

Gabriel Davais Tavern

Gloucester Township Master Plan

June 29, 1999

Master Plan

Township of Gloucester County of Camden

Adopted by the Planning Board

June 29, 1999

Adopted pursuant to N.J.S.A. 40:55D-28,
the New Jersey Municipal Land Use Law

□ □ □

Prepared By:

CLARKE ♦ CATON ♦ HINTZ
400 Sullivan Way
Trenton, New Jersey 08628

Brian M. Slaugh, PP, AICP
New Jersey Professional Planning License No. 3743

A signed and sealed original is on file with the City Clerk's office.

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Introduction

Gloucester Township was established in 1695 as the surrounding region of Gloucester Town, now Gloucester City, and covered about half of present day Camden and Atlantic Counties. The Township was formally incorporated in 1798 through an act of the State legislature. Numerous successions and reincorporations of portions of Gloucester Township into other municipalities have formed its present day boundaries.

Gloucester Township consists of 23.24 square miles in south central Camden County with an estimated 1999 population of 62,700 persons. It has the third largest population in Camden County after Camden City and Cherry Hill Township. It is fourth in area after Winslow, Waterford and Cherry Hill Townships in the County.

Gloucester Township has experienced rapid growth since 1950 when the population was only 7,952 persons. The municipality's growth is part of a nationwide trend after World War II of decentralization of the population and businesses -- the great suburbanizing wave characteristic of development patterns in this latter half of the 20th century.

The growth of Gloucester Township has resulted in great diversity in the built environment that illustrates archetypes of urban, suburban, and rural development. Though it is expected that the population of Gloucester Township will reach nearly 70,000 people, the suburbanization that has characterized development over the past 50 years is largely over. This Master Plan's policy is to retain and enhance the existing patterns of development rather than to encourage major changes in the landscape.

It is the intent of the Master Plan to provide a framework for connecting existing neighborhoods with parks, other public facilities and each other through open space corridors. The establishment of walking and bicycle trails is intended to encourage residents to use alternate means of travel for recreational and leisure purposes.

Gloucester Township may be viewed as a collection of neighborhoods organized around institutional and personal service land uses. Depending on the neighborhood, a firehouse, school, or house of worship may provide the focal point of social interaction. In other areas, a concentration of shops geared towards the every day needs of the neighborhood may act as the focal point, also providing a location for social contacts. The intent of the Master Plan is to reinforce these formal and informal associations while insulating - to the extent necessary - the effects of incompatible development on adjacent tracts.

The purposes of the Master Plan as outlined and elaborated in the Elements that follow are to be viewed in a context that recognizes the importance of natural ecological systems for the continued well-being of humans. The Plan seeks to concentrate population and development in those areas best suited for more intensive development while reserving significantly constrained land for conservation purposes.

Organization of the Master Plan

The Master Plan has been organized into several components, or elements that specifically describe the various facets and policies for articulating the community's vision.

GOALS AND OBJECTIVES

The goals and objectives have been placed at the beginning of the Master Plan. The goals determine the direction of the Master Plan over the time period of the plan, which is at least six years. The objectives are targets by which the goals may be measured. At the end of six years, the Master Plan will be formally reviewed to determine the magnitude of change and the extent to which the Master Plan should be revised. The goals and objectives provide the basis for determining whether the Master Plan has met its purpose.

CONSERVATION

The Conservation Element describes the physical nature of Gloucester Township, including its natural features, soil and subsurface conditions. This environmental analysis provides information on the natural processes that affect the use of land. The Conservation Element portrays the different types of open space and the criteria necessary for its preservation. A number of conservation techniques for preserving environmentally sensitive lands are examined. The Conservation Element provides a foundation for the Land Use Element and the assignment of development densities.

HISTORIC PRESERVATION

Gloucester Township's past is examined in a brief history of the municipality. The Township's existing historic district and individual landmarks are discussed in the context of the National and State Registers of Historic Places. Principles and standards are established for the review of plans to alter historic structures in the Blackwood West Historic District.

BLACKWOOD WEST DISTRICT

The Blackwood West District sub-plan element is closely tied to historic preservation and

serves as a bridge between the Historic Preservation and Land Use Plan Elements. This sub-plan element closely examines the Township's existing policies for the Blackwood West District and analyzes the success of previous planning efforts. From the analysis, several recommendations are proposed, most of a programmatic nature.

COMMUNITY FACILITIES

The Community Facilities Element examines public buildings and services, including educational facilities, from a land use perspective. In this section the administrative facilities of the municipal government and fire and emergency services are reviewed. This element examines expected school children increases that may be expected from continued residential development in the Township and their expected impact on educational facilities.

OPEN SPACE AND RECREATION

The Open Space and Recreation Element has several strong ties to the Conservation Element. Land for conservation purposes is based on the identification of environmentally sensitive lands in the Conservation Element. Additionally, the Township's extensive recreational system is discussed in the context of the expected population once full development is reached. This includes potential areas for additional active recreation.

CIRCULATION

The Circulation Element discusses the means of moving people and goods in Gloucester Township. It describes the network of roads and classifies them according to function and traffic levels. Residential street design is discussed in the context of new findings for the construction of local roads. Trends in transportation, including public transportation, at the federal, state, and county level are reviewed. Several recommendations for access improvements to the North South Freeway are proposed, as well as park and ride facilities.

LAND USE PLAN

The Land Use Plan Element synthesizes the information presented in the other elements of the Master Plan. Existing land use is classified and mapped. Land use issues are discussed in the context of the goals and objectives. Land use has been placed into different categories and has been assigned to specific geographic locations at differing densities of development. The Land Use Plan Element forms the main basis for the Zoning Ordinance and Zoning Map which would be amended to implement the Master Plan.

REGIONAL POLICY CONSISTENCY

Introduction to the Master Plan
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A Statement of Consistency with other planning documents examines the land development policies of the surrounding municipalities. The Master Plan is also compared with the development policies of Camden County as embodied in its second Cross-Acceptance Report. Lastly, the Master Plan is analyzed for conformance with the State Development and Redevelopment Plan for consistency with its goals and objectives.

Goals and Objectives

INTRODUCTION

The Master Plan of Gloucester Township reflects the collective goals of its citizens, officials and business owners for the use of land within the community. The Master Plan has been adopted with the belief that it will exert a positive influence on the evolution of the Township by directing public and private investment in the development and redevelopment of land. The Goals and Objectives Statement is the guide for the elements of the Master Plan that shape ordinances, provide a basis for the review of applications for development, and provides direction for the expenditure of public funds on the needs of the municipality.

ASSUMPTIONS OF THE MASTER PLAN

The Master Plan is based on a number of assumptions about the larger context in which Gloucester Township is situated. These include:

1. Gloucester Township will remain in its existing relationship with other levels of government and will continue to control planning and zoning at its level.

Though recent state initiatives have centralized more planning control, municipalities will continue to hold the power to zone through the State constitution.

2. There will be no long term disruptions in the economic cycle beyond the normal expansion and contractions of the state and national economies.

Though the Master Plan will be affected by economic forces operating at the state, federal, and increasingly, the global economies, the well-diversified employment base of the region will provide job opportunities at many levels.

3. The protection of the natural environment will continue to be a strong social goal of citizens.

Protection of the environment is now inextricably linked to quality of life concerns.

4. The development of Gloucester Township from a rural to suburban pattern is nearly complete. Land use issues will increasingly be focused on redevelopment.

Land scarcity requires a strong planning component for the remaining parcels and redevelopment of underutilized parcels.

OVERALL GOALS OF THE MASTER PLAN

The Master Plan is designed to do the following:

- Guide the physical and economic development of the Township toward the goals in this Master Plan, thereby benefitting the public health, safety, and welfare.
- Provide for the harmonious and efficient allocation and arrangement of land uses and the protection of property values in Gloucester Township and surrounding municipalities.
- Preserve environmentally sensitive lands from development or other potentially damaging influences.
- Preserve and enhance the character of the built environment through the encouragement of good design.
- Promote the preservation of historically significant structures and districts that represent the diversity of architectural styles in the Township.
- Encourage and promote the social interaction of groups and individuals to maintain the strength of the community.
- Provide for efficiency and economy in governmental administration.
- Balance the needs of pedestrian, bicycle and vehicular circulation within and through the Township.

These broad purposes reflect the major guiding principles of the Master Plan. Within the framework established by the guiding principles, more specific goals and objectives for the Plan have been developed.

Goals and Objectives for Planning and Development

LAND USE

Foster a well-balanced, diverse community with a mix of residential housing types, institutional, commercial, and industrial uses along with ample open space and public

facilities. The Land Use Plan and development regulations are designed to minimize land use conflicts and to reduce adverse impacts of development on other activities in the Township.

OBJECTIVES

- Improve the quality of life for Gloucester Township residents, those persons who work in the municipality and visitors by following the principles of the Master Plan in its implementation in the zoning ordinance.
- Preserve open space and promote the visual enjoyment of the land.
- Protect environmentally sensitive land from development.
- Direct new development and redevelopment to places in relation to their transportation and environmental capacities.
- Discourage the introduction of incompatible land uses.
- Industrial uses should be encouraged with direct or nearby access to the regional highway network.
- Retail uses should be designed for community shopping rather than regional shopping needs.
- Office and industrial uses should be encouraged in business parks rather than individual sites to take advantage of the benefits of planned development.

OPEN SPACE, RECREATION AND CONSERVATION OF NATURAL FEATURES

Open space for conservation and recreational purposes should be enhanced through public and private efforts. Adequate active recreation facilities should be maintained through governmental action and citizen participation. The critical natural features and resources of Gloucester Township such as woodlands, steep slopes, wetlands, flood plains and bodies of water provide a natural ecological balance and a counterpoint to the built environment.

OBJECTIVES

- Utilize natural features to distinguish the permitted intensity of land development.
- Restrict development on environmentally sensitive land to recreational and conservation purposes.

- Acquire and develop additional land for community-wide recreation needs.
- Organized recreational programs should continue to be provided for all ages.

VISUAL CHARACTER AND HISTORIC PRESERVATION

Establish policies governing the development or redevelopment of land which will promote the retention of the Township's architectural character and historic streetscapes in the community.

OBJECTIVES

- Promote the development and redevelopment of commercial areas that are attractive to public view through the use of building and site design standards reflective of the established character of development in Gloucester Township.
- Establish design standards to encourage new development in Gloucester Township to be compatible with the style and scale of existing buildings.
- Refine the standards for development to retain the integrity of the Blackwood West District and individual landmarks.
- Identify additional individual site(s) and district(s) in Gloucester Township of historical importance.

COMMUNITY FACILITIES AND MUNICIPAL SERVICES

Establish and maintain a level of community facilities and public services sufficient to satisfy the needs of present residents and to allow for the well planned expansion of facilities to meet future needs.

OBJECTIVES

- Provide for streets, parks, police and fire protection, and other services sufficient to meet the needs of Gloucester Township residents and business owners. Encourage appropriate agencies to meet the utility needs of residents and business owners.
- Based upon the Master Plan and development trends, periodically assess the need for municipal services beyond their existing capacities.

- Identify school needs in close cooperation with the Gloucester Township Board of Education and Black Horse Pike Regional School District.
- Create a forum for discussing Camden County's plans for its extensive land holdings in Gloucester Township to work towards outcomes that provide mutual benefits to both governments.

HOUSING

Preserve the existing housing stock and provide the opportunity for the development of a variety of housing types to meet the differing needs of households of varying income levels and composition.

OBJECTIVES

- Maintain a fair share housing plan and associated development regulations which meet the municipality's fair share requirements for affordable housing.
- Promote the clustering of housing on sites with environmentally sensitive areas.
- Advance the development of senior citizen housing through an expansion of residential opportunities.
- Increase the opportunity to provide executive housing.
- Promote individual ownership of housing in all areas of the Township.

CIRCULATION

Provide for the efficient movement of people and goods within and through the Township in a manner compatible with the policies of the Land Use Element.

OBJECTIVES

- Promote pedestrian connections between neighborhoods where feasible.
- Promote trails and selected hard-surfaced paths as part of a bicycle and pedestrian system
- Restrict vehicular access through residential neighborhoods for non-residential purposes.
- Provide for the continuity of the street network.

- Identify streets with a special scenic character and establish policies that retain the streetscape.

RECYCLING

Adopt the state and county goals for recycling that pertain to local governments.

OBJECTIVES

- Ensure that the Township's recycling plan meets the requirements of the State Recycling Plan.
- In accordance with State policy, conserve energy in manufacturing processes, increase the supply of reusable raw materials for industry and reduce the amount of poorly combustible materials that are directed to resource recovery facilities.

Conservation

INTRODUCTION

The Conservation Element of the Master Plan addresses the issues of the preservation and management of environmentally sensitive lands. In this context, environmentally sensitive lands include stream corridors, open water, freshwater wetlands, flood plains, soils with high water tables, and aquifer recharge lands. The preservation of these natural resources constitutes the main objective of the Township's conservation efforts. Conservation is a term that may also be used in conjunction with preserving the “built environment”, that is significant buildings and streets. Policies concerning this latter form of conservation may be found in the Historic Preservation Element.

The Conservation Element includes an environmental analysis of the natural resources of the municipality and then discusses policies for their conservation and recommendations for implementation. This element provides a basis for the land use policies presented in the Land Use Plan Element designed to lessen development impacts on environmentally sensitive land.

GEOLOGY

Geologic formations provide the parent material for the production of soils. Their characteristics help determine the suitability of land for development. The primary role of geology in development considerations relates to the supply of groundwater and the disposal of effluent. In Gloucester Township where there is extensive public infrastructure, geology is more important in identifying aquifer recharge areas and potential problem areas for existing development constructed with private well and septic systems.

There are two basic types of geologic formations, surficial and bedrock. In Gloucester Township, surficial geology is more important since bedrock is at a significant depth and plays no part in creating limitations for development. Surficial formations in Gloucester Township consist of unconsolidated sands, gravels, silts and clays that formed as layers under the ocean. The rise and fall of the oceans, corresponding to glacial periods, successively inundated the land. Erosion from streams cutting through previously deposited materials on the land emptied into the ocean, creating distinct layers. The emergence of the land is relatively recent, occurring less than a million years ago.

Gloucester Township also sits on the boundary between the Inner and Outer Coastal Plains, two of the five major geologic provinces in the State. A line beginning just south

Conservation Element

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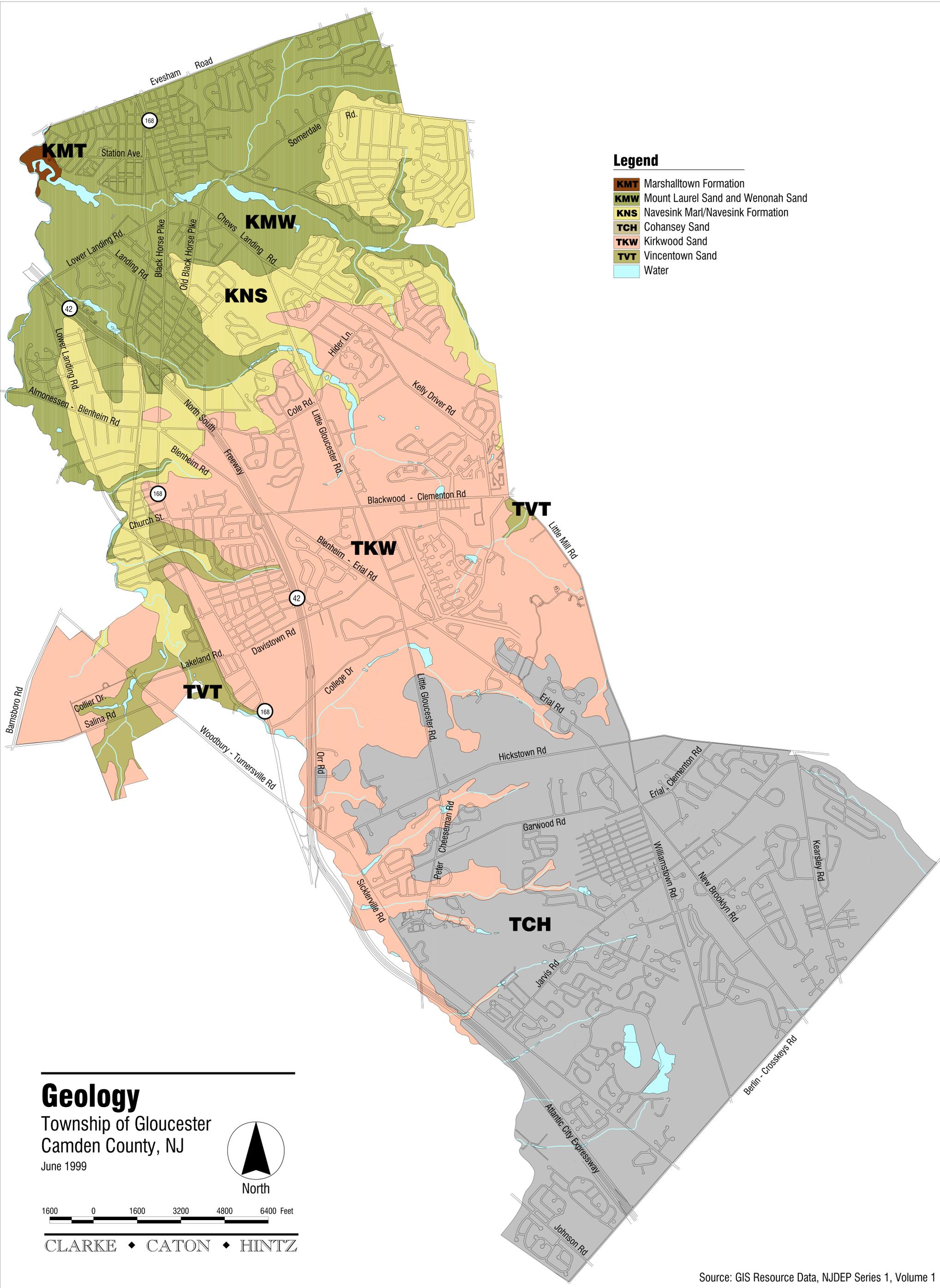
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of Lakeland and drawn in a northeast direction towards Pine Hill roughly describes the boundary between these two major areas. The Outer Coastal Plain is south and east of the line and the Inner Coastal Plain is west and north of the line. The difference between the two is related to the time of deposition of the sediment that makes up the surficial geology. The land in the Outer Coastal Plain represents deposits made during the Tertiary period (1 million to 63 million years ago) that were covered later by deposits during the Pleistocene era (1 million years ago to the present). During the Pleistocene era, the Inner Coastal Plain was above water, so its sedimentary deposits date back to the Cretaceous period (125 to 63 million years ago). The boundary between the two provinces is marked by a series of hills called *cuestas* that are partially cemented together. Pine Hill marks one of these *cuestas*, as well as Mt. Laurel and Mt. Holly.

Both the Inner and Outer Coastal Plains are tilted towards Cape May. The oldest strata are located along the Delaware River and the youngest at the Atlantic coast. Like the edges of a pack of cards, the strata are exposed at the surface. Sedimentary layers become progressively deeper the more one moves southeastward.

In the Township six geologic formations have been identified (*see* Geology Map). These include the Marshalltown, and Navesink Marl/Navesink Formations; and the Mount Laurel/Wenonah, Cohansey, Kirkwood and Vincentown Sands. A description of each of the formations is as follows:

MARSHALLTOWN FORMATION - This formation consists of sandy clays ranging in color from gray to black. The clay contains varying amounts of argillaceous glauconite (marl). Marl, also called greensand, is generally calcareous sands, silts and clays containing phosphoric acid. Marl was used as a fertilizer prior to the advent of mass-produced nitrogen fertilizers and is a component of a **INSERT GEOLOGY MAP**



Conservation Element

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number of the geologic formations as well as many soils found in Camden County. The formation is 30 to 40 feet thick.

NAVESINK MARL/NAVESINK FORMATION - This formation has higher amounts of glauconite mixed with quartz sand and fine clay earth. Powdery calcium carbonate is found mixed with the clay. The upper part of the formation has more clay than the bottom part. The formation is 25 to 40 feet thick.

MOUNT LAUREL/WENONAH SAND - The sand layer is from 25 to 95 feet thick and is a mixture of sand and glauconite. The lower element of the layer is generally fine micaceous sand with the upper portions more coarse in nature. It is in the upper portion that glauconite is found.

COHANSEY SAND - This formation consists of quartz sand with lenses of gravels and light-colored clay. This formation underlies the great majority of the pine barrens. It overlies the Kirkwood Formation. The sand layer is from 100 to 250 feet thick.

KIRKWOOD SAND - The Kirkwood is a layered mixture of sand and lignitic clay - the sand being predominantly a fine micaceous sand like the Mount Laurel/Wenonah formation. The Kirkwood is also known for having great quantities of shells in certain locations. The Kirkwood is from 80 to 90 feet thick and ranges in color from yellow to salmon pink to chocolate brown.

VINCENTOWN SAND - There are two phases of the Vincentown Sand, one being a calcareous or lime sand and the other a glauconite quartz sand. These layers alternate throughout the formation, with the calcareous tending to be more prominent in the lower portion and the glauconite quartz sand in the upper portion in the region. It ranges from 25 to 100 feet thick.

AQUIFER RECHARGE

Three of the geological layers are important water bearing formations, the Mt. Laurel/Wenonah, Cohansey and Vincentown Sands. Most of the Township is served by public water and consequently there is less concern about the effects of development on existing private wells. The two water companies that service Gloucester Township, New Jersey American Water Company and Consumers New Jersey Water Company, use commercial wells to supply the public drinking water. Water is also drawn from the Delaware River by the former company. Aquifer recharge is an essential component of the hydrologic cycle that replenishes the underground water supply. Preventing overuse of aquifers is an important environmental goal. This may occur from over pumping where more water is drawn from the aquifer than is available for replenishment by rainfall (water "mining") or when impervious surfaces prevent rainfall from percolating into the ground. The state Department of Environmental Protection has established a

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Critical Area No. 2 region centered in northern Camden County where over pumping from the Potomac-Raritan-Magothy aquifer has reached serious levels. Water from the Delaware River was required as a method of reducing the reliance on commercial wells.

From a local standpoint, ensuring that sufficient open land remains is important for aquifer recharge. This can take two forms, one, that the Township pursues the retention of open land through purchase, land trust, or easement; and two, that a reasonable percentage of land slated for development is required to remain unpaved.

Aquifer recharge areas are also susceptible to pollution especially in the Cohansey sands because of its relatively inert character and rapid permeability. Though pollution is more commonly associated with industrial outfalls to streams or with dumps like the GEMS Landfill, runoff from streets and parking lots also contains significant pollutants that can contaminate aquifers. Water quality from these “non-point” pollution sources is an area of increasing concern at the state and federal level. New techniques are evolving to address the urban runoff issue that should be incorporated into the Township's land development regulations. These include, for instance, groundwater recharge from rooftops, specialized inlets to trap hydrocarbons and sediment, operational practices such as regular parking lot sweeping, grassed swales as a biological filter, and artificial wetlands basins.

SOILS

Parent geologic formations also play a major role in the formation of different soil types. Soil is formed from the underlying geologic strata, the actions of weathering, organic material, and biological processes to create a material supportive of life on the planet. Soil types have specific characteristics that determine landforms, slopes, drainage, and vegetation that provide the basis for determining suitable land uses for a variety of human activities.

Soils are made up of varying amounts of clay, silt and sand - which are determined by particle size - plus organic matter. Clay particles are the smallest and sand particles the largest in diameter. A number of the soil classifications have similar characteristics and it is usually the lower subsoil that provides the distinguishing series. The general soil series are depicted on the Soils map on page 7 for Gloucester Township and are described beyond:

AURA - Aura soils are found at the higher elevations of the municipality between stream corridors. They tend to be well drained, sandy soils of a dark grayish-brown color of nearly level to gently sloped topography. Typical vegetation is a mixed oak forest. Aura soils typically have a firm lower horizon of coarse, reddish sandy clay loam that restricts plant growth that has implications for the planting of shade and ornamental trees. They are also extremely acid. Where the land has been used for agriculture, they are usually

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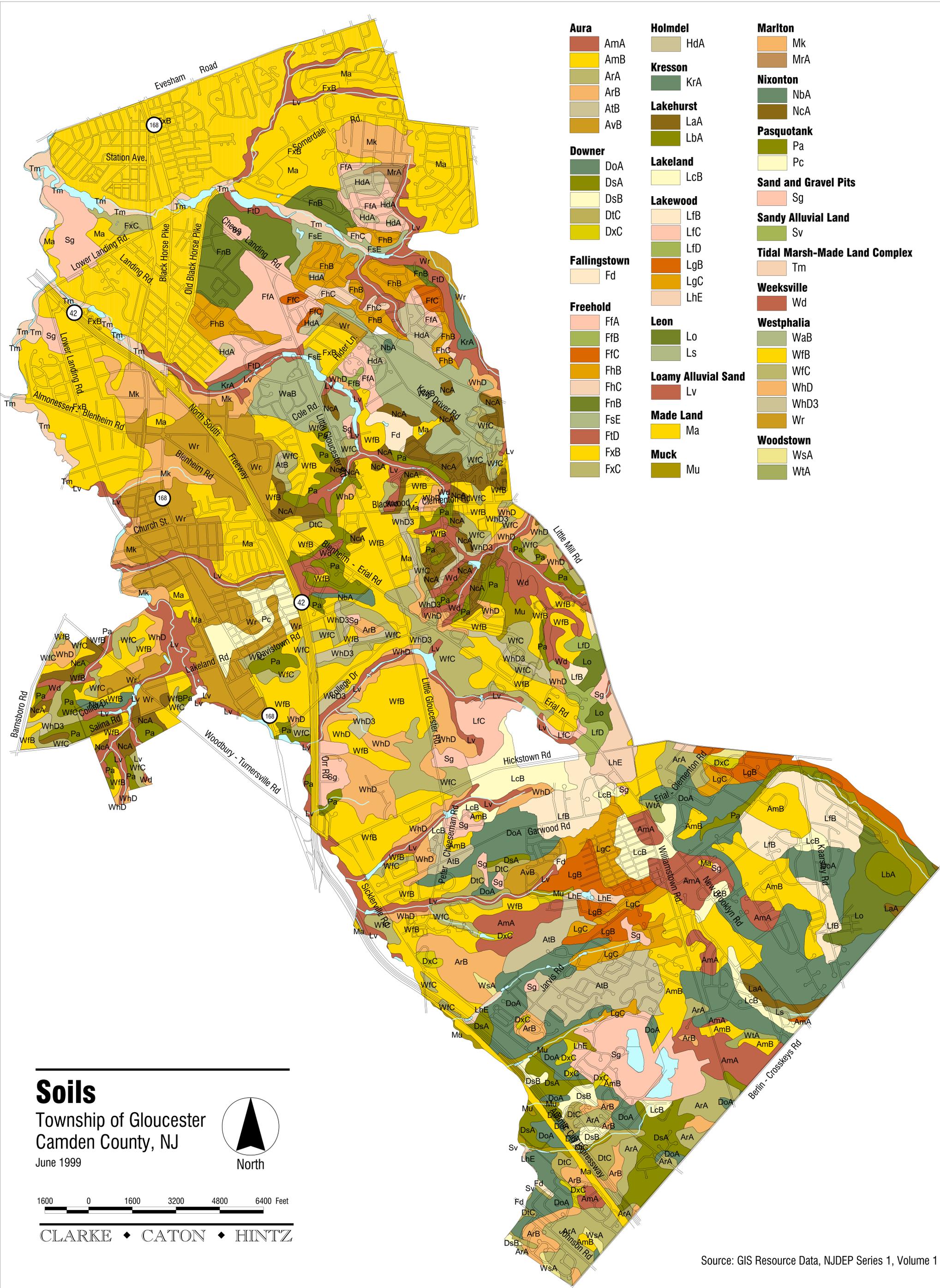
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heavily limed and often were used to grow fruit trees and have been identified as prime agricultural soils. Aura soils are usually found next to Downer and Woodstown soils.

DOWNER - Downer soil has a number of the same characteristics as Aura. It is typically a dark grayish brown at the surface but tends to be sandier than Aura and has less quartz at lower levels. Downer is also nearly level to gently sloping. When found in association with Aura soils, it is down slope from them. Downer soils are extremely acid and where cultivated have been heavily limed. Because Downer soil is rapidly permeable, it tends to have low fertility. The natural vegetation is a mixture of pine and oak. Steeper Downer soils tend to erode quickly, requiring good soil entrapment procedures during construction.

FALLSINGTON - Fallsington soils occur only in a very limited portion of the Township. Slopes are less than one percent and are found in lower elevations. It consists of grayish-colored mottled sandy loams that drain poorly. Fallsington soils support wetlands in many locations. Typical vegetation is pin, willow, swamp white oaks, and red maple with an understory of sheep laurel, blueberry, pepperbush, and gallberry. Fallsington soils are not suitable for development.

FREEHOLD - These soils constitute the single largest soil series in the Township as well as the County. Freehold soils are typically dark grayish-brown, well-drained and sandy. In contrast to other soil types, the soil is low in glauconite. **INSERT SOILS MAP**



| | | | | | |
|---------------------|----------------|----------------------------|----------------------------|--------------------------------------|----|
| Aura | AmA | Holmdel | HdA | Marlton | Mk |
| AmB | Kresson | KrA | Nixonton | NbA | |
| ArA | ArB | Lakehurst | LaA | NcA | |
| AtB | AvB | LbA | Pasquotank | Pa | |
| Downer | DoA | Lakeland | LcB | Pc | |
| DsA | DsB | Lakewood | LfB | Sand and Gravel Pits | |
| DtC | DxC | LfC | LfD | Sg | |
| Fallingstown | Fd | LgB | LgC | Sandy Alluvial Land | |
| Freehold | FfA | LhE | Loamy Alluvial Sand | Sv | |
| FfB | FfC | Leon | Lv | Tidal Marsh-Made Land Complex | |
| FfD | FhB | Lo | Weeksville | Tm | |
| FhC | FhC | Ls | Wd | Westphalia | |
| FhD | FhB | Loamy Alluvial Sand | WaB | WfB | |
| FhE | FxB | Ma | WfC | WhD | |
| FxC | FxC | Muck | WhD3 | Wr | |
| | | Mu | Woodstown | WsA | |
| | | | WtA | | |

Soils

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Source: GIS Resource Data, NJDEP Series 1, Volume 1

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Freehold is distinguished by inclusions of iron among the finer particles that gives it a reddish cast in the lower horizons. As the Aura and Downer soils, Freehold also occupies higher elevations and is extremely acid. Unlike these other soils, however, Freehold has less quartz. Freehold soils were heavily farmed in the County except for steep sloped areas. The natural vegetation, typically on slopes, consists of red oak, beech, and yellow poplar.

HOLMDEL - Holmdel soils are similar to Freehold soils and are often found in association with them. Holmdel soils, however, are less well drained than Freehold and often have a high late winter water table. Consequently, mottling is common in the lower subsoil. Holmdel usually are more steeply sloped than Freehold soil. Higher elevations of Holmdel soil contain red, scarlet, and white oaks, yellow poplar, beech and hickory in their natural state. Less well drained areas are dominated by pin oak, willow oak, and sweetgum.

KRESSON - This series is characterized by a high level of glauconite in excess of 40% that typically imparts an olive cast to the soil. Kresson soils are poorly drained and level; however, if underdrained have only moderate limitations for building construction. The only location of this soil is along the North Branch of Big Timber Creek near Stratford. They are similar to Marlton and Colemantown soils but are more water saturated than the former and more brown than the latter.

LAKEHURST - The Lakehurst, Lakeland, and Lakewood soils derive from the Cohansey Sands geologic formation and are characterized by loose, well-drained sandy and highly acidic soils. Lakehurst soils in certain locations are poorly drained because of their adjacency to swampland. Swampland soils are typically Leon or St. John's and Lakehurst is intermediate in composition between the Leon and Lakewood soils. Lakehurst is lower in elevation than either the Lakeland or Lakewood soils and has a water table typically reaching to within 3 feet of the surface. Because of its sandy nature, the soil holds moisture poorly. Lakehurst supports pine trees (pitch, shortleaf and Virginia) and occasional black or white oaks. There are only slight limitations for development. The only location of this soil is at the Camden County Vocational-Tech school.

LAKELAND - Lakeland soil is almost entirely sand and in shore areas has been pushed into dunes. The soils are excessively drained and infertile. This soil when cleared is easily affected by wind erosion. Special efforts to reduce erosion are sometimes necessary, particularly on sloped land. The natural vegetation is mixed pine and oak forest with an understory of low bush blueberry. The soil phase that occurs in Gloucester Township is less sandy than the typical profile and holds more organic matter. It also has; however, a firm subsoil 30 to 40 inches below the surface that creates difficulties for the planting of trees with deep tap roots.

LAKWOOD - Lakewood soils are very similar to Lakeland soils but are typically deeper

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with a greater bleached top soil. They are even less fertile than Lakeland soils and support only pitch pine, blackjack and scrub oaks, and low bush blueberry. Lakewood soils are more extensive in Gloucester Township than Lakeland or Lakehurst types occurring south of College Drive and east of New Brooklyn and Williamstown Roads.

LEON - As noted above, Leon soils are poorly drained and are usually an indication of freshwater wetlands. Wetlands occur when lenses of clay are found in the subsoil. These areas often form shallow depressions or are found adjacent to the Lakehurst series. The soil is typically a series of different sand in successive layers underlain by the clay or very firm, even hardpan brown sand. Leon soils are level. These lands are generally unsuitable for development. The largest area is located at the County Vocational-Technical school.

LOAMY ALLUVIAL - Alluvial refers to the deposition process where the surrounding soils have eroded by water action and the sediment is dropped on level areas adjacent to stream banks. As such, the soil is typical of the surrounding land but differs in that no clay layers have had an opportunity to form. Loamy Alluvial soils are a strong indicator of wetlands and are unsuitable for building.

MADE LAND - This classification refers to soils that have been intermixed to such an extent by human activities that it is no longer possible to determine the original soil type. Most of this land is associated with the construction of the North South Freeway (Rt. 42), however, certain areas of Glendora and adjacent to Hi Nella also exhibit extensive grading or cut and fill.

MARLTON - Marlton soils are similar to Kresson but are better drained. It's name derived from the town and the town from the marl or glauconite that is found in large quantities in the soil. Glauconite exceeds 40% of the composition and this is found both in the upper and lower strata of the series. Marlton soils vary greatly in slope from nearly level to steeply sloping. Native vegetation consists of red, white and black oaks, and beech. Marlton soils also have a greater amount of quartzose gravel than Kresson soils.

MUCK - Muck is found adjacent to the South Branch of the Big Timber Creek in the extreme southern portion of the municipality and - in an unusual location - west of Little Mill Road just north of Hickstown. Muck is characterized by its very heavy layer of organic material above saturated sands and gravels. Native vegetation is Atlantic White Cedar, more often associated with the stream corridors of the Pinelands. Muck is always associated with freshwater wetlands and is unsuitable for development.

NIXONTON - This series is found in a few areas in the center of the municipality generally in association with higher elevation Westphalia and lower Weeksville soils. Nixonton soils often have a seasonally high water table and in lower elevations are considered indicators of freshwater wetlands. Nixonton is distinguished from Westphalia by its high

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content of fine sand in a yellowish-brown mixture. The fine sand slows permeability and leads to the saturated soil conditions that create a wetlands habitat. Natural vegetation is primarily white oak, however red oak, yellow poplar, beech and holly are also found.

PASQUOTANK - Pasquotank soil is a poorly draining, uniformly fine sand in low elevations with a slope of less than one percent. This condition results in the establishment of wetlands and this soil type is always classified as such. Sweetgum, swamp white oak, and willow oak are common tree types, with viburnum and spicebush the typical understory vegetation. Pasquotank soils are unsuitable for development. These soils are concentrated in the Lakeland complex and in the Little Mill Road area noted under the Muck description.

