

ML - Cranbury

25-Oct-84

Suitability Evaluation Analysis for Low Cost Housing:
Mount Laurel II (draft)

pgs. 74

note: Builder's Remedy??

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SUITABILITY EVALUATION ANALYSIS
FOR LOW COST HOUSING: MOUNT LAUREL II

Prepared for the
Cranbury Township Committee
and
Planning Board

by
Raymond, Parish, Pine & Weiner, Inc.
Planning and Development Consultants
Princeton, New Jersey

October 25, 1984

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We reassure all concerned that Mount Laurel is not designed to sweep away all land use restrictions or leave our open spaces and natural resources prey to speculators. Municipalities consisting largely of conservation, agricultural, or environmentally sensitive areas will not be required to grow because of Mount Laurel. No forests or small towns need be paved over and covered with high-rise apartments as a result of today's decision.

As for those municipalities that may have to make adjustments in their lifestyles to provide for their fair share of low and moderate income housing, they should remember that they are not being required to provide more than their fair share. No one community need be concerned that it will be radically transformed by a deluge of low and moderate income developments. Nor should any community conclude that its residents will move to other suburbs as a result of this decision, for those "other suburbs" may very well be required to do their part to provide the same housing. Finally, once a community has satisfied its fair share obligation, the Mount Laurel doctrine will not restrict other measures, including large-lot and open area zoning, that would maintain its beauty and communal character.-

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1. GARFIELD	218.98 Ac.
2. HIGH DENSITY ZONE	155.92 Ac.
3. HIGH DENSITY ZONE	155.92 Ac.
4. CRANBURY DEVELOPMENT	318.61 Ac.
5. MORRIS	101.05 Ac.
6. ZIRINSKY	144.21 Ac.
7. TOLL BROTHERS	104.36 Ac.
8. ZIRINSKY	215.73 Ac.
9. CRANBURY LAND COMPANY	136.71 Ac.
<hr/>	
TOTAL 1546.88 Ac.	

CRANBURY TOWNSHIP Middlesex County, New Jersey

EVALUATED SITES

RFPW Raymond, Pugh, Piro & Walker, Inc. Princeton, N.J. Township, N.Y.



A. ZIRINSKY	50.76 Ac.
B. ZIRINSKY	180.91 Ac.
C. ZIRINSKY	313.67 Ac.
D. ZIRINSKY	469.63 Ac.
E. ZIRINSKY	544.65 Ac.
F. ZIRINSKY	59.55 Ac.
G. ZIRINSKY	41.15 Ac.
TOTAL	1660.32 Ac.

CRANBURY TOWNSHIP *Middlesex County, New Jersey*

SITES ELIMINATED FROM SUITABILITY CRITERIA EVALUATION

STATE DEVELOPMENT GUIDE PLAN

1. Criteria Description

New developments should be located totally within the 1980 State Development Guide Plan "Growth Area" and revised 1981 Guide Plan map "Growth Area" designation as proposed by the New Jersey Department of Community Affairs and Middlesex County Planning Board.

Placing new residential development within a "Growth Area" will reduce the cost of supplying public sewer and water service, increase public transit opportunities, help protect large concentrations of agricultural land west of Cranbury Village, help protect the Cranbury Village Historic District, provide easy access to major highways and greater proximity to employment centers. On page 48, the Guide Plan states that development within a "Growth Area" would "discourage growth in fringe areas which have neither the infrastructure nor the employment opportunities upon which growth depends" and "reduce growth pressures on large areas of agriculturally productive and environmentally significant lands." In essence, Growth Areas were designated either to accommodate a continuation of existing development, or to encompass lands that are logically suited for future development.

New developments should not be located partially or totally within the 1980 State Development Guide Plan "Limited Growth Area" and revised 1981 Guide Plan map "Agriculture Area" designation as proposed by the New Jersey Department of Community Affairs and Middlesex County Planning Board.

On page 72, the Guide Plan states that "limited growth areas should be left to grow at their own moderate pace. Public resources should be targeted toward other areas where growth can be accommodated more readily. In this way, the needs of future generations--for additional land to develop or to set aside for purposes which cannot be anticipated--are recognized,"

It is also important to keep development out of the "Agriculture Area" to maintain farming as an economically viable business. On page 23, the Guide Plan states that "the problem facing agriculture is that fertile farmland in many areas is being converted to urban and suburban use. Because farmland is available in large, cleared and well-drained parcels, it is attractive to developers. Consequently, much farmland has been converted already and the remainder is in jeopardy. Development policy must halt the conversion which would result in the irreversible loss of the State's resource of prime soils." The New Jersey Department of Community Affairs designated as "Agricultural" only areas with the following characteristics:

1. generally low density or sparse development
2. relatively poor accessibility to existing commuter rail and major highway facilities
3. the presence of large blocks of land classified as prime agricultural soils by the Soil Conservation Service

4. accessibility to rural centers, agricultural support services and markets
5. lack of extensive sewer and water systems
6. large blocks of contiguous land where fertilizers and insecticides can be safely applied.

According to the State Development Guide Plan, it is the intent of the State that all designated Agricultural Areas have priority for all state farmer assistance programs.

The State Development Guide Plan notes that "the plans of regional, county and municipal agencies should provide progressively finer levels of detail" and that where substantial agreement is found among plans, they are considered "appropriate refinements of the Guide Plan." The Tri-State Regional Development Guide functions as the next "more detailed level of planning that supplements the Concept Map and the Guide Plan." On page 114, the Guide Plan states that both it and the Tri-State Regional Development Guide "promote[s] concentration of growth, stressing that future development should occur adjacent to already developed areas and as infill in mostly settled areas. Accordingly, each plan recognizes the public and private costs of sprawl, and promotes a land use pattern that would encourage efficient use of capital investments for facilities such as sewers and highways. Discouraging present trends toward scattered development in suburban and exurban areas is also seen as a way to conserve energy usage."

On page ii, the Guide Plan states that its "Concept Map consists of broad, generalized areas without site-specific detail or precise boundaries...." On page 43 it adds that "[s]ince it is not the purpose of the Guide Plan to supplant more detailed plans prepared by municipalities and counties...the categories depicted on the Concept Map are general." On page 71 it further articulates the State's policy that "[a]griculture in other portions of the State--no matter how they are assigned on the Concept Map--should be protected from incompatible development to the extent feasible within the context of local planning and land use regulations."

The 1981 amendment to the Guide Plan represents the kind of refinement of the broadly general Concept Map definitions of area boundaries contemplated by the plan itself. In accepting the State Development Guide Plan's delineation of growth areas as conclusive (92 N.J. 246), the Supreme Court could not have invested it with greater precision than the plan claimed for itself. While this does not mean that the boundaries shown on the plan should be capriciously set aside, it should mean that, where a modification thereof is adopted by the local government in furtherance of a well-considered refinement by the County Planning Board, it should be given serious consideration unless the new delineation precludes the government from being able to satisfy its Mount Laurel obligation.

2. Site Analysis

A careful review of Figure 1 reveals that sites 1-5 are located in the heart of the 1980 "Growth Area" while sites 6 and 8 are located on the

fringe of the "Growth Area" immediately adjacent to the "Limited Growth Area" northwest and west of Cranbury Village. Large portions of sites 7 and 9 are located within the 1980 "Limited Growth Area." Sites 1-3 support the concepts of the State Development Guide Plan because they are a logical easterly extension of growth from Cranbury Village and are far enough removed from the "Limited Growth Area" so as not to create any permanent adverse development impacts on existing farmland within the "Limited Growth Area," and are separated by Route 130 from the Village Historic District. Sites 1-3 also reflect a westerly extension of development from within Monroe Township which, while located in its "Agriculture Area" now contains the large retirement communities of Concordia, Rossmoor, and Clearbrook. Site 4 is also well removed from the "Limited Growth Area" but does not represent a contiguous extension of Village growth; site 5, while located closer to the "Limited Growth Area" than sites 1-4, constitutes a southerly extension of existing development. Site 4 and 5 are both located next to existing and potential employment centers. Development on site 4 would result in no direct loss of farmland.

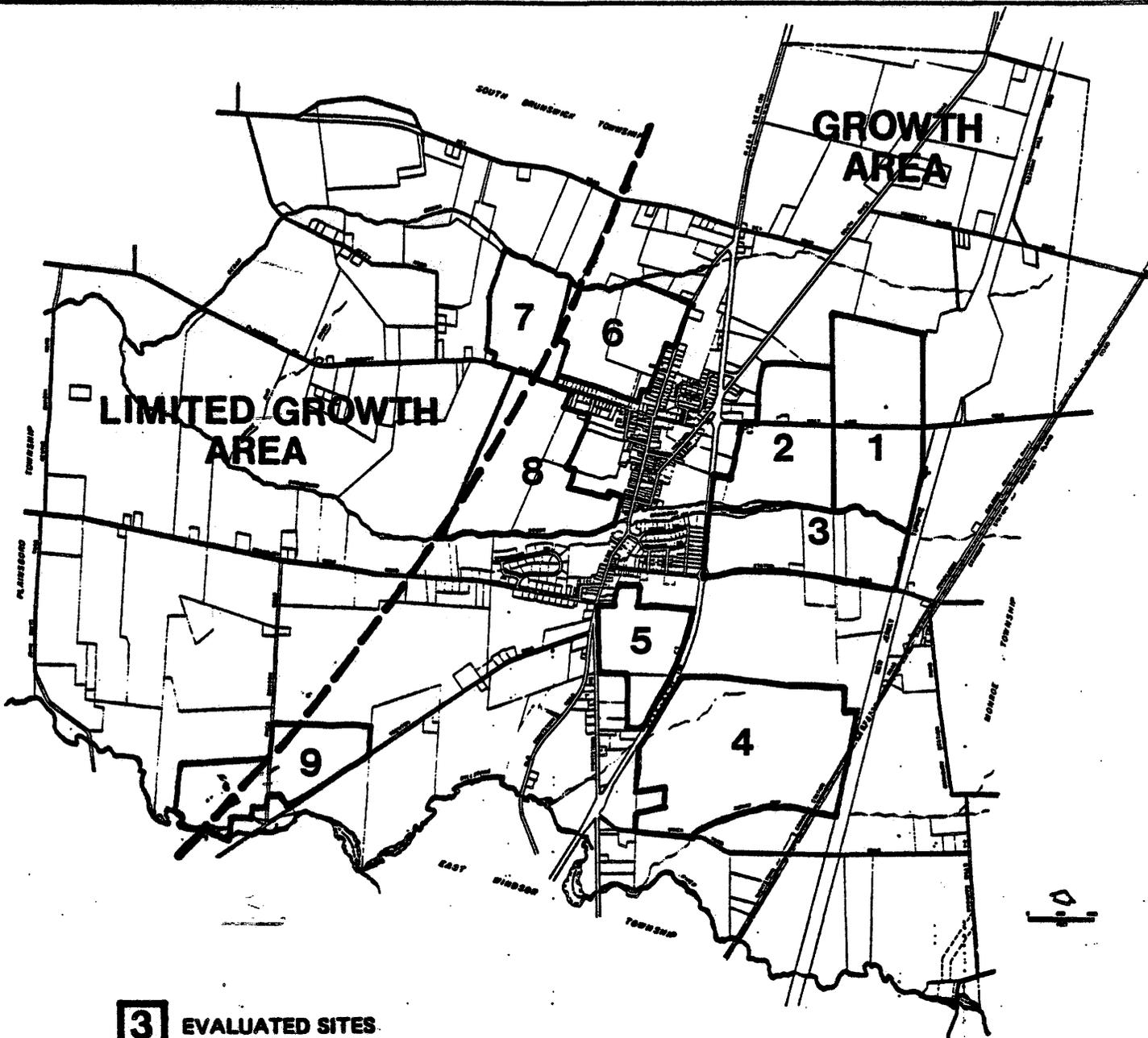
Sites 6-9 represent a westerly extension of growth from Cranbury Village but, by projecting into the "Limited Growth Area" would tend to exert development pressures on adjacent farmland. This would be especially true of sites 7 and 9. Site 9 is properly characterized by the State Development Guide Plan description (on page 48): a "scattered residential concentration" in a semi-rural area. Site 9 encourages development of adjacent farmland in the "Limited Growth Area" and

conversion of additional farmland to housing along the north side of Old Trenton Road between Cranbury Village and the site.

Figure 2 presents sites 1-9 in the context of the 1981 "Growth Area" and "Agricultural Area" designations. Sites 1-3 are located in the "Growth Area" between Cranbury Village and development activity in Monroe Township. They are also located inside the transportation corridor defined by Route 130 and the New Jersey Turnpike. Sites 4 and 5 are located in the "Growth Area." Site 4 is removed from major existing development patterns while site 5 is adjacent to Cranbury Village. Most of sites 6 and 8 and all of sites 7 and 9 are located within the 1981 "Agricultural Area."

Sites 1-3 are compatible with the State Development Guide Plan "Growth Area" designation because they create a dense, compact settlement pattern which provides realistic opportunities for jobs, housing, public transit, and the logical extension of utilities. Site 4 has a good location within the "Growth Area" but is not located adjacent to Cranbury Village or within the path of logical sewer extensions. Even though development on the site would not threaten farmland, it would take place on land that is somewhat environmentally sensitive. Site 5 is located adjacent to Cranbury Village in the "Growth Area" and would require the conversion of farmland for residential development. Sites 6 and 8 are located within the 1980 "Growth Area" adjacent to the "Limited Growth Area," primarily within the 1981 "Agricultural Area." Portions of sites 7, 8, and 9 are located within the 1980 "Growth Area" and "Limited growth Area" and the entire areas of sites 7 and 9 are located within the 1981 "Agriculture

Area." High density residential development on sites 6, 7, 8, and 9 would not only threaten on-site farmland, but also adjacent agricultural uses because of necessary utility extensions, traffic impacts, increased speculative land values, and extended land use incompatibilities along the boundaries between residential and agricultural uses. The area which encompasses sites 6-9 is free of water and sewer improvements. Servicing this area would be difficult because the existing sewer pumping station near Unami Park and alongside Cranbury Brook is higher in elevation than most of the surrounding agricultural conservation areas.

