersey Farmhouse.	
148.	59/11	Great Pluckemin Stone Mystery	65 massive stones in a row more than 150 feet long in a wooded section north of Pluckemin. Cultural feature placed there either by Indians or early farmer. May be the remnants of an early dam.	SCPB 157

PLATE HISTORIC-2: Description of Historic Resources

Site Number	Tax Map Block/Lot	Historic or Traditional Name	Historical and Architectural Significance	Designation in Other Surveys
149	59/1&10	Artillery Park	Site of the 1778-1779 winter encampment of General Henry Knox and the Continental Artillery. Later a military hospital and militia training area. Investigation underway by the Pluckemin Archeological Project, an historical and archeological research group.	SCPB 101
150.	59/10	Higgins House	American Country House built in stages. Oldest part is circa 1930.	

historic places worthy of preservation. Placement of the Pluckemin Historic District on the National Register is important because the Pluckemin area is experiencing significant development. Of particular on-going concern is the need to accommodate the increased traffic volumes which will circulate within and around the village. Any significant roadway widening to existing State Route 202/206 through the Pluckemin Historic District will be detrimental and destructive to the integrity of the historic resource.

- Lamington Historic District

Lamington is a rural settlement of seven houses, a store and barn, the Lamington Presbyterian Church (1826), schoolhouse and cemetery, and two non-contiguous sites, a black cemetery (1857), and site of the meetinghouse barn (1740).

Lamington is on Lamington Road at its intersections with Black River and Rattlesnake Bridge Roads. Although settled in 1740 (when the first church was built), the architectural appearance of the village is mid-to-late nineteenth century in character. The area has survived as an identifiable example of a rural trading and meeting place surrounded by open lands. Preservation and protection of Lamington, including the surrounding open lands, is deemed an important objective for historical and cultural purposes.

- Bedminster Village Historic District

The Bedminster Village Historic District encompasses lands historically referred to as "Lesser Crossroads" and includes an assortment of buildings located along Lamington Road, State Route 202, Main Street and Hillside Avenue. Some of the buildings are the Bedminster Inn, the Bedminster Dutch Reformed Church, and the Saddlery and numerous houses.

- Pottersville Historic District

Pottersville has remained a rural village since its 18th century beginnings as a mill and foundry town where grain and feed were ground, and harrows and plowshares forged for the farmers in the hills of Somerset, Hunterdon, and Morris Counties. An architectural and historical inventory and National Register nomination are planned for 1983. The boundaries of the historic district are not determined yet, but will generally include the visible village area.

HISTORIC RURAL BEDMINSTER

The survey of historic resources recognizes more than 150 historic sites, outside the village areas, in the rural areas of the Township. Collectively, these sites form an historic district - Historic Rural Bedminster. Individually, these sites are the thread of history which, woven together, tell the story of a once-remote farming community drawn into the metropolitan area. The merits of protecting any individual site should be assayed when a development plan is presented that impacts that site, until such time as historic district zoning regulations are adopted.

ROCKAWAY VALLEY RAILROAD

A significant addition to the transportation system within northcentral New Jersey was the construction of the Rockaway Railroad (the "Rockabye Baby") in 1889.

Farmers in Hunterdon and Somerset had turned to peach growing after the Civil War. By 1889 there were 2,000,000 peach trees in Hunterdon and another 500,000 east of the Lamington River in Somerset. Peach growers put up the money to construct a railroad linking the orchards to the New York market.

The Rockaway Valley Railroad, providing passenger and freight service from Peapack through Pottersville to Oldwick and White House, began operating in 1889. The line carried coal, iron, lime, and cement, but primarily peaches. The "Rock-A-Bye Baby" met the New York train at the New Jersey Central Station in White House.

But, the train came late. The peach industry was as fragile as its lucious fruit. Despite record crops in 1891 and 1894, peach production was declining. Growers were not setting out any new trees.

The San Jose scale, a tiny destructive insect, first appeared in the orchards in 1900, and killed thousands of peach trees in succeeding years. The last peach train ran in 1901. By 1904 the peach industry was gone.

The Rock-A-Bye-Baby", always financially troubled, continued to run until 1913. Then the railroad shut down, the government came along and bought it up - - track, train, engine, and all - - and shipped it to France and built a railroad over there.

CONCLUSION

As evidenced from the information presented in this report, Bedminster Township has a rich and extensive historical legacy. The purpose of the Background Study report has been to identify the historic resources of Bedminster Township as part of the municipal Master Plan so that appropriate methods for the protection and conservation of the historic resources, including historic district zoning and other land development regulations, can be considered and pursued.

Regional Analysis

REGIONAL ANALYSIS

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INTRODUCTION

It is the purpose of the Regional Analysis to ascertain Bedminster Township's obligations with respect to the planning and development of surrounding land areas in the northcentral portion of New Jersey. Therefore, it is necessary to evaluate the current zone plan of Bedminster Township against the Somerset County Master Plan, the Tr-State Regional Guide Plan, the State Development Guide Plan and the zone plans of adjacent municipalities.

Most important to an understanding of Bedminster Township's relationship to its region is an understanding of the Allan-Deane/Bedminster Township litigation. Uniquely, Bedminster Township's current zone plan was devised under the perview of the Superior Court which required that Bedminster Township satisfy its regional development obligations.

SOMERSET COUNTY MASTER PLAN OF LAND USE

Plate REG-1 illustrates the Somerset County Master Plan of Land Use as it affects Bedminster Township. As noted, lands west of the Bedminster and Pluckemin Route 202/206 corridor are proposed for low density rural development and/or open space preserves. It is within the corridor itself that the relatively dense residential development and the relatively intense non-residential development is planned to occur. Specifically, the "Village Neighborhood" areas are projected to develop with a density of between five and fifteen (5 - 15) families per acre with complimentary local institutions and commercial facilities. The "Residential Neighborhood" areas are intended to be developed at relatively low gross residential densities, but within a clustered format permitting increased densitites within certain areas.

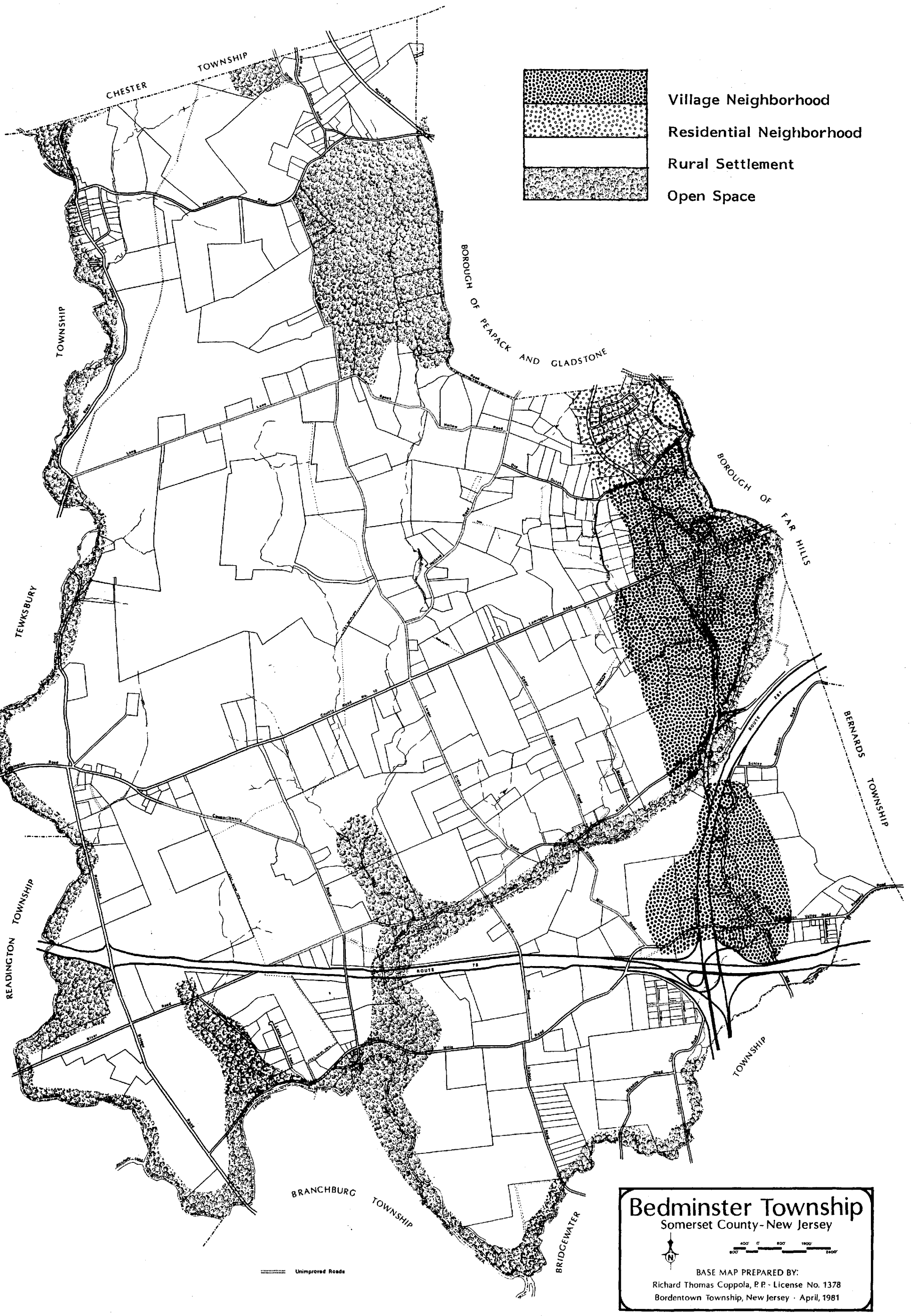
TRI-STATE REGIONAL AND NEW JERSEY STATE DEVELOPMENT GUIDE PLANS

Plate REG-2 indicates the Tri-State and State Development Guide Plans as they affect Bedminster Township.

In concert with the Somerset County Master Plan of Land Use, the Tri-State Regional Planning Commission suggests that the entirety of Bedminster Township be maintained in its rural development state with the exception of the Bedminster and Pluckemin Village corridor. Within the designated corridor, densities would range between 2.0 and 6.9 dwelling units per acre with the exception of Pluckemin Village which is suggested to be developed at a density of between 7.0 and 14.9 dwelling units per acre.

Also consistent with the Somerset County Master Plan of Land Use and the Tri-State Regional Development Guide, the State Development Guide Plan has designated the majority of Bedminster Township in its "limited growth area" designation, with the Bedminster and Pluckemin Village corridor designated as a "growth area". Specifically,

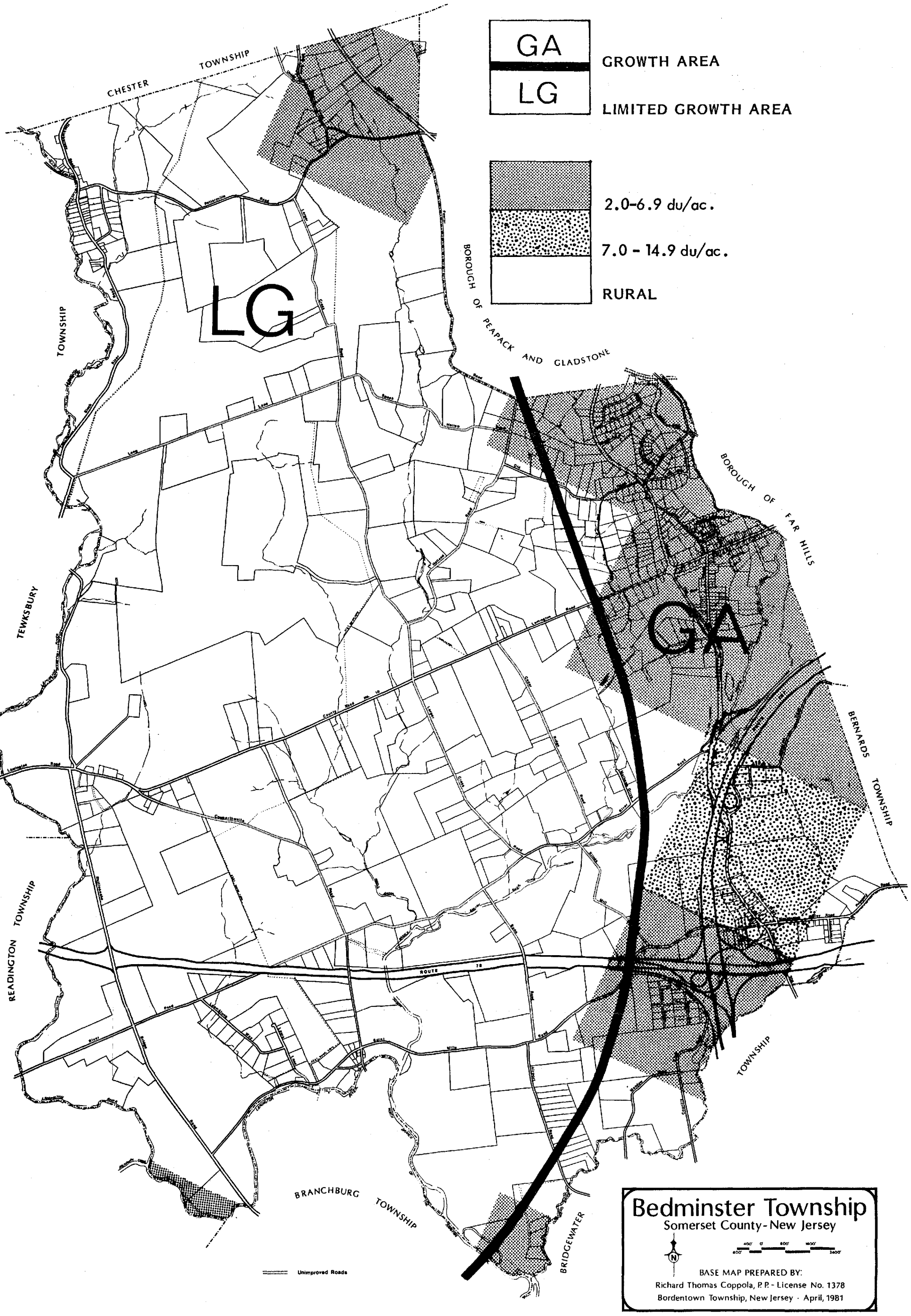
Somerset County Master Plan of Land Use



SOURCE: Master Plan of Land Use, adopted November 24, 1970 by the Somerset County Planning Board.

PLATE REG. 1

Tri-State & State Development Guide Plan · January, 1982



Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
Richard Thomas Coppola, P.P. - License No. 1378
Bordentown Township, New Jersey · April, 1981

SOURCE: Tri-State Regional Development Guide, dated August 14, 1979 and Revised State Development Guide Plan dated May 1980.

PLATE REG. 2

the State Development Guide Plan recommends that relatively intense development occur within the designated "growth areas" throughout the State in order to achieve the following objectives:

- Improved housing opportunities for a variety of households and income groups;

- Improved balance between job locations and housing choices; and

- Increased concentration of development to reduce infrastructure costs and facilitate the use of mass transit.

HOUSING OBLIGATIONS

Since Governor Cahill's "Housing Message" in 1970, several important zoning cases were rendered in the New Jersey Courts. The most far reaching decision was rendered on March 24, 1975 by the New Jersey Supreme Court when it took a pioneering step and upheld the Superior Court decision in the Mount Laurel case. In his decision, Justice Hall outlined the litany of planning related techniques which have prohibited the construction of affordable housing for low and moderate income families including the exclusion of multiple family dwelling units as permitted land uses, the inordinant amount of land commonly reserved for nonresidential purposes, extremely low density large lot zoning which by virtue of the size of the area affected precludes any area for smaller sized lots, and excessively high minimum floor area requirements for residential units.

Justice Hall emphasized the importance of affirmative action on the part of municipalities to protect the general welfare of the public; not merely the parochial interest of the municipality. Among the remedial actions suggested was the requirement that each municipality consider its 'fair share' of the "regional housing needs" as long as zoning is done on a municipal rather than regional basis). In providing for the housing needs of the "regional population", a municipality should insure that a wide range of housing types be constructed for the prospective needs of the regional population, including multiple family units and small detached homes on small individual lots.

The Oakwood at Madison case, decided January 26, 1977 by the State Supreme Court, has helped to refine the Mount Laurel decision. Moreover, the Madison decision introduced a new term to the ever-expanding planning and legal vocabulary.

The decision addressed the well-known fact that in the current economy, private enterprise cannot "...without subsidization or external incentive..." provide affordable housing for the low or moderate income population. The Court recognized that mere zoning does not provide housing for the lower income groups. The Court proceeded to find that although newly constructed housing for the low income groups cannot be provided through conventional construction techniques, sound housing can nevertheless be provided through the "filtering down process".

The "filtering down" theory holds that the construction of new housing, although beyond the range of lower income groups, initiates a chain-like reaction, freeing the older but sound housing vacated by the population moving up the housing scale. The speed at which lower income families can occupy the better housing is dependent on the length of the chain; i.e., the cost of the most recently constructed housing. The Supreme Court, following this rationale, found that it is encumbent upon the municipalities to insure that "least cost housing" can be built in sufficient amounts to satisfy the deficiency in the hypothesized fair share, thus providing the necessary link for the provision of housing for low and moderate income households.

While the Oakwood at Madison case de-emphasized the importance of designating specific numbers of dwelling units as a quota for municipalities to construct within a given time frame,

the decision did not alter the most basic conditions of the Mount Laurel decision. Summarily, the Mount Laurel decision concluded that "developing municipalities" must "affirmatively plan and provide by its land use regulations a reasonable opportunity for an appropriate variety and choice of housing, including, of course, low and moderate income housing, to meet the needs, desires and resources of all categories of people who may desire to live within its boundaries". While the purpose of the litigation was to provide low and moderate income housing, the decision specifically requires such municipalities to provide an opportunity for an "appropriate variety and choice of housing for all categories of people".

Subsequent Superior Court decisions throughout New Jersey have helped to define municipalities as either "developed" or "non-developing" thereby exempting them from the "fair share" mandates of Mount Laurel. Other Supreme Court decisions have helped to refine the terminology included in prior Court decisions. One recent court decision affecting a town in Hunterdon County (Round Valley, Inc. vs. Township of Clinton) re-emphasized several of the court's concerns that were articulated in the Oakwood at Madison decision. Among those concerns outlined by Judge Beetel were the reasonableness of the region in which the prospective housing needs were to be met and the requirement that the developing municipalities eliminate the zoning and subdivision "cost exactions" which unreasonably restrict the availability of housing to low and moderate income families.

Currently, the New Jersey Supreme Court is reviewing six (6) zoning cases concerning the Mount Laurel theme. The Court's ruling, which is anticipated sometime in the Fall of 1982, is expected to clarify a number of the unresolved questions regarding municipal responsibility to actually provide, as opposed to zoning for, housing and the extent of the obligation carried by "developing", "developed" and "non-developing" municipalities.

Environmental Capacities and Limitations

The necessity of a municipality to provide for a diversity of housing types at various densities within its bounds must be evaluated against the other viable factors of the planning process. All relevant planning inputs, including, but not limited to, the perceived housing needs must be considered. Clearly, the location, extent and timing of housing construction is dependent not merely on the specific numbers of housing units to be provided, but also upon the other planning inputs which collectively define the comprehensive planning process.

The benchmark considerations concerning a municipality's ability to develop are the capacities and limitations dictated by the natural environment. The Soil Conservation Service provides significant information regarding soil types with ratings of the soils concerning their appropriateness for different types of community development. Additionally, the U. S. Geological Survey provides both topographic and geologic information. The geologic considerations are translatable to a quanitifcation of the available total water supply. Clearly, the Master Plan of a municipality must document and evaluate this environmental data to the extent that such information is available and applicable, and reflect a balance between its current social/legal obligations and its moral obligations to future generations.

A viable planning process must acknowledge both the natural environment as well as the right of the people to live in that environment. While often situated at the extreme ends of the ideological spectrum, the two areas of common concern are not mutually exclusive and can be honored simultaneously.

Community Facility Capacities and Limitations

In addition to the environmental concerns, which must serve as benchmark criteria, the provision of community facilities necessary to serve future residential populations must be addressed as a key input concerning the location, extent and timing of residential development. Certain community facilities, such as public water and sewerage systems, will offset certain of the environmental limitations such as the need for relatively large individual lots where septic systems are used. However, the ultimate capacities for any man-made water or sewerage system remains dependent upon the limitations of the natural environment. As infrastructure systems become more extensive, the planning considerations become more regional in nature; nevertheless, the community facility considerations must be addressed by the locality in its planning process.

The importance to the planning process of delineating capacities versus limitations is not new; indeed this determination is the basic pursuit of a comprehensive planning program. The recent mandates to provide a diversity of housing types has merely affirmed the importance of evaluating the relevant data.

Rights vs. Rights

The competing forces of planning must be viewed not as a conflict of right versus wrong but as a contest of issues which must be balanced to safeguard the "general welfare". Judge Leahy of the Superior Court of Somerset County, New Jersey aptly summarized the housing versus environmental versus private property conflicts as a contest of rights: "...the right of minorities and those of limited income to fair housing opportunity, the right of a landowner to a reasonable use of his private property; the right of a community to plan and zone for its future as it envisions that future should ideally be; and the right of all to have ecological necessities recognized and respected...the question is not of one right against wrong, but one of right against right--each worthy of legal recognition and of legal protection".

THE ALLAN-DEANE/BEDMINSTER TOWNSHIP LITIGATION

In 1971 Allan-Deane filed a complaint charging that the zoning of Bedminster Township was arbitrary and exclusionary. The action was consolidated later with a "public interest suit" brought by the Suburban Action Institute and the American Civil Liberties Union. Subsequent to Allan-Deane's initial complaint in 1971, a number of Court opinions and orders were rendered and a number of appeals were filed and heard. In 1975, the Court first ordered Bedminster Township to rezone. That order was appealed by the Township and in 1977, the

Appellate Court upheld Judge Leahy's decision. Later in 1977, the Township did rezone at a density of approximately two (2) dwelling units per acre. In 1979, a hearing was held on a "show cause" action brought by the plaintiff and an Opinion was issued on December 13, 1979 against Bedminster Township, holding that the municipality had failed to comply with the prior Court Orders. During March 1980, Judge Leahy issued an Order for the Township to rezone in accordance with specific guidelines and, furthermore, specified that the rezoning process be supervised by a Court Appointed Master and be completed within three months time.