SAND AND GRAVEL - Sand and Gravel is a descriptive term rather than a soil series. As the name suggests, Sand and Gravel indicates the creation of borrow pits where the topsoil has been removed, exposing the underlying geologic layers which are excavated for construction purposes. Most of the Sand and Gravel areas are in the Cohansy Sand, however, all of the geologic formations except Vincentown Sand were used at one time or another for borrow pit activities.

SANDY ALLUVIAL - This is a variation of the Loamy Alluvial soil noted above except that the soil is primarily sand rather than loam and hence is coarser in texture.

TIDAL MARSH-MADE LAND COMPLEX - In Gloucester Township, Tidal Marsh soils are low lying lands inundated by tides. All of the Tidal Marsh land is in the stream corridors of the North and South Branches of the Big Timber Creek and Pines Run. These streams are tributaries of the Delaware River. Tidal Marsh is by definition freshwater wetlands and is unsuitable for development. The soil contains substantial proportions of organic material combined with silt. Vegetation is almost entirely grasses. Other stretches of tidal marsh have been dredged to create deeper channels elsewhere, however, in Gloucester Township, the land has remained largely undisturbed.

WEEKSVILLE - Weeksville soils are similar to Pasquotank being poorly drained with high and perched water tables. Weeksville has even less permeability than Pasquotank. The soil is mainly fine sand and is extremely acid. The Weeksville series differs from the Pasquotank by having greater inclusions of quartzose pebbles in the lower soil horizons. Soils tend to be grayer than Pasquotank and darker than Barclay (Barclay soils are often associated with Nixonton soils, however, not in Gloucester Township). Weeksville soils are also strong indicators of freshwater wetlands. They are located in the east central part of the municipality.

WESTPHALIA - Westphalia soils are found extensively throughout the central portions of the Township corresponding to the parent geologic formation of the Kirkwood Sand.

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This series ranges from nearly level to very steep, well-drained sandy soil. The soil is a very dark grayish-brown loamy fine sand. Westphalia soils are up slope of Nixonton soils and are better drained. Though glauconite is also found in this series, the amounts are small. Native trees tend to be holly and yellow poplar, but oaks and beeches are also found. Westphalia soils tend to be well suited for development except when their slope exceeds 10 percent. Slope of this steepness tends to be located near stream channels which limits their use for development purposes in any event.

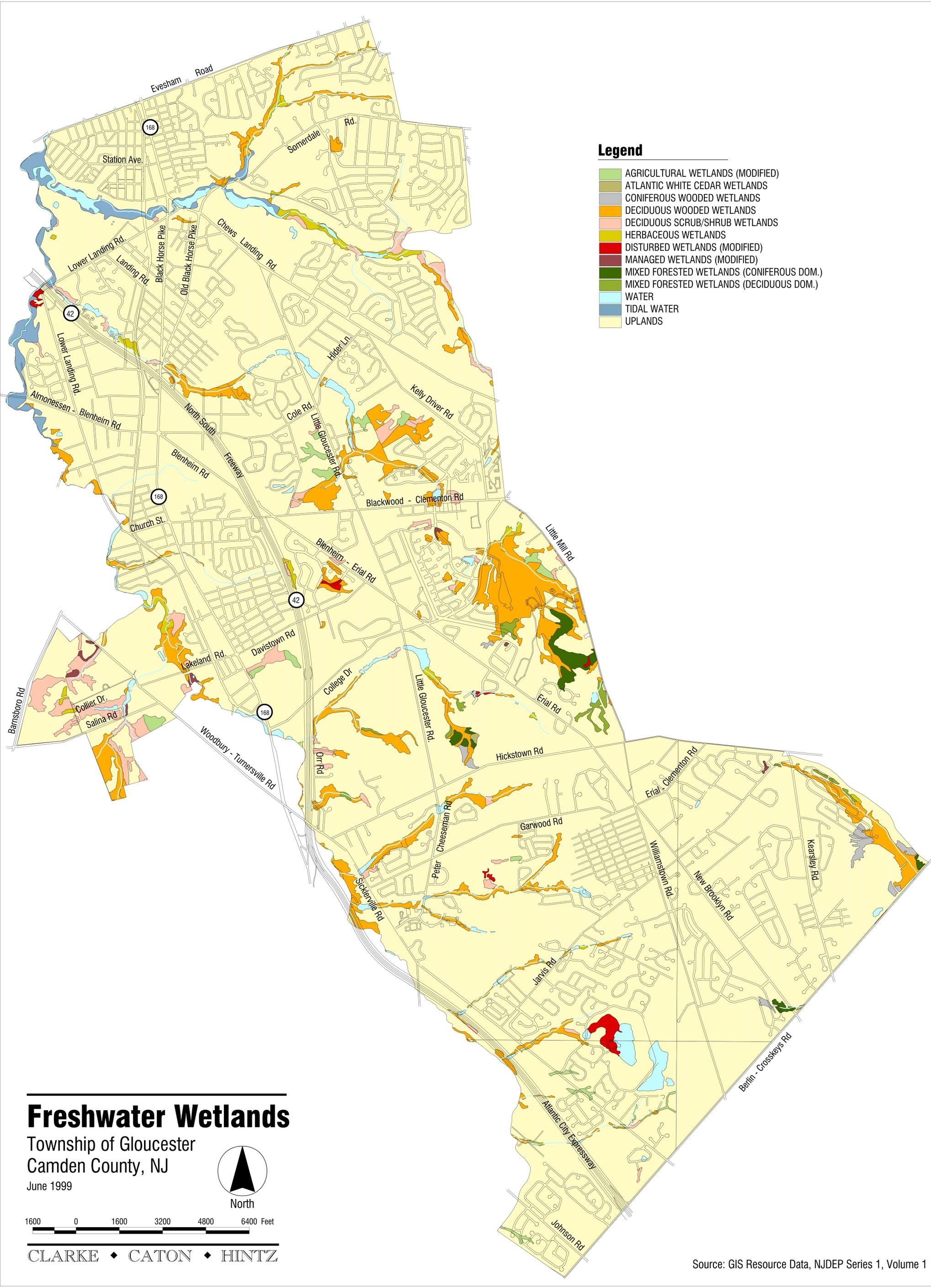
WOODSTOWN - The Woodstown series is usually found in lower elevations related to Downer and Aura soils. Woodstown soils, particularly at the lower levels, has a high water table in late winter to within 2 feet of the surface, though the soil is not usually considered a wetlands indicator. The Woodstown soils are only a small mapping unit in the Township.

The majority of the soil series present only slight constraints to development. Many are agricultural soils of first and secondary importance, which also made them generally well suited for development. Wetland areas are mainly confined narrowly to the stream corridors, except for the County Lakeland complex and north of Hickstown. The Township has also been the site of numerous sand and gravel pits, especially with the construction of Rt. 41 and the Atlantic City Expressway that has altered the natural topography and soil types to a significant degree. The high percentage of suitable land is an important reason for the rapid development of the Township because it allowed a high yield of houses to acreage and simple construction techniques.

FRESHWATER WETLANDS

Jurisdiction for the regulation of freshwater wetlands was passed from the U.S. Army Corps of Engineers to the New Jersey Department of Environmental Protection (DEP) on July 1, 1988. Transitional buffer standards (after legal challenge from several quarters) were instituted on July 1, 1989. The final transfer from federal to state control of Section 404 permits, pertaining to the federal Clean Water Act, occurred in 1994, thereby completing New Jersey's assumption of wetlands protection. As part of this process, the New Jersey Department of Environmental Protection has developed wetlands mapping that more definitively identifies wetlands based on one of three markers (*see* Freshwater Wetlands Map, next page). These identifiers of wetlands include: 1) the land at least periodically and predominantly supports hydrophytes (vegetation characteristically found in saturated soils); 2) the soil substrate is primarily undrained hydric soil characterized by at least long periods of oxygen starvation; and 3) the substrate is a non-soil and is saturated or covered by shallow water at some time during the growing season¹. In Gloucester Township, the Fallsington, Leon, Loamy Alluvial, Muck, Pasquotank, Sandy Alluvial, Tidal Marsh and Weeksville soils are all indicative of freshwater wetlands.

¹- The three parameter approach to classifying wetlands is from the definition of a wetland by the U.S. Fish and Wildlife Service.



Legend

- AGRICULTURAL WETLANDS (MODIFIED)
- ATLANTIC WHITE CEDAR WETLANDS
- CONIFEROUS WOODED WETLANDS
- DECIDUOUS WOODED WETLANDS
- DECIDUOUS SCRUB/SHRUB WETLANDS
- HERBACEOUS WETLANDS
- DISTURBED WETLANDS (MODIFIED)
- MANAGED WETLANDS (MODIFIED)
- MIXED FORESTED WETLANDS (CONIFEROUS DOM.)
- MIXED FORESTED WETLANDS (DECIDUOUS DOM.)
- WATER
- TIDAL WATER
- UPLANDS

Freshwater Wetlands

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The New Jersey Department of Environmental Protection continues to use the U.S. Fish and Wildlife's classification system based on Cowardin, et al². This consists of a hierarchical nomenclature encompassing a wide variety of wetlands' ecologies. Five systems are defined: Marine, Estuarine, Riverine, Lacustrine, and Palustrine (*see* Wetlands Illustration, following). The Marine system consists of the open ocean and its associated coastline. The Estuarine system includes salt and brackish marshes and the brackish waters of coastal rivers and bays. These two classifications are salt water wetlands. Freshwater wetlands and deep water habitats (water over 2 meters in depth) are either classified as river or stream based (Riverine); lake, reservoir or large pond wetlands (Lacustrine); or Palustrine encompassing forested wetlands, marshes, swamps, bogs, and small ponds³. In Gloucester Township, all of the wetlands are freshwater and classified as Palustrine. This is typical of Camden County and the state in general where the large majority of the wetlands acreage is Palustrine.

Palustrine wetlands are the most diverse of the five classifications in terms of the type of vegetation found and of the amount of water saturation. Water saturation ranges from permanently flooded to seasonal and temporarily flooded. Palustrine wetlands also encompass some lands that are tidally flooded such as occurs along Big Timber Creek.

There are three major Palustrine types of wetlands that occur in Gloucester Township. In addition to these natural systems, there are other wetlands that have been disturbed by human actions. An example is wetlands that have been drained and plowed for agriculture. The three major undisturbed wetlands types are described as follows:

PALUSTRINE EMERGENT - On the Freshwater Wetlands Map these are identified as Herbaceous Wetlands and in the Township are located immediately adjacent to flowing streams. They are tidally influenced but are protected behind

2- L. M. Cowardin, V. Carter, F.C. Golet and E.T. La Roe, *Classification of Wetlands and Deep-water Habitats of the United States*, 1979, U. S. Fish and Wildlife Service.

3- This description is based on *Wetlands of New Jersey*, by Ralph W. Tiner, Jr., U.S. Fish and Wildlife Service, U.S. Department of the Interior, July 1985.

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Figure 1. Typological Characteristics of Wetlands.

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natural levees so inundation is occasional rather than constant. They are dominated by grasses, sedges, forbs and rushes. Scattered trees include red maple and willow.

PALUSTRINE FORESTED - The mapping indicates these wetlands under the headings of Deciduous Wooded Wetlands, Mixed Forest (Conifer Dominated), Mixed Forest (Deciduous Dominated), Coniferous Wooded Wetlands, and Atlantic White Cedar Wetlands. This is the most common type of wetland in Gloucester Township. Freshwater swamps are this type of wetland. The first four sub-classifications may be viewed as a continuum of forested wetlands dominated at one end by deciduous trees and at the other by coniferous ones. Deciduous trees are commonly red maple, sweetgum, black gum (tupelo), and holly. Coniferous trees only include pitch pine, other evergreens require drier soil. The understory in forested wetlands typically includes pepperbush, high bush blueberry, swamp azalea, and arrowwood. Atlantic White Cedar Wetlands are virtually the only tree of the sub-classification with red maple the only other species found.

PALUSTRINE SCRUB/SHRUB - The Wetlands Map identifies these areas as Deciduous Scrub/Shrub and consist of similar species as the forested variety. Here, however, vegetation is less than 20 feet tall and is dominated by shrub species rather than trees. Aside from the shrubs noted in the preceding paragraph, St. John's wort, sheep laurel, feterbush, inkberry, and chokeberries are found. Saplings are typically red maple or Atlantic white cedar.

REGULATORY BASIS CONTROLLING DEVELOPMENT AFFECTING WETLANDS

The delineation of wetlands noted on the map are not "regulatory" in the sense of being accepted as definitive for the placement of buildings or establishing buffer limits. Each individual site must be surveyed and the results submitted for a "Letter of Interpretation (LOI)" which is a formal acceptance of the mapping by the State Department of Environmental Protection. This is a common requirement in the site design and approval process.

State law preempts any local freshwater wetlands regulation, including determining or regulating transition areas or buffers. State law sets up three categories of wetlands, "exceptional resource value", "intermediate resource value", and "ordinary resource value". Exceptional resource wetlands harbor endangered species or are related to trout production and have a 150 foot buffer. Intermediate resource value wetlands are all wetlands which are neither exceptional nor ordinary. Intermediate wetlands require a 50 foot buffer. Ordinary wetlands are generally man-made and have no buffer. Bodies of water and water courses with no fringe of associated wetlands are called "state open waters" and also require no buffer. It has been estimated that 47% of the water courses in the state do not have a buffer requirement.

While requiring a buffer from freshwater wetlands is preempted by state law, a setback

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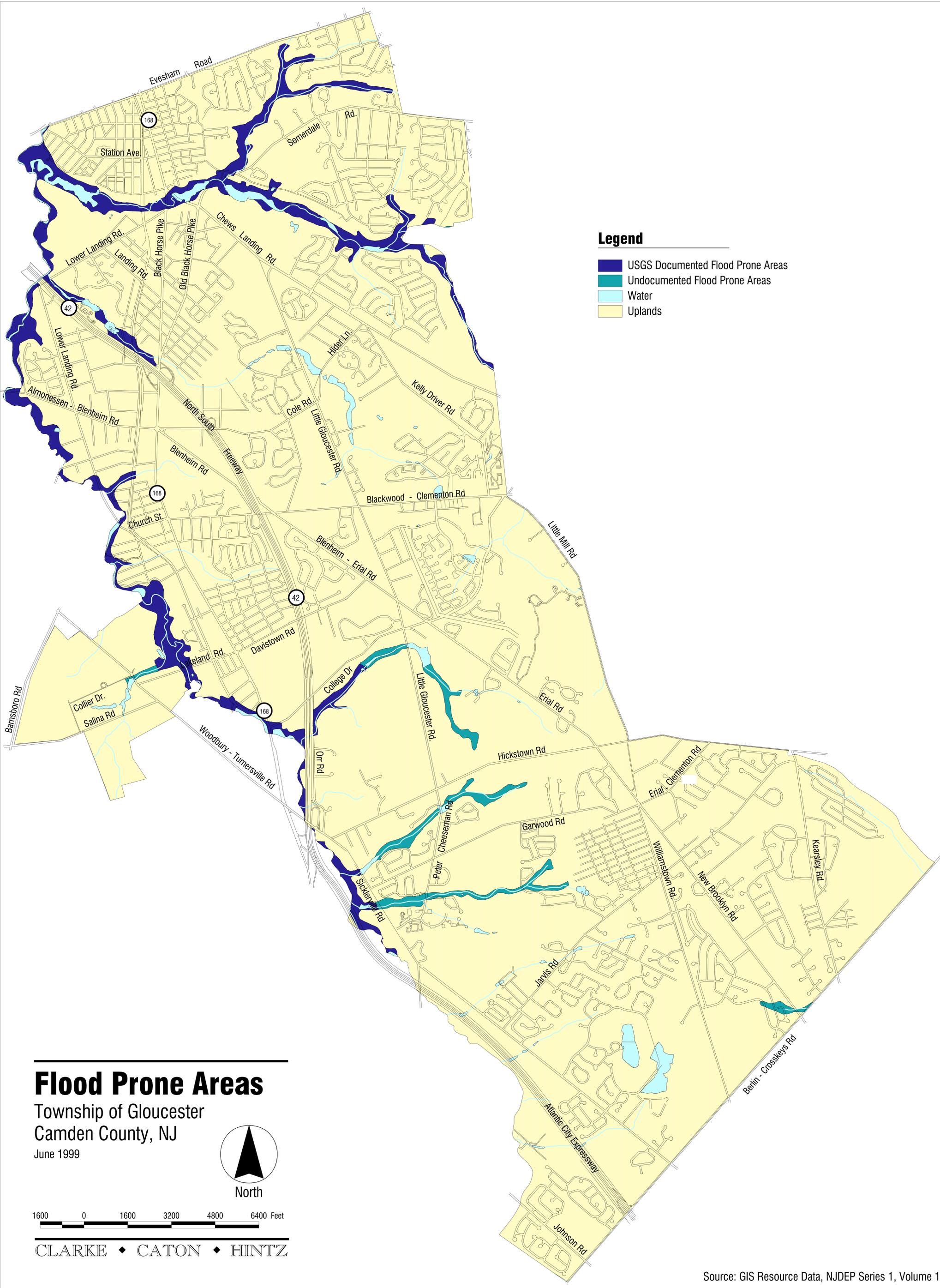
requirement from a stream or pond (ie., state open water) is permissible as an aesthetic regulation. One of the purposes of zoning is to promote the visual environment provided that the regulation is reasonably drawn and applied.

FLOOD PRONE AREAS

"Flood Prone" is a measurement of the danger or probability of flooding. This can result from the overflowing of a body of water onto adjacent land, but can also occur as the result of a rise in the water table, so that land becomes soaked at the subsurface level. The level or nearly level areas on either side of a water course or body created by successive and cyclical inundation and erosion is typically classified as a flood prone area. The DEP uses the "flood prone" description to include the flood plain areas that have been the subject of detailed engineering studies plus those areas outside of the study zone that would likely flood based on aerial photography and topography. Flood Prone areas in Gloucester Township are depicted on the following page.

For purposes of measuring hazards in flood prone areas, 100-year and 500- year flood plains are determined. The flood plains are based on a probability that a storm of a certain magnitude will occur once every 100 years or 500 years, respectively. The delineation of these regulatory boundaries are based on the detailed engineering studies noted above that examine the specific watershed: the land area of the drainage basin, the amount of impervious cover, slope, and capacity of the stream channel. The flood hazard area is composed of three parts: 1) the stream channel, which is the normal stream bed of the stream and contains normal flows; 2) the floodway, which is the area on either side of the stream which must be kept free of obstruction in order to contain 100-year flood

INSERT FLOOD PRONE MAP



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flows; and 3) the flood fringe or 500-year level. None of the flood prone area should be developed though the State allows certain exceptions in flood fringe areas.

Municipalities are required to adopt ordinances that enforce the state statutes, including engineering details to minimize flood damage and adhere to net fill requirements. Municipalities may adopt stricter ordinances, for instance, requiring that no net fill be placed in the flood plain, rather than the 20% limitation imposed by DEP.

In areas outside of flood prone areas, provision need only be made for adequate drainage of each site to prevent local flooding (ponding). Flood prone areas are best suited for conservation and passive recreational purposes. Much of the proposed Greenway Network consists of these areas.

LAND FOR CONSERVATION PURPOSES

The imposition of environmental regulations over the past two decades has greatly reduced or eliminated the development of certain types of environmentally sensitive land. Most of the regulation of environmentally sensitive land has reverted to the state level, including stream encroachment (development within the flood plain), freshwater wetlands, water withdrawals and effluent disposal. Some municipalities also administer complementary requirements which prohibit development or site disturbance next to streams, open bodies of water, net fill in floodplain areas and other types of environmental regulation.

With these restrictions already in place, attention to other desirable site characteristics that are not protected by existing regulations become more important in the preservation of environmentally sensitive land. Protection of environmentally sensitive land is a prudent investment for the municipality to make. Once lands are developed, retrofitting a neighborhood or commercial complex becomes exceeding expensive. Preventing the use of inappropriate lands for construction purposes eliminates future problems and preserves the substantial ecological benefits.

Open space acquisition in Gloucester Township has focused on the use of land for active recreation (*see* Open Space and Recreation Element). Conservation land is one of the other categories of open space. Conservation land is usually the backbone of a Greenway Network - a plan to provide open space that links neighborhoods, civic uses, and active recreation together. Greenways are discussed further below.

Land proposed for conservation should be reviewed for its effectiveness in meeting goals for preservation and open space. Towards that end, a list of recommended site characteristics for acquiring or preserving conservation land is provided.

Site Characteristics in the Ranking of Conservation Land

The following characteristics are considered positive factors in the ranking of land for conservation purposes:

- 1) Its environmentally sensitive nature which may include the following categories:
 - stream corridors and adjacent upland sites
 - aquifer recharge areas
 - freshwater wetlands
 - unique wildlife and plant habitats
 - mature woodlands
- 2) The site's historic significance;
- 3) The extent of aesthetic views and vistas;
- 4) The proximity of the land to other conservation land or other open space;
- 5) The demand for conservation land in the area based on current or future projected population;
- 6) Its accessibility to the public;
- 7) Whether the land may be suitability for multiple types of open space; and
- 8) The ability of the site to sustain its intended use.

In addition to the physical features and location that distinguish a particular site, there are often other considerations that may affect the desire of the municipality to pursue preservation efforts. These factors are listed below.

- 1) The property owner's willingness to sell or preserve land;
- 2) The amount of development pressure;
- 3) The cost of preservation;
- 4) The expected operating expenses and potential for liability claims.

Timely governmental action can be critical to an effective land preservation strategy. Accordingly, it is important for Gloucester Township to maintain an open dialogue with land owners and developers with interests in land identified for conservation. Early

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identification of potential lands for acquisition, easement purchase, or donation is essential because of the deliberative approach that governmental agencies must take in considering the public interest. These factors affect the cost and means to preserve specific parcels.

CONSERVATION TECHNIQUES

There are a number of methods to preserve lands for conservation apart from direct purchase by government or a private non-profit conservation organization. Purchasing large tracts of land in fee simple is expensive and only the most desirable properties should be preserved in this manner.

Techniques discussed here to conserve land include clustering development, purchase or donation of development rights, transfer of development credits, conservation easements, and site design.

The implementation of techniques for conservation of environmentally sensitive land will require a process that successfully integrates plan review, governmental agency programs and private land conservation efforts. No one technique will achieve the goals set forth in this document. The techniques should be selectively utilized to best achieve the objectives of this Conservation Element. These specific techniques are as follows:

CLUSTER DEVELOPMENT

This form of development concentrates buildings on a small portion of a site while preserving the remainder. This design maintains the overall (gross) density for the entire parcel while saving environmentally sensitive land and potentially upland from development. Gloucester Township employs a limited form of this technique in its residential zoning regulations that results in a relatively small percentage of land being set aside for open space. Changes in the open space set aside requirement for open space should be explored in the implementation of the Master Plan.

PURCHASE OR DONATION OF DEVELOPMENT RIGHTS

Under the "bundle of rights" theory of property ownership, development rights are an additional right inherent in a property along with the better known air, water, and mineral rights. Development rights may be separated from the property and sold or donated to governmental agencies or conservation organizations. The sale of development rights requires the landowner to pay federal capital gains taxes which may be offset depending on the individual landowners tax situation. The donation of these rights, however, can be treated as a charitable contribution and provides the donor with a tax deduction. The sale of development rights also reduces the property assessment for tax purposes. Since

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development rights are less than fee simple ownership, their cost is substantially less.

CONSERVATION EASEMENTS

The dedication of easements is a technique that may be used by the Township to preserve wetlands and other environmentally sensitive areas. While retaining ownership in private hands, conservation easements effectively protect lands of ecological importance. Donation of the easement has similar tax advantages, though to a lesser extent, as a development rights contribution. They may also provide other general benefits, such as public access. Private non-profit conservation organizations are substantially involved in identifying prospective properties and working with interested land owners in securing conservation easements in certain parts of the state.

TRANSFER OF DEVELOPMENT CREDITS (TDC)

The transfer of development credits (TDC) is a voluntary program that transfers development rights in the form of a credit from one zoning district to another. Transfers may occur from residentially zoned land to either residentially or commercially zoned land. This program requires a developer to purchase or acquire the development rights to build housing from land proposed for conservation or agricultural purposes and adds it to targeted areas that can support additional development. In this fashion, the land proposed for conservation will be permanently preserved at no cost to the municipality. From the developer's perspective, additional density or intensity of use would be allowed in exchange for the deed restriction of the conservation land.

SITE DESIGN

The design treatment of the layout of buildings, circulation, and utilities is the single largest factor in the preservation of environmentally sensitive lands. The design should start with a development suitability map showing environmental constraints. From this starting point, a design sensitive to the findings of this element may be produced.

GREENWAYS

The greenways concept has gained prominence in recent years in the planning for recreation and conservation lands. The establishment of greenways has grown from earlier ideas that led to linear parks, the interconnected open space of planned unit developments, and the conversion of abandoned railroad lines to trails. The concept of linking recreational areas, civic institutions and residential districts with open space corridors and walking paths has gained new adherents as residents and government officials alike have discovered its benefits. These include creating new recreational opportunities, reducing passenger vehicle travel and hence air pollution, increasing public awareness of the area's natural resources and their need for conservation, and retaining

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scenic vistas.

On a parallel track, environmental awareness and the evolving understanding of the importance of natural areas in controlling pollution and other man-made impacts have greatly increased over the past 25 years. The necessity for conserving environmentally sensitive land is now well established by the scientific community.

These two tracks converge with greenways, which may be defined⁴ as follows:

- 1) A linear open space established along either a natural corridor, such as a river front, stream valley, or ridge line, or overland along a railroad right-of-way converted to recreational use, a canal, a scenic road, or other route;
- 2) Any natural or landscaped course for pedestrian or bicycle passage;
- 3) An open space connector linking parks, natural reserves, cultural features, or historic sites with each other and with populated areas; or
- 4) Locally, certain strip or linear parks designated as a parkway or greenbelt.

Much of the recent emphasis on creating greenways has focused on the preservation of stream corridors. Stream corridors include the water course or body, flood plain and flood fringe area, and often include freshwater wetlands and in some cases associated uplands.

Greenway is also the name used for a program supported by the State Department of Environmental Protection to preserve stream corridors in a continuous band of open space. Establishing greenways along stream corridors would allow the creation of an interconnected open space system. Part of a greenway system has already been established in the Township through the land subdivision process. Though not always in public ownership, the land has been preserved. This process is most evident along the North Branch of Big Timber Creek. Implementation of a conservation system of this type would permit a passive recreation circulation system through the Township that would provide a natural counterpoint to the built environment characterized by the street network.

The development of greenways are usually affected by New Jersey's environmental laws. Since greenways often encompass environmentally sensitive land that is restricted from development in certain ways, the existing regulatory environment will affect trail construction or other development associated with their establishment. Any institution of

⁴ - From *Greenways for America*, Charles E. Little, The John Hopkins University Press, Baltimore, 1990.

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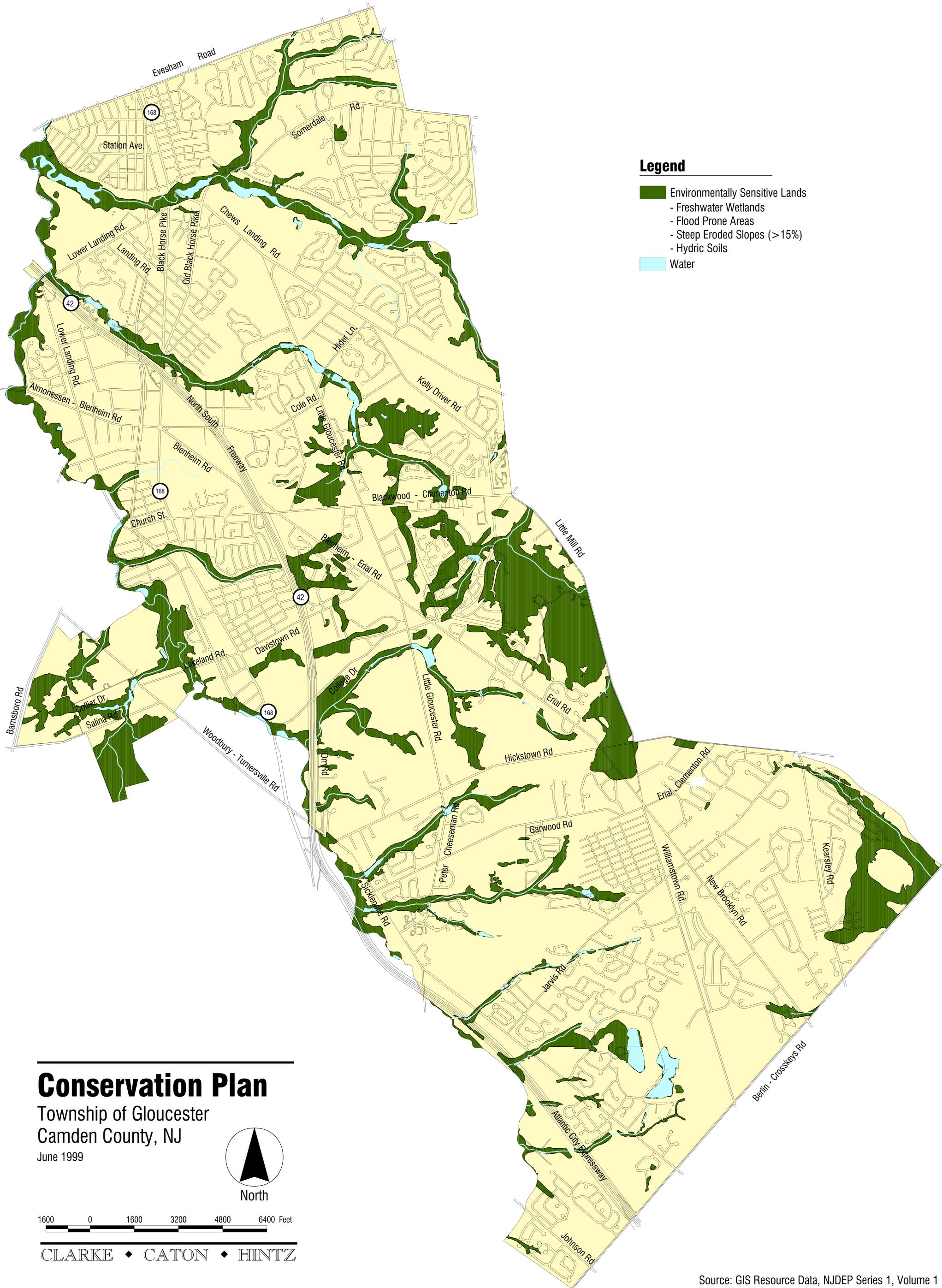
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a trail system must be designed to minimize disturbance in wetland, wetland buffer, or the amount of fill in flood plains. Most stream corridors in the municipality support wetlands within the flood plain. The state DEP anticipated the desire of municipalities to create passive recreation trails in greenways and has established a General Permit No. 17 for this purpose. Several criteria for the issuance of this permit must be met. These include, public ownership of the land or control through public ownership of an easement, a report on endangered or threatened species that may be affected by the construction of a trail, a maintenance plan for the trail, and an approved construction method of establishing the trail. In general, this requires a restricted path no wider than 6 feet constructed of gravel or wood chips (or similar porous material) or in some cases a boardwalk.

SUMMARY OF RECOMMENDATIONS

The Conservation Plan at the end of the element depicts the largest extent of environmentally sensitive lands. It is intended that these lands be preserved from development or encroachments through one or more of the techniques discussed above. Several specific recommendations pertaining to conservation are summarized below:

- 1) Proposed major subdivisions should be encouraged to cluster buildings to preserve open space. The Zoning Ordinance should be amended to provide a greater incentive for larger percentages of open space.
- 2) The design of sites should maximize the quantity and quality of open space in accordance with the criteria established in this element. The Planning Board shall continue to work closely with developers to protect aesthetic views and environmentally sensitive land.
- 3) Farmland, environmentally sensitive areas and woodlands (mature forests and secondary growth) that include development constraints or ecological or aesthetic value should be protected by requiring mitigation of adverse impacts and by limiting or prohibiting development in these areas.
- 4) Preserve additional conservation and other open space by exploring developer contributions and dedication of conservation easements. The criteria as defined in this document for the acquisition or preservation of land should be used in evaluating proposals for public funding and developer contributions.



Legend

- Environmentally Sensitive Lands
 - Freshwater Wetlands
 - Flood Prone Areas
 - Steep Eroded Slopes (> 15%)
 - Hydric Soils
- Water

Conservation Plan

Township of Gloucester
Camden County, NJ

June 1999



CLARKE ♦ CATON ♦ HINTZ

Historic Preservation

INTRODUCTION

The Historic Preservation Element is intended to establish and maintain policies for the conservation of the history of Gloucester as it relates to its people and land. As such, it generally concerns itself with buildings and sites more than 50 years old. Local efforts in historic preservation fit into a framework developed by the state and federal governments that have created programs designed to coordinate and promote conservation activities.

The concept of historic preservation has expanded beyond the initial desire to protect buildings where significant persons lived or events occurred to a broader emphasis on preserving the cultural heritage of a community as it has developed over time. The framework for historic preservation has been codified into a set of criteria used to determine the need and desirability for inclusion in preservation efforts. These criteria include:

- 1) Whether the site or district has significant character, interest, or value, as part of the heritage of cultural characteristics of the municipality, state, or nation, or is associated with the life of a person significant in the past.
- 2) Whether the site or district is associated with an event of importance to the history of the municipality, state, or nation.
- 3) Whether the place reflects the environment in an era characterized by a distinctive architectural style.
- 4) Whether the building or structure embodies distinguishing characteristics of an architectural style or engineering specimen.
- 5) Whether the work is one by a designer, architect, landscape architect, or engineer whose design has significantly influenced the historical, architectural, economic, social, or cultural development of the municipality, state, or nation.
- 6) Whether the site or district contains elements of design, detail,

materials, or craftsmanship which possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

7) Whether an area is part of or related to a park or other distinctive location which should be preserved according to an historic, cultural, or architectural motif.

8) Whether an area has yielded, or may be likely to yield, information important to pre-history or history.

9) Lastly, whether the site or district exemplifies the cultural, political, economic, social, or historical heritage of the community.

This set of criteria was developed by the U.S. Secretary of Interior to aid in the designation of historic sites and districts. The criteria, any one of which may be conclusive in the determination to protect a site or district, constitute a sweeping charge to preserve the fabric that gave rise to modern day Gloucester.

HISTORICAL BACKGROUND¹

The Township of Gloucester dates from the earliest days of English rule over the colonies after Dutch and Swedish claims to the land were eliminated, sometimes by force. New Jersey was the province of James, the Duke of York who was given the land by his brother, King Charles II, in 1664. The Duke of York in turn rewarded two of his loyal courtiers, Sir George Carteret and John, Lord Berkeley with East and West New Jersey, respectively. Lord Berkeley found himself in financial difficulties and sold West New Jersey to two Quakers. The part occupied by modern Gloucester Township was eventually owned by Edward Byllynge. Byllynge's land was divided into smaller shares of about 20,000 acres each. Byllynge, along with a group of trustees who marketed the shares, established a common document promising religious freedom, representative government, and fair taxation. These provisions were attractive to a group of Irish Quakers who ended up being the first legal settlers in the area in 1681, a year before William Penn chartered Pennsylvania.

Gloucester Town had been laid out along the Delaware River four years earlier in 1677 in an effort to entice settlers to the New World. Gloucester Town is now known as Gloucester City. The town was named after the shire in England. Gloucester Township was established around Gloucester Town in 1695 and included all of the land between the

1- This section is based upon "Camden County, New Jersey 1616-1976: A Narrative History" by Jeffrey Dorwart and Philip Mackey, Camden County Cultural and Historic Commission (1976) and "The History of Gloucester Township New Jersey, Volume 1: 1492-1770" by Edward E. Fox, III, (1999) unpublished.