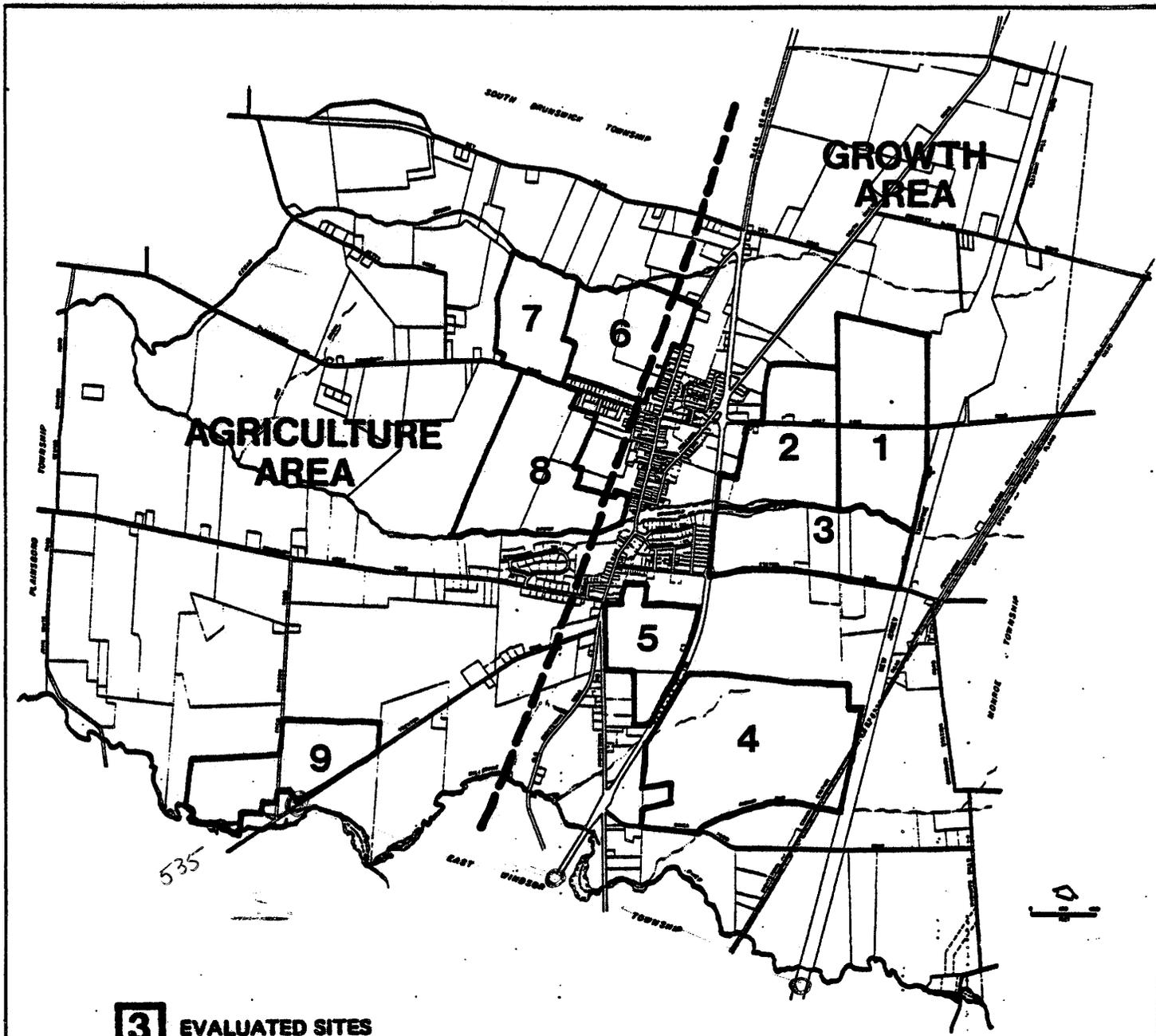


3 EVALUATED SITES

CRANBURY TOWNSHIP Middlesex County, New Jersey

Figure 1
1980 STATE DEVELOPMENT
GUIDE PLAN MAP

RFPW Regional, Planning, Policy & Technical, Inc. Princeton, N.J. November, 1977



3 EVALUATED SITES

CRANBURY TOWNSHIP Middlesex County, New Jersey

Figure 2
1981 STATE DEVELOPMENT
GUIDE PLAN MAP

PPPW Raymond, Parikh, Piro & Walker, Inc. Newark, N.J., Teaneck, N.J.

HISTORIC PRESERVATION

1. Criteria Description

Traffic flow, visual impact, and physical proximity of new residential development should not threaten the Cranbury Village National and State Historic District or the significant cluster of 18th and 19th Century houses and barns grouped along Cranbury Neck Road in the agricultural zone.

Today, there are some 218 major buildings in the Cranbury Historic District which was placed on the National Register of Historic Places on September 18, 1980. Less than 20% of these structures were built after the 1930's. Twenty-one houses were constructed around the beginning of the 19th Century, 87 in the mid-19th Century, 21 in the late 19th Century, and 49 in the 20th Century. The major period of construction in Cranbury was from 1840 to the 1880's. New residential development should not result in permanent damage to historic sites or destroy their natural setting as cultural resources by promoting inappropriate commercial reuse and untimely agricultural conversion to development.

The 1982 Cranbury Township Land Use Plan noted that the great challenge before the Township was to accommodate inevitable demands for housing and employment while conserving as much of its farmland as possible and protecting the quality, character, setting and ambiance of the Village Historic District. The Middlesex County Inventory of Historic, Cultural and Architectural Resources prepared by Heritage Studies of Princeton, New Jersey, mentions that Cranbury Village "has one of the richest and most concentrated collections of 19th Century houses of interest. Greek

Revival, Italianate, Carpenters' Gothic, Queen Anne and Colonial Revival styles are well represented, in a homogeneous context where the mix of scale and materials is unusually pleasing." Heritage Studies identified a cluster of 18th and 19th Century houses and barns within the agricultural zone along Cranbury Neck Road which "are essential to understanding the historical development of the agricultural region, but are difficult to preserve because farmland in New Jersey has become so valuable for purposes of development."

2. Site Analysis

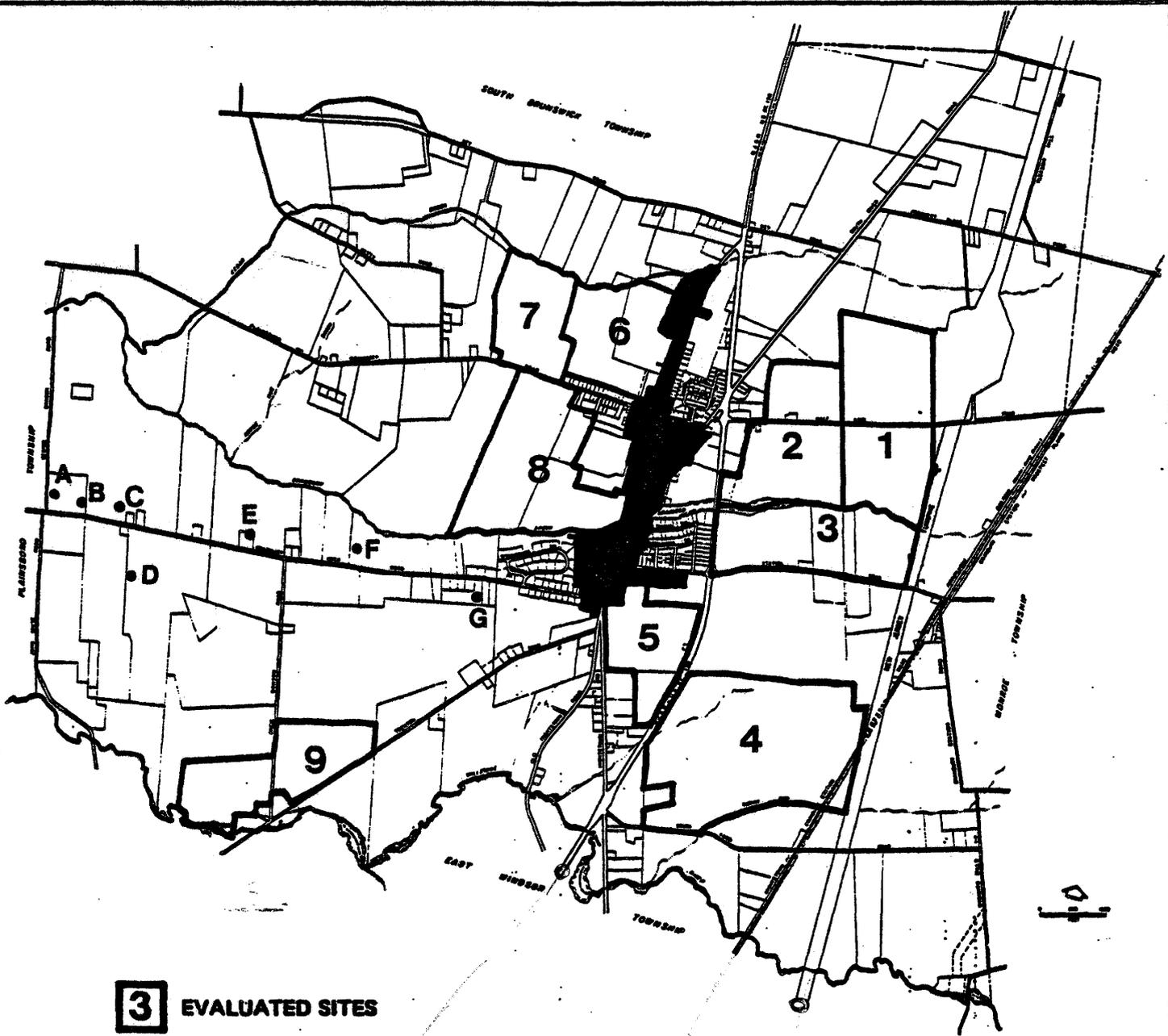
Analysis of Figure 3 reveals that development of Site 4 will have the least adverse impact on the mapped Historic District and scattered individual sites along Cranbury Neck Road because of its remote southeastern location between Route 130 and the New Jersey Turnpike. Traffic flow north/south from Site 4 can completely avoid the Village by using Route 130 and the New Jersey Turnpike (Exits 8 and 8A) while east-west travelers would be able to utilize Princeton-Hightstown Road in East Windsor Township. Sites 1-3 are located closer to the Historic District than Site 4, but have no negative visual impact on the Village. North/south traffic from Sites 1-3 can use Route 130 and the New Jersey Turnpike to avoid the Historic District. The New Jersey Department of Transportation installation of a traffic light at Dey Road and Route 130 which is expected within the next year will permit westerly travel from Sites 1-3 to make use of Dey Road rather than negatively impacting the Village on Plainsboro Road or Cranbury Neck Road. Vehicular traffic to and from Sites 1-3 can also avoid the historic village by using Princeton-Hightstown Road from Route 130 to travel west and east.

The agricultural lands surrounding the Historic District have become an integral part of the Village environment. High density residential development on Sites 5-8 would essentially destroy that natural setting and would have seriously negative visual impacts upon nearby historic properties. The Village has been zoned for residential development at 3 dwelling units/acre, while proposals on Sites 5-8 range from 4.8 dwelling units/acre to 8 dwelling units/acre. North/south traffic from Site 5 will probably use Route 130 and the New Jersey Turnpike; but there is always the possibility that travelers from Site 5 might use Main Street through the "heart" of the Village. Westerly travel from site 5 can utilize Old Trenton Road to Route 571, Cranbury Neck Road, and Plainsboro Road.

Development on Sites 6, 7, and 8 would seriously impact the Historic District because traffic which wants to utilize Route 130, the New Jersey Turnpike or Old Trenton Road would have to travel through the Village. Traffic flow from Site 9 will use Old Trenton Road to Route 571 or impact the Historic District by using Main Street and Station Road. While negative traffic impacts on the Village associated with Site 9 can be mitigated if Old Trenton Road is extended through Site 5 to Route 130, development pressure on farmland adjacent to Site 9 would have negative impacts on the historic structures along Cranbury Neck Road. Residential development on any of the sites west of Route 130 would encourage increased traffic flow through the Village. Increased traffic flow can result in economic pressures to convert and/or demolish homes, widen streets, build new parking lots, remove valuable old trees, increase

signage and outdoor lighting, that, in turn would tend to erode the integrity of the Historic District.

From the historic preservation viewpoint, two major areas of concern are maintaining the District's architectural quality and protecting its integrity from the destructive effects of heavy traffic and from development on the Village periphery which would destroy its historic setting. Large increases in purchasing power among residents located west of Route 130 would increase land values for commercial development in the heart of the historic district. Development located west of the Village within the farmland preservation district will change the character of the dominant farmland/historic interface that exists in Cranbury Township. Densities proposed for Sites 5-8 will overwhelm the scale and character of the existing village which is composed largely of one and two-story buildings on 1/4 to 1-acre lots. Designing architecturally compatible developments and/or buffering them from the Village would mitigate visual impacts. However, if intense residential development at the proposed density levels is allowed to occur next to the Village and negative impacts would result, the National Historic designation could be threatened.



CRANBURY TOWNSHIP Middlesex County, New Jersey

Figure 3
HISTORIC DISTRICT AND SITES

FARMLAND PRESERVATION

1. Criteria Description

New developments should be located to avoid permanent negative impacts on the continued agricultural use of active prime farmland within an established agricultural district or zone.

Property which is under farmland assessment and has either good agricultural soils, farm production, or an existing farmstead should be protected, if possible, from intense residential development pressure.

It is important to protect farmland within existing metropolitan areas to reduce food transportation costs, preserve valuable open space, and halt expensive urban sprawl. One of the purposes of the New Jersey Municipal Land Use Law is that municipalities "provide sufficient space in appropriate locations for a variety of agricultural, residential, recreational, commercial and industrial uses and open space, both public and private, according to their respective environmental requirements in order to meet the needs of all New Jersey citizens" (emphasis supplied).