It was the December 1979 Opinion of Judge Leahy and his subsequent order of March 1980 that brought forth the significant rezoning adopted by Bedminster Township in August 1980. The 1979 Opinion recognized the importance of regional planning and stipulated the necessity of municipal plans to be in concert with the adopted plans at the County, Regional and State levels. Quoting from a portion of Judge Leahy's December 13, 1979 Opinion:

> ....Since 1976 it has been required that the municipalities must adopt land use elements of their master plans before a zoning ordinance may be adopted and such ordinances must be "substantially consistent" with the master plan. Any inconsistency must be justified. N.J.S.A. 40:55D-62a.
>
> The municipal master plan must indicate its relationship to the master plan of contiguous municipalities, to the county master plan and to any comprehensive guide plan adopted pursuant to N.J.S.A. 13:1B-15.52. N.J.S.A. 40:55D-28d.
>
> If municipal zoning provisions comply with municipal master plans and the master plans must be consistent with county plans, it follows with indisputable syllogistic logic that municipal zoning must be consistent with county, and thus state and regional, planning.
>
> By enacting this requirement the legislature has provided the courts with an objective standard against which to measure the provisions of a municipal zoning ordinance.....

Judge Leahy continued regarding the specific relationship between the Somerset County Master Plan and the 1979 zoning ordinance provisions of Bedminster Township:

> .....The county master plan provides for the development of the major portion of Bedminster as a Rural Settlement area with two nearly abutting Village Neighborhoods straddling Route 202-206 at Pluckemin and Bedminster villages and with a small area of Residential Neighborhood development in the northern portion of Bedminster Village.
>
> The zoning ordinance under review also provides that the overwhelming bulk of the township shall remain in the very low

density single-family use. Based on the proofs submitted as to the ecological sensitivity of that area as well as a major watershed with relatively impervious geological sub-soil conditions and accepting the testimony that it is inadvisable to introduce a sewer system into the area to encourage development when other areas in the county and region should more logically be developed sooner, as provided in the county master plan and the Tri-State Regional Planning Commission Regional Development Guide, 1977-2000, this court accepts the decision of the municipal officials as to the provisions, locations and extent of the R-3 zone.

The zoning within the corridor on the eastern edge of the Township through which Routes 202-206 pass is not as easily justified. Where the county master plan anticipates village neighborhood development with the possibility of carefully designed projects of five to fifteen families (dwelling units) per acre in relatively sizeable zones on both sides of Routes 202-206 in the Pluckemin and Bedminster villages, the 1978 zoning restricts the Bedminster Village area to R-6 (.77 and .90, if clustered, dwelling units per acre) and R-8 (1.67 and 1.86, if clustered, dwelling units per acre) and two small R-20 (multi-family) zones of seven and nearly nine acres respectively. Neither .90 nor 1.86 dwelling units per acre amount to five to fifteen families per acre and two small multi-family tracts do not remotely approach the level of development envisioned in the county master plan.....

The March 1980 Court Order listed a number of directives regarding the rezoning process. Four (4) of the directives are particularly relevant to the Master Plan process of the Township:

1. The Order mandated that the revised ordinance provide for the following types of development within the specified "Corridor" area:

   (a) Some moderate sized and many very small lots for detached one family dwelling units;

   (b) Two-family units on small lots; and

   (c) A planned development zone (PUD or PRD overlay mechanism as provided by N.J.S.A.40:44D-45 et seq.).

2. In accordance with the "Village Neighborhood" concept of the Somerset County Master Plan, the Order stipulated that the revised ordinance regulations permit an ultimate density of between five (5) and fifteen (15) dwelling units per gross acre throughout the "Corridor", unless in specific areas and for particular reasons such densitities would constitute improper land use development.

3. The Order provided for the appointment of a planning expert as a Master to serve as a witness and consultant in order to aid the Court and the parties in the revisions of the ordinance regulations.

4. The Order specified an exact definition of the "Corridor" area, thereby indicating that portion of Bedminster Township to be rezoned for high density residential and high intensity non-residential uses versus those lands to remain zoned for low density residential development. Plate REG-3 illustrates the Court defined corridor area.

With the directives of the March 1980 Court Order in hand, Bedminster Township formulated appropriate ordinance provisions satisfactory to the Township, the plaintiff, the Court Appointed Master and the Court itself. As is true with other land use planning issues, the overriding objective was to determine the most appropriate land use for each affected land parcel, based upon such planning factors as environmental constraints, the availability of public water and sewerage facilities, traffic accessibility and the existing land uses within the area.

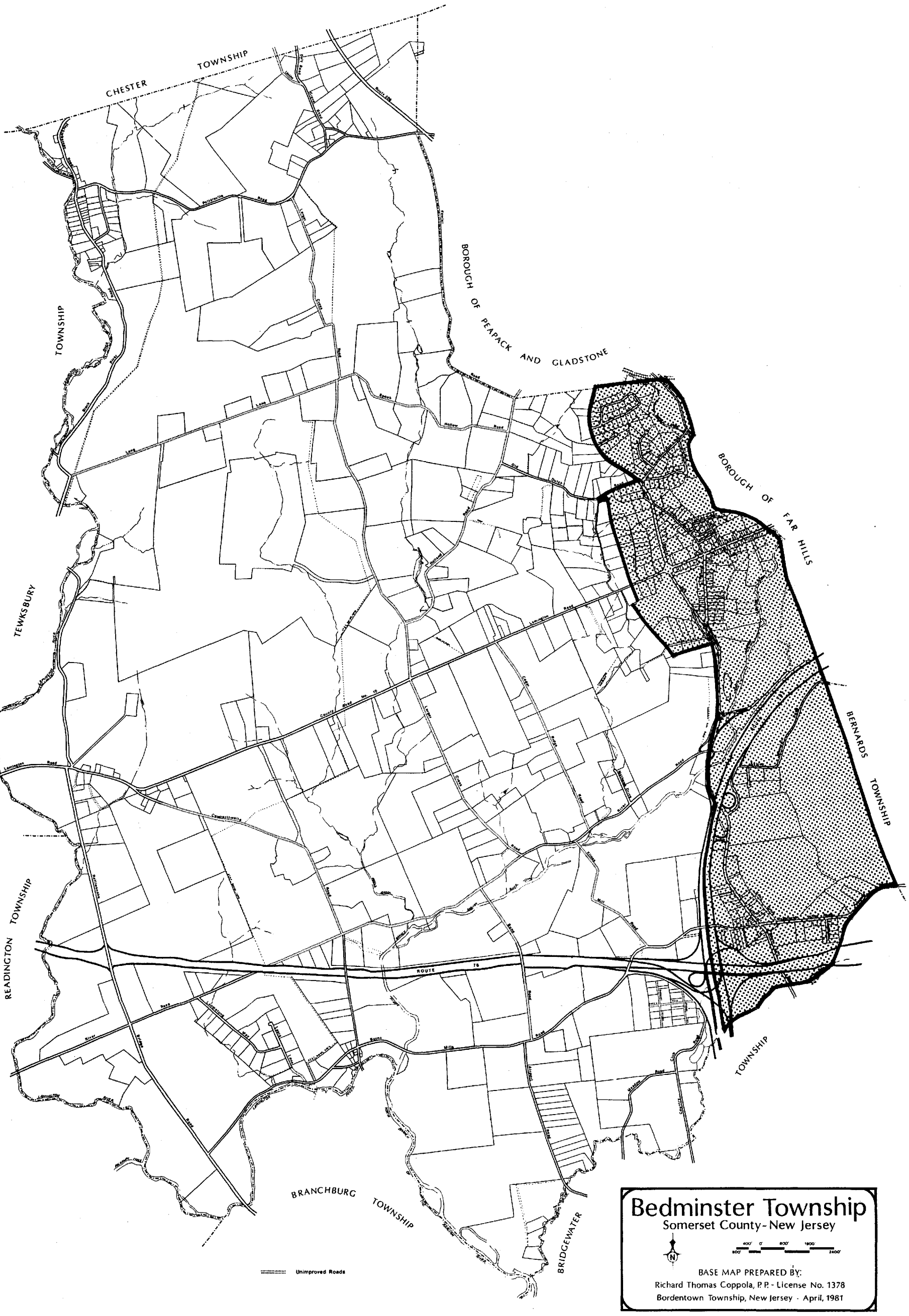
ZONING OF NEIGHBORING MUNICIPALITIES

During the formulation of the current zoning regulations governing land development within Bedminster Township, the Township considered the zone plans of the neighboring municipalities. As indicated on Plate REG-4, most of the zoning bordering Bedminster Township permits low-density residential development and agricultural uses; however, there are certain deviations from this generality which deserve comment:

- The Pottersville Village portion of Tewksbury Township is zoned "C" Commercial and "VR" Village Residential (1 du/0.9 ac). This zoning compares to the "R-1" Residential (1 du/1 ac) and "VN" Village Neighborhood (1 du or commercial use/6,000 sq. ft.) zoning within the Pottersville Village portion of Bedminster Township. There is no inherent incompatibility between the Tewksbury and Bedminster zoning, particularly since the boundary line between the municipalities is the Lamington River, which provides a natural buffer.

- The zoning in the Far Hills Village portion of the Borough of Far Hills, west of Bedminster Township and the North Branch of the Raritan River, includes a variety of relatively intense and dense commercial and residential zoning districts, including a "B" Business Zone; an "RS-9" Village Neighborhood District which permits one (1) residential dwelling unit per 9000 sq. ft. of land area; and an "R-5" Village Neighborhood District which permits one (1) residential dwelling unit per 5000 sq. ft. of lot area. The zoning of Far Hills Village is compatible with the relatively high intensity and high density commercial and residential zoning within Bedminster Village, including the "VN" Village

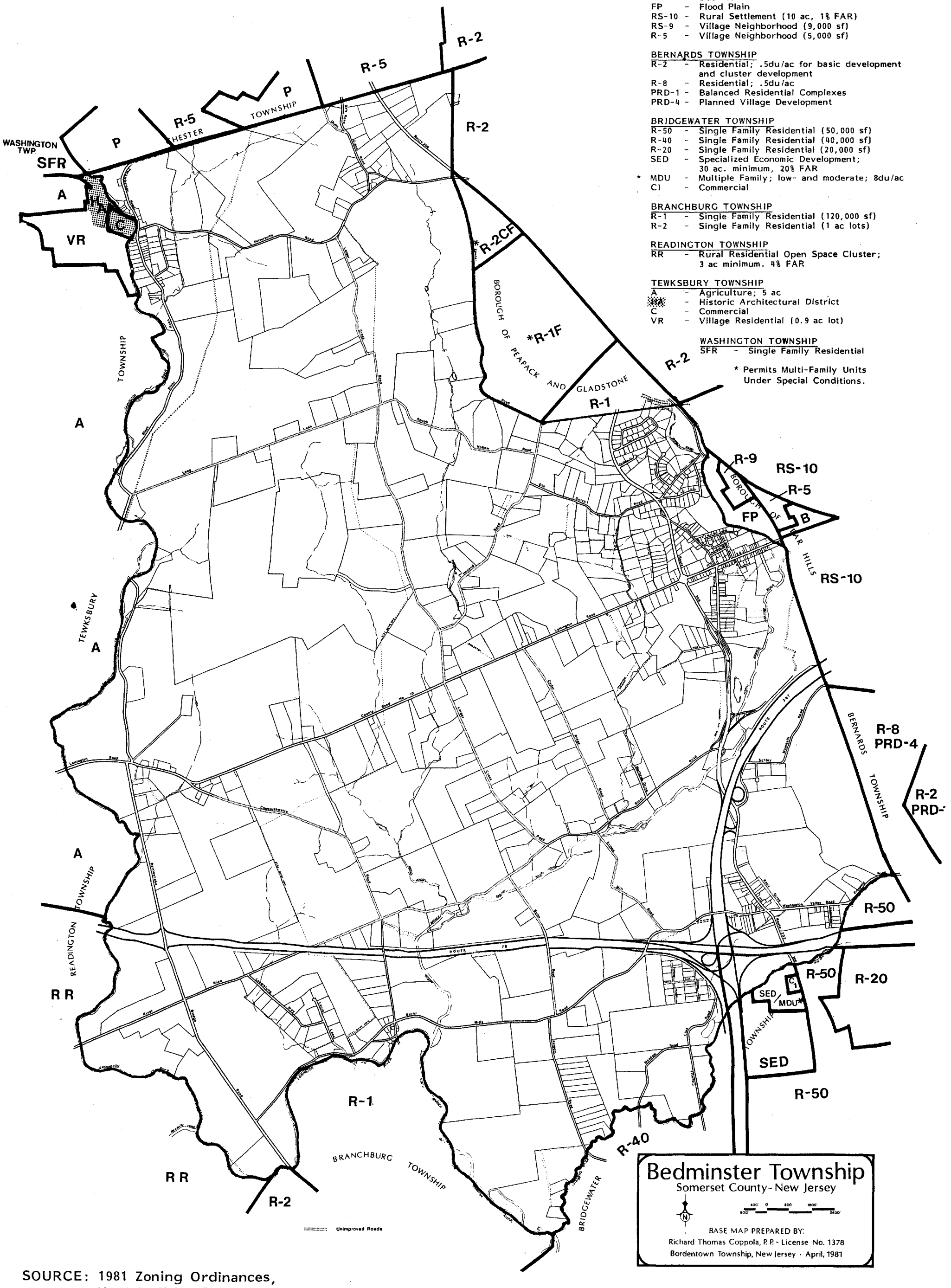
Court Defined Corridor Area



SOURCE: Order For Remedy, March 1980;
Superior Court of New Jersey, Somerset County, N. J.,
re: The Allan-Deane Corporation et al., vs. The Township
of Bedminster, et al., Judge B. Thomas Leahy, presiding.

PLATE REG. 3

Zoning of Surrounding Municipalities



CHESTER TOWNSHIP
- P - Public
- R-2 - Single Family Residential (2 ac)
- R-5 - Agricultural Rural District Areas (5 ac)

BOROUGH of PEAPACK and GLADSTONE
- R-1 - Single Family Residential (125,000 sf)
- * R-1F - Single Family Residential (125,000 sf)
- R-2 - Single Family Residential (80,000 sf)
- * R-2CF - Single Family Residential (80,000 sf) (1 ac cluster)

BOROUGH of FAR HILLS
- B - Business
- FP - Flood Plain
- RS-10 - Rural Settlement (10 ac, 1% FAR)
- RS-9 - Village Neighborhood (9,000 sf)
- R-5 - Village Neighborhood (5,000 sf)

BERNARDS TOWNSHIP
- R-2 - Residential; .5du/ac for basic development and cluster development
- R-8 - Residential; .5du/ac
- PRD-1 - Balanced Residential Complexes
- PRD-4 - Planned Village Development

BRIDGEWATER TOWNSHIP
- R-50 - Single Family Residential (50,000 sf)
- R-40 - Single Family Residential (40,000 sf)
- R-20 - Single Family Residential (20,000 sf)
- SED - Specialized Economic Development; 30 ac. minimum, 20% FAR
- * MDU - Multiple Family; low- and moderate; 8du/ac
- C1 - Commercial

BRANCHBURG TOWNSHIP
- R-1 - Single Family Residential (120,000 sf)
- R-2 - Single Family Residential (1 ac lots)

READINGTON TOWNSHIP
- RR - Rural Residential Open Space Cluster; 3 ac minimum. 4% FAR

TEWKSBURY TOWNSHIP
- A - Agriculture; 5 ac
- HA - Historic Architectural District
- C - Commercial
- VR - Village Residential (0.9 ac lot)

WASHINGTON TOWNSHIP
- SFR - Single Family Residential

* Permits Multi-Family Units Under Special Conditions.

Bedminster Township
Somerset County - New Jersey

BASE MAP PREPARED BY:
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Bordentown Township, New Jersey · April, 1981

SOURCE: 1981 Zoning Ordinances,
Municipalities Surrounding Bedminster Township.

PLATE REG. 4.

Neighborhood District and the single family and multiple family residential development permitted within the "R-1/4", "R-1/2", "MF" and "PRD" which allow residential development at various densities between two and twelve (2 - 12) dwelling units per acre.

- Lands south of Bedminster Township, in Bridgewater Township between Interstate Route 287 and State Routes 202/206, are zoned for "SED" Specialized Economic Development and/or "MDU" Multiple Family Development, which is similar to the zone plan of Bedminster Township within the Pluckemin Village area.

- Lands in the Borough of Peapack and Gladstone east of the municipal boundary with Bedminster Township, between Fowler Road and State Route 206, are zoned for single family residential development on individual lots two to three (2 - 3) acres in size, although multiple family residential development is permitted under certain specified conditions.

CURRENT ZONING OF BEDMINSTER TOWNSHIP

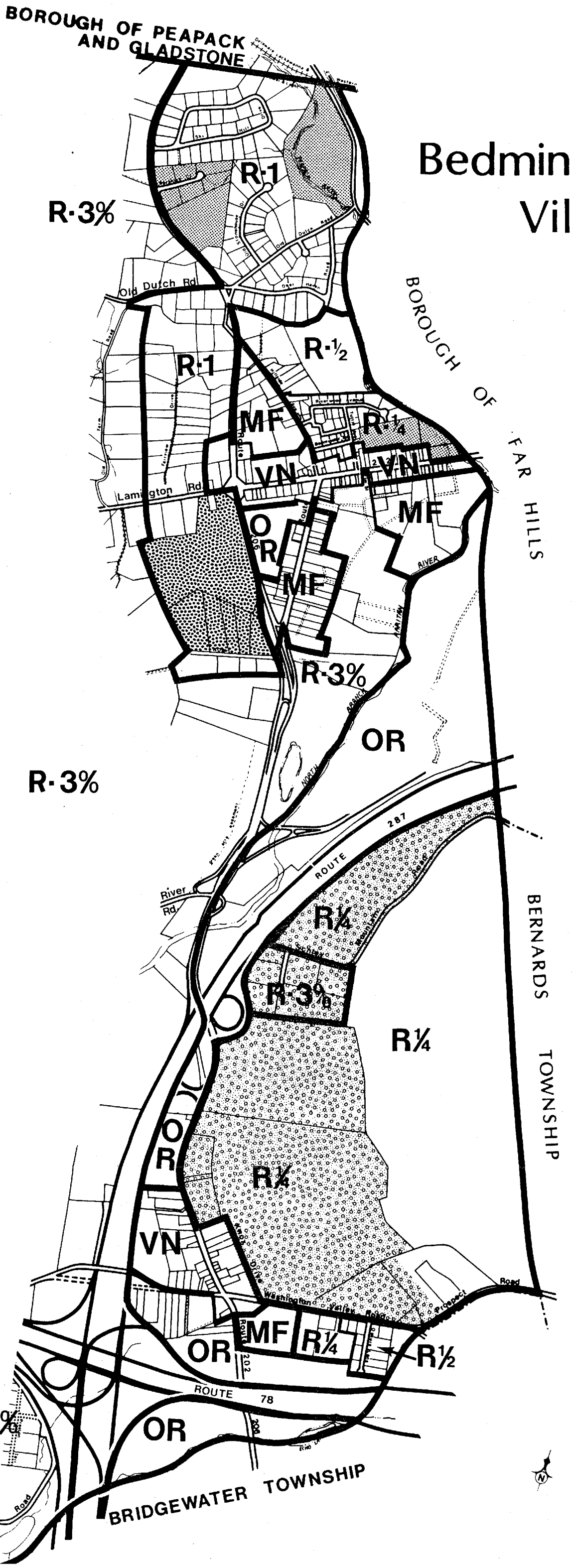
Pursuant to the Order For Remedy issued by the Honorable Thomas B. Leahy on March 6, 1980, the Township of Bedminster prepared a Land Development Ordinance in full compliance with the terms of the Order. The Land Development Ordinance of the Township of Bedminster was approved by the Somerset County Superior Court, was adopted by the Township Committee on September 2, 1980, and was amended on October 6, 1980, incorporating minor modifications and refinements.

In accordance with the Court Order, the Township designated lands within the Bedminster and Pluckemin Village Route 202/206 corridor for the high density residential and high intensity non-residential development, as required by the Court and in accordance with sound planning criteria. The zoning of the corridor lands is indicated on Plate REG-5.

Certain lands within the Bedminster and Pluckemin Village corridor are more likely for development than others because they are currently undeveloped and exhibit relatively non-severe environmental constraints. Such parcels of land within the Village corridor are indicated on Plate REG-6. Plate REG-7 describes these principal parcels available for development and indicates their development potential under current Ordinance provisions. As indicated, approximately 4,090 multiple family dwelling units; approximately 945,000 sq. ft. of retail/office commercial space; and approximately 330,500 sq. ft. of office/research space can potentially be developed on the designated land parcels.