South Branch of Newton Creek and the South Branch of [Big] Timber Creek, from the Delaware River to Egg Harbor Township (which eventually became Atlantic County). This eastern boundary was not officially established until 1761. By this time, Gloucester County had been created which included the modern day counties of Gloucester, Camden and Atlantic Counties.

Gloucester Township was officially incorporated in 1798 when the New Jersey Legislature established specific requirements for municipalities. The Township was one of 104 other municipalities incorporated at that time. In 1831, Gloucester Township's northern territory was ceded to Union Township.

At the time that Camden County was established in 1844, the county included Delaware, Newton, Union, Gloucester, Waterford, Winslow and Washington Townships. Washington Township was later transferred back to Gloucester County in 1871 but without the land that now makes up the Lakeland complex (additional land was acquired in 1926 and 1931 for the County facility).

Gloucester Township reached its present boundaries by the succession of several other municipalities. These included Winslow Township in 1845, additions to Waterford Township in 1859, and Clementon Township in 1903. Clementon Township itself devolved to nine other municipalities in the 1920's.

Prior to European settlement, the area between the Newton and the Timber Creeks was inhabited by the Lenape people (also known as the Lenni Lenape or Delaware Indians). The Dutch and Swedish traders, and the British Quakers that followed them, referred to this area and people as Arwamus (also known by many other spellings). There were certainly Lenape settlements in Gloucester Township, most likely at the convergence of Otter Branch and the North Branch of Big Timber Creek at Chews Landing.

The Township's two early settlements were Blackwood and Chews Landing. The Township's waterways were a primary method of getting timber and crops to market, particularly because of the poor road system. Both places grew around transshipment points from land to water. Mills for grain and sawing were also constructed along stream channels. These centers of commerce grew in population from the economic activity present.

Blackwood began in 1693 when George Ward (a.k.a. as George Brown) purchased 300 acres at the end of the navigable section of the South Branch (a hamlet called Upton established a number of years earlier). Additional land was purchased by his brother William to the east. Subsequently, old Salem Road was rerouted to cross the South Branch at Ward's milldam. The intersection of Salem Road with the old Cape Road near the crossing created the center of Blackwood. The village's name comes not from the charcoal pits that dotted the area but from John Blackwood, a mill manager for Charles

Read, who had purchased the grist and fulling mills from the Ward family in 1739 or so. Blackwood in effect created a company town for the mill workers, by improving and enlarging the operations and providing for worker housing. Blackwood became the largest center of population in Gloucester Township.

Chews Landing got its name from Jeremiah Chew who owned a tavern on the south side of the North Branch. Gabriel Daveis owned a tavern on the north side and established a dam across the creek known either as Daveis dam or Floodgates dam. This tavern building exists to this day and is owned by the Township. In 1768, a bridge was constructed at Chews Landing, a landing being a place to access the creek for navigation - somewhat analogous to the on-ramp of an expressway. Landings were either public or private and many of them became locations for milldams or bridges as the road system developed in colonial times.

Davistown and Hickstown are of interest because of their association with freedmen. Davistown was founded in the early 19th and Hickstown in the mid-19th. The Solomon Wesley United Methodist Church, founded in the 1850's, was a focal point for Davistown.

HISTORIC REGISTERS

The National Historic Preservation Act of 1966 established federal policy for preserving the country's cultural heritage. This marked the first time that funding had been made available throughout the country to identify, map, and preserve historic and pre-European structures and sites. Much of the identification and organizing work was delegated to the state level through the establishment of State Historic Preservation Officers (SHPO's). The State Historic Preservation Officer is the official liaison between local officials or groups and the federal Department of the Interior, the agency responsible for administering federal historic preservation efforts. The federal program became the impetus for the New Jersey Legislature's passage of historic preservation legislation in 1970.

The federal and state acts established the National and State Registers of Historic Places, respectively. In New Jersey, the State Historic Preservation Officer and staff are part of the Department of Environmental Protection. The SHPO is responsible for maintaining the State Register and evaluating petitions for inclusion on the list, as well as submitting requests for inclusion on the National Register.

Sites listed on the Registers are afforded a comprehensive level of review and protection whenever a federal or state project is proposed that may have an impact on the historic property. The State also requires that its political subdivisions -- counties and municipalities and their agencies -- also conduct an analysis of the effect of a

development proposal whenever there is public financing involved. Historic sites on a Register are also given first priority if funding for the maintenance or restoration of buildings, structures or sites is appropriated.

Registration of historic building, structures, and landscapes only provides protection from the actions of governments. If a private individual wanted to alter or demolish a building on the National and State Registers, no protective measures exist unless some governmental funding is involved. Only at the local level may historic buildings and sites be preserved from being incorrectly altered or demolished by the action of private individuals. This regulatory structure underscores the importance of a locally delineated historic district for preservation purposes

A local district and the identification of individual sites not within a district also serve the purpose of identifying places of local history that are less important to state or national history or culture but are significant to the development and history of the Township.

NATIONAL AND STATE REGISTERS AND LANDMARKS

There are four sites and one district within Gloucester Township that have been designated on the National and State Historic Registers. The district and sites are indicated on the Community Facilities Plan. These include:

CHEW-POWELL HOUSE - Located on Good Intent Road in Blenheim, this house was built in 1688 by James Whitall, one of the first settlers of Gloucester County. This well-preserved landmark in Blenheim is privately owned and occupied. The Chew-Powell-Wallens Burying Ground, adjacent to the house, is believed to be the oldest cemetery in the Township, and contains the remains of early settlers, Revolutionary and Civil War soldiers, and Lenni Lenape Indians. Settlers of Upton, the precursor to Blackwood, are thought to be the oldest inhabitants buried there.

GABRIEL DAVEIS TAVERN HOUSE - This pre-revolutionary war tavern was built in 1756 and for many years served as an inn for the boatmen who transported their products to Philadelphia via nearby Big Timber Creek. It competed for trade with the Chews Landing Tavern, since demolished, on the opposite of the creek. The building has also been referred to as the Hillman Hospital House because it was designated as a hospital by George Washington during the Revolution. The tavern is located on 4th Avenue in Glendora and was recently restored by the Township.

ST. JOHN'S EPISCOPAL CHURCH AND BURYING GROUND - St. John's Church at Chews Landing was formally organized in 1789, although regular services had begun months earlier under Reverend Levi Heath. The present St. John's Episcopal was erected in 1881 of

granite-gneiss stone quarried from Ridley Park, Pennsylvania and brought on the scows of local shipyard owner Edmund Brewer to a point near the old landing at Timber Creek. The building was designed by George Watson Hewitt, an important 19th century architect, and is one of the few remaining Victorian Gothic style religious edifices in the County. The burying ground was staked off in regular order in 1794 although it had been in use for some years previous. Many early founders of the church, including Lt. Aaron Chew, rest in the cemetery.

SOLOMON WESLEY UNITED METHODIST CHURCH - Built in 1850, the Solomon Wesley United Methodist Church is one of the few existing reminders of the former village of Davistown and the community of freed slaves that established itself there in the early nineteenth century. The village was part of a mile long parcel of land left to Lindley Davis in the 1790 will of Daniel Bates, a leading layman of the Bethel Methodist Circuit, who also provided Davis, an African-American woman, with \$200 and her family's freedom. Davistown, or Davisville, grew to be a small close-knit community primarily composed of Davis family members. When founded in 1850, the Solomon Wesley Church was an African Wesleyan Methodist Episcopal church, a branch of Methodism that was started in Philadelphia in 1787 when racial discrimination issues divided members of the mother church. The building is one of two African-American churches and the only one from the mid-nineteenth century identified in Gloucester Township. The Solomon Wesley cemetery has veterans from the Civil and Spanish Wars, WWI and WWII, and many members of the original Davis family.

BLACKWOOD HISTORIC DISTRICT - Generally oriented north-south along Black Horse Pike and east-west along Church Street, the Blackwood Historic District encompasses the commercial and residential core of the 18th and 19th-century village of Blackwood. Blackwood had substantial residential growth as a railroad suburb along the Pennsylvania and Reading Railroad, where residents could commute to work in Gloucester City, Camden, or even Philadelphia. Within its boundaries, the district contains 108 buildings, sites, objects and structures, of which 92 or 85% are contributing. The district is characterized by the existing commercial core along the Black Horse Pike, by the churches and residences along Church Street, and by residences in the village's earliest suburban tract along Central Avenue which is bounded on the west by the former railroad to Camden. Representing a range of construction dates from the Federal period (1780-1820) through the 1920s, the buildings within the district are typically two stories in height and built of frame, except for the commercial core where brick is the predominant material. The district's association with early settlement in Gloucester Township, its survival as the most important such example in the Township, and its contribution towards a better understanding of the settlement patterns in Camden County made the district eligible for listing in the National and State Register of Historic Places.

LOCALLY SIGNIFICANT LANDMARKS

In addition to the sites and district on the National and State Registers, several other sites are of known local significance. These sites may also be eligible for a future listing but would require more research before a nomination could be made. These include:

UPTON LOG HOUSE - Built between 1685 -1750, this early log house may be the oldest home in Camden County. Located off of Cole² Landing Road, the home is in good condition and exhibits many original features. It is larger than others recorded and may indicate it was the home of a person of importance. Additional research is needed to identify historical events and persons associated with the structure.

MARQUADANT-JOHNSON FARM HOUSE - This home was one of the original Brewer (a prominent family) homes built in the area. The rear of the house was built in the 1700s, but the front was build in 1824. The home is now privately owned and occupied.

HISTORIC AND SCENIC PRESERVATION COMMITTEE

The Gloucester Township Historic and Scenic Preservation Committee was established to review and advise the Planning Board on issues pertaining to historic preservation. The Committee also advises the Administrative Officer on plans that do not require development approval. The Historic and Scenic Preservation Advisory Committee is also charged with identifying and recording historic sites, buildings, potential new historic districts, and other significant aspects of the cultural resources of the Township and reporting these findings to the Township governing body.

CERTIFIED LOCAL GOVERNMENT PROGRAM AND HISTORIC PRESERVATION COMMISSIONS

The Certified Local Government Program is designed to assist municipalities in surveying and nominating districts or landmarks for inclusion on the historic registers. The Certified Local Government Program is administered by the State Historic Preservation Officer. A certain amount of federal money for historic preservation is required to be passed through by the state government to local agencies. This money is allocated to certified local governments. In order to be eligible to become a certified local government, a municipality must have an adopted historic district and an established Historic Preservation Commission.

2- The original name of Cole Landing was Coal Landing for the numerous charcoal pits that were established in the area. Charcoal was easier to transport and was favored for its more even heating characteristics by smithies in Philadelphia. Since the Cole family (Colestown) is a prominent name in Camden County history, the original name was probably transposed with the family name.

The Gloucester Township Historic and Scenic Preservation Committee has a number of the duties that a Historic Preservation Commission does, such as cataloging and documenting historic buildings and structures and providing advice on development applications that may affect them.

Should the Township decide to apply for Certified Local Government status, the basic organizational structure is in place with the Committee but would need to be upgraded to full Commission status. The Municipal Land Use Law sets out the following responsibilities for Historic Preservation Commissions:

- Prepare a survey of historic sites of the municipality pursuant to criteria identified in the survey report;
- Make recommendations to the Planning Board on the Historic Preservation Plan Element of the Master Plan and on the implications for preservation of historic sites of any other master plan elements;
- Advise the Planning Board on the inclusion of historic sites in the recommended capital improvement program;
- Advise the Planning Board and Board of Adjustment on applications for development;
- Provide written reports on the application of the zoning ordinance provisions concerning historic preservation; and
- Carry out such other advisory, educational and informational functions as will promote historic preservation in the municipality.

There are two methods of organizing a Historic Preservation Commission - the weak and strong Commission. When an application for development is located in a historic district or is a historic site outside of a district, the weak Commission provides advice on the issuance of a Certificate of Appropriateness to the approving Board. The strong Commission issues Certificate of Appropriateness' independent of the Planning or Zoning Boards. Most municipalities have created weak Commissions.

A full survey of the Township's historic resources has not been completed. Many important sites have been identified and in most instances have been nominated to the State and National Registers. However, other, smaller or newer sites may also be of local importance to the history of the Township. The Gloucester Township Historic and Scenic Preservation Committee has been given this charge but a full survey is time consuming and often requires specialized architectural services. One method of obtaining the resources for a full survey would be to take action to become a Certified Local

Government.

RECOMMENDATIONS

- 1) Undertake a full survey of the Township's historic resources.
- 2) Encourage the additional nomination of appropriate sites to the State and National Register of Historic Places.
 - The Historic and Scenic Preservation Committee should be the lead agency to propose nomination with the assistance of private historical groups and homeowners.
 - Nominations should be made with the concurrence of the landowner whenever possible.
 - The Historic and Scenic Preservation Committee should educate the public to the extent possible within their existing resources about the rights and responsibilities of nomination and listing of historic properties.
- 3) Investigate more fully the potential for other historic district registrations as a long range planning goal.
- 4) The Township's property maintenance code should be revised to promote historic preservation.
 - Create more stringent standards for property maintenance in the historic district for contributing buildings and for individual historic landmarks.
 - Implement an effective means of preventing demolition by benign neglect.
- 5) When, as a last resort, the demolition of a designated or suspected historic building is approved, require the submission of an architectural record of the structure prepared by a qualified architectural historian.
- 6) Develop an educational outreach program to promote preservation awareness in Gloucester Township.

Blackwood West District

INTRODUCTION

The Blackwood West District at the crossroads of the Black Horse Pike and Church Street is the most important traditional center of commerce in the municipality. It is also the site of the Township's historic district that has been placed on the State and National Registers (in 1989). This section of the Master Plan examines the policies and past study of the Blackwood West district and makes suggestions for strategies to continue its improvement. It should be considered a sub-plan element of the Master Plan.

Blackwood figured prominently in the early history of the Township, beginning in 1693 when George Ward purchased 300 acres at what is now known as the Church Street crossing of the South Branch. Ward created a milldam on the creek to supply power for his grist mill. William Ward, his brother also purchased large acreage to the east of the original holding. The village's name comes from John Blackwood, a mill manager for Charles Read, who had purchased the grist and fulling mills from the Ward family about 1740. Blackwood created a town for the mill workers which functioned as a center of commerce for the farming community from the surrounding rural area. A dam still exists where Church Street crosses the South Branch, creating Blackwood Lake behind it.

Blackwood West was aided in its development by the paving of the Black Horse Pike in the 1910's and by a railroad line from Camden to Grenloch Lake that passed through the village. Blackwood West reached its present size in the 1920's. Newer post-war housing was constructed adjacent to Blackwood West between the village and Rt. 42 and marks a stylistic departure from the older community.

Since World War II, the importance of the downtown diminished as newer, car-oriented, retail centers were constructed. Long time businesses closed, and some inappropriate alterations were undertaken to "modernize" buildings in an effort to be competitive with the new shopping centers. The Township first examined this problem in 1982 utilizing community development block grant funding for a study. The study was completed in May 1983, entitled, *Blackwood West Mixed Use Revitalization Study - Downtown Development District* and it examined a number of issues related to land use, urban design, the regulatory framework of the area, and business owners' perceptions about Blackwood.

PROBLEMS IDENTIFIED IN THE STUDY

The study found that the zoning regulations were treating the Blackwood West area as a group of distinct land uses. Blackwood developed prior to the institution of zoning and has always been an interrelated mix of uses, combining retail trade with dwellings, religious uses with social functions, public uses and parks in a small downtown setting. Viewing the land use as a set of distinct uses had the effect of atomizing a district that was struggling to be cohesive.

The main development of Blackwood West had occurred by the 1920's when the early age of the automobile was first being fueled by economic expansion and advances in manufacturing that brought the cost of the car into reach of the middle class. Blackwood was not designed to accommodate the automobile to any great degree. When parking and access were developed later, a series of curb cuts and small back yard parking lots were made in a haphazard manner. Because parking was not visible, the perception arose, particularly in comparison to the wide open parking lots of the new shopping centers, that there was insufficient parking. Parking and access to parking lots were viewed as key elements in the study. At the same time, the study warned that over reliance on accommodating the automobile would end up making the downtown worse if it created an unfriendly environment for the pedestrian.

Aside from the disjointed nature of the existing parking lots, the study noted that the location of existing parking was not necessarily where the most demand was. Further, it discovered that park and ride commuters were taking valuable on-street parking in front of shops from potential customers. There was no metering of parking spaces so it encouraged people to park all day long. On-street parking was found to be ill-defined because the travel lanes were not striped. Lastly, some business owners themselves were parking in front of their establishments. All of these factors led to the "justified perception" that parking was inadequate.

Access to existing lots was the other side of the circulation coin. The study observed that the lack of interconnection between existing parking lots meant that an excessive number of driveways were intersecting the Black Horse Pike. The excessive number of curb cuts had several effects: It created conflicts with pedestrians, it reduced the number of on-street parking spaces, and was hazardous for motorists as vehicles entered and exited the driveways.

The study also examined design issues related to the existing buildings. The primary focus was on the ten-store group of attached buildings on the northwest corner of the Rt. 168 and Church Street intersection. Two of the stores had a burned out interior. The group of stores, individually owned, lacked any kind of visually unified scheme, even though the group was built at the same time.

Examination of the Blackwood West District
Township of Gloucester • County of Camden

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The study determined that the streetscape -- the physical and visual elements that constitute the aesthetic look of a street -- did not encourage pedestrian use and was not inviting to the passersby. It identified four elements that made up the streetscape; sidewalks, landscaping, street furniture (benches, trash receptacles, bike racks, sign posts, kiosks, and the like) and lighting. The study observed that many of the sidewalks were in disrepair which discouraged pedestrian use. Street trees were lacking in a number of locations which lent a hard-edged look to the streetscape. Benches and trash receptacles were noted as lacking, especially at the bus stop. Lighting was confined to highway style "cobra head" fixtures that were out of scale with the two story buildings in town, even though they provided sufficient illumination. The study came up with a number of recommendations for improvements.

Study Recommendations

The Blackwood Revitalization Study's recommendations for improvements to the district were manyfold. These are highlighted as follows:

PARKING AND CIRCULATION

- Create centralized parking lots for short term parking.
- Larger lots at the edge of the downtown should be developed for commuters; however one of the lots proposed was the site of Academy Hall.
- Retain on-street parking and add low cost meters to discourage long term parking.
- Reduce curb cuts along Black Horse Pike and add signage to indicate driveways where they remain.
- Interconnect existing parking lots and redesign their layout to maximize the number of spaces.
- Expand existing parking lots to incorporate adjacent vacant land.
- New lots should be to the rear of buildings to the extent feasible.
- Stripe Black Horse Pike to delineate travel from parking lanes.
- Add connecting sidewalks from rear parking lots to the street.

BUILDING FACADE AND DESIGN

- Improve the appearance of the ten-store facade to create a cohesive look to the building, remove inappropriate signage and visible equipment, and add awnings.
- Take steps from condemnation to a negotiated consent agreement with the owner to restore the two burned-out stores.

STREETSCAPE

- Install distinctive sidewalks in the downtown area to create a visual identity for the district.
- Install street trees at a spacing of 30-40 feet. Columnar species would be used along Black Horse Pike and broad crowned trees for West Church Street.

- Install benches for bus stop and pedestrian use in appropriate locations.
- Add lower scale historic lighting while retaining existing high level highway lighting.

REGULATORY

- Create one district allowing a mix of uses that could either be focused on land use or historic preservation.
- Incorporate a set of design guidelines and standards for development in Blackwood West.

Extent of Meeting the Study's Recommendations

REALIZED GOALS

To a remarkable degree, the recommendations contained within the Blackwood West study have been realized. The overall goal was to stop the decline of the downtown and improve its appearance. Blighting influences were present: vacant land, boarded storefronts, abandoned and run down buildings. Parking was scarce, on-street and off-street parking difficult to find. There have been a number of positive improvements that occurred as a result of the study. These include:

- The ten-store commercial core has been rehabilitated with a consistent paint scheme and awning treatment.
- Additional parking lots have been created at Academy Hall, on the vacant lot south of the former Worrell's Pharmacy, and off of Elm Avenue.
- Historic lighting has been installed and banners heralding the district are flown.
- Sidewalks have been improved, though without distinctive markings or patterns.
- Travel and parking lanes have been striped, and crosswalks added.
- The Blackwood West zoning district has been created, which includes the design standards and guidelines established by the study.

POSITIVE DEVELOPMENTS BEYOND THE STUDY

The work undertaken by public and private entities in Blackwood has also led to more investment beyond the scope of the original study. Of particular importance is the Blackwood Branch of the Camden County Library system (*see* Community Facilities Element for a description of the library). The library was constructed on the site of an old tool and machine shop in a collaborative effort between Rotary International (land), Gloucester Township (building) and Camden County (materials and staffing). The library has been in use about ten years. The parking lot associated with Academy Hall, an historic structure owned by the Township and adjacent to the library, provides parking for this side of the Black Horse Pike.

The Township developed a pocket park for Blackwood, called Harwan Park, that has created an area for sitting and includes a gazebo for community events. This has enlivened a part of the downtown that had been abandoned. It is used primarily on pleasant days for eating lunch and for events held by the Blackwood West Business Association.

The Township added a public clock as part of its streetscape improvements which enhances the overall appearance of the community.

PARTS OF THE STUDY NOT IMPLEMENTED

Several parts of the Blackwood study were not implemented. Creating a parking lot on the land behind the ten store structure, called the Elbertson property, was not implemented. The demand for parking appears to have lessened with the development of the new parking lots and the present owner of the land appears to be less willing to sell the land. The number of curb cuts has more or less stayed the same. It was expected that these would be eliminated as part of the development of the parking lots and redevelopment of buildings. Notwithstanding the improvements in the downtown, relatively little new development has occurred so the opportunity to consolidate driveways has remained limited. Finally, the street tree planting plan has not been realized. The existing street tree pattern is spotty, with the heaviest concentration along the Black Horse Pike, south of Church Street.

CHANGES IN THE ASSUMPTIONS OF THE STUDY

The study made the assumption that physical improvements and land use policy would be enough to revitalize the downtown. The degree of revitalization may be debated, but the downtown area appears to be stabilized, with very few empty buildings or run down eyesores. The basic economic structure of retailing has undergone rapid changes since the downtown was established. From the strip shopping center to the enclosed mall, to

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power centers and big box retailing, the provision of goods and services has undergone a vast and telling change. It has had its effect on Blackwood West.

Amid all of the positive improvements, competition from newer and larger retail outlets has eroded the number of businesses catering to the needs of the neighborhood. The 1983 study noted a change at that time from retail sales to more service-oriented commercial uses. This change is even more pronounced in the time period since the study was written. Blackwood no longer has an appliance or furniture store, or an establishment that sells pianos like it did in the early 1980s. Instead, these retail uses have given way to more specialty uses, professional offices, and more services -- even industrial uses. The former Acme grocery store is now a clothing manufacturer. It is unlikely that Blackwood will once again become a significant source of retail trade simply because of the wide variety of easily accessible merchandise in newer shopping centers. The rise in catalogue and selling on the Internet will have new and unforeseen implications for retail sales and services.

The 1983 study exclusively emphasized the commercial aspects of the Blackwood West district. Residential uses, however, occupy a significant portion of the downtown, either in the form of apartments above stores or as single family detached housing on relatively small lots. Nearby residents provide an actual and potential market for Blackwood downtown uses and the immediate area outside of the district is almost exclusively residential. Blackwood also has a strong institutional component that lends importance to the civic realm of the downtown. A balance should be maintained between these uses and commercial uses in Blackwood.

RECOMMENDATIONS

Continuing the progress made so far in Blackwood is less one of physical or land use policy changes than one that promotes and markets the commercial district. Certain physical improvements would make for a more pleasing appearance; however, these could be accomplished over time when the district becomes more successful. For example, more customers would translate into the need for more parking, so at the time demand rises, constructing more parking lots could be accomplished.

New Jersey is replete with older downtown centers that served the surrounding community but have struggled against modern shopping centers and office parks. The most successful at weathering the economic changes caused by new competition have emphasized their unique character, often historic, in promoting businesses. The emphasis may also be on a concentrated type of business. Mullica Hill, for example, combines its historic character with its concentration of antique dealers; Flemington is known for its outlet centers. Another way of distinguishing Blackwood West from other similar downtowns is through special events, such as the Pumpkin Festival held each fall.

The Pumpkin Festival currently takes place over a long weekend but the Blackwood West Business Association hopes to be able to expand it for a longer period, perhaps a week. Discussion has also ensued about a spring festival, conceivably with an arts and craft theme. The need for Blackwood West to promote its activities would fit in well with ongoing efforts by the municipality to develop a marketing and demographic profile for its industrial and office parks. A section devoted to Blackwood West would be a mutually beneficial tool.

Blackwood Lake is at the foot of Church Street and extends southward to the Black Horse Pike. The dam was recently renovated on the stream. Blackwood Lake was at one time an important summer recreation site for visiting city dwellers. Citizen efforts at cleaning up the lake are proceeding. The lake would add to the uniqueness of Blackwood West if it could be linked physically to the downtown. A destination or overlook area, picnic grounds, or other passive recreational activity could be developed to enhance the lake area. The business association is exploring ways to utilize the lake, perhaps for a "bathtub regatta" or other similar water activity.

Though physical improvements should take second priority to program and operational efforts, the site plan process should be used as an opportunity to enhance individual sites. It is recommended that the street tree planting plan initially begun with the 1983 study be implemented. This could be accomplished for individual sites, or as a municipal project. Trees would help establish a sense of place by marking the entrance to Blackwood along the roadway. It would provide shade for parked vehicles and buildings. Lastly, the street trees would help soften the often hard-edged landscape that exists in parts of the district. Partial screening of parking lots from the street would also provide a physical enhancement without reducing the ability of motorists to find entrance drives. Walls, hedging, and screens would help define the difference between public and private space. Aesthetically, commercial vehicles could be hidden from direct view and large expanses of asphalt would be less visible.

Potentially, the Blackwood West area could be placed into a local historic district since it already is on the State and National Registers of Historic Places. Placement on the Registers offers protection from governmental action but does not regulate actions by private individuals. Creating a local historic district would entail greater regulation of the Blackwood West area and the Township would need to weigh the benefits against the added effort for approval that landowners would face.

Community Facilities

INTRODUCTION

Community facilities are public buildings and grounds that provide locations for the administration and delivery of services. Typically these include the facilities of the municipal government, police, fire, emergency services, board of education, and similar government-based uses. In addition, community facilities include quasi-public uses such as churches and other houses of worship, fraternal and social organizations, hospitals, and other institutional uses. Community facilities may also conceptually include those related to recreation; however, in this Master Plan these are discussed in the Open Space and Recreation Plan Element.

The adequacy of community facilities depends on the demographic characteristics of residents and their expectations for the delivery of services. One community's facilities may revolve around senior citizen activities, another may concentrate on youth activities. The characteristics of the population in Gloucester Township are sufficiently broad that there is a constituency for a large variety of facilities and programs.

The purpose of this element is to examine the adequacy of community facilities for the municipality, focusing on those services provided by local government. The community facilities available for Gloucester Township residents are noted below.

TOWNSHIP MUNICIPAL BUILDING

Located on Chews Landing-Clementon Road at Hider Lane, the Township Municipal Building houses the police department, municipal court, and all other municipal departments with the exceptions of Recreation and Public Works. The Recreation Department is located on Broadacres Drive and Public Works on Erial Road. The Municipal Building was built in the mid-1970's and then expanded in 1982. The building currently has adequate space to accommodate municipal functions. Since 1982, the Township's investment in information technologies has allowed it to provide services to a larger population with nearly the same number of employees.

Certain municipal operations are tied closely to the level of population. These typically include police services, municipal court, public works and recreation facilities. The estimated population of the Township was 62,767 people at the beginning of 1999¹. If the Land Use Plan is fully implemented through zoning regulations, a projection of the build out² population of the Township may be made. This is accomplished by calculating

1- See the Land Use Plan Element for more information on population.

2- "Build out" is a term used to describe the time period when the conversion of vacant and

the remaining land earmarked for residential development, subtracting its unbuildable³ portion, multiplying by the number of units per acre and then persons per household. This calculation results in an additional 4,200± persons, or a population of about 67,000 when the Township is fully developed. This represents an increase of 6.7% from the estimated current population, or substantially less than the percentage that the population has already increased since 1990 - 14.2%.

Improved operations in the municipality are expected to allow existing departments to provide a consistent level of services within their current space allocation even with the expected increase in population. This may require, however, more efficient utilization through a reconfiguration of the space assigned to each department or space saving office furniture. The Police Department in particular, housed in the oldest part of the building, lacks storage space for records. Some personnel in the Department are by necessity located in interior circulation areas rather than in defined office areas.

There is a need for additional parking at the Municipal Building, particularly on days when Municipal Court is in session. The lot is hemmed in by roads on two sides, a bank and Veterans Park. Veterans Park, a Green Acres listed facility, is subject to Green Acres rules from being diverted to other uses, even though it is also owned by the municipality. Acquiring the bank facility would be cost prohibitive as would constructing a parking deck. Though no easy or cost effective solution is at hand, the municipality is attempting to manage the demand for parking by limiting scheduled meetings to days when the court is not in session.

SENIOR CENTERS

The Township has two facilities that provide services for seniors. Adjacent to the Township's Municipal Building on Chews Landing Road is a Senior Center that is used primarily for group meetings, seminars, and other larger activities. A second Senior Center was opened at Hider Lane a short distance from the first center to provide a drop-in facility that is open daily to all Township residents 55 years of age or over. On average, the Hider Lane Senior Center has 40 to 50 visitors per day. According to the Center's director, there is a need for additional space at the drop-in center. Though there is limited room for expansion, an addition could be constructed to alleviate the crowding. Additionally, a foot bridge used by visitors to access the building needs to be repaired or replaced.

LIBRARY

The Gloucester Township-Blackwood Rotary Public Library, a branch of the County

agricultural land to residential and non-residential uses is complete.

3- "Unbuildable" refers to land constrained by environmental factors and state regulation to the point where it cannot be used for buildings.

library system, is located on Black Horse Pike in Blackwood. Gloucester Township is the largest contributor to the County library budget. The municipality also owns the land where the library is located and maintains the building.

Based on 1997 and 1998 surveys, an average of 1,832 people use the library's resources each week. At the end of 1997, the library housed a total of 43,985 items, including hardcover, paperback, children's and large print books, plus adult and children's videos and audios, and magazines. Music CDs were added to the library's collection in 1998. The branch also offers three Internet access points as well as four public computers offering a mixture of periodicals, games and word processing. Library staff would like to add additional computer workstations but lack the space. The building's electrical system is also inadequate to handle modern demands for power even though the library is only about ten years old.

There are 46 parking spaces shared by the library and the Township-owned Academy Hall building located next door to the library. Up to five parking spaces at a time are used by library staff, and one or two spaces may be used by public works staff. Additionally, parking is sometimes used by residents in surrounding properties and by commuters who ride NJ Transit buses. Parking demand when there are popular programs for children, or during tax season when Tax Aide provides services for senior citizens in library meeting rooms, strains the available parking. There is also a concern that should the Academy Hall property be sold, the driveway to the library would need to be relocated, since this is on the Academy Hall property.

A new South County regional branch is under construction in Winslow Township and is expected to be open in the year 2000. This branch would also be available to Gloucester Township residents and would be more convenient to the newer developments in the southern end of the municipality than the Blackwood branch. After South County opens, the current Gloucester Township branch library will be the oldest and smallest of the county branches with the fewest services. The County has embarked on a program of building new libraries with better resources to improve service to its subscribers and relieve the heavy use of its main library building in Voorhees. Gloucester Township will be the next community the Library Commission will consider for a new branch, though the planning process is in its infancy. There are several options that the Library Commission could investigate:

- Renovation of the existing building. Since the building is owned by the Township, a more formalized lease arrangement or outright purchase of the building would be in order.
- Expansion of the existing building onto the Academy Hall lot. As noted in the Academy Hall section, the Township Council would need to decide to take this course of action for the building. In the same manner, a more formalized lease arrangement or purchase by the County would be suitable.
- A new building in Blackwood. Library patrons are used to traveling to the library in Blackwood and it easily serves at least the northern part of the Township as well as other

municipalities. A new building in the same general area without the limitations of the existing building or site may be an attractive proposition for the Commission.

- Depending on how difficult the Commission determines that keeping the library in Blackwood is, it may decide that a new site elsewhere in the Township is the best course of action.

Retention of the library in Blackwood would have several positive aspects that would not be achieved by placing the library elsewhere. The library is a meaningful part of the civic realm in Blackwood. Blackwood is an important tie to the past in Gloucester Township when so much of the built environment in town is new. The library helps to anchor the downtown by lending its presence to the streetscape. Also, since land is increasingly scarce in the Township, the Library Commission will likely have to examine redevelopment sites regardless of whether the site is in Blackwood or another part of Gloucester Township. For these reasons, retaining the library in Blackwood either through expansion to the Academy Hall lot or another site is encouraged.

POINT ARIEL PARK COMMUNITY CENTER

In 1995, the Township renovated the Old Erial School building at Ariel Park to provide a day care center for community residents, called the Ariel Park Community Center. The day care center offers morning and afternoon sessions for preschool age children during the school year. The center has three staff members and can enroll up to 25 children. In the summer, the center offers a nature camp for children in grades K - 5. The building is often used as a satellite meeting place for Township and community groups in the evenings. The day care is managed by the Recreation Department.

ACADEMY HALL

Academy Hall is a former girls school that is located at 27 South Black Horse Pike, adjacent to the Gloucester Township branch of the County library system. The facility consists of one building constructed in two stages, the northerly part a three story section, and the southerly part a two-story section. Academy Hall was purchased by the municipality in 1983, and was leased for a period of time to the Camden County Industrial Development Authority (since superseded by the Camden County Improvement Authority). Although the building was renovated when purchased by the municipality, it is now in poor condition and the Township is considering various options regarding its future use. Currently, the building is vacant except for a small portion leased to the State Police.

Prior to making a decision regarding the future of Academy Hall, the Township will need to determine if the building is historically significant, as this determination could affect the uses of the building. Since public money would be involved, the Township will need to apply to the State Historic Preservation Officer for review of any proposed future actions. If the building is found to be a significant contributor to the district (likely, given its history), the cost of

rehabilitation and possible future uses should be explored. Alternatively, if the building can be demolished the following uses of the land should be considered:

- An expansion of the County library. Details regarding ownership and maintenance of the building would need to be worked out.
- A municipal use compatible with the Blackwood West District.
- Sale of the site as is with no preconditions for reuse of the building. The sale could take place before or after demolition.

PUBLIC WORKS

The Gloucester Township Public Works Building is located at 1729 Erial Road. The Public Works Department has about 50 employees including supervisors and office personnel. The Public Works Department has a number of different functions. It provides maintenance for the ten buildings owned by the municipality. The Department maintains and repairs the local street network. It maintains all of the developed parkland and residential detention basins in the Township, requiring a large grass cutting crew. Public works picks up grass and brush and recycles it back to Township residents. Leaf collection, however, is taken to the Gloucester Township Municipal Utilities Authority for composting. Trash and recyclable material pickup is contracted to a solid waste hauler.

The Public Works Department maintains all of the Township vehicles and equipment, including Police Department vehicles. The DPW facility also functions as a fueling depot for both diesel and gasoline powered vehicles. The depot provides fuel for Township vehicles as well as five other municipalities and the Township's fire companies. Non-Township users are charged fuel cost plus an administrative markup.