Large contiguous farmland areas which extend across municipal boundary lines should be protected from the encroachment of haphazard sprawling residential development patterns. It is important to minimize negative impacts of residential development on retention of nearby farmland by utilizing stream corridors and woodlands as natural buffers, prohibiting the extension of public sewer and water service, avoiding increased residential traffic levels on rural roads, and maintaining large tracts of farmland acreage. Residential development located within the agricultural area should not be permitted because of negative impacts on

residents, e.g., tractor noise, pesticide and fertilizer application, unpleasant odors from animal keeping, dust, and slow moving farm vehicles. Residents also create negative impacts on farming operations by filing nuisance complaints, trespassing, and damaging property. The primary objective is to halt the conversion of prime farmland within the Township's established agricultural zone to suburban use because increased property values and the introduction of public sewer and water facilities result in the irreversible destruction of farmland.

A key finding by the Middlesex Somerset Mercer Regional Study Council in their March 1982 report to the Township Committee entitled Agriculture Retention in Cranbury, found, in part, that "Cranbury is the heart of agricultural production in a larger area of which Cranbury is the center. If Cranbury's farmland is lost, it will jeopardize farmland in the surrounding region." A careful review of the boundaries of Cranbury's agricultural zoning district shows its natural extension into Plainsboro, West Windsor, and South Brunswick Townships.

Figure 4 shows the potential agricultural areas in Cranbury Township, as delineated by The Middlesex Somerset Mercer Study Council based upon the following criteria:

1. Soil Conditions: As large a proportion as possible of the best soil should be included in retention areas, although non-prime soils may also be valuable for some types of agriculture.

2. Protective Natural Buffers: Buffers, such as stream corridors or wooded areas, are good ways to protect agricultural land from intruding uses.
3. Traffic: Agriculture should be undivided by major roads or by railroads.
4. Contiguity of Fields: The area should be relatively free from intrusion of conflicting suburban land uses,
5. Urban Infrastructure: The area should not be served by water or sewer and there should be no current plans for same.
6. Regional Plans: State and county plans should be supportive of agricultural use.
7. Water Supply: Water should be available where necessary for agricultural operations.
8. Other criteria as recommended by the Town's citizens and professional farmers.

The Study Council recommended that areas A and B (see Figure 4) be protected from development; however, if the Township felt that it needed "to meet growth demands, Area B could possibly be developed without jeopardizing the viability of Area A" because Area B was surrounded by industrial uses, in close proximity to the New Jersey Turnpike, and

within the path of potential sewer extensions. Most of Area A has since been planned and zoned for agricultural preservation. According to the Township Master Plan, the area earmarked by the New Jersey State Development Guide Plan for agricultural conservation is generally that located west of the Village. This area encompasses 4,490 acres of land. The findings of a review of all parcels consisting of five or more acres are summarized below:

1. Total number of parcels - 78 with an average area of 50 acres
2. Number of parcels with farmland assessment - 65, or 83%
3. Total land area studies - 3,999.4 acres
4. Land area with farmland assessment - 3,739.9 acres, or 94%
5. Farmland assessment per acre - from \$126 to \$1,041, with an average of \$419
6. Land area under other than farmland assessment - 259.5 acres
7. Number of parcels under other than farmland assessment - 13
8. Average non-farmland assessment per acre - \$2,487
9. State equalization ratio - 68%
10. Number of parcels owned by non-Cranbury residents - 28, or 35.9%
11. Number of acres owned by non-Cranbury residents - 1,647.7, or 41.2%

Area B was designed for industrial, commercial, and high density residential development because of its positive relationship to major roadways, public and private infrastructure, and existing development patterns in Cranbury Village and Monroe Township. Even though agricultural land within Area B must be given up to support intense

suburban development, it appears reasonable to do so to meet the Township's housing and other needs. This would be similar to the Twin Rivers PUD in East Windsor which was also built on a productive potato field and designated the first PD zone in New Jersey because of its proximity to the New Jersey Turnpike, Route 33, and existing development in Hightstown Borough.

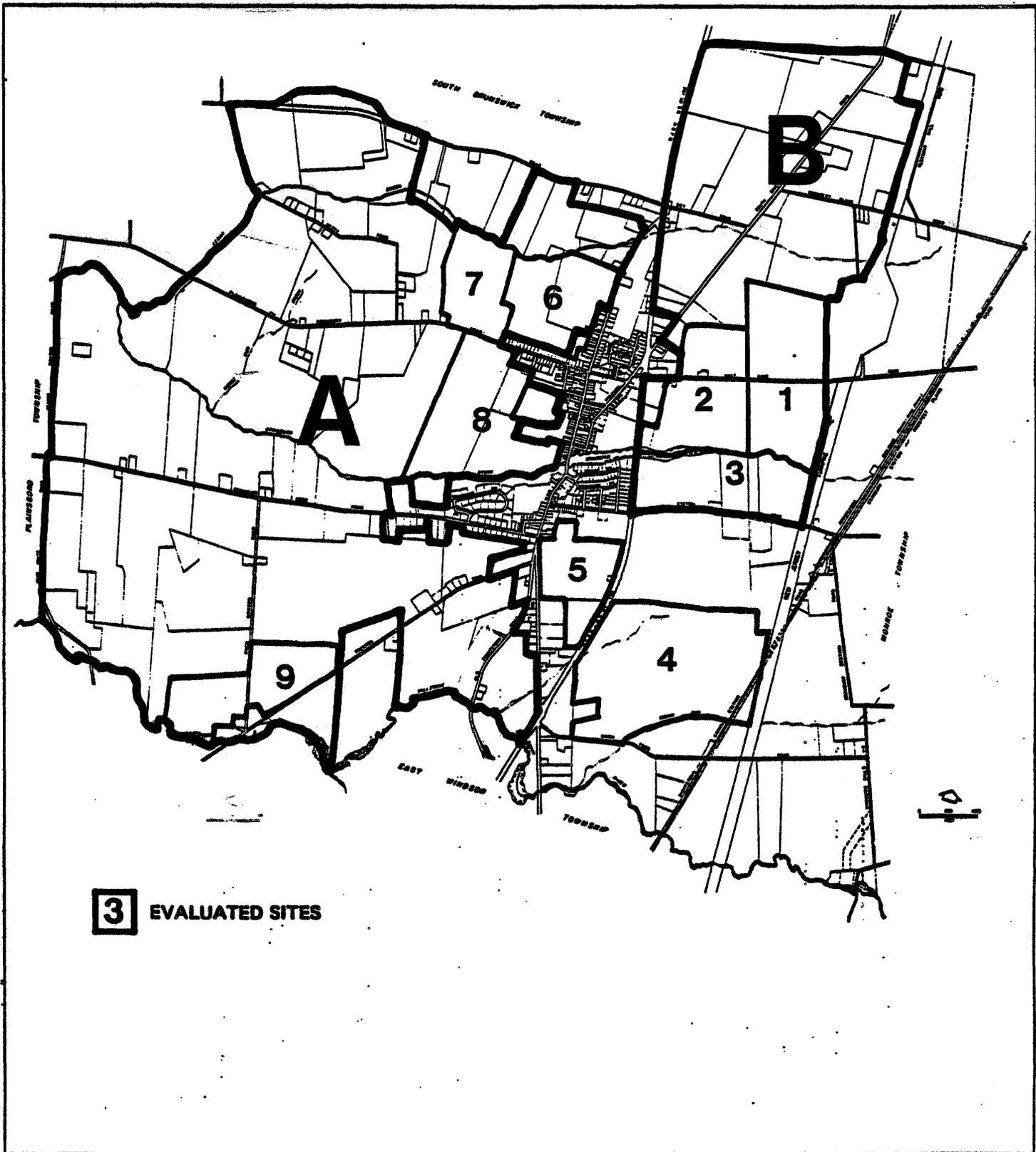
MSM identified 31 farm operations in the Township that were involved in the production of grain, potatoes, nursery items, tree fruits, flowers, vegetables, hay and soybeans, as well as cattle raising. All of this activity is important for the local economy, local job opportunities, and the satisfaction of regional food needs. Understandably, MSM thus considers farmland to be an important, irreplaceable natural resource.

2. Site Analysis

Analysis of Figure 4 reveals that sites 4 and 5 are both located outside of potential agricultural areas. Development on site 4 would probably have the least detrimental impact on farming in Cranbury because of its remote location from Area A and Area B and lack of on-site agricultural activity. Site 5 contains prime agricultural soils and is presently being farmed, but is ideally located for residential development because of its accessibility to Route 130 and the New Jersey Turnpike and its proximity to existing development. Sites 1-3 are located within Area B on Figure 4. These sites are predominantly under farmland assessment and produce grain, hay, and potatoes. According to the MSM "Agriculture Retention" report, site 1 has an absentee owner while large portions of site 2 and 3 are owner-operated or have a Cranbury owner. Sites 1-3 would

continue to be good agricultural sites if they were not located within a major Cranbury development corridor and needed by the Township to absorb external growth pressures from Monroe Township, Exit 8A of the New Jersey Turnpike, and South Brunswick industrial/residential development along Route 130. Cranbury Village and Route 130 serve as buffers between the agricultural conservation zone in Area A and high density zone which contains Sites 1-3.

Sites 6-9 are located within the primary agricultural area as identified on Figure 4. Residential development on any of these sites would begin to erode the rural character of Cranbury Township, promote inefficient sprawling land use patterns and create unnecessary conflicts between farmers and new residents. The agricultural preservation district (Area A) which exists west of the Village and extends into Plainsboro, South Brunswick, and West Windsor Townships is vital to the rural economy of the region. It is also protected from undesirable development pressures by large floodplain areas, woodland buffers, the presence of historic Cranbury Village, and a lack of public utilities.



CRANBURY TOWNSHIP Middlesex County, New Jersey

Figure 4
POTENTIAL AGRICULTURAL AREAS

MIDDLESEX COUNTY LAND USE PLAN

1. Criteria Description

Development area should be consistent with the draft 1979 Middlesex County Year 2000 Land Use Plan which sets forth population and employment levels and land use distributions expected to materialize in accordance with certain recommended land use goals and policies.

The County Master Plan was designed to provide a regional context for municipal master plans so that, in the aggregate, growth and conservation needs would be balanced, available public funds would be allocated in a responsive and cost-effective manner, and county-wide housing needs would be capable of being satisfied in an efficient and equitable manner.

The County plan was developed in conformity with the State Development Guide Plan as well as with the plans and guides of the Tri-State Regional Planning Commission and the Middlesex County Housing and Development Committee, 208 Policy Advisory Committee, and Transportation Coordinating Committee.

To accommodate the growth projected for the year 2000, the Plan provides an additional 16,000 acres of land for housing, an additional 15,000 acres of land for economic development, and an additional 7,000 acres of land for parks and recreation. Full development of the county is not anticipated until well past the year 2000.

The Land Use Plan element of the overall County Plan establishes a variety of land use categories based upon projected growth and includes

the following designations: Residential; Non-Residential; Open Space/Conservation; Agriculture; Undeveloped; Major Institutions; and Proposed Planned Unit Development. The major spurs to development in southern Middlesex County are Routes 130 and 1 and Exit 8A on the New Jersey Turnpike. Along Route 1, development pressures originate from the Trenton area, Princeton-Forrestal Center in Plainsboro Township, and the Carnegie Center in West Windsor Township, while along Route 130 development pressures originate in South Brunswick and to the east in Monroe Township. Another source of development pressure on Cranbury Township in addition to those emanating from the New Jersey Turnpike Exit 8A is the industrial growth along Route 571 in East Windsor.

The Middlesex County Planning Board "Land Use Goals and Policies" document states that the Land Use Plan was designed to:

1. Provide enough land to meet residential and non-residential demand to the year 2000
2. Closely link most new development with existing development and infrastructure
3. Channel public investment to serve existing development and planned growth areas
4. Preserve critical natural resource lands needed to support growth through public investment policies and other policies designed to channel growth to planned growth areas

5. Develop jobs, dwellings and services in physical proximity to each other, or easily accessible via transportation and transit linking compact residential and job centers

6. Discourage thinly-scattered growth which requires uneconomical and unaffordable expansion of public infrastructure and services

Within Cranbury Township, the County Plan establishes five land use categories: Residential; Non-residential; Open Space/Conservation; Agriculture; and Undeveloped. The land proposed for residential development is generally located north and south of the Village, along Old Trenton Road (reflecting only the already existing development), and along the east side of Route 130 between Brainerd Lake and Half Acre Road. Non-residential uses (commercial, office, and industrial) are proposed to be limited primarily to existing development. By the Year 2000, the plan expects that non-residential development will intensify in the Route 130 corridor and in the vicinity of Exit 8A on the New Jersey Turnpike in adjoining South Brunswick and Monroe Townships, but not in Cranbury.

Most of the land proposed for agricultural use is located west of the Village and includes prime farmlands in active use. This area is part of a broad, 10,000-acre regional agricultural corridor located between Routes 130 and 1 in Plainsboro, Cranbury and South Brunswick Townships. Substantial areas east of Route 130 are also proposed to remain in agricultural use.

The "undeveloped" land designation is limited to the southeasterly portion of the Township in recognition of the poor soil conditions that prevail there. The County Plan mentions that "undeveloped" lands "...are not needed to accommodate projected growth to the year 2000, do not have and are not projected to be served by public growth-supporting infrastructure, and in many cases have some environmental constraint such as high groundwater which makes other than very low density development undesirable and imprudent." The Open Space/Conservation classification is applied along stream corridors because they are critical natural resources.

On July 25, 1983 the County planning staff sent a letter to the Township which found the Township's proposed zoning ordinance in conformance with the policies and programs of the County's adopted and/or cross-accepted comprehensive master plan elements. The County Planning Director went on to state that: "...these tools will take some getting used to. But to us, they seem like a far more constructive and positive step than opting for the status quo, and then watching the character of the township slowly change as farms and farmland disappear, and Cranbury becomes simply another part of regional sprawl. This ordinance could help to prevent that." Obviously, special emphasis within the ordinance was placed on preserving farmland west of Cranbury Village and permitting intense development between Route 130 and the New Jersey Turnpike.