Other properties zoned within the Bedminster and Pluckemin Village corridor are less likely to be developed in accordance with the adopted Ordinance provisions because of existing development on the lands or because of severe environmental constraints. Nevertheless, these additional parcels are zoned to accommodate multiple family, retail commercial and office development and may eventually be so developed. Plate REG-8 designates the location of these additional parcels zoned for development and Plate REG-9 describes and tabulates their

Bedminster and Pluckemin Village Corridor



March, 1982 Zoning

R-3%	Rural Residential
R-1	Low Density Residential
R-1/2	Medium Density Residential
R-1/4	Medium Density Residential
MF	Multiple Family Residential
VN	Village Neighborhood
OR	Office Research

Development Alternatives

R-1/4 and R-1/2 Districts: Residential Clusters

PRD - 6 DU/AC

PRD - 8 DU/AC

PUD - 10 DU/AC

PLATE REG.-5

A Portion of Bedminster Township

Somerset County - New Jersey

BASE MAP PREPARED BY:

Richard Thomas Coppola, P.P. - License No. 1378

Bordentown Township, New Jersey · Dec., 1981

PLATE REG-7

DEVELOPMENT POTENTIAL

Multiple Family - Retail Commercial - Offices

PRINCIPAL PARCELS AVAILABLE FOR DEVELOPMENT:
BEDMINSTER and PLUCKEMIN VILLAGE CORRIDOR
March 1982 Zoning

I. MULTIPLE-FAMILY DISTRICTS

	Block	Lot	Acreage	
Area No. 1 (Bedminster Village: Raritan River)	35	15,16,17	1.389	
		18	1.144	
		19	0.454	
		20	0.918	
		21	5.978	
		22	20.554	
		23	12.802	
	Sub Total:		43.239 ac.	(1)
Area No. 2 (Pluckemin Village: George E. Ray)	72	2	14.800	
	Sub Total:		14.800 ac.	(2)

(1) Approximately 11.651 non-critical @ 12 du/ac. = 139.812 du
31.58 critical @ 1/5 du/ac. = 6.316 du
146.128 du

(2) Approximately 14.800 non-critical @ 12 du/ac. = 177.600 du

Total: 323.728 du in "MF" District

II. PLANNED RESIDENTIAL DEVELOPMENTS - 6 du/ac

	Block	Lot	Acreage
Area No. 3 (Bedminster Village: Peapack Brook)	19	2	33.400
		Sub Total:	33.400 ac.
Area No. 4 (Bedminster Village: Route 206)	17	2-1	2.004
		2-2	2.001
		2-3	2.003
		2-4	2.003
		2-5	2.003
		2-6	2.000
		3	13.201
		Sub Total:	25.215 ac.

Total: 58.615 ac. x 6 du/ac. = 351.69 du

III. PLANNED RESIDENTIAL DEVELOPMENTS - 8 du/ac

	Block	Lot	Acreage
Area No. 5 (Bedminster Village: Lamington Road and Route 206)	41	16 (portion)	41.690
		19	8.848
		20	5.073
		21	3.170
		22	2.866
		23	0.320
		24	2.688
		Total:	64.655

Total: 64.655 x 8 du/ac. = 517.240 du

IV. PLANNED UNIT DEVELOPMENTS -
10 du/ac and Retail/Office Development

	Block	Lot	Acreage
Area No. 6 (Pluckemin Village: A.T.& T. Co.)	43A	1	51.767
		Sub Total:	51.767 ac.
Area No. 7 (Pluckemin Village: Duncan Ellsworth)	59	10	73.250
		Sub Total:	73.250 ac.
Area No. 8 (Pluckemin Village: Hills Development Co. and others)	59	11-1	5.639
		Easement	0.510
		11-2	6.365
		11	142.416
		12	17.180
		13	1.509
		14 (portion)	6.887
		Sub Total:	180.506 ac.

Total: 305.523 ac.

Retail/Office Commercial: @ 20% of acreage and 0.25 FAR = 665,429 sq. ft.
Multiple-Family Dwellings: @ 10 du per gross residential acre = 2,444.184 du

V. "R-¼" District - Residential Cluster Option
(no PUD or PRD Option)

	Block	Lot	Acreage
Area No. 9 (Pluckemin Village: Hills Development Co.)	59	1	287.500
		14 (portion)	12.120
		13A	5.632
		Sub Total:	305.252 ac.(3)

(3) Approximately 97.313 non-critical @ 4 du/ac = 389.252 du
207.939 critical @ 1/5 du/ac = 41.588 du
430.840 du

Area No. 10 (Pluckemin Village: W. Zimmerman)	72	3	5.569
		Sub Total:	5.569 ac @ 4 du/ac = 22.276 du

Total: 453.116 du in "R-¼" District-
Residential Cluster Option

VI. OFFICE RESEARCH DISTRICT

	Block	Lot	Acreage
Area No. 11 (Pluckemin Village: Zimmerland Limited)	72	3-1	17.625
		Sub Total:	17.625 ac.
Area No. 12 (Pluckemin Village: City Federal and others)	71	5	1.728
		6	1.564
		7	1.534
		8	1.460
		9	0.551
		10	4.874
		16	1.000
		22	13.017
		Sub Total:	25.728 ac.

Total: 43.353 ac. @ 0.175 FAR = 330,480 sq. ft.

VII. VILLAGE NEIGHBORHOOD DISTRICT (Retail/Office Commercial)

	Block	Lot	Acreage
Area No. 13 (Pluckemin Village: Aaron Johnson and others)	57	1	0.978
		2	1.225
		3	1.518
		5	0.786
		6	9.800
		7 (portion)	2.000
		11 (portion)	2.000
		Total:	18.307 ac. @ 0.35 FAR = 279,109 sq. ft.

AGGREGATE TOTALS

Multiple Family Dwelling Units:	4,089.958 du.
Retail/Office Commercial:	944,538 sq. ft.
Office Research:	330,480 sq. ft.

Bedminster and Pluckemin Village Corridor

Principal Parcels Available for Development

Multiple Family - Retail Commercial - Offices
March 1982 Zoning

See Plate Reg-7 For Descriptions and Tabulations

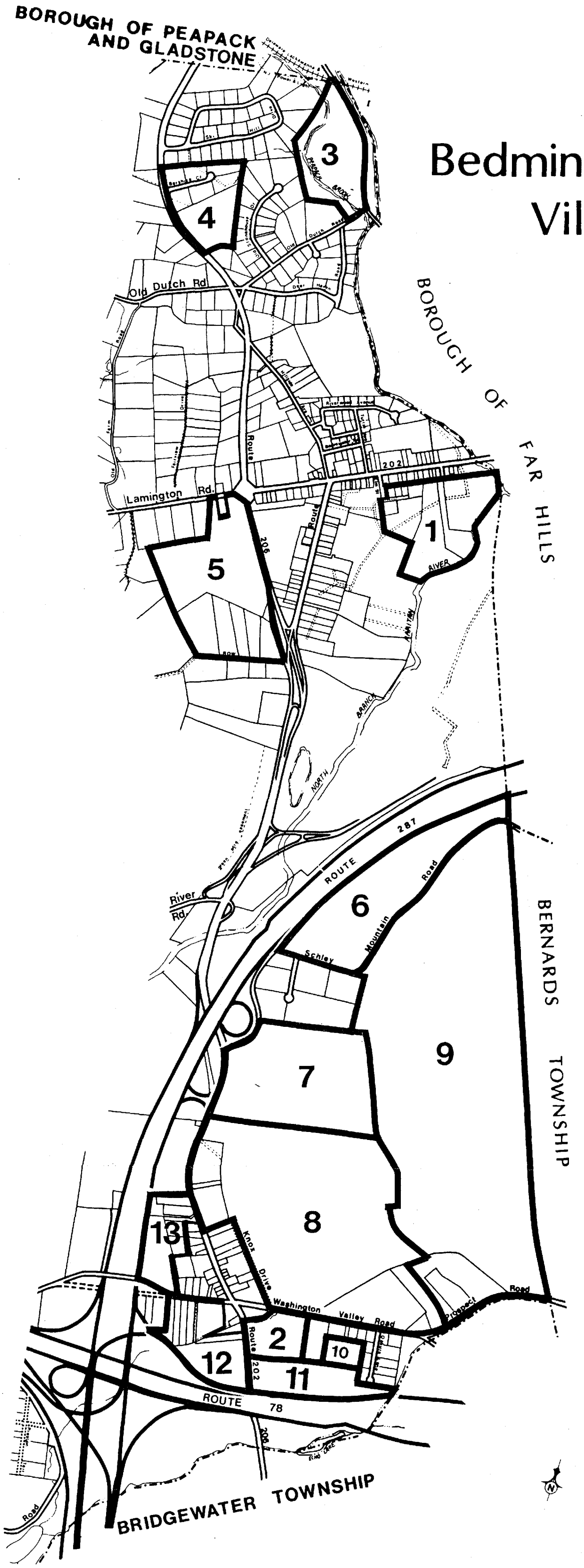


PLATE REG.-6

A Portion of Bedminster Township

Somerset County - New Jersey

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Bordentown Township, New Jersey · Dec., 1981

Bedminster and Pluckemin Village Corridor

Additional Parcels Zoned for Development

Multiple Family - Retail Commercial - Offices
March 1982 Zoning

See Plate REG.-9
For Descriptions and Tabulations

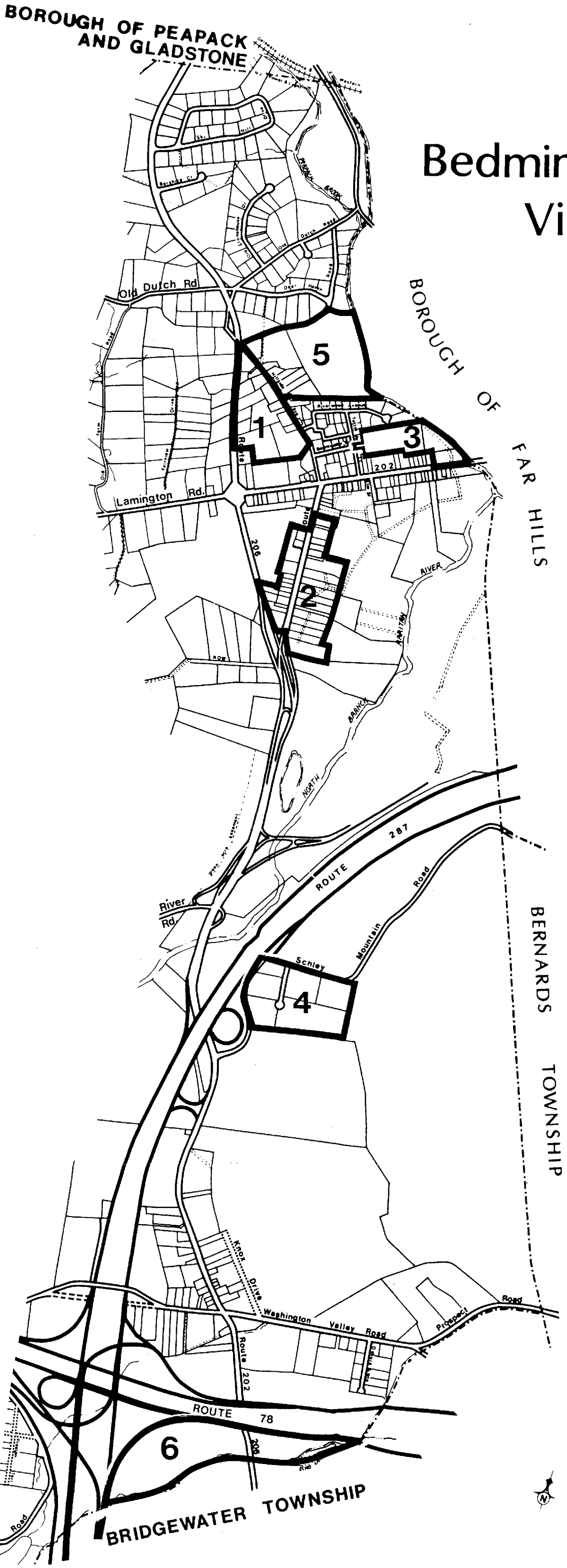

PLATE REG.-8

A Portion of Bedminster Township

Somerset County - New Jersey

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ENVIRONMENTAL ANALYSIS

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ENVIRONMENTAL ANALYSIS

INTRODUCTION

Local and regional environmental considerations are important to the master planning process in that it is an area's natural resources and their limitations which ultimately determine its overall capability to support development as well as greatly influence decisions regarding intensity and distribution of uses.

This chapter presents the implications to land use planning of Bedminster's environmental assets and limitations from both a local and regional standpoint, and joins with the Master Plan's other background studies in providing the technical basis for the land use plan element.

Specifically, this chapter presents the environmental implications relating to three of the preceeding background studies; Utilities Analysis, Natural Resources Inventory, and Regional Analysis, emphasizing the important interrelationships which exist between existing and proposed infrastructure elements, natural resources and regional environmental goals and objectives.

ENVIRONMENTAL PLANNING IMPLICATIONS OF THE UTILITIES ANALYSIS

The availability of utilities, particularly water and sewage facilities, is perhaps the single most important factor influencing land use planning decisions regarding population distribution in rural areas. It is these facilities which encourage energy and cost efficient development patterns in which development in certain areas, referred to here as "preferred development areas," is permitted at densities beyond their natural carrying capacities, while other "offset areas" are developed at low densities below their natural carrying capacities. The capacities of the available utilities determines the population limits in the preferred development areas and also influences acceptable development densities in the offset areas.

The Township's Land Use Plan calls for a preferred development corridor of medium to high density development which is intended to be served by water and sewage facilities, as indeed it must be if the proposed development pattern is to be realized.

Public Water Supply

At the present time the Corridor is partially served by public water facilities and supports approximately 376 customers predominantly located in Bedminster Village. Public water is provided to the Corridor by the Elizabethtown and Commonwealth water companies and is also provided to 68 customers in the Pottersville-Pottersville Road portion of the Township (see Plate Utility -3). The total daily consumption is presently about 0.23 MGD with total ultimate capacity

available to Bedminster estimated by the Elizabethtown Water Company at 1.5 MGD. This ultimate capacity is important in that it establishes an approximate population limit for the Corridor area based on water supply limitations of 14,400, computed as illustrated below:

Ultimate Development Capability of Corridor Based on Water Supply

Ultimate Water Supply in Corridor	1.50 MGD
Minus Present Consumption	-0.23
Minus Consumption by Ultimate Retail/Office Commercial Space and Office Research Space 1,555,500 sq. ft. x .125 gpd/sq. ft.	-0.19
Ultimate Residential Water Supply At 75 gpd/person = 14,400 persons	1.08 MGD

Assuming an average of three persons per dwelling unit in the Corridor area would yield an ultimate residential development potential of 4,800 units. This figure compares favorably to the estimated ultimate development figure of 4,900 dwelling units suggested in this Master Plan and serves to illustrate that the proposed Land Use Plan for the Corridor is very realistic with respect to water supply capability. If, at some time in the future, the total water supply available to the Corridor were to be increased based on new found local water supplies or interconnections with other non-local suppliers, some consideration of that could be given at that point in time. At present, however, any proposed increase in development densities in the Corridor or proposed extensions of service beyond the Corridor would not be prudent in terms of ultimate available water supply.

Sewage Facilities

Given the ultimate development capacity of the Corridor, it is possible to estimate the ultimate demand for sewerage facilities.

At the present time, as reported in the Utilities Analysis, the Corridor is partially served by one principal Township-owned sewage treatment plant located in Bedminster Village. This plant has been operational since 1975 and provides service to the developed portion of Bedminster Village with 160 connections, AT&T, and the Borough of Far Hills (110 connections). The plant has an NJDEP imposed discharge limitation of 0.2 MGD and allocated and actual usage as shown on the following page.

Acknowledging the discharge limit of .2 MGD, the present usage by Bedminster Village, and the committed allocations to Far Hills and AT&T, the additional capacity remaining for service to Bedminster Village is 14,250 gpd. This would represent enough existing capacity for approximately 63 additional homes

Bedminster Township Sewage Treatment Plant Allocated and Actual Usage

	Service Agreement Allocation (gpd)	Current Average Daily Flow (gpd)
Far Hills Borough	35,000	35,000
AT&T	98,750	77,000
Bedminster Village	68,000	52,000

in the Bedminster Village service area, assuming 75 gpd per capita and three persons per dwelling unit. The recently revised (June 1981) Upper Raritan Watershed Wastewater Facilities Plan recommends that this plant be expanded between 1990 and 2000, using the existing process, to a capacity of 0.253 MGD. A projected completion date of 1993 is proposed. Accordingly, development in the Bedminster Village area will be limited at least for the immediate future to that which can be supported by the existing capacity. It is also presumed that a rehabilitation program will be initiated at some time in the near future to eliminate existing infiltration/inflow problems from the Far Hills collectors.

The Wastewater Facilities Plan further recommends the addition of the 0.85 MGD STP presently being constructed by the Environmental Disposal Corporation to serve the Pluckemin Village area. This facility will provide service for approximately .07 MGD from commercial uses and approximately 1,000 housing units in Bernards Township and 2,245 units in Bedminster.

Accordingly, the expected near future capacity of the Corridor area with respect to sewerage facilities is for an additional 2,300± units and 0.07 MGD of office/commercial flows, corresponding to a total, near future, system capacity of 1.05 MGD. This capacity exceeds by nearly 40 percent the annual average flows projected for the Corridor by NJDEP for the year 2000 and is over five times the existing capacity. It is certainly sufficient to meet the Township's immediate and near future needs.

Plate Utility -1 illustrates the location of the existing and proposed sewage treatment facilities.

With ultimate Corridor development as proposed in the Land Use Plan, the sewerage system must be capable of handling approximately 0.19 MGD of office/commercial flows and a total of 4,900 additional dwelling units. This will require future additional capacity of approximately 0.7 MGD for a total ultimate Corridor capacity of 1.75 MGD. This represents an additional increase in capacity of approximately 67 percent over the expected near future capacity or approximately nine times the present capacity. The potential impact on water quality in the North Branch of such additional expansion over and above that already existing or "on the boards" was not evaluated as part of the Upper Raritan Watershed Wastewater Facilities Plan and will have to be evaluated at some time in the future, prior to adding any further capacity. This evaluation effort should take place as part of the next Master Plan update.

The real significance of the above described sewerage improvements lies not just in their implications with respect to development in the Corridor, but with respect to development outside of the Corridor as well. The improvements proposed were not unilaterally planned for by Bedminster but rather are part of a much larger plan for sewerage facilities development proposed as part of the Upper Raritan Watershed Wastewater Facilities Plan (also known as the 201 Plan) prepared by Malcolm Pirnie, Inc. for the Somerset County Board of Chosen Freeholders and, even more broadly, as part of NJDEP's Upper Raritan Water Quality Management Plan prepared in response to Sections 208 and 303(e) of the Federal Clean Water Act. The purpose of these plans is to provide a comprehensive regional program to abate all forms of groundwater and surface water pollution from both point sources and non-point sources of pollution.

Plates ENV. -1 and 2 illustrate the Upper Raritan Water Quality Planning Area in relation to surrounding planning areas and its adjoining subbasins. Plate ENV. -3 presents a listing of the communities and their contributing acreages in the Upper Raritan Planning Area. Plate ENV. -4 illustrates the Upper Raritan Wastewater Facilities Plan's Planning Area and Planning Evaluation areas and Plate ENV. -5 illustrates the Selected Plan for Somerset County. This comprehensive planning effort for sewerage facilities was coordinated with the land use element of the Somerset County Master Plan and municipal land use plans to identify probable growth and sewer need areas and is intended, in concert with non-point source pollutant control strategies, to ensure water quality in accordance with State and federal standards.

What this means in terms of land use planning for Bedminster is that if the Township allows development to the extent projected in the Plan, both inside and outside of the Corridor area, and if the sewage treatment facilities work as they are designed to, acceptable water quality in the North Branch will be the likely result, assuming that the water quality coming into the Township is acceptable to begin with.

Development beyond that projected in the Plan will result in increased loadings to the North Branch Raritan River, the impacts of which have yet to be evaluated. Accordingly, development proposals which would go beyond that which is presently planned for would not be prudent at the present time.

ENVIRONMENTAL PLANNING IMPLICATIONS OF THE NATURAL RESOURCES INVENTORY

The NRI section of this Master Plan presents a basic inventory of Bedminster's natural resources. This section analyzes those resources with respect to their land use planning implications.