The building itself is antiquated with inadequate parking and office space. The garage has four working bays with two lifts that are insufficient for the volume of work carried out by maintenance staff. The site is also of an inadequate size for the functions that the Public Works Department carries out. The existing lot is 4.6 acres. In addition to the office and garage, the site is used to store brush for grinding, salt and sand for winter street maintenance, fencing and other similar materials, and the equipment and vehicles used by the Department. The Township has been negotiating with two adjacent property owners to purchase an additional 11.1 acres on the south side of the Building. This would permit the construction of a new building or an expansion and renovation of the existing building. It would greatly expand the area available for the yard functions, particularly the brush collection and grinding operation. It would also provide sufficient acreage so that expensive equipment that is currently left open to the elements could be covered.

Detention basin maintenance requires increasing manpower at DPW. The design of detention basins has a bearing on the cost of maintenance. There a number of different ways that basins

may be designed to meet the same functional requirements. These should be examined for the lowest cost maintenance requirements and instituted in the Township's construction standards to the extent that the Residential Site Improvement Standards⁴ permit.

MUNICIPAL UTILITIES AUTHORITY

The Gloucester Township Municipal Utilities Authority (GTMUA) is a separate agency established by the Township Council over twenty years ago to provide utility services to the municipality. In Gloucester Township, it functions as the local sewerage authority. Public water franchises are held by two private water companies, New Jersey American Water Company and Consumers New Jersey Water Company. The entire Township is located within the GTMUA's Wastewater Management Plan (WMP) as well as small portions of Winslow Township on the municipality's southern border. The GTMUA maintains and extends the local collection system that feeds into the regional Camden County Municipal Utilities Authority sewerage system. The GTMUA no longer maintains any treatment facility. The regional system handles all effluent treatment at their plant in Camden City.

The GTMUA is located in an industrial park on Lower Landing Road in the northwest part of the Township. In addition to managing the local wastewater system, the GTMUA operates the Township's leaf composting facility. The Department of Public Works collects the leaves and deposits them at the GTMUA. The compost is then used as a soil enricher for parks, agriculture and lawns. The GTMUA is generally self-financing and has adequate facilities for its current operations except for leaf composting. Recently, the municipality bonded \$1 million for improvements to expand the leaf composting facility for the GTMUA.

FIRE AND AMBULANCE DISTRICTS

There are six volunteer fire districts serving Gloucester Township. In addition, Camden County provides fire protection for its own facility at Lakeland. The districts are depicted on the Community Facilities Plan located at the end of this element. The Glendora Fire District (#1) is located at 22 8th Avenue and serves the area from Evesham Road south to the North Branch of Big Timber Creek and Otter Branch. Aside from Glendora, it serves the neighborhoods of Catalina Hills and Fernwood.

The Chews Fire District (#2) is located at 43 Somerdale Road and covers the area between the North Branch of Big Timber Creek and Pine Run. It encompasses Hilltop, half of Valleybrook, Chews Landing, Broadmoor, Timber Line, Glen Oaks, Laurel Hills and Millbridge.

Blenheim Fire District (#3) is located at 34 Almonesson Road. This district incorporates most of the land between Pine Run and Blackwood-Clementon Road, west of Little Gloucester Road. Aside from Blenheim, this district also serves Timber Cove, the remainder of Valleybrook,

⁴- The Residential Site Improvement Standards (*N.J.A.C. 5:21*) are a set of State mandated standards that pertain to all construction that will be publicly dedicated, plus certain other engineering and design standards for residential subdivisions. Municipalities are required to conform to these regulations.

Scenic Falls and Jamestown Square apartment complexes, and Coles Hill.

The Blackwood Fire District (#4) is the only one with two stations; the main station is located at 14 W. Central Avenue, and the second station is located at 1450 Blackwood-Clementon Road. In addition to Blackwood, the district provides fire protection to Blackwood Manor, Blackwood Estates, Little Gloucester, Highland Park, Cherrywood and the apartment complexes at Cherrywood and Countryside.

Lambs Terrace is District #5 and is located at 1781 Sicklerville Road. District # 5 includes the area south of College Drive and in the western half of the Township. It includes many new developments in the Township such as Woods Edge, Mayfair Meadows and Woods, Country Aire, Cobblestone Farms, Terrestria and the Revere Runs.

District #6, Erial, is the largest. The station is located at 1946 Williamstown Road at six points in the hamlet of Erial. It serves Deerwood, Fox Chase, Woodshire, Clementona, Sturbridge Oaks, Dresden Downs, Shenandoah, Asten Woods, Wye Oak Village, Country Oaks, Breckenridge Village, Wood Hill, and Albion Terrace.

Information regarding equipment and paid employees at each district is provided below. The number of volunteers active at each district ranges from 10 to 45.

Table 1 - Fire Districts in Gloucester Township.

| District | Equipment | Paid Employees |
|-----------------|---|--|
| 1 | 2 engines, 1 squirt | 1 part time fire official |
| 2 | 2 engines, 1 heavy rescue , 1 tower ladder, 1 power wagon | 1 fire chief, 3 fire fighters, 1 fire official |
| 3 | 1 engine, 1 rescue, 1 ladder | (no paid employees) |
| 4 | 3 engines, 1 heavy rescue, 1 snorkel | 2 fire fighters, 1 fire official |
| 5 | 2 engines, 1 ladder, 1 power wagon | 3 fire fighters, 1 fire official |
| 6 | 2 engines, 1 heavy rescue, 1 power wagon | 3 fire fighters, 1 part-time fire official |

Source: Fire district personnel

The equipment listed in Table 1 are different types of fire engine. There are two basic types, the pumper truck and the ladder truck, though the distinction between these two has blurred over time. The pumper truck generally carries 750 to 1,200 gallons of water and a variety of basic fire-fighting equipment. The squirt engine is a variety of pumper truck that has an articulating boom. The ladder engine has an 80-100 foot tall extension ladder, the tower ladder engine has a boom with an elevated platform, and the snorkel engine has two hydraulic booms. The heavy rescue vehicle is a fire engine with additional equipment such as a jaws of life, air bags for lifting, jacks and saws. The power wagon is a specialized mini-pumper typically used for brush fires off-road that can carry 200 to 250 gallons of water.

The six Fire Districts within Gloucester Township are operated independently and each district is governed by a separate elected Board of Commissioners. Emergency calls are routed through the County dispatch facility at Lindenwold. In general, each fire station is well equipped and fire station facilities are in good condition.

The division line between Districts 5 and 6 is a survey line rather than one that follows a road or stream like the other districts. The areas where the line runs is developing. Theoretically, a single lot could be divided by the boundary. Though the 911 emergency call system is address-based to identify the jurisdiction of the fire company, addresses are not always well-marked or visible to firefighters or emergency personnel. Accordingly, an adjustment to the boundary to follow more easily identified landmarks may be order to reduce confusion in emergency situations.

The Township helps to fund three ambulance squads in town, including a squad at Glendora, Blackwood and Erial. In recent years, there has been some difficulty in recruiting volunteers for the rescue squads and so the Township has had to hire a private firm to provide ambulance coverage during the day time. If low volunteerism continues, additional paid coverage may be required.

GLOUCESTER TOWNSHIP SCHOOL DISTRICT

Gloucester Township sends students to two school districts. The local district, the Gloucester Township Board of Education, consists of 11 schools serving the school-aged public school population through the eighth grade. The local district is coterminous with the municipal boundaries. Students in ninth through twelve grade attend the Black Horse Pike Regional School District which also includes students from Bellmawr and Runnemede. A discussion on the Black Horse Pike district is in the following section.

The Gloucester Township Board of Education facilities consist of seven elementary schools with enrollment from first through fifth grade. These include Blackwood, Chews, Erial, Glendora, Gloucester Township, J. W. Lilley, and Loring Fleming. The Grenloch School houses only kindergarten classes as well as some administrative offices. The three middle schools for grades 6, 7 and 8 are Glen Landing, C. W. Lewis, and Ann Mullen. *See Community Facilities Plan for locations.*

September school enrollments for the years 1990 - 1998 for the Township's elementary and middle schools are provided in Tables 2 and 3. The capacity of each school is provided at the bottom of each table. Capacity is defined by the New Jersey Department of Education. This theoretical capacity typically cannot be achieved due to scheduling conflicts or the particular needs of a specific grade level. As a rule of thumb, schools become functionally at capacity once 90% of the State maximum capacity has been reached and sometimes at lower ratios depending on circumstances. This difficulty of fully utilizing capacity is greater in the higher grade levels than the elementary level because of the increasing specialization of classes as the grade advances. After this point, classes start being held in space not designed as a classroom. According to the Board of Education, these capacities were determined at the time each school building was constructed and do not necessarily reflect the actual use of the building nor newer state mandates that affect the type and use of space.

Table 2. 1990 - 98 Enrollment in Elementary Schools.

| SCHOOL YEAR | NUMBER OF STUDENTS IN ELEMENTARY SCHOOLS, GRADES K - 5 | | | | | | | | |
|----------------|--|-------|-------|----------|--------|-----------|--------|-----|-------|
| | Blackwood | Chews | Erial | Glendora | Glouc. | Grenloch* | Lilley | L/F | Total |
| 1990 | 821 | 742 | 839 | 351 | 331 | 34 | 795 | 958 | 4,871 |
| 1991 | 854 | 720 | 843 | 351 | 355 | 35 | 798 | 928 | 4,884 |
| 1992 | 883 | 734 | 811 | 347 | 366 | 101 | 784 | 924 | 4,950 |
| 1993 | 830 | 909 | 813 | 325 | 323 | 84 | 820 | 980 | 5,084 |
| 1994 | 802 | 924 | 849 | 312 | 312 | 98 | 855 | 964 | 5,116 |
| 1995 | 757 | 926 | 914 | 299 | 322 | 106 | 883 | 997 | 5,204 |
| 1996 | 765 | 931 | 965 | 321 | 319 | 108 | 959 | 963 | 5,331 |

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| | | | | | | | | | |
|---|-----|------|------|-----|-----|-----|------|-----|-------|
| 1997 | 760 | 959 | 960 | 295 | 317 | 86 | 992 | 937 | 5,306 |
| 1998 | 745 | 894 | 941 | 276 | 315 | 86 | 1042 | 926 | 5,225 |
| Rated Capacity | 795 | 828 | 821 | 322 | 300 | 76 | 839 | 944 | 4,925 |
| 90% Capacity | 716 | 805 | 739 | 290 | 270 | 68 | 755 | 850 | 4,493 |
| <u>Capacity</u> Rated v. Actual Use | 50 | -66 | -120 | 46 | -15 | -10 | -203 | 18 | -300 |
| <u>Capacity</u> 90% v. Actual Use | -29 | -136 | -202 | 14 | -45 | -18 | -287 | -76 | -732 |

* Grenloch School currently houses only kindergarten classes and some administrative offices for the district.
Source: Gloucester Township Public Schools - September enrollments (does not include tuition or special education students).

Table 3. 1990 - 98 Enrollment in Middle Schools.

| SCHOOL YEAR | NUMBER OF STUDENTS IN MIDDLE SCHOOLS | | | |
|---|--------------------------------------|------------|------------|-------|
| | Glen Landing | C.W. Lewis | Ann Mullen | TOTAL |
| 1990 | 1,003 | 1,195 | - | 2,198 |
| 1991 | 1,024 | 1,191 | - | 2,215 |
| 1992 | 1,003 | 1,265 | - | 2,268 |
| 1993 | 1,026 | 1,325 | - | 2,351 |
| 1994 | 1,100 | 1,326 | - | 2,426 |
| 1995 | 1,129 | 1,326 | - | 2,455 |
| 1996 | 979 | 757 | 743 | 2,479 |
| 1997 | 876 | 837 | 785 | 2,498 |
| 1998 | 917 | 836 | 828 | 2,581 |
| Rated Capacity | 1,267 | 1,263 | 1,000 | 3,530 |
| 90% Capacity | 1,140 | 1,137 | 900 | 3,177 |
| <u>Capacity</u> Rated v. Actual Use | 350 | 427 | 172 | 949 |
| <u>Capacity</u> 90% v. Actual Use | 223 | 301 | 72 | 596 |

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Source: Gloucester Township Public Schools, September enrollments (does not include tuition or special education students).

As can be seen in Table 2, the capacity of the eight elementary schools has been exceeded in recent years with only Blackwood, Glendora and Loring Fleming having any additional capacity under the State definition and only the Glendora School has capacity at the 90% rate. The overcrowding has led to the installation of trailers at the Lilley School to help accommodate additional students. Using the 90% capacity figure, current enrollment is 732 students above capacity. Enrollment peaked in 1996 and may be a response by parents to overcrowding. As schools become more crowded, parents seek alternate private placements for their children. It is not known whether the lower school enrollment figures in the past two years is an anomaly or if it marks the beginning of a trend.

Looking at the build-out analysis of the land use categories, an additional 2,650± households could potentially be constructed. However, 1,725 of these would be senior citizen housing units with no children. The remaining districts are the Environmental Residential; Residential 1, 2 and 3; and Townhouse/Twin districts. Assuming that the Environmental Residential would be five bedroom homes, Residential 1 and 2 districts would be four bedroom homes and the Residential 3 and Townhouse/Twins would be three bedroom homes would enable a projection of potential public school children to be made. This projection is found in Table 4.

Table 4. Projected Number of Additional Public School Children at Build-Out.

| Land Use | Estimated No. of Houses | Demographic Multiplier | School Aged Children | % Public School | Estimated No. Public School Children |
|----------------------|-------------------------|------------------------|----------------------|-----------------|--------------------------------------|
| ELEMENTARY SCHOOL | | | | | |
| Environ. Res. | 55 | .75 | 41 | 85% | 35 |
| Residential 1&2 | 665 | .63 | 419 | 84% | 352 |
| Res. 3 & Twin | 103 | .40 | 41 | 85% | 35 |
| Total Elementary: | | | | | 422 |
| MIDDLE SCHOOL | | | | | |
| Environ. Res. | 55 | .29 | 16 | 85% | 14 |
| Residential 1&2 | 665 | .22 | 146 | 85% | 124 |
| Res. 3 & Twin | 103 | .11 | 11 | 92% | 10 |
| Total Middle School: | | | | | 148 |
| HIGH SCHOOL | | | | | |
| Environ. Res. | 55 | .34 | 19 | 85% | 16 |
| Residential 1&2 | 665 | .27 | 180 | 85% | 153 |
| Res. 3 & Twin | 103 | .12 | 21 | 92% | 19 |
| Total High School: | | | | | 198 |

Source of the demographic information in Table 4 comes from the Center for Urban Policy Research, Rutgers University, based on the 1990 U.S. Census Public Use Microdata Sample.

Adding together the largest elementary school shortfall and the projected number of public school children at build-out of the municipality results in a need to accommodate 1,154 more students at this level. The local school district received voter approval in April 1999 for the construction of a new elementary school on Jarvis Road (identified as site number 19 on the Community Facilities Plan). Other methods of accommodating growth may need to be explored should the projection become accurate since the new elementary school would have a capacity of 700-850 students.

There are a number of factors which may mitigate against an increase in demand of this magnitude. Gloucester Township has grown rapidly and in the process has tended to attract young families. This is due in large part because of its location in the metropolitan area and its affordable housing. As the population ages and children graduate from the school system, the number of school children is likely to peak and drop, perhaps significantly. The timing of this change is important, but unknown without a more detailed demographic study. There is also the need, on the other hand, to reserve capacity in the school system. When the initial buyers of new homes retire to other types of housing, their homes would again be attractive to young families, thereby starting the demographic cycle again. The rapid growth in the Township over the past 20 years makes it likely that this type of demographic change will affect the ability to provide a thorough and efficient education to the school population.

Another trend that may reduce the demand for school facilities is the continued fall in household size. The average size of households in the country has decreased for more than 100 years and in Gloucester in 1990 was 2.91 persons per household. Older municipalities have seen this figure be as low as 2.2 persons per household. Demographers expected the declining size of households to continue.

The middle schools had experienced the capacity constraints now evident in the elementary schools prior to 1996. The opening of the Ann Mullen school in 1996 has added sufficient capacity to the school system even with the projected number of middle school students noted in Table 4.

A recent study projecting future enrollment in both the elementary and middle schools was conducted for the Gloucester Township School District by Richard B. Reading Associates. The study took a different approach by aggregating the projected number of households with a projected number of students from each one. Based on this approach, the study projects a total student population of 7,972 for the 1999-2000 school year. This is compared to a 1998-1999 actual enrollment of 7,806 pupils, implying an increase of 166 students the following year. This type of increase is within recent experience; between 1991 and 1992 the school population increased by 167 and by 169 the following

year. However, the school population has been steady over the past three years and this rate of increase may be overstated.

The Reading study makes annual projections through the 2004-2005 school year. For this final year, a total of 8,402 students are projected. This compares with the build-out projection of 8,376 pupils. These two figures are very close and suggest that the school population has nearly reached its expected maximum level.

SCHOOL SITE SELECTION CRITERIA

The analysis of projected school population indicates the need for two elementary schools, sufficient capacity added to existing schools, or a combination of new school and additions to meet this demand. As noted, the Board of Education is in the process of acquiring the site and constructing an additional elementary school. If the Board of Education decides that an additional elementary school beyond the recently approved one is needed, there are certain locational criteria that should be used to select a site. The location of new school facilities should fit into the land use patterns that currently exist in the Township and should meet the land use policies embodied in this Master Plan. Towards that end, criteria for ranking sites in the selection process have been incorporated as follows:

- Proximity to the student population the site is designed to serve.
- Access to appropriate streets (collector or arterial roads).
- Lack of environmental constraints such as freshwater wetlands, floodplains, high tension power transmission lines, and hazardous substances contamination.
- Lack of regulatory or title constraints.
- A location within or in reasonably close proximity to existing public water and sewer service areas with available utility infrastructure.
- A developable area sufficiently large to permit additional expansion, if needed in the future.
- Adjacent land uses compatible with school functions.

An ideal site would include all of these attributes; but a site may be suitable if the constraints can be successfully mitigated or if the parcel is large enough to avoid them.

BLACK HORSE PIKE REGIONAL SCHOOL DISTRICT

As previously noted, Gloucester Township students attend the Black Horse Pike Regional

School District for grades 9-12, which also includes students from Bellmawr and Runnemede. In the 1998-1999 school year, Gloucester Township students represented 79% of the Regional School District population. The School District operates two high schools: Highland located at the intersection of Blackwood-Clementon and Erial Roads, and Triton, located on Evesham Road in Runnemede. Table 5 on the following page presents 1990-1998 enrollment data and projections for the two high schools operated by the Black Horse Pike Regional School District. In September 1998 a voter referendum passed approving construction of a third high school to serve the district. The new school will be designed for an initial class size of 1,500 students, although core facilities including the cafeteria and gym will be designed for a capacity of 1,800 students, so that enrollment at the school can be expanded, if necessary. The District anticipates that the school will open in September 2001. This high school, like Highland, will be in Gloucester Township and will be located on the north side of Jarvis Road (*see* Community Facilities Plan).

Table 5. Regional High School Enrollment and Projections.

| Enrollment | | | | | |
|--------------------------|----------------|----------|--------------|----------|----------------|
| SCHOOL YEAR | HIGHLAND H. S. | | TRITON H. S. | | TOTAL STUDENTS |
| | Gloucester | All | Gloucester | All | |
| | Students | Students | Students | Students | |
| 1990 | 1,451 | 1,467 | 744 | 1,358 | 2,825 |
| 1991 | 1,482 | 1,496 | 758 | 1,424 | 2,920 |
| 1992 | 1,536 | 1,548 | 760 | 1,441 | 2,889 |
| 1993 | 1,604 | 1,614 | 821 | 1,510 | 3,124 |
| 1994 | 1,688 | 1,698 | 861 | 1,603 | 3,301 |
| 1995 | 1,701 | 1,715 | 905 | 1,636 | 3,351 |
| 1996 | 1,776 | 1,787 | 981 | 1,739 | 3,526 |
| 1997 | 1,710 | 1,712 | 1,062 | 1,841 | 3,553 |
| 1998 | 1,694 | 1,699 | 1,069 | 1,801 | 3,500 |
| Rated Capacity: | | 1,545 | 1,647 | | 3,192 |
| Future Capacity (1,500): | | | | | 4,692 |
| 90% of Future Capacity: | | | | | 4,223 |

| | |
|---|-------|
| Enrollment | |
| Projections | |
| 2000-2001 | 3,745 |
| 2004-2005 | 4,043 |
| 90% Capacity v. Projected 2004-2005 Enrollment: | 180 |

Source: Black Horse Pike Regional School District

The projections noted in Table 5 were supplied by the Regional School District. The high school student population projected from Gloucester Township suggests an additional 198 students, a figure that may be met in 2005. Virtually all of the growth in the school district since 1993 has been from Gloucester Township students, with the student population from Bellmawr and Runnemede ranging from 731 to 779 persons in that time period. Both Bellmawr and Runnemede are almost fully developed with only scattered infill lots available. The construction of the new high school on Jarvis Road should provide sufficient capacity for the build-out population of Gloucester Township without the necessity for expansion beyond its 1,500 student design.

HOUSES OF WORSHIP

Houses of worship function as a quasi-public community facility, often providing meeting rooms and hosting events for the general public as well as providing for social services. There are 20 houses of worship located in Gloucester Township, as detailed in Table 6 below. These facilities are identified on the Community Facilities Plan.

Table 6. Houses of Worship in Gloucester Township.

| House of Worship | Location |
|--|-------------------------------|
| Bethel Christian Center | 1631 Blackwood Clementon Rd. |
| Erial Community Church | New Brooklyn & Jarvis Rds. |
| First Presbyterian Church of Blackwood | 2 East Church St. |
| Laurel Hill Bible Church | 1260 Blackwood Clementon Rd. |
| St. Agnes R.C. Church | Coles & Little Gloucester Rd. |
| St. Jude's R.C. Church | 402 S. Black Horse Pike |
| Solomon Wesley United Methodist Church | 291 Davistown Rd. |
| Blackwood United Methodist Church | 35 East Church St. |
| Faith Baptist Church | 76 Porter Ave. |

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| House of Worship | Location |
|---|---------------------------|
| Good News Outreach Church | 416 Black Horse Pike |
| Laurelwood Church of Christ | 543 Somerdale Road |
| St. Edwards R.C. Church | 500 Pine Hill |
| St. Teresa's R.C. Church | 13 E. Evesham Rd. |
| Chews United Methodist Church | 319 Black Horse Pike |
| First Baptist Church of Blackwood | 50 Little Gloucester Rd. |
| Jehovah's Witness Erial Congregation | 1754 Erial Rd. |
| Jehovah's Witness Somerdale Congregation | 631 Somerdale Rd. |
| Jehovah's Witness Turnersville Congregation | 90 Hickstown Rd. |
| Friendship Community Church | Berlin-Cross Keys Rd. |
| Luther Memorial Lutheran Church | Erial Rd. & Church St. |
| St. John's Episcopal Church | 1704 Old Black Horse Pike |
| Berean Baptist Church | 516 West Evesham Ave. |
| Living Word Bible Fellowship | 133 W. Church St. |

Source: Gloucester Township Web site, Tax Assessment Records.

SUMMARY OF RECOMMENDATIONS

Providing for efficient government requires allocating adequate resources as the population grows or mandates from higher levels of government must be implemented. The demand for resources must be balanced by fiscal prudence and these competing factors. Recommendations from this analysis of the Township's community facilities include the following for consideration:

- 1) The Township Municipal Building is adequate for the projected size of the population when Gloucester Township is fully developed. However, more efficient space allocation may be required to provide for the continuation of the level of services expected by residents and business owners. Certain departments lack adequate storage and in a few instances personnel are located in space that should be used for internal circulation.
- 2) The Township's investment in information technology should be a continuous process to provide services at a level that the general public has come to expect.
- 3) The Hider Lane Senior Center is often crowded. As the number of senior citizens is projected to increase substantially in the next decade, an expansion of the center may

need to be constructed or a third center built in the Township in another location.

4) The Blackwood library is increasingly seen as inadequate for modern needs. The County is likely to decide that a new or expanded building is warranted. The Township should be an active participant in the selection process. The library is a solid civic presence to Blackwood that lends weight to the downtown area and draws visitors that also patronize nearby stores. The library should remain in Blackwood even if it is not in the same location.

5) The Township has considered a number of options for Academy Hall from renovation to demolition. Prior to any action, its historical significance should be determined since that may affect the municipality's plans. Several potential options are detailed in the body of the element.

6) Additional land is necessary for the Public Works complex and the Township's recent efforts to acquire it should alleviate the shortage. The building is antiquated for the multiple functions that the Department undertakes and will eventually affect the level of services that can be provided.

7) The design of storm water management basins has a bearing on their maintenance. The New Jersey Department of Environmental Protection is encouraging different designs to improve storm water quality. Both of these factors suggest that the Township's standards be reexamined towards lessening the cost of maintenance. The Township may also consider requiring maintenance to be vested in homeowner's associations rather than the municipal government.

8) The division line between Fire Districts 5 and 6 is a survey line rather than based on landmarks or physical features. For example, the new high school on Jarvis road will be bisected by the boundary line. An adjustment of the line may be in order to reduce confusion about the jurisdiction of each Fire District.

9) From the analysis in this element, the number of projected elementary students would remain greater than the system's capacity, even after the construction of a new elementary school on Jarvis Road, as is planned. Should the Board of Education determine that an additional school is needed, criteria for site selection have been included.

INSERT COMMUNITY FACILITIES PLAN

Legend

Churches/Cemeteries

1. Cemetery
2. Church Parking
3. Methodist Church
4. Baptist Church
5. Laurelwood Church of Christ
6. Jehovah's Witnesses
7. St. Joseph's Church/Cemetery
8. Episcopal Church
9. Church
10. Church
11. Cemetery
12. St. Agnes Church/School
13. Greater Promise Primitive Baptist Church
14. First Presbyterian Church of Blackwood Cemetery
15. Methodist Episcopal Church of Blackwood Cemetery
16. Church
17. Luther Memorial Church
18. Church
19. Church
20. Church
21. Faith Baptist Church
22. Jehovah's Witnesses
23. Point Erial Community Church
24. St. Jude Church/School
25. First Baptist Church
26. Catholic Youth Organization
27. Bethel Christian Center and Academy
28. Laurel Hill Bible Church

Schools and College

1. Blackwood Elementary
2. Chews Elementary
3. Glendora School
4. Glen-Landing School
5. Gloucester Township School
6. Grenloch School
7. Highland Regional High School
8. Charles W. Lewis School
9. Loring-Fleming School
10. St. Agnus School
11. St. Jude School
12. Anne Mullen Middle School
13. James Lilley School
14. Erial School
15. Camden County Vocational Technical School
16. Camden County Community College
17. Board of Education (Vacant)
18. Proposed High School Site
19. Proposed Elementary School Site
20. Special Services
21. B.O.E. Administration

Municipal and Other

1. Veteran's Memorial
2. VFW Post
3. Post Office
4. Municipal Utilities Authority
5. Courthouse
6. American Legion
7. Municipal Building
8. VFW Post
9. Library
10. Lakeland Complex
11. Post Office
12. G.E.M.S. Landfill
13. Department of Public Works
14. USA Base Housing
15. Nike Base

Fire Districts

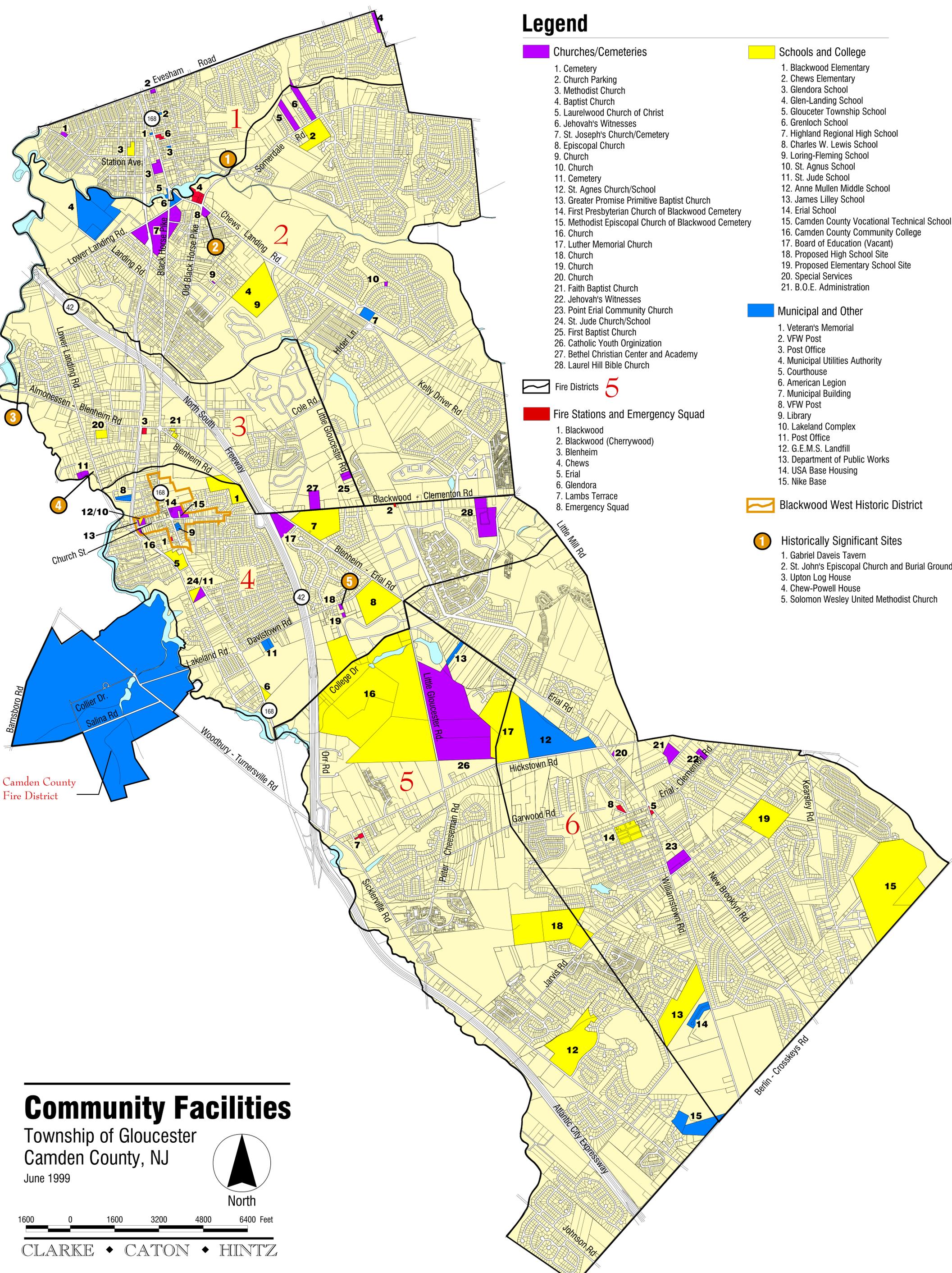
Fire Stations and Emergency Squad

1. Blackwood
2. Blackwood (Cherrywood)
3. Blenheim
4. Chews
5. Erial
6. Glendora
7. Lambs Terrace
8. Emergency Squad

Blackwood West Historic District

Historically Significant Sites

1. Gabriel Daveis Tavern
2. St. John's Episcopal Church and Burial Ground
3. Upton Log House
4. Chew-Powell House
5. Solomon Wesley United Methodist Church



Community Facilities

Township of Gloucester
Camden County, NJ
June 1999



CLARKE ♦ CATON ♦ HINTZ

Open Space and Recreation

INTRODUCTION

Open space is a valuable community asset with many benefits. Open space provides opportunities for recreation, land for the preservation of wildlife habitats and other natural environments, a gathering place for community events and visual relief from urbanization. Setting aside land for these purposes supports property values by being a counterpoint to the man-made environment and by creating a balanced community.

Open space includes active recreation, passive recreation and conservation lands. Active recreation is organized sports or leisure activities that usually require specialized fields or equipment and have a list of rules. Baseball, football, soccer and tennis are examples of active recreation. Passive recreation includes less formal activities, such as bird watching and hiking. Conservation areas are intended to be left in their natural state for wildlife refuges, as buffers between developments or to protect environmentally sensitive land. Large parks usually encompass more than one type of open space. For instance, flat areas might be used for ballfields, with steeper areas near streams left in conservation use except for a passive recreation hiking trail.

In Gloucester, open space has been acquired and used primarily for active recreation rather than for conservation purposes. Long standing development regulations have required the construction of recreation facilities as part of major subdivision approvals and this has resulted in most neighborhoods having playgrounds. The Township has a very well developed recreation program that provides opportunities for every age group in the municipality.

Gloucester also has a significant amount of land left in its natural state. Conservation lands provide wildlife habitat that is an essential link in the food chain, absorb flood waters, clean urban runoff to protect stream quality, and help maintain an ecological balance important in itself. Conservation lands often encompass environmentally sensitive lands such as flood plains and wetlands, poor draining soils and steep slopes. The imposition of regulations at the State level has greatly reduced the development of environmentally sensitive lands and has encouraged their retention in the planning approval process. These efforts may be supplemented by strategic acquisitions of property or easements to create linear open space, called greenways. Environmentally sensitive lands also often contain the largest concentration of woodland because the soil was not suitable for farming.

This element will examine the existing open space and compare them against goals

espoused in state and national standards, examine the adequacy of recreational facilities, discuss the greenways concept, and make policy recommendations for open space.

RECREATION PROGRAMS

Gloucester has numerous recreational opportunities open to its residents. These include basketball, baseball, football, soccer, volleyball, hockey, tennis, and swimming, among less formalized sports and activities. Municipal sponsored programs are operated by the Recreation Department. The Gloucester Township Board of Education also provides leisure and recreation activities. The two agencies usually use their own facilities. The main exception is the use of school gymnasiums by the Recreation Department for indoor athletic programs when not in use for school programs. The Department and Board of Education coordinate the use of their facilities with each other for community groups.

The Township, unlike many municipalities, has an indoor recreation center of its own on Broadacres and Cherrywood Drives which also houses the departmental offices.

Unusually, the Recreation Department also runs a day care program in two locations, the Point Ariel Park Community Center and the Recreation Center. An after school program, only, is operated at the Recreation Center. These programs help to generate revenue for the municipality which in turn permits the expansion of programs and facilities. The Department also occasionally books group excursions for theatre performances in Philadelphia and New York, outlet center shopping, and professional sports games in Philadelphia, New Jersey and Delaware for Township residents.

Many of the organized sports in Gloucester are run by youth sports organizations at facilities owned by the municipality. There are 16 such organizations in Gloucester. Use of the facilities requires application and a permit that is issued on a seasonal basis. Allocation of permits is based on seniority and past behavior. The sports organizations are responsible for maintenance at their fields necessary to set up for games during the season. The Public Works Department handles other maintenance, including grass cutting, repairs, and trash removal.

Township Council established a Parks and Recreation Advisory Committee of seven citizens in 1996 to make recommendations to it on recreational matters, including types of programs, the organization of sports activities, and the need for facilities.

Several quasi-public organizations also provide recreation programming. The Terrestria and Valleybrook Condominium Associations run leisure and sports activities for their residents. The Catholic Youth Organization, located on Peter Cheeseman Road, has an indoor recreation facility as well as outdoor programs. Kiwanis International operates a baseball league that plays on four fields it owns on West Railroad Avenue, behind

Marshall Avenue. The Township has two golf courses, Valleybrook and Freeway Golf, that are open to the public but owned by private entities.

OPEN SPACE LAND

The Township owns 53 active recreation sites dispersed throughout the municipality. Many of these were acquired in the subdivision approval process, however, several important sites were sought specifically by the Township. For example, the municipal pool was acquired in 1983. The pool was originally owned by a private swim club and when the organization dwindled, the municipality purchased the site as a public facility. One of the parks on Crestview and Clementon Avenues where midget football is played is jointly owned by the municipality and the Blenheim Athletic Association.