2. Site Analysis

Sites 1 and 3 are shown on the County Plan for agriculture and non-residential development, e.g. light manufacturing, offices,

warehousing and/or commercial. Site 2 contains not only agriculture but also residential development near Route 130. Open space/conservation has been placed along both sides of the Cranbury Brook through Sites 1-3. The County Plan has shown all of Site 4 as "undeveloped" and Site 5 as "residential." A portion of Sites 6 and 8 located behind existing residential development on Plainsboro Road and Main Street has been shown as "residential" while the remainder of Sites 6 and 8 west of the Village and all of Sites 7 and 9 have either agricultural or open space conservation designations. The Township's zoning districts which were endorsed by the County Planning Board staff as containing appropriate refinements to their draft plan accurately reflect the County Plan designations.

Both the Township Zoning Ordinance Map and Land Use Plan show Sites 1-3 in a high density planned development district, Site 4 in a light impact residential category, Site 5 as a medium density planned development, and all of Sites 6-9 in "Agricultural". The local plan is basically consistent with the County's plan with respect to Sites 4-9 while Sites 1-3 have been shown for more intense development on the local plan to accommodate external growth pressures, provide for needed housing, and preserve farmland west of Cranbury Village.

TOWNSHIP LAND USE PLAN AND ZONING ORDINANCE MAP

1. Criteria Description

New developments should be consistent with the 1982 Cranbury Township Land Use Plan and Township Zoning Ordinance Map.

The Land Use Plan shown on Figure 5 is based on an overall development strategy for Cranbury Township designed to help it achieve its goals in the areas of agricultural and environmental conservation, residential and economic development, circulation improvement, and the provision of needed community facilities and utilities. The Zoning Ordinance Map is consistent with the Land Use Plan which reflects major land use patterns and development proposals. The principal public goal proposed to be achieved through the development and eventual implementation of the Land Use Plan is the preservation of as much as possible of the Township's agricultural economy and historic character while making appropriate provision for anticipated growth needs.

Cranbury Township has a well-documented history of trying to encourage intense development within the Route 130/Turnpike growth corridor. The 1969 Zoning Map showed an R-170 Rural District west of Cranbury Village and an Industrial District east of Route 130 extending to the Monroe Township boundary line. The 1979 Master Plan establishes one (1) acre lots for a residential district west of the Village while the area between Route 130 and Monroe Township was designated for highway business, office-light industrial, and light-industrial development. The 1982 Land Use Plan and Zoning Ordinance are basically consistent with this past land use philosophy.

The following summarizes and defines the various areas on the Land Use Plan and Zoning Ordinance Map which might directly impact the desirability and feasibility of locating residential development on various sites.

a. Agricultural

The Township's agricultural lands are located mainly in two areas: (a) west of the Village and south of Cedar Brook; and (b) between Route 130 and the New Jersey Turnpike. The latter are part of an area designated in the State Development Guide Plan as a growth corridor. The lands lying to the west of the Village have been designated as an Agricultural Preservation Area because they are remarkably cohesive and free of non-agricultural intrusions. In this area, encompassing approximately 3,650 acres nearly three quarters of which are in Class I and II soils, residential development is permitted on six-acre minimum lots.

b. Light Impact Residential

The high ground water table in these areas makes them generally unsuitable for intensive development. Since some discrete portions are undoubtedly useable, that these areas were given a "light impact" residential classification limiting residential development to three-acre minimum lots and permitting single family detached residences, along with agricultural, recreation, and conservation uses. Where it can be shown that no environmentally adverse impacts would result, residential development in these areas can be clustered on lots with a minimum of one acre.

c. Low Density Residential

Vacant and developed residential areas south of Old Trenton Road, as well as a minor enclave north of the Village between Main Street and Route 130, are included in this land use category. Some of these agricultural areas have preliminary approvals for one-acre subdivisions. Uses in these areas are limited essentially to single family detached residences and supportive community facilities which enhance a residential environment. The basic permitted density require 2 acre lots, with permission to develop on one acre lots being achievable only upon provision of either sewers or water.

d. Medium Density Planned Development

The area generally located between Main Street and Route 130 south of the Village is designated for medium density residential development.

It should be noted that running through this area is a proposed extension of Old Trenton Road to Route 130. A schematic alignment for this road is shown on the Land Use Plan map.

e. High Density Planned Development

The area east of the Village, between Route 130 and the New Jersey Turnpike, presents the best opportunity for the expansion of the built-up residential component of the Township. It is connected to the heart of the Village by means of Half Acre and Station Roads, and it contains lands which, except for the temporary absence of services, are suitable for higher density development. To make such

development possible, the Township's facilities plan already proposes that the 24-inch sewer line which presently dead ends at Scott Avenue, be extended eastward.

Building types to be permitted include the full range, from single family detached to town houses and apartments in fee simple, condominium, or cooperative ownership, or for rental occupancy. Building heights are limited to achieve the desired community character. The plan recommends that the mix of housing types be regulated to assure that the housing styles represented in the area in substantial quantities will include attached single-family homes, town house condominiums and/or cooperatives, and rental units.

f. Commercial Land Uses

An underlying principle of the commercial land use plan is the proper grouping of various commercial uses by primary functions and land use requirements. New commercial development consolidated into compact areas so that retail strength will not be diluted by random spread. Concentration also facilitates the making of proper provisions for loading and off-street parking, which, by eliminating frequent curb cuts and curb parking, helps to reduce traffic frictions on major streets.

Two types of commercial land uses are shown in the Plan. The Plan continues the commercial uses in the Village and provides for limited highway commercial use expansion along Route 130. Major retail or large commercial shopping center development is not

envisioned by this Plan as regional shopping needs are adequately serviced by the shopping centers located in East Windsor, West Windsor, Monroe, Plainsboro, and Lawrence Townships.

The designated commercial land use areas within the Township are as follows:

- (1) Village Commercial. This is a small scale retail convenience center oriented in use and sized to service mainly the convenience needs of the immediately surrounding Village area.

- (2) Highway Commercial. These areas are intended to provide the full range of retail and service activities required to serve the Township's local needs. The area proposed for Highway Commercial uses is intended to include only existing commercial uses on Route 130 and those adjacent vacant lands which are deemed unsuitable for any other uses by reason of the impact thereon of the existing uses. This narrow delineation is specifically intended to prevent the kind of strip commercial development that has marred so many principal state highway frontages in other communities and is also an expression of the Township's policy to maintain the vitality of the commercial uses in the Village.

- (3) The Village Historic District. Cranbury's Historic District defines the Township's culturally and architecturally significant area. Almost as important, it provides a prominent

physical identity not commonly found in other municipalities. Because of this, the plan urges that the Township deal sensitively with adjoining areas and that it carefully regulate the intensity of development within the Village area.

g. Industrial

The area located east of Route 130 and north of Dey and Prospect Plains Roads adjoins an area zoned for intensive industrial use in South Brunswick. This area, which is also zoned for industrial uses at present, was set aside for a range of industrial wider uses than that permitted in any other area in the Township, but excluding any uses whose presence would be environmentally unacceptable.

h. Corporate Office and Research

The areas east of Route 130 and closest to the existing and proposed higher density residential areas of the Township were designated for corporate offices and research establishments at the highest achievable development standards. It is believed that this area could attract high quality corporate office users interested in high visibility, corporate image, and long-term stability of property values. Research uses within this zone are intended to be similar to the General Foods and Carter Wallace facilities and therefore be fully compatible with other corporate offices and adjoining residential developments.

i. Light Impact Industrial

The use of this classification is almost entirely limited to the area located east of the New Jersey Turnpike which is also currently zoned for industry. All of Cranbury's existing major office-research corporations are located within this zone. Portions of this area, particularly south of Station Road, suffer from some natural environmental constraints which would tend to restrict its development. Further, Brick Yard Road which provides access to this portion of the area has limited ability to serve high traffic volumes.

2. Site Analysis

Sites 1-3 are consistent with the Cranbury Township Land Use Plan because they are located in a high density planned development district close to highway commercial and industrial land use patterns. Vehicular access to Route 130 and the New Jersey Turnpike is excellent. Route 130 creates a significant barrier between the high density development district and the National Historic District of Cranbury Village. A major treed area and floodplain corridor is shown separating Sites 1 and 2 from Site 3. These areas can be permanently protected from development encroachment during the site plan review process. To better integrate Sites 1-4 with the area west of Route 130 and to reduce the hazard which the need to cross that artery would present to residents, it has been proposed that two pedestrian overpasses into the Village on either side of the lake shown on Figure 5 be required as an off-site improvement.

Site 4 is located in the Light Impact Residential District between Route 130 and the New Jersey Turnpike next to highway commercial and industrial

zoning patterns. Although the site has good locational characteristics, it appears undesirable for high density residential development because of significant environmental constraints, e.g. high water table, major treed areas, floodplains. The Middlesex County Land Use Plan stated that environmental constraints on similar sites made other than low density residential development "very undesirable and imprudent." The extent, if any, of those portions of the site that can "support higher density housing will have to be determined.

Site 5 is located in the Medium Density Planned Development District between Main Street and Route 130 directly south of Cranbury Village. This site is basically consistent with the Land Use Plan because of its excellent relationship to nearby industrial and commercial land use patterns and accessibility to regional roadway patterns. Sites 6-9 are totally inconsistent with the Township Land Use Plan because of their "Agricultural" designation.



- | | | | |
|--|---|--|-------------------------|
| | Agricultural (one d.u. per 15 acres) | | Light Impact Industrial |
| | Light Impact Residential (one d.u. per 3 acres) | | Industrial |
| | Low Density Residential (one d.u. per acre) | | Highway Commercial |
| | Medium Density Village (3 d.u. per acre) | | Village Commercial |
| | Medium Density Planned Development
(one to 3 d.u. per acre) | | Public / Semi-public |
| | High Density Planned Development
(one d.u. per 2 acres to 4 d.u. per acre) | | Park |
| | National Historic District | | Pedestrian Link |
| | Corporate Office and Research | | Major Tree Area |
| | | | Master Plan Road |

Land Use Plan

CRANBURY TOWNSHIP

MIDDLESEX COUNTY, NEW JERSEY

Figure 5

ADJACENT LAND USE PATTERNS

1. Criteria Description

New developments should be compatible with existing or proposed adjacent land use patterns, density, and character, and should not adversely impact existing residential neighborhoods or create potential rezoning requests or environmental degradation.

In addition to achieving compatibility with existing land use patterns it is desirable that development areas also take into consideration land use plans and patterns of adjoining municipalities and the larger regional planning framework.

2. Site Analysis

Sites 1-3 are predominantly agricultural with some residential dwellings and farmsteads. The Brainerd Lake and Cranbury Brook plus treed areas separate Sites 1 and 2 from Site 3. These sites are bounded by open fields directly to the north, Route 130 and Cranbury Village to the west, farmland and warehousing to the south, and the New Jersey Turnpike plus some industrial development to the east. Present zoning around Sites 1-3 is for either industrial or commercial development which is totally compatible with high density residential development. In Monroe Township, the land bordering on Cranbury Township near Sites 1-3 is primarily in a Light Impact Industrial zone which permits office development, enclosed warehousing, business-professional offices and similar activities. The presence of the Turnpike service area and Turnpike next to Sites 1 and 3 are generally inconsistent with sound residential development planning. However, buffers, e.g. open space,

recreational facilities and/or commercial/industrial land uses, could be placed between the service area and homes to mitigate the impact.

The industrial uses permitted in Monroe Township are less intensive than those permitted in South Brunswick. Industrial activity near Exit 8A of the New Jersey Turnpike in the vicinity of Forsgate Drive is projected to produce 3.5 million square feet of new office, warehousing, and light manufacturing space. Rossmoor, a planned retirement community which contains approximately 2,500 dwelling units, is located adjacent to Cranbury Township in the vicinity of Sites 1-3. Other major existing planned retirement communities, e.g. Concordia and Clearbrook, are located further east in Monroe Township on Cranbury Neck Road and Jamesburg Half Acre Road. A 2,510 unit retirement community called Balentrea has recently been proposed within the Light Impact Industrial zone adjacent to Cranbury Station Road, Applegarth Road, and Reed Road. A major portion of Balentrea is located directly opposite the Monroe Development Associates' 700-unit potential Mount Laurel II builder's remedy site along Cranbury Station Road adjacent to Cranbury Township.

Site 4 contains major treed areas, vacant land, and flood plains. It is bounded by Route 130 and commercial land uses at the Cranbury Circle to the west, New Jersey Turnpike to the east, Indian Creek Run, treed areas and industrial land uses (e.g. Filigree Concrete, Browning Ferris Industries) to the south. Lands to the north are zoned for industrial development, but are now primarily being farmed. Present zoning around Site 4 is compatible with high density residential development given the

fact that natural buffers exist on-site to separate dwelling units from existing and/or proposed industrial uses and the New Jersey Turnpike.

The boundary between Cranbury and East Windsor is located south of Site 4 and Brick Yard Road and is defined by the Millstone River. The low lands and treed areas adjoining that waterway act as an effective buffer between the two communities. East of the New Jersey Turnpike beyond the Cranbury Township limits is located the Twin Rivers PUD and land zoned I-O, Industrial Office. Between the Turnpike and Old Trenton Road, the land is zoned in several residential classifications (R-1 to R-4) with zoning densities ranging from two to 16 dwelling units per acre. The Hampton Arms and Windsor Regency Apartments totalling 566 units are located off North Main Street in East Windsor close to the Millstone River. The Georgetown residential development of 172 condominium townhouses is now under construction in East Windsor Township between Route 130 and North Main Street while a 110 unit senior citizen project is being built adjacent to the Millstone River along North Main Street.

All of Site 5 contains farmland. It is bounded by Route 130, scattered commercial uses, and a portion of Site 4 to the east, vacant land, a church, and commercial uses to the south, a greenhouse to the west, and the Mecca Development--a new 22 lot residential subdivision containing homes priced between \$179,900-\$230,000 plus the Cranbury Historic District to the north. Residential developments on Site 5 would be a natural extension of existing development which now surrounds the site.