Geology and its Relationship to Water Supply

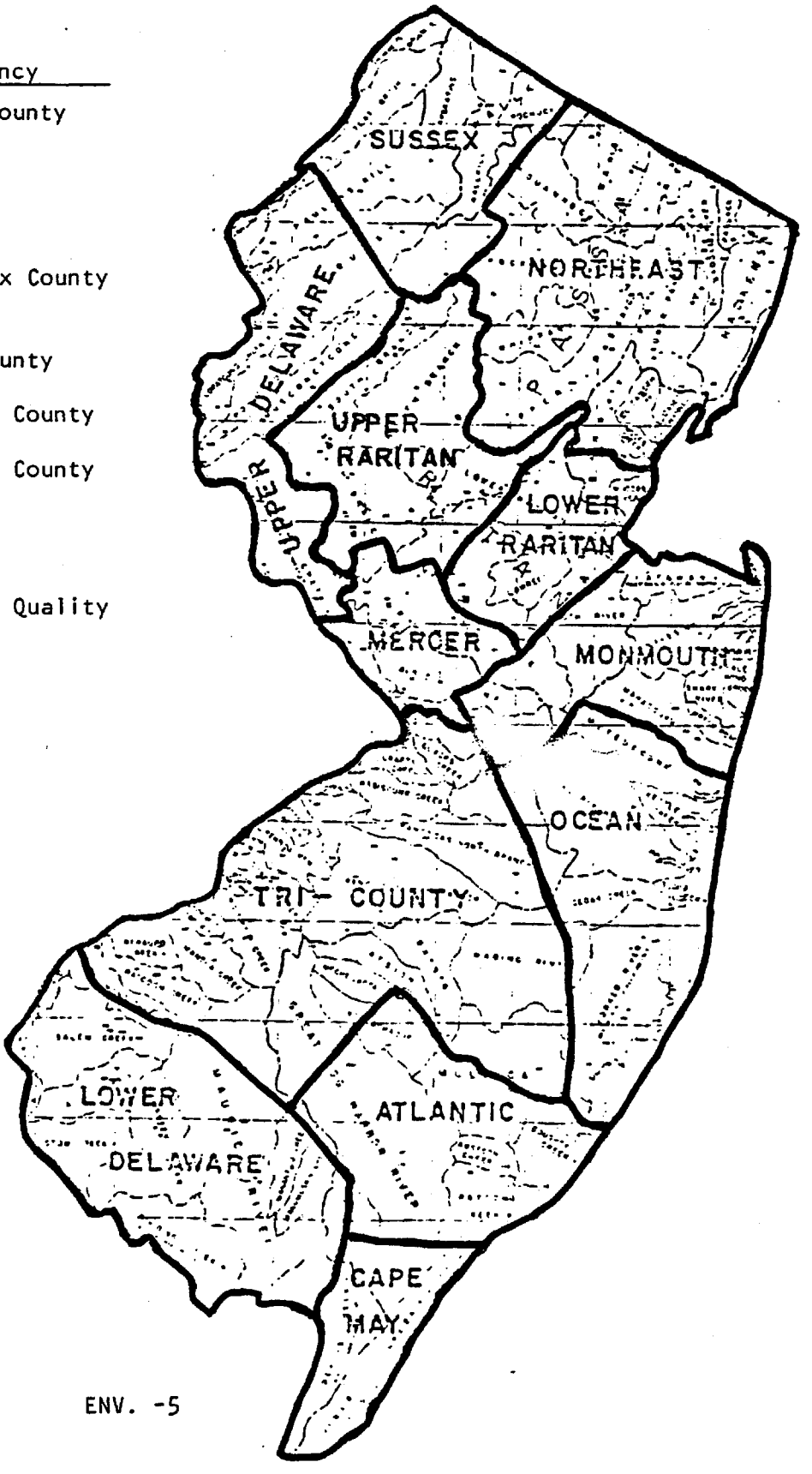
This Master Plan espouses the important and environmentally sound policy of developing the region within its natural carrying capacity limits. Inherent in this policy is the importance of understanding the complex interrelation-

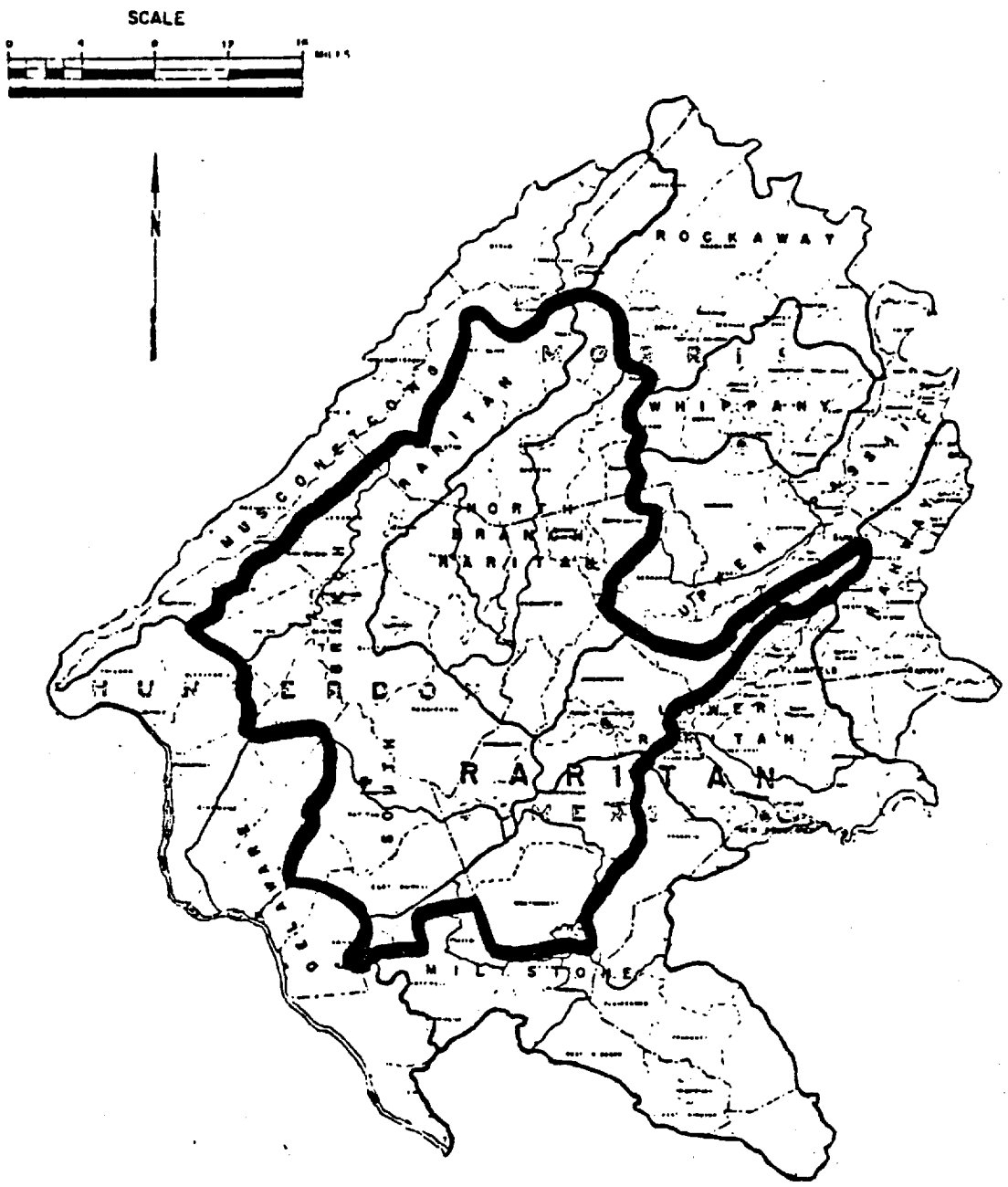
Plate ENV. -1

Water Quality Planning Areas in New Jersey Under Section 208, P.L. 92-500

Planning Area	Agency
Sussex County	Sussex County
Passaic-Hackensack Basin	NJDEP
Upper Delaware	NJDEP
Upper Raritan	NJDEP
Lower Raritan/ Middlesex County	Middlesex County
Monmouth County	NJDEP
Mercer County	DVRPC
Ocean County	Ocean County
Tri-County Area	DVRPC
Atlantic County	Atlantic County
Lower Delaware	NJDEP
Cape May County	Cape May County

Source: Upper Raritan Water Quality Management Plan





THE UPPER RARITAN PLANNING AREA AND ADJOINING SUB-BASINS

Source: Upper Raritan Water Quality Management Plan

Plate ENV. -3

Communities and Their Approximate Land Acreage in the Upper Raritan Planning Area

Somerset County

Municipality	% Municipality in Planning Area	Acres in Planning Area
Bedminster Twp.	100%	17,080
Bernards Twp.	12%	1,870
Bernardsville Boro.	70%	5,870
Branchburg Twp.	100%	12,930
Bridgewater Twp.	95%	19,870
Far Hills Boro.	80%	2,560
Hillsborough Twp.	100%	35,000
Manville Boro.	100%	1,600
Millstone Boro.	100%	385
Montgomery Twp.	100%	20,645
Peapack-Gladstone Boro.	100%	3,775
Raritan Boro.	100%	1,315
Rocky Hill Boro.	100%	410
Somerville Boro	100%	1,500
Warren Twp.	35%	4,320
Somerset County Totals		129,390

Hunterdon County

Alexandria Twp.	5%	900
Bethlehem Twp.	100%	13,680
Califon Boro.	100%	575
Clinton Town	100%	855
Clinton Twp.	100%	21,695
Delaware Twp.	20%	4,720
East Amwell Twp.	95%	16,900
Flemington Boro.	100%	830
Franklin Twp.	60%	8,945
Glen Gardner	100%	935
Hampton Boro.	50%	435
High Bridge Boro.	100%	1,440
Lebanon Boro.	100%	705
Lebanon Twp.	80%	16,385
Raritan Twp.	80%	19,710
Readington Twp.	100%	30,780
Tewksbury Twp.	100%	20,350
Union Twp.	100%	13,030
West Amwell Twp.	100%	1,400
Hunterdon County Totals		174,270

Morris County

Municipality	% Municipality in Planning Area	Acres in Planning Area
Chester Boro.	100%	960
Chester Twp.	100%	18,940
Mendham Boro.	75%	2,880
Mendham Twp.	40%	4,500
Mine Hill Twp.	35%	670
Mount Arlington Boro.	25%	460
Mount Olive Twp.	70%	13,525
Randolph Twp.	25%	3,375
Roxbury Twp.	63%	8,789
Washington Twp.	90%	24,881
Morris County Totals		78,980

Union County

Berkeley Heights	40%	1,610
Mountainside Boro.	15%	395
Summit	10%	385
Union County Totals		2,390
TOTAL UPPER RARITAN PLANNING AREA	-	385,030

Source: Upper Raritan Water Quality Management Plan

Environmental Analysis

ENVIRONMENTAL ANALYSIS

Prepared by

Thonet Associates
Environmental Consultants

for

Township of Bedminster

September 1982

PLATE REG-9

DEVELOPMENT POTENTIAL
Multiple Family - Retail Commercial - Offices

ADDITIONAL PARCELS ZONED FOR DEVELOPMENT
BEDMINSTER and PLUCKEMIN VILLAGE CORRIDOR
March 1982 Zoning

I. MULTIPLE FAMILY DISTRICTS

	Block	Lot	Acreage
Area No. 1	27	14	4.400
(Bedminster Village:		13	0.468
Hillside Avenue)		12 (portion)	5.570
		11	0.953
		9	0.980
		8	0.683
		7	3.118
		6	1.033
		5	1.444
		4B	1.606
		4A	1.022
		4	1.006
		3	0.500
		2	0.560
		1	1.426
		Sub Total:	24.769 ac. (1)
Area No. 2	33	15-1	1.611
(Bedminster Village:		15-2	1.004
Route 202)		16	0.350
		17	0.275
		18	0.300
		19	0.321
		20	0.389
		21	0.587
		22	0.597
		23	0.500
		Easement	0.116
		24	0.876
		25	1.160

. . . more

	Block	Lot	Acreage
Area No. 2 (Bedminster Village: Route 202) cont'd.	36	2,3,4,5,6	2.720
		7	0.598
		Access strip	0.162
		8	2.629
		9	1.596
		10	1.539
		11	1.529
		12	1.517
		13	1.490
		15	1.436
		16	1.390
		17	1.345
		18	1.300
		19A	2.800
		Sub Total:	30.137 ac. (2)

(1) Approximately 19.627 non-critical @ 12 du/ac = 235.524 du
5.142 critical @ 1/5 du/ac = 1.028 du
236.552 du

(2) Approximately 16.914 non-critical @ 12 du/ac = 202.968 du
13.223 critical @ 1/5 du/ac = 2.645 du
205.613 du

II. PLANNED RESIDENTIAL DEVELOPMENTS - 6 du/ac

	Block	Lot	Acreage
Area No. 3 (Bedminster Village: Route 202)	32	12	13.582
		Sub Total:	13.582 ac. @ 6 du/ac = 81.492 du

III. PLANNED UNIT DEVELOPMENTS - 10 du/ac and RETAIL/OFFICE COMMERCIAL

	Block	Lot	Acreage
Area No. 4 (Bedminster Village: Washington Place)	59	9	10.983
		8	4.420
		5	3.700
		4	2.000
		3	5.404
		2	5.284
		Total:	31.791 ac.

Retail/Office Commercial: 20% of acreage and 0.25 FAR = 69,241 sq. ft.

IV. "R-½" DISTRICT - RESIDENTIAL CLUSTER OPTION
(no PUD or PRD Option)

	Block	Lot	Acreage
Area No. 5	26	8	28.239
(Bedminster Village:		17	4.663
Hillside Avenue)		18	1.554
		19	5.842
		20	0.526
		21	0.750
		22	0.862
		23	1.117
		24	1.150
		25	2.650
	Total:		47.353 ac. (3)

(3) Approximately 13.561 ac. non-critical area @ 2 du/ac = 27.122 du
33.792 ac. critical area @ 1/5 du/ac = 6.758 du
33.880 du

V. OFFICE RESEARCH DISTRICT

	Block	Lot	Acreage
Area No. 6	71A	1	19.300
(I-78 and	72A	1	10.200
Rt. 202/206)			29.500 ac. @ 0.175 FAR = 224,879 sq. ft.

AGGREGATE TOTALS

Multiple Family Dwelling Units:	811.865 du.
Retail Office Commercial:	69,241 sq. ft.
Office Research:	224,879 sq. ft.

development potential. As indicated, approximately 812 multiple family dwelling units; approximately 69,000 sq. ft. of retail/office commercial space; and approximately 225,000 sq. ft. of office/research space may eventually be constructed, in addition to the development on the principal parcels noted above.

In aggregate, therefore, the zoning of the Bedminster and Pluckemin Village corridor, including only those parcels of land indicated on Plates REG-6 and REG-8, can permit approximately 4,900 multiple family dwelling units; approximately 1,000,000 sq. ft. of retail/office commercial space; and approximately 555,500 sq. ft. of office/research space.

During the time of finalizing the Land Development Ordinance regulations for adoption by the municipal officials, the Court Appointed Master, George M. Raymond, submitted a May 27, 1980 report to Judge Leahy regarding the Ordinance provisions. It is relevant to incorporate within the Master Plan certain of the summary observations offered by the Court Appointed Master. Regarding the overall zone plan, Mr. Raymond made the following observations to Judge Leahy:

> "While your Order mandated a planned unit development zone applicable throughout the Corridor, the proposed ordinance creates a number of residential cluster, planned residential, and planned unit development options. In my opinion, the Township's approach represents a satisfactory implementation of your Order taking into account the need for zoning regulations to vary depending upon the nature of the land involved and the character of the areas within which they are intended to apply.
>
> Your Order also required that the Township "permit an ultimate development capacity of not less than five nor more than fifteen units per gross acre throughout the corridor." In the very next clause, however, your Order recognizes the possibility that "in specific areas, for particular reasons, such density (might) constitute improper land use." A detailed study of both the nature of the land throughout the Corridor and the existing development pattern has led me to the conclusion that a uniform gross density of even five dwelling units per acre throughout the Corridor would result in excessive densitities on lands which are developable.
>
> It is my considered opinion that the Township has made a good faith effort to develop a zoning pattern that would comply with your Order in a manner which is sensitive to the constraints that must be taken into consideration in the structuring of a development pattern that will result in the creation of a good residential community. This includes not only environmental constraints but also the constraints dictated by the existing character of already developed areas which need to be protected in accordance with the traditional concerns of the zoning statute."

Four (4) areas of specific concern to the Township during the process of formulating the adopted Ordinance provisions were: 1) the amounts of land zoned for "OR" Office-Research

uses; 2) the elimination of subjective ordinance standards and regulations which would be unduly cost generating to developers; 3) assurance that the adopted zone plan was in conformity with the Somerset County Master Plan; and 4) that adequate retail and service commercial space was provided to satisfy the needs of the eventual residential population. Mr. Raymond's communication to the Hon. B. Thomas Leahy offered the following specific comments regarding these issues:

1. "OR" Office-Research Zoning.

   The Office-Research District was mapped to cover the Research-Cottrell property between Routes 202 and 206 in Bedminster Village; the principal AT&T property; and the properties adjoining I-78 to the north and south. This district which is mainly intended to permit low-intensity office building development, was mapped in the latter area upon my recommendation, based on my considered opinion that residential zoning of lands this close to the interchange between I-78 and I-287 would sow the seeds of future deterioration of the neighborhood.

   The Township was apprehensive that zoning this much property for job generating uses might upset the residential-job balance established in its rezoning of the Corridor It is my opinion that this fear in unjustified inasmuch as the total residential capacity of the Corridor is designed to accommodate a very considerable number of residential units. If my judgment reflects your views, I recommend that the final Order specifically mention that, in the aggregate, the provisions made for residential developments are sufficient to satisfy all needs for residential development that might be generated by such employment centers as may materialize in those areas where they are proposed to be permitted.

2. Ordinance Standards.

   The proposed zoning ordinance was carefully examinsed so as to eliminate to the extent feasible subjective standards and unduly cost generating requirements. I believe that the zoning ordinance now before you complies with your Order in this regard.

3. Conformity With The Somerset County Master Plan.

   I believe that the development pattern which would be brought about over the years as a result of the recommended zoning pattern would conform with the Somerset County Master Plan of Land Use for the Corridor. The Village Neighborhood concept described in the Somerset County Master Plan would be implemented in both the Pluckemin and Bedminster Village portions of the Corridor.

4. Retail And Service Commercial Space.

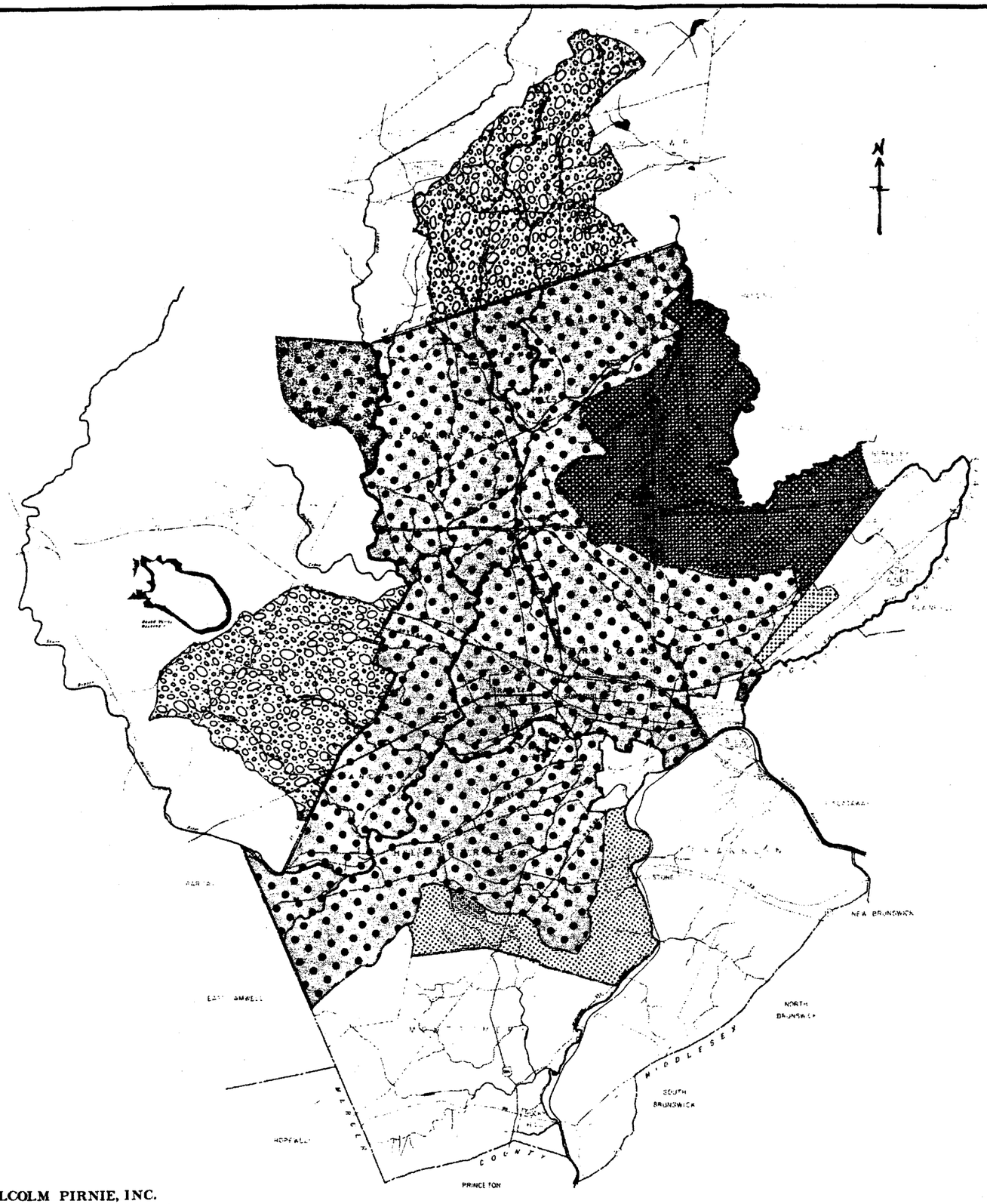
The provisions of the ordinance which permits 20 percent of the land in a planned unit development to be used for commercial purposes is, in my opinion, more than sufficient to assure that all commercial services required by the residential development can be provided.

CONCLUSION

Planners have always been concerned with the provision of community facilities, the provision of an adequate traffic and transportation network, the preservation and respect of environmental considerations, the existing land use pattern and character of the community, the fiscal solvency of the jurisdiction, and the relationship of the individual locality to surrounding land areas, as well as the housing needs of the community's population. When the Southern Burlington County N.A.A.C.P. vs. Township of Mount Laurel decision was rendered by the New Jersey Supreme Court on March 24, 1975, it immediately seemed that the provision of multi-family housing overrode all other planning considerations. As the dust settled and further court decisions addressed the housing issue, it became evident that the Mount Laurel decision did not really change the planning process, and that planners should continue to be concerned with all aspects of community development when approaching the question of meeting housing needs. In fact, the Mount Laurel decision emphasized the importance for a municipality to plan in a comprehensive manner and to be prepared to specifically explain and justify its decisions. The necessity for a documented comprehensive master plan is particularly clear since a municipality may be challenged on a "Mt. Laurel" count and be placed in the position of proving its innocence, whether or not the accusations against it are false.

No two communities in the State of New Jersey are alike, and thus the effect of the Mount Laurel decision and others subsequent to it upon each municipality will be unique. Therefore, it is important for the Township of Bedminster to know both its responsibilities as well as its limitations and capacitiies for future development.

As indicated within this Regional Analysis, the current zoning of Bedminster Township, because of the Allan-Deane/Bedminster Township litigation and the actions of the Superior Court, was formulated with a regional perspective. Moreover, the existing zoning has been found by the Court to be balanced in terms of residential vs. non-residential land uses and to be in concert with County, State and regional plans for the Bedminster Township vicinity of New Jersey.