The Township acquired approximately 30 acres of land in December 1998 to complement land it already owned on Hickstown Road from tax lien foreclosure. Provisionally known as the Hickstown Community Park, this new recreation facility encompasses 66 acres and will be the largest active recreation park in the Township's system. The Township is in the process of completing final development plans for turning the land into a community-sized park. It is likely that the park will include active recreation fields, nature trails and an amphitheatre.

Table 7 lists the active recreation sites and the types of equipment at each park. Table 8 lists open space intended for passive recreation and conservation land. If a site is developed with recreational fields or playgrounds, it is listed in Table 1 even if it also includes a passive recreation or conservation component. Table 1 includes one active recreation area that is leased from Camden County rather than owned by the municipality. This facility is at the Lakeland complex in the extreme western portion of the municipality. The tables are keyed to the Open Space Plan at the end of this element.

Table 7. Recreation Sites Under Township Ownership.

| Map Key | Name of Site | Acres | Facilities |
|---------|-----------------------|-------|---|
| 1 | Melvin Avenue | 1.15 | tot lot, half court basketball court |
| 2 | Glover Fields | 4.38 | ballfields (3) |
| 3 | June Drive | 1.97 | basketball court, ballfields (2) |
| 4 | Seventh Ave. | 1.96 | tot lot, ballfield |
| 5 | Gabriel Daveis Tavern | 5.06 | tavern, bandstand, tables |
| 6 | Randy Road | 2.21 | basketball court, swing set, slide, ballfield |
| 7 | Catalina Hills | 2.35 | basketball court, ballfields (2) |

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| Map Key | Name of Site | Acres | Facilities |
|---------|-----------------------------------|-------|--|
| 8 | Ballantree | .76 | swing set, climber |
| 9 | Chewswyck | 1.07 | swing set, climber, slide/climber unit, basketball court, volleyball posts (3 sets) |
| 10 | Broadmoor Tennis Courts | 1.07 | tennis courts (2) |
| 11 | Orchard Ave. | 3.50 | platform whirl, spring saddle mates, slide/climber unit, basketball court, ballfields (2) |
| 12 | Timbercove | 1.17 | slides, swing set, whirl, spring saddle mates, wooden play units (2), basketball court, tennis court |
| 13 | Taylor Ave. | 4.20 | tot lot, ballfield |
| 14 | Pristine Farms | .75 | swing set, wooden play unit |
| 15 | Chews Village | .85 | swing set, wooden play unit, basketball court |
| 16 | Oxen Hill | 2.11 | swing set, wooden climbing unit (2), basketball, benches, picnic table, walking trail |
| 17 | Valleybrook-GTSC | 20.22 | multi-purpose fields (4), clubhouse, soccer field |
| 18 | Broadmoor West | 5.73 | tennis court, basketball court |
| 19 | Dramsei Park/Senior Ctr. | 9.38 | senior center, bocce courts (2), picnic tables |
| 20 | Ann Mullen | 3.60 | ballfields (2) |
| 21 | Municipal Pool | 6.72 | adult pool, kiddie pool, picnic benches, tennis courts (2), basketball courts (2) |
| 22 | Glen Oaks Little League | 7.00 | ballfields (2), batting cage |
| 23 | Veteran's Park | 8.80 | climber, tire park, tot lot, climber/slide unit, walking/exercise course, basketball courts (2), hockey rink, gazebo |
| 24 | Taranto Ave. | .75 | swing set |
| 25 | Crestview St. | 1.25 | football field (also includes 2.5 acres owned by Blenheim Athletic Association) |
| 26 | Harrison Ave. | 1.55 | swing set, slide, basketball court, ballfield |
| 27 | Harwan Park | .20 | gazebo, picnic tables |
| 28 | Foxboro | 2.50 | tot lot, combination play units (2), half-court basketball court, walking track |
| 29 | Laurel Hills Playground | 1.72 | tot lot, play unit |
| 30 | Millbridge Fields | 4.13 | tot lot, ballfields (2) |
| 31 | Lakeland | 46.97 | ballfields (6), all-purpose field, deck hockey |
| 32 | State Street | 3.65 | hockey rink, tot lot, ballfield |
| 33 | Gloucester Twp. Recreation Center | 4.73 | indoor gymnasium and rink, administrative offices |

| Map Key | Name of Site | Acres | Facilities |
|--------------|--|--------|--|
| 34 | Cherrywood Park | 19.04 | tot lots (4), picnic table, hockey ring, basketball court, walking trails |
| 35 | Quail Hollow | 1.01 | tot lot, basketball court |
| 36 | Hickstown Community Park | 66.00 | undeveloped |
| 37 | Dunleigh | 6.09 | swing set, climber |
| 38 | Ashford Glen (Terrestria) | 3.00 | tot lot, tennis courts (3), basketball court |
| 39 | Point Ariel Park | 4.00 | tot lot, tennis courts (2), walking/exercise course, community day care center |
| 40 | Sturbridge Oaks | .94 | slide, swing, wooden play unit, basket ball court, picnic table |
| 41 | Essex Avenue | 3.00 | baseball fields (4), tee ball field, tot lot |
| 42 | Jarvis Park (to be deeded to Regional School District) | 9.69 | tot lot, slide/climber unit, swings, picnic tables, slide, gazebo, hockey rink, basketball courts (2), softball fields (3), exercise/ walking track, tire park |
| 43 | Brittany Woods | .18 | swing set, platform whirl, climbers, slide, picnic table |
| 44 | Asten Woods | .99 | wooden play unit |
| 45 | Kings Gate | .66 | swing set, slide/climber unit |
| 46 | Pam Place | .24 | swing set, climber, slide, tire course |
| 47 | Breckenridge | 3.54 | swing set, spring saddle mates, wooden play unit, slide/climber unit |
| 48 | Country Oaks | 2.96 | slide/climber unit (2), platform whirl, slide, 4-seat buck-about |
| 49 | Kenwyck Court | 1.50 | swing set, basketball court, monkey bars |
| 50 | Wye Oak | 7.39 | tot lot, basketball court, walking track, ballfield |
| 51 | Wildflower - Mayfair | 1.64 | tot lot, wooden play unit, basketball court, ballfield, walking/exercise track |
| 52 | Mulberry Station | 1.51 | tot lot, basketball court, all-purpose field |
| 53 | Gloucester Farms | 1.50 | swing set, wooden play unit, basketball court |
| TOTAL ACRES: | | 298.34 | |

Source: Gloucester Township Tax Records, Dept. of Recreation

Table 8 lists land intended for passive recreation and conservation land.

Table 8. Passive Recreation and Conservation Lands.

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| Map Key | Name of Site/Location | Acres | Comments |
|---------|-------------------------------|--------|---|
| A | Gloucester Township MUA | 50.91 | Conservation land along Big Timber Creek behind MUA building |
| B | Otter Branch | 70.52 | Conservation land adjacent to Gabriel Davies Tavern |
| C | Gravelly Run | 21.93 | Conservation land on stream corridor |
| D | Fresno Drive | 2.35 | Open space in Catalina Hills |
| E | Chews Landing | 2.61 | Open space along N. Branch of Big Timber Creek |
| F | Timbercove | 7.13 | Open space in Timbercove |
| G | Bee Lane | 2.50 | Open space along N. Branch of Big Timber Creek |
| H | Dorset Place | 5.35 | Open space |
| I | Roberts Lane | 5.40 | Open space |
| J | Sherbrook Blvd. | 2.20 | Open space |
| K | N. Branch of Big Timber Creek | 167.58 | Stream corridor between Glen Oaks and Broadmoor, excludes municipal pool and Glen Oaks Little League. |
| L | Pine Run Lake | 13.32 | Stream corridor south of Hider Lane |
| M | Windy Drive | 2.55 | Open space |
| N | Tall Oaks | 6.63 | Open space |
| O | Millbridge | 7.85 | Open space |
| P | Lakeside Ave. | 2.52 | Stream corridor south of Lakeside Ave. |
| Q | Fraser Rd. | 7.26 | Open space |
| R | Argyle Ave. | 5.89 | Open space |
| S | Sunset Drive | 1.10 | Open space |
| T | Stratford Rd. | 18.51 | Open space |
| U | Deer Park | 2.35 | Open space |
| V | Fox Chase | 2.33 | Open space |
| W | Andrea Court | 2.02 | Open space |
| X | Roosevelt Ave. | 4.04 | Open space |
| Y | Woodshire Rd. | 4.25 | Open space in three parcels. |
| Z | Dickinson Drive | .33 | Open space |
| AA | Presidential Drive | .85 | Open space |
| BB | Pine Glen | 2.14 | Open space |
| CC | Maynard Drive & Spar Road | .48 | Mowed and maintained field. |

| Map Key | Name of Site/Location | Acres | Comments |
|--------------|-----------------------|--------|-----------------------------|
| DD | Clementona Lake | 5.32 | Lake and associated land. |
| EE | Sawood Drive | 2.61 | Open space |
| FF | Sturbridge Rd. | 1.70 | Open space |
| GG | Dunlin Drive | 1.34 | Open space |
| HH | Berkshire Rd. | 1.71 | Open space |
| II | Hampshire Rd. | 2.20 | Open space in four parcels. |
| JJ | Dori Court | 1.31 | Open space |
| KK | Cottagegate Rd. | .63 | Open space |
| LL | Galena Court | 4.63 | Open space |
| MM | Sherri Lane | .31 | Open space |
| NN | Kay Lane | .58 | Open space |
| OO | Mary Ellen Lane | 1.47 | Mowed and maintained field. |
| PP | Centennial Court | 1.34 | Open space |
| QQ | Breckenridge | 6.88 | Open space in six parcels. |
| RR | Burnie Drive | 3.59 | Open space |
| SS | Easton Drive | 5.91 | Open space |
| TT | Latham Way | .33 | Open space |
| TOTAL ACRES: | | 464.76 | |

Source: Gloucester Township Tax Records, Dept. of Public Works

GUIDELINES FOR THE ADEQUACY OF OPEN SPACE

There are several guidelines against which the adequacy of the amount of open space and recreation facilities in the Township may be measured.

NEW JERSEY GREEN ACRES PROGRAM

The New Jersey Green Acres Program, in the Department of Environmental Protection, disperses funds for acquisition and development of open space to municipalities, counties, and non-profit groups by grant and loan since 1961. The funding for the program has come from voter-approved state bonding. A new consistent funding source from the sales tax was approved by voters in November 1998. Over the years, the focus of funding has shifted more towards acquisition rather than development and towards sites that have multiple benefits. Gloucester Township, like most municipalities in New

Jersey, has received Green Acres funding for acquisition and development projects. The Green Acres program suggests a desirable goal of 8 acres of land per 1,000 persons for the three types of open space earmarked for municipal purposes. Application of the guideline results in a desirable standard of 500 acres for the current estimated population and 550 acres for the projected build-out population. The Township, from Tables 7 and 8, has 298.34 acres of developed (or to be developed) parkland and 464.76 acres of conservation/passive recreation land for a total of 763.10 acres.

The Green Acres guidelines also suggest that a minimum of 3% of the municipal land area be set aside for all types of open space. Gloucester Township's land area of 15,252± acres would require a minimum of 458 acres of open space. The 763.1 acres dedicated for open space equals about 5% of the Township's land area. From this limited perspective, sufficient land has been set aside in the Township for open space according to the State guideline.

NATIONAL PARK AND RECREATION ASSOCIATION GUIDELINES

The National Recreation and Park Association (NRPA) is an organization devoted to promoting and developing recreational opportunities. The NRPA has published a number of standards for "developed" open space. As a broad measure, the NRPA has established a range of 6.25 to 10.5 acres of developed park land per 1,000 residents. Applying this standard to the estimated 1998 population of Gloucester Township (62,700± persons), would result in a range of 390 to 655 acres of developed park land. This compares to developed parkland of 300± acres for a total deficit range of 90 to 355 acres.

It should be noted that these standards are exclusive of recreational facilities provided by school districts or non-active open space. Since the NRPA is a national organization, its standards may not reflect the developed nature of New Jersey and its relatively high land values that make acquisition a more expensive proposition than other parts of the nation. New Jersey also has the second highest household income in the country with sufficient disposal income to prefer to purchase their recreational needs from commercial providers. For example, ice hockey rinks are provided by commercial operators in South Jersey. This situation lessens the need for the municipality and school district to provide active recreation facilities.

The NRPA has also categorized active recreation parks into three types based on size and service area. These are mini-parks, neighborhood parks and community parks. Mini-parks are usually playgrounds, tot lots, or other small scale parks within close proximity to residences. Mini-parks are categorized as 1 acre or less, though larger areas are common in the Township. Neighborhood parks should be 15 acres or larger and would commonly constitute home parks for youth sports organizations. Community scale parks should be at least 25 acres but preferably larger. Community parks are multi-functional entities intended for a wide variety of recreation. Many Gloucester Township parks do

not meet the size guidelines established by the NRPA. Most of the Township's ballfields, for example, are located in parks of 3 to 8 acres even though they function as neighborhood parks. The municipal pool is really a community-wide facility though it is on a lot of less than 7 acres.

Because of the disparity in sizes, existing parks in this document have been classified according to function, rather than strictly by size. Mini-parks under the functional approach are listed in Table 9.

Table 9. Mini-Parks by Functional Classifications.

| Mini - Parks | | |
|-----------------|--------------------|------------------|
| Ann Mullen | Asten Woods | Ballantree |
| Breckenridge | Brittany Woods | Broadmoor West |
| Catalina Hills | Chews Village | Country Oaks |
| Dunleigh | Foxboro | Gloucester Farms |
| Harrison Avenue | Harwan Park | June Drive |
| Kenwyck Court | Kings Gate | Laurel Hills |
| Melvin Avenue | Millbridge Fields | Mulberry Station |
| Oxen Hill | Pam Place | Pristine Farms |
| Quail Hollow | Randy Road | Seventh Avenue |
| State Street | Sturbridge Oaks | Taranto Avenue |
| Timbercove | Wildflower-Mayfair | - |

Table 10. Neighborhood Parks by Functional Classification.

| Neighborhood Parks | | |
|---------------------------|-------------------------|------------------|
| Ashford Glen (Terrestria) | Cherrywood Park | Crestview Street |
| Essex Avenue | Glen Oaks Little League | Glover Fields |
| Orchard Avenue | Point Aerial Park | Taylor Avenue |
| Valleybrook-GT SC | Veteran's Park | Wye Oak |

Community parks have been classified into two sub-categories, community parks as termed under the NRPA standards and special community parks that fill a particular need on a community-wide basis. These are shown in Table 11.

Table 11. Community Parks by Functional Classification.

| Community Parks | Special Parks |
|-----------------|----------------------------|
| Lakeland | Dramsei Park Senior Center |

| Community Parks | Special Parks |
|--------------------------|-----------------------|
| | Gabriel Daveis Tavern |
| Hickstown Community Park | Municipal Pool |
| | Recreation Center |

Returning to the broad ranges established by the NRPA standards allows a comparison of the types of parks needed within each size category. Table 12 below compares the NRPA standards applied to the Township's estimated current population with the existing parkland acreage in the Township.

Table 12. NRPA Standards and Existing Population.

| Type of Park (recommended acreage) | Recommended Acreage in Gloucester Township (1999 Population) | Existing Acreage | 1999 Surplus or (Deficit) |
|---------------------------------------|--|---------------------|---------------------------------|
| Mini-Park (.25 -.5 ac /1,000 pop.) | 15.6 to 31.2 | 64.01 | 48.41 to 32.81 |
| Neighborhood (1 - 2 ac/1,000 pop.) | 62.4 to 124.8 | 97.97 | 35.57 to (26.83) |
| Community (5 - 8 ac./ 1,000 pop.) | 312 to 499 | 138.86 | (173.14) to (516.14) |
| TOTAL | 390 to 655 | 300.84 | (89.16) to (444.16) |

Since recreation standards from the NRPA are based on population, an increase in the number of persons residing in the Township also increases the amount of land recommended for park land. Table 13 indicates this relationship at the projected build-out population.

Table 13. NRPA Standards and Projected Population.

| Type of Park | Recommended Acreage in Gloucester Township (Build-Out Population) | Existing Acreage | Acreage Needed at Build-Out Population |
|--------------|---|---------------------|---|
| Mini-Park | 16.8 - 33.5 | 64.01 | 0 |
| Neighborhood | 67.0 - 134.0 | 95.57 | 0 |
| Community | 335.0 - 536.0 | 138.86 | 196.14 to 397.14 |
| TOTAL | 418.8 - 703.5 | 298.34 | 120.46 to 405.04 |

The NRPA analysis indicates that the Township's program of requiring mini-and neighborhood parks as part of the development of housing has had good results in ensuring that sufficient land has been set aside for active recreation for these two park types. The Township has made up in numbers what it does not have in the minimum acreage of individual parks. The need for community-sized facilities, however, tells a different story. Under the NRPA standards, community-sized facilities are lacking. Three parks with the acreage of Hickstown would be needed to meet the existing and projected deficit in the land area recommended by the NRPA guide. It should also not be lost to view that the Lakeland complex is leased. Should the County decide that it needs the land for other purposes, the Township would lose one-third of its existing community park acreage.

Purchasing the acreage necessary to establish one or more larger community parks represents a significant financial cost to the Township. Costs of between \$10,000 and \$15,000 per acre for raw land (e.g., no infrastructure) are typical in Gloucester, based on the acquisition costs for Hickstown. Using these figures would result in a cost of \$2.0-\$3.0 million to acquire the NRPA recommended minimum of 200± acres (at build-out population) needed for community parks.

Costs may be lessened through donation of land or funds for open space and building on existing land owned by the municipality or other governmental entities, or foregoing the recommended minimum.

STRATEGIES FOR ACQUIRING COMMUNITY PARKLAND

In the past the Township was able to rely upon the development approval process to obtain parkland. This strategy applies well to the smaller mini- and neighborhood-sized parks since they could be incorporated into the subdivision design without undue difficulty. The developer could also use the park as an amenity to help in the marketing and sale of houses. The size necessary for community parks, however, is too large to be absorbed in the development process directly through land set aside and construction of facilities.

The Township within the past few years has implemented a more flexible process that permits a developer to pay a fee in lieu of constructing recreational facilities within the development. This fee has been placed in a recreation trust fund to assist in payment of community park development. For instance, it is expected that this funding will be used in the development of the Hickstown Community Park. Residents of the neighborhoods where the developer undertook the option of paying a fee will be able to use a greater variety of recreational amenities than available at a mini- or neighborhood park.

The Recreation Department has instituted a few programs that earn more money than they cost and that provides additional funds that may be applied to recreation sites and programs. A more extensive user fee may be implemented that would add more funding for new recreation facilities.

Both of these strategies are unlikely to raise sufficient money to fully fund acquisition of land to equal three community-sized parks. The traditional method of funding acquisitions is through the State Green Acres Program which provides low cost loans (typically 2% per annum) that municipalities, including Gloucester, have used. The Green Acres program has relied upon state bond programs in the past. Applications to the Green Acres program have always exceeded the funding available, however. The recent voter approval to earmark \$98 million per year, statewide, for parks, other open space and farmland preservation means additional funding will probably be available for the traditional parkland acquisition project. New State funding will not be a panacea, though, since the funding available only calculates to a per acre price of about \$1,800¹. Acquiring additional open space will require a commitment, perhaps a substantial one, from the municipality.

Support for more open space and particularly recreation facilities is found in a survey distributed to residents and business owners through the Township newsletter. Approximately 24,000 were distributed and 490 responses were returned, including 21 from business owners². Though clearly not a scientific sampling, in response to a statement asserting that enough land had been set aside for open space, 280 respondents strongly disagreed or somewhat disagreed, compared to 110 that agreed with the statement. A strong response also occurred from the question, "More facilities for sports are needed." where 246 respondents answered affirmatively compared to 146 that disagreed. Respondents saved their strongest positive response to the question, "Retaining existing woodland and other natural features during construction is crucial in keeping the Township attractive." which goes to the heart of residents' concerns - the disappearance of open land as the Township continues to develop.

The Township is about 82% developed. This development has occurred rapidly - in 1980 Gloucester was about 50% developed. Under present trends the Township would be fully developed by 2005. "Fully developed" in this context means that the large open areas either currently vacant or in agriculture would be developed but that some smaller infill sites would remain vacant. Since larger tracts of land are easier to develop than smaller ones, more competition for scarce land will occur. The same land that could be used for a community park will be attractive to the private sector or to other governmental entities such as the Board of Education or Camden County. There are limited tracts of 50 acres

1- \$800 million in state borrowing would be added to the \$98 million earmarked from state sales tax revenue per year for ten years, or \$1.78 billion total. The goal is to preserve one million acres in that time period.

2- The newsletter was mailed on September 1, 1998 and returns were compiled through September 30, 1998. Compilation by the Recreation Department.

or more that could be utilized for additional large parks. Because of the increasing scarcity of land and, by extension, an increase in competition and cost for it, action sooner rather than later is recommended to secure sufficient parkland for the projected build-out population.

Sixteen counties, including Camden, and 98 municipalities have enacted their own open space tax³ either as an add on to the existing property tax rate or as a specific fund within the existing budget to purchase and develop open space. Most municipalities placed this as a non-binding question on the municipal election ballot prior to enacting the tax or establishing the fund. This may be a method of funding open space that Gloucester Township may want to consider.

One way of lessening the cost of acquisition is to add to land that the Township has already acquired. The Hickstown Community Park is an example of this method. The western portion was acquired by *in rem* tax foreclosure on the property. The Township then acquired the eastern portion to create a large park of 66 acres.

Another method would be share resources with the local or regional Board of Education with side-by-side facilities that may be utilized by both parties. For example, Valleybrook Park is adjacent to the Glen Landing and Loring Fleming Schools. The proposed new high school slated for construction next to Jarvis Park is being planned to allow a combined use of athletic facilities for school and municipal purposes.

RECOMMENDATIONS FOR COMMUNITY PARKLAND

In examining the strategies for acquiring additional parkland, the Township could most efficiently -- from both a capital and operating perspective -- incrementally add to Hickstown Community Park. Both the Township and the Gloucester Township Board of Education own land at the northeast corner of the intersection of Peter Cheeseman and Hickstown Roads - directly across the street from Hickstown Community Park. Further, the Board of Education parcel was originally owned by the municipality who retains a reversion clause should the Board decide not to use it. The Township and Board of Education lots are vacant and there are no current plans for development. If the Township does not already technically own the parcel, it should be able to easily acquire it. A stigma exists for the use of the school district's land, however, because of its proximity to the G.E.M.S. landfill⁴ - let alone the actual site of the landfill. The G.E.M.S. landfill occupies the northwest corner of Erial and Hickstown Roads and is on the federal Superfund list for cleanup. The landfill is owned by the Township. The landfill has been capped and the second phase of cleanup began in May 1999. The second phase will withdraw groundwater, treat it to a certain level, and discharge it to the sanitary sewerage

3- "The Politics of Preservation" *New Jersey Reporter*, December 1998, pp. 8-13, 50.

4- A portion of the landfill is actually located on the Board of Education's land.

system.

The potential exists in the long term to use both the Board of Education's land and the landfill for parkland. Though the time period for treatment and remediation is unknown, in forty or fifty years, this land will likely be available and safe to use for recreation. In any event, the other land owned by the Township, which totals about 32 acres, is already usable for a variety of active and passive recreation. The total area of all of the parcels discussed is about 147 acres.

The development of the existing 66 acres at Hickstown will take a number of years over several phases. Washington Township's community park is often cited as an example of the type of facility that Gloucester Township should have and is planning to have at its community park. The Washington park was developed over a period of about ten years and took incremental phases to complete. One could expect that the development of Hickstown would take a similar amount of time and effort.

Using the present Hickstown park as a catalyst for meeting the future need for community parkland has several advantages. The concentration of facilities allows for more efficient maintenance. It is expected that a park maintenance building will be built as part of its development that could also serve land added in future years. The cost of water and sewer infrastructure could be lessened through a more compact development of recreational facilities. Community parks are by definition intended for municipal-wide use. In this area there are relatively few residents that may be affected by lights or noise and there is sufficient land where more active areas can be oriented away from residences to minimize the park's impact. Establishing this area as the Township's premier park would also provide the opportunity to create pedestrian links, shared programs, or joint facilities with the County College and the Catholic Youth Organization to everyone's mutual benefit.

A need for a large neighborhood park or a small community-sized park is evident in the Kearsley Road area. There are a number of paper streets and old subdivision lots that could be acquired for a community park that would occupy both sides of the street. In addition, there are several larger parcels that could be acquired -- some of which have homes along the street frontage. Sufficient depth exists that the rear of the property could be acquired and a significant buffer established or retained to mitigate any adverse impacts from the park use. Up to 52 acres could be acquired on the west side of Kearsley and 21 acres on the east side. This community park would effectively be an expansion of the existing Country Oaks park.

FACILITY NEEDS

Youth sports organizations constitute the largest part of the Township's recreational

program and subsequent demand for facilities. The four main sports are soccer, baseball or softball, deck hockey (a.k.a. street hockey) and football. Organized adult sports are limited to a men's softball league. The Township also maintains facilities for tennis, basketball, volleyball, and outdoor swimming. Demand for facilities has been growing most quickly for soccer fields and deck hockey.

The Gloucester Parks and Recreation Advisory Committee has identified a number of facility needs for the municipality. The full development of Hickstown Community Park is important in meeting existing needs and allowing some expansion in sports field demand. The design of new park facilities should be geared towards the development of multi-purpose fields that allow more than one season of use per year. The development of Hickstown should largely meet the need for additional soccer fields and football. The Committee views the lighting of fields as key to utilizing fields more efficiently, particularly for baseball and softball use. Many baseball and softball games are during week nights and lights at suitable locations would extend playing hours. The installation of lights should be limited to areas where glare does not substantially affect nearby residential neighborhoods.

Though the Township has recently completed a lighted deck hockey rink at Lakeland, five other existing rinks are undersized for league play. The Recreation Department has identified these rinks for replacement.

The municipal pool provides an adequate level of swimming enjoyment but was originally designed as a swim club, rather than a municipal facility. Further, the pool was built nearly 30 years and requires a significant amount of maintenance. As the pool ages, it will require more maintenance and eventually renovation or replacement.

Gloucester Township was initially founded by settlers using the creeks as byways and by timber cutters to float their products to Philadelphia. The ability to have access to the water has been lost over the years as common landings were removed or decayed and private owners have raised buildings and controlled access. The two traditional landing areas were located at Chews Landing and Upton. A new boat launching area for the public would regain access to the Big Timber Creek. The GTMUA land provides an opportunity to establish a new boat launching ramp near the two historic landings. It is recommended that the launching ramp be limited to non-motorized boats because of the shallow, tidal nature of the streams and their environmental sensitivity. Though environmentally sensitive lands, utilizing boats rather than creating trails would allow enjoyment of nature at a lower impact. The establishment of a ramp and parking would require a waterfront access permit from the State.

MAINTENANCE OF EXISTING FACILITIES

The Township has a vandalism problem with its existing park system, particularly with playgrounds and tot lots. This is a problem common with many park systems. The design of many of the small parks contributes to this problem. Many small parks are tucked behind houses and are accessible only through narrow links to the street. Though only helpful in new design, requiring larger street frontages and setting a maximum distance from the street for play equipment would keep the most active parts of the park visible to passersby. Vandals would be less likely to break equipment if their chances of being caught were higher.

Instilling more neighborhood pride in the nearby park would also work towards the goal of reducing vandalism. This often requires an intensive outreach program to residents to enlist them in 'adopting' the park. Where there are established neighborhood watch programs, park adoption would make a natural outgrowth of this civic activity.

Some municipalities have instituted a park ranger system either as an independent department or as an adjunct to the police department. Though this system is often effective, it is usually expensive and may exceed the maintenance costs that would be saved.

GREENWAYS

Greenways are discussed extensively in the Conservation Element and may be considered linear parks, recreation trails, undeveloped open space connectors, and parkways. Gloucester Township has the beginnings of a greenway network in the conservation lands along the North Branch of Big Timber Creek, Otter Brook and Gravelly Run. In Gloucester, greenways are intended to be established along the stream corridors for conservation purposes. Conservation land is usually best protected through public ownership, though lesser forms of control may be suitable. It is intended that land would be deed restricted for conservation purposes or acquired if the developer offers through the land subdivision process to protect stream corridors from inappropriate development. This would include the flood prone areas, steep slopes, freshwater wetlands and transition buffers associated with the stream itself. Potentially, greenways could also be established to link to upland parks where feasible.

RECREATIONAL TRAILS

Development of hiking trails and bicycle paths within greenways is a way of expanding recreational opportunities in the Township. Establishing this system will involve the municipal government and perhaps adjacent municipalities, conservation and recreation organizations, and landowners. A successful program will require close cooperation among these groups towards the goal of producing recreational trails. (*see also* Conservation Element).

The establishment of a recreational trail greenway should follow the criteria for open space acquisition that is spelled out in the Conservation Element. In particular, the connection of existing open space parcels should be given greater weight than disconnected trail segments. Each trail segment should stand on its own and be useable in its entirety when completed.

Trails are first intended to provide connections across greenways between neighborhoods, for example between Glen Oaks and Broadmoor. This would provide a pedestrian connection between neighborhoods. Linear trails parallel to the stream would require the establishment of a policing mechanism before they are instituted to avoid the same type of problems attendant with low visibility mini-parks.

SUMMARY OF RECOMMENDATIONS

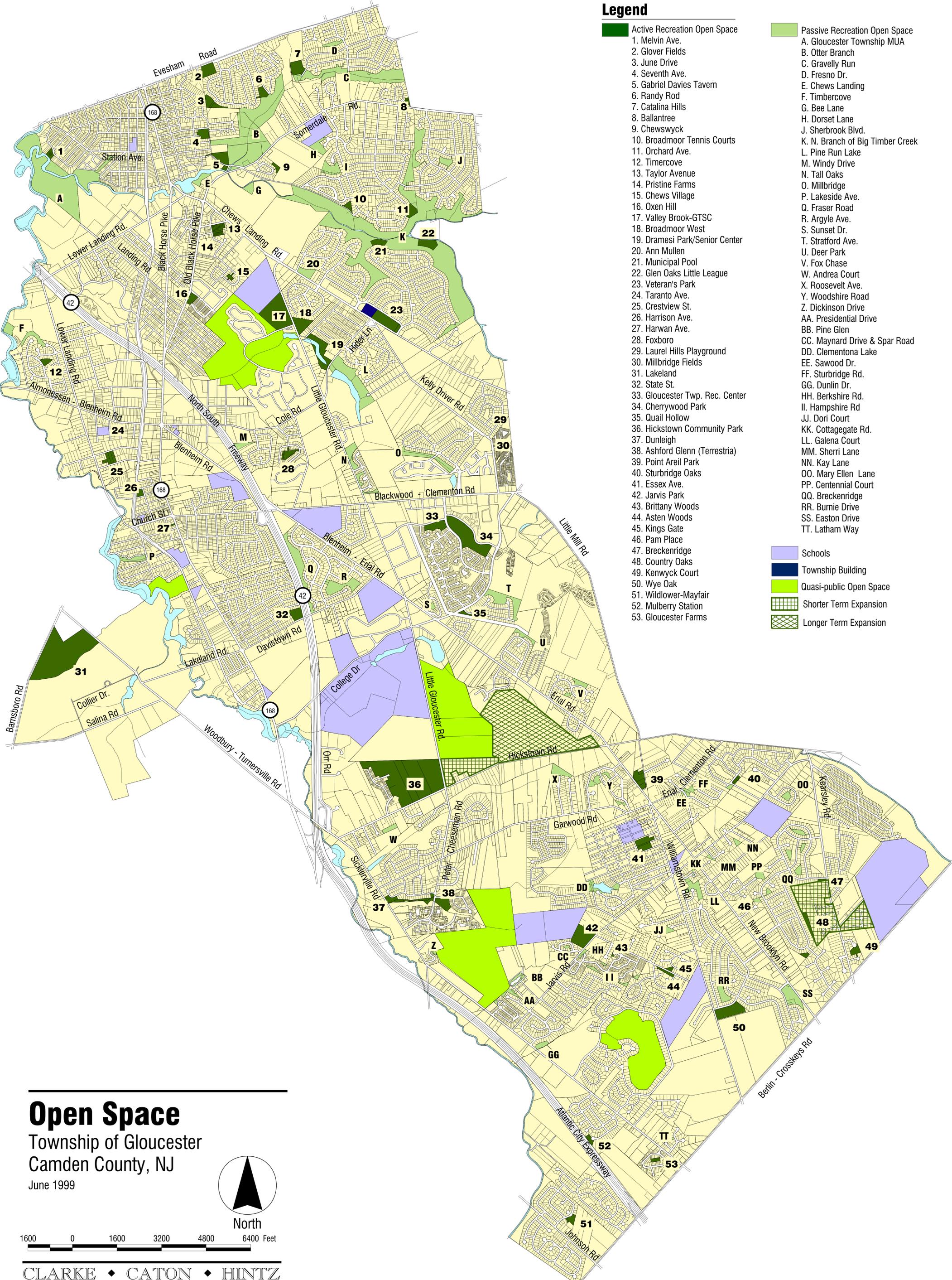
- 1) New residential development should be designed to provide sufficient on-site recreation facilities or where such construction is infeasible, contribute towards community-wide recreation facilities.
- 2) Hickstown Community Park should be viewed as the nucleus of a larger community park system that would also encompass land east of Little Gloucester/Peter Cheeseman Road. Linkages to the County College and the Catholic Youth Organization could be established at several different levels.
- 3) Expand the Country Oaks Park to provide a large neighborhood or small community-sized park for the Kearsley Road area.
- 4) Consider forming a committee that includes representatives from the Board of Education and the municipal Recreation Department to explore mutual recreational needs in the future as new schools and parks are constructed.
- 5) Concentrate on constructing multi-purpose fields to the extent feasible. Look to lighting additional sports fields in appropriate locations to extend the hours of operation.
- 6) Change the standards for open space development in the subdivision design process to ensure better visual access for police and neighbors. Consider an 'adopt a park' outreach program to reduce vandalism.
- 7) Provide a network of hiking and bicycle trails to be concentrated in greenways throughout Gloucester Township.
 - Hiking and bicycle trails should be developed that link schools, parks, leisure centers and similar routes in adjoining neighborhoods. Trails are intended for

recreational rather than commuting use.

- The Township should encourage the dedication of easements that allow public access to open space.