Sites 6 and 7 are located near South Brunswick Township along Plainsboro Road and Main Street. Site 6 contains land which is generally flat and has been used for productive farming even though it is immediately adjacent to Cranbury Village. Site 6 is bounded by Main Street, the historic village and residential land uses to the east, single family detached homes to the south along Plainsboro Road, farmland to the west and floodplain, vacant property and farmland to the north. Site 7 is bounded by Site 6 to the east and is a natural extension of farmland from the west which abuts the Village. Plainsboro Road and more farmland is located to the south of Site 7 with vacant property, floodplain and major treed areas located to the north.

The area north of Dey Road in South Brunswick Township near Sites 6 and 7 is zoned A-3, Rural Agricultural, requiring a minimum of three acres of land per dwelling unit. The area is now in agricultural uses which include orchards; some of this land is wet. Along both sides of Route 130 as far east as the boundary of Monroe Township is an I-3, General Industrial Zone which permits such uses as offices; lumber, coal, fuel and general storage yards; manufacturing, including chemical production; and a variety of other intensive uses. Cranbury's existing industrial zone is compatible with the adjacent South Brunswick industrial zone.

Site 8 contains farmland, an orchard, nursery and a farmstead. It is bounded by a greenhouse, elementary school, and the village historic district to the east, single family homes and farmland to the north, farmland to the west extending to the Plainsboro Township boundary line, and the Cranbury Brook to the south. Approximately 1,400 acres of land

adjacent to Cranbury in Plainsboro Township between the Millstone River and Cedar Brook is zoned R-100, Agricultural, at one dwelling unit per 6 acres. Land in Plainsboro adjacent to Cedar Brook and Petty Road, which is zoned for Planned Development, is being developed by the Linpro Company for a variety of town house and multi-family residential uses. Within the Linpro project an open space buffer along Cedar Brook will protect future homes from flooding and from any effect of continued agricultural use of lands in Cranbury Township. This will also tend to protect Cranbury's agricultural land from the negative impacts of nearby residential settlements.

Intense residential development on Sites 6, 7, and 8 would not be compatible with existing agricultural land uses and the historic village and would tend to undermine the policy of agricultural preservation in Plainsboro Township.

Site 9 primarily contains farmland with extensive floodplains and treed areas along the Millstone River. This site is located adjacent to the Shadow Oaks development--a new 119 lot residential subdivision containing homes priced between \$185,000-\$300,000 and farmland in Cranbury Township. The site is bounded by the Millstone River and East Windsor Township to the south. The land in East Windsor is zoned R-3 and R-4 permitting from 12 to 16 dwelling units per acre. Existing development in these high density zones include: a 300-unit "Windsor Mews" garden apartment condominium project and recently approved Windsor Hollow and Windsor Commons projects which total 478 additional townhouses and apartment condominiums. Along Old Trenton Road and Route 571 in east Windsor

directly south of these projects are located the RCA Space Center, Carter Wallace, McGraw-Hill, and Windsor Center--a proposed one (1) million square foot office research park that is currently being developed.

Site 9 is effectively buffered from development in East Windsor by an extensive floodplain and tree masses which protect it from intense development pressures. It is impossible to even catch a glimpse of East Windsor from Site 9 because of the extensive natural buffering along the Millstone River. Development on Site 9 will remove active farmland from production and increase pressures to convert other adjacent sites to residential land uses. The Shadow Oaks development is a classic example of how a new area along Old Trenton Road can develop and begin to influence the conversion of other sites from agriculture to residential uses. If Site 9 were to develop residentially, it would have a similar influence, in combination with Shadow Oaks, on adjacent farmland parcels.

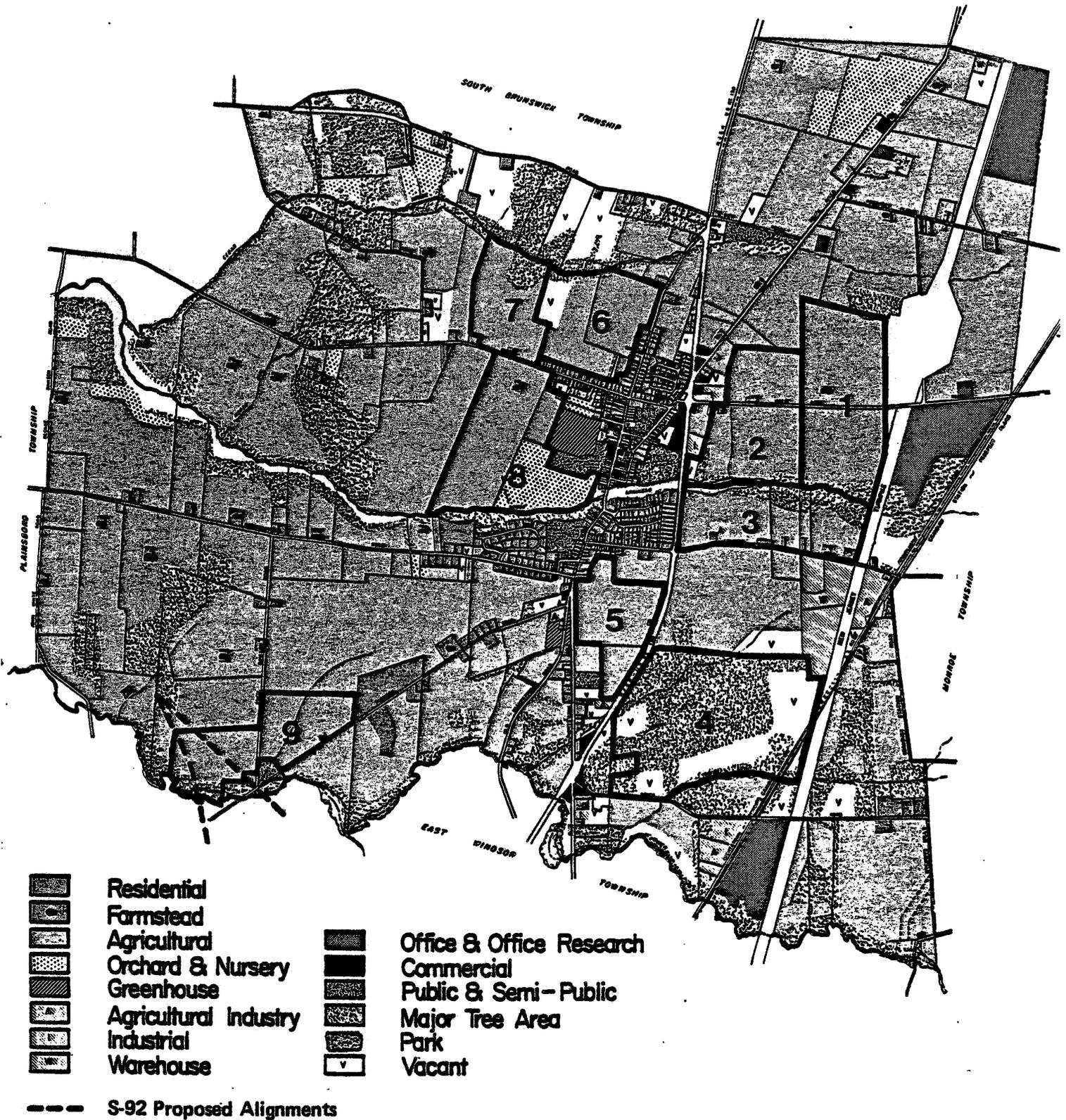
Another major drawback to any early development on Site 9 is the proposed location of State Route 92 through Block 22 Lot 8. Figure 6 reveals two (2) major alternative alignments which are now being seriously considered and evaluated by the New Jersey Department of Transportation. These two 300 foot wide alignments realistically make development on Lot 8 impossible in the near future. The DOT intends to complete and release a draft environmental impact statement in September, 1985 with a preferred alignment for the roadway. Until final decisions are made on the alignment of S92 it seems prudent not to encourage development on Lot 8.

For many years, Cranbury's residential development had focused on the Village area. Shadow Oaks represents the first example of development to have struck out into new areas along Old Trenton Road. Office research uses occur in only four locations along the New Jersey Turnpike. Compared to that in adjoining communities, the overall rate of growth for all types of development in Cranbury has been minimal. For these reasons, the need to continue existing land development trends is less compelling than it might be if a lesser proportion of the community's land were still undeveloped and if the undeveloped areas were scattered among developed ones. Cranbury's planning policies can thus reflect public goals as well as market trends.

Given the strong natural boundaries that separate Cranbury's land uses from those in East Windsor and in that segment of Plainsboro that includes the Linpro Company project, the preservation of agricultural uses in adjoining areas in Cranbury would have no adverse effect on the neighboring communities' residential development. The existing character of the lands in Cranbury is very similar to that of adjoining lands in Plainsboro along George Davidson Road and John White Road and of those in South Brunswick north of Dey Road. The lands in the adjoining communities are mapped in agricultural zones with densities of one unit per 6 acres in Plainsboro and one unit per three acres in South Brunswick. In South Brunswick, the lands along Route 130 are zoned for intensive industrial use to take advantage of their accessibility. Existing uses include scattered warehouse and industrial operations and the existing zoning permits even more intensive uses in the area. For

this reason, the use of adjoining lands in Cranbury for residential purposes is inappropriate.

The zoning for light impact industrial uses of lands in Monroe Township adjoining Cranbury is quite compatible with Cranbury's existing office-research development zone. The zoning in both municipalities enables lands adjoining the New Jersey Turnpike to take advantage of the advertising exposure which this gives them. The high density planned development district between Route 130 and the Turnpike also fits in well with present planning and zoning both within and outside the municipality.

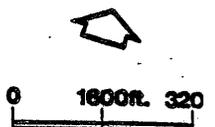


Existing Land Use

CRANBURY TOWNSHIP MIDDLESEX COUNTY, NEW JERSEY

Raymond, Parish, Pine & Weiner, Inc. Consultant, Tarrytown, NY Princeton, NJ

Figure 6



PROXIMITY TO COMMUNITY FACILITIES AND SERVICES

1. Criteria Description

New developments should be reasonably conveniently accessible to existing and/or proposed public and private facilities, e.g. shopping, post office, health care facilities, schools, recreation and playfields, places of worship, library, fire, rescue, and police protection.

The center of activity and location for most community facilities and services in the Township is within the historic village. The scale of existing development in and around the Village permits present facilities and services to meet everyday local needs on a limited basis. The Village has shops and stores, recreational facilities, places of worship, banks and restaurants, a library and post office, fire and rescue squad, a school, and municipal offices. Any major new residential development next to the Village would probably overwhelm the present scale and require more facilities and services to satisfy increased demand at the expense of quiet tree-lined streets, historic structures, and a small town atmosphere. On the other hand, the benefits associated with locating next to the Village would be good fire, police, and rescue squad coverage and the ability for children to walk to the elementary school (grades K-8) located on Main Street. Close proximity to these vital services might not be an advantage, however, if greater traffic impacts increase response and travel times and create traffic hazards.

Other areas of the Township which provide necessary commercial facilities and services are located along Route 130 at the Cranbury Circle and near the intersections of Half Acre Road and South River Road with Route 130.

These areas have been planned and zoned for highway commercial uses, e.g. gas stations, muffler shops, auto repair facilities and restaurants.

The proximity to facilities and services outside of Cranbury Township is also critical to any residential development decisions. North of the Township, off Route 130, is located the village of Dayton with a small cluster of commercial establishments that primarily service South Brunswick Township residents. In Monroe Township, Apple Plaza is located near Rossmoor and a new 40 unit shopping center on 10 acres is now being constructed next to Concordia. To the southwest of Cranbury Township is located a 50,000 square foot Acme Shopping Center along Route 571 in Princeton Junction. The commercial facilities and services offered by the Hightstown central business district and 97,000 square foot Twin Rivers shopping center are located directly south of the municipality. The East Windsor Associates and Jamesway shopping centers which total over 230,000 square feet can be found in East Windsor Township along Route 130. In addition, Shoprite has proposed to build a 200,000 square foot shopping center in East Windsor opposite the Jamesway Shopping Center.

Between the shopping centers in East Windsor extending down to Route 33 on Route 130 is a builtup strip commercial area. Toward the west in Plainsboro Township exists the Linpro Shopping Center and proposals are to build over 400,000 square feet of new commercial space along Route 1 in Forrestal Village and within the general business zone at the intersection of Plainsboro Road and Schalks Crossing Road. Beyond the municipalities located immediately adjacent to Cranbury Township is the

Princeton Medical Center, 220,000 square foot Princeton Shopping Center, and 1.2 million square foot Quakerbridge Mall in Lawrence Township on Route 1 near I-295.

Major subregional convenience centers either exist or are proposed for East Windsor and Plainsboro Townships. Other factors are the possibility of clustering development parcels to generate large numbers of dwelling units that can be economically serviced by police, fire, and rescue facilities and discouraging the location of residential development which would overtax the existing services found in the Village.

2. Site Analysis

Sites 1-5 are located in close proximity and with easy access to the Apple Plaza and Concordia Shopping Centers in Monroe Township while Sites 2 and 4 are located adjacent to highway commercial zones along Route 130 in Cranbury Township. Plaintiffs for Sites 1 and 4 have proposed to construct neighborhood and/or convenience commercial facilities. Sites 1-5 also have easy vehicular access to Route 130 and the major subregional shopping centers to the south in East Windsor Township. Sites 1-4 can be serviced without disrupting the existing historic village while Site 5 can be serviced from many different directions, e.g., Cranbury Village, south in East Windsor Township, and west in Plainsboro Township. Sites 6-8 have ready access to the Village and commercial development in Plainsboro. Site 9 has proposed to set aside a 1 acre convenience commercial parcel and is serviced by both the East Windsor/Hightstown area and Cranbury Village.

Another important factor is the potential for building a neighborhood convenience center in Cranbury that is located within or next to intense residential development which does of promote sprawling land use patterns or lengthy travel times, or which create negative traffic impacts on the village. Based upon the previously discussed criteria, it would appear that Sites 1-4 are ideally located, followed by Site 9 and then Site 5. Sites 6-8 would either depend on Village facilities or would have negative impacts on agricultural preservation because of the new residents' travel to commercial facilities in Plainsboro Township.