LEGEND

- PLANNING AREA
- PLANNING EVALUATION AREAS
- ADDITIONAL AREAS TO BE EVALUATED BASED ON FINDINGS OF INVENTORY REPORT
- UPPER PASSAIC PLANNING AREA

Plate ENV. -4

SOMERSET COUNTY BOARD OF CHOSEN FREEHOLDERS
SOMERSET COUNTY, NEW JERSEY

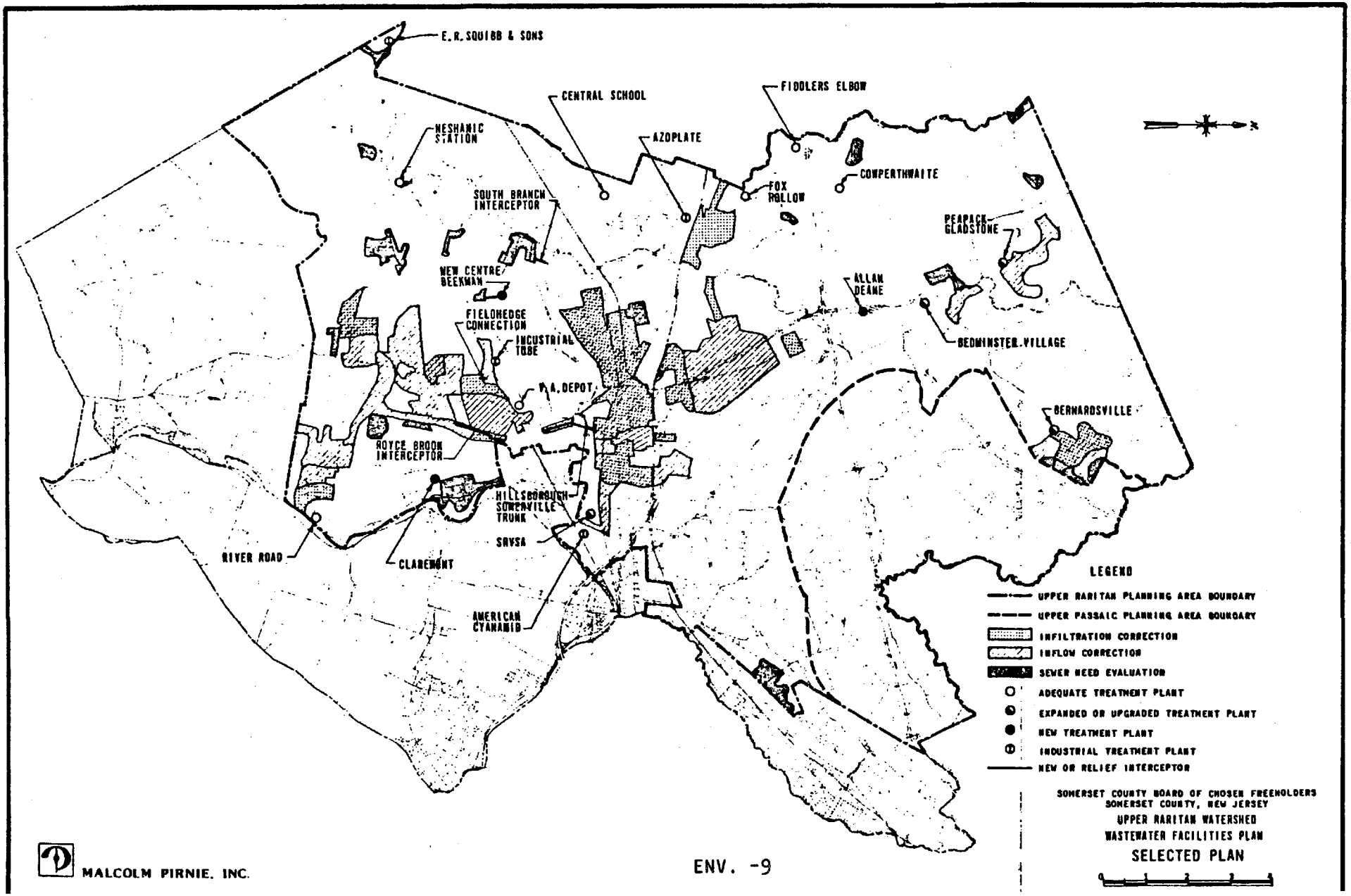
UPPER RARITAN WATERSHED
WASTEWATER FACILITIES PLAN

PLANNING AREA AND PLANNING EVALUATION AREAS

SCALE IN FEET

MALCOLM PIRNIE, INC.

Plate ENV. -5


E.R. SQUIBB & SONS
CENTRAL SCHOOL
FIDDLERS ELBOW
NESHANIC STATION
AZOPLATE
COMPERTHWAITE
FOX HOLLOW
SOUTH BRANCH INTERCEPTOR
PEAPACK GLADSTONE
NEW CENTRE/ BEEKMAN
ALLAN DEANE
FIELDHEDGE CONNECTION
INDUSTRIAL TUBE
BEDMINSTER VILLAGE
P.A. DEPOT
BERNARDSVILLE
ROYCE BROOK INTERCEPTOR
HILLSBOROUGH-SOMERVILLE TRUNK
SMVSA
RIVER ROAD
CLAREMONT
AMERICAN CYANAMID
LEGEND
UPPER RARITAN PLANNING AREA BOUNDARY
UPPER PASSAIC PLANNING AREA BOUNDARY
INFILTRATION CORRECTION
INFLOW CORRECTION
SEWER NEED EVALUATION
ADEQUATE TREATMENT PLANT
EXPANDED OR UPGRADED TREATMENT PLANT
NEW TREATMENT PLANT
INDUSTRIAL TREATMENT PLANT
NEW OR RELIEF INTERCEPTOR
SOMERSET COUNTY BOARD OF CHOSEN FREEHOLDERS
SOMERSET COUNTY, NEW JERSEY
UPPER RARITAN WATERSHED
WASTEWATER FACILITIES PLAN
SELECTED PLAN
0 1 2 3 4
MALCOLM PIRNIE, INC.

ships between environmental elements at work in the region. One of the most important interrelationships involves geology as an indicator of groundwater resources and the relationship of groundwater resources to surface water supplies.

Precipitation which falls upon land is dispersed in several ways. The greater part is temporarily retained in the soil near where it falls and is ultimately returned to the atmosphere by evaporation and transpiration by plants. A portion of the water finds its way over and through surface soil to stream channels, while other water penetrates further into the ground to become groundwater. When stream flows are high, they tend to recharge groundwater supplies and when stream flows are low, the surface water base flows are provided through a depletion of the groundwater resource.

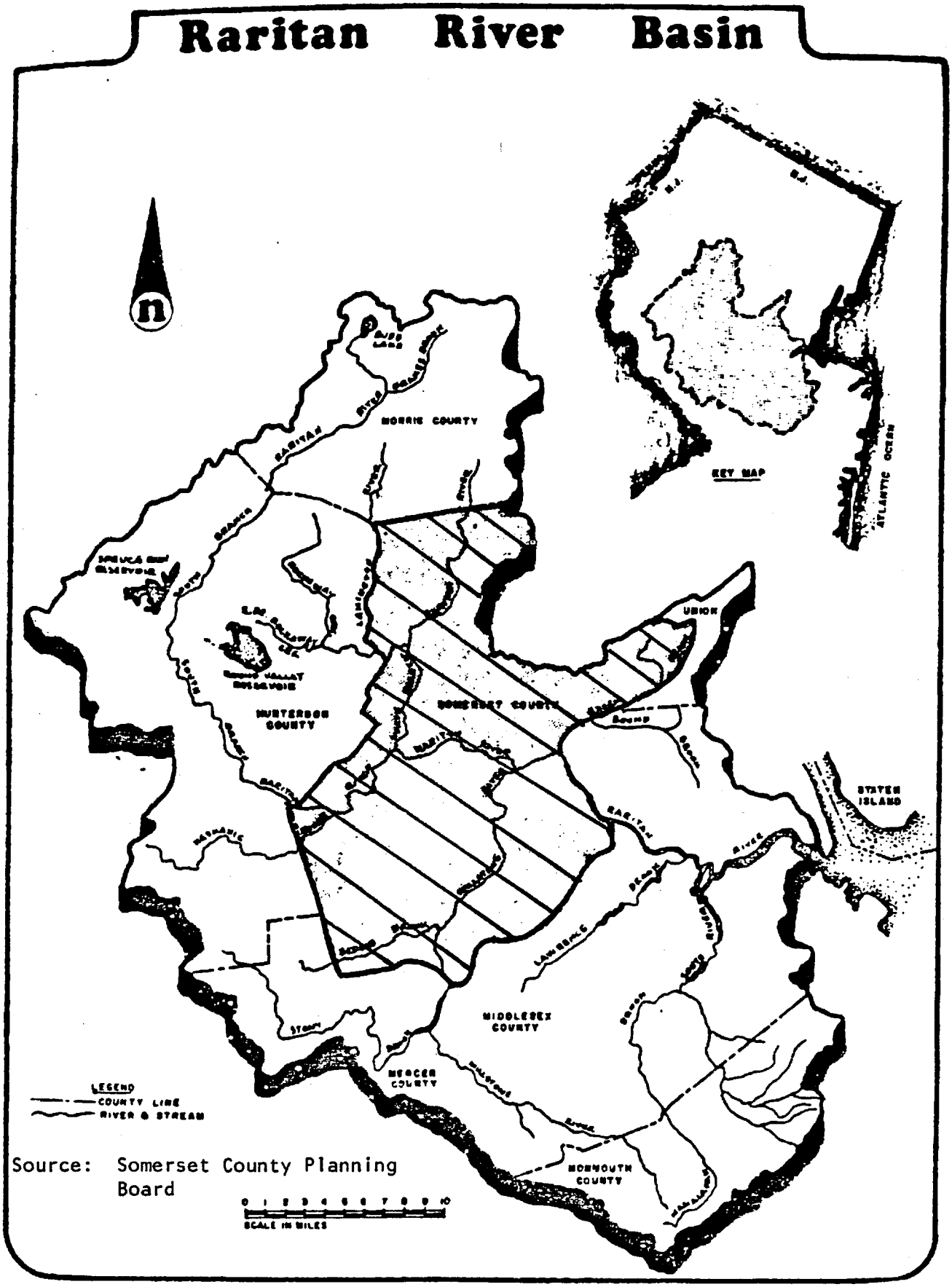
The safe yield for a surface water supply is the maximum quantity of water that may be drawn continuously from a stream after deducting losses due to evaporation from the reservoir surface, leakage through and under the dam, and necessary downstream minimum releases. This safe yield is supplied by the groundwater.

The maximum safe yield of a groundwater source is limited by the capacity of the aquifer to supply water without suffering a continuous lowering of the water table or piezometric surface. This maximum yield is limited by the rate at which the groundwater is replenished, known as the recharge rate.

The drought low flows of any stream, therefore, which represent the primary source of safe sustained yield for surface water supplies are equivalent to the combined safe sustained groundwater yields of all the rock types within the river's watershed. Therefore, municipalities which choose to use surface water in order to develop densities greater than the carrying capacity of their own groundwater resource budget are really doing so on the unused portion of the groundwater supply of some upstream municipality. If each municipality were to adopt this strategy, the region would be out of water long before all municipalities had the opportunity to develop as they would like. This is, of course, exactly what is happening all over New Jersey today, with the highly urbanized areas tapping the highlands' surface water supplies. Such developments preclude the full development of offset communities without adversely affecting the integrity of the region's water supply. The principal point to keep in mind here is that public water supplies, be they from deep wells or from low flow suppies of the river, depend on the same groundwater for their supply, and that supply has definite limits. Therefore, it is not prudent for Bedminster to increase overall development densities significantly beyond that which the area could naturally support, regardless of the extent of public water development.

Keeping this in mind, Plate ENV. -7 shows the Raritan River Basin which is, for purposes of water resources management, the region in which we are interested. While a complete regional water resources study is beyond the scope of this report, a lot can be learned just by examining Somerset County's water resources.

Raritan River Basin



Source: Somerset County Planning Board

Somerset County lies almost entirely in the Raritan River Basin. Its underlying geologic formations are illustrated on Plate ENV. -7. Based on this information, the groundwater safe yield for Somerset County can be computed as 73.8 MGD, as shown in Plate ENV. -8. Using the State of New Jersey's accepted average water consumption figure of 100 gallons per capita per day, the groundwater resources of the County are capable of supporting approximately 738,000 people if none of the groundwater resources are exported out of the County.

At the printing of the 1973 Somerset County Water Supply and Distribution report, it was estimated that 80 percent of the 1978 demand for potable water from public systems would be provided by surface water sources. Most of the water available in these surface sources, however, are provided by groundwater sources. Almost the entire amount of water consumed in the County, whether from surface or groundwater sources, was reported to have been obtained from within the County.

As in many water supply systems, Somerset County's systems involve a certain degree of export-import trade which is significant in determining the water supply actually available to the County. While the 1973 report states that the exact quantity of potable water involved in Somerset County's export-import trade cannot be accurately determined, it also states that conservative estimates indicate that the total amount of potable water exported exceeds the total amount utilized within the County by six times, and exceeds the total imported by a ratio of 26:1.

The reality of this situation is that Somerset County is a major supplier of potable water to consumers outside of the County, thus decreasing its own in-County capability to support population growth.

The 1973 report estimated the 1978 population served by public water facilities at 193,260 people. Using a usage rate estimate of 100 gallons per person per day, generates an in-County consumption of public water supplies of about 19 MGD. Knowing that the County also exports approximately six times this amount, the total amount of exported water must be roughly 114 MGD. At an export-import rate of 1:26, this means that Somerset County must import roughly 4 MGD from outside County services. The population not served by water in 1978 was also estimated by the 1973 report at 45,926 people, thus yielding a non-public source consumption of water of 4.6 MGD.

The total net estimated 1978 draw from Somerset County's water supplies was therefore roughly 134 MGD, or over 80 percent more than the total in-County groundwater safe yield. This tremendous overdraw is only possible due to (i) the additional storage capacity provided by the system's water supply reservoirs, and (ii) the offsetting lack of demand from Somerset County itself and other communities upstream of the County.

Needless to say, Somerset County's present water supply is currently being used predominantly for the benefit of others outside of the County and that the system is already beyond its safe yield, as evidenced by the 1981 drought.

Predominant Geologic Formations

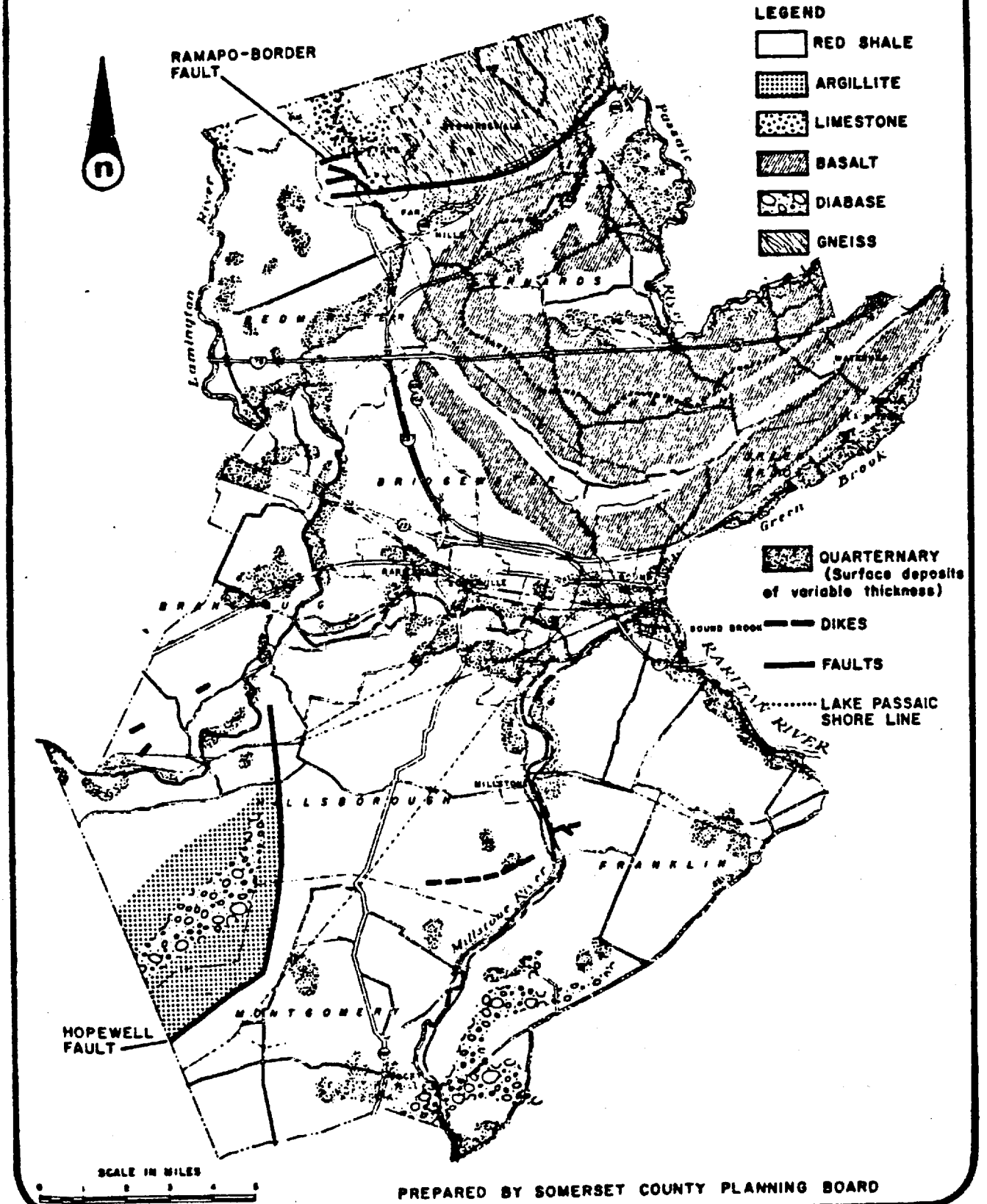


Plate ENV. -8

Approximate Groundwater Safe Yield for Somerset County

Geologic Formation	Percent of Somerset County	Square Miles of Somerset County	Safe Yield Rate[1] (gal/day/mi^2)	Safe Yield (MGD)
Red Shale	72	219.7	300,000	65.9
Limestone	1	3.1	235,000	0.7
Gneiss	5	15.3	100,000	1.5
Basalt, Diabase, or Agillite	22	67.1	85,000	5.7
Total	100	305.2		73.8

[1]Safe Yields taken from Somerset County's "Water Supply and Distribution", 1973, and do not reflect John Thonet's adopted estimates of safe yields taken from other published sources.

This serves to reinforce "carrying capacity" and "offset" principles used in determining appropriate zoning densities based on the regional water resource capability. While not advocating that communities in Somerset County are obligated to serve as offset areas, it is clear that offset areas are required and that, at the very least, no community should be expected to zone so that its total water demand would exceed its geologic proportional share of the region's water resource.

With this in mind, Bedminster's overall water supply capability has been analyzed based on the underlying geology as presented in Plate NRI -2. Plate ENV. -9 presents this analysis, illustrating Bedminster's ultimate supply capability to be in the neighborhood of 5 MGD.

Knowing that Bedminster's geologic proportional share of the region's water resources is about 5 MGD and that approximately 1.5 MGD has been allocated to serve the Corridor area, 3.5 MGD is the balance of the water resource available to the R-3% zone. Since the R-3% zone is approximately 23.5 square miles in area, this is about 0.15 MGD per square mile, or enough water to safely support roughly 1,500 persons per square mile, assuming 100 gallons per day per person. This is about 2.3 persons per acre, and translates into a minimum lot size of about 1.5 acres, based on available water supply.

Soils and Septic Suitability

The NRI section presents Plates NRI -6, 7, and 8, illustrating areas with high water tables, areas with shallow depth to bedrock and septic system suitability. These plates, and particularly Plate NRI -8, demonstrate that large areas exist throughout the Township which are generally unsuitable for on-site waste disposal systems with the highest concentration of suitable soils found in the northernmost portion of the Township along Pottersville Road. The high proportion of unsuitable soils in the unsewered R-3% zone puts constraints on the density and distribution of development within this zone and reinforces the Township's plan for this zone which calls for a continuation of agricultural activities, recreation and low density residential construction similar to, and compatible with, the prevailing rural country atmosphere.

Groundwater Quality

With the majority of Bedminster located in the R-3% zone, and expected to be served by septic tanks, groundwater quality concerns warrant examination.

Plate ENV. -10 illustrates septic effluent quality with respect to nitrogen, as reported by various investigators. Septic effluent includes ammonium and organic nitrogen, with small amounts of nitrate and nitrite. Organic nitrogen comprises about 20 percent of the total N and is generally caught and immobilized under the disposal field. The crust contains bacteria which degrade organic nitrogen into ammonium which is then removed by the flushing action of the effluent. In time, almost all of the organic nitrogen entering the crust is released as ammonium. This ammonium, as well as the ammonium already in the effluent, then leaches through the crust.

Plate ENV. -9

Township of Bedminster's Water Supply Capability Based on Underlying Geology

Geologic Formation	Approximate Square Miles in Township	Dry Year Recovery Rates (gpd/mi^2)*	Safe Yield (gpd)
Triassic Formations			
Brunswick Formation	20.44	225,000	4,599,000
Border Conglomerate	3.70	<100,000	<370,000
Basalt Flows	0.50	170,000	85,000
Precambrian Formations			
Marble and Skarn	0.04	120,000	4,800
Hypersthene-Quartz-Andesine-Gneiss	0.02	170,000	3,400
Approximate Ultimate Impervious Cover	2.00	0	0
		TOTAL	5,062,200

*From Land Oriented Reference Data System, Bulletin 74, New Jersey Geological Survey, August 1974.

Values of Total-N Given by Various Investigators for Septic Systems

Investigator	Total-N (mg/l)
Robeck et al. (1964)	27.5
Hickey and Duncan (1966)	40.4
Preul (1967)	35.1
Popkin and Bendixen (1968)	30.4
Thomas and Bendixen (1969)	33.4
Bouma et al. (1972)	80
Magdoff et al. (1974)	42
Otis and Boyle (1976)	52.2
Sauer et al. (1976)	20.3
Viraraghavan and Warnock (1976)	97.3
Otis et al. (1977)	23.9
Silberman (1977)	35.2
Brown et al. (1977)	29.8
Tyler et al. (1977)	55.3

Mean of Reported Values = $\frac{602.8}{14}$ = 43.05

Source: NJDEP

In well drained soils, the effluent then moves downward toward the water table under unsaturated, aerobic conditions. Under these conditions the ammonium is converted to nitrate (nitrification) with almost total nitrification taking place within a few feet of travel.