Legend

- Active Recreation Open Space
- Passive Recreation Open Space
- 1. Melvin Ave.
- 2. Glover Fields
- 3. June Drive
- 4. Seventh Ave.
- 5. Gabriel Davies Tavern
- 6. Randy Rod
- 7. Catalina Hills
- 8. Ballantree
- 9. Chewswyck
- 10. Broadmoor Tennis Courts
- 11. Orchard Ave.
- 12. Timercove
- 13. Taylor Avenue
- 14. Pristine Farms
- 15. Chews Village
- 16. Oxen Hill
- 17. Valley Brook-GTSC
- 18. Broadmoor West
- 19. Dramesi Park/Senior Center
- 20. Ann Mullen
- 21. Municipal Pool
- 22. Glen Oaks Little League
- 23. Veteran's Park
- 24. Taranto Ave.
- 25. Crestview St.
- 26. Harrison Ave.
- 27. Harwan Ave.
- 28. Foxboro
- 29. Laurel Hills Playground
- 30. Millbridge Fields
- 31. Lakeland
- 32. State St.
- 33. Gloucester Twp. Rec. Center
- 34. Cherrywood Park
- 35. Quail Hollow
- 36. Hickstown Community Park
- 37. Dunleigh
- 38. Ashford Glenn (Terrestria)
- 39. Point Areil Park
- 40. Sturbridge Oaks
- 41. Essex Ave.
- 42. Jarvis Park
- 43. Brittany Woods
- 44. Asten Woods
- 45. Kings Gate
- 46. Pam Place
- 47. Breckenridge
- 48. Country Oaks
- 49. Kenwyck Court
- 50. Wye Oak
- 51. Wildlower-Mayfair
- 52. Mulberry Station
- 53. Gloucester Farms
- Schools
- Township Building
- Quasi-public Open Space
- Shorter Term Expansion
- Longer Term Expansion
- A. Gloucester Township MUA
- B. Otter Branch
- C. Gravelly Run
- D. Fresno Dr.
- E. Chews Landing
- F. Timbercove
- G. Bee Lane
- H. Dorset Lane
- J. Sherbrook Blvd.
- K. N. Branch of Big Timber Creek
- L. Pine Run Lake
- M. Windy Drive
- N. Tall Oaks
- O. Millbridge
- P. Lakeside Ave.
- Q. Fraser Road
- R. Argyle Ave.
- S. Sunset Dr.
- T. Stratford Ave.
- U. Deer Park
- V. Fox Chase
- W. Andrea Court
- X. Roosevelt Ave.
- Y. Woodshire Road
- Z. Dickinson Drive
- AA. Presidential Drive
- BB. Pine Glen
- CC. Maynard Drive & Spar Road
- DD. Clementona Lake
- EE. Sawood Dr.
- FF. Sturbridge Rd.
- GG. Dunlin Dr.
- HH. Berkshire Rd.
- II. Hampshire Rd
- JJ. Dori Court
- KK. Cottagegate Rd.
- LL. Galena Court
- MM. Sherri Lane
- NN. Kay Lane
- OO. Mary Ellen Lane
- PP. Centennial Court
- QQ. Breckenridge
- RR. Burnie Drive
- SS. Easton Drive
- TT. Latham Way



Open Space
Township of Gloucester
Camden County, NJ

June 1999



Circulation

INTRODUCTION

The Circulation Element examines the existing transportation network in Gloucester Township consisting of vehicular, transit, and pedestrian routes in the municipality, the potential problems that may exist for mobility, and recommendations for improvements. An adequate transportation system is vital to a prosperous economic system for it provides access to jobs, provides methods of moving goods and materials, and permits easy social interaction.

Transportation systems have always influenced the development and redevelopment of land. In the early history of Gloucester Township, rivers were the earliest transportation routes, supplemented by Indian trails that connected early population centers. Upton, Blackwood, and Chews Landing are all examples of hamlets that grew up around transshipment points where the navigable river ended and trails began. In other areas of the state, canals, such as the Delaware and Raritan in central New Jersey, improved the use of water borne transportation. Later, railroads like the Pennsylvania-Reading Seashore Line through Glendora, Blenheim and Blackwood, supplanted canals as the network of choice for moving goods and people.

From the earliest days in New Jersey, royal roads were surveyed, cleared, and improved to move the mail and tie together newly created county seats. The development of the road system was greatly influential in the growth of the new colony. Many of the early roads were toll roads. Gloucester Township was on the road between Gloucestertown (Gloucester City) and Egg Harbor, with branches to Haddonfield and Woodbury. The County road system grew gradually over time to provide the means of moving agricultural goods to market and to connect population centers.

Modern roads were developed to accommodate the explosion in motorized transport beginning in the 1920's. At that time the White Horse (U.S. Rt. 30) and Black Horse Pikes (Rt. 168) were paved. The era of limited access highways in South Jersey began with the opening of the New Jersey Turnpike in 1951. This continued when the Walt Whitman Bridge across the Delaware River opened in 1957 and the North-South Freeway (Rt. 42) a few years later. The Atlantic City Expressway was opened in 1965. This is primarily the system of transportation that is in place today.

Transportation and land use are linked together. Improvements to existing transportation systems and the creation of new technologies brings added mobility, making heretofore inaccessible places within reasonable commuting distance. In Gloucester Township, the

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transportation and land use link found a strong expression with the development of a modern freeway system. When the Walt Whitman Bridge and Rt. 42 opened, it had a profound suburbanizing effect on Gloucester Township, transforming the municipality from an agricultural area to one of housing and commercial development in the span of 30 years.

This element will primarily focus on the street and highway network, with secondary emphasis on public transportation and changes in governmental policy that affect local circulation.

ROAD JURISDICTION

The jurisdiction of the public road network is divided among state, county, and local governments. In this discussion, federal aid highways have been placed in the state's jurisdiction since the New Jersey Department of Transportation (NJDOT) has the responsibility for their construction and maintenance. Toll roads, which have had a distinguished career in Gloucester Township, are now limited to the Atlantic City Expressway operated by the New Jersey Expressway Authority. In terms of jurisdiction, the Atlantic City Expressway Authority is considered part of the state highway network.

The jurisdiction of roadways among different levels of government are reflective of their differing functions. State and federal highways are intended for regional and interstate travel. County highways are important intermunicipal and intracounty roadways. County highways collect traffic from municipal streets for dispersal to the state system and vice versa. Local roads are intramunicipal streets that provide access primarily to residential property.

Table 14 lists the roads under state and county jurisdiction. These roads primarily function as routes for regional traffic and long distance travel.

Table 14. State and County Roads.

| | |
|-------------------------|--|
| NEW JERSEY STATE ROADS: | North-South Freeway (Route 42) Atlantic City Expressway Black Horse Pike (Route 168) |
| CAMDEN COUNTY ROADS: | Almonesson-Blenheim Road/ Blenheim-Erial Road/ New Brooklyn Road (Route 706) Berlin-Cross Keys Road (Route 689) Barnsboro Road (Route 749) |

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Chews Landing Road (Route 683)
Church Street/
 Blackwood-Clementon Road (Route 583)
College Drive (Route 673)
Erial-Clementon Road (Route 703)
Evesham Road (Route 544)
Fairview-Blackwood Road (Route 748)
Good Intent-Lower Landing Road (681)
Hickstown Road (Route 688)
Jarvis Road (Route 687)
Lakewood/Davistown Road (Route 747)
Little Gloucester/
 Peter Cheeseman Road (Route 759)
Old Black Horse Pike (Route 689)
Sicklerville Road (Route 705)
Somerdale Road (Route 677)
Station Avenue (682)
Williamstown-Erial Road (Route 704)

Sources: NJDOT, Camden County Engineering Office

The location of these roads are indicated on the Road Classification map on page 113. Many of the County roads are known by more than one name. The names listed here are intended to be the most commonly used and to reduce duplications.

DESCRIPTION OF THE ROAD NETWORK

As noted in the introduction, the development of Gloucester Township into a suburban community occurred from changes in the living and working arrangements of people after World War II. The transformation of Gloucester Township from an agrarian past to its present suburban development pattern can be seen as a continuation of the trend that started with post-war prosperity and explicit federal and state policies. The National Defense Interstate Highway Systems act in 1956 began the modern era of highway construction, partly modeled on the autobahn system of Germany, but also on the examples closer to home of the Pennsylvania and New Jersey Turnpikes. Municipalities closer to Philadelphia, such as Bellmawr and Cherry Hill, underwent this transformative process sooner than Gloucester Township. Gloucester Township is close to completing this transformation wrought by highway access, while other municipalities such as Winslow and Monroe are still undergoing great suburbanizing pressure.

LIMITED ACCESS HIGHWAYS

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Limited access highways only consist of the North-South Freeway and the Atlantic City Expressway. These can be viewed as essentially one highway, with the change in jurisdiction occurring at the juncture of County Route 705, Sicklerville Road. The North South Freeway is six lanes in Gloucester Township and the Atlantic City Expressway is four lanes. The highway is eight lanes where the two highways interconnect. Limited access highways are considered Principal Arterials. Rt. 42 carries approximately 45,000 vehicles per day in Gloucester Township.

Principal Arterials are intended to handle large volumes of regional and through traffic. Typically, as in Gloucester Township, they are under the jurisdiction of the state. The state receives substantial funding from the federal government for their construction and maintenance. Highways of this type are intended for volumes of traffic exceeding 25,000 vehicles per day (on an annual basis). Certain of the County roads that are classified as major arterials carry in excess of 25,000 vehicles, and the Federal Highway Administration (FHA) would also consider these Principal Arterials. The FHA also classifies roads into urban and rural categories. Gloucester Township would be considered an urban area.

MAJOR ARTERIALS

Major Arterials are intended to move traffic from municipality to municipality within a region and to provide connections between higher and lower orders of streets. These roads are under Camden County's jurisdiction except for the Black Horse Pike, which is the state's responsibility. Their average annualized daily traffic (ADT) is in excess of 10,000 vehicles. The following roads have been classified as Major Arterials:

Table 15. Major Arterial Roads in Gloucester Township.

| <u>Name</u> | <u>Route No.</u> | <u>Number of Lanes</u> | <u>Jurisdiction</u> | |
|---|------------------|------------------------|---------------------|--------|
| Black Horse Pike | | 168 | 2 to 4 | State |
| Evesham Road | | 544 | 2 | County |
| Blackwood-Clementon Road | 583 | 2 to 5 | County | |
| Somerdale Road | | 677 | 2 | County |
| Chews Landing Road | 683 | 2 | County | |
| Hickstown Road | | 688 | 2 | County |
| Berlin-Cross Keys Road | | 689 | 2 to 4 | County |
| Erial-Clementon Road | | 703 | 2 | County |
| Williamstown-Erial | 704 | 2 | County | |
| Sicklerville/Woodbury-Turnersville Road | | 705 | 2 | County |
| Blenheim Erial/Erial/New Brooklyn Road | 706 | 2 | County | |

MINOR ARTERIALS

Minor Arterials function in much the same way as Major Arterials but with lesser volumes of traffic and fewer through routes. They provide a connection between major arterials and residential or non-residential collector streets, as well as providing intra-municipal travel paths. Mainly the province of Camden County, some minor arterials are municipally owned. The intended number of vehicles ranges between 3,000 and 10,000 ADT. Minor Arterials are considered Principal Arterials under the federal system. Table 16 indicates the classification of minor arterials in Gloucester Township.

Table 16. Minor Arterial Roads in Gloucester Township.

| <u>Name</u> | <u>Route No.</u> | <u>Number of Lanes</u> | <u>Jurisdiction</u> |
|---------------------------------------|------------------|------------------------|---------------------|
| Church Street | 583 | 2 | County |
| College Drive | 673 | 2 | County |
| Station Avenue | | 682 | 2 County |
| Jarvis Road | | 687 | 2 County |
| Old Black Horse Pike | 688 | 2 | County |
| Almonessen-Blenheim/ Blenheim Road | | 706 | 2 County |
| Lakewood Ave./Davistown Rd. | | 747 | 2 County |
| Salina Road | | 748 | 2 County |
| Barnsboro Road | | 749 | 2 County |
| Little Gloucester Road | | 759 | 2 County |
| Lower Landing Road | 681 | 2 | County |
| Cole Road/Hider Lane | | - | 2 Township |
| Kelly Drivers Road | - | 2 | Township |
| Peter Cheeseman Road | | - | 2 Township |
| Garwood Road | | - | 2 Township |
| Kearsley Road | - | 2 | Township |
| Johnson Road | - | 2 | Township |

COLLECTOR streets are the next lower step in the street hierarchy. Collectors distribute traffic between residential access and subcollector streets and arterial order streets in residential subdivision design. Non-residential collectors also service industrial and business parks by channeling traffic to arterial roads. Collectors are intended to carry up to 3,000 vehicles per day (AADT). Collectors are also called Collectors under the federal system. Table 17 indicates roads classified as collectors.

Table 17. Collector Roads in Gloucester Township.

| <u>Name</u> | <u>Route No.</u> | <u>Number of Lanes</u> | <u>Jurisdiction</u> |
|-----------------|------------------|------------------------|---------------------|
| Landing Road | - | 2 | Township |
| Peters Lane | - | 2 | Township |
| Broadacres Road | - | 2 | Township |
| Cherrywood Road | - | 2 | Township |
| Orr Road | - | 2 | Township |

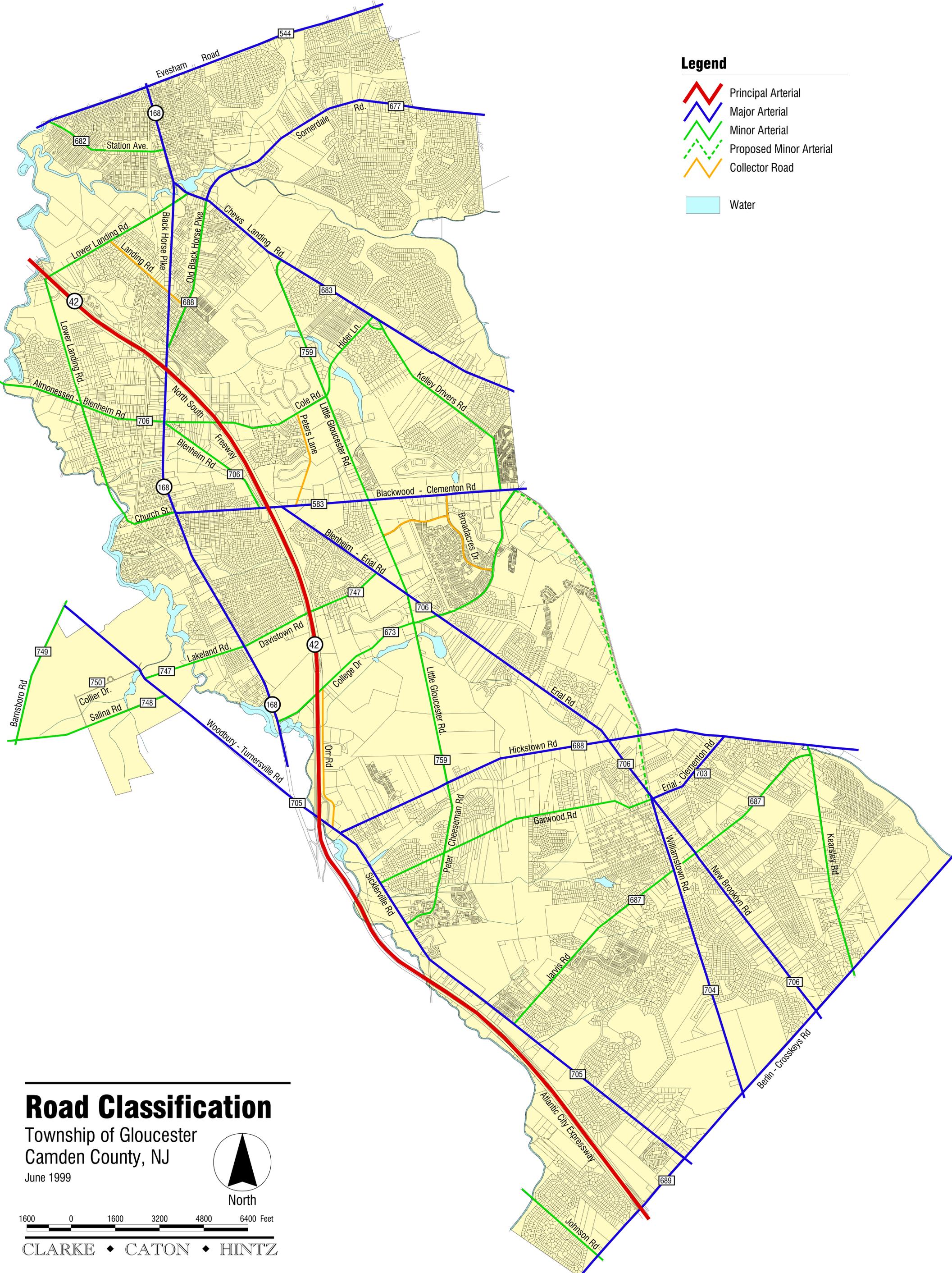
The Principal Arterial, Major Arterial, Minor Arterial, and Collector classifications represent a descending hierarchy in the order of streets. This order is independent of the use of land and is based on the capacity of the roadway and for existing streets, the volume of traffic. The Road Classification map on the following page identifies these street types.

RESIDENTIAL SITE IMPROVEMENT STANDARDS

A street order has also been developed for local roads. Most local roads provide access to residential lots. The primary non-residential local roads are developed within business parks, such as the Freeway Industrial Park located on Orr Road. The design of residential streets is the primary focus for local street classifications of the road network and this section will explore the efforts by the state to create uniform standards in this area of land development. All of the streets noted in this section are considered Local Streets in the FHA classification system.

In January 1997, the New Jersey Department of Community Affairs adopted the Residential Site Improvement Standards (RSIS) that, among other things, superseded municipality's street standards for residential uses. It established a set of standards for street hierarchy that include the following road classifications:

MAJOR COLLECTOR is the highest order of residential streets and is also known as a residential collector. This street type, as its name suggests, collects and distributes traffic between lower-order residential streets and the higher-order streets noted in the previous section. This type of street carries the largest volume of traffic at higher speeds compared to other residential streets. Its Insert Road Classifications here.



Legend

-  Principal Arterial
-  Major Arterial
-  Minor Arterial
-  Proposed Minor Arterial
-  Collector Road
-  Water

Road Classification

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North

1600 0 1600 3200 4800 6400 Feet

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function is to the promote free traffic flow. On-street parking and direct access reduce this free flow and should not be permitted for this type of street. Major collectors should be designed so they cannot be used as shortcuts by non-neighborhood traffic. Major collector's should be limited to no more than 7,500 trips per day. Station Avenue in Glendora could be considered a residential major collector based on its traffic volume and location within a residential area. However, since it provides a way for through traffic that does not originate in there, it has been placed in the Collector category. This contrasts with Golf View Drive which does function as a Major (Residential) Collector since it does not provide access for traffic outside of Valley brook.

MINOR COLLECTORS are a middle order residential street. These are also known as residential sub-collectors. They provide frontage for access to lots and carry traffic to and from adjoining residential access streets. Minor Collectors connect either to (Residential) Major Collectors or to the higher order Collectors or Arterials. This type of street should be designed to carry higher traffic volumes than lower-order streets such as rural and residential access streets, with traffic limited to motorists having origin or destination within the immediate neighborhood. Is not intended to carry regional traffic. Each half of a loop-configured minor collector may be classified as a single minor collector street, but the total traffic volume conveyed on the loop should not exceed 3,500 ADT, nor should it exceed 1,750 ADT at any point of traffic concentration. Examples of Minor Collectors include Orchard Avenue, Lincoln Drive, Argyle Avenue, and Breckenridge Drive.

RESIDENTIAL ACCESS streets are the lowest order classification, other than the rural street type. Most streets in subdivision design fall into this category. As its name suggests, this street type allows access to lots and carries traffic with destination or origin on the street itself. They are designed to carry the least amount of traffic at the lowest speed. The best design practice is to front all of the lots on streets of this order. Each half of a loop street should be classified as a single residential access street, but the total traffic volume generated on the loop street should not exceed 1500 ADT, nor should it exceed 750 ADT at any point of traffic concentration.

Specialized forms of residential access streets are cul-de-sacs, alleys, and parking loops which should not exceed 250-500 ADT, depending on design.

RESIDENTIAL STREET DESIGN

Most of the streets that will be built in the future in Gloucester Township will be designed to service new residential development. New residential streets are created as part of the subdivision and development of land. The Township has an important interest in the design and layout of streets for several reasons. The first of these is the efficiency of the street layout. The street layout has an impact on the cost of providing services to

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residents. Inefficient layouts are wasteful of land and are more expensive to maintain and reconstruct, if necessary, because there are fewer residences to generate the tax support to maintain the road system.

Second, certain types of streets are more expensive to service. Cul-de-sacs create a particular problem for the municipality. Trash trucks and school buses have difficulty in maneuvering within cul-de-sac streets. Cul-de-sacs take twice the time to be cleared of snow because of the backing up that is required. Loop streets should be encouraged over the use of cul-de-sacs in residential street design.

Third, street design affects the quality of life in a development. Streets with a design speed set too high encourage motorists to travel faster than prudent. Streets also serve as locations for social interaction. Travel speeds that are too high discourage this interaction among neighbors. How streets intersect with each other also affects the quality of life. Headlight glare shining into houses can be avoided through proper design. But perhaps the greatest effect on the quality of life is the failure to design the street system with the hierarchy established by the RSIS. This leads to houses fronting on higher order streets, making for greater noise, access problems into and out of the lot, and lower property values. In turn, this may lead to pressure to convert residences to non-residential uses, which aside from exacerbating traffic problems, can be an aesthetic blight.

STATE HIGHWAY ACCESS MANAGEMENT CODE

The New Jersey Department of Transportation adopted a Highway Access Management Code (HAMC) in April 1992, with several subsequent amendments, that applies to all of the roads under their jurisdiction. The HAMC was developed in response to the unprecedented increase in traffic congestion in the 1980's when the state realized that it could not construct enough capacity to satisfy the demand. This demand occurred from several trends that accelerated in the 1980's - the increasing percentage of women in the workforce, an increase over time in the average lot size and house, and decreasing household size. NJDOT changed its view on the purpose of the highway system to one that stresses the mobility of people and goods rather than access to property. It noted that unrestricted access to the state highway system impairs its capacity that inconveniences the public and adds costs to the economy.

Each state highway has been classified for different levels of access, depending on existing conditions and NJDOT's functional plans for the highway system. The types of access are classified as follows:

Table 18. NJDOT Access Levels

| <u>Access Level</u> | <u>Type of Access Allowed</u> |
|---------------------|-------------------------------|
|---------------------|-------------------------------|

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- 1 At grade-separated interchange only.
- 2 Access to the highway is only permitted from a street intersection or interchange only.
- 3 Allows right hand turns into a site from the highway, but left hand turns are only permitted via a jughandle.
- 4 Allows right hand turns into a site from the highway and left hand turns from a dedicated left turn lane.
- 5 Both right and left hand turns are permitted provided the spacing of driveways is adequate.
- 6 Unrestricted turning movements provided that they meet safety design criteria.

Route 42 is classified as Access Level 1. The Atlantic City Expressway is not under the jurisdiction of NJDOT and does not have an access level classification, however, it functions as Access Level 1. Rt. 168 is classified as Access Level 4 throughout its length in Gloucester Township.

The access levels are NJDOT's policy for each road segment. The access level assignment does not necessarily represent actual road conditions. Rt. 168 functions as an Access Level 5 along most of its length and Level 6 in Glendora. Where direct access is permitted from a state highway, standards have been established for the spacing of new driveways from intersections based on the posted speed limit. The spacing limits are indicated in Table 19.

Table 19. Spacing Standards for Driveways Intersecting State Roads.

| <u>Miles Per Hour</u> | <u>Minimum Spacing (feet)</u> |
|-----------------------|-------------------------------|
| 20 | 85 |
| 25 | 105 |
| 30 | 125 |
| 35 | 150 |
| 40 | 185 |
| 45 | 230 |
| 50 | 275 |
| 55 | 330 |

Source: NJDOT

Note: NJDOT does not allow access to state highways with speed limits in excess of 55 miles per hour.

The spacing becomes an important consideration when reviewing site plans for access to Rt. 168. Secondary means of access may need to be developed if state minimum spacing guidelines can not be met. This could include cross-access easements and access to

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secondary streets that intersect with Rt. 168 instead of direct access.

ACCESS MANAGEMENT PLANS

This discussion on the Highway Access Management Code has served to highlight a changed emphasis in transportation from reacting to the demand for road capacity to planning and anticipating what that demand will be in the future.

NJDOT instituted rules in the Access Code for creating access management plans at both the county and municipal levels. The access management plan concept is to pre-plan access to a road. The access management plan may be used as a redevelopment tool to plan for improvements to the streetscape. The state will enter into an access management plan with a county or a municipality on roads under NJDOT jurisdiction, or approve purely local plans. An access management plan for Blackwood-Clementon, for example, might seek to create a management plan with the County to improve the movement of vehicles at intersections. Blackwood-Clementon could benefit most from such a plan because of the high accident rates that occur from turning movements off of and onto the road. The Black Horse Pike also has a significant accident rate, particularly in Glendora, where an access management plan may serve to reduce accident rates and improve its appearance. Intersections where more than 10 accidents occurred in 1998 are depicted on the Circulation Plan.

The crucial question is the allocation of costs for such plans. Typically, NJDOT enters into an agreement with the local entity that spells out the responsibilities for each party. Time, effort, and funding do need to be made by the municipality. Access management plans at the municipal level are rare and NJDOT looks for demonstration projects to promote the concept. This situation makes for a favorable atmosphere for substantial state funding towards an access management plan.

CONNECTION BETWEEN LAND USE AND TRANSPORTATION

Land use and transportation are inextricably linked. Each type land use generates a certain amount of traffic that uses the road network, pedestrian path, or mass transit vehicle to get from one place to another. Traffic congestion is the situation where the volume of traffic either in a road segment or at an intersection exceeds the carrying capacity of the system to handle it, leading to longer trip times or delays. Congestion is primarily a phenomenon of the road system.

PEAK HOUR CONGESTION

Traffic congestion is at its worst at peak hour times. During the weekday, these times generally occur between 7 am to 9 am and 4 pm to 6 pm. The highest peak hour usually

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falls within these two hour periods.

Peak times differ depending on the type of land use that generates the traffic. Office uses have a peak hour of traffic generation that is the same as the total peak hour, with a smaller rise around noon that represents workers going to lunch. Retail uses, however, have much less traffic until stores open about 10 am. Traffic generation reaches a peak around noon on weekdays and gradually tapers off till the stores close. Saturdays between noon and 2:00 pm are typically the highest peak times for stores, with total traffic substantially higher than the weekday. Schools have a peak hour that begins earlier, around 6:30 am and ends sooner at about 3:30 pm.

CAUSES OF PEAK HOUR CONGESTION

The pattern of development in Gloucester Township represents a prototypical suburban community that grew up from the road access afforded by the federal, state, and county road network, increasing prosperity, and policies that allowed housing at suburban densities to be affordable to the average household. Today, residents, visitors, and business people are still dependent on the same road network to travel to work, ship goods, and shop as was largely in place in the 1800's. As land converted from farming to other uses that generate much more traffic, the capacity of the local road system has not kept pace. This is particularly noticeable at the county level.

Most of Gloucester Township's residential development occurred since 1960 and reflects prevailing design ideas. The street system is largely a curvilinear pattern with no or few interconnections between neighborhood "pods". This means that traffic is collected from residential access streets and funneled to residential subcollectors. The subcollectors intersect with the arterial road system, thereby concentrating their traffic on one specific road segment. This type of street pattern was developed to slow vehicles down in residential areas and to prevent cut through of traffic. In this it has been largely successful. It has meant, however, that virtually all of a neighborhood's traffic ends up on the same arterial no matter what the ultimate destination is.

The passenger vehicle is the most favored form of transportation because of its extraordinary convenience in allowing motorists to travel when and where they choose. Congestion is largely a function of the trip to work in a single occupant vehicle (SOV). Despite many efforts on the part of employers and government to encourage people to travel to work by car pooling, van pooling, bus or train, the percentage of people traveling to work alone rose between 1980 and 1990. There is every reason to believe that this percentage has continued to increase since the 1990 U.S. Census.

At least part of the rise can be attributed to the continuing wave of suburbanization. Though New Jersey is often called the most urbanized state in the country, it is really the most suburban. Population densities in older suburbs, such as Collingswood or

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Haddonfield, where the development pattern was influenced more by the distance one could walk than the car, population densities range from 4,000 to 8,000 people per square mile. About 1,000 people per square mile is usually considered the point at which a developing area is considered suburban as opposed to rural or exurban. Gloucester Township's estimated population density is about 2,900 people per square mile.

Effective bus systems, the least costly mass transit alternative to the car, require a minimum of 3-4,000 people per square mile for a reasonable level of service. Though New Jersey Transit runs buses along several routes in Gloucester (more will be discussed below) it provides services only to major employment areas or retail centers, such as the Echelon Mall. The bus service also runs at a loss that must be made up through other means, generally through taxpayer subsidy.

As noted previously, two major demographic changes over the past three decades has been the rise of women in the work force and the decline in household size. These two changes have had a disproportionate effect on traffic congestion. Each woman added to the workforce requires a means of getting to work and in nine times out of ten this is the SOV car. With two earner incomes in many households as well, the second car is not only affordable, but in many cases, essential. The decline in household size has meant that more dwelling units must be provided than the general rise in the population would suggest. More housing units means more vehicles and hence more congestion.

There is some evidence that the rise in general use of the road system has held steady in areas where the population has reached its build-out level. For Gloucester Township, this suggests that the older parts of the Township should not see significant changes in traffic levels and perhaps even a decline as the people in specific neighborhoods age. Where parts of Gloucester Township provide accessibility to the regional road system for adjoining municipalities, however, traffic congestion should be expected to rise. Specifically, roads providing through travel from Winslow and Washington Townships to Rt. 42 or the Atlantic City Expressway and Rt. 30 should expect increases in congestion.

This analysis suggests that traffic congestion will remain a significant quality of life issue for most residents of Gloucester Township.

LEVEL OF SERVICE STANDARD

Transportation planners and engineers often use "Levels of Service (LOS)" to quantify congestion. These are based on the capacity of the road system determined by the number of lanes, the physical geometry of the road, the number of curb cuts, and so on. Level of Service runs from A to F and is usually based on the Transportation Research Board's *Highway Capacity Manual* issued in regular editions. Standards have been set for both signalized and unsignalized intersections. Typically, the ability to move through an intersection defines congestion, rather than the ability to travel a road segment, called

lane capacity. Though lane capacity is important in determining whether a road should be expanded from 2 lanes to 3 or 4, most motorists experience of congestion occurs at intersections. In Gloucester Township, since most major intersections are already signalized, this level of service standard is of the most importance. Levels of service for signalized intersections are defined as follows:

Table 20. Levels of Service for Signalized Intersections.

| <u>Level of Service</u> | <u>Definition</u> |
|-------------------------|---|
| A | Free flow, low volumes and no delays. Volume less than 60% of capacity; delays at signals 0-5 seconds. |
| B | Stable flow, speeds restricted by travel conditions, minor delays. Volumes are 60-70% of capacity; delay at signals 5-15 seconds. |
| C | Stable flow, speeds and maneuverability closely controlled due to higher volumes. Volume 70-80% of capacity, delays at signals 15-25 seconds. |

Table 20. Levels of Service for Signalized Intersections, cont.

| <u>Level of Service</u> | <u>Definition</u> |
|-------------------------|--|
| D | Stable flow, speeds considerably affected by changes in operating conditions (ie. weather). Traffic restricts maneuverability. Volume 80-90% of capacity; delays at signals 25-40 seconds. |
| E | Unstable flow, low speeds, considerable delay, volume is at or near capacity. Freedom to maneuver is extremely difficult. Volume 90-100% of capacity; delay at signals 40-60 seconds. |
| F | Forced flow, very low speeds, volumes exceed capacity, long delays, stop and go traffic. Delay at signals more than 60 seconds. |

Source: Transportation Research Board, *Highway Capacity Manual*, 3rd Ed., Special Report No. 209.

Where Levels of Service have been set by municipalities, LOS D is considered acceptable in suburban areas. In certain areas where there is a heavy concentration of businesses or a good transit system, LOS E is acceptable. For Gloucester Township,

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because it does not have a significant central business district or a well developed transit system, LOS D should be the overall standard for planning purposes and in the review of applications for development.

Traffic impact studies should be used to review the effects of specific development proposals on intersections and road segments. If the LOS D level is not met this should trigger the need for the developer to find an approach using incremental construction improvements, reduction in demand, or pricing incentives to reduce congestion.

COORDINATION AMONG GOVERNMENTS AND THE PRIVATE SECTOR

As noted in the section dealing with access management plans, coordination among local, county, and state officials is now more important than in the past. Since all levels of government have constrained resources to a greater or lesser degree, cooperative ventures have a better chance of succeeding both for funding and in acting in a timely manner to address problems that arise. Further, as time goes on, new initiatives stemming from federal laws requiring action to reduce air pollution and to coordinate transportation planning across regions will meet the needs of the municipality if its viewpoint is addressed in the planning process.

Increasingly, the private sector will need to become involved in matters once solely the domain of government. Moving people to and from jobs is the single most causal factor of congestion and air pollution. Solutions to these problems will require an active role for the private sector in encouraging their employees to seek other methods of traveling to work. For the state, solving these problems is crucial to the long term viability of the state economy. Employers will move jobs elsewhere if they can not get their employees to the workplace or goods and services to customer in an efficient manner.

DEMAND MANAGEMENT

On a regional level, the supply side approach to alleviate congestion by building new roads and increasing capacities of existing roads has been limited by fiscal, political, and social constraints. While new road capacity has been added - the construction of a fourth lane on Rt. 42 is an example - NJDOT has publicly stated that the era of road building is over. The focus on reducing congestion has shifted to reducing the demand for road capacity at peak times. This is generally known as demand management. Demand management includes a number of techniques, including flexible and staggered work hours, car and van pooling, office links to home workers (telecommuting), bicycling, and walking. The implementation of demand management techniques also takes a number of methods, including trip reduction ordinances, transportation management associations

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(TMA), direct financial incentives and disincentives, public and private subsidies, and reducing parking or creating preferential places for car pool users.

Demand management techniques are not a panacea because their successful implementation requires changes in social and cultural attitudes that have been prevalent for almost fifty years. Pricing mechanisms, such as an increase in fuel taxes or creating toll charges on previously free roadways may offer the most economically efficient method in reducing peak hour traffic congestion, but is rather unlikely in this political climate. There is one operating TMA in Camden County involving the Rt. 73 corridor that also extends into Burlington County. Called the Cross-County Connection TMA, it works with large employers on getting their employees to work. It is funded by dues paid by municipalities, the counties and employers. Over time, Gloucester Township may wish to explore the TMA concept with Washington Township and perhaps other nearby municipalities as a method of combating congestion. Transportation demand management offers a good opportunity to provide for the relief of traffic congestion in the long run.

PEDESTRIAN AND BICYCLE PATHS

Pedestrian and bicycle movements are another aspect of mobility in Gloucester Township. Only a very small percentage of commuters either walk or ride bicycles to work. Gloucester Township has until recently not pursued a strategy of constructing either bicycle or pedestrian paths except for street-side sidewalks in subdivisions. Bicycle commuters look for the same types of straight line means of reaching work as motorists. This suggests that bicycle lanes should be created along the county road network. The Township's previous master plan took this approach to the creation of bicycle paths. Yet, the County has never reconstructed one of their roads with proper bicycle lanes. In some instances, road widening projects do not include shoulders that may be used by bicyclists, who must then compete for limited travel lane area with motorized vehicles traveling at higher speeds. The Township also has a dispersed and relatively low employment base that make targeting a specific area for bicycle lane construction problematic. Pedestrian paths, whether sidewalks or a defined trail, suffer from a similar set of problems as bicycle lanes.

For these reasons, bicycle and pedestrian paths are intended for recreational and leisure use as opposed to commuting purposes. Such paths are proposed in conjunction with Greenways (*see Conservation and Open Space and Recreation Elements*) as a method of providing access to open space, connections between neighborhoods and community facilities, including recreational fields.

The Township was recently successful in its application for state funding of the first leg of a "rails to trails" project utilizing the old Pennsylvania Reading Sea Shore Line that ran from Camden to Grenloch. This use of the line has been discussed for many years

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and no longer has tracks. Its two sections are owned by Gloucester Township and Public Service Electric and Gas Co. for their transmission lines. The funding will enable the construction of a bicycle path from Woodland to Marshall Avenues, a distance of 1.82 miles. This area is depicted on the Circulation Plan at the end of this document. A number of other proposed connections are also indicated on the Plan and are described in more detail below.

The width of paths should be determined by their intended use. Dual use paths, for example both bicycling and pedestrians, needs to be wider than single purpose paths or trails. Recommended standards for the width of paths are indicated in Table 21.