The development of new residential units will probably require the construction of new school, fire, and rescue squad facilities in Cranbury. The ideal location would be within Sites 1-3 because of the anticipated number and density of the dwellings to be erected in a relatively small area. Recreational facilities exist within the Village for the existing population. Any new residential development proposal would be required to incorporate recreational facilities in the overall site plan to satisfy anticipated demands generated by new residents.

ACCESSIBILITY

1. Criteria Description

New developments should have easy and safe access to adjacent and/or surrounding roadways that are capable of accommodating safely the increased residential traffic flows.

New developments should either be adjacent to or within close proximity of the New Jersey Turnpike and other principal, major, and minor arterial roadways to provide fast, easy, and convenient access to existing and/or proposed commercial and industrial employment centers within and outside the municipality. Developments should also be located within easy access of existing and/or proposed public transportation routes and facilities.

Various roads in Cranbury Township are under the jurisdiction of three levels of government: state, county, and local. The only state road (exclusive of the New Jersey Turnpike) is Route 130; South River, and Main Street are county roads; township roads include most of the remainder.

For purposes of analysis in Cranbury, however, the functional use of roads rather than jurisdiction is the better indicator of the purpose they serve. Understanding the type and function of roadways is an important first step in analyzing the capacity of the local circulation system preliminary to the implementation of whatever improvements may be required in the future.

a. Principal Arterials

Route 130, a four lane road, is the only principal arterial currently operated by the state with access in Cranbury. Ideally, this type of road, which provides region-wide service, should be a limited access facility, linking major arterials. This is not the case in Cranbury, however, where several commercial strip developments with access to the highway are scattered along its entire length.

Another major state road, Route 92, is currently under consideration. If constructed, this road could run from Route 1 in South Brunswick to Routes 130 and 33 in East Windsor through the southwest agricultural corner of Cranbury. The New Jersey Department of Transportation is also studying an alignment which would connect Route 1 with Exit 8A of the Turnpike which would keep the entire roadway out of Cranbury Township. This alternative alignment is supported by Plainsboro, Cranbury, and South Brunswick Townships in addition to the Middlesex County Planning Board. The feasibility and character of this proposed facility will not be firmly determined until after September 1985 when a draft environmental impacts statement is intended to be released by the Department of Transportation for review and comment. A possible alternative to Route 92 that has been advanced is the improvement of Dey Road from Scudders Mill Road in Plainsboro to Route 130 in Cranbury Township.

b. Major Arterials

These serve as major channels for the movement of people and goods between principal arterials. Ideally, they should be designed with rights-of-ways ranging from 80 to 120 feet, and with direct controlled access from roadside properties. The only road in Cranbury that would qualify for designation as a major arterial by virtue of its being the main link between Exit 8A of the New Jersey Turnpike and Route 130 is South River Road. The existing right-of-way of this highway ranges from 66 to 93 feet. The County proposes that it be widened to a uniform width of 120 feet.

c. Minor Arterials

This type of roadway consists of intracommunity links between major arterials and local development concentrations. In developing areas, many minor arterials evolve from purely local roads that provide access to properties into important components of the regional arterial system as the intensified development in the region increases the volumes of traffic which they are called upon to carry.

Most of the minor arterials in Cranbury are county roads. These include Old Trenton Road, Station Road, Hightstown Road, Main Street, Maplewood Avenue, Park Place, and Cranbury Neck and Dey Roads. As stated above, one of these roads, Dey Road, may change function, although not jurisdiction, as the Route 92 feasibility study unfolds. With the construction of Scudders Mill Road in Plainsboro and the improvement of Ridge Road in South Brunswick, Dey Road could become a major arterial.

The only township road which now serves as a minor arterial and which is also the principal road serving the Linpro development in Plainsboro is Plainsboro-Cranbury Road which connects Route 1 with Route 130. Studies anticipate that, by the year 2000, the average daily traffic (ADT) from the intersection of the proposed new Scudders Mill Road in Plainsboro with Plainsboro-Cranbury Road will amount to some 11,000 vehicles and the design hour volume (DHV) to 2,200 vehicles. As part of the Route 92 studies, New Jersey DOT will update those figures, and Cranbury will then be able to adjust appropriately its right-of-way requirements and its land development policies.

The Roadway Classification Map (Figure 7) helps identify opportunities for more intensive development and some of the circulation-related constraints which must be observed in the development of a land use plan.

That part of the Township which is located east of Route 130 is best served by a substantial system of principal, major, and minor arterials. The collection and distribution system enable traffic to flow easily to and from Route 130 to the New Jersey Turnpike.

The roadways which pose the greatest potential problems for Cranbury and its Village area are Plainsboro-Cranbury Road, Old Trenton Road, and to a lesser extent, Cranbury Neck Road. Under the existing zoning, these roads will provide regional access to Route 130 through the Village. All east bound traffic generated in Cranbury

between Cedar Brook and the Millstone River as well as all regional traffic that may materialize in time must converge at three intersections and filter through the Village's streets. Under full development, even excluding regional traffic, this will generate approximately 2,000 trips during the afternoon peak hour. Such a high volume of traffic would affect the quality of the officially-designated Historic District, downgrade the livability of the Village's residential areas, and harm its businesses. Minimizing traffic through the Village will enhance its unique character and will help preserve the Historic District.

Tables 1-4 identify adjacent or nearby external growth pressures on Cranbury Township that will create more through traffic impacts of commuters and commercial traffic moving through Cranbury and/or the historic village along local, county, and state roads. It appears that the primary office and research node will be along the Route 1 corridor from South Brunswick to West Windsor Township including Plainsboro, while a secondary node of over 5 million square feet of new office, light manufacturing and warehousing is being developed in South Brunswick and Monroe Township along Route 130 near Exit 8A of the Turnpike. While much of the East Windsor non-residential development is centered on Route 571 between Old Trenton Road and Route 130, significant additional industrial growth could occur in the future within the Twin Rivers industrial park which contains over 400 vacant developable acres near Route 33, Exit 8 of the New Jersey Turnpike, and the Twin rivers Planned Unit development of 2,700 dwelling units.

Just to the east of Cranbury Township in Monroe are the existing residential developments of Rossmore, Clearbrook and Concordia, and proposals to build Concordia II, Balentrea, and another large planned unit development which totals approximately 15,000 dwelling units. In addition to external growth pressures on Cranbury roads, the likelihood exists that residents of any potential new development on Sites 1-9 will also desire to commute out of the township to the Route 1 job corridor, Route 130/Exit 8A industrial areas, or East Windsor Township employment nodes.

Significantly different impacts will occur on local roads depending upon which of these roads are being used as primary means of travel for vehicular through traffic. It is the Township's desire that north/south vehicular through traffic in Cranbury be confined to either Route 130, the New Jersey Turnpike or South River Road--a major arterial. Every effort should be made to isolate the historic village from through traffic impacts, which now occur on Main Street, to preserve its character and charm as a communitywide focal point. East/west travel now uses Dey Road, Plainsboro Road, Cranbury Neck Road, and Old Trenton Road. Efforts should be made to convert Dey Road and Old Trenton Road into major arterials which divert east/west traffic movement from Plainsboro and Cranbury Neck Roads. This will reinforce Township efforts to preserve farmland and the historic village by creating northern (Dey Road between South River Road and Scudders Mill Road in Plainsboro) and southern (Old Trenton Road from Route 571 in east Windsor to Route 130 in Cranbury) bypasses of the Village for east/west through traffic

movements. These roads can generally be improved with the installation of a traffic sign at the intersection of Dey Road and Route 130, the upgrading of Dey Road to South River Road, the extension of Old Trenton Road to Route 130, and the installation of a traffic signal at the intersection of Station Road and Route 130. The planned upgrading of Route 571 between Route 130 and Route 1, the construction of the Hightstown Bypass, and the construction of S-92 between Route 206 and Exit 8A of the New Jersey Turnpike can also significantly reduce east/west through traffic impacts on Cranbury Township.

Another important yet often overlooked factor in reducing traffic impacts on local roads is the location and potential use of existing or expanded transit services. Existing public transportation is provided by the Suburban and South River Bus Companies and AMTRAK. The Suburban Bus Company offers commuter bus service to New York City and the Wall Street area, making pickups between the East Windsor/Hightstown area and East Brunswick including stops at Rossmoor, Clearbrook, and Concordia in Monroe Township; and then traveling to New York City on the Turnpike. A 100-space park and ride lot is being built on Applegarth Road in Monroe Township to handle the increased demand, while another 500-space park and ride lot has been proposed near Twin Rivers. Local bus service is available from the South River Bus Company, which has a bus making one morning and one afternoon round trip from Trenton to New Brunswick along Route 130 with a scheduled stop at Carter-Wallace in Cranbury Township. In addition, commuter bus service is available

from Jamesburg to New Brunswick, Edison and Woodbridge. Commuter rail service is available to the Princeton Junction train station in West Windsor Township which provides service between Philadelphia and New York City with shuttle service to Princeton along the "Dinky". East Windsor Township has recently initiated a shuttle bus service between Hightstown and the Princeton Junction train station for commuters. Also, New Jersey Transit is seriously considering the development of a new train station/park and ride facility at Monmouth Junction in South Brunswick Township.

2. Site Analysis

Sites 1-5 have direct access onto Route 130--a major four-lane median-divided state highway which provides direct linkage to Exits 8 and 8A of the Turnpike and connects Trenton with Route 1 and the New Brunswick area. Sites 1 and 2 have direct access onto Half Acre Road, which is classified as a local road in the Cranbury Township Land Use Plan and a major collector by Monroe Township. Residential development on Sites 1-5 could use Route 130 to travel north to Route 1 or South River Road to Exit 8A while southbound traffic would enter East Windsor on Route 130 to connect with Route 571 for east/west travel or turn into Main Street at the Cranbury Circle to connect with Exit 8 of the Turnpike and/or travel east to Freehold and the Jersey shore on Route 33. Site 3 has direct access onto Station Road, which is classified as a major collector by both Cranbury and Monroe Townships. Future plans for the installation of a traffic signal at Route 130 and Station Road will improve access to Site 3. Both Sites 4 and 5 have direct access onto Route 130. Site 4 also abuts Brick Yard Road and Hightstown-Cranbury

Station Roads which are classified as local roads, while Site 5 has additional access onto Main Street, Cranbury Neck Road, and Old Trenton Road which are classified as minor arterials. The future extension of Old Trenton Road to Route 130 through Site 5 will greatly improve travel towards the south into Mercer County and onto Route 130 from West Windsor Township and development in East Windsor.

Residential development on Sites 1-3 can avoid traveling through Cranbury Village and the major farm corridor on Plainsboro Road by using Dey Road which has been approved by the New Jersey Department of Transportation for signalization and intersection improvements at Route 130. Westerly movement from Sites 4 and 5 would probably use Cranbury Neck Road, Route 571 in East Windsor, and Plainsboro Road--although Dey Road with its superior design standards, is also a distinct possibility. Sites 1-5 are also located within the Route 130/Turnpike corridor which is presently being served by the South River Bus Company and are within close proximity to Suburban Transit and proposed park and ride facilities in Monroe Township. Plaintiffs for Sites 1 and 4 have proposed park and ride facilities to be included to service new intense residential development.

Site 6 has direct access onto Plainsboro Road and Main Street which are both classified as minor collectors. Plainsboro Road has been classified a major collector in Plainsboro Township because of intense industrial and residential development pressures by Linpro. Access from Site 6 to Route 130 would impact existing homes and the historic Village along Plainsboro Road while movement north along Main Street would permit a

more orderly and direct link to Route 130 at a non-signalized intersection.

Sites 7 and 8 have their only access onto Plainsboro Road, which has been identified by the State Department of Transportation as an existing problem area and one of the most congested roads in the Route 92 study area extending from Route 1 to Route 130. Plainsboro Road also cuts through the agricultural zone of Cranbury Township. Any increased traffic levels experienced from development on sites 6-8 would severely impact the historic Village and the Township's ability to maintain farmland as a viable land use in the agricultural zone. Site 9 has direct access onto Old Trenton Road and Ancil Davison Road. Old Trenton Road has been classified a minor arterial and Ancil Davison Road a local road.

Traffic leaving Site 9 and heading in a southerly direction will use Route 571 for major east/west travel. A portion of Route 571 between Locust Corner and Hightstown Borough (Route 33/Main Street intersection) has also been identified by the State Department of Transportation as one of the most congested roadways within the S-92 study area. However, this situation can be overcome by the widening of Route 571 to four lanes and implementation of a Hightstown bypass. Traffic leaving Site 9 and moving north/south will utilize Route 130 and the Turnpike. In order to reach Route 130, traffic must travel along either Route 571 in East Windsor Township or move up Old Trenton Road using Main Street and/or Station Road within the historic Village. This impact can only be mitigated if Old Trenton Road is extended to directly meet Route 130 through Site 5.

Negative traffic impacts on adjacent farmland, the historic Village and Route 571 will occur as a result of development on Site 9 when major planned roadway improvements, e.g., Hightstown bypass, Old Trenton Road extension, and widening of Route 571, are in place prior to development.