If the soil is poorly drained (high water table), anaerobic conditions prevail and water movement is by saturated flow. Under these conditions, nitrification is minimal and the nitrogen will remain as ammonium. Of course, under high water table conditions, septic tanks don't work at all.

The process of denitrification is a process occuring in soil which removes nitrogen from effluent, giving off gaseous nitrous oxide or elemental nitrogen. This process only occurs in the presence of denitrifying bacteria, under anaerobic conditions, when a carbon source (soil organic matter or effluent organics) and nitrates are present. Denitrifying bacteria are present in all soils and thus present no limitations to denitrification. Organic matter, however, is a limiting factor in the denitrification process and, hence, denitrification of nitrates can only occur to the extent organic matter is present in the subsoil beneath the septic field crust. The efficiency of denitrification decreases drastically as the texture of the soil becomes coarser and the rate of percolation increases. In sandy soils almost all (99%+) of the nitrogen in the effluent reaches the water table as nitrate. Under optimum conditions for denitrification, experimental values of 30 percent denitrification have been achieved.

At this point the remaining nitrates (70-100 percent of the original nitrate loading) move freely in the aquifer with groundwater flow. Dilution then is the only significant mechanism of attenuation.

The above described process is the basis for the Douglas Nutrient Dilution Model.

The model equation is stated as follows:

$$Dwq = \frac{I(CL)}{640(R)(Ce)(Qe)(P)}$$

where Dwq = allowable density in dwelling units/acre
I = dilution water available to the aquifer
R = fraction of nitrates which are not denitrified as the septic effluent filters down through the soil to the groundwater
Ce = the nitrate concentration in septic tank effluent beneath the crust
Qe = per capita effluent flows
P = unit occupancy in person/dwelling unit
CL = allowable nitrate concentration established by EPA

"CL" is established by the USEPA at 10 mg/l and, accordingly, this is not a variable, but rather a constant.

"Ce," the nitrate concentration, is a function of "Qe," the per capita effluent flows. As "Qe" is quite variable, so is "Ce." For example, given that an individual produces a certain average weight of nitrogen per day, the nitrate concentration thus produced is a function of the amount of flow in which the nitrate finds itself. Research results as shown in the previous plate indicate a mean total nitrogen concentration in septic effluent of 43.05 mg/l. This average concentration is related to the average per capita effluent flow from septic systems, which has been estimated by NJDEP as 75 gal/capita/day. Hence, one can not increase or decrease "Qe" without making a compensatory decrease or increase, respectively, in "Ce." Therefore, "Qe" and "Ce" are not considered to be true variables, but rather must be treated as constants.

"R" varies from 0.7 to 1.0. This means that the percent of nitrates which will be removed by denitrification varies in the range of 0 to 30 percent, with 30 percent representing experimentally determined optimal denitrification conditions. It is unlikely that optimal conditions exist in the shaley subsoil found in Bedminster or in mound systems which will undoubtedly be used in much of the Township in the future.

"I," the dilution water available to the aquifer, is equal to the groundwater infiltration in gal/square mile/day. This is the drought year infiltration, and is a constant value related to the underlying geologic formation. Dry year infiltration is that infiltration which is one standard deviation from the mean. The reason dry year infiltration is used as opposed to normal or average year infiltration is that if we were to use the average year infiltration, we would theoretically be in violation of the 10 mg/l standard one half of the time. This is clearly unacceptable. Hence, the drought year infiltration is the correct value to use.

"P" is the unit occupancy in persons per dwelling unit. Values of 3 to 4 persons per dwelling unit are chosen as representative of the typical size of family that would occupy a single family home on a large lot.

The Douglas Nutrient Dilution model is sound in concept and is formally recognized by NJDEP as an appropriate method of determining lot sizes. NJDEP has published a report clarifying the assumptions and methodology of the model and refers to the methodology as "the methodology employed by NJDEP to calculate lot sizes." Further evidence of acceptance of the methodology is the fact that it was used by the New Jersey Pinelands Commission for the establishment of lot sizes in the Pinelands.

Applying the model to Bedminster's areas underlain by Brunswick shale yields environmentally safe lot sizes in the range of 2.6 to 3.7 acres, based on the following range of variables:

I = 225,000 gal/sq. mi./day	Ce = 40-43 mg/l
CL = 10 mg/l	Qe = 75 gal/capita/day
R = 0.7-1.0	P = 3-4 persons/dwelling unit

These results illustrate the reasonableness of the Township's R-3% zone.

Surface Water Quality

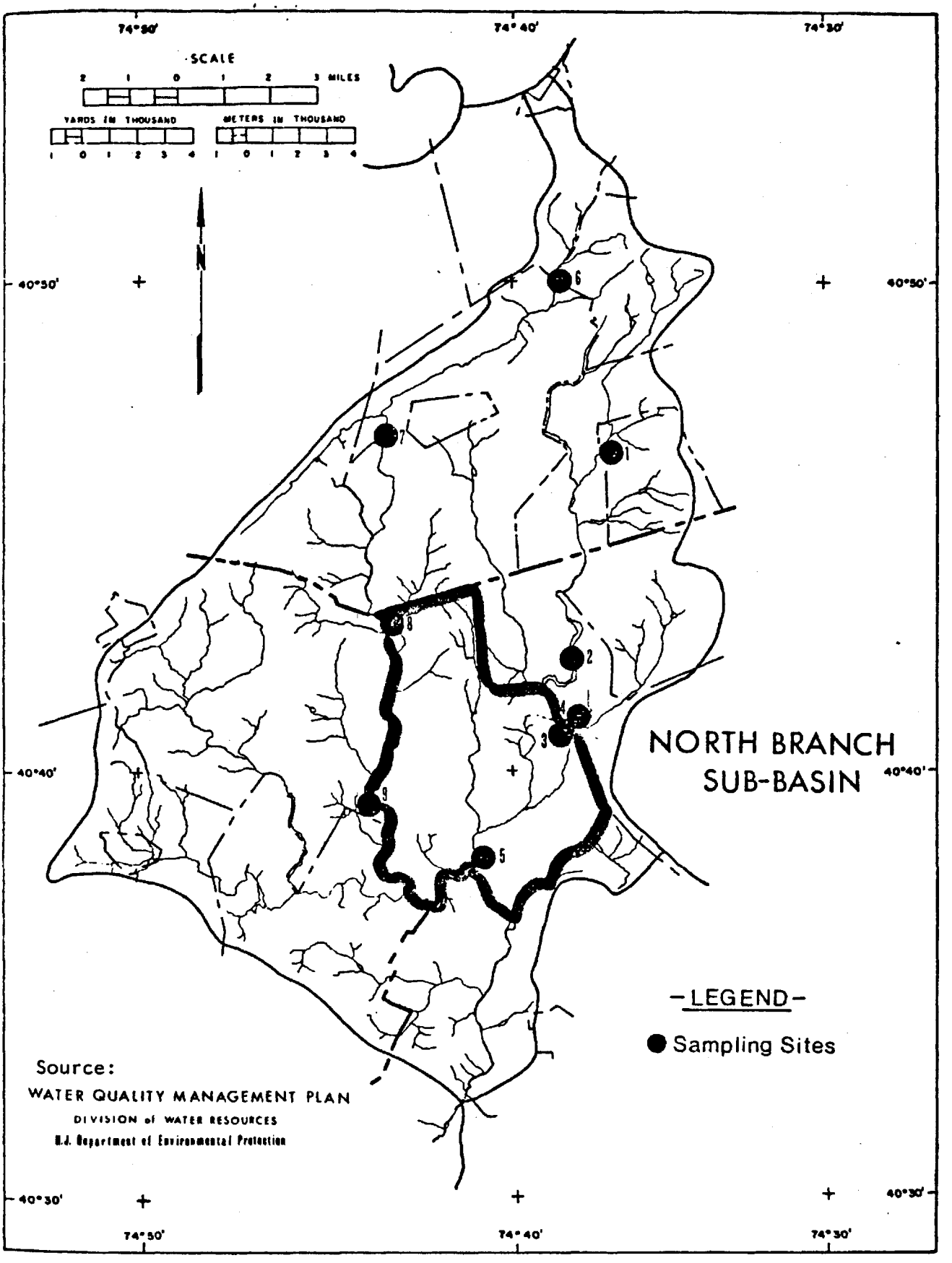
Bedminster lies within the North Branch Raritan Watershed which originates in the highlands of Morris County and flows in a southerly direction through the rural regions of Hunterdon and Somerset Counties until its confluence with the South Branch Raritan in Branchburg. Its total drainage area is 191.6 square miles at the confluence and about 174 square miles at Bedminster's downstream-most boundary. Twenty-one communities lie, in part or in whole, within the North Branch Raritan Watershed with Bedminster controlling approximately 14 percent of the total drainage area. This makes Bedminster the third largest land holder in the basin and, accordingly, water quality in the North Branch is dependent in no small part on Bedminster's responsible attitude toward water quality management. In addition to being one of the largest communities in the basin, it is also one of the communities closest to the proposed confluence reservoir site, thus making it one of the last potential pollutant recovery reaches prior to the proposed reservoir.

From Bedminster's downstream-most boundary, the North Branch Raritan Watershed can be divided into two principal sub-watersheds; the Lamington River Watershed and the main stem North Branch Watershed, with drainage areas of 101 and 73 square miles, respectively. Bedminster controls only eight percent of the Lamington River's drainage area, but a substantial 24 percent of the main stem North Branch at that point, further emphasizing the Township's regional importance with respect to protecting water quality in the North Branch. Plate ENV. -11 illustrates the location of Bedminster within the North Branch drainage area.

In the draft Upper Raritan Water Quality Management Plan (May 1979) prepared by NJDEP, it was reported that, at present, water quality in the North Branch is better than that necessary to support fish, including trout in some areas, contact and non-contact recreation, and potable water supplies, but that fecal coliform levels may preclude swimming for a limited time in local areas. NJDEP's biological assessment further indicated that the macro-invertebrate community has a high number of species with moderate numbers equally distributed along the species and that the species present were indicative of a mildly enriched stream. The following general physical, chemical and bacteriological descriptions were given in that report:

1. Dissolved Oxygen: DO levels were above the New Jersey standards at all sampling stations. However, DO approached the minimum standards on two occasions. In August, the Lamington at Ironia and the Lamington at Milltown had values of 4.9 and 4.0, respectively. Flow in the Lamington at Ironia at that time was approximately five cubic feet per second. The low DO may be due to industrial discharges upstream from Hercules Inc. and Ajax Terrace. These are large discharges which may be particularly acute in low flow periods. DO levels improve in a downstream direction in both the Lamington and the North Branch.

2. Temperature: Median year round and 90th percentile (summer) temperatures



SURFACE WATER SAMPLING SITES

in the North Branch reach a peak at Far Hills and then decrease in a downstream direction. The Lamington River has the opposite trend. Median temperatures in the Lamington River are highest at Lamington. The Lamington River above Lamington and the North Branch above Far Hills have water which is cold enough for the year round maintenance of trout.

3. Biochemical Oxygen Demand: Some sampling stations showed high levels (compared to most stations) of BOD. The North Branch near Far Hills was high in August 1977 with a reading of 5.0, October 1975 (4.5), and April 1973 (9.0). These high levels occurred at periods of low or average flow, and since there are no point sources immediately upstream, it appears that the decomposition of algae and other aquatic plants from Ravine Lake increases the BOD concentrations. The Lamington at Ironia had a high reading (7.0) in November 1976. All other readings were 3.0 or less. Discharges above this station include Hercules Inc. and Ajax Terrace. Mine Brook had a high reading (7.0) in May 1977. All the readings from other months were 3.0 or less. Bernardsville Borough STP is upstream and may be the cause for the high reading in May. The median values at all stations remained constant (below 2.0) while the 90th percentile plots peaked at Bedminster and the Lamington at Ironia.

4. Total Phosphorus (PO_4-P): Phosphorus concentrations generally decrease in a downstream direction in both the North Branch Raritan and Lamington Rivers. Median phosphorus concentrations are highest in the North Branch Raritan River at Chester, which may be associated with the Mendham Borough STP (approximately one mile upstream of this station and India Brook). High phosphorus concentrations are also high in Mine Brook (a small tributary to the North Branch). The phosphorus concentrations in Mine Brook may be affected by the Bernardsville STP. In contrast, the median phosphorus concentrations in the lower North Branch (Far Hills, Bedminster, and Burnt Mills) were approximately the same as the criterion of 0.1 mg/l (USEPA, 1976). Median year round values are generally higher than the USEPA criterion in all areas of the Lamington; however, they are near the criterion just before the confluence with the North Branch. Most high values occurred in July and August throughout this sub-basin. These high concentrations may be associated with point source discharges in the headwaters.

5. Nitrate-Nitrogen (NO_3-N): Nitrates showed similar temporal and spatial trends as phosphorus. The median year round concentrations are generally less than 1.5 mg/l. The majority of high values occur in July and August. These high concentrations may be associated with nitrates from soil erosion and from fertilizers, but since these samples are taken primarily during low and average flows, waste discharges are the most likely source. Nitrate concentrations are highest in the North Branch Watershed near Chester. These high nitrate concentrations are, for the most part, due to the Mendham Boro STP. Nitrate concentrations decrease in a downstream direction in both the North Branch and Lamington River. Nitrate concentrations are generally less than 1.0 mg/l on the North Branch near Far Hills. Mine Brook had a median of 1.4 mg/l. However, median levels on

the North Branch below Mine Brook are less than 1 mg/l.

6. pH: The year round pH values are nearly neutral. However, pH values increase to relatively more alkaline levels (8.7-9.7) during the spring and summer months. These conditions are especially evident in the North Branch at Far Hills and Bedminster, and to a lesser extent at Burnt Mills. pH also appears to increase during the spring and summer in Mine Brook. Finally, pH increases in a downstream direction in the Lamington River. The fluctuations in pH levels do not appear to be caused by point source discharges. Since the increase of pH levels occurs in the spring and summer, the application of lime and fertilizers on agricultural crops and lawns could contribute to these alkaline conditions. In addition, biological and chemical interactions (which may be influenced by man-made activities) may contribute to the high pH levels during the spring and summer. This is particularly true below the outlet of Ravine Lake which experiences high productivity during the summer.

7. Turbidity: Turbidity values are generally better than water quality standards. One should note, however, that samples are not usually collected during storm conditions when turbidity levels are expected to be higher. Turbidity decreases slightly in a downstream direction in the Lamington River. Furthermore, turbidity levels in the Lamington are slightly lower than in the North Branch.

8. Suspended Solids: Suspended solids concentrations of 40 mg/l are associated with good sport fishery environments (USEPA, 1972). It should be noted that most suspended solids results represent dry weather conditions. Median concentrations generally decrease in a downstream direction in both the North Branch and Lamington Rivers. The highest median concentration in this sub-basin occurred in the Lamington River near Ironia. This monitoring stations is approximately two miles downstream of the discharge from Houdaille Construction Materials Company. It is evident that suspended solids concentrations are at levels which will support a good to excellent sport fishery environment.

9. Total Dissolved Solids: Levels of total dissolved solids were well below the New Jersey standard of 500 mg/l. and no sample at any sampling station exceeded 300 mg/l. The highest median value for any of the stations was on the Lamington River near Ironia. This sampling station is about two miles below the discharges of the Houdaille Construction Materials Company and the Hercules Powder plant in Kenvil. Levels of TDS decrease in a downstream direction in both the Lamington and the North Branch.

10. Fecal Coliform: The year round median fecal coliform levels in the North Branch are generally less than 200 MPN/100 ml (the New Jersey water quality standard is a geometric average of 200 MPN/100 ml). Summer median values are higher than the year round median levels. The summer 90th percentile values are higher than the year round values. Furthermore, the summer 90th percentiles are generally greater than 400 MPN/100 ml (a

criteria acceptable for swimming, Quality Criteria for Water, USEPA, 1976). Year round median fecal coliform levels at the first three stations on the Lamington are generally greater than 200 MPN/100 ml. The highest year round median value was at Milltown. The summer 90th percentile fecal coliform levels are 400 MPN/100 ml (USEPA, 1976). The majority of high values occur during July and August. Furthermore, fecal streptococci levels were often higher than fecal coliform levels. This is an indication that the bacteriological contamination is of animal origin.

Plate ENV. -12 (six sheets) graphically illustrates the above findings on a station by station basis for both the North Branch and Lamington Rivers. The station locations are given in Plate ENV. -13 and are also illustrated on Plate ENV. -11, previously presented.

From this data some important observations regarding present surface water quality in Bedminster can be made:

1. Year round and summer median dissolved oxygen concentrations in both the North Branch and Lamington Rivers are generally higher in Bedminster than in the upstream reaches.

2. Year round BOD concentrations in the Lamington are generally lower through Bedminster (av. 1.0 mg/l) than in its upstream reaches, and relatively constant at about 2 mg/l in the North Branch.

3. Phosphate concentrations are generally lower through Bedminster for both the Lamington and North Branch than in upstream reaches. Concentrations in the Lamington are generally slightly better than the State and federal standards. Phosphate concentrations in the North Branch are generally slightly below State and federal standards and also show a tendency to increase slightly in a downstream direction.

4. Nitrate concentrations are generally lower in the North Branch and Lamington Rivers through Bedminster than in their upstream reaches.

Essentially, what this data demonstrates is that:

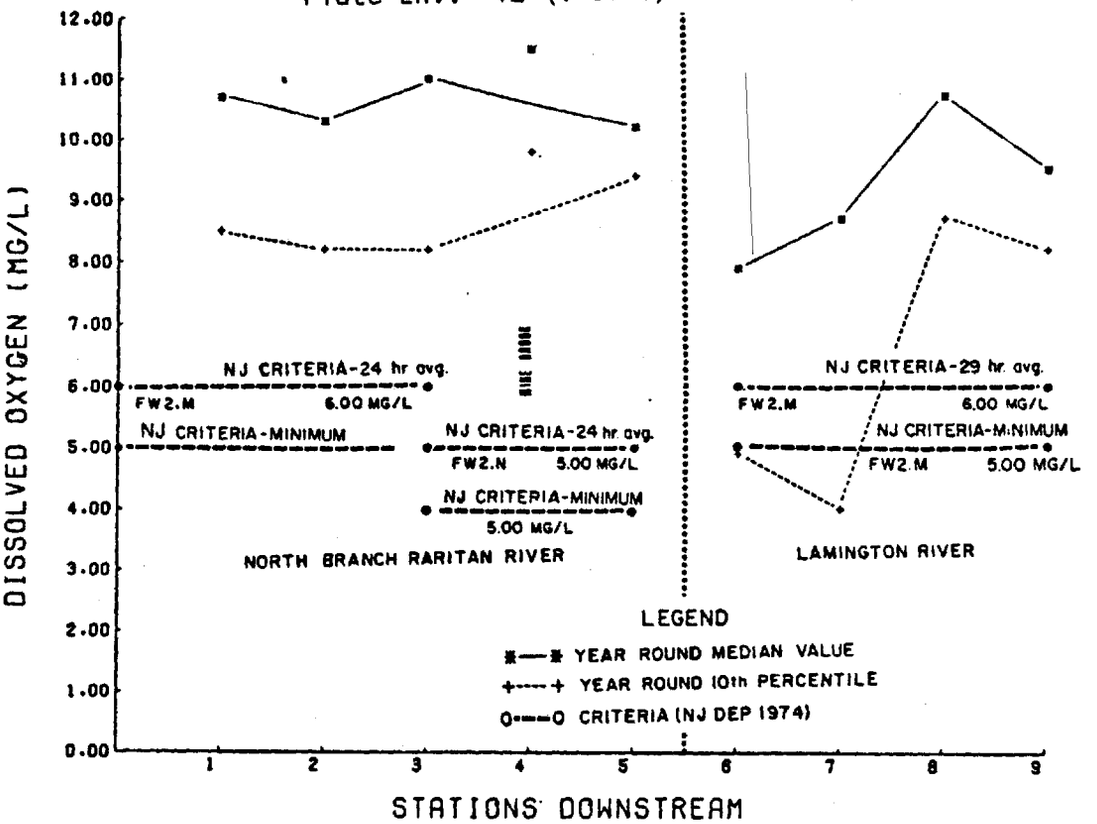
1. Although water quality in the North Branch is generally good, it nonetheless exceeds the State and federal standard with respect to phosphate concentrations.