Table 21. Clearing Limits and Recommended Widths for Trails.

| <u>Trail Type</u> | <u>Clearing and Grubbing Width</u> | <u>Selective Thinning Width</u> | <u>Clearing Height</u> |
|------------------------|------------------------------------|---------------------------------|------------------------|
| 6' hiking | 10 feet | 20 feet | 7 feet |
| 8' pedestrian | 14 feet | 24 feet | 8 feet |
| 8' bicycle | 16 feet | 26 feet | 10 feet |
| 10' bicycle/pedestrian | 18 feet | 28 feet | 10 feet |
| 6' horse | 12 feet | 22 feet | 12 feet |
| 10' horse/pedestrian | 16 feet | 26 feet | 12 feet |

Source: Greenways, A Guide to Planning, Design, and Development; Schwarz, Flink and Searns; The Conservation Foundation Fund, 1993

PUBLIC TRANSPORTATION

Gloucester Township is not well served by public transportation. Typically, public transportation is most efficient where there are greater concentrations of population than found in the Township or significant concentrations of employers. The decentralization of both housing and employment since World War II has created a suburban pattern that public transit with fixed routes can not easily serve. Most commuting travel in the metropolitan area of Philadelphia is now from suburb to suburb, rather than to a central city.

The persons most in need of public transit are the poor and the elderly since even at modest income levels, car ownership is high because of its convenience.

New Jersey Transit operates three bus lines on a regular basis that provides service to the Township, primarily in the west and south. The routes are depicted on the New Jersey Transit Bus Routes map on the following page. These bus lines follow these routes:

Route 400 - This route originates in downtown Philadelphia and travels through Gloucester Township on Rt. 168, the Black Horse Pike, detours to the Camden

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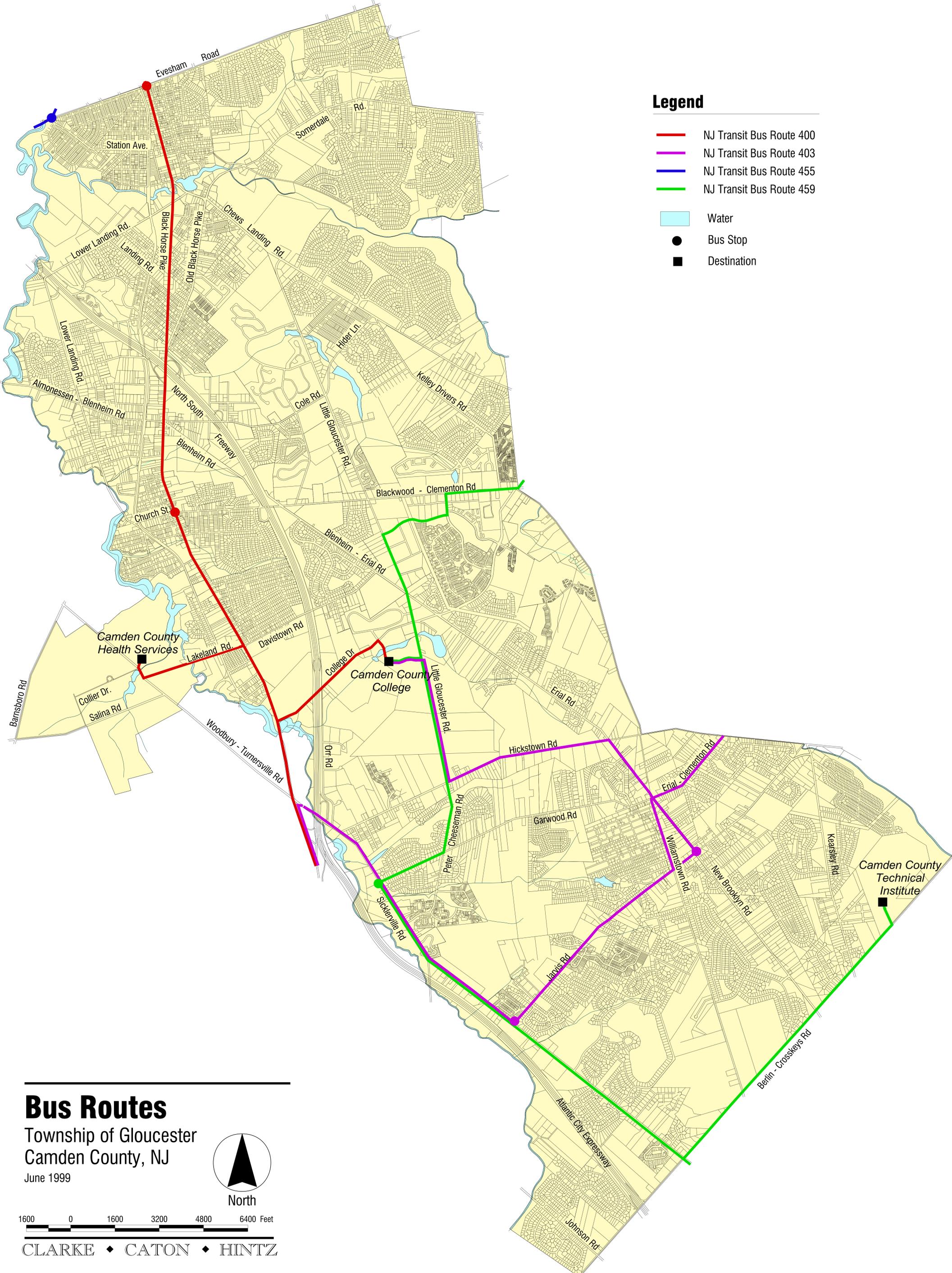
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County Lakeland complex, and ends in Sicklerville (Washington Township) at the Village Diner. In between it has stops in Camden, Audubon, Mt. Ephraim, Runnemede, Blackwood, Camden County College, the Lakeland Health Services Center, Turnersville, Williamstown, and two additional stops in Sicklerville. The Blackwood stop is located at the intersection of Rt. 168 and Church Street. The route takes approximately an hour and forty-five minutes to complete on normal days.

Route 403 - Also originating in Philadelphia, the 403 terminates at two different locations depending on the service being run. The route either ends in Turnersville at Rt. 168 and Greentree Road or at Camden County College. Intermediate stops include Camden, Collingswood, Audubon, Barrington (all via Rt. 30), the Echelon Mall, Lindenwold, Clementon, Pine Hill, and Erial. The route traverses Erial-Clementon Road, Erial Road, Hickstown Road, Little Gloucester/Peter Cheeseman Road to Camden County College, *or* Erial-Clementon Road, to Erial Road, then to Garwood Road, Sicklerville Road to Rt. 168 and south to its terminus at Greentree Road in Washington Township.

This route provides transit access to the Port Authority Transportation Corporation (PATCO) station in Lindenwold on White Horse Road. The PATCO High Speed Line is a commuter rail service between Lindenwold and Philadelphia. New Jersey Transit also operates a commuter rail service between Philadelphia and Atlantic City which stops at the InsertBus Routes here.



Legend

- NJ Transit Bus Route 400
- NJ Transit Bus Route 403
- NJ Transit Bus Route 455
- NJ Transit Bus Route 459
- Water
- Bus Stop
- Destination

Bus Routes

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PATCO station in Lindenwold. This allows access to Amtrak in Philadelphia as well as Cherry Hill (Garden State Racetrack), Atco, Hammonton, Egg Harbor City, Absecon and the new rail station in Atlantic City next to the new convention center.

Route 459 - The 459 is a cross-county route that connects the Echelon Mall with the Avandale Park and Ride facility in Winslow on Sicklerville Road. It travels through Gloucester Township on Blackwood-Clementon Road, swings through Cherrywood to Little Gloucester/Peter Cheeseman Road, then the route follows Garwood Road to Sicklerville Road and into Winslow Township. Particular routes also detour to the Camden County Technical Institute on Berlin-Cross Keys Road. Stops in Gloucester Township are also made at Laurel and Blackwood-Clementon Road, Broadacres and Cherrywood Drives, Camden County College, and Sicklerville at Garwood Road. The 459, like the 403, provides access to the Lindenwold PATCO station and NJ Transit Rail. The 459 route takes approximately an hour to complete.

NJ Transit Bus also runs a local 455 line that runs through Runnemede and Deptford to the Deptford Mall. This route travels on County Route 573, Clements Bridge Road, where it crosses Big Timber Creek into Deptford on County Route 544. This is on the border of Gloucester Township and provides a limited means of traveling to the shopping center.

Absent an increased level of funding from state government, large portions of the Township will remain inaccessible by bus.

RECOMMENDED IMPROVEMENTS

Improvements to circulation in Gloucester Township will require incremental steps along a broad front. Access to the regional highway network is a high priority for residents and businesses. Rt. 42 was constructed without any full interchanges, which has hampered the ability to access the road system without creating impacts in adjacent neighborhoods. A number of recommendations for ramp improvements have been made.

It is expected over time that a number of county roads will need to be widened to four lanes from their present two lanes. Camden County examined Sicklerville Road (Route 705) in February 1996 in conjunction with the New Jersey Expressway Authority's proposal to construct a diamond interchange at Berlin-Cross Keys Road. One of the recommendations to come from the County study is to construct a park and ride facility at the interchange. The Township would prefer that this be constructed on the Winslow Township side because of future plans for the open land in Gloucester Township.

Circulation Element

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However, two other potential locations for park and ride facilities have been identified. Following are more detailed recommendations for road improvements:

RT. 42 - NORTH-SOUTH FREEWAY

Several additional ramps would aid mobility to and from Rt. 42. Aerial photography and wetlands mapping were used to determine, at a planning level, the feasibility of adding ramps. Actual feasibility would require a more detailed study and acceptance by NJDOT. Not all of the ramps are likely to be accepted by NJDOT because of its spacing requirements for access ramps. However, the locations of ramps constitute alternatives where spacing is less than about a mile from other ramps. The following are potential ramp locations:

- On the Clover property to permit northbound Rt. 168 motorists to travel southbound on the highway and for southbound Rt. 42 drivers to go northbound on Rt. 168.
- An on-ramp from Blenheim-Erial Road to southbound Rt. 42 to allow southbound access from Blackwood-Clementon Road.
- Sufficient land also appears available to allow an exit from northbound Rt. 42 to Blackwood-Clementon Road alongside the Lutheran Church. This is attractive since Blackwood-Clementon Road is the Township's primary shopping corridor. This exit would need to be carefully considered since the intersection at Blackwood-Clementon and Erial Roads has the highest accident rate in the Township. A signalized ramp would probably be necessary, linked to the intersection signal.
- Adding a new interchange just north of College Drive on Block 13103, Lot 1 and Block 13104, Lots 1 and 3.02. This interchange has been proposed by a shopping center developer to provide a set of ramps connecting to Rt. 168 from Rt. 42 and on the opposite side of the freeway, a second set of ramps connecting to College Drive.
- Adding a new ramp looping behind Metrologic to provide access to Rt. 42 northbound. This would be preferable to an on-ramp on the north side of Cole Road where there are a number of residences that would be affected.

PARK AND RIDE FACILITIES

A park and ride facility on the Clover property may be feasible depending on the ultimate use of the building. If it becomes light industrial, most of the parking lot would not be needed. A park and ride facility within the loop created by the new interchange and accessible from College Drive is proposed.

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ATLANTIC CITY EXPRESSWAY

The New Jersey Expressway Authority has proposed and is planning to build a diamond interchange between the Atlantic City Expressway and Berlin-Cross Keys Road by June 2000. Because of its toll road status, no further connection to the Expressway appears feasible.

OTHER ROADWAYS

Little Mill Road - Little Mill Road is partially constructed for approximately half of its length. The right-of-way has been established from College Drive/Laurel Road to Hickstown Road. The construction of the road would provide better access not only for Gloucester Township County residents but also Lindenwold and Pine Hill. It is suggested that it be classified as a minor arterial.

Johnson and Kearsley Roads - Both of these roads are municipal streets but serve an intermunicipal function for through traffic. Johnson Road connects Rt. 42 in Washington Township with Berlin-Cross-Keys Road. It functions to carry through traffic. Kearsley Road connects Wiltons Corner in Winslow to Hickstown Road. Jarvis Road, a county road, has been realigned to be secondary to Kearsley - indicating its importance in intermunicipal travel. Because of these functions in the regional roadway, both roads should be under Camden County jurisdiction.

Belleview Avenue - The grid system of streets should be connected to Garwood to provide another means of access via an extension of Belleview. This road crossing would involve the fill of a minor amount of wetlands.

In addition to the road segments discussed in the preceding section, the following bicycle and pedestrian improvements are recommended:

RANDY ROAD TO PASADENA DRIVE

This connection requires a bridge over Otter Branch and acquisition of a portion of Block 3101, Lot 1 that the Township does not yet own. However, this land is listed for sale and subdivision, which would present the opportunity to acquire the land and perhaps the path constructed as part of the subdivision approval process.

FLOODGATE ROAD TO GABRIEL DAVEIS TAVERN

The old bridge abutments, reconstructed in 1910 still exist over the N. Branch of Big Timber Creek at Somerdale Road. This would require a bridge also, but all of the land is

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owned by the Township. A bicycle and pedestrian path would reestablish the old road as it existed in colonial times.

PENNSYLVANIA AND READING SEASHORE LINE

The funding for the bikeway on the old railroad right-of-way equals about one-third of the mileage in Gloucester Township. There are opportunities to extend the bikeway north and south from the funded portion. The bikeway should be continued along the old railroad line. Acquisition of an easement for public access would need to be obtained. Most of the land is controlled by PSE&G.

FENWICK LANE TO MUNICIPAL POOL AND TO BLOCK 8401

A connection from the Broadmoor and Timberline neighborhoods would provide a path to the municipal pool that exists on an informal level. Block 8401 consists of the last large piece of vacant land in the northern part of the Township. This would present the opportunity to provide a path from the pool through the site and eventually to Floodgate Road and the Tavern.

WASHINGTON & SPRING HILL TO STRATFORD

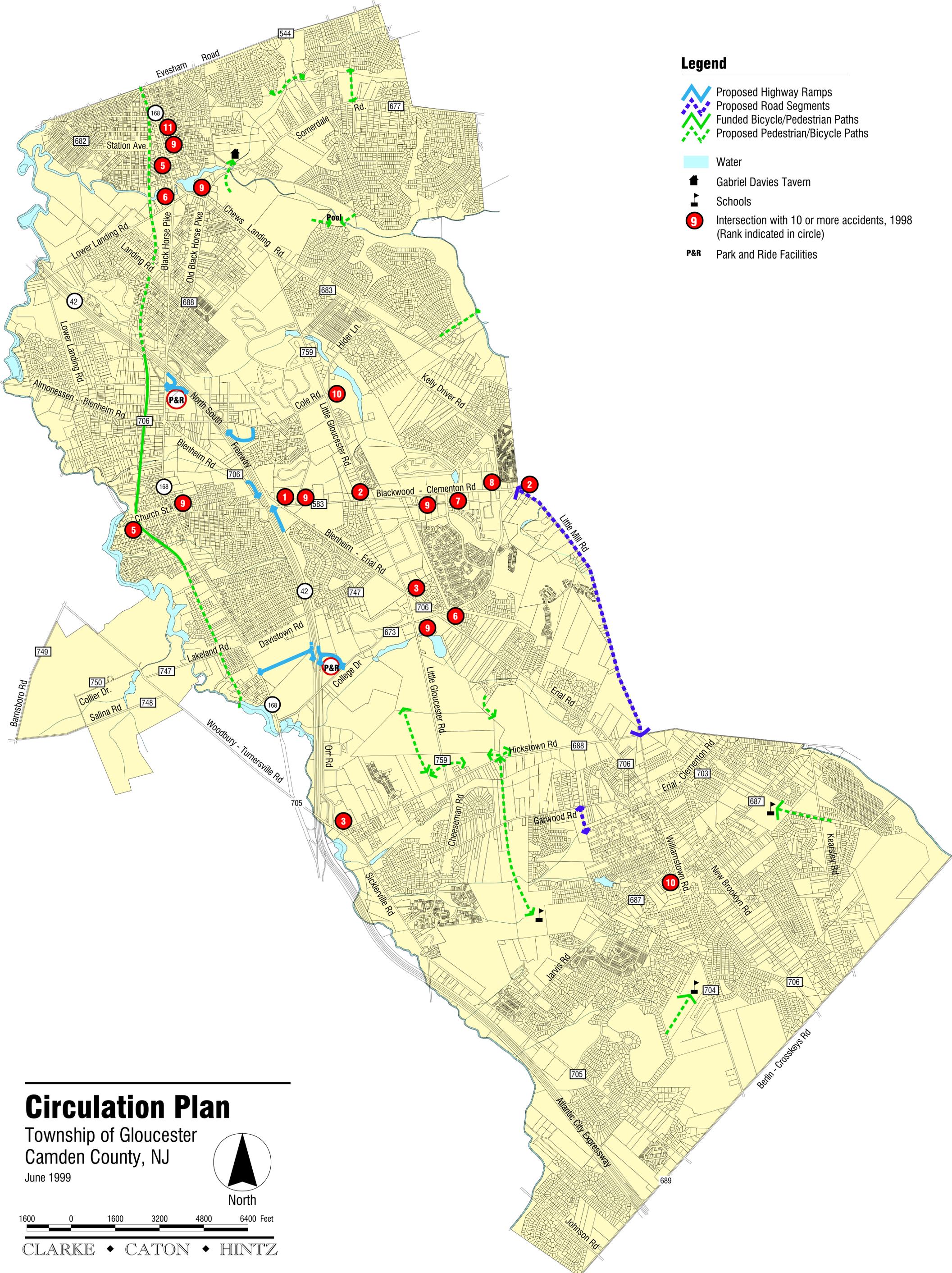
An informal trail already exists in this location. A more formal path system would provide access to the North Branch conservation area and access to recreation fields in Stratford.

HICKSTOWN COMMUNITY PARK

Several connections to the Hickstown Community Park are proposed. A connection to the College would allow some sharing of facilities, which already takes place for some athletic contests. Potentially a path from Primrose Lane through an expanded community park on the east side of Little Gloucester Road to Hickstown would be sensible. The middle of the Township between Jarvis and Hickstown Road lacks access because few roads exist here. Environmental constraints would likely limit roads as more development occurs in the area. It is proposed that a path be established to Hickstown Community Park from Jarvis Park via the proposed new High School. It would provide recreational access for many of the residents south of Jarvis.

NEW ELEMENTARY SCHOOL TO FOREST RIDGE

A connection through the PSE&G lot would allow school children to ride their bikes to the planned new elementary school on Jarvis Road from the Forest Ridge development.



Legend

-  Proposed Highway Ramps
-  Proposed Road Segments
-  Funded Bicycle/Pedestrian Paths
-  Proposed Pedestrian/Bicycle Paths
-  Water
-  Gabriel Davies Tavern
-  Schools
-  Intersection with 10 or more accidents, 1998 (Rank indicated in circle)
-  Park and Ride Facilities

Circulation Plan

Township of Gloucester
Camden County, NJ
June 1999



North

1600 0 1600 3200 4800 6400 Feet

CLARKE ♦ CATON ♦ HINTZ

Land Use Plan

INTRODUCTION

The Land Use Plan Element seeks to maintain a balance in the quality of life for residents, business owners and visitors to Gloucester Township. The Land Use Plan Element synthesizes the policies in the other elements of the Master Plan. The Land Use Plan Element is designed to encourage compatible land uses, the reuse of existing buildings, the restriction of development in environmentally sensitive areas, and the careful management of growth on the limited vacant land remaining. The Land Use Element is designed to help implement the goals and objectives of this Master Plan in map and text form. This is accomplished by designating different geographic areas of Gloucester Township into land use classifications and by describing the development policies associated with each one.

The Master Plan forms the legal and conceptual foundation for the zoning ordinance and zoning map. New Jersey, among a few other states, explicitly ties the planning of a community with the zoning ordinance and zoning map. These latter two documents are the local rules which govern the use of land and the location of buildings. The zoning ordinance must be substantially consistent with a municipality's master plan. In the same manner, the zoning map must be substantially consistent with the land use plan. Gloucester Township's Land Use Plan may be found at the end of the element. In this document, Land Use Element refers to the text and Land Use Plan refers to the map that indicates the various land use categories in the Township.

The intent of the Land Use Element and Plan is to create an implementation document that will be used regularly to review and judge development and redevelopment proposals.

Existing Land Use

A survey of the Township was undertaken in August 1998 by ground and aerial observation to classify land according to its use. The existing land use survey was also corroborated with the Township's tax assessment records. The survey was completed to determine how land is actually used instead of how it is regulated. Based on the survey,

the existing land use in Gloucester Township has been assigned into nine functional categories: single family detached residential, two-family and single family attached residential, multi-family residential public and quasi-public, commercial, industrial, open space, agriculture, and vacant. Two other classes of land, roads and water, are indicated on the Existing Land Use map but are not otherwise included in the description of uses. The Existing Land Use map may be found on the following page. Table 22 illustrates the land area within each category of land use. The water designation has been included into the land use category that is adjacent or surrounds it for the purposes of presenting the table.

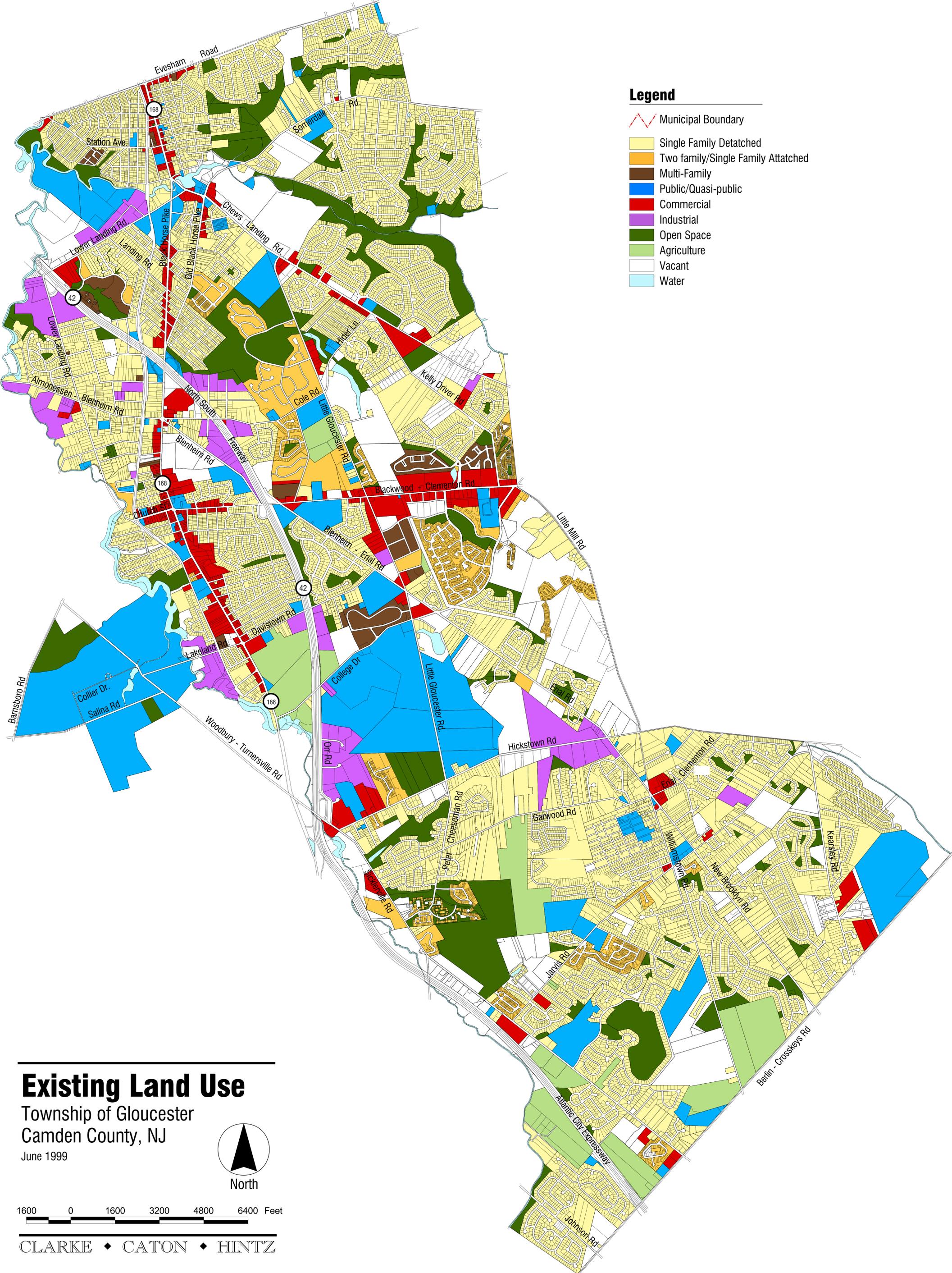
Table 22. Existing Land Use Acreage and Percentage of Total Area.

| Land Use Category | Acres | % of Total Area |
|---|--------|-----------------|
| Single Family Detached Residential | 5,628 | 36.9 |
| Two-Family & Single Family Attached Residential | 698 | 4.6 |
| Multi-Family Residential | 82 | 0.5 |
| Public & Quasi-Public | 1,432 | 9.4 |
| Commercial | 698 | 4.6 |
| Industrial | 884 | 5.8 |
| Open Space | 1,478 | 9.7 |
| Agriculture | 625 | 4.1 |
| Vacant | 2,115 | 13.8 |
| Roads | 1,612 | 10.6 |
| Total | 15,252 | 100% |

Insert Existing Land Use Plan

Legend

-  Municipal Boundary
-  Single Family Detached
-  Two family/Single Family Attached
-  Multi-Family
-  Public/Quasi-public
-  Commercial
-  Industrial
-  Open Space
-  Agriculture
-  Vacant
-  Water



Existing Land Use

Township of Gloucester
Camden County, NJ

June 1999



1600 0 1600 3200 4800 6400 Feet

CLARKE ♦ CATON ♦ HINTZ

SINGLE FAMILY DETACHED RESIDENTIAL

The single family detached residential category encompasses a large portion of the land area of the municipality and is the largest of the nine existing land use classifications. The density of development generally ranges from 1 to 4 units per acre. Lower densities than these occur where land is underutilized and represents an earlier, more rural, stage of development in the Township. The development of the land in this category has taken place mainly from the 1920's to the present and more particularly after World War II. The housing type is a dwelling occupied by one household that is on its own separate lot and unattached to any other dwelling.

TWO-FAMILY AND SINGLE FAMILY ATTACHED RESIDENTIAL

The two-family, or twin house, has been included with the single family attached, or townhouse, category because of their similarity in density in Gloucester Township. Density ranges generally from 3 to 10 units per acre, with the lower densities developed more recently. The twin house is one where the units share a common vertical party wall. The townhouse unit is typically in a building of up to 8 units, each one of which is joined to at least one vertical party wall.

MULTI-FAMILY RESIDENTIAL

The multi-family residential differs from the single family attached residential use by being designed usually as apartments with access from a central hall. The garden apartment complex is the archetypical multi-family development in the Township. Unlike other municipalities, no mid- or high rise facilities were constructed. Gloucester Township was developed with a wide range of densities from 3 to 20 or more units per acre. The oldest complexes were generally the most densely developed and in single or two building configurations. The larger developments are from 15 to 25 years old and were developed with more open space and recreational amenities than earlier complexes.

PUBLIC AND QUASI-PUBLIC

The land uses in the public and quasi-public category are primarily for governmental purposes, such as municipal and school board facilities. Gloucester Township is also host to a significant number of Camden County functions, including the County College, Lakeland and the Technical Institute. The public & quasi-public land use classification also includes religious and fraternal organizations.

COMMERCIAL

Existing commercial land uses are buildings and premises used for retail sales and

services, office uses, and non-manufacturing wholesale businesses. The density of development ranges up to a floor area ratio of .30. The commercial land use is in a linear form along major thoroughfares such as Blackwood-Clementon Road.

INDUSTRIAL

The industrial category is mainly a manufacturing use, however it also includes old sand and gravel mines, flexible space (a combined manufacturing and office building), and office uses. The G.E.M.S. landfill on Hickstown Road is also included in this category.

OPEN SPACE

Open space includes conservation, active recreation and passive recreation uses. It includes the Township's park land, County parkland, common lands of a homeowner's or condominium association, and privately owned recreation open to the public. This would include the Valleybrook and Freeway golf courses.

AGRICULTURE

The agriculture land use category includes land in active farming. This land is also agriculturally assessed by the municipality.

VACANT

The vacant land use classification is land that is not being used for any specific purpose. Some of the land may have development approvals but is not currently under construction or contemplated to be in the short term.

Population Trends

The rise of the population in Gloucester Township has followed a modified exponential growth curve since 1960 - modified by the amount of vacant land there was to be developed. The Township has followed a trend in this regard similar to other suburban areas with a large land area throughout metropolitan areas in the country. In Camden County, Cherry Hill Township began this trend sooner and Winslow Township is following this trend later. As the wave of suburbanization from the central city has occurred, more outlying areas are affected by development pressure.

The counted and estimated population in Gloucester Township is displayed in Table 23.

Table 23. Population in Gloucester Township, 1940 to the Present.

| Year | Population | Increase | % Increase |
|------------------|------------|----------|------------|
| 1940 | 6,198 | - | - |
| 1950 | 7,952 | 1,754 | 28.3% |
| 1960 | 17,591 | 9,639 | 121.2% |
| 1970 | 26,511 | 8,920 | 50.7% |
| 1980 | 45,156 | 18,645 | 70.3% |
| 1990 | 53,797 | 8,641 | 19.1% |
| 1999 (estimated) | 62,767 | 8,970 | 14.2% |

Sources: U.S. Bureau of the Census, CCH calculations.

The population estimate is based on the number of building permits issued from 1990 through 1998. Each housing unit was multiplied by the 2.9 persons per household median from the 1990 U.S. Census. It assumes that there is no double counting between the 1990 Census and building permits in early 1990, that all permits issued resulted in an occupied house, and that household size has remained constant. This estimate is about 2,800 persons higher than the one issued by the NJ State Data Center; however that estimate is based on disaggregating population trends to the municipal level and is more likely to experience a larger range of inaccuracy.

Based on the full build out of the Land Use Plan, the Township is expected to have a peak population of about 67,080 people, or approximately 4,380 more people than the estimated population at the beginning of 1999. This means that the Township has reached almost 93.5% of its projected peak population.

The peak population is projected to be approximately 3,360 people fewer than would reside in the Township if the current zoning scheme was constructed to full build out. This occurs primarily from a shift in emphasis in the Land Use Plan towards meeting senior housing needs that is created by the changing demographics of the region. Further discussion on senior housing issues is found in the following section.

Land Use Issues

This section examines the major trends affecting the use of land in the Township towards explaining the rationale for the different land use classifications and their mapped locations that will appear later in this element.

Gloucester Township's development pattern has nearly completed its conversion from a rural, agricultural and resource extraction past to its suburban present. Based on the existing land use survey, the Township is more than 82% developed. The continuation of the existing suburban trend is proposed to continue with this Master Plan through the policies detailed in the element. If present trends continue, when this present Master Plan is reexamined, it is expected that the Township will be almost entirely built out. Factors that affect build out include the economic cycle, infrastructure capacity, and major disruptions such as natural or man-made disasters. Since the economic cycle has had such a long expansionary time, one could expect a recession within the six-year time frame of the reexamination which would extend the build-out period.

CHANGING FUTURE DEVELOPMENT PATTERNS

The Township will enter into a transition era where the remaining infill parcels that were previously overlooked in the development process will become more valuable. Since many of these parcels are environmentally sensitive, development proposals will need to be scrutinized even more closely. This transition era will increase the importance of redevelopment efforts as obsolete land uses are abandoned and new uses arise. More municipal resources, such as public-private partnerships, are typically needed once this phase of development is reached to encourage the private sector to redevelop sites for new uses.

A NEED FOR A BALANCED LAND USE

Though redevelopment will be an increasing focus as vacant land becomes ever more scarce, this Master Plan is intended primarily to guide land use for the development of the remaining parcels at suburban densities. The balance of land uses between the two major categories of residential and non-residential is of particular concern. For a number of historical reasons - lack of regional highway access, closer in suburbs developing sooner - non-residential development has lagged in Gloucester Township compared to similar municipalities such as Deptford, Washington, Voorhees and Evesham Townships. With the present tax structure in New Jersey, funding for local governmental services is heavily dependent on property taxes. At the point of full development, Gloucester Township needs to have a better balanced land use to avoid the fiscal predicaments that many smaller, older, municipalities face in the region. This challenge of finding the proper balance is complicated by the large percentage of land area devoted to governmental and institutional land uses - identified as the Public and Quasi-Public existing land use category (*see Existing Land Use map*). Gloucester Township hosts the largest concentration of Camden County facilities of any municipality, with the possible exception of the County seat, Camden. Governmental and institutional land uses occupy more than double the land area used for commercial purposes and almost equal the land area of commercial and industrial uses *combined*.

The Township's supply of large, vacant parcels with reasonable road access is quite limited. In this Land Use Plan Element, these have been mainly assigned for non-residential development. There have been proposal by developers, because of the size or depth of the parcels, to allow strip commercial development along the road frontage and residential uses in the interior of the tracts. This form of development serves the purpose of providing neighborhood shopping but the Township is already well served by such uses. In the long term, it reduces the value that such large parcels have to create a significant employment base with well paying jobs. Additional strip commercial development, which creates relatively low-paying service jobs, should be avoided in favor of retaining the potential for much higher value development and a good jobs base. This Master Plan encourages taking the longer view of the ultimate build out of the municipality and the greater good that would come from office campus, business park or regional shopping development on the remaining larger parcels.

UTILITIES

Since the responsibility for public utilities is the province of other agencies rather than the Township, the Master Plan does not have a separate element addressing utilities. The development potential of land is affected by its proximity to appropriate infrastructure with sufficient capacity. Gloucester Township's sanitary sewer infrastructure is the responsibility of the Gloucester Township Municipal Utilities Authority (GTMUA) and the Camden County Municipalities Utility Authority (CCMUA). Public water is supplied by either the New Jersey American Water Company or Consumers New Jersey Water Company. Electricity is supplied by PSE&G and Connectiv Electric. Sanitary sewer capacity is potentially the largest impediment to the utilization of land in the southern end of the Township. The CCMUA is a regional system that collects effluent from the local systems and conveys it for treatment to a plant in Camden and eventual discharge into the Delaware River. This is a relatively new system with ample capacity. The GTMUA system is currently under evaluation but preliminary results indicate new interceptor lines would need to be extended to and along Berlin-Cross Keys Road in order to have sufficient capacity for its development potential to be realized. This could be accomplished either through GTMUA's initiative, developer contribution, or some combination of the two.

SENIOR CITIZEN HOUSING

The population in Gloucester Township, like the rest of New Jersey, continues to age, meaning that the average age is increasing over time. Policies more appropriate for a youthful era and growing households should be reexamined in light of the Township's changing demographics. The population is older than the early wave of suburbanization and has a more diverse family structure. The oldest portions of the population are

growing the fastest.

The United States has a mobile population characterized by a flexible labor market which encourages people to move for job opportunities. However, as people age, the family and social ties which they have established with their community often become progressively more important. Consequently, while senior citizens may need to change their residence for a variety of reasons, many desire to stay in the community which has grown familiar to them.

While there are many reasons that senior citizens have for moving to a new residence, the two main ones cited in surveys are to reduce expenses and to receive better medical care and daily assistance. Increases in expenses may take the form of higher rents, periodic maintenance, and increased property taxes. Senior citizens who own their homes often desire to move to less expensive residences in order to realize the capital gain from selling their house - money that may be put towards their expenses.

The second main reason usually results from illness or growing infirmity which leads to a decision to seek alternative housing. Since the need for assistance varies greatly, the real estate and medical industries have developed different solutions.