Table 1

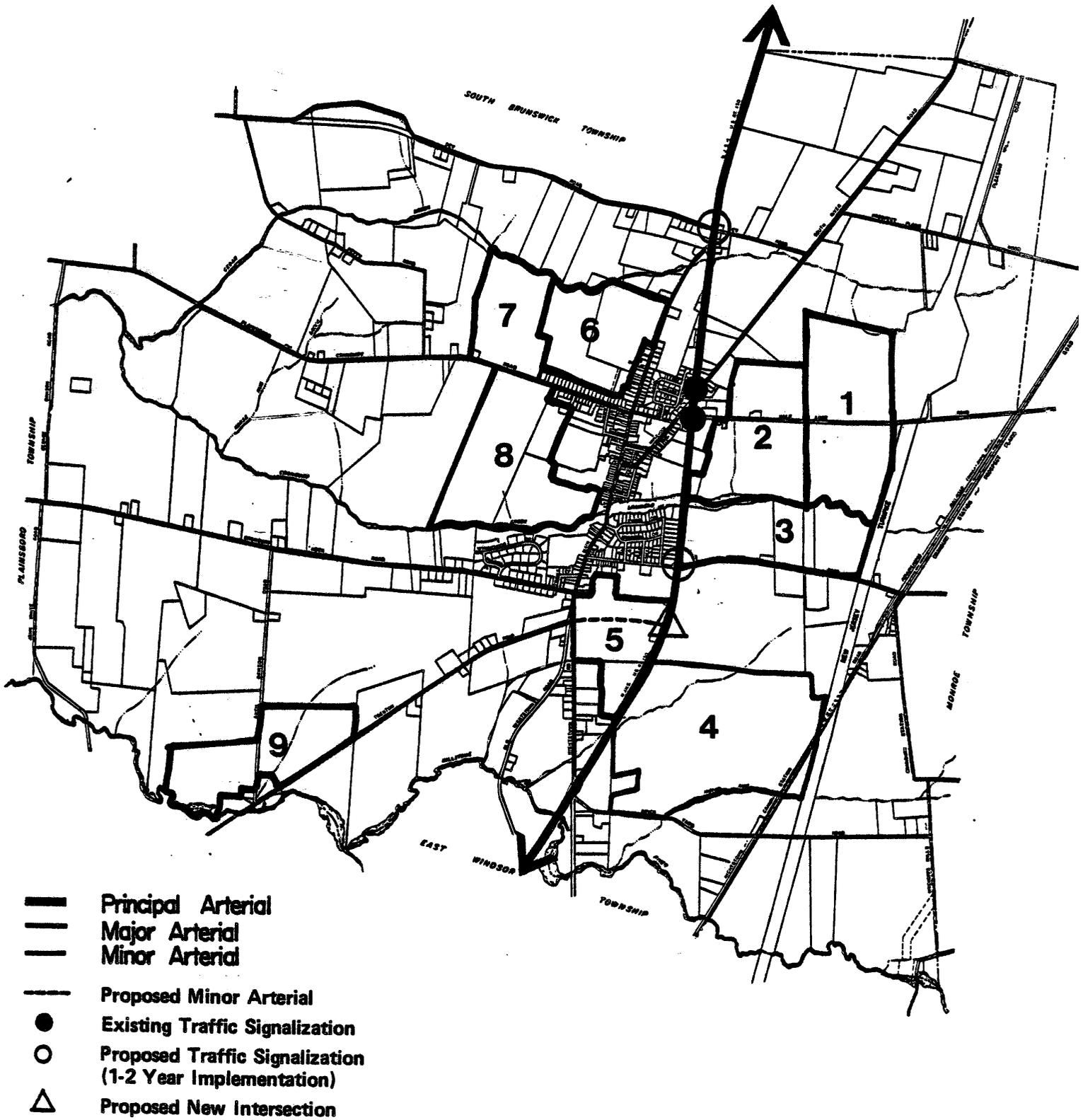
MAJOR INDUSTRIAL AND COMMERCIAL ACTIVITY
PLAN PROPOSALS/UNDER CONSTRUCTION

<u>West Windsor Township - 5,721,700 sq. ft.</u>	
Nassau Park	-- 2,000,000 sq. ft. office/research
Princeton Overlook	-- 250,000 sq. ft. office
Nichols	-- 200,000 sq. ft. office
Goldenson (expansion)	-- 51,000 sq. ft. office
NJ Transit Bldg.	-- 400,000 sq. ft. office
International Corp. Cntr	-- 190,000 sq. ft. office
231 Clarksville	-- 30,000 sq. ft. office
Carnegie Center	-- 2,500,000 sq. ft. office
American Cyanamid	-- 7,700 sq. ft. office
CHE2A II	-- 48,000 sq. ft. office
MacLean Engineering	-- 30,000 sq. ft. office
Zwosee Solar Building	-- 150,000 sq. ft. office
<u>Plainsboro Township - 7,813,222 sq. ft.</u>	
Forrestal Village	-- 1.6 million sq. ft. retail/office (240,000 sq. ft. retail 275,000 sq. ft. hotel 1,085,000 sq. ft. office)
Walker-Gordon	-- 1.5 million sq. ft. office/light manufacturing/warehouse
Bowers GBD	-- 200,000 sq. ft. retail/office
Linpro Industrial Park	-- 850,000 sq. ft. office/light manufacturing distribution
Linpro offices	-- 88,000 sq. ft. offices
Prudential Forrestal Greens	-- 389,222 sq. ft. offices
Merrill Lynch Campus	-- 1.8 million sq. ft.
Princeton Bank Building	-- 154,000 sq. ft. office
Princeton Forrestal Center	-- 232,000 sq. ft. office
Papachristous	-- 1.0 million sq. ft. office
<u>East Windsor Township - 1,323,607 sq. ft.</u>	
Ecana Lodge	-- 37,720 sq. ft. motel
Twin Rivers	-- 9,308 sq. ft. office
RCA/Astro. Div.	-- 3,570 sq. ft. cafe/addition
McGraw Hill Corp.	-- N/A microwave tower
104 Windsor Center	-- 66,000 sq. ft. office building
Hidas Muffler	-- 4,085 sq. ft. commercial
Beasam, Inc.	-- 8,040 sq. ft. manufacturing
RCA/Astro. Div.	-- 130,000 sq. ft. office building
EMU	-- 8,160 sq. ft. water treatment plant/lab
Presbyterian Homes of NJ	-- 1,621 sq. ft. office/addition
East Windsor Mun. U.A.	-- 1,103 sq. ft. sludge pump station/trmt. plant
FA International	-- 76,000 sq. ft. office/research
Windsor Center	-- 858,000 sq. sq. office/research
Professional Office	-- 120,000 sq. ft. office
<u>South Brunswick Township - 5,625,028 sq. ft.</u>	
Einstein Corp. Ctr.	-- 620,000 sq. ft. office/research
Princeton Corp. Center	-- 750,000 sq. ft. office/research
Sutton	-- 60,000 sq. ft. office
Pumia	-- 400,000 sq. ft. office
RH Development	-- 293,945 sq. ft. office
So. Brk. Industrial Pk	-- 32,500 sq. ft. light industrial
Southview Ind. Pk	-- 121,900 sq. ft. industrial warehouse
B & B Weinsenfeld	-- 40,520 sq. ft. warehouse
Forsgate Complex	-- 595,141 sq. ft. office/warehouse
ST Peterson & Co.	-- 42,000 sq. ft. office research
Forsgate Complex (Barrie)	-- 209,403 sq. ft. warehouse/office
Harold Kent	-- 37,500 sq. ft. office
Richardson & Bassett	-- 79,150 sq. ft. office/research
Shaklee Corp.	-- 157,340 sq. ft. office/research
Eastern Properties	-- 126,010 sq. ft. office
Seltzer Organization	-- 271,741 sq. ft. office/research
Dow Jones	-- 431,717 sq. ft. office
Kelber	-- 175,750 sq. ft. office
Bellmead	-- 175,411 sq. ft. office

Table 2

MAJOR RESIDENTIAL ACTIVITY
PLAN PROPOSALS/UNDER CONSTRUCTION

	Total Units	Single Family	Semi- Detached	Townhouse	Multi- Family
<u>West Windsor Township</u>					
Princeton Overlook	144	29	0	115	0
Princeton Countryside	1,675	109	0	824	742
Princeton View	89	89	0	0	0
Princeton Jct. I & II	108	108	0	0	0
Lakeview	40	40	0	0	0
Westwinds	69	0	0	69	0
Princeton Ivy	117	117	0	0	0
Charter Club	95	95	0	0	0
Lawlin	611	611	0	0	0
Dutch Neck Estates	92	92	0	0	0
Deerfield	121	121	0	0	0
Carnegie Residential	630	100	0	180	350
Carnegie Park	252	0	0	0	252
Princeton Villa	38	38	0	0	0
La Pare	114	114	0	0	0
Millstone Farms	80	80	0	0	0
Leprovost	320	320	0	0	0
Canal Glen	150	150	0	0	0
Windsor Oaks	8	8	0	0	0
Johill	15	15	0	0	0
Country Ridge	46	46	0	0	0
Cubberly Farms	26	26	0	0	0
TOTAL	4,840	2,008	0	1,188	1,644
<u>Flainshoro Township</u>					
Raven Crest	1,324	0	0	0	1,324
Waters Edge	32	0	0	32	0
Princeton Landing	600	0	0	600	0
Brittany I	267	0	0	267	0
The Gentry	350	350	0	0	0
Brittany II	697	0	0	413	284
Aspen	352	0	0	0	352
TOTAL	3,622	350	0	1,312	1,960
<u>East Windsor Township</u>					
Windsor Lakes	320	100	0	220	0
Georgetown	172	0	0	172	0
Princeton East	92	0	92	0	0
East Points	222	101	0	0	101
Windsor Woods	134	0	0	134	0
Haymarket Square	42	0	42	0	0
Wyndmoor	152	0	152	0	0
Windsor Hollow	440	0	0	440	0
Windsor Commons	132	0	0	0	132
St. James Village	109	0	0	0	109
Georgetown Estates	7	7	0	0	0
Centex	675	249	0	213	213
TOTAL	2,497	457	286	1,179	575
<u>South Brunswick Township</u>					
Hynwood	384	0	0	96	288
Whispering Woods	542	0	0	217	325
Woodland Meadows	101	101	0	0	0
Twin Mansions	120	0	120	0	0
Kingston Knoll	176	176	0	0	0
Woodgate	47	47	0	0	0
Oaktree	47	47	0	0	0
Princeton Horizon	192	0	0	0	192
Dayton Center	678	121	0	334	223
Fair Acres	63	0	0	0	63
Royal Oaks	736	--	--	--	736
Lakeside Manor	61	61	0	0	0
Stoneshedge	54	0	0	54	0
Dayton Center East	120	120	0	0	0
Timberponds	687	290	0	237	160
University Heights	324	0	0	324	0
Eastern Properties	1,100	275	0	0	0
Haypress Estates	250	250	0	0	0
Kislak	350	88	0	175	87
TOTAL	6,032	1,576	120	1,987	2,349

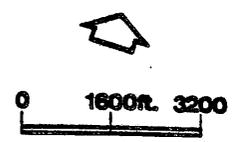


Existing Road Classification

Figure 7

CRANBURY TOWNSHIP
 MIDDLESEX COUNTY, NEW JERSEY

Raymond, Parish, Pine & Weiner, Inc. Consultant, Tarrytown, NY Princeton, NJ



ENVIRONMENTAL SUITABILITY

1. Criteria Description

New developments should have sufficient buildable land which can accommodate acceptable residential densities that do not encroach upon environmentally sensitive features, such as floodplains and heavily wooded areas.

Buildable land should display good topographic features, soil conditions, and hydrology to permit the anticipated housing development with minimal site disturbance at least cost. The U.S. Department of Agriculture (USDA) has conducted an interim soil survey for Middlesex County as part of the National Cooperative Soil Survey Program in 1978. A 1980 updating of the USDA report did not affect the soil types or the boundaries between them in Cranbury Township. In addition to soil types the survey reviewed suitability of land for agriculture and its chemical and physical properties, water levels, the presence of soil conditions which would increase construction costs, suitability for on-site sewage disposal, and other characteristics. It should be understood, however, that because the boundaries between soil types are only approximately located on these maps due to the scale of the statewide project, they cannot be used as the sole basis for determining development or agricultural potential. Isolated soil types within areas dominated by other soil types may be lost altogether. Also, the depth to high water level varies on a seasonal basis and is also affected by terrain characteristics. Nevertheless, although on-site testing is necessary before the undertaking of any construction, the USDA soils maps are still

the best source of information regarding existing soils and are relied upon in all agricultural preservation and development efforts.

Brief descriptions of major soil classifications found in Cranbury are set forth below.

- a. Sassafras Series. This is an excellent soil for agriculture because of its easy workability, moderate natural fertility, and response to fertilization. Lime often needs to be added to lessen acidity. There are few limitations regarding residential development or septic systems. Depth to seasonal high water table is greater than five feet.

- b. Woodstown Series is another soil type that is well suited for agriculture, but only if moderately well drained. Otherwise, the subsoil becomes saturated during the winter and spring thus restricting the possibility of farming. For isolated pockets of Woodstown soil, it is sometimes possible to lower the water table and improve farm production. Residential development with sewer systems generally needs a depth of 4-5 feet above groundwater, while construction with septic systems needs a minimum of six feet above the seasonal high water table. Since the seasonal high water table is normally only 1½ to 4 feet below grade, any residential development on Woodstown type soil would require extensive lowering of the water table or costly construction to prevent seepage into basements or shifting foundations to allow septic systems to operate properly.

- c. Downer Series. Very similar to Sassafras, Downer soils have a relatively high agricultural productivity but are susceptible to erosion or low water availability, depending on soil subclasses.

- d. Hammonton, Fallsington, Elkton, and other Series. The other soil classifications found in Cranbury have poor agricultural or development potential qualities. Their characteristics are a high water table and poor soil quality.

2. Site Analysis

A review of soil characteristics on each site and knowledge of floodplains, heavily wooded areas, and good topographic features reveals that Sites 6 and 8 appear to be the best suited for intense residential development with low/moderate income housing. Both sites are basically flat with gentle slopes toward stream corridors. Nearly 80% of sites 6 and 8 contain Sassafras soils which have slight limitations for construction of foundations and moderate limitations for construction of roadways. Sassafras soils are also prime soils for agricultural purposes. Sites 1 and 9 appear to be good development areas because they contain 50% Sassafras soils. Site 5 exhibits positive development characteristics since it has no floodplains or major treed areas and is presently being farmed. Construction on Site 3 would have to incorporate design adjustments/modifications because of Woodstown, Downer, and Hammonton soils. Site 3 contains small pockets of fill which provide good drainage and where therefore construction is feasible. Both Sites 2 and 7 contain large amounts of Woodstown soils which have moderate to severe limitations for construction of foundations and roads. Site 4

exhibits the worst soil characteristics, e.g. high water table, poorly drained soils, and moderate to severe limitations for construction. Many of the site limitations noted above can be successfully overcome by preserving the 100-year floodplain and adjacent treed areas, spending more developer dollars during construction to overcome poor soil conditions, and sensitively clustering homes while increasing net residential densities on good developable land.