2. Bedminster presently provides an important pollutant recovery reach for the North Branch.

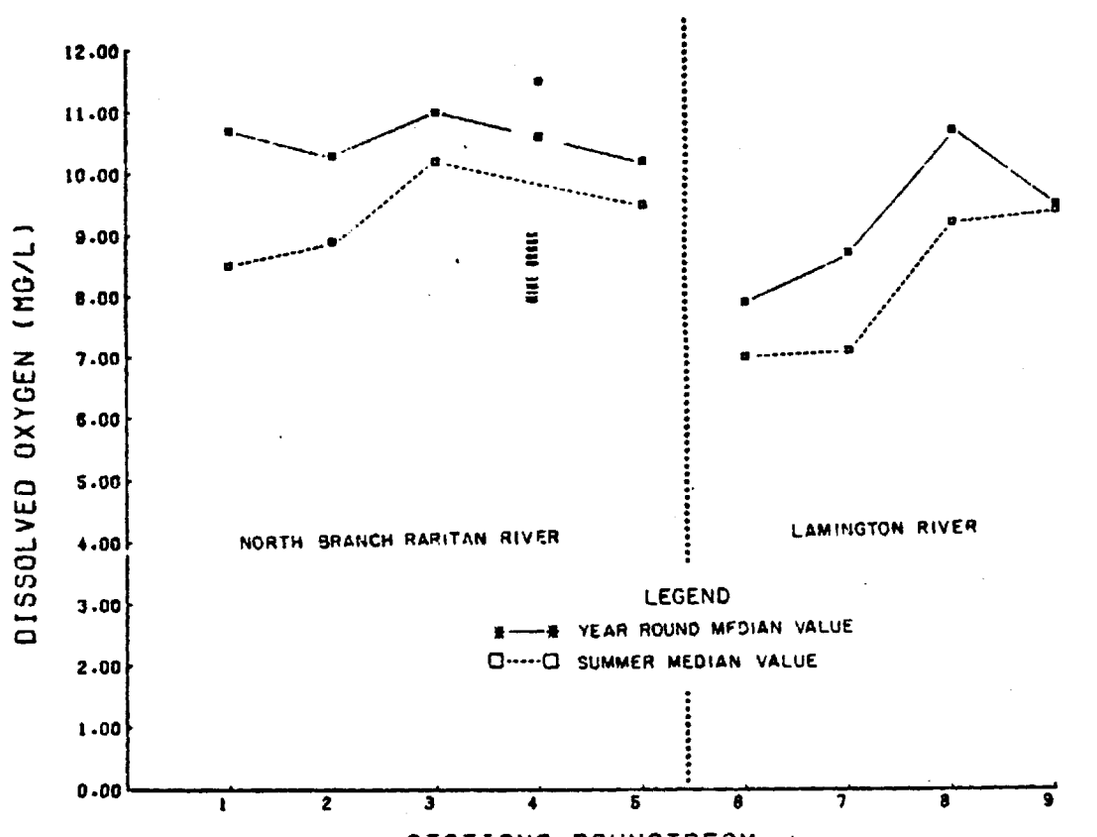
These conclusions are further supported by sampling programs prepared during the past decade by various environmental consultants, namely:

1. Aquatic Biology Study, Bedminster Township, prepared for the Bedminster

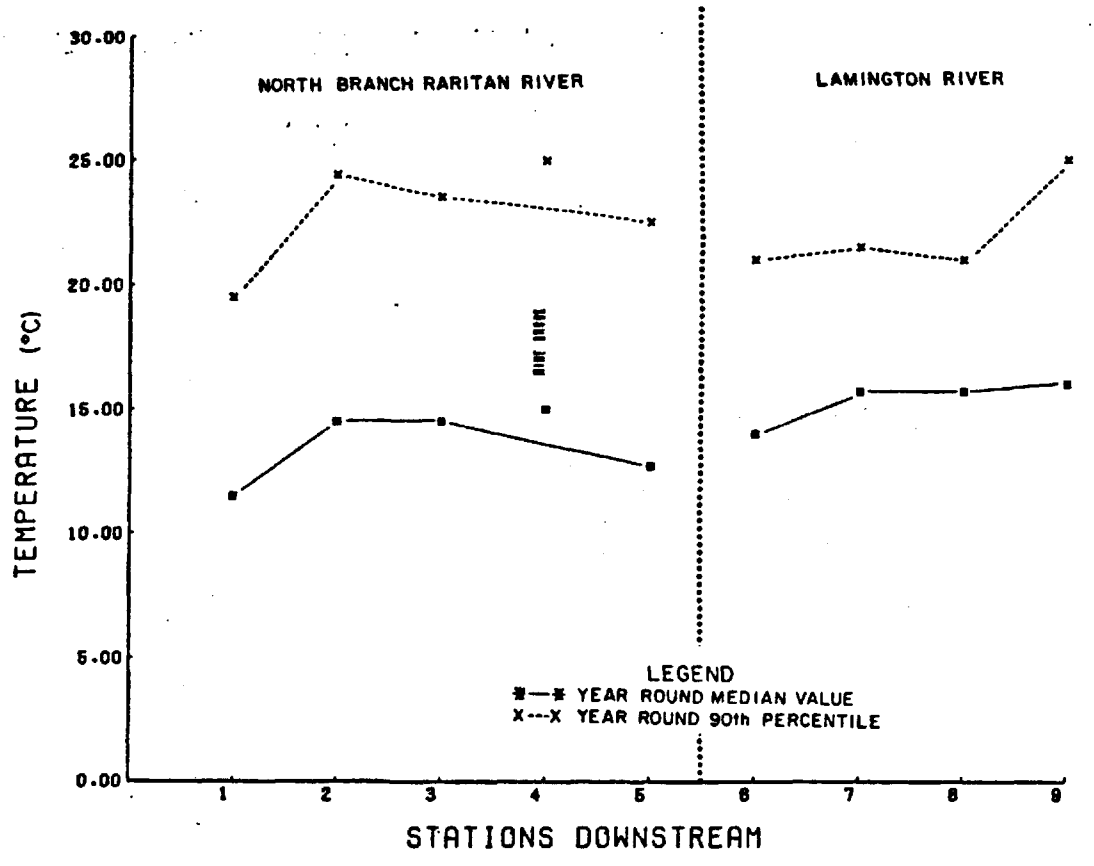
Plate ENV. -12 (1 of 6)



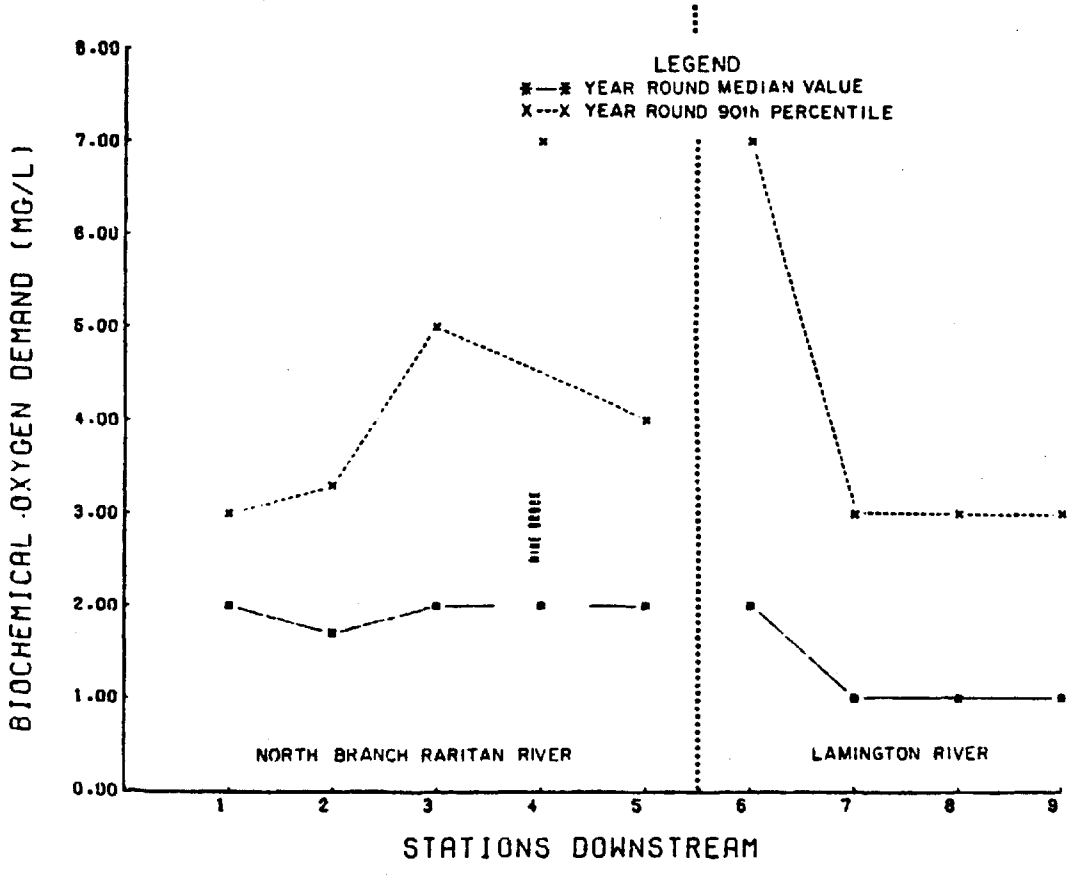
YEAR ROUND MEDIAN AND 10th PERCENTILE DISSOLVED OXYGEN CONCENTRATIONS FOR THE NORTH BRANCH RARITAN RIVER BASIN (1973-1977).



YEAR ROUND AND SUMMER MEDIAN DISSOLVED OXYGEN CONCENTRATIONS FOR THE NORTH BRANCH RARITAN RIVER BASIN (1973-1977).

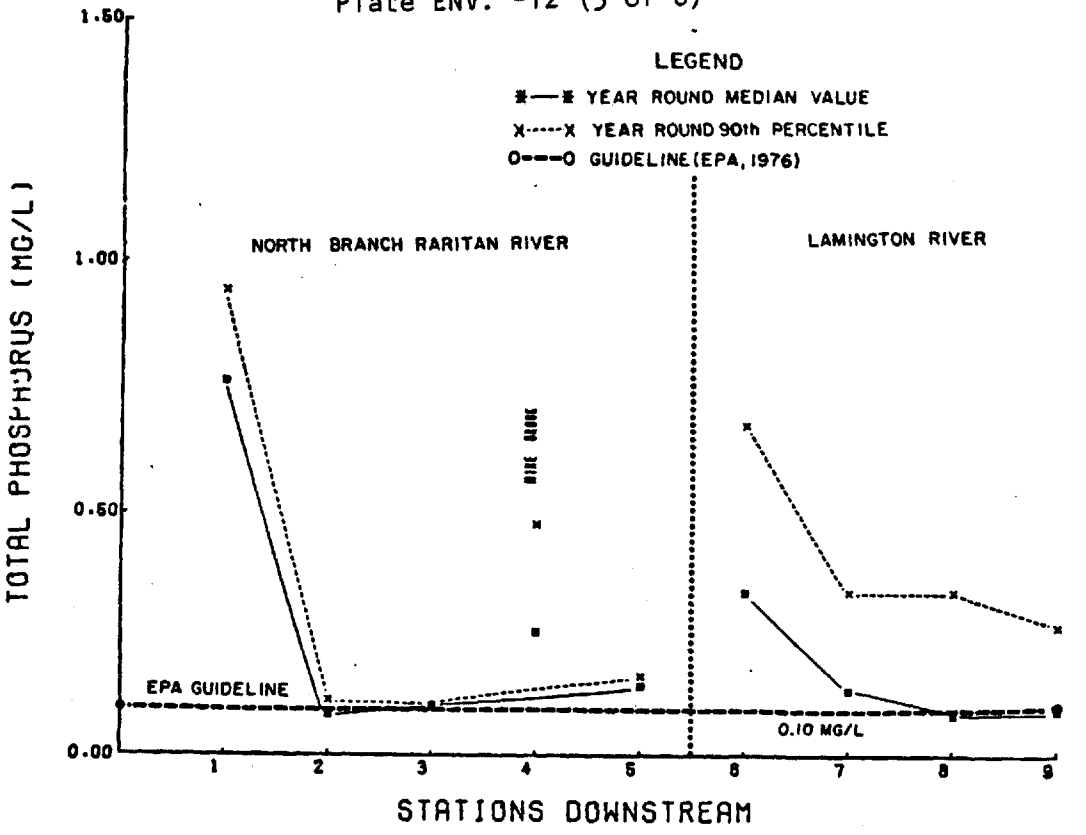


YEAR ROUND MEDIAN AND 90th PERCENTILE TEMPERATURE VALUES FOR THE NORTH BRANCH RARITAN RIVER BASIN (1973-1977).

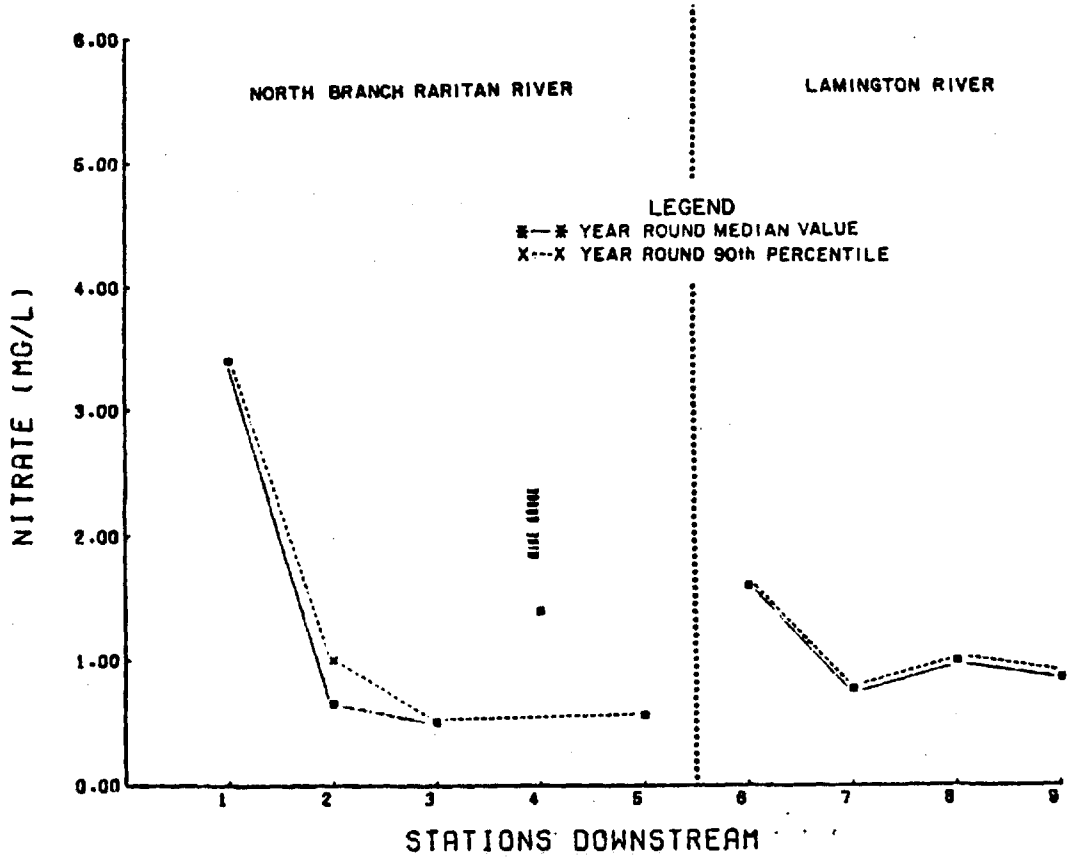


YEAR ROUND AND 90th PERCENTILE 5-DAY BOD CONCENTRATIONS FOR THE NORTH BRANCH RARITAN RIVER BASIN (1973-1977).

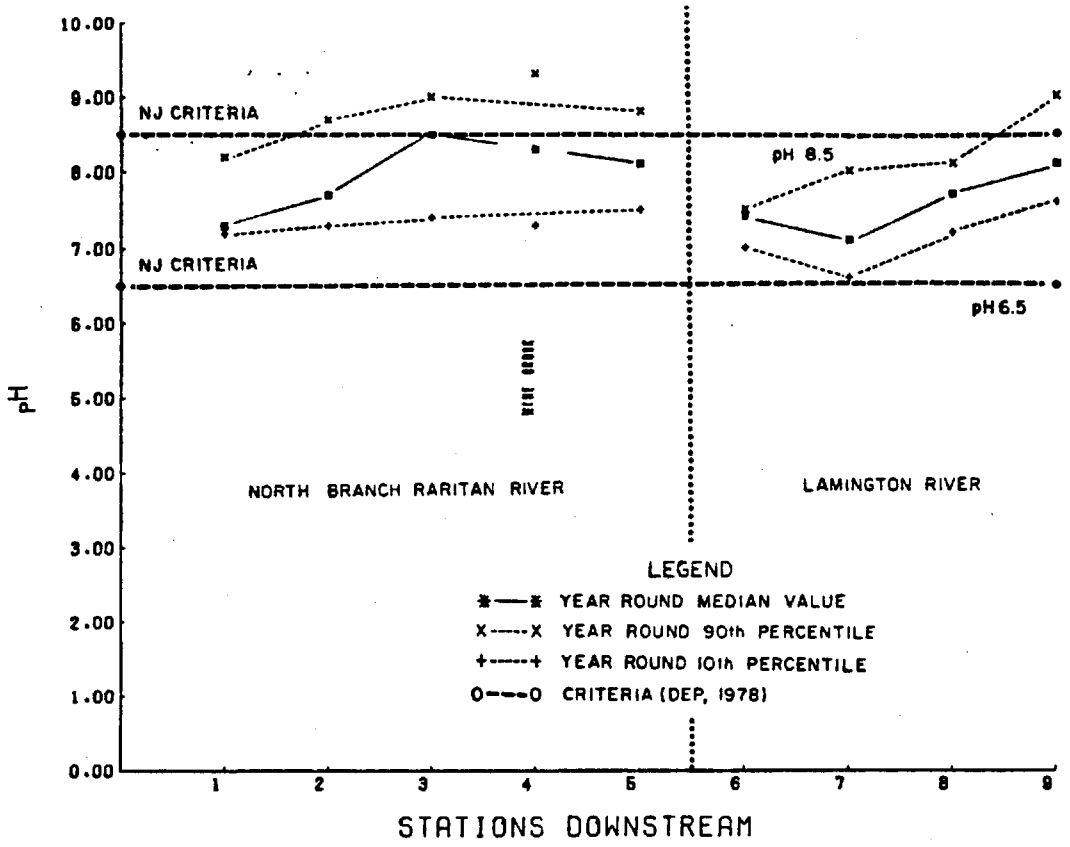
Plate ENV. -12 (3 of 6)



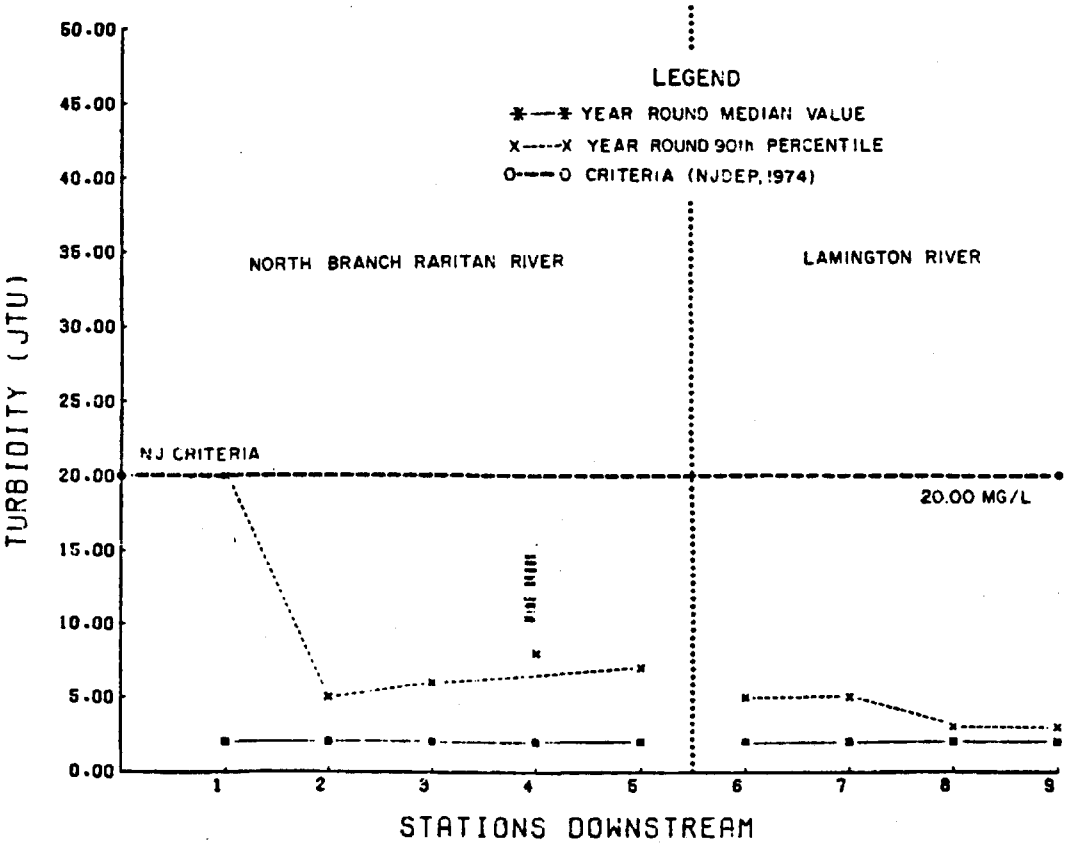
YEAR ROUND MEDIAN AND 90th PERCENTILE TOTAL PHOSPHATE-PHOSPHOROUS CONCENTRATIONS FOR THE NORTH BRANCH RARITAN RIVER BASIN(1973-1977).



YEAR ROUND MEDIAN AND 90th PERCENTILE NITRATE-NITROGEN CONCENTRATIONS FOR THE NORTH BRANCH RARITAN RIVER BASIN(1973-1977).