Housing types for senior citizens usually presuppose a certain type of living arrangement. Distinctions are also made depending on the amount of care that is provided. Nursing homes, for example, normally provide beds in a setting more akin to group quarters living rather than a more conventional apartment unit. On the other hand, an adult retirement community has housing similar to the general population. Senior citizen housing and living arrangements take the following forms:

- Accessory Apartments
- Adult Retirement Community
- Assisted Living Facility
- Boarding Home
- Congregate Apartment Housing
- Continuing Care Retirement Community
- ECHO Housing
- Homes for the Aged
- Nursing Home
- Residential Health Care Facility

These housing types for senior citizens may be arranged along two continuums based on the scale of development and the amount of services provided.

There are a number of locational considerations that should be made in siting age-

restricted housing. The smaller scaled senior citizen housing types may be incorporated into existing neighborhoods either on existing residential lots or as infill developments. Since every lot may not be suitable, most jurisdictions use either specific performance criteria or the conditional use process to ensure that boarding homes, accessory apartments, or ECHO housing would not result in an over built lot or a burden to the neighborhood. A certain amount of land is necessary to place ECHO housing in a rear yard. The unit is typically 500-600 square feet, or about the size of a large garage. Performance criteria for placement similar to detached garages would be appropriate for ECHO housing.

Larger scale senior citizen housing developments should be located on or immediately off of main roads for better access to retail sales and services as well as being more accessible for emergency personnel. Ideally, developments designed for active seniors and independent living should be located close to grocery shopping, banking, medical, and governmental services. However, lack of this close access does not rule out sites since most of these facilities have transportation for their residents available. Local and county governments often establish local bus routes for senior citizens.

The March 1999 Reexamination Report noted the need for more age-restricted choices in residential development within the Township. This section explores the different types of housing that may be suitable for Gloucester Township. Not all of these uses will be suitable in all places, so it would be appropriate for locational criteria to be established in the zoning regulations depending on the intensity of the particular use.

OPEN SPACE

As the Township nears its build out potential, the need to acquire open space for recreational and conservation purposes becomes more difficult. Organized recreational programs have been increasing in membership and the demand for additional fields has grown commensurately. Coupled with this need has been a sense voiced by the public that the open land is disappearing and that action to preserve some of the remaining land for future generations to use and enjoy should be taken. The existing land use survey indicates that there is approximately 1,478 acres in open space or about 9.7% of the Township's land area. This includes both publicly owned land and quasi-public facilities such as the two golf courses and the Catholic Youth Organization facility on Little Gloucester Road. The quasi-public land potentially could be converted to other uses.

A comprehensive plan for open space is detailed in the Open Space and Recreation Element.

Land Use Classifications

A number of factors have been taken into consideration in the development of the Land Use Plan. Foremost among these are the goals and objectives for development and redevelopment in Gloucester Township found in the Statement of Goals and Objectives, as well as in the various elements that make up this Master Plan. In particular, the land use classifications are intended to meet these goals specific to the Land Use Plan Element:

- Improve the quality of life for Gloucester Township residents, those persons who work in the municipality and visitors.
- Preserve open space for future generations as the Township nears full development.
- Discourage the introduction of incompatible land uses and ensure that new infill development, particularly in established neighborhoods, is compatible in intensity, scale and design with the prevailing pattern of development in adjacent areas.
- Direct and control the intensity of new development and redevelopment in relation to the transportation and environmental capacities of the land.
- Provide continuity with previous planning documents.
- Encourage a balanced mixture of residential and non-residential uses and promote this balance through planned development.
- Reduce blighting influences through improved standards for development.

The Land Use Element includes the analysis of a number of issues that have arisen in the deliberations of the Planning Board. The Planning Board's determinations with respect to the analysis has also provided a set of guidelines for the application of the land use classifications.

The Land Use Plan supports the Zoning Map but differs from it in some crucial respects. The Land Use Plan is a policy statement in graphic form that depicts what different parcels are intended to be used for in the future. As such it shows what is supposed to happen *over time*. The Zoning Map, on the other hand, is a regulatory document that has the force of law, governing what may be done legally on a parcel of land. As such, it concerns the here and now.

This difference is most evident when the government intends to acquire land for a public purpose. In the Public/Quasi-Public and Parks & Recreation land use categories, land has been designated on the Land Use Plan for public purposes. This was done in accordance

with *N.J.S.A.* 40:55D-28(2)(b) and -44, Contents of the Land Use Plan and Reservation of Public Areas, respectively. This serves notice to land owners that their land may be acquired for these uses. The government has to pay full market value and in certain circumstances an option for purchase should it decide to move ahead and implement the Master Plan's recommendations. However, the Zoning Map could not be drawn to zone these lands only for public purposes since they are privately owned. Instead, the land must be zoned to allow private development in order to provide an economic use of the property for the land owner. For example, the park and ride facilities at the former Clover store and on the north side of College Drive would be zoned consistent with the remainder of their tracts. In this particular circumstance the Clover store is indicated for an industrial purpose and the area north of College Drive at Rt. 42 for business park uses. The park and ride facilities are intended to be zoned for such uses as part of the implementation strategies of the Master Plan.

The land use classifications are depicted on the Land Use Plan at the end of this element. The classifications are:

ENVIRONMENTAL RESIDENTIAL (ER)

In certain locations within the Township there are underdeveloped or vacant parcels where there are substantial freshwater wetlands, flood plains and other environmentally sensitive land that affect their full usability. Most of this land is located along Little Mill Road, however, similar land is also located along Sicklerville Road where the South Branch of Big Timber Creek parallels the street. This land is intended for minimal residential development based on a density of one unit per two acres. On larger tracts, buildings would be clustered on half acre lots in order to utilize upland areas and avoid environmentally sensitive land. The housing type is proposed to be single family detached that has an overall smaller footprint compared to other housing types. Consequently, there would be greater flexibility in siting buildings in upland areas.

RESIDENTIAL 1 (R-1)

The Residential 1 land use category is a single family residential detached district with a density of one unit per acre. Much of the land that this has been applied to has been subdivided from larger (previously) agricultural parcels along the County road frontage. Higher densities for this land would encourage subdivision into smaller lots arranged around a single cul-de-sac. This type of land use pattern raises municipal costs and reduces the ability to create an efficient street system. Where the R-1 designation is not applied to frontage lots, it is intended to provide a balance with higher density single family districts. The R-1 would provide opportunities for more expensive housing for trade-up buyers who already live in the Township. The Residential 1 category also encompasses parks and recreation uses, conservation land, and minor institutional uses

not mapped separately. In general, the land area for this use is proposed to increase in comparison to the R-2 or R-3 classifications.

RESIDENTIAL 2 (R-2)

Where existing single family residential developments were constructed at densities of two units per acre, the Residential 2 district has been applied. The Residential 2 district also incorporates vacant or underutilized land adjacent to existing R-2 areas which would make a reasonable extension of the district or is an infill parcel. Like the R-1 classification, the Residential 2 category incorporates parks, conservation land, and minor institutional uses such as churches.

RESIDENTIAL 3 (R-3)

Most of the single family residential neighborhoods in Gloucester Township are in the Residential 3 classification. It constitutes the largest land use classification of the sixteen categories of the Land Use Plan. The category is intended for single family detached residential uses at three units per acre. Generally, the Residential 3 areas have already been developed, however, small infill areas still exist where a minor number of units could be developed. Open space and small scale institutional uses not individually mapped have been placed in this land use classification.

RESIDENTIAL 4 (R-4)

Intended for the oldest neighborhoods in Gloucester Township, the Residential 4 district is proposed for single family detached residential uses at four units to the acre. The Residential 4 district is mainly for the Glendora section of the Township, but it also includes the Grenloch Park Manor neighborhood. These areas are completely developed. The Residential 4 district incorporates some small scale institutional uses and parkland in the same fashion as the other single family detached districts (excepting the ER classification). The R-4 classification is intended to support a new zoning district that would more closely match the area and yard limitations of the uses as they were actually developed. It would reduce the non-conforming status of most of the lots in this land use category.

TOWNHOUSE AND TWIN (T)

This category is proposed for single family attached and semi-detached housing, commonly called townhouses and twins, respectively. Existing developments with this designation were constructed at densities ranging from 3 to 10 units per acre. New developments are proposed at three units per acre, with a significant portion of the land area to be devoted to open space. One new area is proposed for this category on a part of

the horse farm north of Blackwood-Clementon Road near Little Gloucester Road that is located between an existing twin development, an apartment complex and is adjacent to a commercial land use classification. This particular parcel is not well suited for single family detached units because of its proximity to these other land uses. The T classification here would provide a transition to the single family detached, R-1 district located on the north side of a stream dividing the land uses.

APARTMENT (A)

The Apartment classification is for existing garden apartments, either developed as single buildings or as a complex of buildings. Development densities range from 10 to 25 units per acre. No new land areas are proposed to be added to this designation. Certain limited apartments in conjunction with commercial development are proposed to continue for the Mixed Business/Residential classification.

SENIOR CITIZEN RESIDENTIAL (SCR)

The Senior Citizen Residential land use classification is intended for a mix of residential and health care uses in a planned, integrated whole. Specifically proposed for continuing care retirement communities, less comprehensive development would also be permitted on appropriately sized parcels. Residency would be restricted to persons 55 years old or older. Examples of the type of uses permitted would be small scale detached dwellings at a net density of 5-7 units per acre, attached units in 2-6 unit buildings, congregate care apartments, assisted living, and skilled nursing care. Larger sized parcels would permit a full range of senior citizen housing with varying incorporation of health care and personal services. Other types of senior citizen housing as outlined in the Land Use Issues section of this element, may be appropriate as conditional uses on a range of lot sizes.

BLACKWOOD WEST DISTRICT (BWD)

The Blackwood West District is a unique land use classification for Gloucester Township. This category is intended to aid in the implementation of specific standards for historic preservation in accordance with the guidelines of the National and State Registers of Historic Places. The land use is intended for a wide range of commercial and residential uses that were traditionally provided in centers for the surrounding farm population. The Blackwood West Historic District has an established pattern of apartments above commercial uses which is proposed to continue with this Land Use Element. Combined land uses such as these are indicative of a pattern of development common until the 1930's and should be allowed in new buildings. The scale and quality of development or redevelopment within the district is a key element in preserving its rare character and place in the history of Gloucester Township.

PROFESSIONAL OFFICE (PO)

The Professional Office land use category is for the development or conversion of existing buildings to residentially scaled office buildings. This class of land use is intended for mixed districts with buildings devoted to either residential or business uses, such as is presently the case along Chews Landing- Clementon Road. Here, the process is one of converting existing single family detached dwellings to professional office uses. Over time, it is expected that the district would become entirely office oriented. On vacant or underutilized sites, purpose built professional office campuses would be appropriate. The fundamental factor in this category is the residential scale of the buildings, generally less than 5,000 sf. The low intensity of the business uses would be compatible with the existing residential uses but would also serve as a transition between roads with high volumes of traffic and adjacent neighborhoods. Since this land use category encompasses a number of different concepts, it is anticipated that more than one zoning districts would be needed for implementation. A floor area ratio¹ for business uses of between .10 and .15 is proposed.

MIXED BUSINESS/RESIDENTIAL (B-1)

The Mixed Business/Residential/Professional Office land use category is intended for intermixed areas of residences and businesses at residential scales. This is proposed for a number of the older, mainly commercial, sections of the Township along the Black Horse Pike (Rt. 168). Because of the general lack of parking, this land use category is not proposed for auto-oriented commercial uses with high parking demand, nor uses that required frequent delivery or delivery by tractor trailer. The prototypical uses would be for furniture or carpet stores or other retail stores with a low customer turnover, business establishments that offer products or services off-premises to customers, and similar low traffic volume uses. A floor area ratio for business uses of between .15 and .25 is proposed primarily because many buildings in this category occupy large proportions of their lot.

SMALL SCALE BUSINESS (B-2)

In contrast to the B-1 category, this land use would be a purely commercial district including both retail and office uses. It is intended for small neighborhood shopping centers, stand alone uses such as pharmacies and convenience stores, individual office buildings, gasoline service stations in appropriate locations and similar commercial uses. A floor area ratio of .15 and .20 is proposed.

1- Floor area ratio is the total gross floor area of building divided by the total lot area and is a measure of the intensity of development. A one-story building that covered the entire lot would have a floor area ratio of 1.0. A four-story building that covered 25% of the lot would have the same floor area ratio of 1.0.

HIGHWAY COMMERCIAL (B-3)

The Highway Commercial land use category is for community-sized retail shopping centers usually anchored by a supermarket or discount store. It is proposed to allow more automobile-oriented uses than the B-2 classification, as well as pad sites for fast food restaurants. It would attract more national chains than the B-2 class because of the concentration of retail uses. In addition to the retail sales and services proposed, office buildings and entertainment uses are intended; however, wholesale businesses would be located in the Industrial or Business Park districts as envisioned. A floor area ratio between .25 and .30 would be appropriate for this land use category.

BUSINESS PARK (BP)

This land use category is intended primarily for office and flex space complexes that are part of a planned unit development. Flex space in this instance means multi-tenanted buildings combining office and warehousing or manufacturing uses. For tracts of sufficient size, for example, 50 acres, a planned retail development would also be permitted to take advantage of road frontage on deeper lots. It is also proposed that the intensity of development increase with an increase in the size of the tract to encourage the consolidation of lots into larger areas. Potentially, the floor area ratio could be as much as .50 in a multi-story complex on a large tract.

INDUSTRIAL (I)

The Industrial category is intended for older and stand alone manufacturing or warehousing uses that were constructed individually instead of in a planned development. In general, these are located on lots of less than 10 acres along major thoroughfares. A floor area ratio ranging from .25 to .30 is proposed. No new areas are designated for this use.

PUBLIC/QUASI-PUBLIC (P)

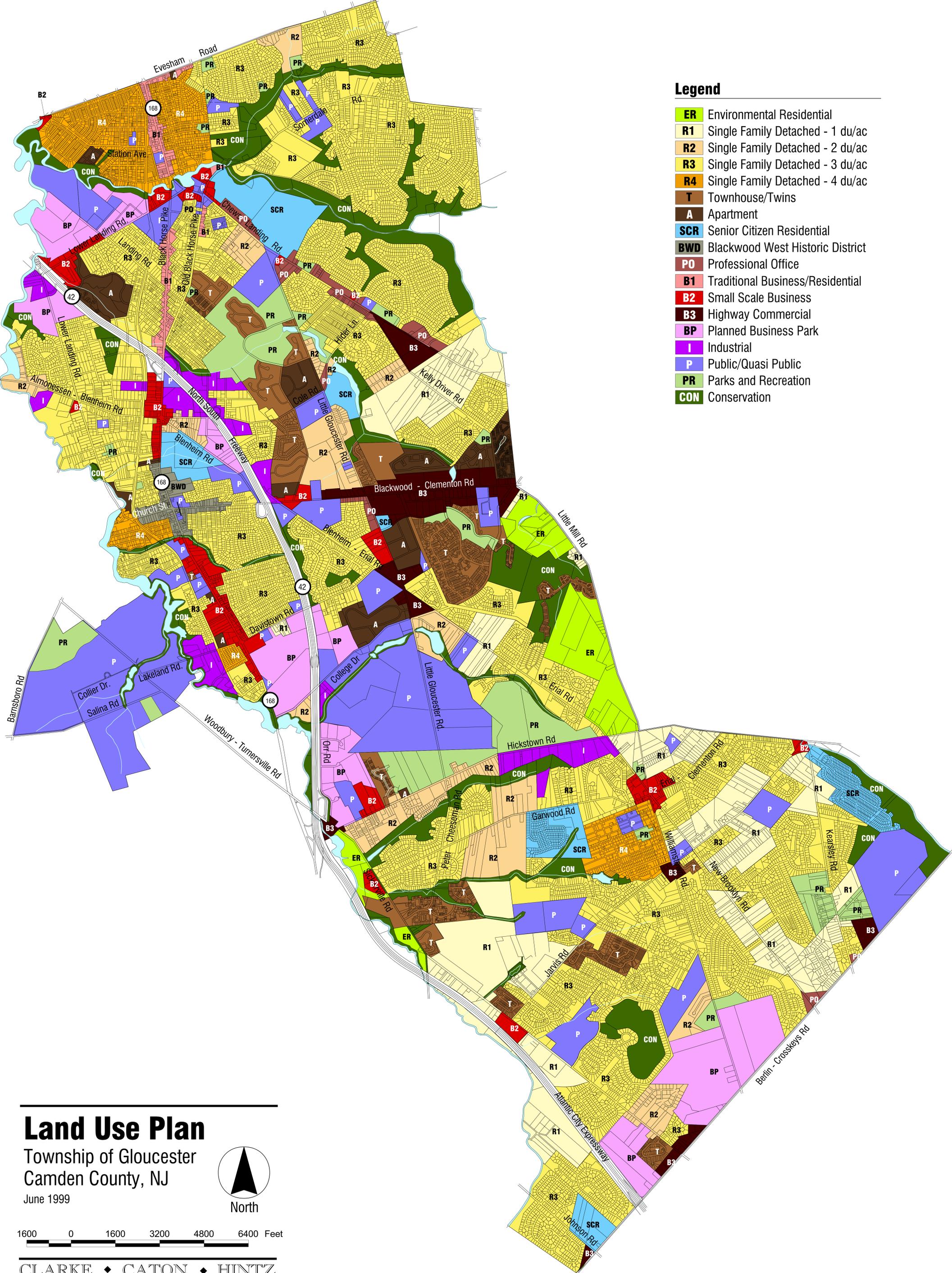
Governmental, educational, religious, fraternal, and other institutional uses are included in the Public and Quasi-Public land use category. Religious and fraternal uses on one acre or less lots have been included in the surrounding land use, rather than being mapped individually. All of these uses are mapped on the Community Facilities Plan. This category does not include land proposed for parks or conservation purposes. These are included in the following two land use categories.

PARKS AND RECREATION (PR)

This land use category is proposed for land owned or to be owned by the Township for parks and active recreation and quasi-public commercial recreation restricted from development. Land to be acquired in the future that has been assigned the Parks and Recreation category but is still privately owned should retain zoning consistent with adjacent land uses. Park facilities could include some significant buildings or structures such as ballfields, stands, tracks, swimming pool, tennis, basketball, riding tracks, or similar recreational facilities and may be lighted.

CONSERVATION (CON)

The Conservation classification is for land intended to be left primarily in its natural state as a wildlife area, locations for flood control, the filtering of storm water runoff, aquifer recharge zones, and other biological mechanisms necessary for healthy streams. It differs in its application depending on its ownership. If owned by a public entity, conservation trust, or other organization for open space, the areas are proposed to be protected from uses that would damage or degrade the ecological capabilities of the land. On private land, the Conservation district serves as an indicator of land that is to be avoided in the development process, but it would permit any crossing or encroachment allowed by state environmental laws which govern in these circumstances. Since environmentally sensitive land needs to be field verified, the Conservation districts depicted on the Land Use Plan should be considered the general location with the exact boundaries determined during the development approval process. On private land, the zoning district of the whole tract would apply to land identified for conservation on the Land Use Plan.



Legend

- ER** Environmental Residential
- R1** Single Family Detached - 1 du/ac
- R2** Single Family Detached - 2 du/ac
- R3** Single Family Detached - 3 du/ac
- R4** Single Family Detached - 4 du/ac
- T** Townhouse/Twins
- A** Apartment
- SCR** Senior Citizen Residential
- BWD** Blackwood West Historic District
- P0** Professional Office
- B1** Traditional Business/Residential
- B2** Small Scale Business
- B3** Highway Commercial
- BP** Planned Business Park
- I** Industrial
- P** Public/Quasi Public
- PR** Parks and Recreation
- CON** Conservation

Land Use Plan

Township of Gloucester
Camden County, NJ

June 1999



CLARKE ♦ CATON ♦ HINTZ

Statement of Consistency

INTRODUCTION

The Master Plan of Gloucester Township is designed to specifically address land use policies within the Township, but it must also be reviewed in relation to the land development policies of surrounding municipalities, Camden County, the State Development and Redevelopment Plan, and the district's solid waste management plan. The statement below relates the land uses proposed under Gloucester Township's Master Plan to the land use designations and related Master Plan policies for contiguous municipalities, Camden County and the State of New Jersey. The land use abbreviations used in describing Gloucester Township's land use policy may be found in the Land Use Element.

Land Use Policy in Surrounding Municipalities

RUNNEMEDE BOROUGH

Runnemede Borough's Commercial (C), R-1 Residential, General Office (GO), and R-3 Residential Districts are located along Gloucester Township's northern border on Evesham Road. The R-1 Residential District consists of single family residential on lots of 6,000 square feet. Land use policies for this district encourage sensitive infill of new single family dwellings through development of remaining vacant parcels, and through minor subdivision of oversized parcels within the district. The R-3 Residential District consists of a transitional area of medium density (8,000 square foot lots) single family development.

Runnemede's Commercial District is intended to provide a wide variety of shopping and service needs of the community. The Commercial District is almost fully developed; land use policies for this district encourage sound site planning practices and upgrading of existing properties, inclusive of buffering to residential areas, frontage improvements, and landscaping. The Borough's General Office District is intended to foster small scaled office conversion and new construction to serve as a transition to commercial districts and provide the Borough with new sources of employment and ratables.

Gloucester Township's R-3 and R-4 land use categories are located along the majority of the Township's border with Runnemede. This single family district is generally compatible with the adjacent R-1 and R-3 single family residential districts in Runnemede, although a lower density of 3 units per acre is permitted within the Township's R3 district. Similarly, nonresidential districts adjacent to the Black Horse Pike, including Gloucester Township's General Business (GB) District and Runnemede's

C and GO Districts can be considered compatible. There are, however, several small areas of incompatibility where Runnemede's Commercial district borders the Township's R-3 zoning district, including the area east of Arline Avenue, one lot adjacent to Triton High School, and a small area adjacent to Hartford Drive.

MAGNOLIA BOROUGH

Virtually all of the area within Magnolia Borough located adjacent to Gloucester Township's northeast corner is designated as the Residential 'A' (RA) District. This is a high density single family residential district with a minimum permitted lot size of 5,000 square feet. A small portion of the RA District, located between Albertson Park in Magnolia and the Gloucester Township border, is designated for conservation use in the Borough's Master Plan.

To the west of Otter Branch Drive, there is a very small area that is included within the Borough's Commercial District and one single lot that is designated as Residential 'B'. The Commercial District permits a variety of commercial uses in addition to detached single family and conversion dwellings on 5,000 square foot lots. The RB district permits single family dwellings, duplex units, apartments, conversion dwellings, and cluster and townhouse developments. The minimum lot size for single family, duplex, and conversion units in the RB District is 5,000 square feet.

The northeast corner of Gloucester Township that borders Magnolia Borough is designated as an R-3 land use. Additionally, there is a church located on Evesham Road that is included in the Township's Institutional (I) District. These uses are generally compatible with the Borough's RA District, although the permitted density within Township's R-3 zoning district is lower than the density permitted within the Borough's RA District. The Borough's Commercial and RB District designations are not as compatible with the Townships R-3 zoning, however only a few properties are affected by this incompatibility.

SOMERDALE BOROUGH

The majority of the area of Somerdale Borough adjacent to Gloucester Township is included in the Borough's R-1 Residential District. Additionally, there is a small area of the Borough located along Mardale Avenue that is included in the Borough's Recreation District. The R-1 District is a single family residential district with a minimum lot size of 6,500 square feet. Both the Borough's R-1 District and Recreation District are compatible with the adjacent R-3 land use in Gloucester Township.

HI-NELLA BOROUGH

In Hi-Nella Borough, there are two parcels of land located adjacent to the border with

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Gloucester Township. One is currently used for agriculture, the other is owned by the Hi-Nella Inn. According to the Borough, planned land use within the Borough is the same as existing use. Gloucester Township's R3 District borders these parcels; expansion of existing agricultural or commercial uses on the adjacent parcels in Hi-Nella would potentially be incompatible with this low density single family residential district.

STRATFORD BOROUGH

Big Timber Creek and Signey Run delineate the border between Stratford Borough and Gloucester Township. Stratford Borough has designated the areas adjacent to these waterways as Environmental (E) and Governmental (G) Districts. The Environmental District is intended for recreation and environmental conservation purposes with no permanent building or structures to be erected unless deemed necessary by the Mayor or Council for recreational and environmental purposes. The Government District is intended for uses that provide government or educational services.

Gloucester Township has designated lands along Big Timber Creek and Signey Run, adjacent to Stratford Borough, as Conservation. This land use designation is compatible with the E and G Districts in Stratford.

LINDENWOLD BOROUGH

Lindenwold's R-1 Single-Family Detached Residential, OP-1 Office and Professional, and R-4 Multi-Family Residential Districts adjoin the border with Gloucester Township. The R-1 District, located to the north of Chews Landing Road, has a minimum lot size of 10,000 square feet. The R-4 District, located south of Chews Landing Road, is fully developed with existing apartment buildings. The R-1 and R-4 Districts are separated by the Borough's OP-1 District located along Chews Landing Road. This district is intended for office and professional use, although there are some pre-existing residences located along Chews Landing Road.

In Gloucester Township, the area north of Chews Landing - Clementon Road is proposed as an R-1 Residential, which is compatible in use if not size with the adjoining R-1 District in Lindenwold Borough. There is a small area of incompatibility, however, where Lindenwold's OP-1 District abuts the Township's R-1 area on the north side of Chews Landing Road. South of Chews Landing Road is Gloucester's Apartment classification, which is compatible with the adjoining R-4 Multi-Family Residential District in Lindenwold.

PINE HILL BOROUGH

In Pine Hill Borough, the majority of land on Little Mill Road north of Turnerville Road that adjoins Gloucester Township is designated as the Rural Residential (R-Rural)

District. Additionally, there are small areas designated for non-residential use along Little Mill Road, including the Limited Business District (LBD), Institutional (I) District, and General Business District (GBD). South of this area, Pine Hill has a mix of land use designations that border Gloucester Township, including the Planned Recreation & Conservation (PRC), Low Density Residential (R-Low), Central Business District (CBD), Medium Residential (R-Med), Institutional (I), Multi-Family Residential (R-Multi) and Limited Business District (LBD).

Pine Hill's R-Rural District has a minimum lot size of 2 acres, and the R-Medium District has a minimum lot size of 11,250 square feet. A maximum density of 3 units per acre is allowed in the Borough's R-Multi District. The PRC District is intended to conserve the value of the land and to encourage flexible land development. Three-quarters of a residential development's total area in this district must be set aside for recreational use; the remaining 25% may then be developed under the R-Rural District standards. In terms of non-residential districts, the LBD is intended to provide an area for general commercial and professional activities. Similarly, the Borough's CBS provides for commercial and professional activities, although residential development on a minimum lot size of 7,500 square feet is also permitted. The GBD is intended to provide for development of commercial shopping center activities, as well as retail, government offices, motel/hotel, and other similar types of development.

Along Little Mill Road, north of Turnersville - Hickstown Road, Gloucester Township's Environmental Residential (ER) District and R-1 Residential District are generally compatible with Pine Hill Borough's adjoining R-Rural and Institutional Districts. Just south of Blackwood - Clementon Road, Gloucester's B-3, Townhouse and Apartment land use classifications are compatible with Pine Hill's LBD District. Along Turnersville - Hickstown Road, the Township's R1 District is generally compatible with the adjacent R-Low and R-Med Residential Districts in Pine Hill. However, there are several areas of incompatibility, where the Township's R-1 category abuts the GBD and CBD commercial zones in Pine Hill. Along Sharps Branch, potential incompatibilities between Gloucester Township's R-3 area and the adjoining R-Multi and LBD Districts in Pine Hill are buffered by the intervening wetland area.

WINSLOW TOWNSHIP

Winslow Township's Minor Commercial (C), Public Use (P), Major Commercial (CM), Planned Community (PC), and Light Industrial (LI) Districts are located along Gloucester Township's southern border, Berlin-Cross Keys Road. Land use within the C District is intended to meet the convenience shopping and service needs of the nearby population. In the CM District, land may be used for the development of shopping facilities, and service and professional offices at a scale similar to a community shopping center. Donio Park is located in Winslow Township's P District adjacent to Gloucester Township. East of Blenheim-Erial-New Brooklyn Road, Winslow's PRC District is currently being developed with a mix of townhouse and single family residential, and a commercial

component. East of the PRC District, Winslow Township's LI District permits a variety of uses, including research and development, warehouses, and manufacturing or fabrication facilities.

Land use designations in Gloucester Township are generally compatible with the adjacent land use designations in Winslow Township. West of Erial Williamstown Road, Gloucester's Business Park, Highway Commercial and Professional Office districts border Winslow's C, P, and CM Districts. However, just west of the Atlantic City Expressway there is a small area of potential incompatibility where Gloucester Township's R-3 category borders Winslow's C District. Similarly, there are some potentially incompatible land use designations to the east of Erial-Williamstown Road, where Gloucester Township's R-3 borders Winslow's CM District, and where Gloucester's R-1 District borders the commercial component of Winslow's PC District.

WASHINGTON TOWNSHIP

In Washington Township, the Planned Residential One (PR-1), Rural Residential (R), Commercial Industrial (CI) and Highway Commercial (HC) Districts are located along the southern portion of the border with Gloucester Township. In the northern portion of the border, surrounding Camden County's Lakeland Complex, are Washington Township's C Residential (C), PR-1, R, Planned Industrial (PI), Shopping Center (SC), High Density Residential (H), and HC Districts.

The PR-1 District is intended for low density single family residential development, with a density of 1.6 units per acre. Clustering is permitted within this district on 10,500 square foot lots. In the R District, 31,000 square foot single family residential lots are allowed at a maximum density of 1.2 units per acre. The C District is a medium density residential district which allows single family residential development on a minimum lot size of 12,500 square feet. The H District is a high-density residential zone intended for multi-family residential development at a density of 10 units per acre.

Washington Township's HC District is designed to provide a wide variety of commercial facilities to both local residents and travelers. The SC District also serves both the local and regional community, but is intended for large scale planned shopping centers, with coordinated access, operations, parking and services. The CI District allows any use permitted in the HC District and uses such as warehouses, manufacturing and processing, wholesale and distribution, and research laboratories. The CI District has a minimum lot size of 15,000 square feet. The PI District allows a range of industrial uses and has a minimum lot size of 1 acre.

In the southern portion of the Gloucester-Washington border, the Atlantic City Expressway, Big Timber Creek and Great Lebanon Branch provide a buffer between Gloucester Township's ER, T, GB and R-1 land use categories and Washington

Township's PR-1, C1, C, and HC Districts. Around the Lakeland Complex, Washington Township's residential districts (PR-1, R, and C) and the Shopping Center District would generally be compatible with the recreational uses at Lakeland. However, there may be some incompatibilities between Washington's Planned Industrial District and the Lakeland Complex, depending on the type of industrial use, and distance between industrial facilities and recreational uses. North of Lakeland, Gloucester Township's R-3 and R-4 land uses is buffered from Gloucester Township's H, PR-1, and HC Districts by Timber Creek Lake and the South Branch of Timber Creek.

DEPTFORD TOWNSHIP

Deptford Township's Low Density Single Family Residential (R-40), Medium Density Single Family Residential (R-10 and R-20), High Density One & Two Family Residential (R-6), Office Campus (OC), and Town Center (TC) Districts border Gloucester Township. The R-40 District requires a minimum lot size of 40,000 square feet. Cluster development with lots as small as a half acre is allowed within this district, provided that the overall density does not increase over that already permitted. The R-10 and R-20 Districts allow single-family residential development on lots of 10,000 square feet and 20,000 square feet, respectively. The R-6 District is largely composed of existing single family neighborhoods that were developed before the advent of zoning. For vacant land within the district, a minimum lot area of 6,000 square feet is required.

The OC and TC Districts are the only non-residential districts in Deptford Township located adjacent to Gloucester Township. The Office Campus District is intended to encourage office uses on large tracts, and prohibits retail uses except when accessory to the office use. The Town Center District is intended to accommodate a wide variety of intensive commercial uses including shopping centers, office complexes, and hotel/conference facilities.

In general land use designations within Gloucester Township are compatible with those in Deptford Township. In the southern portion of the border area, Gloucester's R-2 and R-3 land use designations are adjacent to Deptford's R-40, R-20, R-10 and R-6 Districts. In the northern portion of the border, Gloucester's Industrial, Business Park and Small Scale Business classifications are adjacent to the OC and TC Districts in Deptford Township. There is a small area of potential incompatibility where Gloucester's R-3 district borders Deptford's OC District, and another potential incompatibility where Gloucester's Industrial area borders Deptford's R-40 District, however, these incompatible land uses are buffered by wetland areas along the South Timber Branch.

Compatibility with Regional and State Planning Documents

The consistency of the Master Plan with regional and state plans is examined in this

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section. The documents compared include Camden County's Cross-Acceptance II Report, and the State Development and Redevelopment Plan.

CAMDEN COUNTY CROSS-ACCEPTANCE II REPORT

The Camden County Cross-Acceptance II Report provides an overview of current planning efforts and programs in the County, including those related to transportation, regional planning, parks and recreation, community development, recycling and special waste collection, and urban revitalization and redevelopment. County and regional planning efforts related to development in Gloucester Township include the identification of transportation improvements needed along Sicklerville Road and Williamstown-New Freedom Road, identification and study of employment centers in Gloucester Township, and financing of a County Health Services Center to be located in Gloucester Township. Gloucester Township's Master Plan is consistent with these planning efforts.

STATE DEVELOPMENT AND REDEVELOPMENT PLAN

The New Jersey State Development and Redevelopment Plan (SDRP) was formulated to facilitate coordinated planning among state agencies and to efficiently allocate scarce state resources. The SDRP was adopted on June 12, 1992. The SDRP is a policy guide for state, regional and local governments and agencies, functioning in a comparable fashion to the County's Plan but on a state-wide scale.

The SDRP established a Resource Planning and Management Structure (RPMS) complete with state-wide mapping of growth management areas and concentrations of existing and proposed development, called Planning Areas and Centers. The SDRP delineates policy objectives for each Planning Area and Center to guide growth in appropriate places and contexts.

The State Development and Redevelopment Plan designates the following Planning Areas in Gloucester:

Planning Area 1 - Metropolitan Planning Area

The land use policy objective in this area is to guide new development and redevelopment to ensure efficient and beneficial utilization of scarce land while capitalizing on the inherent public facility and service efficiencies of existing concentrated development patterns.

Planning Area 2 - Suburban Planning Area

The land use intent in this area is to guide development into compact centers. This would also include retrofitting former single-use developments into mixed-use

developments with local services and cultural amenities.

Under the 1992 SDRP, the majority of the Township's land was designated as Planning Area 1, with several small areas also designated as Planning Area 2 - including, land in the vicinity of the Blackwood Country Club, land along Gloucester's border with Pine Hill, and lands along the border with Washington Township. As part of the recent cross-acceptance process, the County has proposed converting most of the PA2 areas within the Township to PA1 after petition by the Township. In the map amendment documents dated September 28, 1998 outlining the proposed changes, the County noted that all of these areas had experienced significant growth and clearly met the delineation criteria for PA1. The proposed planning area changes have been reviewed and approved by the Office of State Planning and are part of the recently issued Interim Plan. The only remaining PA2 areas within Gloucester Township are two small sites located along the Township's border with Pine Hill Borough.

The Land Use Element and Map of the Gloucester Master Plan is generally consistent and compatible with the SDRP Planning Area designations and their policy guidelines, as well as the revisions to the Planning Areas proposed through the cross-acceptance process.

SUMMARY

The policy goals and objectives for the Gloucester Township Master Plan have been shown to be substantially consistent with local plans and ordinances, County growth plans and programs, and the State Development and Redevelopment Plan. In certain minor instances, mainly with the land use policies in adjacent municipalities, inconsistencies occur. These inconsistencies, however, do not alter the substantial compatibility of this document with other relevant planning documents.