Approximately 49% of Site 1 contains Sassafras soils according to Table 5--primarily located north of Half Acre Road. Fallsington soils are located adjacent to the Cranbury Brook while Woodstown can be found between the Brook and Half Acre Road. Site 2 appears to be very similar to Site 1 yet has a greater amount of Woodstown soils. A 100-year floodplain and major treed areas located along the southern boundary of Sites 1 and 2 serve to define limits for residential development. Site 3 is separated from Sites 1 and 2 by Brainerd Lake and Cranbury Brook. Approximately 80% of Site 3 contains Sassafras and Woodstown soils. Site 4 appears to exhibit the most severe constraints for residential development because over 50% of the site contains Fallsington soils and 45% of the site is covered by Woodstown soils. Site 4 also has major treed areas and floodplains. Site 5 which is located between Route 130 and Main Street, contains over 60% Woodstown soils with the remainder being largely Sassafras soils. Site 6 is bounded by Cedar Brook to the north and primarily contains Sassafras soils which are readily developable. Because Site 7 contains large amounts of Woodstown soils, it has limitations which must be carefully dealt with during site design and construction. Site 8 is probably the most easily developable as

compared with the remaining sites because over 80% is covered with Sassafras soils. Site 9 should be dealt with carefully because of large amounts of Downer and Fallsington soils. Much of the site is readily developable, especially that portion east of Ancil Davison Road.

Table 3

SOIL ANALYSIS

Soil Type	Development Areas								
	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9
Sassafras	49%	22%	41%	3%	35%	78%	28%	82%	50%
Woodstown	39%	58%	42%	45%	62%	15%	70%	11%	20%
Downer			7%					7%	20%
Hammonton	8%	9%	6%						
Fallsington	4%	11%		52%	3%	7%	2%		10%
Fill			3%						
Developed Land			1%						

Source: RPPW, Inc.

Table 4

SOIL ANALYSIS INTERPRETATIONS

Community Development Limitations

- slight - little or no limitation or limitations easily corrected by the use of normal equipment.
- moderate - limitations which usually can be overcome by careful design and management at somewhat greater cost than normal.
- severe - limitations which usually cannot be overcome without exceptional, complex or costly measures.

Critical Area Designation

- 1 - Frequently Flooded, Frequently Pondered
- 2 - Frequently Pondered, Occasionally/Rarely Flooded
- 3 - Erosion Hazard
- 4 - Aquifer Recharge/Groundwater Pollution Hazard

<u>Soil Series</u>	<u>Soil Association</u>	<u>Septic Limitations</u>	<u>Foundation</u>	<u>Foundation</u>	<u>Local Roads</u>	<u>Critical Areas</u>			
			<u>Basements</u>	<u>Limitations W/O Basements</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Sassafras	Coastal Sandy Loam	slight	slight	slight	moderate			x	x
Woodstown	Coastal Sandy Loam	moderate	moderate	severe	severe				x
Downer	Sandy	slight	slight	moderate	moderate			x	x
Hammonton	Sandy	moderate	moderate	severe	severe				x
Fallsington	Poorly Drained	severe	severe	severe	severe			x	

Source: Interim Soil Survey Report, South Brunswick Township and Interim Soil Survey Report, Middlesex County, N.J.



Soil Analysis

CRANBURY TOWNSHIP MIDDLESEX COUNTY, NEW JERSEY

Raymond, Parish, Pine & Weiner, Inc. Consultant, Tarrytown, NY Princeton, NJ

Figure 8



SITE ASSEMBLAGE, SHAPE, AND SIZE

1. Criteria Description

Development areas should be of a shape and size that permits the best possible residential layout and design while providing for a substantial amount of low/moderate income housing.

2. Site Analysis

The likelihood for residential development and low/moderate income housing decreases as the number of individual tracts and ownership patterns within the development area increase.

Review of Figure 9 and Tables 7 and 8 reveal that Site 4 best satisfies the above criteria because it has the largest single development area--over 300 acres of open land located between Route 130, Brick Yard Road/Indian Run Creek, the Hightstown-Cranbury Station Road, and Block 10 Lots 1 and 19 to the north. Site 4 is owned entirely by the Cranbury Development Corporation. The plaintiff has proposed to construct 2,762 dwelling units at a gross density of 7 dwelling units/acre. Site 1, which is owned by Garfield & Company, contains two lots basically split into equal parts by Half Acre Road. Garfield & Company has proposed to build 2,000 dwelling units on approximately 218 acres.

Site 6 appears to have a size and shape that permits desirable residential layout. Site 6 has two separate lots and two different property owners. It has been proposed to build 922 townhouses and 230 garden apartment condominiums t 8 dwelling units/acre. The plaintiff for Site 8 has not asked for specific relief at this time. However, the site

does have a good size and shape for residential development. It has three separate lots and three different property owners, but has one large parcel totalling 130 acres. If the site were developed at 8 dwelling units/acre, it would generate 1,726 units. Site 2 is divided by Half Acre Road. It contains 56 acres north of Half Acre Road and over 90 acres between Site 3 and Half Acre Road. Site 2 has three different owners and six individual lots yet 97% of the entire site is owned by a single individual. If the site were developed at 9 dwelling units/acre, similar to the Applegate proposals for Block 7 Lots 20 and 21 and Garfield & Company for Site, it would generate 1,368 units.

Site 3 is located on Station Road in Cranbury Township between the New Jersey Turnpike, Route 130, and Cranbury Brook/Brainerd Lake. The site has six separate lots and four different owners. Silbert, on Block 7 Lot 13 (49.482 acres), has proposed to construct 288 townhouses and 72 garden apartment condominiums at 8 dwelling units/acre. Applegate, on block 7 Lots 20 and 21 (70.28 acres), has proposed 700 high density units. Site 9 which is located adjacent to the Millstone River and Old Trenton Road is divided into two equally sized parcels by Ancil Davison Road. The site has one owner and two individual lots that would generate 680 dwelling units at 5 dwelling units/acre. Site 7 has few constraints on development, e.g. floodplains and woodlands, and is shaped to permit desirable residential layout. Site 7 consists of a single lot with one property owner which would produce 500 dwelling units.

Site 5 totals over 100 acres and is in single ownership. If developed as proposed it would produce 240 single family detached homes, 210

townhouses, and 200 garden apartment condominiums at 6½ dwelling units/acre. The extension of Old Trenton Road from Main Street to Route 130, the odd shape of Lot 23, and adjacent existing development patterns might contribute to an awkward site design.

Table 5
SITE STATISTICS

Development Areas	Block, Lots, and Ownership Patterns						Totals		
							Lots	Owners	Acres
Site 1	(A) Bk 5 Lot 9 118.59 AC Garfield	(B) Bk 7 Lot 10 100.395 AC Garfield					2	1	218.985
Site 2	(A) BK 5 Lot 11 55.636 AC Danser	(B) BK 5 Lot 26 .87 AC Danser	(C) BK 5 Lot 12 .78 AC Stachurski	(D) BK 7 Lot 8 53.03 AC Danser	(E) BK 7 Lot 9 37.14 AC Danser	(F) BK 7 Lot 22 3.858 AC Motor Service	6	3	151.314
Site 3	(A) Bk 7 Lot 21 12.45 AC Applegate	(B) BK 7 Lot 20 57.83 AC Applegate	(C) BK 7 Lot 19 1.16 AC Stults	(D) BK 7 Lot 18 25 AC Stults	(E) BK7 Lot 17 10.00 AC Nebbia	(F) BK 7 Lot 13 49.482 AC Silbert	6	4	155.922
Site 4	(A) Bk 10 Lot 10 373.616 AC Cranbury Development	(B) Bk 12 Lot 1 20.936 AC Cranbury Development					2	1	394.552
Site 5	(A) Bk 18 Lot 36 79.3 AC Freedman	(B) Bk 18 Lot 23 21.75 Freedman					2	1	101.050
Site 6	(A) Bk 25 Lot 19 61.5 AC Barclay	(B) Bk 25 Lot 31 82.71 AC Wright					2	2	144.210
Site 7	(A) Bk 25 Lot 40 104.36 AC Greenberg						1	1	104.360
Site 8	(A) Bk 23 Lot 12 130 AC Barclay	(B) Bk 23 Lot 13 19.55 Wright	(C) Bk 23 Lot 70 66.18 AC West				3	3	215.73
Site 9	(A) Bk 22 Lot 8 68.89 AC Cranbury Land	(B) Bk 21 Lot 8 67.817 AC Cranbury Land					2	1	136.707

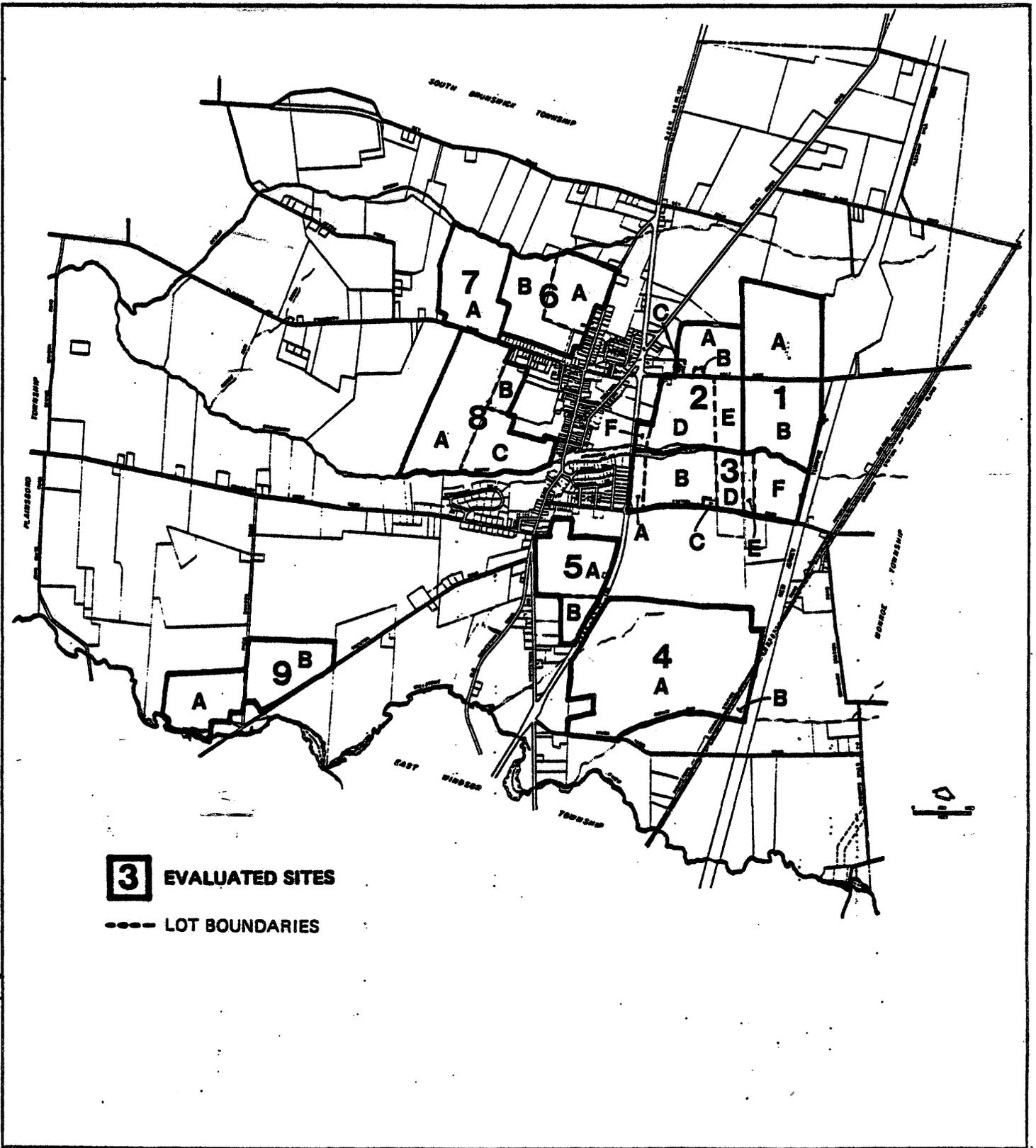
Source: 1984 Cranbury Township Tax Map Property Owner List.

Table 6

DEVELOPMENT PROPOSALS

Development Areas	Total Dwelling Units	Gross Density	Dwelling Unit Mix	Affordable Housing			Other Uses/Plans
				Low	Moderate	Total	
Site 1	2,000	9.2 du/ac	1600 Townhouses 400 Rental Apartments	200	200	400	. Park/Ride Lot . 3-5 AC Commercial Site
Site 2	1,368 (A)	9 du/ac	Unknown	137	137	274 (B)	
Site 3	700 (C)	10 du/ac	Unknown	70	70	140	
	325	9 du/ac	Unknown	33	32	65	
	360	8 du/ac	288 Townhouses, 72 Apartment Condominiums	36	36	72	
Site 4	2,762	7 du/ac	Single family townhouses, Multi-family, and Senior Citizen Housing	276	276	552	. Commercial Service Node . Park/Ride Lot
Site 5	650	6.5 du/ac	240 Zero-lot line, 210 Townhouses 200 Apartment Condominiums	65	65	130	Old Trenton Road Extension
Site 6	1,152	8 du/ac	922 Townhouses 230 Apartment Condominiums				
Site 7	500	4.8 du/ac	400 Patio Homes 100 Apartment Condominiums	50	50	100	
Site 8	1,726 (D)	8 du/ac	Unknown	173	172	345 (E)	
Site 9	680	5 du/ac	60 Single Family 484 Townhouses 136 Apartments	68	68	136	1 Acre Neighborhood Commercial Site
Totals	12,223			1,223	1,221	2,444	

Notes: (A) 9 du/ac which closely reflects Applegate & Garfield proposals; (B) 20% of total dwelling units;
(C) 9 du/ac which is an average between current Site 3 development proposals; (D) 8 du/ac which reflects Site 6 density;
(E) 20% of total dwelling units.



CRANBURY TOWNSHIP Middlesex County, New Jersey

Figure 9
LOT COMPUTATIONS