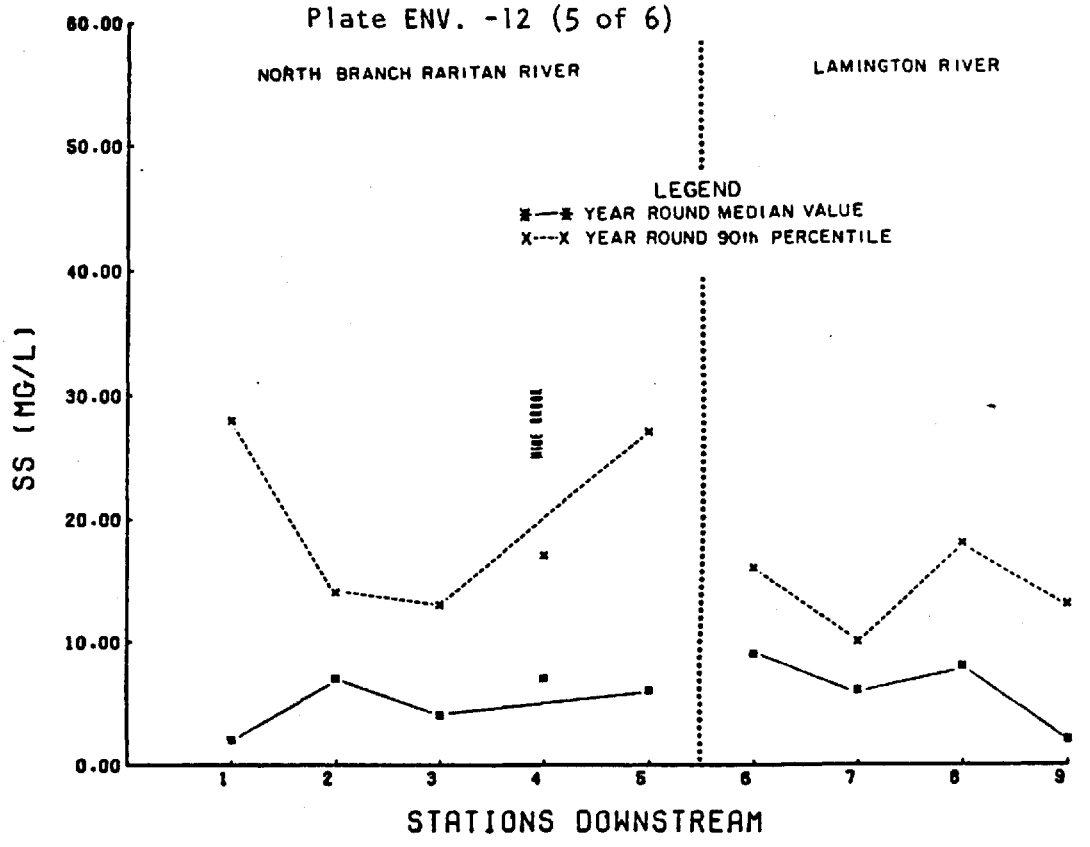


YEAR ROUND 10th, 50th, AND 90th PERCENTILE pH VALUES FOR THE NORTH BRANCH RARITAN RIVER BASIN(1973-1977).

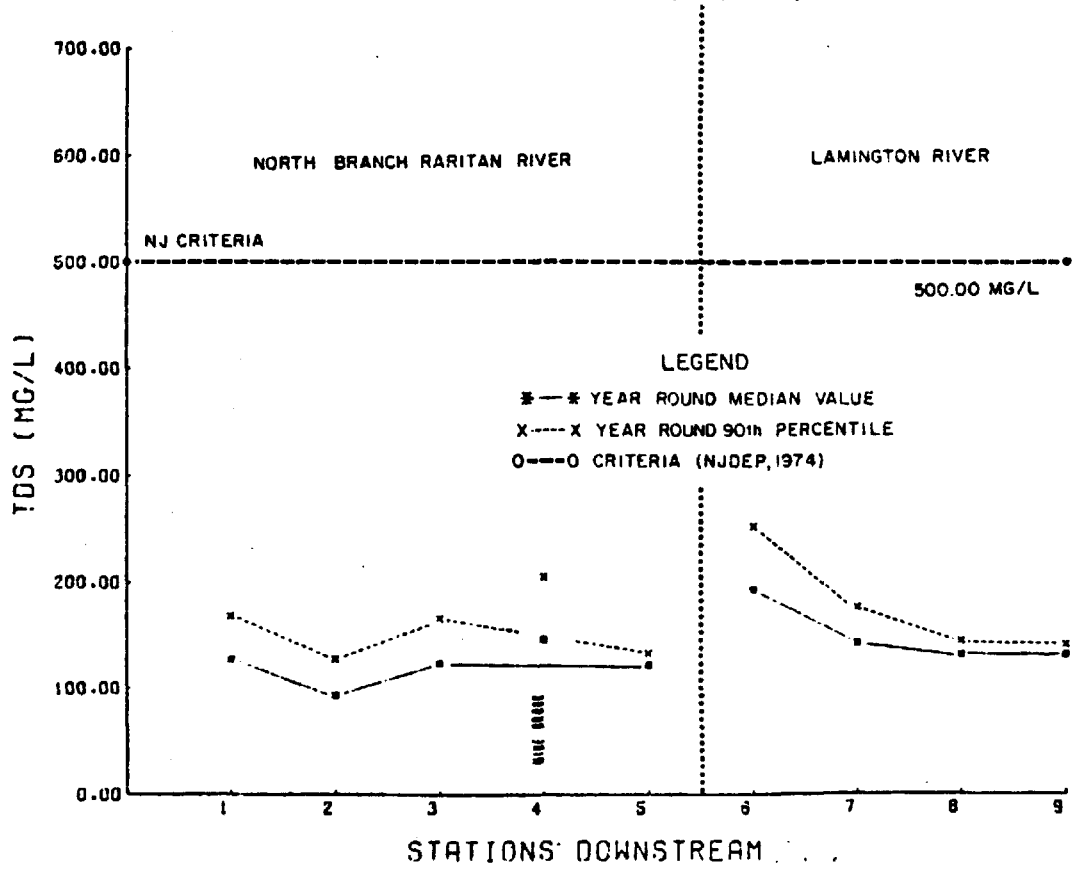


YEAR ROUND MEDIAN AND 90th PERCENTILE TURBIDITY VALUES FOR THE NORTH BRANCH RARITAN RIVER BASIN(1973-1977)

Plate ENV. -12 (5 of 6)

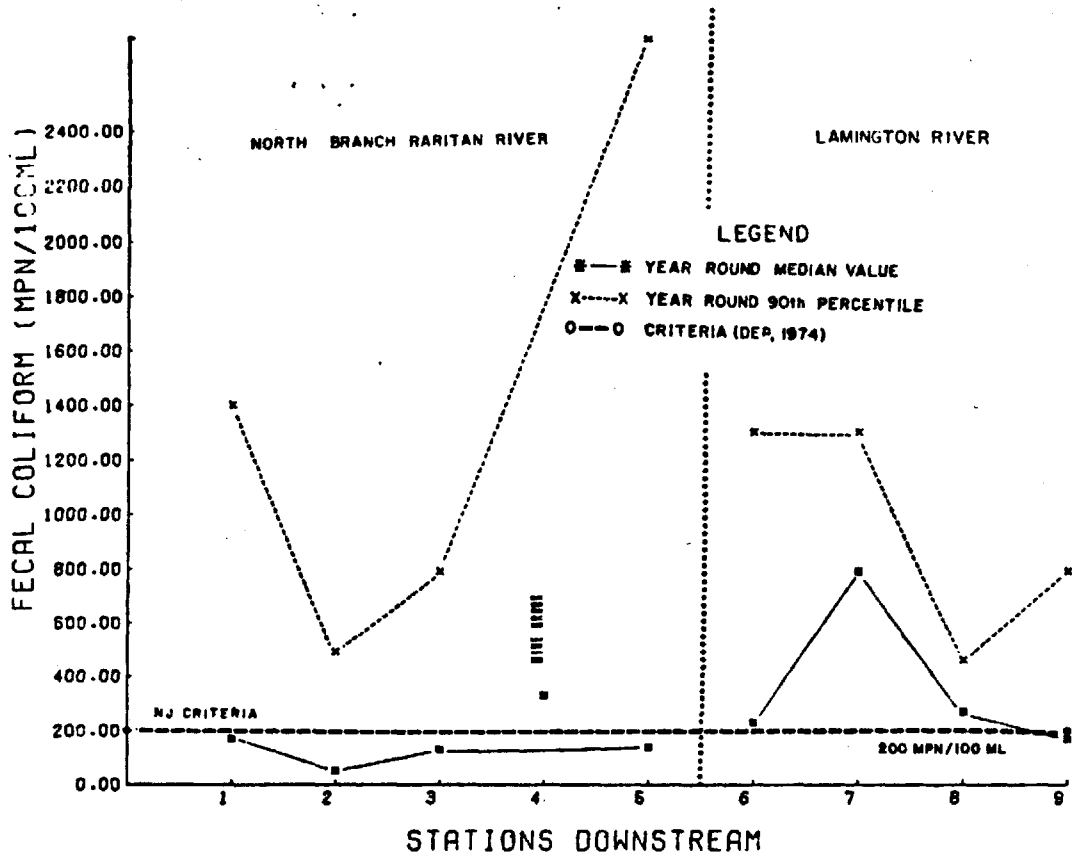


YEAR ROUND MEDIAN AND 90th PERCENTILE SUSPENDED SOLIDS CONCENTRATIONS FOR THE NORTH BRANCH RARITAN RIVER BASIN(1973-1977).

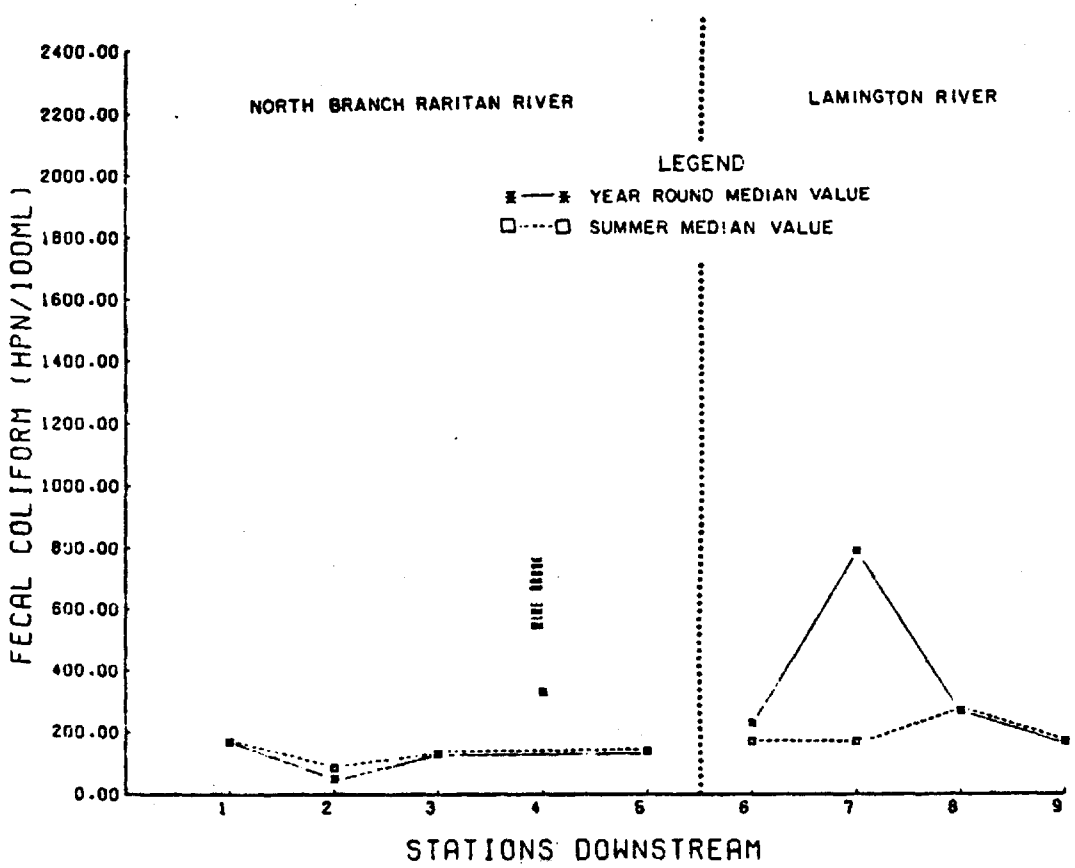


YEAR ROUND MEDIAN AND 90th PERCENTILE TOTAL DISSOLVED SOLIDS CONCENTRATIONS FOR THE NORTH BRANCH RARITAN RIVER BASIN(1973-1977).

Plate ENV. -12 (6 of 6)



YEAR ROUND MEDIAN AND 90th PERCENTILE FECAL COLIFORM VALUES FOR THE NORTH BRANCH RARITAN RIVER BASIN(1973-1977).



YEAR ROUND AND SUMMER MEDIAN FECAL COLIFORM VALUES FOR THE NORTH BRANCH RARITAN RIVER BASIN(1973-1977).

Plate ENV. -13

North Branch Raritan River Basin Water Quality Monitoring Stations

Map Number	Storet Number	Location
1	01398260	North Branch near Chester
2	01398500	North Branch near Far Hills
3	01398900	North Branch at Bedminster
4	01398950	Mine Brook at Far Hills
5	01399120	North Branch at Burnt Mills
6	01399200	Lamington near Ironia
7	01399300	Lamington at Milltown
8	01399500	Lamington near Pottersville
9	01399545	Lamington at Lamington

Environmental Commission by Jason M. Cortell and Associates, Inc. November 27, 1974.

2. Upper Raritan Watershed; Water Quality Survey 1972, prepared for the Upper Raritan Watershed Association by the Academy of Natural Sciences of Philadelphia, March 1974.

3. Water Quality and Aquatic Biology Report, North Branch Raritan River, Bedminster, New Jersey, prepared for AT&T by Jason M. Cortell and Associates, Inc., November 15, 1974.

Phosphate concentration is presently the most limiting factor with respect to water quality in the North Branch and a review of the above data indicates that, indeed, even now, the assimilative capacity of the North Branch is such that during periods of lower than average flows, the State and federal water quality standard with respect to phosphates is frequently being violated. Even if future flows entering Bedminster meet the State and federal standard of 0.1 for phosphate-phosphorus, it is still questionable that that standard can be maintained through Bedminster under low flow conditions, given the additional 0.85 MGD sewage treatment plant presently being constructed by Environmental Disposal Corporation. The flow from this plant will represent a significant percentage of the North Branch's low flows with a phosphate effluent limitation of 0.5 mg/l, five times that which is allowable in the stream itself. The effect of this will be an overenrichment of the North Branch during periods of low flow unless the background phosphate concentration upstream of the plant is actually lower than the standard of 0.1. This can be achieved only through a combination of additional point source and non-point source controls both in Bedminster and upstream. With such additional controls in place, it should be at least theoretically possible to support development in the Corridor as proposed in the Land Use Plan and still maintain acceptable water quality in the North Branch.

Point source controls could include the future upgrading of the treatment process at the Bedminster sewage treatment plant to include nutrient removal and should also include controlling point discharges from detention basins in the development Corridor by ensuring that NJPDES permits are required and associated monitoring programs established.

Non-point source controls should also be instituted as part of an overall stormwater management plan in accordance with the New Jersey Stormwater Management Act, P.L. 1982 c. 32. This law, which amends and supplements the Municipal Land Use Paw, requires all New Jersey municipalities to develop a Stormwater Quantity and Quality Control plan and ordinance, provided that a grant for the preparation of the plan has been made for 90 percent of the costs incurred. While funding is not presently available, NJDEP is exploring various funding avenues.

The Stormwater Quantity/Quality Management Plan will be aimed at minimizing the detrimental effects of urban and agricultural runoff and should include a

mix of non-structural and structural requirements and regulations, particularly employing land use controls and density provisions as important elements of the plan in the R-3% zone.

Implications of Non-Point Source Pollutants on Land Use Planning

The above discussed water quality studies show that the present background levels of NPS pollutants are acceptable in terms of their water quality impacts, except, perhaps, with respect to phosphates which, in combination with the existing point sources on the North Branch, have led to just barely acceptable concentrations during periods of lower than average flows. Therefore, it is a desirable goal of the Master Plan to recommend a land use plan which will not increase, and hopefully even decrease, the existing levels of NPS pollutant inputs.

Existing NPS loadings for BOD, TN and TP have been roughly estimated for Bedminster based on data provided in the draft New Jersey Stormwater Quantity/Quality Management Manual, and compared to the expected NPS loadings for BOD, TN and TP under ultimate development conditions as presented in the Land Use Plan, assuming that structural controls were employed in the Corridor area. The results of that analysis indicate that outside of the Corridor, three acres is the minimum lot size advisable and larger lot sizes would be preferable if NPS pollutant loadings are to be kept at approximately the same levels as they are at present. This analysis and conclusion will be incorporated in the Township's Stormwater Quantity/Quality Management planning discussed above.

Qualified Farmlands

Plates NRI -12 and 13 illustrate the Township's qualified farmlands and soil suitability for agricultural use. As can be readily seen, qualified farmlands are by far the largest single land use category in Bedminster, accounting for roughly 74 percent of the total Township acreage.

According to recent data available from the New Jersey Cooperative Extension Service, Bedminster has a total of 56 farms engaged in the growing of crops and raising and keeping of livestock. Common crops include hay, corn and grain, grass silage, wheat, oats, silage corn, sorghum, soybeans, apples, trees and shrubs. Common livestock operations include beef cattle, dairy farms and horse farms.

The preservation of Bedminster's agricultural and open space character is an important planning objective with respect to the Township's overall plan for environmental protection of the North Branch Watershed, and is one which is supported by both the County Master Plan and the State Development Guide Plan.

Implicit in this goal is the encouragement of rural development, as opposed to typical suburban type development, and continued investigations into additional avenues which will further serve to encourage the continuance of farming in Bedminster.

ENVIRONMENTAL PLANNING IMPLICATIONS OF THE REGIONAL ANALYSIS

The Regional Analysis section of the Master Plan compares Bedminster's Land Use Plan to the Somerset County Master Plan, the Tri-State Regional Guide Plan, and the State Development Guide Plan.

From an environmental standpoint, close conformance with the region's plans is important.

Regional environmental planning involves an equitable distribution of resources and development. An equitable distribution, however, is not a uniform distribution. Regional environmental planning recognizes the importance of this specialization. Thus, some areas, because of locational and natural resources characteristics, develop into major commercial and/or residential centers; others develop as farming areas; while others may provide important open space and recreation. In this manner, a variety of development opportunities are provided for in such a way as to minimize negative environmental impacts and maximize development opportunities.

This concept is recognized in Bedminster's zoning plan and is reinforced by the recommendations of the New Jersey State Development Guide Plan, the Tri-State Regional Planning Commission's Regional Development Guide Plan, and Somerset County's Master Plan of Land Use. The following comments reflect important, environmentally relevant, issues addressed in the region's plans which are important to Bedminster and which are reflected in the Master Plan.

Somerset County Master Plan of Land Use

The County Master Plan serves to reinforce Bedminster's zoning. In particular, in the western portion of the Township, outside of the development influence of Routes 287 and 206, the plan calls for "rural settlements" at densities of no less than three acres per dwelling unit. It is proposed that "these areas not be served by major utilities and that it not be landscaped for development purposes." The stated objective of the rural settlement pattern is to conform with the existing open topography, while recognizing that residential development will take place.

The areas so designated are all directly related to the Raritan River Basin which has become New Jersey's major source of potable water supply. The proposed Confluence Reservoir would be situated at the confluence of the North and South Branches of the Raritan River in Branchburg and is planned to serve as a major water source for north central New Jersey. Bedminster's R-3% zone in these areas serves to not only "conform with existing open topography, while recognizing that residential development will take place," but also as an important environmental strategy for the protection of an important future water resource.

Tri-State Regional Development Guide

The Tri-State Regional Planning Commission's Regional Development Guide recom-

mends the R-3% zones in the Township as open lands. For new developments in these areas, the plan recommends the lowest residential densities deemed constituitonal - "three to ten acres per dwelling, more if possible." In any case, the plan recommends that local zoning be structured so as to encourage densities lower than two acres per dwelling. Within the Corridor, average densities of 2 to 6.9 units per acre are generally recommended by the plan.

The Guide's major goals reinforce the suitability and desirability of Bedminster's low density/agricultural character:

1. to protect our farms, wetlands, mountains, stream valleys, watersheds and forests;

2. to coordinate the location of homes and workplaces with public utilities, facilities, services and public transportation in order to conserve energy and promote social equity; and

3. to enhance our older cities as desirable places to live and do business.

Bedminster's zoning plan encourages the location of homes and workplaces at suitable suburban densities in the Corridor area. It is here that public utilities, facilities, services and public transportation are already in place and are most accessible, serving to promote efficient use of these facilities, and hence, the most economical development patterns. In the outlying portion of the Township, the R-3% zone serves the important environmental function of ground and surface water supply protection as well as tending to discourage, though not prohibit, the subdivision of the Township's valuable agricultural resource.

State Development Guide Plan

The State Development Guide Plan, prepared in September 1977, identifies four principal goals:

1. maintain the quality of the environment;

2. preserve the open space necessary for an expanding population;

3. provide space and service to support continued economic expansion; and

4. enhance the quality of life in urban areas.

The fulfillment of these goals calls for achieving a balance between conservation and development. Accordingly, the plan suggests that regions which are presently partially developed are the most suitable locations for future population and industrial growth. In areas which are most suitable for conservation as natural resource or agricultural areas, the plan recommends that they be conserved for these purposes. In this manner, the State hopes to allow the present public infrastructure elements to be effectively utilized,

mass transit development facilitated, and valuable natural resources and agricultural areas preserved. This is a fundamental concept of environmental planning - to provide an environmentally sound and supportive balance between development and conservation interests.

CONCLUSIONS

This chapter has presented enviromental data and analyses which serve to illustrate the implications to land use planning of Bedminster's environmental assets and limitations, both from a local and regional standpoint. These implications are summarized below.

1. The Land Use Plan must balance the Township's important responsibility to provide housing opportunities for the future with its regional and local responsibilities with respect to environmental protection.

2. The preservation of Bedminster's rural and open space character is an important planning objective with respect to the Township's overall plan for environmental protection of the North Branch Watershed and is supported by both the County Master Plan and the State Development Guide Plan.

3. The ultimate development proposed in the Corridor is consistent with estimates of ultimate water supply capability.

4. Any increase in development densities within the Corridor or additional proposed service areas outside of the Corridor would be inconsistent with the ultimate water supply capability and therefore could not be accommodated without a reduction in the number of units presently planned for in the Corridor.

5. The existing and near future sewerage facilities intended to serve the Corridor area are consistent with the Upper Raritan Wastewater Facilities Plan and should serve to further the achievement of State and federal goals with respect to water quality in the North Branch Raritan River.

6. Developments requiring sewerage facilities within or outside of the Corridor, beyond that intended by the Upper Raritan Wastewater Facilities Plan, would be inconsistent with State and federal goals with respect to water quality in the North Branch Raritan River.

7. The R-3% zone provides for the minimum advisable lot size when considering Bedminster's groundwater supply capability and the State and federal surface and groundwater quality standards. Larger lot sizes would also be appropriate from an environmental standpoint.